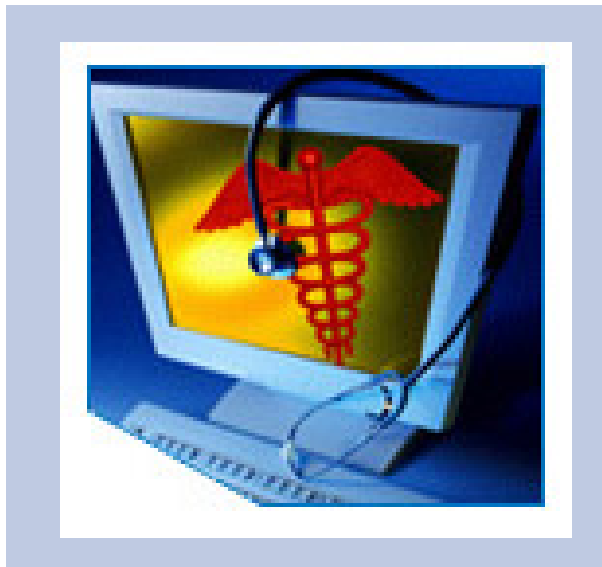


# HITSP Interoperability Specification: Patient Demographics Query Transaction

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HITSP/ISTP -23



*Submitted to:*

**Healthcare Information Technology Standards Panel**

*Submitted by:*

**Biosurveillance Technical Committee  
Consumer Empowerment Technical Committee  
Electronic Health Records Technical Committee**



## DOCUMENT CHANGE HISTORY

Version Number	Description of Change	Name of Author	Date Published
1.0	Final Draft	Biosurveillance Technical Committee Consumer Empowerment Technical Committee Electronic Health Records Technical Committee	18 August 2006



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## 1.0 FOREWORD

Healthcare Information Technology Standards Panel (HITSP) is a multi-stakeholder coordinating body designed to provide the process within which affected parties can identify, select, and harmonize standards for communicating healthcare information throughout the healthcare spectrum. HITSP functions as a partnership of the public and private sectors and operate with a neutral and inclusive governance model administered by the American National Standards Institute. The goal of the panel is to:

Facilitate the development of harmonized interoperability specifications and information policies, including SDO work products (e.g. standards, technical reports). These policies, profiles and work products are essential for establishing privacy, security and interoperability among healthcare software applications.

Coordinate, as appropriate, with other national, regional and international groups addressing healthcare informatics to ensure that the resulting standards are globally relevant.

Be use-case driven, utilize information from stakeholders and base its decisions on industry needs. The HITSP shall serve the public good by working to ensure that the combined work of various healthcare information standards organizations supports interoperability, accurate use, access, privacy and security of shared health information.

In order to advance the goal of expanding harmonized interoperability specifications and information policies, HITSP was tasked with developing interoperability specifications for three main use case “breakthroughs areas” in which specific, near term value to the health care consumer could be realized.

The harmonized use case areas are:

Biosurveillance	Transmit essential ambulatory care and emergency department visit, utilization, and lab result data from electronically enabled health care delivery and public health systems in standardized and anonymized format to authorized Public Health Agencies with less than one day lag time.
Consumer Empowerment	Allow consumers to establish and manage permissions access rights and informed consent for authorized and secure exchange, viewing, and querying of their linked patient registration summaries and medication histories between designated caregivers and other health professionals.
Electronic Health Record	Allow ordering clinicians to electronically access laboratory results, and allow non-ordering authorized clinicians to electronically access historical and other laboratory results for clinical care.

The interoperability specification provides a detailed mapping of existing standards and specifications such as implementation guides, integration profiles to actions and actors that satisfy the requirements imposed by the relevant use cases. It identifies and constrains standards where necessary, and creates groupings of specific actions and actors to further describe the relevant contexts. Where gaps and overlaps are identified, the interoperability specification provides recommendations and a roadmap for corrections to be made.



## 60 2.0 INTRODUCTION

This Patient Demographics Query (PDQ) Transaction is intended to be a portion of the Consumer / Patient ID Cross-Referencing Transaction Package. The relationship of this transaction to the transaction package and its application portions is illustrated in the following chart.

Type	Number	Specification
		Title
Transaction	HITSP/IST – 23	Patient Demographics Query (PDQ) Transaction
Transaction	HITSP/IST – 22	Patient ID Cross-Referencing (PIX) and Patient Identity Feed Transactions
Component	HITSP/ISC – 38	Admission, Discharge, Transfer (ADT) Component [unpublished writing-support component only]

65 Table 2.0-1. Relationship to transaction package and application portions

This PDQ transaction is intended to provide a 'list patients and their demographics' query / 'patient(s) and their demographics identified' response message pair for use wherever such needs exist.

70 The PDQ transaction, as described in this document, does not include messages for other purposes; e.g., patient enrollment / identification, patient visit / encounter (e.g., Patient Demographics and Visit Query / Response), patient identity updated, obtain patient identifiers. Messages for such other purposes are provided by other specifications in the suite.

### 2.1 OVERVIEW

75 This Patient Demographics Query (PDQ) Transaction document extracts the Health Level Seven (HL7) version 2.5 Query and Response data mapping. The underlying basis for this extraction can be found in the Integrating the Healthcare Enterprise IT Infrastructure Technical Framework, Volume 2 (ITI TF-2), Revision 2.0, dated August 15, 2005, 3.21: "Patient Demographics Query".

80 The HL7 version 2.5 standard is available from Health Level Seven, Inc.:

3300 Washtenaw Avenue, Suite 227  
Ann Arbor, Michigan 48104-4261  
Phone: 734-677-7777 FAX: 734-677-6622  
[www.HL7.org](http://www.HL7.org) [HQ@HL7.org](mailto:HQ@HL7.org)

85 The Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework is available at [www.ihe.net](http://www.ihe.net) or from any of the following organizations:

American College of Cardiology (ACC)  
9111 Old Georgetown Road  
90 Bethesda, Maryland 20814-1699



Phone: 800-253-4636 FAX: 301-897-9745

[www.ACC.org](http://www.ACC.org)

[IHE@ACC.org](mailto:IHE@ACC.org)

Healthcare Information and Management Systems Society (HIMSS)

95 230 East Ohio Street, Suite 500

Chicago, Illinois 60611-3270

Phone: 312-664-4467 FAX: 312- 664-6143

[www.HIMSS.org](http://www.HIMSS.org)

[IHE@HIMSS.org](mailto:IHE@HIMSS.org)

100 Radiological Society of North America, Inc. (RSNA)

820 Jorie Blvd

Oak Brook, Illinois 60523-1860

Phone: 630-571-2670

[www.RSNA.org](http://www.RSNA.org)

[IHE@RSNA.org](mailto:IHE@RSNA.org)

105

## 2.2 AUDIENCE

110 In general, this interoperability specification is designed to be used by analysts who need to understand the interoperability requirements for the described use case, and by implementers working to develop interoperable applications. Understanding and using the relevant interoperability set of specifications is a key requirement for establishing interoperability compliance.

In particular, this document is primarily intended for ADT, patient matching, master person index, and other related subject matter specialists within healthcare enterprises.

115

This document is also intended for information technology staff focused on programming inter-computer message transmissions and receipts, and/or building message translators. Knowledge of structures and contents of messages from a communications perspective is most essential. Understanding of the business use of data contained within the messages is definitely useful.

120 Familiarity with Health Level Seven (HL7) version 2 is required. Familiarity with HL7 version 2.5 is preferred.

## 2.3 TERMS AND DEFINITIONS

125 For purposes of this document, the terms and definitions contained in Health Level Seven (HL7) version 2.5 will apply; particularly those in Chapter 5: "Query". Also applicable are terms and definitions in the following chapters:

Chapter 3: "Patient Administration"

Chapter 2: "Control".

130 Additional terms can be found in the glossary. Refer to glossary in the appendix.



## 2.4 CONVENTIONS

This specification uses the following to convey the full descriptions and usage of standards:

### UML sequence and activity diagrams

135 In these diagrams, the actors and transactions are highlighted within the framework of the specific scenario or context. The actors involved in the specified use-scenario or context are mapped out, and the interactions between each action and actor for a particular context, and the flow of data are provided through the use of arrows. Diagrams are named according to the section in which they reside, and will use the following naming convention:

140 Figure <section number>-<consecutive number for the diagram, e.g. 1, 2, 3, etc.>. <Short name/description of diagram>. For example, a diagram residing in section 3.1.3 showing the Actor Interactions for the Send Lab Results transaction package is named:

Figure 3.1.3-1. Send Lab Results Transaction Package

### Tables

145 Tables are used to indicate standards categorizations, as well as dependencies and constraints between constructs. Tables are named according to the section in which they reside, and will use the following naming convention:

Table <section number>-<consecutive number for the table, e.g. 1, 2, 3, etc.>. <Short name/description of table>. For example, a table residing in section 2.7.1 showing the Dependencies between the transactions for the Send Lab Results transaction package is named:

150 Table 2.7.1-1. Send Lab Results Transaction Package dependencies

### References

When references are made to another section within an Interoperability Specification a section number is used by itself. When references are made to other constructs that are related to the Interoperability Specification, such as Transaction Packages, Components or Composite Standards, the HITSP document short name and section number are displayed as follows:

<HITSP Document short name or Composite Standard Short Name>-<Volume Number>: <section number>

where:

160 <HITSP document short name> is a short designator for the construct (e.g. HITSP/ISTP-013)  
<Composite Standard Short Name> is a short designator for the composite standard (e.g. IHE-ITI TF)  
<Volume Number> is the applicable volume within the given composite standard (e.g. 1)  
<section number> is the applicable section number (e.g. 3.1)



For example: HITSP/ISTP-013: 3.1 refers to Section 3.1 in the Interoperability Specification for a Transaction Package, IHE-ITI TF-2: 4.33 refers to Section 4.33 in volume 2 of the IHE IT Infrastructure Technical Framework.

## Reproductions

Where large sections of composite standards or base standards are reproduced within a HITSP specification, the reproduced sections are cited with introductory text containing the reference information for the composite or base standard. In addition, the beginning and ending of the reproduced text are respectively shown using a beginning statement:

The text for the <composite or base standard name> specification begins here:

And an ending statement:

The text for the <composite or base standard name> ends here.

This document uses two additional conventions.

HL7 message, segment and field layouts as defined and illustrated in HL7 version 2.5. Segments and fields used are shown in normal text. Unused segments and fields are indicated by a lighter colored gray text. All unused segments that follow the last segment used in a message are not shown. Similarly, all unused fields that follow the last field used in a segment are not shown.

Explanations of each field used organized according to the following table:

<b>Identifier</b>		
<b>Description</b>		
<b>Source – where created</b>		
<b>Rationale – where used</b>		
<b>Data Type</b>		
<b>Conformance</b>		
<b>Repetitions</b>		
<b>Code Domain</b>		

## 2.5 COMMENTS

To submit comments for this interoperability specification, please download the Comment Submission sheet from the HITSP site at [www.hitsp.org](http://www.hitsp.org) and provide all relevant information, and then email the





completed document to [hitspcomments@ansi.org](mailto:hitspcomments@ansi.org). Comments are consolidated periodically and sent to the Technical Committees for review.

## 2.6 COPYRIGHT PERMISSIONS

### COPYRIGHT NOTICE

© [\_\_\_\_\_] (Note: Name of copyright holder is currently under review by Government) This material may be copied without permission from \_\_\_\_ only if and to the extent that the text is not altered in any fashion and \_\_\_\_'s copyright is clearly noted.

HL7 materials used in this document have been extracted from relevant copyrighted materials with permission of Health Level 7 (HL7). Copies of this standard may be purchased from the Health Level 7 website at [www.hl7.org](http://www.hl7.org).

IHE materials used in this document have been extracted from relevant copyrighted materials with permission of Integrating the Healthcare Enterprise (IHE). Copies of this standard may be retrieved from the IHE website at [www.ihe.net](http://www.ihe.net).

## 2.7 LIST OF COMPOSITE STANDARDS

Composite Standard	Description	Relationships
Health Level Seven (HL7) version 2.5	ANSI approved standard for information interchange	Used as basis for Integrating the Healthcare Enterprise IT Infrastructure Technical Framework
Integrating the Healthcare Enterprise IT Infrastructure Technical Framework, Volume 2 (ITI TF-2), Revision 2.0, August 15, 2005	Documentation of specifications employed to stimulate the integration of information systems that support modern healthcare institutions	Uses HL7 version as the basis for the transactions incorporated into this specification

Table 2.7-1 List of Composite Standards

## 2.8 LIST OF COMPONENTS

There are no Components used by this Transaction; although it liberally incorporates data elements from the Patient Identification (PID) segment of the ADT Component specification: HITSP/ISC – 38.

## 3.0 TRANSACTIONS

The Patient Demographics Query (PDQ) transaction is a request – *i.e.*, query – by a Patient Demographics Consumer actor for information about patients whose data match data included in the query message. The query is received by a Patient Demographics Supplier. The Patient Demographics Supplier immediately processes the request and returns a response in the form of demographic information for matching patients.



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**3.1    CONTEXT OVERVIEW**

The PDQ transaction is intended for use wherever Health Level Seven (HL7) messages are suitable to identify patients from a list of potentials.

225    3.1.1    CONTEXTUAL CONSTRAINTS

The PDQ transaction may be used by any pairs of systems capable of performing real-time HL7 query and response transactions.

The Patient Demographics Consumer actor must store and be able to communicate the data fields necessary for the Patient Demographics Supplier to be able to process the received query and return demographic information for matching patients.

230

The Patient Demographics Supplier must be able to create a, possibly empty, list of matching patient demographic information solely based on the data fields received in the query message from the Patient Demographics Consumer.

235    3.1.2    TECHNICAL ACTORS

The technical actors in the PDQ transaction are shown in the following list.

Actor	Description
Patient Demographics Consumer	Queries the Patient Demographics Supplier for a list of patient demographic information, if any. Receives a list of corresponding patient demographic information from the Patient Demographics Supplier.
Patient Demographics Supplier	Receives the query for a list of corresponding patient demographics from the Patient Demographics Consumer. Sends a list of corresponding patient demographic information to the Patient Demographics Consumer. Maintains one or more Patient Information Sources of patient demographics data.

Table 3.1.2-1 Technical Actors

240    3.1.3    ACTOR INTERACTIONS



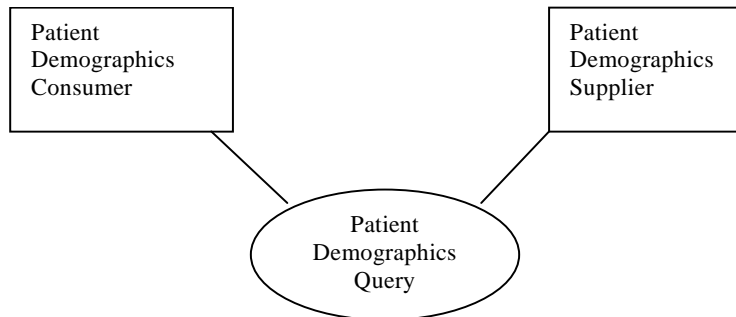


Figure 3.1.3-1 Actor Interactions

## 3.2 PROCESS FLOWS

The PDQ transaction involves a request by a Patient Demographics Consumer for a demographic information about patients whose demographic data match data contained in the query message. The request is sent as a Patient Demographics query and received by a Patient Demographics Supplier. The Patient Demographics Supplier immediately processes the query and sends a Patient Demographics response to the Patient Demographics Consumer that originated the query. This response contains a list of patient demographics for matching patients if any were found.

The process flows in the PDQ transaction are shown in the diagram.

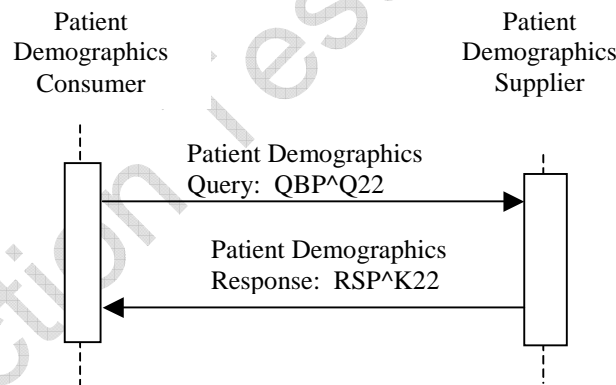


Figure 3.1.3-1 Actor Interactions

### 3.2.1 PROCESS PRE-CONDITIONS

Patient Demographics Consumer: contains minimal patient demographic data suitable for matching.  
 Patient Demographics Supplier: maintains a list of patient demographic data suitable for matching and extending patient demographic data at the Patient Demographics Consumer.

#### 3.2.1.1 PROCESS TRIGGERS

Patient Demographics Consumer: a need to obtain patient demographic data beyond what is already known for one or more patients.



Patient Demographics Supplier: receipt of a Patient Demographics query from a Patient Demographics Consumer.

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### 3.2.2 PROCESS POST-CONDITIONS

Patient Demographics Consumer: expanded patient demographic data for one or more patients where found by the Patient Demographics Supplier.

Patient Demographics Supplier: none beyond providing outputs related to this Transaction.

#### 270 3.2.2.1 PROCESS OUTPUTS

Patient Demographics Consumer: none specifically related to this Transaction.

Patient Demographics Supplier: a Patient Demographics Response message containing, where applicable, demographic data for of one or more patients; where no list of applicable patient demographics data is found, indicators in the message as to the reason no data was provided.

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## **3.3 DATA FLOWS**

Consistent with the process flows discussed above, there are two data flows for the PDQ transaction: Query to obtain Patient Demographics data from Patient Demographics Consumer to Patient Demographics Supplier, and Response to a query to return Patient Demographics data from Patient Demographics Supplier to Patient Demographics Consumer.

280

Details of these two data flows are contained in the two subsections below.

To better understand the data flows described in the two subsections below, the following definitions are applicable.

285

Patient Demographics Supplier: See explanation in section 3.1.2, Technical Actors, above.

Patient Information Source: A collection of patient demographic data from one or more Patient ID Domains.

Patient ID Domain: A collection of patient demographic data from a single Assigning Authority.

290

### 3.3.1 QUERY – CONSUMER TO SUPPLIER

The query portion of the Patient Demographics Query Transaction uses one HL7 message consisting of three segments: MSH, QPD, and RCP.



<u>QBP^Q22^QBP_Q22</u>	<u>Query By Parameter</u>
MSH	Message Header
[[SFT]]	Software Segment
QPD	Query Parameter Definition
RCP	Response Control Parameter

*HL7 Segment - MSH - Message Header*

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1	1	ST	R			00001	Field Separator
2	4	ST	R			00002	Encoding Characters
3	227	HD	O			00003	Sending Application
4	227	HD	O			00004	Sending Facility
5	227	HD	O			00005	Receiving Application
6	227	HD	O			00006	Receiving Facility
7	26	TS	R			00007	Date/Time Of Message
8	40	ST	O			00008	Security
9	15	MSG	R			00009	Message Type
10	20	ST	R			00010	Message Control ID
11	3	PT	R			00011	Processing ID
12	60	VID	R			00012	Version ID
13	15	NM	O			00013	Sequence Number

295

<b>Identifier</b>	MSH-1 Field Separator	
<b>Description</b>	Field Separator	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Consumer	
<b>Rationale – where used</b>	Indicates the character that will separate fields in all segments contained in this message	
<b>Data Type</b>	ST	String
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	HL7	Only HL7 default value shall be used

<b>Identifier</b>	MSH-2 Encoding Characters	
<b>Description</b>	Encoding Characters used in this message	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Consumer	



<b>Rationale – where used</b>	Contains four characters that indicate, in order: Character that separates components of fields Character that indicates repetitions of data Character that identifies a following escape character Character that separates subcomponents of components	
<b>Data Type</b>	ST	String
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	HL7	Only HL7 default values shall be used

<b>Identifier</b>	MSH-3 Sending Application	
<b>Description</b>	Identification of Sending Application for this message	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Consumer	
<b>Rationale – where used</b>	Contains information that identifies the software system that is sending the message	
<b>Data Type</b>	HD	Hierarchic Designator
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	n/a	Free text

<b>Identifier</b>	MSH-4 Sending Facility	
<b>Description</b>	Identification of Sending Facility for this message	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Consumer	
<b>Rationale – where used</b>	Contains information that identifies the facility or organization that is sending the message	
<b>Data Type</b>	HD	Hierarchic Designator
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	n/a	Free text



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## MSH-5 Usage Notes:

305

(a) If only one Patient Information Source of patient demographics information can be searched by the Patient Demographics Supplier, MSH-5 and it's components may be used at sender's discretion as it is presumed that the Patient Demographics Supplier is clear on where to search.

310

(b) If more than one Patient Information Source of patient demographics information could be searched by the Patient Demographics Supplier, MSH-5 shall be populated to explicitly identify the single Patient Information Source to be searched by the Patient Demographics Supplier.

315

(c) If more than one Patient Information Source of patient demographics information could be searched by the Patient Demographics Supplier and such a multiple source search is required, multiple Patient Demographic Query messages must be sent – one for each Patient Information Source. Such multiple query messages must be sent even if the query recipient Patient Demographics Supplier is the same entity. By rule, a Patient Demographics Query can only be targeted to a single Patient Information Source.

320

Identifier	MSH-5 Receiving Application	
Description	A value identifying the Patient Information Source that will be searched within the Patient Demographics Supplier's environments	
Source – where created	Sending Software Application within the Patient Demographics Consumer	
Rationale – where used	Where necessary, contains information that identifies the Patient Information Source to be searched by the Patient Demographics Supplier	
Data Type	HD	Hierarchic Designator
Conformance	C	Value (no nulls) must be included when and as described in the MSH-5 Usage Notes above
Repetitions	N	Does not repeat
Code Domain	n/a	Free text



Identifier	MSH-6 Receiving Facility	
Description	Identification of Receiving Facility for this message	
Source – where created	Sending Software Application within the Patient Demographics Consumer	
Rationale – where used	Contains information that identifies the facility or organization that is receiving the message	
Data Type	HD	Hierarchic Designator
Conformance	R	Value must always be supplied (no nulls)
Repetitions	N	Does not repeat
Code Domain	n/a	Free text

Identifier	MSH-7 Date / Time of Message	
Description	Date/Time of this message	
Source – where created	Sending Software Application within the Patient Demographics Consumer	
Rationale – where used	Receiving system within the Patient Demographics Supplier uses as needed	
Data Type	TS	Time Stamp
Conformance	R	Value must always be supplied (no nulls)
Repetitions	N	Does not repeat
Code Domain	n/a	Formatted text

Identifier	MSH-9.1 Message Type: Message Code	
Description	Message Code for this message	
Source – where created	Sending Software Application within the Patient Demographics Consumer	
Rationale – where used	Receiving system within the Patient Demographics Supplier uses as needed	
Data Type	ID	Coded value from pre-determined domain list
Conformance	R	Value must always be supplied (no nulls)
Repetitions	N	Does not repeat
Code Domain	fixed value	Only the value QBP may be used





Identifier	MSH-9.2 Message Type: Trigger Event	
Description	Trigger Event for this message	
Source – where created	Sending Software Application within the Patient Demographics Consumer	
Rationale – where used	Receiving system within the Patient Demographics Supplier uses as needed	
Data Type	ID	Coded value from pre-determined domain list
Conformance	R	Value must always be supplied (no nulls)
Repetitions	N	Does not repeat
Code Domain	fixed value	Only the value Q22 may be used

Identifier	MSH-9.3 Message Type: Message Structure	
Description	Message Structure for this message	
Source – where created	Sending Software Application within the Patient Demographics Consumer	
Rationale – where used	Receiving system within the Patient Demographics Supplier uses as needed	
Data Type	ID	Coded value from pre-determined domain list
Conformance	O	Value may be included at sender's discretion
Repetitions	N	Does not repeat
Code Domain	fixed value	Only the value QBP_Q22 may be used



<b>Identifier</b>	MSH-10 Message Control ID	
<b>Description</b>	Message Control ID for this message	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Consumer	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Supplier uses when responding to this message	
<b>Data Type</b>	ST	String
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	n/a	Formatted text

<b>Identifier</b>	MSH-12 Version ID	
<b>Description</b>	Version ID used by this message	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Consumer	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Supplier uses as needed	
<b>Data Type</b>	VID	Version Identifier
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	fixed value	Only the value 2.5 may be used

<b>Identifier</b>	MSH-13 Sequence Number	
<b>Description</b>	Sequence Number of this message	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Consumer	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Supplier uses as needed	
<b>Data Type</b>	NM	Numeric
<b>Conformance</b>	O	Value may be included at sender's discretion
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	n/a	Incrementing value used as message sequence number

330



HL7 Segment – QPD – Query Parameter Definition

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	250	CE	R		0471	01375	Message Query Name
2	32	ST	R			00696	Query Tag
3		QIP	R			00696	Demographics Fields
4							not used; must be empty
5							not used; must be empty
6							not used; must be empty
7							not used; must be empty
8		CX	O			01435	What Domains Returned

335

<b>Identifier</b>	QPD-1 Message Query Name	
<b>Description</b>	Name of Query for this message	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Consumer	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Supplier uses as needed	
<b>Data Type</b>	ST	String
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	free text	Only the value PATIENT DEMOGRAPHICS QUERY may be used



Identifier	QPD-2 Message Query Tag	
Description	Tag of Query for this message	
Source – where created	Sending Software Application within the Patient Demographics Consumer	
Rationale – where used	Receiving system within the Patient Demographics Supplier uses when responding to this message	
Data Type	ST	String
Conformance	R	Value must always be supplied (no nulls)
Repetitions	N	Does not repeat
Code Domain	free text	Unique value that identifies each specific query message; an incrementing number may be used if desired

QPD-3 Usage Notes: QPD-3 consists of one or more occurrences, each of which contains two components. QPD-3.1 identifies data elements from patient identifier list, PID-3, that are to be matched against, and QPD-3.2 contains the value that is to be matched with that patient identifier list data element. The only allowable values and formats for QPD-3.1 are listed in the following table.

QPD-3.1	Data Element
@PID.3.1	Patient ID Number
@PID.5.1	Patient Surname / Last Name
@PID.5.2	Patient Given Name / First Name
@PID.5.3	Patient Middle Names
@PID.7	Patient Date/Time of Birth
@PID.8	Patient Administrative Sex
@PID.11.1	Patient Street Address Line 1
@PID.11.3	Patient Address City
@PID.11.4	Patient Address State / Province
@PID.11.5	Patient Address ZIP / Postal Code
@PID.11.6	Patient Address Country
@PID.13	Patient Home Telephone Number
@PID.18.1	Patient Account Number
@PID.19	SSN Number – Patient



<b>Identifier</b>	QPD-3.1 Demographic Fields: Data Elements to be Matched	
<b>Description</b>	One or more patient identifier list data elements that are to be matched against values in QPD-3.2 in the search for patient demographics	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Consumer	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Supplier uses as needed	
<b>Data Type</b>	ST	String
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	Y	Must be at least one occurrence, but may repeat, along with other components of QPD-3, for each data element to be matched
<b>Code Domain</b>	see left column of table above	Only values itemized may be used precisely as shown; <i>e.g.</i> , @PID.18.1

<b>Identifier</b>	QPD-3.2 Demographic Fields: Values to be Matched	
<b>Description</b>	A value to be matched against the data element specified in QPD-3.1	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Consumer	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Supplier uses as needed	
<b>Data Type</b>	ST	String
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	Y	Must be at least one occurrence, but may repeat, along with other components of QPD-3, for each data element to be matched
<b>Code Domain</b>	as applicable	Domain, where required, must be the same as used for the data element being matched

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<b>Identifier</b>	QPD-8.4.3      What Domains Returned: Assigning Authority's Universal ID Type	
<b>Description</b>	A value identifying the source of the value used for Patient ID Domain	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Consumer	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Supplier uses as needed	
<b>Data Type</b>	ID	Coded value from code domain list below
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	Y	No occurrences required, but may repeat, along with other components of QPD-8, for each Patient ID Domain the Patient Demographics Consumer wishes to have patient demographic information returned to it by the Patient Demographics Supplier.
<b>Code Domain</b>	"NPI"  "ISO"	One or the other of:  HIPAA National Provider ID  Object Identifier (OID)



Identifier	QPD-8.4.4      What Domains Returned: Assigning Authority's Universal ID	
Description	Used to identify a Patient ID Domain	
Source – where created	Sending Software Application within the Patient Demographics Consumer	
Rationale – where used	Receiving system within the Patient Demographics Supplier uses as needed	
Data Type	ST	String
Conformance	O	Value may be included at the discretion of the sending system within the Patient Demographics Consumer. If not present, all domains will be processed by the Patient Demographics Supplier system.
Repetitions	Y	No occurrences required, but may repeat, along with other components of QPD-8, for each Patient ID Domain the Patient Demographics Consumer wishes to have patient demographic information returned to it by the Patient Demographics Supplier.
Code Domain	See QPD-8.4.3	Free text

355

#### HL7 Segment – RCP – Response Control Parameter

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	1	ID	O		0091	00027	Query Priority

Identifier	RCP-1    Query Priority	
Description	Query Priority for this message	
Source – where created	Sending Software Application within the Patient Demographics Consumer	
Rationale – where used	Receiving system within the Patient Demographics Supplier uses as needed	
Data Type	ID	Coded value from pre-determined domain list
Conformance	R	Value must always be supplied (no nulls)
Repetitions	N	Does not repeat
Code Domain	fixed value	Only the value I (Immediate) may be used



### 360 3.3.2 RESPONSE – SUPPLIER TO CONSUMER

The Patient Demographics response portion of the Patient Demographics Query Transaction uses one HL7 message consisting of up to six segments: MSH, MSA, ERR, QAK, QPD, and PID.

<u>RSP^K22^RSP_K22</u>	<u>Segment Pattern Response</u>
MSH	Message Header
[[SFT]]	Software Segment
MSA	Message Acknowledgement
[ERR]	Error Segment
QAK	Query Acknowledgement
QPD	Query Parameter Definition
[PID]	Patient Identification

365 As a consequence of all patient matching processes completed within the Patient Demographics Supplier, three status cases may occur. These three cases are summarized in the following chart, along with the values that shall be contained in the first field of the MSA segment (MSA-1) and the second field of the QAK segment (QAK-2).

<u>Patient Matching Results Status</u>			
Case #	Case Description / Resulting Patient Demographics Supplier Action	MSA-1 value	QAK-2 value
1	The Patient Demographics Supplier finds (in the Patient Information Source specified in MSH-5) at least one patient record matching the criteria sent in QPD-3. No QPD-8, What Domains Returned, have been included in the query.  One PID segment is returned for each patient found.	AA	OK
2	The Patient Demographics Supplier finds (in the Patient Information Source specified in MSH-5) at least one patient record matching the criteria sent in QPD-3. One or more recognized QPD-8, What Domains Returned, have been included in the query.  One PID segment is returned for each patient found. Only patient data for those Patient ID Domains received in QPD-8 shall be included – as identified by the contents of PID-3.4.2 and PID-3.4.3.	AA	OK





Patient Matching Results Status											
Case #	Case Description / Resulting Patient Demographics Supplier Action	MSA-1 value	OAK-2 value								
3	<p>The Patient Demographics Supplier does not recognize one or more values in QPD-8, What Domains Returned, that have been included in the query.</p> <p>An ERR segment is returned in which the components of ERR-2, Error Location, are valued as follows:</p> <table><tr><td>ERR-2.1, Segment ID</td><td>QPD</td></tr><tr><td>ERR-2.2, Sequence</td><td>1</td></tr><tr><td>ERR-2.3, Field Position</td><td>8</td></tr><tr><td>ERR-2.4, Field Repetition</td><td>occurrence number from QPD-8</td></tr></table> <p>Additionally, ERR-3, HL7 Error Code, is populated with the value 204 (unknown key identifier). Together with the values in ERR-2, this signifies that the Patient Demographics Supplier did not recognize the value in the first component of QPD-8.</p> <p>No PID segments are returned.</p>	ERR-2.1, Segment ID	QPD	ERR-2.2, Sequence	1	ERR-2.3, Field Position	8	ERR-2.4, Field Repetition	occurrence number from QPD-8	AE	AE
ERR-2.1, Segment ID	QPD										
ERR-2.2, Sequence	1										
ERR-2.3, Field Position	8										
ERR-2.4, Field Repetition	occurrence number from QPD-8										

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#### HL7 Segment - MSH - Message Header

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1	1	ST	R			00001	Field Separator
2	4	ST	R			00002	Encoding Characters
3	227	HD	O			00003	Sending Application
4	227	HD	O			00004	Sending Facility
5	227	HD	O			00005	Receiving Application
6	227	HD	O			00006	Receiving Facility
7	26	TS	R			00007	Date/Time Of Message
8	40	ST	O			00008	Security
9	15	MSG	R			00009	Message Type
10	20	ST	R			00010	Message Control ID
11	3	PT	R			00011	Processing ID
12	60	VID	R			00012	Version ID
13	15	NM	O			00013	Sequence Number



Identifier	MSH-1 Field Separator	
Description	Field Separator	
Source – where created	Sending Software Application within the Patient Demographics Supplier	
Rationale – where used	Indicates the character that will separate fields in all segments contained in this message	
Data Type	ST	String
Conformance	R	Value must always be supplied (no nulls)
Repetitions	N	Does not repeat
Code Domain	HL7	Only HL7 default value shall be used

Identifier	MSH-2 Encoding Characters	
Description	Encoding Characters used in this message	
Source – where created	Sending Software Application within the Patient Demographics Supplier	
Rationale – where used	Contains four characters that indicate, in order: Character that separates components of fields Character that indicates repetitions of data Character that identifies a following escape character Character that separates subcomponents of components	
Data Type	ST	String
Conformance	R	Value must always be supplied (no nulls)
Repetitions	N	Does not repeat
Code Domain	HL7	Only HL7 default value shall be used



<b>Identifier</b>	MSH-3 Sending Application	
<b>Description</b>	A value identifying the Patient Information Source that was searched within the Patient Demographics Supplier's environments. Must be the same as the value received in MSH-5 of the Patient Demographics Query	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Consumer uses as needed	
<b>Data Type</b>	HD	Hierarchic Designator
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	n/a	Free text

<b>Identifier</b>	MSH-4 Sending Facility	
<b>Description</b>	Identification of Sending Facility for this message	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Contains information that identifies the facility or organization that is sending the message	
<b>Data Type</b>	HD	Hierarchic Designator
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	n/a	Free text



<b>Identifier</b>	MSH-5 Receiving Application	
<b>Description</b>	Identification of Receiving Application for this message	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Contains information that identifies the software system that is receiving the message	
<b>Data Type</b>	HD	Hierarchic Designator
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	n/a	Free text

<b>Identifier</b>	MSH-6 Receiving Facility	
<b>Description</b>	Identification of Receiving Facility for this message	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Contains information that identifies the facility or organization that is receiving the message	
<b>Data Type</b>	HD	Hierarchic Designator
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	n/a	Free text

<b>Identifier</b>	MSH-7 Date / Time of Message	
<b>Description</b>	Date/Time of this message	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Consumer uses as needed	
<b>Data Type</b>	TS	Time Stamp
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	n/a	Formatted text

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Identifier	MSH-9.1      Message Type: Message Code	
Description	Message Code for this message	
Source – where created	Sending Software Application within the Patient Demographics Supplier	
Rationale – where used	Receiving system within the Patient Demographics Consumer uses as needed	
Data Type	ID	Coded value from pre-determined domain list
Conformance	R	Value must always be supplied (no nulls)
Repetitions	N	Does not repeat
Code Domain	fixed value	Only the value <b>RSP</b> may be used

Identifier	MSH-9.2      Message Type: Trigger Event	
Description	Trigger Event for this message	
Source – where created	Sending Software Application within the Patient Demographics Supplier	
Rationale – where used	Receiving system within the Patient Demographics Consumer uses as needed	
Data Type	ID	Coded value from pre-determined domain list
Conformance	R	Value must always be supplied (no nulls)
Repetitions	N	Does not repeat
Code Domain	fixed value	Only the value <b>K22</b> may be used



Identifier	MSH-9.3 Message Type: Message Structure	
Description	Message Structure for this message	
Source – where created	Sending Software Application within the Patient Demographics Supplier	
Rationale – where used	Receiving system within the Patient Demographics Consumer uses as needed	
Data Type	ID	Coded value from pre-determined domain list
Conformance	R	Value must always be supplied (no nulls)
Repetitions	N	Does not repeat
Code Domain	fixed value	Only the value <b>RSP_K22</b> may be used

Identifier	MSH-10 Message Control ID	
Description	Message Control ID for this message	
Source – where created	Sending Software Application within the Patient Demographics Supplier	
Rationale – where used	Receiving system within the Patient Demographics Consumer uses when responding to this message	
Data Type	ST	String
Conformance	R	Value must always be supplied (no nulls)
Repetitions	N	Does not repeat
Code Domain	n/a	Formatted text

Identifier	MSH-12 Version ID	
Description	Version ID used by this message	
Source – where created	Sending Software Application within the Patient Demographics Supplier	
Rationale – where used	Receiving system within the Patient Demographics Consumer uses as needed	
Data Type	VID	Version Identifier
Conformance	R	Value must always be supplied (no nulls)
Repetitions	N	Does not repeat
Code Domain	fixed value	Only the value <b>2.5</b> may be used



<b>Identifier</b>	MSH-13 Sequence Number	
<b>Description</b>	Sequence Number of this message	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Consumer uses as needed	
<b>Data Type</b>	NM	Numeric
<b>Conformance</b>	O	Value may be included at sender's discretion
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	n/a	Incrementing value used as message sequence number

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#### HL7 Segment - MSA - Message Acknowledgment

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1	2	ID	R		0008	00018	Acknowledgment Code
2	20	ST	R			00010	Message Control ID

<b>Identifier</b>	MSA-1 Acknowledgement Code	
<b>Description</b>	Acknowledgement Code for the Patient Demographics Query message being acknowledged  Values for this field shall be provided as specified in the Patient Matching Results Status chart shown above.	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Consumer uses as needed	
<b>Data Type</b>	ID	Coded value from predetermined list
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	Patient Matching Results Chart	HL7 Acknowledgement Codes

<b>Identifier</b>	MSA-2 Message Control ID	
<b>Description</b>	Message Control ID of the Patient Demographics Query message being responded to	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Consumer	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Consumer uses as needed	



Identifier	MSA-2 Message Control ID	
Data Type	ST	String
Conformance	R	Value must always be supplied (no nulls)
Repetitions	N	Does not repeat
Code Domain	n/a	Formatted text

#### HL7 Segment - ERR –Error

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1	493	ELD	B	Y		00024	Error Code and Location
2	18	ERL	O	Y		01812	Error Location
3	705	CWE	R		0357	01813	HL7 Error Code
4	2	ID	R		0516	01814	Severity
5	705	CWE	O		0533	01815	Application Error Code
6	80	ST	O	Y/10		01816	Application Error Parameter
7	2048	TX	O			01817	Diagnostic Information
8	250	TX	O			01818	User Message
9	20	IS	O	Y	0517	01819	Inform Person Indicator
10	705	CWE	O		0518	01820	Override Type
11	705	CWE	O	Y	0519	01821	Override Reason Code
12	652	XTN	O	Y		01822	Help Desk Contact Point

Segment Usage Note: The ERR Segment and its fields shall only be included in a Patient Demographics Supplier to Patient Demographics Consumer Patient Demographics Response message when required by a Case in the Patient Matching Results Status chart shown above.





<b>Identifier</b>	ERR-2 Error Location	
<b>Description</b>	Location of error(s) as a consequence of processing by the Patient Demographics Supplier of the Patient Demographics Query message received from the Patient Demographics Consumer  Values for each component of this field shall be provided as specified in the Patient Matching Results Status chart shown above.	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Consumer uses as needed	
<b>Data Type</b>	ERL	Error Location
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	Y	May contain an unlimited number of repetitions
<b>Code Domain</b>	Patient Matching Results Chart	Formatted text

<b>Identifier</b>	ERR-3 HL7 Error Code	
<b>Description</b>	Code for Type of Error in processing the Patient Demographics Query message	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Consumer uses as needed	
<b>Data Type</b>	CWE	Coded With Exceptions
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	fixed value	Only the value 204 (unknown key identifier) may be used



<b>Identifier</b>	ERR-4 Severity	
<b>Description</b>	Severity of error in processing the Patient Demographics Query message	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Consumer uses as needed	
<b>Data Type</b>	ID	Coded value from predetermined list
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	Table 0516	Error Severity

405

HL7 Table 0516 – Error Severity

Value	Description	Comment
W	Warning	Transaction successful, but there may issues
I	Information	Transaction was successful but includes information e.g., inform patient
E	Error	Transaction was unsuccessful

<b>Identifier</b>	ERR-7 Diagnostic Information	
<b>Description</b>	Information that may be useful to help desk or other support personnel in diagnosing the error in the Patient Demographics Query message	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Consumer uses as needed	
<b>Data Type</b>	TX	Text Data
<b>Conformance</b>	O	Value may be included at sender's discretion
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	ASCII	Free text



<b>Identifier</b>	ERR-8 User Message	
<b>Description</b>	Text to be displayed to user of system that sent the Patient Demographics Query regarding error in processing	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Human user of Receiving system within the Patient Demographics Consumer uses as needed	
<b>Data Type</b>	TX	Text Data
<b>Conformance</b>	O	Value may be included at sender's discretion
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	ASCII	Free text

410

<b>Identifier</b>	ERR-9 Inform Person Indicator	
<b>Description</b>	Codes indicating who should be informed of error in processing the Patient Demographics Query message	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Human user of receiving system within the Patient Demographics Consumer uses as needed	
<b>Data Type</b>	IS	Coded value from open-ended list
<b>Conformance</b>	O	Value may be included at sender's discretion
<b>Repetitions</b>	Y	May repeat sufficient times to include all appropriate code values
<b>Code Domain</b>	Table 0517	Inform Person Code

User-Defined Table 0517 – Inform Person Code

Value	Description
PAT	Inform patient
NPAT	Do NOT inform patient
USR	Inform user
HD	Inform help desk



<b>Identifier</b>	ERR-10 Override Type	
<b>Description</b>	Codes indicating what type of override may be performed by the at the Patient Demographics Consumer system sending the Patient Demographics Query message	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Human user of receiving system within the Patient Demographics Consumer uses as needed	
<b>Data Type</b>	CWE	Coded With Exceptions
<b>Conformance</b>	O	Value may be included at sender's discretion
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	Table 0518	Override Type

415

User-Defined Table 0518 – Override Type

Value	Description	Comment
EXTN	Extension Override	Identifies an override where a service is being performed for longer than the ordered period of time.
INLV	Interval Override	Identifies an override where a repetition of service is being performed sooner than the ordered frequency.
EQV	Equivalence Override	Identifies an override where a service is being performed against an order that the system does not recognize as equivalent to the ordered service.



<b>Identifier</b>	ERR-11 Override Reason Code	
<b>Description</b>	Codes indicating the reason(s) for overriding the message being acknowledged	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Human user of receiving system within the Patient Demographics Consumer uses as needed	
<b>Data Type</b>	CWE	Coded With Exceptions
<b>Conformance</b>	O	Value may be included at sender's discretion
<b>Repetitions</b>	Y	May repeat sufficient times to include all necessary code values
<b>Code Domain</b>	Table 0519	Override Reasons  Note: HL7 version 2.5 has no suggested values for User-Defined Table 0519. As a consequence, Table 0519 is not shown for this Transaction.

<b>Identifier</b>	ERR-12 Help Desk Contact Point	
<b>Description</b>	Telephone, e-mail, facsimile, and other relevant contact numbers for personnel at the Patient Demographics Supplier who can assist in resolving any errors	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Human user of Receiving system within the Patient Demographics Consumer uses as needed	
<b>Data Type</b>	XTN	Extended Telecommunications Number
<b>Conformance</b>	O	Value may be included at sender's discretion
<b>Repetitions</b>	Y	May repeat to include all applicable contact points
<b>Code Domain</b>	n/a	Free text

420



# HL7 Segment – QAK – Query Acknowledgment

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	32	ST	C			00696	Query Tag
2	2	ID	O		0208	00708	Query Response Status
3	250	CE	O		0471	01375	Message Query Name
4	10	NM	O			01434	Hit Count
5	10	NM	O			01622	This payload

<b>Identifier</b>	QAK-2 Query Response Status	
<b>Description</b>	<p>Status of processing by the Patient Demographics Supplier of the Patient Demographics Query message received from the Patient Demographics Consumer</p> <p>Values for this field shall be provided as specified in the Patient Matching Results Status chart shown above.</p>	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Consumer uses as needed	
<b>Data Type</b>	ID	Coded value from code domain list below
<b>Conformance</b>	R	Value must always be supplied (no nulls)
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	Patient Matching Results Chart	String



Identifier	QAK-3 Message Query Name	
Description	Name of Query that caused this response message to be sent	
Source – where created	Sending Software Application within the Patient Demographics Supplier as received from the Patient Demographics Consumer's query message	
Rationale – where used	Receiving system within the Patient Demographics Consumer uses as needed	
Data Type	ST	String
Conformance	O	Value may be included at sender's discretion
Repetitions	N	Does not repeat
Code Domain	free text	Only the value <b>PATIENT DEMOGRAPHICS QUERY</b> may be used; see field QPD-1

Identifier	QAK-4 Hit Count Total	
Description	Total number of patient identifier matches found by the Patient Demographics Supplier when processing the query	
Source – where created	Sending Software Application within the Patient Demographics Supplier	
Rationale – where used	Receiving system within the Patient Demographics Consumer uses as needed	
Data Type	NM	Numeric
Conformance	→	<b>Required</b> if Hit Count Total is zero; <i>i.e.</i> , no PID segments are included in message  <b>Optional</b> if Hit Count is greater than zero
Repetitions	N	Does not repeat
Code Domain	free text	Numeric value



<b>Identifier</b>	QAK-5 This Payload	
<b>Description</b>	Total number of patient identifier matches sent to the Patient Demographics Consumer by the Patient Demographics Supplier in this message; <i>i.e.</i> , the number of PID segment repetitions included in this message	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Consumer uses as needed	
<b>Data Type</b>	NM	Numeric
<b>Conformance</b>	O	Value may be included at sender's discretion
<b>Repetitions</b>	N	Does not repeat
<b>Code Domain</b>	free text	Numeric value

430

#### HL7 Segment – QPD – Query Parameter Definition

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
Sending Software Application within the Patient Demographics Supplier shall send an unaltered replica of the QPD segment received from the Patient Demographics Consumer as part of the query message back to the Sending Software Application within the Patient Demographics Consumer							

#### HL7 Segment - PID - Patient Identification

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	R			00104	Set ID - PID
2	20	CX	X			00105	Patient ID
3	250	CX	R	Y		00106	Patient Identifier List
4	20	CX	X	Y		00107	Alternate Patient ID - PID
5	250	XP	R	Y		00108	Patient Name
6	250	XP	RE	Y		00109	Mother's Maiden Name
7	26	TS	RE			00110	Date/Time of Birth
8	1	IS	RE		0001	00111	Administrative Sex
9	250	XP	X	Y		00112	Patient Alias
10	250	CE	RE	Y	0005	00113	Race
11	250	XAD	O	Y		00114	Patient Address
12	4	IS	X		0289	00115	County Code
13	250	XTN	O	Y		00116	Phone Number - Home
14	250	XTN	X	Y		00117	Phone Number - Business
15	250	CE	X		0296	00118	Primary Language
16	250	CE	X		0002	00119	Marital Status
17	250	CE	X		0006	00120	Religion





SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
18	250	CX	RE			00121	Patient Account Number
19	16	ST	X			00122	SSN Number - Patient
20	25	DLN	X			00123	Driver's License Number - Patient
21	250	CX	X	Y		00124	Mother's Identifier
22	250	CE	O	Y	0189	00125	Ethnic Group

Segment Usage Note: The PID Segment and its fields shall only be included in a Patient Demographics Supplier to Patient Demographics Consumer Patient Demographics Response message when required by a Case in the Patient Matching Results Status chart shown above.

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Identifier	PID-1 Set ID	
Description	Sequence numbers of patients being identified.	
Source – where created	Sending Software Application within the Patient Demographics Supplier	
Rationale – where used	Receiving system within the Patient Demographics Consumer uses as needed	
Data Type	SI	Sequence Identifier
Conformance	R	Value must always be supplied (no nulls)
Repetitions	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched
Code Domain	fixed value	A monotonically incrementing number, starting with 1



<b>Identifier</b>	PID-3.1 Patient Identifier List: ID Number	
<b>Description</b>	Full Identification Number of Patient, including all check digits and other qualifiers	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Consumer uses as needed	
<b>Data Type</b>	ST	String
<b>Conformance</b>	RE	Value must be supplied when data is available
<b>Repetitions</b>	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched Component itself may also repeat, along with other components of PID-3, for each ID Number the Patient Demographics Supplier conveys for each matched patient
<b>Code Domain</b>	n/a	Free text

<b>Identifier</b>	PID-3.4.2 Patient Identifier List: Assigning Authority's Universal ID	
<b>Description</b>	A value identifying the organization or facility that assigned the patient ID Number	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Consumer uses as needed	
<b>Data Type</b>	ST	String
<b>Conformance</b>	RE	Value must be supplied when data is available
<b>Repetitions</b>	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched Component itself may also repeat, along with other components of PID-3, for each ID Number the Patient Demographics Supplier conveys for each matched patient
<b>Code Domain</b>	See PID-3.4.3	Free text



<b>Identifier</b>	PID-3.4.3 Patient Identifier List: Assigning Authority's Universal ID Type	
<b>Description</b>	A value identifying the source of the value used for Assigning Authority's Universal ID	
<b>Source – where created</b>	Sending Software Application within the Patient Demographics Supplier	
<b>Rationale – where used</b>	Receiving system within the Patient Demographics Consumer uses as needed	
<b>Data Type</b>	ID	Coded value from code domain list below
<b>Conformance</b>	RE	Value must be supplied when data is available
<b>Repetitions</b>	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched Component itself may also repeat, along with other components of PID-3, for each ID Number the Patient Demographics Supplier conveys for each matched patient
<b>Code Domain</b>	"NPI"  "ISO"	One or the other of:  HIPAA National Provider ID  Object Identifier (OID)



<b>Identifier</b>	PID-5.1 Patient Name: Family Name Surname / Last Name Surname	
<b>Description</b>	Family / last name surname of patient being identified.	
<b>Source – where created</b>	Sending Software Application	
<b>Rationale – where used</b>	Receiving system uses as needed	
<b>Data Type</b>	FN	Family Name
<b>Conformance</b>	RE	Value must be supplied when data is available
<b>Repetitions</b>	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched Component itself may also repeat, along with other components of PID-5, for each ID Number the Patient Demographics Supplier conveys for each matched patient
<b>Code Domain</b>	n/a	Free text

<b>Identifier</b>	PID-5.2 Patient Name: Given Name / First Name	
<b>Description</b>	Given / first name of patient being identified.	
<b>Source – where created</b>	Sending Software Application	
<b>Rationale – where used</b>	Receiving system uses as needed	
<b>Data Type</b>	ST	String
<b>Conformance</b>	RE	Value must be supplied when data is available
<b>Repetitions</b>	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched Component itself may also repeat, along with other components of PID-5, for each ID Number the Patient Demographics Supplier conveys for each matched patient
<b>Code Domain</b>	n/a	Free text



Identifier	PID-5.3 Patient Name: Middle Names	
Description	Middle names of patient being identified.	
Source – where created	Sending Software Application	
Rationale – where used	Receiving system uses as needed	
Data Type	ST	String
Conformance	RE	Value(s) must be supplied when data is available. If more than one middle name is available, all available middle names shall be repeated within this data element
Repetitions	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched  Component itself may also repeat, along with other components of PID-5, for each ID Number the Patient Demographics Supplier conveys for each matched patient
Code Domain	n/a	Free text

Identifier	PID-5.4 Patient Name: Name Suffix	
Description	Name suffix of patient being identified.	
Source – where created	Sending Software Application	
Rationale – where used	Receiving system uses as needed	
Data Type	ST	String
Conformance	RE	Value(s) must be supplied when data is available. If more than one suffix is available, all available suffixes shall be repeated within this data element
Repetitions	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched  Component itself may also repeat, along with other components of PID-5, for each ID Number the Patient Demographics Supplier conveys for each matched patient
Code Domain	n/a	Free text

Identifier	PID-5.5 Patient Name: Name Prefix / Title	
Description	Name prefix / title of patient being identified.	
Source – where	Sending Software Application	



created		
Rationale – where used	Receiving system uses as needed	
Data Type	ST	String
Conformance	RE	Value(s) must be supplied when data is available. If more than one prefix / title is available, all available prefixes and titles shall be repeated within this data element
Repetitions	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched  Component itself may also repeat, along with other components of PID-5, for each ID Number the Patient Demographics Supplier conveys for each matched patient
Code Domain	n/a	Free text

Identifier	PID-5.7 Patient Name: Name Type Code	
Description	Type of patient name being identified.	
Source – where created	Sending Software Application	
Rationale – where used	Receiving system uses as needed	
Data Type	ID	Coded value from code domain list below
Conformance	RE	Value must be supplied when data is available
Repetitions	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched  Component itself may also repeat, along with other components of PID-5, for each ID Number the Patient Demographics Supplier conveys for each matched patient
Code Domain	Table 0200	Name Type

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HL7 Table 0200 - Name Type

Value	Description
A	Alias Name
B	Name at Birth
C	Adopted Name
D	Display Name
I	Licensing Name
L	Legal Name
M	Maiden Name
N	Nickname / "Call me" Name/Street Name
S	Coded Pseudo-Name to ensure anonymity
T	Indigenous/Tribal/Community Name



Value	Description
U	Unspecified

Identifier	PID-6.1 Mother's Maiden Name: Family Name / Last Name Surname	
Description	Mother's Maiden Family Name Surname / Mother's Maiden Last Name Surname of patient being identified. Only one mother's maiden name per message is permitted by this specification.	
Source – where created	Sending Software Application	
Rationale – where used	Receiving system uses as needed	
Data Type	FN	Family Name
Conformance	RE	Value must be supplied when data is available
Repetitions	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched Component itself may not repeat
Code Domain	n/a	Free text



Identifier	PID-7 Date/Time of Birth	
Description	Date and time patient was born.	
Source – where created	Sending Software Application	
Rationale – where used	Receiving system uses as needed	
Data Type	TS	Time Stamp
Conformance	RE	Value must be supplied when data is available
Repetitions	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched
Code Domain	n/a	Free text

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Identifier	PID-8 Administrative Sex	
Description	Patient's gender as commonly used	
Source – where created	Sending Software Application	
Rationale – where used	Receiving system uses as needed	
Data Type	IS	Coded value from open-ended list
Conformance	RE	Value must be supplied when data is available
Repetitions	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched
Code Domain	Table 0001	Administrative Sex

User-Defined Table 0001 - Administrative Sex

Value	Description
F	Female
M	Male
O	Other
U	Unknown
A	Ambiguous
N	Not applicable

Identifier	PID-10 Race
Description	Race of patient being identified.





Source – where created	Sending Software Application	
Rationale – where used	Receiving system uses as needed	
Data Type	CE	Coded element: first triplet shall be populated from table shown below, second triplet from listed alternate source
Conformance	RE	Value must be supplied when data is available
Repetitions	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched Values may also repeat sufficient times to include all appropriate code values
Code Domains	Table 0005 alternate source	Race  U. S. Government Race and Ethnicity Codes: available from Health Information and Surveillance Systems Board Centers for Disease Control and Prevention Mailstop C08 1600 Clifton Road, NE Atlanta, Georgia 30333

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User-Defined Table 0005 - Race

Value	Description
1002-5	American Indian or Alaska Native
2028-9	Asian
2054-5	Black or African American
2076-8	Native Hawaiian or Other Pacific Islander
2106-3	White
2131-1	Other Race



<b>Identifier</b>	PID-11.1 Patient Address: Street Address Line 1	
<b>Description</b>	Patient's Postal Service Street Address, first line	
<b>Source – where created</b>	Sending Software Application	
<b>Rationale – where used</b>	Receiving system uses as needed	
<b>Data Type</b>	SAD	Street Address
<b>Conformance</b>	RE	Value must be supplied when data is available
<b>Repetitions</b>	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched Component itself may also repeat, along with other components of PID-11, for each ID Number the Patient Demographics Supplier conveys for each matched patient
<b>Code Domain</b>	n/a	Free text that shall contain structure number and street where structure is located as listed in the United States, Canada, or other country's standardized address listings



Identifier	PID-11.2 Patient Address: Other Designation	
Description	Patient's Postal Service Street Address, second line	
Source – where created	Sending Software Application	
Rationale – where used	Receiving system uses as needed	
Data Type	ST	String
Conformance	RE	Value must be supplied when data is available
Repetitions	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched Component itself may also repeat, along with other components of PID-11, for each ID Number the Patient Demographics Supplier conveys for each matched patient
Code Domain	n/a	Free text that shall contain additional structure address information as listed in the United States, Canada, or other country's standardized address listings

Identifier	PID-11.3 Patient Address: City	
Description	Patient's Postal Service City Name	
Source – where created	Sending Software Application	
Rationale – where used	Receiving system uses as needed	
Data Type	ST	String
Conformance	RE	Value must be supplied when data is available
Repetitions	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched Component itself may also repeat, along with other components of PID-11, for each ID Number the Patient Demographics Supplier conveys for each matched patient
Code Domain	n/a	Free text that shall contain city name as listed in the United States, Canada, or other country's standardized address listings

Identifier	PID-11.4 Patient Address: State / Province	
Description	Patient's Postal Service State / Province Name	
Source – where created	Sending Software Application	



<b>Rationale – where used</b>	Receiving system uses as needed	
<b>Data Type</b>	ST	String
<b>Conformance</b>	RE	Value must be supplied when data is available
<b>Repetitions</b>	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched Component itself may also repeat, along with other components of PID-11, for each ID Number the Patient Demographics Supplier conveys for each matched patient
<b>Code Domain</b>	n/a	Free text that shall contain state / province name as listed in the United States, Canada, or other country's standardized address listings

<b>Identifier</b>	PID-11.5 Patient Address: ZIP / Postal Code	
<b>Description</b>	Patient's Postal Service ZIP / Postal Code	
<b>Source – where created</b>	Sending Software Application	
<b>Rationale – where used</b>	Receiving system uses as needed	
<b>Data Type</b>	ST	String
<b>Conformance</b>	RE	Value must be supplied when data is available
<b>Repetitions</b>	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched Component itself may also repeat, along with other components of PID-11, for each ID Number the Patient Demographics Supplier conveys for each matched patient
<b>Code Domain</b>	n/a	Free text that shall contain ZIP / postal code as listed in the United States, Canada, or other country's standardized address listings

<b>Identifier</b>	PID-11.6 Patient Address: Country	
<b>Description</b>	Patient's Postal Service Country Name	
<b>Source – where created</b>	Sending Software Application	
<b>Rationale – where used</b>	Receiving system uses as needed	
<b>Data Type</b>	ST	String
<b>Conformance</b>	RE	Value must be supplied when data is available
<b>Repetitions</b>	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched Component itself may also repeat, along with other components of PID-



		11, for each ID Number the Patient Demographics Supplier conveys for each matched patient
<b>Code Domain</b>	<b>ISO-3166</b>	International Standards Organization Codes for Representation of Names and Countries: available from American National Standards Institute 11 West 42 <sup>nd</sup> Street, 13 <sup>th</sup> Floor New York, NY 10036

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<b>Identifier</b>	PID-11.7	Patient Address: Address Type
<b>Description</b>	Type of Address	
<b>Source – where created</b>	Sending Software Application	
<b>Rationale – where used</b>	Receiving system uses as needed	
<b>Data Type</b>	ID	Coded value from code domain list below
<b>Conformance</b>	RE	Value must be supplied when data is available
<b>Repetitions</b>	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched Component itself may also repeat, along with other components of PID-11, for each ID Number the Patient Demographics Supplier conveys for each matched patient
<b>Code Domain</b>	Table 0190	Address Type

HL7 Table 0190 - Address type

Value	Description
BA	Bad address
N	Birth (nee) (birth address, not otherwise specified)
BDL	Birth delivery location (address where birth occurred)
F	Country Of Origin
C	Current Or Temporary
B	Firm/Business
H	Home
L	Legal Address
M	Mailing
O	Office
P	Permanent
RH	Registry home. Refers to the information system, typically managed by a public health agency, that stores patient information such as immunization histories or cancer data, regardless of where the patient obtains services.
BR	Residence at birth (home address at time of birth)

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<b>Identifier</b>	PID-13 Phone Number – Home	
<b>Description</b>	Patient's Home Telephone Number	
<b>Source – where created</b>	Sending Software Application	
<b>Rationale – where used</b>	Receiving system uses as needed	
<b>Data Type</b>	XTN	Extended Telecommunications Number
<b>Conformance</b>	RE	Value must be supplied when data is available
<b>Repetitions</b>	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched  Values may also repeat to include all appropriate telephone numbers. If values repetition occurs, then first occurrence shall be the primary telephone number used for patient contact.
<b>Code Domain</b>	n/a	Free text

<b>Identifier</b>	PID-18.1 Patient Account Number: ID Number	
<b>Description</b>	Full Account Number of Patient, including all check digits and other qualifiers	
<b>Source – where created</b>	Sending Software Application	
<b>Rationale – where used</b>	Receiving system uses as needed	
<b>Data Type</b>	ST	String
<b>Conformance</b>	RE	Value must be supplied when data is available
<b>Repetitions</b>	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched  Component itself may also repeat, along with other components of PID-18, for each ID Number the Patient Demographics Supplier conveys for each matched patient
<b>Code Domain</b>	n/a	Free text



<b>Identifier</b>	PID-18.4.2 Patient Account Number: Assigning Authority's Universal ID	
<b>Description</b>	A value identifying the organization or facility that assigned the patient Account Number	
<b>Source – where created</b>	Sending Software Application	
<b>Rationale – where used</b>	Receiving system uses as needed	
<b>Data Type</b>	ST	String
<b>Conformance</b>	C	Value (no nulls) must be supplied when Account Number is included in message
<b>Repetitions</b>	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched  Component itself may also repeat, along with other components of PID-18, for each ID Number the Patient Demographics Supplier conveys for each matched patient
<b>Code Domain</b>	See PID-18.4.3	Free text

<b>Identifier</b>	PID-18.4.3 Patient Account Number: Assigning Authority's Universal ID Type	
<b>Description</b>	A value identifying the source of the value used for Assigning Authority's Universal ID	
<b>Source – where created</b>	Sending Software Application	
<b>Rationale – where used</b>	Receiving system uses as needed	
<b>Data Type</b>	ID	Coded value from code domain list below
<b>Conformance</b>	C	Value (no nulls) must be supplied when Account Number is included in message
<b>Repetitions</b>	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched  Component itself may also repeat, along with other components of PID-18, for each ID Number the Patient Demographics Supplier conveys for each matched patient
<b>Code Domain</b>	"NPI"  "ISO"	One or the other of:  HIPAA National Provider ID  Object Identifier (OID)



Identifier	PID-19 SSN Number – Patient	
Description	Patient's Social Security Number	
Source – where created	Sending Software Application	
Rationale – where used	Receiving system uses as needed	
Data Type	ST	String
Conformance	RE	Value must be supplied when data is available
Repetitions	N	Does not repeat
Code Domain	United States Social Security Admin.	Free text

Identifier	PID-22 Ethnic Group	
Description	Ancestry of patient being identified.	
Source – where created	Sending Software Application	
Rationale – where used	Receiving system uses as needed	
Data Type	CE	Coded element: first triplet shall be populated from table shown below, second triplet from listed alternate source
Conformance	RE	Value must be supplied when data is available
Repetitions	Y	Must be at least one occurrence, but may repeat, along with other fields of PID, for each patient matched Values may also repeat sufficient times to include all appropriate code values
Code Domains	Table 0189 alternate source	Ethnic Group  U. S. Government Race and Ethnicity Codes: available from Health Information and Surveillance Systems Board Centers for Disease Control and Prevention Mailstop C08 1600 Clifton Road, NE Atlanta, Georgia 30333

User-Defined Table 0189 - Ethnic Group

Value	Description
H	Hispanic or Latino
N	Not Hispanic or Latino
U	Unknown





## 485 4.0 CONSTRAINTS FOR REUSE

There are no constraints regarding use or reuse of this Patient Demographics Query (PDQ) transaction. It is intended for use and reuse wherever Health Level Seven (HL7) messages are suitable to identify patients from a list of potentials.

## 490 5.0 APPENDIX

### 5.1 GLOSSARY

This is the HITSP glossary that spans all the interoperability specifications, which can be found in the following folder on the HITSP site:

495 <http://publicaa.ansi.org/sites/apdl/Documents/Forms/AllItems.aspx?RootFolder=http%3a%2f%2fpublicaa%2eansi%2eorg%2fsites%2fapdl%2fDocuments%2fStandards%20Activities%2fHealthcare%20Informatics%20Technology%20Standards%20Panel>

