My HealtheVet MHV Prescription API

Interface Control Document

July 2021

Version 1.8

Revision History

Date	Version	Description	Author
April 13, 2020	1.8	Technical Writer Review and posting to GIT	Melinda LaTona
Apr 13, 2020	1.7	API New fields mapping	Krish Nandipati, Praneeth Gaganapally, Beverly Armstrong
Jan 8, 2015	1.6	Minor edits and review	Muazzam Khan, Ken Graham
Dec 8, 2014	1.5	Peer review	Muazzam Khan, Ken Graham, Charisse Dean
Dec 3, 2014	1.4	Minor edits	Ken Graham
Nov 24, 2014	1.3	Adding New Elements	Muazzam Khan
Nov 18, 2014	1.2	Removed getDetail and updated the data elements	Ken Graham
Nov 14, 2014	1.1	Add in sample Request/Response,	Nov 14, 2014
Nov 13, 2014	1.0	Initial document based on MHV BB API	Muazzam Khan,

Table of Contents

1. Introduction

My HealtheVet (MHV) is VHA's web-based portal for Veterans to use when accessing their personal health information and communicating with the VHA health care system. Veterans can currently order, re-fill and review the history of all VA medication that they have been prescribed using the portal. The Department of Veterans Affairs (VA) sends the majority of outpatient prescriptions to patients via the United States Postal Service (USPS) and United Parcel Service (UPS), the current VA contracted delivery services for prescriptions mailed from both local VA facilities and the VA CMOP. The majority of these prescriptions are filled at seven large CMOPs which are located across the United States. Over 115 million prescriptions or 80% of all Veterans Health Administration's (VHA) outpatient prescriptions are sent to Veterans annually via the CMOP.

Currently, for Veterans to track the delivery of their mail-out prescription medications they must telephone their local VA Medical Center or request tracking information via the VHA's web-based portal, MyHealtheVet, using Secure Messaging, a communication device utilized by VA patients and staff. This results in an increased number of telephone calls and messages to pharmacy staff at medical centers and decreased Veteran satisfaction.

Veterans and consumers expect to have this functionality available and are familiar with the concept and use. Online Prescription Tracking displays a link within MHV for Veterans to use so they can access USPS and UPS package tracking information that is already available from the Veterans Administration CMOP. It is estimated that 460,000 phone calls from Veterans could be eliminated quarterly by providing this service.

1.1. Scope

This Interface Control Document (ICD) defines the interface(s) available to access the Rx Refill & Tracking of prescriptions within MyHealtheVet (MHV).

This document provides details on the functional, performance, operational and design requirements for the interface herein. It describes the concept of operations for the interface, defines the message structure and protocols which govern the interchange of data, and identifies the communication paths along which the data is expected to flow.

1.2. System Identification

MHV is the VA's Personal Health Record. It was designed for veterans, active duty service members, their dependents and caregivers. My HealtheVet helps veterans partner with their health care team. It provides veterans opportunities and tools to make informed decisions.

MHV shall establish a session for each user. Every time a new session is started MHV provides the current state of the account status. The session will succeed if all the conditions of the current eligibility check succeeds and will reflect any reason for rejection or failure in a corresponding error code.

1.3. Operational Agreement

This Interface Control Document provides the specification for all clients of Rx Refill and Tracking functionality within MHV. Any changes made to the interface must be agreed upon by the Project Managers responsible for the respective systems.

2. Interface Definition

The interface between MHV Rx Refill and all clients is network-based using Secure HTTP (aka HTTPS) connections.

2.1. System Overview

MHV is VA's portal that provides veterans access to their personal health records (PHR). The portal provides the capability for users to authenticate and provide proof of their identity and receive access to its functionality. It therefore, provides access to the Rx Refill and Tracking functionality covered within its Pharmacy features. VA patients have the capability to refill their VA filled prescriptions and track its delivery once a refill request has been submitted.

2.2. Interface Overview

The Rx Refill and Tracking integration defines the interaction of the various systems with MHV. This section of the interface is composed of a system-to-system communication channel using a web service. The web services interaction does not involve an end-user's web browser session.

2.2.1. Web Service Integration

An MHV user shall be able to access the MHV API's through the MHV webserver and corresponding web application for the API's.

2.3. Data Transfer

The following diagram describes the transfer of data that occurs between MHV API web service clients and the MHV API hosted web service.

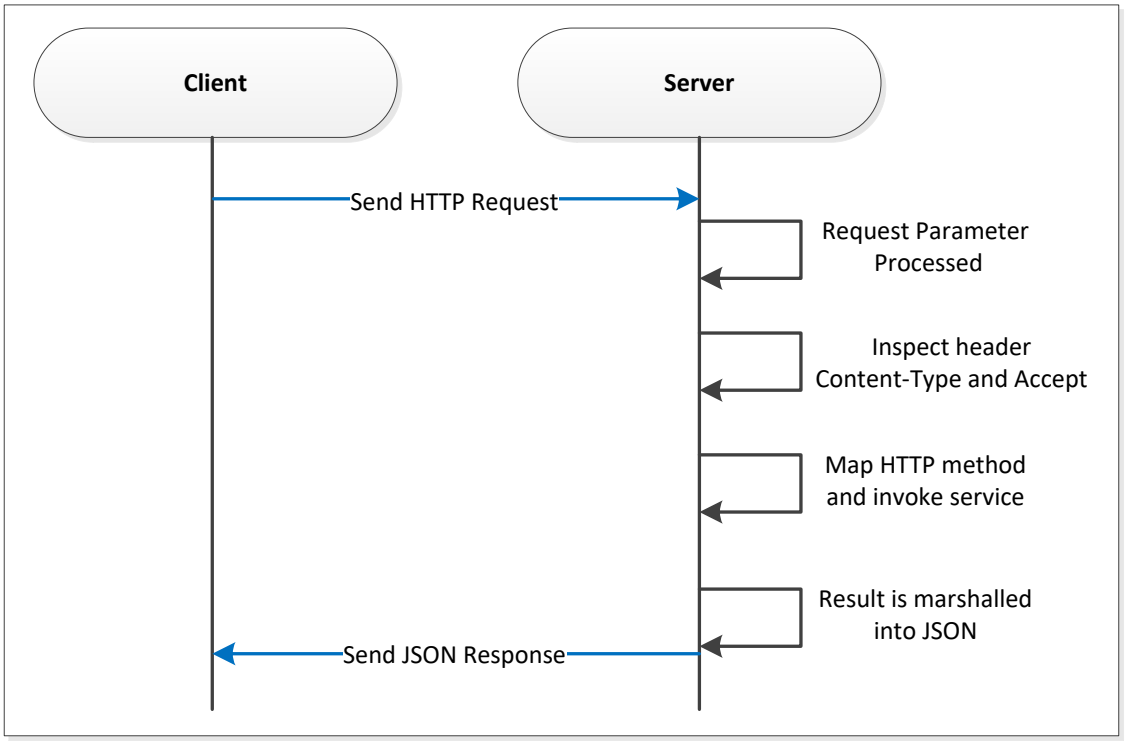


Figure 1 Data Transfer[1]

Data Transfer Standards

The following table describes data transfer standards used in the transfer of information between MHV API and its clients.

Standard	Description	Reference
HTTP	The Hyper Text Transfer Protocol (HTTP) is an application protocol for distributed, collaborative, hypermedia information systems. HTTP is the foundation of data communication for the World Wide Web. Hypertext is a multi-linear set of objects, building a network by using logical links (the so-called hyperlinks) between the nodes (e.g. text or words). HTTP is the protocol to exchange or transfer hypertext. The common version in use is HTTP 1.1	http://tools.ietf.org/html/rfc2616
HTTPS	Hypertext Transfer Protocol Secure (HTTPS or Secure HTTP) is a widely used communications protocol for secure communication over a computer network, with especially wide deployment on the Internet. Technically, it is not a protocol in itself; rather, it is the result of simply layering the Hypertext Transfer Protocol (HTTP) on top of the SSL or TLS protocol, thus adding the security capabilities of SSL or TLS to standard HTTP communications. In its typical deployment on the internet, HTTPS provides authentication of the web site and associated web server that one is communicating with, which protects against Man-in-the-middle attacks. Additionally, it provides bidirectional encryption of communications between a client and server, which protects against eavesdropping and tampering with and/or forging the contents of the communication. In practice, this provides a reasonable guarantee that one is communicating with precisely the web site that one intended to communicate with (as opposed to an impostor), as well as ensuring that the contents of communications between the user and site cannot be read or forged by any third party.	http://tools.ietf.org/html/rfc4346 (TSL 1.1) http://tools.ietf.org/html/rfc6101 (SSL 3.0)

[1] Note that this diagram does not represent request or acknowledgement messages, just the transfer of data in the context of this ICD. Also the grayed-out components and lines are respective system internal and may in actuality work different.

REST	Representational State Transfer (REST) has gained widespread acceptance across the Web as a simpler alternative to SOAP and Web Services Description Language (WSDL) based Web services. Key evidence of this shift in interface design is the adoption of REST by mainstream Web 2.0 service providers—including Yahoo, Google, and Facebook—who have deprecated or passed on SOAP and WSDL based interfaces in favor of an easier-to-use, resource-oriented model to expose their services.	http://tools.ietf.org/html/rfc1945 http://tools.ietf.org/html/rfc2616
JSON	**JSON** (JavaScript Object Notation) is a lightweight data-interchange format. It is easy for humans to read and write. It is easy for machines to parse and generate. It is based on a subset of the JavaScript Programming Language, Standard ECMA-262 3rd Edition - December 1999. JSON is a text format that is completely language independent but uses conventions that are familiar to programmers of the C-family of languages, including C, C++, C#, Java, JavaScript, Perl, Python, and many others. These properties make JSON an ideal data-interchange language.	http://www.json.org/

2.3.1. Web Service Integration

Rx Refill & Tracking API shall provide a web service interface for the exchange of REST based messages via an HTTPS connection. The web service interface will be described using a WADL specification.

2.4. Transaction Types

The interface will have the following transaction types:

Transaction Type	Description
Back-end Integration	
Synchronous	This is a system-to-system transaction. An originating system makes a synchronous request to the (other) receiving system and waits for the response. The receiving system is only a passive participant in this type of transaction. Synchronous transactions are intended to be used for situations that require immediate and quick response. They may also be used in situations where the only required response is an acknowledgement.

2.5. Data Exchanges

The following data shall be exchanged from MHV API to a Client:

- A session token for a valid user and account.
- Retrieve the list of active VA prescriptions
- Request a refill for an active VA prescription

- Retrieve the list of historical VA prescriptions
- View tracking information for a VA prescription

2.6. Precedence and Criticality

TDB

2.7. Communications Methods

Clients will exchange REST messages with MHV API's and transmit/receive JSON objects. This communication does not involve any end-user browser connecting to both systems.

HTTP can provide compression of the information exchanged. HTTPS, or more precisely Secure Socket Layer (SSL)/ Transport Security Layer (TSL), shall be used to provide encryption of the information exchanged. HTTPS is used between the end-user's browser and the web server.

REST provides a mechanism to exchange data in a structured fashion following a pre-defined specification. Error recovery and guaranteed delivery are not part of the protocol. Any unexpected errors must be communicated using REST/HTTP Error codes.

The following table describes the versions of the communication standards that shall be used:

Standard	Version	Comments
REST	Xx	
JSON	Xx	
WADL	Xx	
SSL	3.0	Prefer TSL over SSL
TSL	1.1	

2.8. Performance Requirements

The interface shall adhere to the following performance requirements:

Requirement	Description	Rationale
Message latency	The messaging system shall provide "near real-time" responses. A 'near real-time response' is a response in 30 seconds or less, 24x7 hours of operation and within a tolerance level of 98%. The response is measured from the time the originating system sends a request to the time the response is returned to the originating system.	
Real-time monitoring	Both systems shall monitor real-time performance of message throughput.	Monitoring of performance is required to guarantee uninterrupted real-time performance; therefore notification of disruptions is required so that adequate real-time performance can be restored in the shortest possible period of time.

Requirement	Description	Rationale
Scalability	The messaging system shall be scalable to handle increasing capacity requirements.	The messaging system architecture must enable the addition of components to handle increasing capacity without the need to redesign or replace the messaging system, which would be prohibitively expensive and time-consuming. The number of users will grow as the function is rolled-out targeting the entire user base of MHV.
Trend analysis	The messaging system shall provide trend analysis of the volume of messages.	The messaging system is required to provide awareness of situations in which the capacity of messages the system is called upon to handle has grown to approach threshold limits. Trend analysis should support the expansion of messaging system capacity before the messaging system is overloaded.

2.9. Security

All interfaces will use Secure HTTP (HTTPS) or HTTP over SSL/TSL. MHV and the corresponding clients shall use simple authentication, i.e. only the server is authenticated and only the server provides a certificate to the client. The algorithmic encryption used for the SSL connection must be Federal Information Processing Standard (FIPS) Publication 140-2 compliant.

MHV Rx Refill & Tracking API shall limit access to the web service interface to requests from designated and approved applications. MHV Rx Refill & Tracking API shall create audit functionality to track system-to-system access and integration access (MHV shall provide the SSL certificate to the client systems).

3. Interface Requirements

The following is an overview of the interfaces will subsequently be specified:

Interface	Purpose
Web Service Integration	Allows a valid MHV user to use all the features available via the current web client.

3.1. Web Application Integration Interface

The Web Application Integration interface will support the following transactions:

Transaction	Communication	Description
/session	Synchronous, REST over HTTPS	A client shall send a synchronous request in order to obtain a session token for a valid MHV user.

3.1.1. Interface Processing Time Requirements

The following table describes the interface processing time requirements. Note that the maximum response times are educated guesses at reasonable values. The validity of the values must be established in a (test) environment:

Message	Maximum Response Time[1]	Requirements
/session	10 seconds	MHV API shall send a response to establish a user session request in 10 seconds or less.

[1] *Maximum Response Time* does not include network latency

3.1.2. Message Requirements

MHV REST API - Version 1 (v1)

Base URL

All API URIs in this document start with the following base:

```
/mhv-api/patient/v1
```

All API calls will return responses in the context of the *authenticated user* making the request.

3.1.2.1. Session Resource

The purpose of this call is to allow callers to create a session token. It also checks the policy of security related to a user within the MyHealtheVet application as a patient. (This session token is to be used for all subsequent calls to any API during the session of the client)
For the RX Refill API's the user is required to have been registered with MHV and accepted the terms and conditions for MHV and RX.

3.1.2.1.1. Creating a new session

	Resource	Description
GET	**/session**	Establish a session token and expiration (including authorization)

Request

Header		
Content-type	*Required*	*application/json*
Accept	*Required*	*application/json*
appToken	*Required*	Application Token provided to them by MHV
mhvCorrelationId	*Required*	User's MHV correlation id (aka User Profile Id)

Parameters
None

Body
None

Response

Header		
Token	*Required*	Session Token value for subsequent calls
Expires	*Required*	Session Token expiration timestamp

Body
None

Codes	
200	***Successful creation of a token and expiration timestamp***
400	101 - Application authentication failed 102 - Application authorization failed 103 - Invalid User Credentials 104 - Missing User Credentials 105 - User was not found 106 - User is not eligible because they are blocked 107 - System unable to create token 132 - Missing application token 135 - User is not eligible because they have not accepted terms and conditions or opted-in 901 - Authentication Service Error

Example Request

GET *http://{hostname}/mhv-api/patient/v1/session*

```
GET /mhv-api/patient/v1/session HTTP/1.1
Content-Type: application/json
Accept: application/json
appToken: qhEH6XJucS-PO5VxDQvjK
mhvCorrelationId: 7614
User-Agent: Apache CXF 2.7.7
Cache-Control: no-cache
Pragma: no-cache
Host: ~~
Connection: keep-alive
```

Example Response

```
HTTP/1.1 200 OK
Date: Thu, 26 Dec 2015 15:49:19 GMT
Content-Length: 0
Expires: Thu, 26 Dec 2015 15:54:21 GMT
Token: o7nsKRFVeijDG8u59/D6JOMrCmXMZO8p
X-Powered-By: Servlet/2.5 JSP/2.1
```

3.1.2.2. Prescription Resource

The purpose of this call is to allow callers to interact with the prescription data that is stored within eVault. It also provides access to the prescription refill action as well as the tracking information that is available from CMOP.

3.1.2.2.1. Retrieve VA Active Prescriptions

The purpose of this call is to allow callers to retrieve their Active VA Prescriptions

	Resource	Description
GET	**/patient/v1/prescription/getactivex**	Retrieves the list of Active Prescriptions

Request

Header		
Content-type	*Required*	*application/json*
Accept	*Required*	*application/json*
Token	*Required*	Session Token created in /session call

Parameters

Body
None

Response

Header		
None		

Body		
PrescriptionsTO	*Required*	(See Appendix A – PrescriptionsTO)
PrescriptionTO	*Required*	(See Appendix A – PrescriptionTO)

Codes	
200	***Successful retrieval of Prescriptions***
400	102 - Application authorization failed 108 - Missing session token 109 - Invalid session token 110 - Expired session token 111 - Invalid user permissions 901 – Authentication Service Error 135 – Rx Agreement Not Accepted Error 117 – Data Integrity Error 99 – Unknown Application Error

Example Request

GET http://{hostname}/mhv-api/patient/v1/prescription/getactiverx

```
Accept-Encoding: gzip,deflate
Conent-Type: application/json
Token: 4QaH+S/7r4U=lwv0jvNiDKdDj9dDf6DOQVl3ucuV2hkYas4YTdWP9Eg=
Accept: application/json
Host: {hostname}
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)
```

Example Response

```
HTTP/1.1 200 OK
Date: Fri, 14 Nov 2014 17:02:27 GMT
Server: Apache/2.2.3 (Red Hat)
X-Powered-By: Servlet/2.5 JSP/2.1
Connection: close
Transfer-Encoding: chunked
Content-Type: application/json
{"prescriptionList": [
    {
    "refillStatus": "active",
    "refillSubmitDate": null,
    "refillDate": "Tue, 17 Jan 2012 00:00:00 EST",
    "refillRemaining": 11,
    "facilityName": "SLC4",
    "isRefillable": true,
    "isTrackable": false,
    "prescriptionId": 527450,
    "orderedDate": "Tue, 17 Jan 2012 00:00:00 EST",
    "quantity": 30,
    "expirationDate": "Thu, 17 Jan 2013 00:00:00 EST",
    "prescriptionNumber": "2719090",
    "prescriptionName": "BROMOCRIPTINE MESYLATE 5MG CAP",
    "dispensedDate": null,
    "stationNumber": "991"
  },
    {
    "refillStatus": "submitted",
    "refillSubmitDate": null,
    "refillDate": "Tue, 17 Jan 2012 00:00:00 EST",
    "refillRemaining": 11,
    "facilityName": "SLC4",
    "isRefillable": false,
    "isTrackable": false,
    "prescriptionId": 527449,
    "orderedDate": "Tue, 17 Jan 2012 00:00:00 EST",
    "quantity": 30,
    "expirationDate": "Thu, 17 Jan 2013 00:00:00 EST",
    "prescriptionNumber": "2719089",
    "prescriptionName": "BENAZEPRIL HCL 10MG TAB",
    "dispensedDate": null,
    "stationNumber": "991"
 } ] ,
“failedStationList” : “”,
“lastUpdatedTime” : “Tue, 17 Jan 2012 00:00:00 EST”
}
```


3.1.2.2.2. Request a Refill of a Prescription

The purpose of this call is to allow callers to request a refill of a prescription.

	Resource	Description
POST	**/patient/v1/prescription/rxrefill/{rxId}**	Requests a refill of a prescription

Request

Header		
Content-type	*Required*	*application/json*
Accept	*Required*	*application/json*
Token	*Required*	Session Token created in /session call

Parameters		
rxId	*Required*	Prescription Number to be refilled

Body
None

Response

Header
None

Body

Codes	
200	***Successful retrieval of Active Prescriptions***
400	102 - Application authorization failed 108 - Missing session token 109 - Invalid session token 110 - Expired session token 111 - Invalid user permissions 901 – Authentication Service Error 135 – Rx Agreement Not Accepted Error 136 – The User is not the owner of the prescription 138 – Prescription Not Found 117 – Data Integrity Error 99 – Unknown Application Error 139 –Prescription is not refillable 140 – Prescription Refill was unsuccessful. Please try again later

Example Request

POST http:// {hostname}/mhv-api/patient/v1/prescription/rxrefill/781758

```
Accept-Encoding: gzip,deflate
Token: SbZsdCuIcyg=i1h8xLSn3n2RJfxyZAIVEKWgfpndt+z/8yK1cz3YK/I=
Content-Type: application/json
Accept: application/json
Content-Length: 0
Host: {hostname}
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)
```

Example Response

```
HTTP/1.1 200 OK
Date: Fri, 14 Nov 2014 17:17:21 GMT
Server: Apache/2.2.3 (Red Hat)
X-Powered-By: Servlet/2.5 JSP/2.1
Connection: close
Transfer-Encoding: chunked
Content-Type: application/json

Success
```

3.1.2.2.3. Retrieve Historical VA Prescriptions

The purpose of this call is to allow callers to retrieve their Historical VA Prescriptions

	Resource	Description
GET	**/patient/v1/prescription/gethistoryrx**	Retrieves the list of Historical Prescription of a patient

Request

Header		
Content-type	*Required*	*application/json*
Accept	*Required*	*application/json*
Token	*Required*	Session Token created in /session call

Parameters

Body
None

Response

Header
None

Body		
PrescriptionsTO	*Required*	(See Appendix A – PrescriptionsTO)
PrescriptionTO	*Required*	(See Appendix A – PrescriptionTO)

Codes	
200	***Successful retrieval of Historical Prescriptions***
400	102 - Application authorization failed 108 - Missing session token 109 - Invalid session token 110 - Expired session token 111 - Invalid user permissions 901 – Authentication Service Error 135 – Rx Agreement Not Accepted Error 117 – Data Integrity Error 99 – Unknown Application Error

Example Request

GET http:// {hostname}/mhv-api/patient/v1/prescription/ gethistoryrx

```
Accept-Encoding: gzip,deflate
Token: v8pLNejMsjs=LUn0L3WvJM7NuMwbrMqWLNuBltoR2Bl7r8WkScOjOvM=
Accept: application/json
Content-Type: application/json
Host: {hostname}
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)
```

Example Response

```
HTTP/1.1 200 OK
Date: Fri, 14 Nov 2014 17:02:27 GMT
Server: Apache/2.2.3 (Red Hat)
X-Powered-By: Servlet/2.5 JSP/2.1
Connection: close
Transfer-Encoding: chunked
Content-Type: application/json
{"prescriptionList": [
    {
    "refillStatus": "active",
    "refillSubmitDate": "Wed, 24 Sep 2014 00:00:00 EDT",
    "refillDate": "Tue, 23 Sep 2014 00:00:00 EDT",
    "refillRemaining": 5,
    "facilityName": "SLC4",
    "isRefillable": false,
    "isTrackable": false,
    "prescriptionId": 781763,
    "orderedDate": "Thu, 10 Jul 2014 00:00:00 EDT",
    "quantity": 5,
    "expirationDate": "Sat, 11 Jul 2015 00:00:00 EDT",
    "prescriptionNumber": "3635940",
    "prescriptionName": "CLARITHROMYCIN 500MG TAB",
    "dispensedDate": "Tue, 23 Sep 2014 00:00:00 EDT",
    "stationNumber": "991"
  },
    {
    "refillStatus": "refillinprocess",
    "refillSubmitDate": "Sun, 10 Aug 2014 00:00:00 EDT",
    "refillDate": "Fri, 15 Aug 2014 00:00:00 EDT",
    "refillRemaining": 3,
    "facilityName": "DAYT3",
    "isRefillable": false,
    "isTrackable": false,
    "prescriptionId": 781483,
    "orderedDate": "Fri, 11 Jul 2014 00:00:00 EDT",
    "quantity": 5,
    "expirationDate": "Sun, 12 Jul 2015 00:00:00 EDT",
    "prescriptionNumber": "2719154",
    "prescriptionName": "FLUCONAZOLE 100MG TAB",
    "dispensedDate": "Tue, 23 Sep 2014 00:00:00 EDT",
    "stationNumber": "994"
  }],
“failedStationList” : “”,
“lastUpdatedTime” : “Tue, 17 Jan 2012 00:00:00 EST”
}
```

3.1.2.2.3.1. View Tracking Information & Status

The purpose of this call is to allow callers to retrieve the tracking information and status of a VA Prescription

	Resource	Description
GET	**/patient/v1/prescription/rxtracking/{rxId}**	Retrieves the Tracking History

Request

Header		
Content-type	*Required*	*application/json*
Accept	*Required*	*application/json*
Token	*Required*	Session Token created in /session call

Parameters		
rxId	*Required*	Prescription Id to be fetched

Body
None

Response

Header
None

Body		
TrackingInfoDetailsTO	*Required*	(See Appendix A – TrackingInfoDetailsTO)
TrackingInfoTO	*Required*	(See Appendix A – TrackingInfoTO)
OtherPresListIncluded	*Required*	(See Appendix A – OtherPresListIncluded)

Codes	
200	***Successful retrieval of Tracking Informations***
400	102 - Application authorization failed 108 - Missing session token 109 - Invalid session token 110 - Expired session token 111 - Invalid user permissions 901 – Authentication Service Error 136 – The User is not the owner of the prescription 138 – Prescription Not Found 99 – Unknown Application Error

Example Request

GET http:// {hostname}/mhv-api/patient/v1/prescription/rxtracking/780117

```
Accept-Encoding: gzip,deflate
Token: 9WW/0xExCcQ=fSTTcCSqZh17gBNF2MJ/mwlfcej1LH5VGuLuEaUgg1s=
Accept: application/json
Content-Type:
Host: {hostname}
Connection: Keep-Alive
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)
```

Example Response

```
HTTP/1.1 200 OK
Date: Fri, 14 Nov 2014 17:38:21 GMT
Server: Apache/2.2.3 (Red Hat)
X-Powered-By: Servlet/2.5 JSP/2.1
Connection: close
Transfer-Encoding: chunked
Content-Type: application/json
{
  "prescriptionName": "ASPIRIN 81MG EC TAB",
  "prescriptionNumber": "3635937",
  "facilityName": "SLC4",
  "rxInfoPhoneNumber": "(555)342-4321 ext@1",
  "ndcNumber": "000A6074931",
  “lastUpdatedtime”:” Tue, 09 Sep 2014 00:00:00 EDT”,
  "trackingInfo":   [
        {
      "shippedDate": "Tue, 09 Sep 2014 00:00:00 EDT",
      "deliveryService": "USPS",
      "trackingNumber": "1000039121531",
      "otherPrescriptionListIncluded":        [
                {
          "prescriptionName": "ATENOLOL 50MG TAB",
          "prescriptionNumber": "3635930",
          "ndcNumber": "00074493411",
          "stationNumber": "991"
        },
                {
          "prescriptionName": "VERAPAMIL HCL 120MG TAB",
          "prescriptionNumber": "3635939",
          "ndcNumber": null,
          "stationNumber": "991"
        }
      ]
    },
        {
      "shippedDate": "Tue, 22 Jul 2014 00:00:00 EDT",
      "deliveryService": "UPS",
      "trackingNumber": "1Z767W9ENT39121531",
      "otherPrescriptionListIncluded":        [
                {
          "prescriptionName": "TORSEMIDE 100MG TAB",
          "prescriptionNumber": "3635913",
          "ndcNumber": "00074493462",
          "stationNumber": "991"
        },
                {
          "prescriptionName": "ETHOSUXIMIDE 250MG CAP",
          "prescriptionNumber": "3635938",
          "ndcNumber": "00006077331",
          "stationNumber": "991"
        },
                {
          "prescriptionName": "VERAPAMIL HCL 120MG TAB",
          "prescriptionNumber": "3635939",
          "ndcNumber": null,
          "stationNumber": "991"
        }
      ]
    }
  ]
}
```

3.1.3. Communication Methods

MHV and their clients shall communicate directly using JSON over HTTPS. Any application or service errors should be part of the response message using the Error object represented with JSON and a response code of 400. Any unexpected errors will be communicated using the error codes of other 403, 404, 503, etc. code responses.

Interface Initiation

To initiate a connection the Client sends a REST message to the MHV API web service using the designated host address and port number. The host address and port number shall be configurable.

3.1.4. Security Requirements

The interface relies on the network connections and firewalls through which the systems are connected. The transport of messages shall be protected by using Secure HTTP (or HTTPS)

The MHV Rx Refill & Tracking API shall provide an audit trail for connections made between systems, as well as attempts to connect.

4. Interface Verification

The following qualification methods will be used to verify that requirements have been met:

- Demonstration - The operation of interfacing entities that rely on observable functional operation.
- Test - The operation of interfacing entities that involve system-to-system communication using audit information and monitoring tools.

5. Appendix A – Data Elements

5.1. Data Structures Single Entity

Action	Associated Primitive fields
PrescriptionTO	• *refillStatus : String* • *refillSubmitDate : RFC1123 Date* • *refillDate : RFC1123 Date* • *refillRemaining : Integer* • *facilityName : String* • *isRefillable : Boolean* • *isTrackable : Boolean* • *prescriptionId : Long* • *orderedDate : RFC1123 Date* • *quantity : Integer* • *expirationDate : RFC1123 Date* • *prescriptionNumber : String* • *prescriptionName : String* • *dispensedDate : RFC1123 Date* • *stationNumber : String* ***Notes:*** ***refillStatus*** *– active, deleted, discontinued, discontinuedByProvider, discontinuedEdit, expired, hold, nonVerified, providerHold, refillinprocess, submitted, suspended, unknown* ***prescriptionId*** *– MHV RX Id* ***prescriptionNumber*** *– VistA RX Number*
PrescriptionsTO	• *prescriptionList : List<PrescriptionTO>* • *failedStationList : String* • *lastUpdatedTime : RFC1123Date*
TrackingInfoDetailsTO	• *prescriptionName : String* • *prescriptionNumber : String* • *facilityName : String* • *rxInfoPhoneNumber : String* • *ndcNumber : String* • *lastUpdatedtime : RFC1123 Date* • *trackingInfo : List<TrackingInfoTO>* ***Notes:*** ***prescriptionNumber*** *– VistA RX Number*
TrackingInfoTO	• *shippedDate : RFC1123 Date* • *deliveryService : String* • *trackingNumber : String* • *OtherPrescriptionsIncluded: List< OtherPresListIncluded >*
OtherPresListIncluded	• *prescriptionName : String* • *prescriptionNumber : String* • *ndcNumber : String* • *stationNumber : String*

	Notes: ***prescriptionNumber*** *– VistA RX Number* ***ndcNumber*** *– National Drug Code Number. You can pull the image from MHV via the following URL:* https://www.myhealth.va.gov/mhv-portal-web/ShowBinary/BEA%20Repository/MILDrugImages/**{Directory}**/NDC**{Number}**. Take an example ndcNumber such as "0006074954". Break the number into three chunks *0006-0749-54. (Starting from the right side [4 or 5 digits] [4 digits][2 digits])* ***Directory:*** *is determined by the first segment:* ***0006****-0749-54(in this case the result is* ***6*** *because we remove leading 0's)* ***Number****: is determined by the full ndcNumber.*

5.1.1. Error

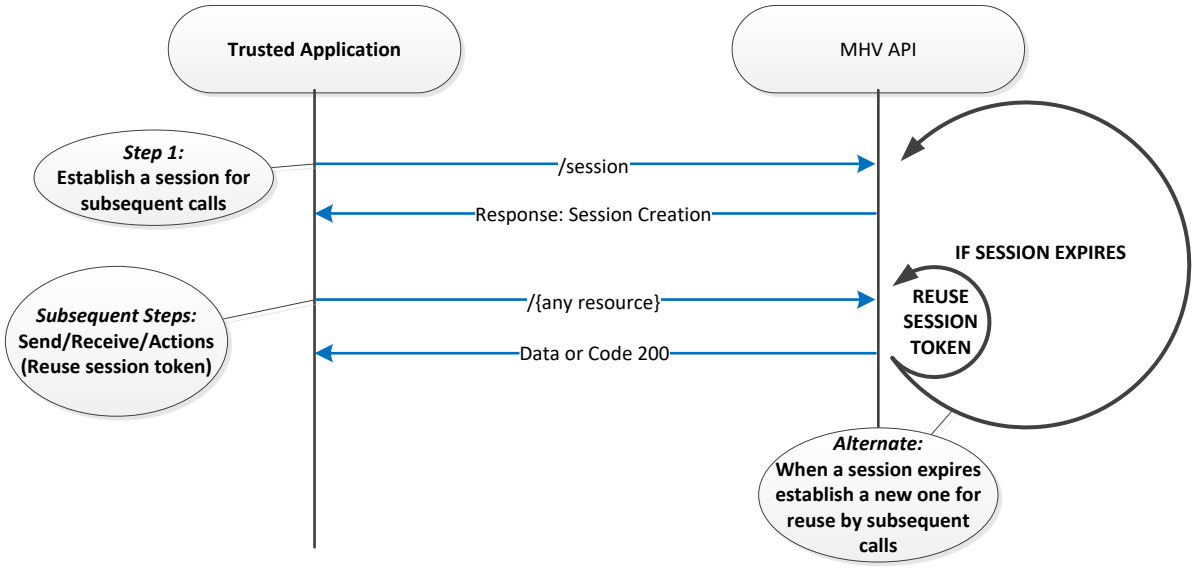
Code	Text	Description
200	**OK**	Success!
400	**Application Error**	An application error occurred: 99 - Unknown application error occurred 101 - Application authentication failed 102 - Application authorization failed 103 - Invalid User Credentials 104 - Missing User Credentials 105 - User was not found 106 - User is not eligible because they are blocked 107 - System unable to create token 108 - Missing session token 109 - Invalid session token 110 - Expired session token 111 - Invalid user permissions (invalid user type for resource requested) 117 – Data Integrity Error 132 – Missing Application Token 135 -The User has not accepted the Rx Agreement. Please login to MHV to accept it 136 – The User is not the owner of the prescription 138 – Prescription Not Found 901 - Authentication Service Error 904 - Message Service Error

503	**Internal Error**	Internal System Level Error
404	**Not Found**	Unable to find resource being requested

5.2. Data Structures Array Entity (Collections)

6. Appendix B – Sequence Diagrams

6.1. Typical flow: series of calls to the API's



7. Appendix C – RESTful API Call Requirements

7.1. Making requests: JSON escaping

It is critical that all calls made to the MHV API are properly escaped otherwise an error will result. This normally only becomes an issue where calls are crafted "by hand" in lieu of using a library that would passively handle all escaping requirements.

The only characters that **must** be escaped are \ (backslash), " (double quote), and any control codes (less than U+0020).

See the JSON RFC for more information.

8. Appendix D – RX API Field Mapping

8.1. API field Mappings

API Fields	Refillable Screen	Tracking Screen	History Screen	MHV DATABASE Column	MHV Refill VA page	MHV History page	MHV Tracking Page	VistA File and Field Number	VistA Field Name
refillStatus : String	Refill Status*	Refill Status/ Prescription Status	Refill Status/ Prescription Status	PRESCRIPTIONS.STATUS	Refill Status	Status	Refill Status (Detail page)	52.100	STATUS
refillSubmitDate : RFC1123 Date				PRESCRIPTIONS.LAST_REFILL_SUBMITTED_DATE	Refill Submit Date				
refillDate : RFC1123 Date	Last Refill Shipped	Last Refill Shipped	Last Refill Shipped	PRESCRIPTIONS.LAST_FILL_DATE	Fill Date	Fill Date	Fill Date (Detail page)	52,22	LAST FILL DATE
refillRemaining : Integer	Refills Left		Refills Left	PRESCRIPTIONS.NUMBER_OF_REFILLS	Refill Remaining	Refills Remaining (Detail page)	Refills Remaining (Detail page)	52,9 this is calculated	Number of Refills
facilityName : String	VA Facility	VA Facility	VA Facility	INSTITUTION.NAME	Facility	Facility	Facility	52,20 50;.02	Facility Name
isRefillable : Boolean	(We filter list based on this)			PRESCRIPTIONS.REFILLABLE					
isTrackable : Boolean		(We filter this list based on this value and also only show prescriptions whose refillDate is less than 30 days old.)							
prescriptionId : Long				PRESCRIPTIONS.PRESCRIPTION_ID					

orderedDate : RFC1123 Date				PRESCRIPTIONS.ISSUE_DATE_TIME	Ordered On (Detail page)	Ordered On (Detail page)	Ordered On (Detail page)	52.1	ISSUE DATE
quantity : Integer	Quantity		Quantity	PRESCRIPTIONS.QUANTITY	Quantity (Detail page)	Quantity (Detail page)	Quantity (Detail page)	52.7	QTY
expirationDate : RFC1123 Date	Current Prescription Expires		Current Prescription Expires	PRESCRIPTIONS.EXPIRATION_CANCEL_DATE	Expiration Date (Detail page)	Expiration Date (Detail page)	Expiration Date (Detail page)	52.26	EXPIRATION DATE
prescriptionNumber : String	Prescription Number	Prescription Number	Prescription Number	PRESCRIPTIONS.PRESCRIPTION_NUMBER	Prescription Number	Prescription Number	Prescription Number	52.01	RX #
prescriptionName : String	In the Header	In the Header	In the Header	PRESCRIPTIONS.DRUG_NAME	Medication Name	Prescription	Prescription	52.6	DRUG
dispensedDate : RFC1123 Date	Dispensed On		Dispensed On	PRESCRIPTIONS.RELEASE_DATE_TIME	Dispensed On (Detail page)	Dispensed On (Detail page)	Dispensed Date	52.31	RELEASED DATE/TIME
stationNumber : String				INSTITUTION.STATION_NUMBER					
sig: String	Instructions	Instructions	Instructions	PRESCRIPTIONS.SIG	Included within Medication Name	Included within Prescription	Included within Prescription	52.10, 52.10.2	SIG, SIG1
rxInfoPhoneNumber		Rx Information Phone Number		RX_TRACKING.DIVISION_PHONE			Rx Information Phone Number	52,20, 59,.05	Facility Phone Number
shippedDate		Date Shipped		RX_TRACKING.COMPLETE_DATE_TIME			Date Shipped	52.01,9	
deliveryService		Delivery Service		RX_TRACKING.CARRIER			Delivery Service		
trackingNumber		Tracking Number		RX_TRACKING.TRACKING_NUMBER			Select Tracking Number	can be 52,01,11 or found in activity log comment.	
otherPrescriptionListIncluded		Other Prescriptions in Package							