

Massachusetts Immunization Information System

MIIS Query and Response (QBP/RSP) HL7 Specifications Version 1

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Table of Contents



.....	3
Introduction	3
Background	3
Purpose	3
Connecting to the MIIS	3
RSP Sample Profile Z34	3
Query example for Match found	4
Match found RSP.....	4
No Match found RSP	4
More than one match found RSP.....	5
One Identical/ One Exact Match Found but Data Sharing = No	5
One Identical/ One Exact Match Found but Data Sharing = Unknown	5
Format Issue with query message format (Required field missing)	5
Response (RSP) Message Segment Profile.....	6
Response (RSP) Data Elements	6



Introduction

Background

The Massachusetts Department of Public Health has established the Massachusetts Immunization Information System (MIIS). As a secure, web-based system, the MIIS supports the tracking of vaccine administration within the Commonwealth.

Purpose

The purpose of this document is to provide information for insurers regarding vaccine Query and Response (QBP/RSP) functionality. Insurance providers will have the ability to Query the MIIS registry to view vaccine history for their members who received a vaccine in Massachusetts.

The Query by Parameter (QBP) message type enables providers to request the information history of a patient, provided there is one exact match in the MIIS. The MIIS accepts both Z34 and Z44 Query requests profile.

Connecting to the MIIS

Prior to connecting to the MIIS production environment every Insurer must test a query by parameter and receive a successful response from our testing environment. Once this has been completed, the Insurer will be granted access to query the MIIS production environment.

For testing and additional instructions, we have provided the MIIS CDC-WSDL and Soap Web Service instructions for the MIIS 2.0 environment.

RSP Sample Profile Z34

Below you will find a query by parameter example as well as responses and system acknowledgements from the MIIS.

Please be aware that if your query does not match a patient in our system with a 1 to 1 match, based on demographic information included in the query, the MIIS will not return a picklist with patients that match your query. Instead the MIIS will return a message to further narrow your search and or provide additional demographic information for the patient.

The State of Massachusetts will only return data for a patient when the query is a 1 to 1 match.

Query example for Match found

MSH | ^~\& | EHR | 10405 | MIIS | 99990 | 20210202 | | QBP^Q11^QBP_Q11 | EW38okJbpKzh | T | 2.5.1 | | NE | AL | | | | Z34^CDCPHINVS
QPD | Z34^Request Immunization
History^HL70471 | 95385222 | dfwsQ4C00YIS | ORBLDGHV^NNPLK^L | | 19590326000000 | M | 047
ENRG JT^Rutland^MA^01543^ZYC^M | |
RCP | | 1 | R
BTS | 1 |

Match found RSP

MIIS | 99990 | EHR | 10405 | 20210205155815 | | RSP^K11^RSP_K11 | ACK-20210205-155815-092 | T | 2.5.1 | | NE | NE | | | | Z32^CDCPHINVS
MSA | AA | EW38okJbpKzh
QAK | 95385222 | OK | Z34^Request Immunization History^HL70471
QPD | Z34^Request Immunization
History^HL70471 | 95385222 | dfwsQ4C00YIS | ORBLDGHV^NNPLK^L | | 19590326000000 | M | 047
ENRG JT^Rutland^MA^01543^ZYC^M | |
PID | 1 | | dfwsQ4C00YIS^10405^MR~11215198^MAMIIS^SR | | ORBLDGHV^NNPLK^L | Pelouquin^M | 19590326 | M | | 2131-1^Other Race^CDCREC | 047 ENRG
JT^Rutland^MA^01543^H | | ^PRN^PH^111^111111 | | | | | 2186-5^not Hispanic or Latino^CDCREC | | N | | | | N
ORC | RE | | 11215198^MIIS
RXA | 0 | 1 | 20210209 | | 03^MMR^CVX | 0.5 | ML | | 00^NIP001 | ^Irene Weeks | ^Nashoba Valley Medical Center&22401 | | | 004M20A | 20210710 | MSD^Merck and Co., Inc.^MVX | | CP | | 20210210
RXR | C28161^Intramuscular^NCIT | LA^Left Arm^HL70163
OBX | 2 | CE | 38890-0^Component Vaccine Type^LN | 1 | 03^MMR^CVX | | | | F

No Match found RSP

MIIS | 99990 | EHR | 10405 | 20210205160239 | | RSP^K11^RSP_K11 | ACK-20210205-160239-822 | T | 2.5.1 | | NE | NE | | | | Z33^CDCPHINVS
MSA | AA | EW38okJbpKzh
ERR | | 0^Message Accepted^HL70357 | I | 9^No Match Found^HL70533 | | No Match found in the MIIS
ERR | | MSH^10^1 | 0^Message Accepted^HL70357 | I | 14^Duplicate Data received^HL70533 | | Duplicate records received in MIIS.
QAK | 95385222 | NF | Z34^Request Immunization History^HL70471
QPD | Z34^Request Immunization
History^HL70471 | 95385222 | dfwsQ4C00YIS | ORBLDGHV^PLK^L | | 19590326000000 | M | 047
ENRG JT^Rutland^MA^01543^ZYC^M | |

More than one match found RSP

```
MSH|^~\&|EHR|12345^SiteName|MIIS|99990|20140701041038||RSP^K11^RSP_K11|7731029|P|2.5.1|||NE|NE||||Z33^ CDCPHINVS|
MSA|AA|793543
ERR|||0^Message Accepted^HL70357|I|10^More Than One Match^HL70533|||More than one match found in MIIS. Please re-query with more information
QAK|37374859|TM|Z34^request Immunization history^CDCPHINVS
QPD| Z44^Request Immunization History^CDCPHINVS
|37374859|123456^^^MYEHR^MR|Child^Bobbie^Q^^^^L|Que^Suzy^^^^M|20050512|M|10 East Main St^^Boston^MA^^L
```

One Identical/ One Exact Match Found but Data Sharing = No

```
MSH|^~\&|EHR|12345^SiteName|MIIS|99990|20140701041038||RSP^K11^RSP_K11|7731029|P|2.5.1|||NE|NE||||Z33^ CDCPHINVS|
MSA|AA|793543
ERR|||0^Message Accepted^HL70357|I|11^No Match - Data Sharing No^HL70533|||A match was found in the MIIS but no value is returned since Data Sharing for the record is set to No
QAK|37374859|NF|Z34^request Immunization history^CDCPHINVS
QPD| Z34^Request Immunization History^CDCPHINVS
|37374859|123456^^^MYEHR^MR|Child^Bobbie^Q^^^^L|Que^Suzy^^^^M|20050512|M|10 East Main St^^Boston^MA^^L
```

One Identical/ One Exact Match Found but Data Sharing = Unknown

```
MSH|^~\&|EHR|12345^SiteName|MIIS|99990|20140701041038||RSP^K11^RSP_K11|7731029|P|2.5.1|||NE|NE||||Z33^ CDCPHINVS|
MSA|AA|793543
ERR|||0^Message Accepted^HL70357|I|12^No Match- Data Sharing Unknown|||A match was found in the MIIS but no value is returned since Data Sharing for the record is set to Unknown|
QAK|37374859|NF|Z34^request Immunization history^CDCPHINVS
QPD| Z34^Request Immunization History^CDCPHINVS
|37374859|123456^^^MYEHR^MR|Child^Bobbie^Q^^^^L|Que^Suzy^^^^M|20050512|M|10 East Main St^^Boston^MA^^L
```

Format Issue with query message format (Required field missing)

```
MSH|^~\&|MIIS|99990|EHR|12345|20170202091847||ACK^V04^ACK|ACK-20170202-091847-337|P|2.5.1|||NE|NE||||Z33^CDCPHINVS
MSA|AR|201612220045-050015617688
ERR|| PID^5^2^^^|101^Required Missing Field^HL70357|E|7^Required Data Missing^HL70533|||Patient Given Name is required.
```

Response (RSP) Message Segment Profile

The response to a Query by Parameter (RSP) is a message type that the MIIS generates in response to a request sent by a Provider.

SEGMENT	CARDINALITY	QUERY GRAMMAR	USAGE
MSH	[1..1]	Message Header Segment	R
MSA	[1..1]	Message Acknowledgement Segment	R
[ERR]	[0..1]	If errors exist, this segment is populated.	RE
QAK	[1..1]		R
QPD	[1..1]	Query Parameter Definition Segment	R

Response (RSP) Data Elements

The MIIS may return the following data elements for a vaccine or a patient based on the information that currently exist in the MIIS. For insurance providers and bulk queries, the MIIS will only return vaccines administered to the patient. This may include historical and administered vaccines.

DEMOGRAPHIC INFORMATION	VACCINE INFORMATION	CLINICAL COMMENTS
Medical Record Number	Date/Time Start of Administration	Immunities
MIIS ID	Administered Code	Forecasting (only Z44 requests)
Last name	Administered Amount	
First Name	Administered Units	
Middle Name	Administration Notes (Historical versus administered)	
Suffix	Administering Provider	
Alias	Administered-at Location	
Date of Birth	Substance Lot Number	
Gender	Substance Expiration Date	
Mothers Maiden Name	Substance Manufacturer Name	
Race	Refusal Reason	
Any address we have	Completion Status	
Any phone numbers we have	Action Code - RXA	
Email we have	System Entry Date/Time	
Ethnicity	Route	
Multiple Birth Indicator	Administration Site	
Birth Order	Dose validity	
Patient Death Date and Time		
Patient Death Indicator		