Illinois Department of Public Health

I-CARE Local Implementation Guide for HL7 Immunization Messaging

HL7 versions 2.3.1 to 2.5.1

Illinois Department of Public Health

I-CARE

Illinois Cares!

Illinois Comprehensive Automated Immunization Registry Exchange

Last Updated: 3/12/2012

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All Messages

Spec Notes
[] = optional
{} = repeatable
R = required
RE = required but may be empty (in 2.3
O = optional
C = conditional
CE = conditional but may be empty
X = not supported

Batch Messages
VXU-V04 - Vaccination Record Update
ADT-A04 - Register a Patient
ADT-A28 - Add Person Information
ADT-A31 - Update Person Information

Real Time Messages
QBP-Q11 (v2.5.1) - Request Imm History
VXQ-V01 (v2.3.1) - Request Imm History
ADT-A29 - Delete Person Information
ADT-A40 - Merge Patient

Note: differences in v2.3.1 to v2.5.1 will be anotated in the specs.
Specs are based on v2.3.1 and v2.5.1 except where indicated.

Fields that are imported into I-CARE are highlighted in green.

Fields required in order to be imported into I-CARE are hightlighted in red.

Please note that HL7 required fields are in bold but are not necessarily mapped into the I-CARE Registry, but should be present in order to remain HL7 compliant.

**Please note these specifications are subject to change to meet current Illinois Department of Public Health policies.*

VXQ^V01 ***Query for Vaccination Record***

Segment	Cardinality	Usage	Field Name	Comment
MSH	[1..1]	R	Message Header Segment	Every message begins with an MSH.
QRD	[1..1]	R	Query Definition Segment	Every VXQ has one QRD segment.
[QRF]	[0..1]	RE	Query Filter Segment	Every QRD segment in VXQ may have one or less QRF segments.

v2.3.1

Realtime VXQ responses: VXR, VXX, ACK, QCK

VXX^V02 ***Response to Vaccination Query Returning Multiple PID Matches***

Segment	Cardinality	Usage	Field Name	Comment
MSH	[1..1]	R	Message Header Segment	Every message begins with an MSH.
MSA	[1..1]	R	Message Acknowledgment	Every VXX has one MSA segment.
QRD	[1..1]	R	Query Definition Segment	Every VXX has one QRD segment.
[QRF]	[0..1]	RE	Query Filter Segment	May have one or less QRF segments.
{	***PATIENT begin***			
PID	[1..1]	R	Patient Identification Segment	Each Patient Group will have only one PID segment.
[{NK1}]	[0..*]	RE	Next of Kin/Associated Parties	
}	***PATIENT end***			

v2.3.1

Realtime VXQ responses: VXR, VXX, ACK, QCK

VXR^V03 ***Vaccination Record Response***

Segment	Cardinality	Usage	Field Name	Comment
MSH	[1..1]	R	Message Header Segment	Every message begins with an MSH.
MSA	[1..1]	R	Message Acknowledgment	Every VXR has one MSA segment.
QRD	[1..1]	R	Query Definition Segment	Every VXR has one QRD segment.
[QRF]	[0..1]	RE	Query Filter Segment	May have one or less QRF segments.
PID	[1..1]	R	Patient Identification Segment	Every VXR has one PID segment.
[PD1]	[0..1]	RE	Additional Demographics	Every PID segment in VXU may have one or less PD1 segment.
[{NK1}]	[0..*]	RE	Next of Kin/Associated Parties	The PID segment in a VXR may have zero or more NK1 segments.
[	***PATIENT VISIT begin***			
PV1	[0..1]	RE	Patient Visit	The PID segment in a VXR may have zero or one PV1 segment. Subsequent messages regarding the same patient/client may have a different PV1 segment.
[PV2]	[0..1]	X	Patient Visit Additional Information	
]	***PATIENT VISIT end***			
[{	***ORDER begin***			Each VXR may have zero or more Order Groups.
[ORC]	[0..*]	O	Common Order Segment	The PID segment in a VXR may have zero or more ORC segments.
RXA	[1..1]	R	Pharmacy Administration	Each ORC segment in a VXR must have one RXA segment. Every RXA requires an ORC segment.
[RXR]	[0..1]	RE	Pharmacy Route	Every RXA segment in a VXR may have zero or one RXR segments.
[{	***OBSERVATION BEGIN***			
OBX	[0..*]	RE	Observation/Result	Every RXA segment in a VXR may have zero or more OBX segments.
[{NTE}]	[0..1]	RE	Notes (Regarding Immunizations)	Every OBX segment in a VXR may have zero or one NTE segment.
}]	***OBSERVATION END***			
}]	***ORDER end***			

v2.3.1

Realtime VXQ responses: VXR, VXX, ACK, QCK

VXU^V04 ***Unsolicited Vaccination Record Update***

Segment	Cardinality	Usage	Field Name	Comment
MSH	[1..1]	R	Message Header Segment	Every message begins with an MSH.
PID	[1..1]	R	Patient Identification Segment	Every VXU has one PID segment.
[PD1]	[0..1]	RE	Additional Demographics	Every PID segment in VXU may have one or less PD1 segment.
[{NK1}]	[0..*]	RE	Next of Kin/Associated Parties	The PID segment in a VXU may have zero or more NK1 segments.
[	***PATIENT VISIT begin***			
PV1	[0..1]	RE	Patient Visit	The PID segment in a VXU may have zero or one PV1 segment. Subsequent messages regarding the same patient/client may have a different PV1 segment.
[PV2]	[0..1]	X	Patient Visit Additional Information	
]	***PATIENT VISIT end***			
[{	***INSURANCE begin***			Each VXU may have zero or more Insurance Groups.
IN1	[0..1]	X	Insurance	
[IN2]	[0..1]	X	Insurance Additional Information	
[IN3]	[0..1]	X	Insurance Additional Information-Cert.	
}]	***INSURANCE end***			
[{	***ORDER begin***			Each VXU may have zero or more Order Groups.
*ORC	[1..*]	RE	Common Order Segment	The PID segment in a VXU may have zero or more ORC segments.
RXA	[1..1]	R	Pharmacy Administration	Each ORC segment in a VXU must have one RXA segment. Every RXA requires an ORC segment.
[RXR]	[0..1]	RE	Pharmacy Route	Every RXA segment in a VXU may have zero or one RXR segments.
[{	***OBSERVATION BEGIN***			
OBX	[0..*]	RE	Observation/Result	Every RXA segment in a VXU may have zero or more OBX segments.
[{NTE}]	[0..1]	RE	Notes (Regarding Immunizations)	Every OBX segment in a VXU may have zero or one NTE segment.
}]	***OBSERVATION END***			
}]	***ORDER end***			

**While not all immunizations recorded in an immunization message are able to be associated with an order, each RXA must be associated with one ORC, based on HL7 2.5.1 standard. The ORC in v2.3.1 is optional.*

ADT^A01 ***Admit/Visit Notification***

Segment	Cardinality	Usage	Field Name	Comment
MSH	[1..1]	R	Message Header Segment	Every message begins with an MSH.
EVN	[1..1]	R	Event Type	Every ADT has one EVN segment.
PID	[1..1]	R	Patient Identification Segment	Every ADT has one PID segment.
[PD1]	[0..1]	RE	Patient Additional Demographics	Every PID segment in ADT may have zero or one PD1 segment.
[{ROL}]	[0..*]	O	Role	
[{NK1}]	[0..*]	O	Next of Kin/Associated Parties	The PID segment in a ADT may have zero or more NK1 segments.
PV1	[1..1]	R	Patient Visit Information	The PID segment in an ADT must have one PV1 segment.
[PV2]	[0..1]	X	Patient Visit Additional Information	
[{ROL}]	[0..*]	O	Role	
[{DB1}]	[0..*]	X	Disability Information	
[{OBX}]	[0..*]	O	Observation /Result	The PID segment in an ADT may have zero or more OBX segments.
[{AL1}]	[0..*]	X	Allergy Information	
[{DG1}]	[0..*]	X	Diagnosis Information	
[DRG]	[0..*]	X	Diagnosis Related Group	
[{	***PROCEDURE begin***			
PR1	[0..1]	O	Procedures	
[{ROL}]	[0..*]	O	Role	
}]	***PROCEDURE end***			
[{GT1}]	[0..*]	O	Guarantor	
[{	***INSURANCE begin***			
IN1	[0..1]	X	Insurance	
[IN2]	[0..1]	X	Insurance Add'l Information	
[{IN3}]	[0..*]	X	Insurance Add'l Info - Cert	
[{ROL}]	[0..*]	X	Role	
}]	***INSURANCE end***			
[ACC]	[0..1]	X	Accident Information	
[UB1]	[0..1]	X	Universal Bill Information	
[UB2]	[0..1]	X	Universal Bill 92 Information	
[PDA]	[0..1]	X	Patient Death and Autopsy	

ADT^A04 ***Register a Patient***

Segment	Cardinality	Usage	Field Name	Comment
MSH	[1..1]	R	Message Header Segment	Every message begins with an MSH.
EVN	[1..1]	R	Event Type	Every ADT has one EVN segment.
PID	[1..1]	R	Patient Identification Segment	Every ADT has one PID segment.
[PD1]	[0..1]	RE	Patient Additional Demographics	Every PID segment in ADT may have zero or one PD1 segment.
[{ROL}]	[0..*]	O	Role	
[{NK1}]	[0..*]	O	Next of Kin/Associated Parties	The PID segment in a ADT may have zero or more NK1 segments.
PV1	[1..1]	R	Patient Visit Information	The PID segment in an ADT must have one PV1 segment.
[PV2]	[0..1]	X	Patient Visit Additional Information	
[{ROL}]	[0..*]	O	Role	
[{DB1}]	[0..*]	X	Disability Information	
[{OBX}]	[0..*]	O	Observation /Result	The PID segment in an ADT may have zero or more OBX segments.
[{AL1}]	[0..*]	X	Allergy Information	
[{DG1}]	[0..*]	X	Diagnosis Information	
[DRG]	[0..*]	X	Diagnosis Related Group	
[{	***PROCEDURE begin***			
PR1	[0..1]	O	Procedures	
[{ROL}]	[0..*]	O	Role	
}]	***PROCEDURE end***			
[{GT1}]	[0..*]	X	Guarantor	
[{	***INSURANCE begin***			
IN1	[0..1]	X	Insurance	
[IN2]	[0..1]	X	Insurance Add'l Information	
[{IN3}]	[0..*]	X	Insurance Add'l Info - Cert	
[{ROL}]	[0..*]	X	Role	
}]	***INSURANCE end***			
[ACC]	[0..1]	X	Accident Information	
[UB1]	[0..1]	X	Universal Bill Information	
[UB2]	[0..1]	X	Universal Bill 92 Information	
[PDA]	[0..1]	X	Patient Death and Autopsy	

ADT^A05 ***Pre-admit a Patient***

Segment	Cardinality	Usage	Field Name	Comment
MSH	[1..1]	R	Message Header Segment	Every message begins with an MSH.
EVN	[1..1]	R	Event Type	Every ADT has one EVN segment.
PID	[1..1]	R	Patient Identification Segment	Every ADT has one PID segment.
[PD1]	[0..1]	RE	Patient Additional Demographics	Every PID segment in ADT may have zero or one PD1 segment.
[{ROL}]	[0..*]	O	Role	
[{NK1}]	[0..*]	O	Next of Kin/Associated Parties	The PID segment in a ADT may have zero or more NK1 segments.
PV1	[1..1]	R	Patient Visit Information	The PID segment in an ADT must have one PV1 segment.
[PV2]	[0..1]	X	Patient Visit Additional Information	
[{ROL}]	[0..*]	O	Role	
[{DB1}]	[0..*]	X	Disability Information	
[{OBX}]	[0..*]	O	Observation /Result	The PID segment in an ADT may have zero or more OBX segments.
[{AL1}]	[0..*]	X	Allergy Information	
[{DG1}]	[0..*]	X	Diagnosis Information	
[DRG]	[0..*]	X	Diagnosis Related Group	
[{	***PROCEDURE begin***			
PR1	[0..1]	O	Procedures	
[{ROL}]	[0..*]	O	Role	
}]	***PROCEDURE end***			
[{GT1}]	[0..*]	X	Guarantor	
[{	***INSURANCE begin***			
IN1	[0..1]	X	Insurance	
[IN2]	[0..1]	X	Insurance Add'l Information	
[{IN3}]	[0..*]	X	Insurance Add'l Info - Cert	
[{ROL}]	[0..*]	X	Role	
}]	***INSURANCE end***			
[ACC]	[0..1]	X	Accident Information	
[UB1]	[0..1]	X	Universal Bill Information	
[UB2]	[0..1]	X	Universal Bill 92 Information	

ADT^A08 ***Update Patient Information***

Segment	Cardinality	Usage	Field Name	Comment
MSH	[1..1]	R	Message Header Segment	Every message begins with an MSH.
EVN	[1..1]	R	Event Type	Every ADT has one EVN segment.
PID	[1..1]	R	Patient Identification Segment	Every ADT has one PID segment.
[PD1]	[0..1]	RE	Patient Additional Demographics	Every PID segment in ADT may have zero or one PD1 segment.
[{ROL}]	[0..*]	O	Role	
[{NK1}]	[0..*]	O	Next of Kin/Associated Parties	The PID segment in a ADT may have zero or more NK1 segments.
PV1	[1..1]	R	Patient Visit Information	The PID segment in an ADT must have one PV1 segment.
[PV2]	[0..1]	X	Patient Visit Additional Information	
[{ROL}]	[0..*]	O	Role	
[{DB1}]	[0..*]	X	Disability Information	
[{OBX}]	[0..*]	O	Observation /Result	The PID segment in an ADT may have zero or more OBX segments.
[{AL1}]	[0..*]	X	Allergy Information	
[{DG1}]	[0..*]	X	Diagnosis Information	
[DRG]	[0..*]	X	Diagnosis Related Group	
[{	***PROCEDURE begin***			
PR1	[0..1]	O	Procedures	
[{ROL}]	[0..*]	O	Role	
}]	***PROCEDURE end***			
[{GT1}]	[0..*]	X	Guarantor	
[{	***INSURANCE begin***			
IN1	[0..1]	X	Insurance	
[IN2]	[0..1]	X	Insurance Add'l Information	
[{IN3}]	[0..*]	X	Insurance Add'l Info - Cert	
[{ROL}]	[0..*]	X	Role	
}]	***INSURANCE end***			
[ACC]	[0..1]	X	Accident Information	
[UB1]	[0..1]	X	Universal Bill Information	
[UB2]	[0..1]	X	Universal Bill 92 Information	
[PDA]	[0..1]	X	Patient Death and Autopsy	

ADT^A28 ***Add Person Information***

Segment	Cardinality	Usage	Field Name	Comment
MSH	[1..1]	R	Message Header Segment	Every message begins with an MSH.
EVN	[1..1]	R	Event Type	Every ADT has one EVN segment.
PID	[1..1]	R	Patient Identification Segment	Every ADT has one PID segment.
[PD1]	[0..1]	RE	Patient Additional Demographics	Every PID segment in ADT may have zero or one PD1 segment.
[{ROL}]	[0..*]	O	Role	
[{NK1}]	[0..*]	O	Next of Kin/Associated Parties	The PID segment in a ADT may have zero or more NK1 segments.
PV1	[1..1]	R	Patient Visit Information	The PID segment in an ADT must have one PV1 segment.
[PV2]	[0..1]	X	Patient Visit Additional Information	
[{ROL}]	[0..*]	O	Role	
[{DB1}]	[0..*]	X	Disability Information	
[{OBX}]	[0..*]	O	Observation /Result	The PID segment in an ADT may have zero or more OBX segments.
[{AL1}]	[0..*]	X	Allergy Information	
[{DG1}]	[0..*]	X	Diagnosis Information	
[DRG]	[0..*]	X	Diagnosis Related Group	
[{	***PROCEDURE begin***			
PR1	[0..1]	O	Procedures	
[{ROL}]	[0..*]	O	Role	
}]	***PROCEDURE end***			
[{GT1}]	[0..*]	X	Guarantor	
[{	***INSURANCE begin***			
IN1	[0..1]	X	Insurance	
[IN2]	[0..1]	X	Insurance Add'l Information	
[{IN3}]	[0..*]	X	Insurance Add'l Info - Cert	
[{ROL}]	[0..*]	X	Role	
}]	***INSURANCE end***			
[ACC]	[0..1]	X	Accident Information	
[UB1]	[0..1]	X	Universal Bill Information	
[UB2]	[0..1]	X	Universal Bill 92 Information	

ADT^A29^ADT_A21 Delete Person Information

Segment	Cardinality	Usage	Field Name	Comment
MSH	[1..1]	R	Message Header Segment	Every message begins with an MSH.
EVN	[1..1]	R	Event Type	Every ADT has one EVN segment.
PID	[1..1]	R	Patient Identification Segment	Every ADT has one PID segment.

ADT^A31 ***Update Person Information***

Segment	Cardinality	Usage	Field Name	Comment
MSH	[1..1]	R	Message Header Segment	Every message begins with an MSH.
EVN	[1..1]	R	Event Type	Every ADT has one EVN segment.
PID	[1..1]	R	Patient Identification Segment	Every ADT has one PID segment.
[PD1]	[0..1]	RE	Patient Additional Demographics	Every PID segment in ADT may have zero or one PD1 segment.
[{ROL}]	[0..*]	O	Role	
[{NK1}]	[0..*]	O	Next of Kin/Associated Parties	The PID segment in a ADT may have zero or more NK1 segments.
PV1	[1..1]	R	Patient Visit Information	The PID segment in an ADT must have one PV1 segment.
[PV2]	[0..1]	X	Patient Visit Additional Information	
[{ROL}]	[0..*]	O	Role	
[{DB1}]	[0..*]	X	Disability Information	
[{OBX}]	[0..*]	O	Observation /Result	The PID segment in an ADT may have zero or more OBX segments.
[{AL1}]	[0..*]	X	Allergy Information	
[{DG1}]	[0..*]	X	Diagnosis Information	
[DRG]	[0..*]	X	Diagnosis Related Group	
[{	***PROCEDURE begin***			
PR1	[0..1]	O	Procedures	
[{ROL}]	[0..*]	O	Role	
}]	***PROCEDURE end***			
[{GT1}]	[0..*]	X	Guarantor	
[{	***INSURANCE begin***			
IN1	[0..1]	X	Insurance	
[IN2]	[0..1]	X	Insurance Add'l Information	
[{IN3}]	[0..*]	X	Insurance Add'l Info - Cert	
[{ROL}]	[0..*]	X	Role	
}]	***INSURANCE end***			
[ACC]	[0..1]	X	Accident Information	
[UB1]	[0..1]	X	Universal Bill Information	
[UB2]	[0..1]	X	Universal Bill 92 Information	

ADT^A40^ADT_A39 Merge Patient - Patient Identifier List

Segment	Cardinality	Usage	Field Name	Comment
MSH	[1..1]	R	Message Header Segment	Every message begins with an MSH.
EVN	[1..1]	R	Event Type	Every ADT has one EVN segment.
{	***PATIENT begin***			
PID	[1..1]	R	Patient Identification Segment	Every ADT has one PID segment.
MRG	[1..1]	R	Merge Information	
}	***PATIENT end***			

ADT^A47 ***Change Patient Identifier List***

Segment	Cardinality	Usage	Field Name	Comment
MSH	[1..1]	R	Message Header Segment	Every message begins with an MSH.
EVN	[1..1]	R	Event Type	Every ADT has one EVN segment.
PID	[1..1]	R	Patient Identification Segment	Every ADT has one PID segment.
[PD1]	[0..1]	RE	Patient Additional Demographics	Every PID segment in ADT may have zero or one PD1 segment.
MRG	[1..1]	R	Merge Information	Every ADT has one MRG segment.

ACK^varies^ACK ***General Acknowledgment***

Segment	Cardinality	Usage	Field Name	Comment
MSH	[1..1]	R	Message Header Segment	Every message begins with an MSH.
MSA	[1..1]	R	Message Acknowledgment	Every ACK has one MSA segment.
[{ERR}]	[0..*]	O	Error	Include if there are errors.

QCK^Q02 ***Query General Acknowledgment***

Segment	Cardinality	Usage	Field Name	Comment
MSH	[1..1]	R	Message Header Segment	Every message begins with an MSH.
MSA	[1..1]	R	Message Acknowledgment	Every ACK has one MSA segment.
[ERR]	[0..1]	O	Error	Include if there are errors.
[QAK]	[0..1]	O	Query Acknowledgment	Include if there are errors.

v2.3.1

Realtime VXQ responses: VXR, VXX, ACK, QCK

QBP^Q11 ***Request Immunization History***

Segment	Cardinality	Usage	Field Name	Comment
MSH	[1..1]	R	Message Header Segment	Every message begins with an MSH.
QPD	[1..1]	R	Query Parameter Definition	Every QBP has one QPD segment.
[	***QBP begin***			
[…]	[1..*]	R		The Query Profile will specify the list of fields and their components in the order that they will be expected for this query.
]	***QBP end***			
RCP	[1..1]	R	Response Control Parameter	The Query Profile will list the segments that are expected to be returned in response to this query.

v2.5.1

Realtime QBP responses: RSP, ACK

RSP^K11 ***Return Candidate List***

Segment	Cardinality	Usage	Field Name	Comment
MSH	[1..1]	R	Message Header Segment	Every message begins with an MSH.
MSA	[1..1]	R	Message Acknowledgment	Every RSP has one MSA segment.
[ERR]	[0..1]	O	Error	Include if there are errors.
QAK	[1..1]	R	Query Acknowledgment	
QPD	[1..1]	R	Query Parameter Definition	This segment echoes the Query Parameter Definition Segment sent in the requesting query.
[	***QBP begin***			
…	[0..1]	O		The specified segments and their contents as specified in the Segment Pattern from Query Profile, are returned here. May be null if no records returned.
]	***QBP end***			

v2.5.1

Realtime QBP responses: RSP, ACK

Segment	Field	Length	Type	Req/Opt	RP/#	Table	Item #	Element Name	Comment	Mapped
MSH	**1**	**1**	**ST**	**R**	**[1..1]**		**00001**	**Field Separator**	**The MSH.1 field shall be |**	
MSH	**2**	**4**	**ST**	**R**	**[1..1]**		**00002**	**Encoding Characters**	**The MSH.2 field shall be ^~\&**	
MSH	3		HD	O	[0..1]	0361	00003	Sending Application		
MSH	**4**		**HD**	**R**	**[0..1]**	**0362**	**00004**	**Sending Facility**		**Y**
MSH	5		HD	O	[0..1]	0361	00005	Receiving Application		
MSH	6		HD	O	[0..1]	0362	00006	Receiving Facility		
MSH	**7**		**TS**	**R**	**[1..1]**		**00007**	**Date/Time of Message**	**YYYYMMDDHHMM[SS[.S[S[S[S]]]]]+/- ZZZZ**	
MSH	8	40	ST	O	[0..1]		00008	Security		
MSH	**9**	**15**	**MSG**	**R**	**[1..1]**	**0076 0003**	**00009**	**Message Type**		
MSH	**10**	**20**	**ST**	**R**	**[1..1]**		**00010**	**Message Control ID**		
MSH	**11**	**3**	**PT**	**R**	**[1..1]**		**00011**	**Processing ID**		
MSH	**12**		**VID**	**R**	**[1..1]**	**0104**	**00012**	**Version ID**	**2.3.1 or 2.5.1**	**Y**
MSH	13	15	NM	O	[0..1]		00013	Sequence Number		
MSH	14	180	ST	O	[0..1]		00014	Continuation Pointer		
MSH	15	2	ID	O	[0..1]	0155	00015	Accept Acknowledgement Type		
MSH	16	2	ID	O	[0..1]	0155	00016	Application Acknowledgement Type	AL-always, NE-Never, ER-Error/reject only, SU successful completion only	
MSH	17	3	ID	O	[0..1]	0399	00017	Country Code	Use 3 character country code from ISO 3166. If is empty, assume USA	
MSH	18	16	ID	O	[0..1]	0211	00692	Character Set	blank defaults to ASCII printable	
MSH	19		CE	O	[0..1]		00693	Principal Language of Message		
MSH	20	20	ID	O	[0..1]	0356	01317	Alternate Character Set Handling Scheme		
*MSH	21		EI	O	[0..*]		01598	Message Profile Identifier	Required for QBP, RSP. Z31^CDCPHINVS - Return Candidates (RSP) Z34^CDCPHINVS - Return Imm History (RSP) Z32^CDCPHINVS - Request Imm History (QPB)	

**MSH21 is used with v2.5.1*

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comment	Mapped
PID	1	4	SI	RE	[1..1]		00104	Set ID - PID		
PID	2		CX	X	[0..1]		00105	Patient ID		
PID	**3**		**CX**	**R**	**[1..*]**		**00106**	**Patient Identifier List**		Y
PID	4		CX	X	[0..1]		00107	Alternate Patient ID - 00106		
PID	**5**		**XPN**	**R**	**[1..*]**		**00108**	**Patient Name**	**The first repetition shall contain the legal name. Multiple given names or initials are seperated by spaces.**	Y
PID	6		XPN	RE	[0..1]		00109	Mother's Maiden Name		Y
PID	**7**		**TS**	**R**	**[1..1]**		**00110**	**Date/Time of Birth**	**Required, must have month, day and year.**	Y
PID	**8**	**1**	**IS**	**R**	**[0..1]**	**0001**	**00111**	**Administrative Sex**		**Y**
PID	9		XPN	X	[0..1]		00112	Patient Alias	This field should not be used. It was supported in earlier implementations.	
PID	10		CE	RE	[0..*]	0005	00113	Race		Y
PID	**11**		**XAD**	**RE**	**[0..*]**		**00114**	**Patient Address**	**The first repetition should be the primary address. If empty then NK1.4 is required.**	**Y**
PID	12	4	IS	X	[0..1]	0289	00115	County Code	County belongs in the address field.	
PID	13		XTN	RE	[0..*]		00116	Phone Number - Home	The first iteration is considered the primary and will follow this rule: PID13.5-8 will hold the primary number. PID13.1 will be used if PID13.5-8 is not populated. Other comminication types may follow (e.g. fax, cell, e-mail) in its own iteration.	Y
PID	14		XTN	O	[0..1]		00117	Phone Number - Business	PID14.5-8 will hold the primary number. PID14.1 will be used if PID14.5-8 is not populated.	Y
PID	15		CE	O	[0..1]	0296	00118	Primary Language	Use ISO 639.	Y
PID	16		CE	O	[0..1]		00119	Marital Status		
PID	17		CE	O	[0..1]		00120	Religion		
PID	18		CX	O	[0..1]		00121	Patient Account Number		

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comment	Mapped
PID	19	16	ST	X	[0..1]		00122	SSN Number - Patient	Kept for backwards compatibility. It is recommended to use PID.3	Y
PID	20		DLN	X	[0..1]		00123	Driver's License Number - Patient		
PID	21		CX	X	[0..1]		00124	Mother's Identifier		
PID	22		CE	RE	[0..1]	0189	00125	Ethnic Group	First triplet should contain H,N,U if populated. Second triplet should contain government issued code from table xxx, if populated. If both are populated, they must match logically.	
PID	23	60	ST	O	[0..1]		00126	Birth Place	Use may be specified locally.	O
PID	24	1	ID	RE	[0..1]			Multiple Birth Indicator	Y or N	Y
PID	25	2	NM	CE	[0..1]		00128	Birth Order	If multiple births, use person's birth order, with 1 for the first child born and 2 for the second.	Y
PID	26		CE	O	[0..1]	0171	00129	Citizenship		
PID	27		CE	O	[0..1]	0172	00130	Veterans Military Status		
PID	28		CE	O	[0..1]	0212	00739	Nationality		Y
PID	29		TS	RE	[0..1]		00740	Patient Death Date and Time		
PID	30	1	ID	CE	[0..1]	0136	00741	Patient Death Indicator	If patient death date is populated, then this field should be populated.	Y
PID	31	1	ID	O	[0..1]	0136	01535	Identity Unknown Indicator		
PID	32	20	IS	O	[0..1]	0445	01536	Identity Reliability		
PID	33		TS	O	[0..1]		01537	Last Update Date/Time	May be locally specified.	O
PID	34		HD	O	[0..1]		01538	Last Update Facility	Use is locally specified.	O
PID	35		CE	O	[0..1]	0446	01539	Species Code		
PID	36		CE	O	[0..1]	0447	01540	Breed Code		
PID	37		ST	O	[0..1]		01541	Strain		
PID	38		CE	O	[0..1]	0429	01542	Production Class Code		
PID	39		CE	O	[0..1]	0171	01840	Tribal Citizenship		

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comments	Mapped
PD1	1	1	ST	O	[0..1]	0223	00755	Living Dependency		
PD1	2	4	ST	O	[0..1]	0220	00742	Living Arrangement		
PD1	3		HD	O	[0..1]		00756	Patient Primary Facility		
PD1	4		HD	O	[0..1]		00757	Patient Primary Care Provider Name & ID N.		
PD1	5		HD	O	[0..1]	0231	00745	Student Indicator		
PD1	6		HD	O	[0..1]	0295	00753	Handicap		
PD1	7		TS	O	[0..1]	0315	00759	Living Will Code		
PD1	8	40	ST	O	[0..1]	0316	00760	Organ Donor Code		
PD1	9	15	MSG	O	[0..1]	0136	00761	Separate Bill		
PD1	10	20	ST	O	[0..1]		00762	Duplicate Patient		
PD1	11	3	PT	RE	[0..1]	0215	00763	Publicity Code		
PD1	12	60	ID	RE	[0..1]	0136	00744	Protection Indicator*	**ver. 2.5.1** N = consented Y = unconsented null = consented **ver. 2.3.1 & 2.4** N = unconsented Y = consented null = consented	
PD1	13	15	NM	CE	[0..1]		01566	Protection Indicator Effective Date	If protection indicator is valued, then this field should be valued.	
PD1	14	180	ST	O	[0..1]		01567	Place Of Worship		
PD1	15	2	ID	O	[0..1]		01568	Advance Directive Code		
PD1	16	2	ID	RE	[0..1]	0441	01569	Immunization Registry Status		Y
PD1	17	3	ID	CE	[0..1]		01570	Immunization Registry Status Effective Date	If the registry status field is filled, then this field should be valued.	
PD1	18	16	ID	CE	[0..1]		01571	Publicity Code Effective Date	If the publicity code field is filled then this field should be valued.	
PD1	19		CE	O	[0..1]	00140	01572	Military Branch		
PD1	20	20	ID	O	[0..1]	00141	00486	Military Rank/Grade		
PD1	21		EI	O	[0..1]	00142	01573	Military Status		

** Illinois' immunization registry is considered an Opt-Out state registry (patients/guardians un-consent by signing a form to be excluded from the registry.) If PD1 segment is missing or PD1.12 is null then the patient will be considered consented.*

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comments	Mapped
PV1	1	4	SI	O	[0..1]		00131	Set ID - PV1	If populated, this should be 1.	
PV1	**2**	**1**	**IS**	**R**	**[1..1]**	**0004**	**00132**	**Patient Class**		
PV1	3		PL	O	[0..1]		00133	Assigned Patient Location		
PV1	4	2	IS	O	[0..1]	0007	00134	Admission Type		
PV1	5		CX	O	[0..1]		00135	Preadmit Number		
PV1	6		PL	O	[0..1]		00136	Prior Patient Location		
PV1	7		XCN	O	[0..1]	0010	00137	Attending Doctor		
PV1	8		XCN	O	[0..1]	0010	00138	Referring Doctor		
PV1	9		XCN	O	[0..1]	0010	00139	Consulting Doctor		
PV1	10	3	IS	O	[0..1]	0069	00140	Hospital Service		
PV1	11		PL	O	[0..1]		00141	Temporary Location		
PV1	12	2	IS	O	[0..1]	0087	00142	Preadmit Test Indicator		
PV1	13	2	IS	O	[0..1]	0092	00143	Re-admission Indicator		
PV1	14	6	IS	O	[0..1]	0023	00144	Admit Source		
PV1	15	2	IS	O	[0..1]	0009	00145	Ambulatory Status		
PV1	16	2	IS	O	[0..1]	0099	00146	VIP Indicator		
PV1	17		XCN	O	[0..1]	0010	00147	Admitting Doctor		
PV1	18	2	IS	O	[0..1]	0018	00148	Patient Type		
PV1	19		CX	O	[0..1]		00149	Visit Number		
PV1	20		FC	RE	[1..*]	0064	00150	Financial Class	VFC Status	Y
PV1	21	2	IS	O	[0..1]	0032	00151	Charge Price Indicator		
PV1	22	2	IS	O	[0..1]	0045	00152	Courtesy Code		
PV1	23	2	IS	O	[0..1]	0046	00153	Credit Rating		
PV1	24	2	IS	O	[0..1]	0044	00154	Contract Code		
PV1	25	8	DT	O	[0..1]		00155	Contract Effective Date		
PV1	26	12	NM	O	[0..1]		00156	Contract Amount		
PV1	27	3	NM	O	[0..1]		00157	Contract Period		
PV1	28	2	IS	O	[0..1]	0073	00158	Interest Code		
PV1	29	4	IS	O	[0..1]	0110	00159	Transfer to Bad Debt Code		
PV1	30	8	DT	O	[0..1]		00160	Transfer to Bad Debt Date		
PV1	31	10	IS	O	[0..1]	0021	00161	Bad Debt Agency Code		
PV1	32	12	NM	O	[0..1]		00162	Bad Debt Transfer Amount		
PV1	33	12	NM	O	[0..1]		00163	Bad Debt Recovery Amount		
PV1	34	1	IS	O	[0..1]	0111	00164	Delete Account Indicator		
PV1	35	8	DT	O	[0..1]		00165	Delete Account Date		
PV1	36	3	IS	O	[0..1]	0112	00166	Discharge Disposition		
PV1	37		DLD	O	[0..1]	0113	00167	Discharged to Location		
PV1	38		CE	O	[0..1]	0114	00168	Diet Type		
PV1	39	2	IS	O	[0..1]	0115	00169	Servicing Facility		

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comments	Mapped
PV1	40	1	IS	O	[0..1]	0116	00170	Bed Status		
PV1	41	2	IS	O	[0..1]	0117	00171	Account Status		
PV1	42		PL	O	[0..1]		00172	Pending Location		
PV1	43		PL	O	[0..1]		00173	Prior Temporary Location		
PV1	44		TS	O	[0..1]		00174	Admit Date/Time		
PV1	45		TS	O	[0..1]		00175	Discharge Date/Time		
PV1	46	12	NM	O	[0..1]		00176	Current Patient Balance		
PV1	47	12	NM	O	[0..1]		00177	Total Charges		
PV1	48	12	NM	O	[0..1]		00178	Total Adjustments		
PV1	49	12	NM	O	[0..1]		00179	Total Payments		
PV1	50		CX	O	[0..1]	0203	00180	Alternate Visit ID		
PV1	51	1	IS	O	[0..1]	0326	01226	Visit Indicator		
PV1	52		XCN	O	[0..1]	0010	01274	Other Healthcare Provider		

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comments	Mapped
NK1	**1**	**4**	**SI**	**R**	**[1..1]**		**00190**	**Set ID- NK1**		Y
NK1	**2**		**XPN**	**R**	**[1..*]**		**00191**	**Name**	**The first instance is the legal name and is required.**	Y
NK1	**3**		**CE**	**R**	**[1..1]**	**0063**	**00192**	**Relationship**		Y
NK1	4		XAD	RE	[0..*]		00193	Address	The first instance shall be the primary address. Is required if PID.11 is empty.	Y
NK1	5		XTN	RE	[0..*]		00194	Phone Number	The first instance shall be the primary phone number.	Y
NK1	6		XTN	O	[0..*]		00195	Business Phone Number		Y
NK1	7		CE	O	[0..1]	0131	00196	Contact Role		
NK1	8	8	DT	O	[0..1]		00197	Start Date		
NK1	9	8	DT	O	[0..1]		00198	End Date		
NK1	10	60	ST	O	[0..1]		00199	Next of Kin / Associated Parties Job Title		
NK1	11		JCC	O	[0..1]	0327 0328	00200	Next of Kin / Associated Parties Job Code/Class		
NK1	12		CX	O	[0..1]		00201	Next of Kin / Associated Parties Employee Number		
NK1	13		XON	O	[0..1]		00202	Organization Name - NK1		
NK1	14		CE	O	[0..1]	0002	00119	Martial Status		
NK1	15	1	IS	O	[0..1]	0001	00111	Administrative Sex		Y
NK1	16		TS	O	[0..1]		00110	Date/Time of Birth		Y
NK1	17	2	IS	O	[0..1]	0223	00755	Living Dependency		
NK1	18	2	IS	O	[0..1]	0009	00145	Ambulatory Status		
NK1	19		CE	O	[0..1]	0171	00129	Citizenship		
NK1	20		CE	O	[0..1]	0296	00118	Primary Language		Y
NK1	21	2	IS	O	[0..1]	0220	00742	Living Arrangement		
NK1	22		CE	O	[0..1]	0215	00743	Publicity Code		
NK1	23	1	ID	O	[0..1]	0136	00744	Protection Indicator		O
NK1	24	2	IS	O	[0..1]	0231	00745	Student Indicator		
NK1	25		CE	O	[0..1]	0006	00120	Religion		
NK1	26		XPN	O	[0..1]		00746	Mother'S Maiden Name		Y
NK1	27		CE	O	[0..1]	0212	00739	Nationality		Y
NK1	28		CE	O	[0..1]	0189	00125	Ethnic Group		
NK1	29		CE	O	[0..1]	0222	00747	Contact Reason		

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comments	Mapped
NK1	30		XPN	O	[0..1]		00748	Contact Person's Name		
NK1	31		XTN	O	[0..1]		00749	Contact Person's Telephone Number		
NK1	32		XAD	O	[0..1]		00750	Contact Person's Address		
NK1	33		CX	O	[0..1]		00751	Next of Kin/AP's Identifier		
NK1	34	2	IS	O	[0..1]	0311	00752	Job Status		
NK1	35		CE	O	[0..1]	0005	00113	Race		Y
NK1	36	2	IS	O	[0..1]	0295	00753	Handicap		
NK1	37	16	ST	O	[0..1]		00754	Contact Person Social Security #		
NK1	38		ST	O	[0..1]		01905	Next of Kin Birth Place		O
NK1	39	2	IS	O	[0..1]	0099	00146	VIP Indicator		

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comments	Mapped
ORC	**1**	**2**	**ID**	**R**		**0119**	**00215**	**Order Control**	**use RE**	
ORC	2		EI	RE			00216	Placer Order Number		
ORC	3		EI	R			00217	Filler Order Number	Filler Order Number SHOULD be the unique immunization ID of the sending system. See appendix C for usage.	Y
ORC	4		EI	O			00218	Placer Group Number		
ORC	5	2	ID	O		0038	00219	Order Status		
ORC	6	1	ID	O		0121	00220	Response Flag		
ORC	7		TQ	X			00221	Quantity/Timing		
ORC	8		EIP	O			00222	Parent		
ORC	9		TS	O			00223	Date/Time of Transaction		
ORC	10		XCN	RE			00224	Entered By	This is the person that entered this immunization record into the system.	
ORC	11		XCN	O			00225	Verified By		
ORC	12		XCN	RE			00226	Ordering Provider	This is the provider ordering the immunization. It is expected to be empty if the immunization record is transcribed from a historical record.	
ORC	13		PL	O			00227	Enterer's Location		
ORC	14		XTN	O			00228	Call Back Phone Number		
ORC	15		TS	O			00229	Order Effective Date/Time		
ORC	16		CE	O			00230	Order Control Code Reason		
ORC	17		CE	O			00231	Entering Organization	This is the provider organization that entered this record/order.	
ORC	18		CE	O			00232	Entering Device		
ORC	19		XCN	O			00233	Action By		
ORC	20		CE	O		0339	01310	Advanced Beneficiary Notice Code		
ORC	21		XON	O			01311	Ordering Facility Name		
ORC	22		XAD	O			01312	Ordering Facility Address		
ORC	23		XTN	O			01313	Ordering Facility Phone Number		

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comments	Mapped
ORC	24		XAD	O			01314	Ordering Provider Address		
ORC	25		CWE	O			01473	Order Status Modifier		
ORC	26		CWE	O		0552	01641	Advanced Beneficiary Notice Override Reason		
ORC	27		TS	O			01642	Filler's Expected Availability Date/Time		
ORC	28		CWE	O		0177	00615	Confidentiality Code		
ORC	29		CWE	O		0482	01643	Order Type		
ORC	30		CNE	O		0483	01644	Enterer Authorization Mode		
ORC	31		CWE	O			02286	Parent Universal Service Identifier		

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comment	Mapped
QAK	1	32	ST	R	[1..1]		00696	Query Tag		
QAK	2		ID	O	[0..1]	0208	00708	Query Response Status		
QAK	3	2	CE	O	[0..1]	0471	01375	Message Query Name		
QAK	4	10	NM	O	[0..1]		01434	Hit Count		
QAK	5	10	NM	O	[0..1]		01622	This Payload		
QAK	6	10	NM	O	[0..1]		01623	Hits Remaining		

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Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comment	Mapped
QPD	**1**		**CE**	**R**	**[1..1]**	**0471**	**01375**	**Message Query Name**	**Z34^Request Immunization History^HL70471**	
QPD	2	32	ST				00696	Query Tag		
QPD	3		CX	RE	[0..*]			Patientlist	PID-3: Patient Identifier List	Y
QPD	4		XPN	RE	[0..1]			Patientname	PID-5: Patient Name	Y
QPD	5		XPN	RE	[0..1]			Patientmothermaidenname	PID-6: Mother'S Maiden Name	Y
QPD	6	26	TS	RE	[0..1]			Patient Date of Birth	PID-7: Patient Date of Birth	Y
QPD	7	1	IS	RE	[0..1]			Patient Sex	PID-8: Patient Sex	Y
QPD	8		XAD	RE	[0..1]			Patient Address	PID-11: Patient Address	Y
QPD	9		XTN	RE	[0..1]			Patient Home Phone	PID-13: Patient Home Phone	Y
QPD	10	1	ID	RE	[0..1]			Multiple Birth Indicator	PID-24: Multiple Birth Indicator	Y
QPD	11	2	NM	RE	[0..1]			Patient Birth Order	PID-25: Patient Birth Order	Y
QPD	12		TS	RE	[0..1]			Client Last Updated Date	PID-33: Patient Last Update Date	Y
QPD	13		HD	RE	[0..1]			Client Last Update Facility	PID-34: Patient Last Update Faciliity	Y

Patient List QPD-3

ID	ID Type
SS	SS#
MA	Medicaid ID
MC	Medicare ID
BR	Birth Certificate ID
CH	Chart ID
PT	Site Patient ID
PI	ICARE Patient ID

v2.5.1

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comment	Mapped
QRD	**1**	**26**	**TS**	**R**	**[1..1]**		**00025**	**Query Date/Time**		
QRD	**2**	**1**	**ID**	**R**	**[1..1]**		**00026**	**Query Format Code**		
QRD	**3**	**1**	**ID**	**R**	**[1..1]**		**00027**	**Query Priority**		
QRD	**4**	**10**	**ST**	**R**	**[1..1]**		**00028**	**Query ID**		
QRD	5	1	ID	O	[0..1]		00029	Deferred Response Type		
QRD	6	26	TS	O	[0..1]		00030	Deferred Response Date/Time		
QRD	**7**	**10**	**CQ**	**R**	**[1..1]**		**00031**	**Quantity Limited Request**	**25RD**	**Y**
QRD	**8**	**250**	**XCN**	**R**	**[1..1]**		**00032**	**Who Subject Filter**		**Y**
QRD	**8.1**		**ST**		[0..1]			**ID Number**		**Y**
QRD	**8.2**		**ST**		[0..1]			**Patient Last Name**		**Y**
QRD	**8.3**		**ST**		[0..1]			**Patient First Name**		**Y**
QRD	**8.4**		**ST**		[0..1]			**Patient Middle Name**		**Y**
QRD	**9**	**250**	**CE**	**R**	**[1..1]**		**00033**	**What Subject Filter**	**VXI^VACCINE INFO^HL70048**	**Y**
QRD	10	250	CE	R	[1..1]		00034	What Department Data Code		
QRD	11	20	VR	O	[0..1]		00035	What Data Code Value Qual.		
QRD	12	1	ID	O	[0..1]		00036	Query Results Level		

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Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comment	Mapped
QRF	**1**	**20**	**ST**	**R**	**[1..*]**		**00037**	**Where Subject Filter**		
QRF	2	26	TS	O	[0..1]		00038	When Data Start Date/Time		
QRF	3	26	TS	O	[0..1]		00039	When Data End Date/Time		
QRF	4	60	ST	O	[0..*]		00040	What User Qualifier		
QRF	5		ST	RE	[0..1]		00041	Other QRY Subject Filter		Y
QRF	5.1		ST		[0..1]			Patient Social Security Number		Y
QRF	5.2		DT		[0..1]			Patient Birth Date		Y
QRF	5.3		ID		[0..1]			Patient Birth State		
QRF	5.4		ST		[0..1]			Patient Birth Registration Number		Y
QRF	5.5		ST		[0..1]			Patient Medicaid Number		Y
QRF	5.6		PN		[0..1]			Mother’s Name Last^First^Middle		
QRF	5.7		ST		[0..1]			Mother’s Maiden Name		Y
QRF	5.8		ST		[0..1]			Mother’s Social Security Number		
QRF	5.9		PN		[0..1]			Father’s Name Last^First^Middle		
QRF	5.10		ST		[0..1]			Father’s Social Security Number		
QRF	6	12	ID	O	[0..*]	0156	00042	Which Date/Time Qualifier		
QRF	7	12	ID	O	[0..*]	0157	00043	Which Date/Time Status Qualifier		
QRF	8	12	ID	O	[0..*]	0158	00044	Date/Time Selection Qualifier		
QRF	9	60	TQ	O	[0..1]		00694	When Quantity/Timing Qualifier		

v2.3.1

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comment	Mapped
ERR	1		ELD	X	[0..0]		00024	Error Code and Location	Not supported for Version 2.5 and above.	
ERR	2	18	ERL	RE	[0..1]		01812	Error Location	If an error involves the entire message (e.g. the message is not parse-able.) then location has no meaning. In this case, the field is left empty.	
ERR	**3**		**CWE**	**R**	**[1..1]**	**0357**	**01813**	**HL7 Error Code**		
ERR	**4**	**2**	**ID**	**R**	**[1..1]**	**0516**	**01814**	**Severity**		
ERR	5		CWE	O	[0..1]	0533	01815	Application Error Code		
ERR	6	80	ST	O	[0..1]		01816	Application Error Parameter		
ERR	7	2048	TX	O	[0..1]		01817	Diagnostic Information		
ERR	8	250	TX	O	[0..1]		01818	User Message	This field may contain free text that may be displayed to a user. It is not intended for any further processing.	
ERR	9	20	IS	O	[0..1]	0517	01819	Inform Person Indicator		
ERR	10		CWE	O	[0..1]	0518	01820	Override Type		
ERR	11		CWE	O	[0..1]	0519	01821	Override Reason Code		

v2.5.1

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comment	Mapped
ERR	1	80	CM	R	[1..*]	0357	00024	Error Code and Location		

v2.3.1

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comment	Mapped
RCP	1	1	ID	O	[0..1]	0091	00027	Query Priority	Constrain to null or I. Immediate priority is expected.	
RCP	2		CQ	O	[0..1]	0126	00031	Quantity Limited Request	25^RD^HL70126	
RCP	3		CE	O	[0..1]	0394	01440	Response Modality	R^real-time^HL70394	
RCP	4		TS	O	[0..1]		01441	Execution and Delivery Time		
RCP	5	1	ID	O	[0..1]	0395	01443	Modify Indicator		
RCP	6		SRT	O	[0..1]		01624	Sort-by Field		
RCP	6		ID	O	[0..*]		01594	Segment Group Inclusion		

v2.5.1

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comments	Mapped
RXA	**1**	**4**	**NM**	**R**	**[1..1]**		**00342**	**Give Sub-ID Counter**	**Constrain to 0 (zero)**	
RXA	**2**	**4**	**NM**	**R**	**[1..1]**		**00344**	**Administration Sub-ID Counter**	**Constrain to 1.**	
RXA	**3**		**TS**	**R**	**[1..1]**		**00345**	**Date/Time Start of Administration**		Y
RXA	4		TS	RE	[0..1]		00346	Date/Time End of Administration	If populated, this should be the same as start time (RXA-3)	Y
RXA	**5**		**CE**	**R**	**[1..1]**	**0292**	**00347**	**Administered Code**	**CVX code is strongly preferred.**	Y
RXA	**6**	**20**	**NM**	**R**	**[1..1]**		**00348**	**Administered Amount**	**If administered amount is not recorded, use 999.**	
RXA	7		CE	CE	[0..1]		00349	Administered Units	If previous field is populated by any value except 999, it is required.	
RXA	8		CE	O	[0..1]		00350	Administered Dosage Form		
RXA	9		CE	RE	[0..1]	NIP 0001	00351	Administration Notes	Constrained to one repetition. This repetition is intended for conveying if this immunization record is based on a historical record or was given by the provider recording the immunization. 00=Administered 01=Historical	Y
RXA	10		XCN	RE	[0..1]		00352	Administering Provider	This is the administering provider not necessarily the person who gave the shot.	Y
RXA	11		LA2	RE	[0..1]		00353	Administered-at Location		Y
RXA	12	20	ST	O	[0..1]		00354	Administered Per (Time Unit)		
RXA	13	20	NM	O	[0..1]		01134	Administered Strength		
RXA	14		CE	O	[0..1]		01135	Administered Strength Units		
RXA	15	20	ST	RE	[0..*]		01129	Substance Lot Number		Y
RXA	16		ST	CE	[0..1]		01130	Substance Expiration Date	If the lot number is not null, this field should be valued.	
RXA	17		CE	RE	[0..*]	0227	01131	Substance Manufacturer Name		Y
RXA	18		CE	C	[0..*]		01136	Substance Refusal Reason	If the completion status is RE, then this shall be populated.	
RXA	19		CE	O	[0..1]		01123	Indication		

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comments	Mapped
RXA	20	2	ID	RE	[0..1]	0322	01223	Completion Status	If this field is not populated, it is assumed to be CP or complete. If the Refusal reason is populated, this field shall be set to RE.	
RXA	21	2	ID	RE	[0..1]	0323	01224	Action Code-RXA	D=Mark for deletion	Y
RXA	22		TS	O	[0..1]		01225	System Entry Date/Time		
RXA	23	5	NM	O	[0..1]		01696	Administered Drug Strength Volume		
RXA	24		CWE	O	[0..1]		01697	Administered Drug Strength Volume Units		
RXA	25		CWE	O	[0..1]		01698	Administered Barcode Identifier		
RXA	26	1	ID	O	[0..1]	480	01699	Pharmacy Order Type		

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comments	Mapped
RXR	**1**		**CE**	**R**	**[1..1]**	**0162**	**00309**	**Route**		Y
RXR	2		CWE	RE	[0..1]	0163	00310	Administration Site		Y
RXR	3		CE	O	[0..1]	0164	00311	Administration Device		
RXR	4		CWE	O	[0..1]	0165	00312	Administration Method		
RXR	5		CE	O	[0..1]		01315	Routing instructions		
RXR	6		CWE	O	[0..1]	0495	01670	Administration Site Modifier		

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comments	Mapped
OBX	**1**	**4**	**SI**	**R**	**[1..1]**		**00569**	**Set ID - OBX**		
OBX	**2**	**2**	**ID**	**R**	**[1..1]**	**0125**	**00570**	**Value Type**	**CE,NM,ST,DT,or TS**	Y
OBX	**3**		**CE**	**R**	**[1..1]**		**00571**	**Observation Identifier**	**Indicates observation. Answered by OBX-5. See appendix G & H for Funding and Financial Rules**	Y
OBX	4	20	ST	RE	[1..1]		00572	Observation Sub-ID		
OBX	**5**		**Varies**	**R**	**[1..1]**		**00573**	**Observation Value**	**Observation value, answers the question posed by OBX-3.**	Y
OBX	6		CE	CE	[0..1]		00574	Units	If the observation in OBX-5 requires an indication of the units, they are placed here.	
OBX	7		ST	O	[0..1]		00575	Reference Ranges		
OBX	8		IS	O	[0..1]	0078	00576	Abnormal Flags		
OBX	9		NM	O	[0..1]		00577	Probability		
OBX	10		ID	O	[0..1]	0080	00578	Nature of Abnormal Test		
OBX	**11**		**ID**	**R**	**[1..1]**	**0085**	**00579**	**Observ Result Status**	**Constrain to F.**	
OBX	12		TS	O	[0..1]		00580	Effective Date of Reference Range Values		
OBX	13	20	ST	O	[0..1]		00581	User Defined Access Checks		
OBX	**14**		**TS**	**R**	**[1..1]**		**00582**	**Date/Time of the Observation**		
OBX	15		CE	O	[0..1]		00583	Producer's ID		
OBX	16		XCN	O	[0..1]		00584	Responsible Observer		
OBX	17		CE	O	[0..1]		00936	Observation Method		
OBX	18		EI	O	[0..1]		01479	Equipment Instance Identifier		
OBX	19		TS	O	[0..1]		01480	Date/Time of the Analysis		
OBX	20			O	[0..1]			Reserved for Harmonization With V2.6		
OBX	21			O	[0..1]			Reserved for Harmonization With V2.6		
OBX	22			O	[0..1]			Reserved for Harmonization With V2.6		
OBX	23		XON	O	[0..1]		02283	Performing Organization Name		
OBX	24		XAD	O	[0..1]		02284	Performing Organization Address		
OBX	25		XCN	O	[0..1]		02285	Performing Organization Medical Director		

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comments	Mapped
NTE	1	4	SI	O	[0..1]		00096	Set ID-NTE		
NTE	2	8	ID	O	[0..1]	0105	00097	Source Of Comment		
NTE	**3**	**65536**	**FT**	**R**	**[1..1]**		**00098**	**Comment**		Y
NTE	4	250	CE	O	[0..1]	0364	01318	Comment Type		

Segment	Field	Length	Type	Req/Opt	RP/#	Table	ITEM #	Element Name	Comment	Mapped
ROL	1	60	EI	C			01206	Role Instance ID		
ROL	**2**	**2**	**ID**	**R**		**0287**	**00816**	**Action Code**		
ROL	**3**	**250**	**CE**	**R**		**0443**	**01197**	**Role-ROL**		
ROL	4	250	XCN	R	Y		01198	Role Person		
ROL	5	26	TS	O			01199	Role Begin Date/Time		
ROL	6	26	TS	O			01200	Role End Date/Time		
ROL	7	250	CE	O			01201	Role Duration		
ROL	8	250	CE	O			01205	Role Action Reason		
ROL	9	250	CE	O	Y		01510	Provider Type		
ROL	10	250	CE	O		0406	01461	Organization Unit Type		
ROL	11	250	XAD	O	Y		00679	Office/Home Address/Birthplace		
ROL	12	250	XTN	O	Y		00678	Phone		

HL7 Table 0287 – Problem/goal action code

Value	Description	Comment
AD	ADD	
CO	CORRECT	
DE	DELETE	
LI	LINK	
UC	UNCHANGED *	
UN	UNLINK	
UP	UPDATE	

ICARE process to insert/update patients:

Key fields:
PID.3 – Patient ID List
MSH.4 – Site ID

First ID in PID.3 list must be an unique Site Identifier for inserted/updated patient.
I-CARE will keep an unique Patient Identifier MSH.4 + PID.3.1 to identify this patient in the future.

I-CARE process to identify trade and generic vaccine names:

Key fields:
RXA.5 – Administered CVX Code
RXA.17 – Manufacturer Code

I-CARE will try to find **trade** vaccine RXA.5 + RXA.17. If no trade vaccine is found, use RXA.5 to find **generic** vaccine for a particular CVX code.

I-CARE process to insert/update/delete shots:

Key fields:
PID.3 – Patient ID
ORC.3 – Shot Unique identifier – 16 characters free text ^ Site ID (optional) (available in HL7 ver. 2.5.1 only)
RXA.3 – Administered Date
RXA.5 – Administered Code – CVX code
RXA.11 – Facility – Facility ID, Name and Address
RXA.21 – Action code-RXA
MSH.4 – Site ID – HL7 site ID, assigned by I-CARE

Use RXA.11 if RXA.11 is not empty, otherwise use MSH.4

1. ORC.3 is not empty
   a. ORC.3 belongs to I-CARE (example – 9999999^ICARE) – skip the shot.
   b. ORC.3 does not belong to I-CARE (example – 9999999)
   Search for shot in I-CARE by PID.3 + RXA.11/MSH.4 + ORC.3.
   If found the shot, update existing record, go to the end.
   If did not find the shot, go to step 3.
2. ORC.3 is empty go to step 3.
3. Search for shot in I-CARE by PID.3 + RXA.11/MSH.4 + RXA.5 + RXA.3.
   If found the shot, update existing record.
   If did not find the shot, insert new record (including ORC.3 if ORC.3 is not empty).

RXA.21 is ignored unless RXA.21 = “D”. In this case I-CARE updates or inserts this shot as a “MARK FOR DELETION” shot.

If a site does not use ORC.3 and wants to update the shot administered code or administered date:

1. Site must send 2 RXA records: First record with RXA.21=”D” (mark existing record for deletion) and second record with new administered code and/or administered date.
2. OR after updating existing shot through the HL7 interface (I-CARE will add a new shot into I-CARE with a new administered code and/or administered date), the site needs to use the I-CARE web interface to delete a shot with an old administered code and/or administered date.

Minimum Required v2.5.1

```
MSH|^~\&|ACME FAMILY PRACTICE CENTER|77700001|||20110310113157||VXU^V04^VXU_V04|MSG00001|P|2.5.1||||||WINDOWS-1252
PID|1||12345678^^^^MR||JONES^JACK^^^^^||20000101|M|||ADDRESS 1^^SPRINGFIELD^IL^62702^^H||||||||||||N|1||||||||
PD1||||||||||||N||||||
PV1||R||||||||||||||||||V02
ORC|RE||85354920
RXA|0|1|20110310|20110310|141^Fluzone > 3 yrs^CVX|999||||Y|||||||PMC||||||
```

Minimum Required v2.3.1

```
MSH|^~\&|ACME FAMILY PRACTICE CENTER|77700001|||20110310113157||VXU^V04^VXU_V04|MSG00001|P|2.3.1||||||WINDOWS-1252
PID|1||12345678^^^^MR||JONES^JACK^^^^^||20000101|M|||ADDRESS 1^^SPRINGFIELD^IL^62702^^H||||||||||||N|1||||||||
PD1||||||||||||Y||||||
PV1||R||||||||||||||||||V02
RXA|0|1|20110310|20110310|141^Fluzone > 3 yrs^CVX|999||||Y|||||||PMC||||||
```

VXU^V04

Segment	Field	Length	Type	Req/Opt	RP/#	Table	Item #	Element Name
MSH	4		HD	R	[0..1]	0362	00004	Sending Facility
MSH	12		VID	R	[1..1]	0104	00012	Version ID
PID	3		CX	R	[1..*]		00106	Patient Identifier List
PID	5		XPN	R	[1..*]		00108	Patient Name
PID	7		TS	R	[1..1]		00110	Date/Time of Birth
PID	8	1	IS	R	[0..1]	0001	00111	Administrative Sex
PID	11		XAD	RE	[0..*]		00114	Patient Address, (If empty NK1 is required.)
NK1	4		XAD	CE	[0..*]		00193	Address
RXA	3		TS	R	[1..1]		00345	Date/time start of administration
RXA	5		CE	R	[1..1]	0292	00347	Administered code

These are the minimum required elements for VXU^V04 messages to be successfully imported into the ICARE system. Other HL7 standard requirements should also apply.

VXU^V04

Segment	Field	Length	Type	Req/Opt	RP/#	Table	Item #	Element Name
PID	6		XPN	RE	[0..1]		00109	Mother's Maiden Name
PID	10		CE	RE	[0..*]	0005	00113	Race
PID	13		XTN	RE	[0..*]		00116	Phone Number - Home
PID	25	2	NM	CE	[0..1]		00128	Birth Order
PID	24	1	ID	RE	[0..1]			Multiple Birth Indicator
PID	25	2	NM	CE	[0..1]		00128	Birth Order
PD1	12	60	ID	RE	[0..1]	0136	00744	Protection Indicator
PD1	16	2	ID	RE	[0..1]	0441	01569	Immunization Registry Status
PV1	20		FC	RE	[1..*]	0064	00150	Financial Class
NK1	1	4	SI	R	[1..1]		00190	Set ID- NK1
NK1	2		XPN	R	[1..*]		00191	Name
NK1	3		CE	R	[1..1]	0063	00192	Relationship
NK1	4		XAD	RE	[0..*]		00193	Address
ORC	3		EI	RE			00217	Filler Order Number
RXA	9		CE	RE	[0..1]	NIP 0001	00351	Administration Notes
RXA	10		XCN	RE	[0..1]		00352	Administering Provider
RXA	15	20	ST	RE	[0..*]		01129	Substance Lot Number
RXA	17		CE	RE	[0..*]	0227	01131	Substance Manufacturer Name
RXA	11		LA2	RE	[0..1]		00353	Administered-at Location
RXA	21	2	ID	RE	[0..1]	0323	01224	Action Code-RXA
RXR	1		CE	R	[1..1]	0162	00309	Route
RXR	2		CWE	RE	[0..1]	0163	00310	Administration Site

These segments/elements are required but may be empty for VXU^V04 messages.

The segment/element may be missing from the message, but must be sent by the sending application if there is relevant data.

A conforming sending application must be capable of providing all "RE" segment/elements. If the conforming sending application knows the required values for the segment/element, then it must send that segment/element. If the conforming sending application does not know the required values, then that segment/element will be omitted.

I-CARE process rules for Financial Class:

Financial class references a client's eligibility status at the time of vaccine administration. It is the eligibility of the client for the vaccine administered.

Vaccine Financial Class – Use in OBX-3 to indicate that OBX-5 will contain the financial class of the patient at the time the vaccine was administered.

OBX-3: is set to LOINC code "64994-7" (Vaccine funding program eligibility category)
OBX-5: is set to HL70064 table

V01	Not VFC eligible
V02	VFC eligible-Medicaid/Medicaid Managed Care
V03	VFC eligible- Uninsured
V04	VFC eligible- American Indian/Alaskan Native
V05	VFC eligible-Federally Qualified Health Center Patient
V06	Deprecated [VFC eligible- State specific eligibility
V07	Local-specific eligibility
V08	Deprecated [Not VFC eligible-underinsured]

Example

```
OBX|1|CE|64994-7^vaccine fund pgm elig cat^LN|1|V04^ VFC eligible^NA/AN^HL70064||||||F|||20090415
```

I-CARE process rules for Immunization Funding Source:

The funding source may be linked to each immunization record, using an OBX segment.
If no OBX segment with funding source is sent then we assume UNK - unknown

Vaccine Funding Source – Use in OBX-3 to indicate that OBX-5 will contain the funding source for a given immunization. The funding source of a vaccination indicates who paid for a given immunization.

v2.5.1 OBX-3: |30963-3^funding source for immunization ^LN|
v2.5.1 OBX-5: Value Set Code:: PHVS_ImmunizationFundingSource_IIS

VXC1	Federal funds
PHC68	Military funds
OTH	other
PHC70	Private funds
VXC2	State funds
VXC3	Tribal funds
UNK	unknown

v2.3.1 OBX-3: -3: |30963-3^Vaccine purchased with^LN|
v2.3.1 OBX-5: Value Set Code:: NIP-defined NIP008 – Vaccine purchased with

PVF	Private funds
PBF	Public funds
MLF	Military funds
OTH	Other

v2.5.1 Example

OBX|1|CE|30693-3^funding source for immunization^LN|1|VXC1^ Federal funds^CDCPHINVS||||||F|||20090415

V2.3.1 Example

OBX|9|CE|30963-3^Vaccine purchased with^LN||PBF^Public funds^NIP008||||||F|