Australian Government
Australian Digital Health Agency

My Health Record FHIR® Gateway
API Specification

22 June 2018 v1.3.0

Approved for external use

Document ID: DH-2721:2018

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Acknowledgements

Council of Australian Governments
The Australian Digital Health Agency is jointly funded by the Australian Government and all state and territory governments.

Document information

Key information

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Product or document version history

Product or document version	Date	Release comments
1.0.0	30 Jun 2016	First Public Release
1.0.0-hotfix	25 Jul 2016	Hot Fix Release
1.2.0	8 Jun 2017	Draft release for API v1.2.0
1.3.0	22 Jun 2018	Production Release for API v1.3.0

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1 Introduction

1.1 Purpose

This document provides an overview of the API specifications required by developers to connect applications (apps) to the My Health Record system. This document describes API requests, API responses, OperationOutcome details, and error conditions that apply to application transactions.

1.2 Intended audience

This document is intended for use by Fast Healthcare Interoperability Resources (FHIR®) API consumers to understand the API signature exposed by the My Health Record system. This includes information about request messages, response messages, error handling and request processing logic. This document will serve as an input to the National Infrastructure Operator (NIO) Build team for the development and implementation of the solution. This document is also intended as an input to the NIO Test team for the purpose of defining test scripts.

1.3 Scope

This document is limited to discussing the following three sections:

- **Section 1 – Introduction:** The introduction outlines the document's purpose, scope and references.
- **Section 2 – REST Model:** This section describes the key characteristics of the REST model and how they are used in the APIs developed in the My Health Record system.
- **Section 3 – API Catalogue:** This section describes the APIs exposed via the API Gateway channel, API descriptions, API message specifications and a list of error codes that the APIs can return as an OperationOutcome.

It does not cover the following areas:

- Guideline for RESTful API: This document assumes that the implementers are familiar with RESTful API concepts.
- FHIR® Specification: This document assumes that the implementers are familiar with basic FHIR® concepts.

2 REST Model

REST (Representational State Transfer) relies on a stateless, client-server, cacheable communications protocol and, in virtually all cases, the HTTP protocol is used.

REST is an architecture style for designing networked applications. Rather than using complex mechanisms such as CORBA, RPC or SOAP to connect between machines, simple HTTP is used to make calls between machines.

The My Health Record system FHIR API has been implemented using the REST model, and the following guiding principles have been followed:

- Platform independence;
- Programming language independence;
- Standards-based (runs on top of HTTP);
- Can easily be used in the presence of firewalls.

The following subsections give an overview of some of the key characteristics of the My Health Record system FHIR API and the versioning strategy that is applied to both the FHIR API Specification as a whole and its associated interactions.

2.1 Key characteristics

Resources, which are identified by logical URLs.
Both state and functionality are represented using resources. Client systems make requests against My Health Record system resources, either in aggregate or a specific resource.

No connection state: interaction is stateless.
Each new request should carry all the information required to complete it, and must not rely on previous interactions with the same client.

HTTP Interaction: GET, POST or PUT HTTP requests against My Health Record system resources.

Request Headers vary between API interactions.
Refer to the respective API sections in this document for more details.

Common request headers in use are:

- 'Accept': This is an optional value. The value of 'Accept' specifies the response format. Valid response formats are: 'application/xml+fhir' or 'application/json+fhir'.
- 'Authorization': This is the OAuth token generated by the My Health Record system. This is mandatory.
- 'App-Id': This is the Application ID assigned to the application. This is mandatory.
- 'App-Version': This is the application version as presented to the user. This is mandatory.
- 'Platform-Version': This optional header is used to identify the version of the intermediary server for apps based on interaction models 4 and 5.

Response Codes: HTTP response codes appropriate for the result of the request. While the exact meaning of the code varies depending on the API interaction, the general rules are:

- 200 – The request was successful.
- 201 – The request has been successful and a new resource has been created.
- 204 – The requested interaction was successful and there is no response body.
- 307 – Please repeat the request using the provided URI. Subsequent requests can use the old URI.
- 400 – Your request was improperly formatted. You should verify that your request conforms to this specification and re-issue the request in a properly formatted manner.
- 403 – The request was not allowed because the request did not pass authentication or you do not have the proper access rights to the target.
- 404 – The requested resource does not exist.
- 500 – My Health Record system failed to process the request because of an error. These responses should be reported to the My Health Record support team as these can represent a bug in the system.
- 501 – My Health Record system does not support the functionality required to fulfil the request.
- 503 – My Health Record system is undergoing maintenance or is otherwise temporarily unavailable for API queries.

Response Entities: all GET methods respond with the JSON or XML of the resource(s) being requested.

Authentication: My Health Record system authenticates each application request individually. The application provides the request with the Application ID provided during the registration process.

Application ID and Secret Client Access Key: Will be provided during the registration process by the My Health Record System Operator.

2.2 API Versioning

The FHIR API of the My Health Record system is versioned according to the following numbering scheme:

majorVersion.minorVersion.patchVersion

This numbering scheme is aligned with Semantic Versioning Specification (SemVer) v2.0.0[1], which has been widely adopted across the software development community. Its key points are reflected by the following table.

Table 1 – Semantic Versioning

Version type	Backwards compatible	Change type
Major	NO	Functionality changes, e.g. removed operations; alignment with new FHIR Specification version
Minor	Yes	Functionality changes, e.g. additional operations
Patch	Yes	Bug fixes

Importantly, the version number of the FHIR API is reflected in the URLs of all API interactions. To allow for an easy transition to newer versions of the FHIR API, applications should be developed in ways that allow the setting of the FHIR API version number at a central location and the utilisation of this setting for all API requests (i.e. dynamic inclusion of the API version number in the URLs of all API requests).

[1] http://semver.org/spec/v2.0.0.html

3 API Catalogue

This section lists the APIs in the My Health Record system, organised into six logical groups:

- **Authentication Services** provides interactions for interacting with the My Health Record system by establishing the identity of the user**.**
- **Identification Services** provides interactions to retrieve patient details and record details from the My Health Record system.
- **Medicare Information** provides interactions to retrieve Medicare information from the My Health Record system, which includes Medicare Benefits Scheme (MBS) and Pharmaceutical Benefits Scheme (PBS) data.
- **Generic Document Services** provides interactions to retrieve a document or a document list from the My Health Record system.
- **Consumer Document Services** provides interactions to retrieve and update consumer-entered documents from the My Health Record system.
- **Clinical Document Services** provides interactions to retrieve specific clinical document information from the My Health Record system such as prescription and dispense, and allergies information.

3.1 Authentication services

Three APIs are classified under this group:

- Individual Initial Authentication (OAuth)
- Initial Provider Authentication (JWT)
- Get or Refresh Token

3.1.1 Individual Initial Authentication (OAuth)

3.1.1.1 Description

This API is used to validate an individual's identity (username, password and secret question/answer with myGov – identity provider for government services).

To proceed with Individual Authentication, the following criteria must be met:

- Application is registered with the My Health Record system.
- Individual has a myGov account.
- Individual has one or more My Health Record(s) linked to his/her myGov account.

3.1.1.2 Authentication Flow

The below figure depicts the successful authentication and authorisation flow for an application (note, step 3 is an example only).

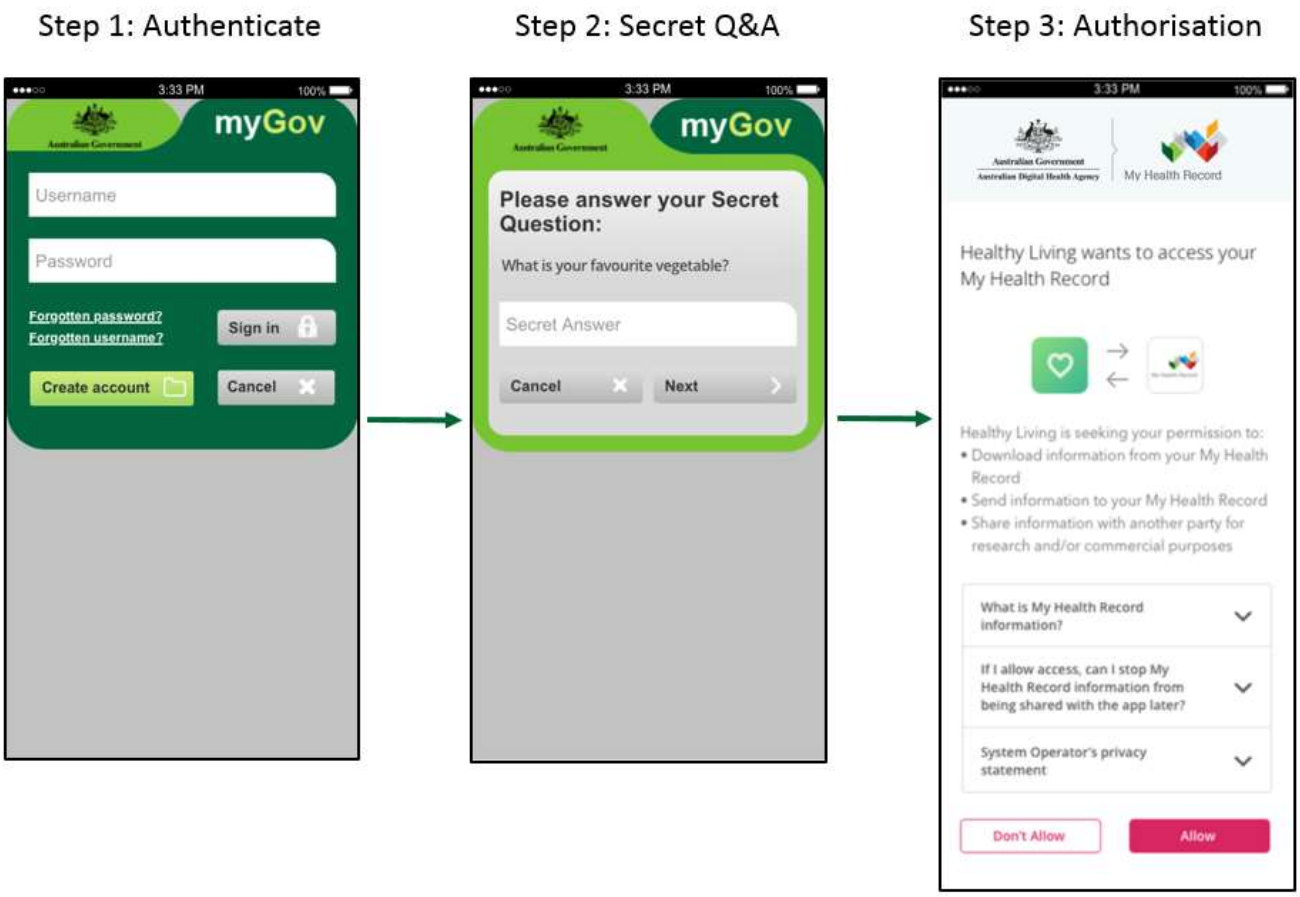

Figure 1 – Authentication and Authorisation Flow

3.1.1.3 Message Specification

OAuth 2.0 framework specification is available at: http://tools.ietf.org/html/rfc6749

3.1.1.4 Request Message

Table 2 – Individual Authentication-Request Message

Resource URI	[base]/api/oauth/authorize/login					
HTTP Method	GET					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Request Parameters/ Search Support						
client_id	UUID	UUID	36	36	1..1	Client identifier for the application (aka App ID)
response_type	string	string	4	4	1..1	The value MUST be text as "code" for requesting an authorisation code

redirect_uri	string	string	-	-	1..1	Callback URL for the application to handle authorisation code, to be provided by the developer during the application registration process in the *Production Environment Access Request Form*.
scope	string	string	-	-	1..1	API scope to be provided to the developer during the application registration process

3.1.1.5 Response Message

The My Health Record system returns an HTML page to the application, and end users get authenticated with their myGov username/password and secret question/answer.

An authorisation code is generated against the redirect URL. This is depicted below:

[redirect_uri]?code=[authorization_code]

Refer to the *"My Health Record FHIR Gateway - Sample Requests and Responses"* for further details.

3.1.1.6 Error Scenarios

Refer to the "Access Token Error Conditions" section under "OAuth2_0" tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

3.1.2 Get or Refresh Token

3.1.2.1 Description

This API provides the ability to obtain access tokens for subsequent requests for individual access to the My Health Record system. It also provides the ability to refresh access tokens upon access token expiry.

To generate a token, the following criteria must be met:

- Application is registered with the My Health Record system.
- Individual has a myGov account.
- Individual has one or more My Health Record(s) linked to his/her myGov account.

3.1.2.2 Message Specification

OAuth 2.0 framework specification is available at: http://tools.ietf.org/html/rfc6749

3.1.2.3 Request Message to get access token

Table 3 – Get Access Token-Request Message

Resource URI	[base]/api/oauth/token
HTTP Method	POST

Request Headers	Data Type	Format	Min Length	Max Length	Cardinality	Remarks
Content-Type	string					application/x-www-form-urlencoded
Request Parameters/ Search Support						
client_id	UUID	UUID	36	36	1..1	Client identifier for the application (aka App ID)
client_secret	UUID	UUID	36	36	1..1	Client secret for the application (aka App secret)
grant_type	string	string	18	18	1..1	The value MUST be “authorisation_code” to get the access token
redirect_uri	string	string	-	-	1..1	Callback URL for the application to handle authorisation code, to be provided by developer during the application registration process
format	string	string	4	4	1..1	The value MUST be “JSON”
Code	string	string	32	32	1..1	Authorisation code generated in 3.1.1

3.1.2.4 Request Message to refresh access token

Table 4 – Refresh Access Token – Request Message

Resource URI	[base]/api/oauth/token					
HTTP Method	**POST**					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
content-type	string	string	33	33	1..1	application/x-www-form-urlencoded
Authorization	string	string	102	102	0..1	Base64 encoded of “client_id:client_secret”
Request Parameters/ Search Support						
client_id	UUID	UUID	36	36	1..1	Client identifier for the application (aka App ID)
client_secret	UUID	UUID	36	36	1..1	Client secret for the application (aka App secret)

grant_type	string	string	13	13	1..1	The value MUST be "refresh_token" to refresh the access token
format	string	string	4	4	1..1	The value MUST be "JSON"
refresh_token	string	string	46	46	1..1	Refresh token generated while generating the access token in step 3.1.2.3

3.1.2.5 Response Message

The access token is returned in JSON format.

Refer to the *"My Health Record FHIR Gateway - Sample Requests and Responses"* for further details.

3.1.2.6 Token Expiration Period

- Access token expires in 7200 seconds (2 hours)
- Refresh token expires in 15768000 seconds (6 months)

Note: Under interaction model #4, a consumer's OAuth tokens (both the access token and the refresh token) must not be used by the intermediary server if that consumer has not accessed the application for more than 6 months.

3.1.2.7 Error Scenarios

During authentication, for all success and failure cases system redirects the flow to the "redirect_url" as registered with My Health Record System.

For all other cases where My Gov denies authentication due to incorrect credentials, the system says on the login page with showing the appropriate error messages.

Refer to the "Refresh Token Error Conditions" section under "OAuth2_0" tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

3.1.3 Initial Provider Authentication (JWT)

3.1.3.1 Description

This API is used to validate a healthcare provider's identity to allow the indirect connection of a mobile application to MHR through an Intermediary Server.

To proceed with Provider Authentication, the following criteria must be met:

- Application is registered with the My Health Record system.
- Healthcare provider has either a HPI-I or a Local System Identifier (LSI).
- The HPI-I or LSI is linked to a valid HPI-O.

3.1.3.2 Authentication Flow

The steps below describe the successful authentication and authorisation flow for an application

1. Healthcare provider accesses the app by entering their HPI-I/LSI and password on their mobile device.

2. The device passes the login information to the vendor intermediary server to authenticate the user.
3. Intermediary server fires the Initial Provider Authentication request to the MHR mobile gateway to authenticate the user with a JSON Web Token (JWT).
4. Mobile gateway triggers access validation internally to verify if the calling application has access to the invoked API:
5. Based on the validation result, system generates a token and returns back to the calling system.

3.1.3.3 Message Specification

OAuth 2.0 framework specification is available at: http://tools.ietf.org/html/rfc6749

More information on JWT can be found at: https://tools.ietf.org/html/rfc7519#page-6

3.1.3.4 Request Message

Table 5 – Provider Authentication-Request Message

Resource URI	[base]/api/oauth/token/provider					
HTTP Method	POST					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Content-Type	string					application/x-www-form-urlencoded
Request Parameters/ Search Support						
grant_type	string	string	43	43	1..1	The value MUST be set to: urn:ietf:params:oauth:grant-type:jwt-bearer
assertion	string	string	-	-	1..1	Must be set to the JWT bearer token, base64url-encoded.

format	MIME-type	MIME-type	4	4	0..1	The supported value is 'json'.
userName	string	string	-	-	1..1	This captures the username of the individual provider. This is provided by the vendor intermediary server.
organisationName	string	string	-	-	1..1	This captures the organisation name of the individual provider. This is provided by the vendor intermediary server.
deviceID	string	string	-	-	0..1	This captures the mobile device ID of the individual provider. This is provided by the vendor intermediary server.
deviceMake	string	string	-	-	0..1	This captures the mobile device make of the individual provider. This is provided by the vendor intermediary server.
deviceModel	string	string	-	-	0..1	This captures the mobile device model of the individual provider. This is provided by the vendor intermediary server.

3.1.3.5 JWT Format

The Intermediary Server will trigger the API with the JSON Web Token (JWT) that has been generated. The JWT contains the following authentication claims in its body:

Table 6 – JWT Claims

Claim	Description	Cardinality	Sample
iss	The service's client_id, as determined during registration with the EHR's authorization server.	1..1	E.g. "28198d27-c475-4695-83d3-1f1f8256e000"
aud	The EHR authorization server's "token URL" (the same URL to which this authentication JWT will be posted).	1..1	E.g. "https://localhost/oauth_callback"
exp	Expiration time integer for this authentication JWT, expressed in seconds since the "Epoch" (1970-01-01T00:00:00Z UTC). This time MUST be no more than five minutes in the future.	1..1	E.g. "1477025181"
iat	The time the assertion was issued (iat) expressed in seconds since the "Epoch" (1970-01-01T00:00:00Z UTC).	1..1	E.g. "1477025181"
jti	A nonce string value that uniquely identifies this authentication JWT bearer token.	1..1	E.g. "uuid:98145613-756b-445f-909f-d16d6c49d000"

organisationID	Custom JWT claim that captures the organisation ID of the HPI-O.	1..1	E.g. "8003629900020187"
userID	Custom JWT claim that captures the user identifier, the identifier can be one of the following: • HPI-I • Local System Identifier (LSI)	1..1	E.g. "8003611566666701"

3.1.3.6 Response Message

The access token is returned in JSON format. The response contains the following elements:

'scope', 'expires_in', 'access_token' and 'token_type'.

The value of 'token_type' is always 'Bearer'.

Refer to "My Health Record FHIR Gateway - Sample Requests and Responses" further details.

3.1.3.7 Error Scenarios

Refer to the "Provider Authentication Error Conditions" section under "OAuth2_0" tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

3.2 Identification service

There are two APIs classified under this group:

- Record List (GET)
- Patient Details (GET)

3.2.1 Get Record List (GET)

3.2.1.1 Description

This API provides the ability to retrieve the list of records the individual is permitted to access and returns a bundle containing the RelatedPerson resource for each accessible record such as:

- Self
- Authorised Representative types:
  - Under 18 - Parental Responsibility
  - Under 18 - Legal Authority
  - Under 18 - Otherwise Appropriate Person
  - 18 and Over - Otherwise Appropriate Person
  - 18 and Over - Legal Authority
- Nominated Representative
  - Full Access Nominated Representative
  - Nominated Representative

This API is accessible by consumers only.

3.2.1.2 Message Specification

Resource served on the REST interface (Conformance.rest.resource.type): 'RelatedPerson'

FHIR®-based resource reference (Conformance.rest.resource.profile) is available at:

- http://hl7.org/fhir/2016May/relatedperson.html
- http://hl7.org/fhir/2016May/operationoutcome.html

This specification is intended to be used to describe an actual running instance of software (Conformance.kind = 'instance').

For API v1.3.0, the server does not accept unknown elements or extensions when reading resources (Conformance.acceptUnknown = 'no').

The server supports both XML and JSON transactions. The value can be 'application/xml+fhir' (to represent it as XML) or 'application/json+fhir' (to represent it as JSON). (Conformance.format = "xml" or "json").

3.2.1.3 Versioning and History

- API Version: 'v1.3.0'.
- FHIR® Version (Conformance.fhirVersion): '1.4.0'.
- Resource Instance Version (Conformance.rest.resource.versioning): 'no-version'. 'VersionId' meta-property is not supported (server) or used (client).
- History (Conformance.rest.resource.readHistory): 'false'. For API v1.3.0, the server is not able to return past versions. 'vRead' interaction is not supported.

3.2.1.4 Request Message

Table 7 – Record Details-Request Message

Resource URI	[base/fhir/ v1.3.0]/RelatedPerson Refer to the "Action URI List" tab in the *My Health Record – API Mapping* document for more details on the possible Action URIs.					
HTTP Method (interaction)	GET (search)					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	string	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	string	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.

Request Parameters (searchParam)						
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

3.2.1.5 Content and Terminology

The tables below summarise My Health Record Specific Extension and ValueSet as applicable to the Get Record List API.

Content Extension: Relationship Type

Table 8 – Content Extension: Relationship Type

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/relationship-type
Name:	Relationship Type
File Name:	• StructureDefinition-relationship-type.xml • StructureDefinition-relationship-type.json
This is an extension on the RelatedPerson.relationship. More information can be found at Appendix E Extension Registry section.	

Terminology: Relationship Type Code

Table 9 – Terminology: Relationship Type Code

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/ValueSet/relationship-type	
Name:	Relationship Type Code	
File Name:	• ValueSet-relationshiptype.xml • ValueSet-relationshiptype.json • CodeSystem-relationship-type.xml • CodeSystem-relationship-type.json	
Code Definition		
Code	**Display**	**Definition**
RT001	Self	Self
RT002	Under 18 - Parental Responsibility	Under 18 - Parental Responsibility
RT003	Under 18 - Legal Authority	Under 18 - Legal Authority
RT004	Under 18 - Otherwise Appropriate Person	Under 18 - Otherwise Appropriate Person
RT005	18 and Over - Legal Authority	18 and Over - Legal Authority
RT006	18 and Over - Otherwise Appropriate Person	18 and Over - Otherwise Appropriate Person
RT007	Full Access Nominated Representative	Full Access Nominated Representative
RT008	Nominated Representative	Nominated Representative

The ValueSet is being Referenced from http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/relationship-type . More information can be found at TerminologiesExtension Registry section.

3.2.1.6 Response Message

Based on the MIME header (Accept) or '_format' request parameter, the system will return 'Bundle' of 'RelatedPerson' resources in either XML or JSON format.

Refer to "My Health Record FHIR Gateway - Sample Requests and Responses" further details.

Refer to the "GetRecordList" tab in the *My Health Record – API Mapping* document in for more details on the response mapping.

3.2.1.7 OperationOutcome Codes

The API returns error, warning and information messages that provide detailed information about the outcome of attempted system interaction. They are provided as a direct system response, or component of one, where they provide information about the outcome of the interaction.

HTTP error codes that are applicable to this service will be transmitted in the response header along with the OperationOutcome details in the response body.

Refer to the "Get Record List (GET)" section under "FHIR API Error Cases" tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

Please refer to Appendix B.1 API Error for a full list of common errors applicable to all the APIs exposed through My Health Record System.

3.2.2 Get Patient Details (GET)

3.2.2.1 Description

This API offers the following capabilities:

- Consumer and provider can retrieve (access control logic applied) individual's demographic details as available in the My Health Record system.
- Provider can verify if a particular patient exists in the My Health Record system without gaining access to the record.
- Provider can gain access to a particular patient's record to view the associated details.

This API is accessible by both consumers and providers.

3.2.2.2 Message Specifications

Resource served on the REST interface (Conformance.rest.resource.type): 'Patient'

FHIR®-based resource reference (Conformance.rest.resource.profile) is available at:

- http://hl7.org/fhir/2016May/patient.html
- http://hl7.org/fhir/2016May/operationoutcome.html

This specification is intended to be used to describe an actual running instance of software (Conformance.kind = 'instance').

For API v1.3.0, the server does not accept unknown elements or extensions when reading resources (Conformance.acceptUnknown = 'no').

The server supports both XML and JSON transactions. The value can be 'application/xml+fhir' (to represent it as XML) or 'application/json+fhir' (to represent it as JSON). (Conformance.format = "xml" or "json").

The definition of the OperationDefinition (Conformance.rest.operation.definition) used for the custom FHIR® operation: $access:

More details on the '$access' can be found in Operations section.

3.2.2.3 Versioning and History

- API Version: 'v1.3.0'.
- FHIR® Version (Conformance.fhirVersion): '1.4.0'
- Resource Instance Version (Conformance.rest.resource.versioning): 'no-version'. 'VersionId' meta-property is not supported (server) or used (client).
- History (Conformance.rest.resource.readHistory): 'false'. For API v1.3.0, the server is not able to return past versions. 'vRead' interaction is not supported.

3.2.2.4 Request Message

The table below summarises the request message to get the individual's demographic detail when accessed by the individual (consumer).

Table 10 – Patient Details-Request Message

Resource URI	[base/fhir/v1.3.0]/Patient/[id] Note: the [id] is the logical identifier of the patient to be retrieved. If [id] is not passed in the query string, then the Patient API retrieves the demographics of logged-in user. Additional validation is performed on the [id] supplied in the URI to check if the logged-in user is authorized to perform any operation to the user in context. Refer to the "Action URI List" tab in the *My Health Record – API Mapping* document for more details on the possible Action URIs.					
HTTP Method (interaction)	GET (read)					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	string	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	string	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.

Request Parameters (searchParam)						
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

My Health Record system enables capability for the providers to check whether a particular patient exists in the system or not without gaining the access to the record. This can be achieved by using the "_element" search on patient's ID. The system supports only "_element=identifier" and if the patient exists, the system returns only the 'id', 'identifier' and 'active' element associated with the patient resource. Please refer to Appendix Item: Access Policy for Providers for more details.

The table below summarises the request message when a provider (e.g. practitioner) wants to verify if a particular patient exists in the My Health Record system.

Table 11 - Verify Patient Exists in My Health Record system - Request Message (Provider)

Resource URI	[base/fhir/v1.3.0]/Patient Refer to the "Action URI List" tab in the *My Health Record – API Mapping* document for more details on the possible Action URIs.					
HTTP Method (interaction)	GET (search)					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	string	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	string	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
Request Parameters (searchParam)						
identifier	string	string	16	16	0..1	IHI Number of the patient. A validation is performed on the IHI in the URI to check if it meets the My Health Record IHI criteria. If the IHI number is not available for the patient, the search can be performed with 'Medicare

						Card Number' or 'DVA File Number' can be sent as the search criteria using the custorm search parameter 'coverageId' Either of identifier or coverageId is mandatory for searching the patient.
coverageId	token	token	-	-	0..1	This is custom search parameter. Use this in the following format: coverageId =[system]|[code] Refer to section Patient Search by Provider – Alternative Search Criteria section for more detail. Either identifier or coverageId is mandatory for searching the patient.
_elements	string	string	10	10	0..1	Allowed value is 'identifier'. Use "_element=identifier" as search parameter when the provider is interested to check if patient (corresponding to the identifier provided in the request) exists in the My Health Record system or not. System does not support any other '_elements' option. Note: This Search option is not available for the consumer.
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

The table below summarises the request message when a provider (e.g. practitioner) wants to gain access to a patient's record. Providers are required to gain access to patient's record to view relevant details.

Table 12 - Gain Access to Patient Record - Request Message (Provider)

Resource URI	[base/fhir/v1.3.0]/Patient/[id]/$access (if the logical Id is available) base/fhir/v1.3.0]/Patient/$access (if search patient with demographic details or IHI)

	'$access' is a custom FHIR® operation on the patient resource. More details can be found at Operations section. The [id] in the URI is the logical identifier of the patient. Refer to the "Action URI List" tab in the *My Health Record – API Mapping* document for more details on the possible Action URIs.					
HTTP Method (interaction)	POST					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	string	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	string	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
content-type	string	string	20	21	1..1	application/xml+fhir (or) application/json+fhir This is the MIME type of the body of the request
Request Parameters (search Param)						
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).
Request Body (Parameter name)						**The request body should contain a 'Parameters' resource containing the following list of parameters**
subject	Patient	XML/JSON	-	-	0..1	Use the IHI number if the logical identifier of the patient is unknown. The provider can also gain access with supplying demographic details in the request body. Refer to section Patient Search by Provider – Alternative Search Criteria section for more detail and the 'OperationDefinition.xml' attached in section This API is

						accessible by both consumers and providers. Message Specifications for more details.
accessType	String	String	10	15	1..1	The values of accessType parameter can be: 'GeneralAccess','AccessCode', 'EmergencyAccess'
accessCode	String	String	-	-	0..1	This field is conditional mandatory. If the value of 'accessType' parameter is 'AccessCode', then a value of 'accessCode' parameter has to be sent as well.

In the scenario where the provider wants to gain access to the patient's demographic details, 'POST' request is initiated using patient's 'id' (Logical identifier) or IHI (business identifier) or demographic detail. This is done by invoking '$access' custom FHIR operation on the patient resource. Please refer to Appendix section Provider Access: Status and Types as applicable to the provider to gain access to the patient details.

3.2.2.5 Content and Terminology

The table below summarises My Health Record Specific Extension and ValueSet as applicable to the Get Patient Details API.

Content Extension: Indigenous Status

Table 13 – Content Extension: Indigenous Status

Defining URL:	http://hl7.org.au/fhir/StructureDefinition/indigenous-status
Name:	Indigenous Status
Sample:	<extension url="http://hl7.org.au/fhir/StructureDefinition/indigenous-status"> <valueCoding> <code value="1"/> <system value="http://meteor.aihw.gov.au/content/index.phtml/itemId/602543#Codes" /> <!-fixed vocab --> <display value="Aboriginal but not Torres Strait Islander origin" /> <!--required: indigenous status display name --> </valueCoding> </extension>
This is an extension on the Patient.	

Terminology: Indigenous Status Code

Table 14 – Terminology: Indigenous Status Code

Defining URL:	http://meteor.aihw.gov.au/content/index.phtml/itemId/602543#Codes
Name:	Indigenous Status Codes

Sample:	1- Aboriginal but not Torres Strait Islander origin	
Code Definition		
Code	**Display**	**Definition**
1	Aboriginal but not Torres Strait Islander origin	Aboriginal but not Torres Strait Islander origin
2	Torres Strait Islander but not Aboriginal origin	Torres Strait Islander but not Aboriginal origin
3	Both Aboriginal and Torres Strait Islander origin	Both Aboriginal and Torres Strait Islander origin
4	Neither Aboriginal nor Torres Strait Islander origin	Neither Aboriginal nor Torres Strait Islander origin
9	Not stated/inadequately described	Not stated/inadequately described
The value set is being referenced from http://meteor.aihw.gov.au/content/index.phtml/itemId/602543#Codes		

3.2.2.6 Response Message

Based on the MIME header (Accept) or '_format' request parameter, the system will return 'Bundle' resources in either XML or JSON format if there is no IHI passed in the URI query string.

When accessed by the consumer, a bundle containing a list of patients for which the logged in user has authorized the application to access is retrieved. The list will contain at least one entry. The normal case is that the list will contain the patient record for the logged-in user ('self' details), but this is not always the case. The patient may have access to records for other patients, and may exclude their own record from view.

The system returns a 'Patient' resource corresponding to the patient's logical identifier as provided in the request.

When the API is accessed by the provider to verify if a particular patient exists in the My Health Record system (search), a bundle resource is served which contains entries of 'Patient' resource with the 'identifier' and the 'active' element populated. An extension ('patient-access-criteria') on the 'Bundle.search.mode' has been added to provide more information about the access restriction as required to access the patient demographic details.

The API can also be accessed by the provider to gain access to a patient record. In this case, a 'Parameter' resource is returned which consist of the resource access status ('WithoutCode', 'WithCode' or 'AccessGranted') along with the requested patient details (if available).

Refer to "My Health Record FHIR Gateway - Sample Requests and Responses" further details.

Refer to the "GetPatientDetails" tab in the *My Health Record – API Mapping* document for more details on the response mapping.

3.2.2.7 OperationOutcome Codes

The API returns error, warning and information messages that provide detailed information about the outcome of attempted system interactions. They are provided as a direct system response, or component of one, where they provide information about the outcome of the operation.

HTTP error codes that are applicable to this service and will be transmitted in the response header along with the OperationOutcome details in the response body.

Refer to the "Get Patient Details (GET) & Get Patient Details (POST)" section under "FHIR API Error Cases" tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

Please refer to Appendix B.1 API Error for a full list of common errors applicable to the All APIs exposed through My Health Record System.

3.3 Medicare Information

There are two APIs classified under this group:

- PBS Items (GET)
- MBS Items (GET)

3.3.1 Get PBS Items (GET)

3.3.1.1 Description

This API provides the ability to retrieve PBS details in the form of a bundle of ExplanationOfBenefit FHIR® resources from the My Health Record system. A maximum of 99 resources is returned in the response.

This API is accessible by both consumers and providers.

3.3.1.2 Message Specifications

Resource served on the REST interface (Conformance.rest.resource.type): 'ExplanationOfBenefit'

FHIR® based resource reference (Conformance.rest.resource.profile) is available at:

- http://hl7.org/fhir/2016May/explanationofbenefit.html
- http://hl7.org/fhir/2016May/operationoutcome.html

This specification is intended to be used to describe an actual running instance of software (Conformance.kind = 'instance')

For API v1.3.0, the server does not accept unknown elements or extensions when reading resources (Conformance.acceptUnknown = 'no').

The server supports both XML and JSON transactions. The value can be 'application/xml+fhir' (to represent it as XML) Or 'application/json+fhir' (to represent it as JSON). (Conformance.format = "xml" or "json").

3.3.1.3 Versioning and History

- API Version: 'v1.3.0'.
- FHIR® Version (Conformance.fhirVersion): '1.4.0'.
- Resource Instance Version (Conformance.rest.resource.versioning): 'no-version'. 'VersionId' meta-property is not supported (server) or used (client).
- History (Conformance.rest.resource.readHistory): 'false'. For API v1.3.0, the server is not able to return past versions. 'vRead' interaction is not supported.

3.3.1.4 Request Message

Table 15 – PBS Items-Request Message

Resource URI	[base/fhir/v1.3.0]/ExplanationOfBenefit

	Refer to the "Action URI List" tab in the *My Health Record – API Mapping* document for more details on the possible Action URIs.					
HTTP Method (interaction)	GET (read)					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	string	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	string	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
Request Parameters (searchParam)						
patientreference	integer	integer	-	-	1..1	Logical identifier of the patient. Additional validation is performed on the patientreference in the URI to check if the logged in user is authorized to perform any operation on the provided patientreference.
coverage.plan	string	string	3	3	1..1	Allowed value: 'PBS'
created(ge)	date	yyyy-mm-dd	8	8	0..1	From Date is a search criteria to select the ExplanationOfBenefit whose start date is after the specific period.
created(le)	date	yyyy-mm-dd	8	8	0..1	To Date is a search criteria to select the ExplanationOfBenefit whose start date is before the specific period. Any future date provided in the request for 'le' will be defaulted to server current date.
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

3.3.1.5 Content and Terminology

The tables below summarise My Health Record Specific Extension as applicable to the Get PBS Items API.

Content Extension: Medication Generic Name

Table 16 – Content Extension: Medication Generic Name

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medication-generic-name
Name:	Medication Generic Name
File Name:	• StructureDefinition-medication-generic-name.xml • StructureDefinition-medication-generic-name.json
This is an extension on the Medication. More information can be found at Appendix E Extension Registry section.	

Content Extension: Medication Brand

Table 17 – Content Extension: Medication Brand

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medication-brand
Name:	Medication Brand
File Name:	• StructureDefinition-medication-brand.xml • StructureDefinition-medication-brand.json
This is an extension on the Medication. More information can be found at Appendix E Extension Registry section.	

Content Extension: Medication Form and Strength

Table 18 – Content Extension: Medication Form and Strength

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medication-form-and-strength
Name:	Medication Form and Strength
File Name:	• StructureDefinition-medication-form-and-strength.xml • StructureDefinition-medication-form-and-strength.json
This is an extension on the Medication.product. More information can be found at Extension Registry section.	

Content Extension: Explanation of Benefit

Table 19 - Content Extension: EOB Item Service

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/eob-item-service
Name:	EOB Item Service
File Name:	• StructureDefinition-eob-item-service.xml • StructureDefinition-eob-item-service.json
This is an extension on the ExplanationOfBenefit.item.service. More information can be found at Appendix E Extension Registry section.	

Terminology: ExplanationOfBenefit Item Code

Table 20 - Terminology: ExplanationOfBenefit Item Code

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/ValueSet/eob-item-service	
Name:	ExplanationOfBenefit Item Code	
File Name:	• CodeSystem-eob-item-service.xml • CodeSystem-eob-item-service.json • ValueSet-eob-item-service.xml • ValueSet-eob-item-service.json	
Code Definition		
Code	**Display**	**Definition**
MBS	Medicare Benefit System	Medicare Benefit System
PBS	Pharmaceutical Benefit System	Pharmaceutical Benefit System
The ValueSet is being Referenced from http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/eob-item-service . More information can be found at Appendix F Terminologies section.		

3.3.1.6 Response Message

Based on the MIME header (Accept) or '_format' request parameter, the system will return 'Bundle' of 'ExplanationOfBenefit' resources in either XML or JSON format.

Refer to "My Health Record FHIR Gateway - Sample Requests and Responses" further details.

Refer to the "GetPBSItems" tab in the *My Health Record – API Mapping* document for more details on the response mapping.

3.3.1.7 OperationOutcome Codes

The API returns error, warning and information messages that provide detailed information about the outcome of attempted system interactions. They are provided as a direct system response, or component of one, where they provide information about the outcome of the interaction.

HTTP error codes that are applicable to this service and will be transmitted in the response header along with the OperationOutcome details in the response body.

Refer to the "Get PBS Items (GET)" section under "FHIR API Error Cases" tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

Please refer to Appendix B.1 API Error for a full list of common errors applicable to all the APIs exposed through My Health Record System.

3.3.2 Get MBS Items (GET)

3.3.2.1 Description

This API provides the ability to retrieve MBS details for the individual and returns a bundle of ExplanationOfBenefit resources from the My Health Record system. A maximum of 99 resources is returned in the response.

This API is accessible by both consumers and providers.

3.3.2.2 Message Specifications

Resource served on the REST interface (Conformance.rest.resource.type): 'ExplanationOfBenefit'

FHIR® based resource reference (Conformance.rest.resource.profile) is available at:

- http://hl7.org/fhir/2016May/explanationofbenefit.html
- http://hl7.org/fhir/2016May/operationoutcome.html

This specification is intended to be used to describe an actual running instance of software (Conformance.kind = 'instance')

For API v1.3.0, the server does not accept unknown elements or extensions when reading resources (Conformance.acceptUnknown = 'no').

The server supports both XML and JSON transactions. The value can be 'application/xml+fhir' (to represent it as XML) Or 'application/json+fhir' (to represent it as JSON). (Conformance.format = "xml" or "json").

3.3.2.3 Versioning and History

- API Version: 'v1.3.0'.
- FHIR® Version (Conformance.fhirVersion): '1.4.0'.
- Resource Instance Version (Conformance.rest.resource.versioning): 'no-version'. 'VersionId' meta-property is not supported (server) or used (client).
- History (Conformance.rest.resource.readHistory): 'false'. For API v1.3.0, the server is not able to return past versions. 'vRead' interaction is not supported.

3.3.2.4 Request Message

Table 21 – Get MBS Items-Request Message

Resource URI	[base/fhir/ v1.3.0]/ExplanationOfBenefit Refer to the "Action URI List" tab in the *My Health Record – API Mapping* document for more details on the possible Action URIs.					
HTTP Method (interaction)	GET (read)					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	string	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	string	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.

Request Parameters (searchParam)						
patientreference	integer	integer	-	-	1..1	Logical identifier of the patient. Additional validation is performed on the IHI corresponding to the patientreference in the URI to check if the logged in user is authorized to perform any operation to the IHI in context.
coverage.plan	string	string	3	3	1..1	Allowed value is 'MBS'
created(ge)	date	yyyy-mm-dd	10	10	0..1	From Date is a search criteria to select the ExplanationOfBenefit whose start date is after the specific period.
created(le)	date	yyyy-mm-dd	10	10	0..1	To Date is a search criteria to select the ExplanationOfBenefit whose start date is before the specific period. Any future date provided in the request for 'le' will be defaulted to server current date.
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

3.3.2.5 Content and Terminology

The tables below summarises My Health Record Specific Extension as applicable to the Get MBS Items API.

Content Extension: Explanation of Benefit

Table 22 - Content Extension: EOB Item Service

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/eob-item-service
Name:	EOB Item Service
File Name:	• StructureDefinition-eob-item-service.xml • StructureDefinition-eob-item-service.json
This is an extension on the ExplanationOfBenefit.item.service. More information can be found at Appendix E Extension Registry section.	

Terminology: ExplanationOfBenefit Item Code

Table 23 - Terminology: ExplanationOfBenefit Item Code

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/ValueSet/eob-item-service	
Name:	ExplanationOfBenefit Item Code	
File Name:	• CodeSystem-eob-item-service.xml • CodeSystem-eob-item-service.json • ValueSet-eob-item-service.xml • ValueSet-eob-item-service.json	
Code Definition		
Code	**Display**	**Definition**
MBS	Medicare Benefit System	Medicare Benefit System
PBS	Pharmaceutical Benefit System	Pharmaceutical Benefit System
The ValueSet is being Referenced from http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/eob-item-service . More information can be found at Appendix F Terminologies section.		

3.3.2.6 Response Message

Based on the MIME header (Accept) or '_format' request parameter, the system will return 'Bundle' of 'ExplanationOfBenefit ´ resources in either XML or JSON format.

Refer to "My Health Record FHIR Gateway - Sample Requests and Responses" further details.

Refer to the "GetMBSItems" tab in the *My Health Record – API Mapping document for more* details on the response mapping.

3.3.2.7 OperationOutcome Codes

The API returns error, warning and information messages that provide detailed information about the outcome of attempted system interactions. They are provided as a direct system response, or component of one, where they provide information about the outcome of the operation.

HTTP error codes that are applicable to this service and will be transmitted in the response header along with the OperationOutcome details in the response body.

Refer to the "Get MBS Items (GET)" section under "FHIR API Error Cases" tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

Please refer to Appendix B.1 API Error for a full list of common errors applicable to the All APIs exposed through My Health Record System.

3.4 Generic document services

There are two APIs classified under this group:

- Get Document (GET)
- Search Document List (GET)

3.4.1 Get Document (GET)

3.4.1.1 Description

This API provides the ability to retrieve a specific document for an individual from the My Health Record system.

The API returns a base64binary of the CDA zip package as per the FHIR® specification.

This API is accessible by both consumers and providers.

As per My Health Record system policy, Medicare/DVA Benefits Report (TypeCode: 100.16644 & ClassCode: 100.16644) documents are not available for download by consumers. Information from these documents can be accessed through the Get MBS Items API.

3.4.1.2 Message Specifications

Resource served on the REST interface (Conformance.rest.resource.type): 'Binary'

FHIR® based resource reference (Conformance.rest.resource.profile) is available at:

- http://hl7.org/fhir/2016May/binary.html
- http://hl7.org/fhir/2016May/operationoutcome.html

This specification is intended to be used to describe an actual running instance of software (Conformance.kind = 'instance').

For API v1.3.0, the server does not accept unknown elements or extensions when reading resources (Conformance.acceptUnknown = 'no').

3.4.1.3 Versioning and History

- API Version: 'v1.3.0'.
- FHIR® Version (Conformance.fhirVersion): '1.4.0'.
- Resource Instance Version (Conformance.rest.resource.versioning): 'no-version'. 'VersionId' meta-property is not supported (server) or used (client).
- History (Conformance.rest.resource.readHistory): 'false'. For API v1.3.0, the server is not able to return past versions. 'vRead' interaction is not supported.

3.4.1.4 Request Message

Table 24 – Get Document - Request Message

Resource URI	[base/fhir/ v1.3.0]/Binary/[docID] Refer to the "Action URI List" tab in the *My Health Record – API Mapping document for more* details on the possible Action URIs.					
HTTP Method (interaction)	GET (read)					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	string	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID

App-Version	string	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
Request Parameters (searchParam)						
patient	integer	integer	-	-	1..1	Logical identifier of the patient. Additional validation is performed on the IHI corresponding to the logical identifier of the patient in the URI to check if the logged in user is authorized to perform any operation to the IHI in context.

3.4.1.5 Response Message

The system will return 'Binary'.

Refer to the *"My Health Record FHIR Gateway - Sample Requests and Responses"* for further details.

Refer to the "GetDocument" tab in the *My Health Record – API Mapping document for more* details on the response mapping.

3.4.1.6 OperationOutcome Codes

The API returns errors, warnings and information messages that provide detailed information about the outcome of attempted system interactions. They are provided as a direct system response, or component of one, where they provide information about the outcome of the operation.

HTTP error codes that are applicable to this service and will be transmitted in the response header along with the OperationOutcome details in the response body.

Refer to the "Get Document (GET)" section under "FHIR API Error Cases" tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

Please refer to Appendix B.1 API Error for a full list of common errors applicable to all the APIs exposed through My Health Record System.

3.4.2 Search Document List (GET)

3.4.2.1 Description

This API provides the ability to retrieve a list of document references for an individual from the My Health Record system. The API returns the document references for an individual by matching a class code provided as input. A maximum of 99 DocumentReference resources is returned in the response.

This API is accessible by both consumers and providers.

As per My Health Record system policy, Medicare/DVA Benefits Report (TypeCode: 100.16644 & ClassCode: 100.16644) documents are not available for download. Correspondingly, the Search Document List API does not include documents of this type in the list of returned document references.

3.4.2.2 Message Specifications

Resource served on the REST interface (Conformance.rest.resource.type): 'DocumentReference'

FHIR® based resource reference (Conformance.rest.resource.profile) is available at:

- http://hl7.org/fhir/2016May/documentreference.html
- http://hl7.org/fhir/2016May/operationoutcome.html

This specification is intended to be used to describe an actual running instance of software (Conformance.kind = 'instance')

For API v1.3.0, the server does not accept unknown elements or extensions when reading resources (Conformance.acceptUnknown = 'no').

The server supports both XML and JSON transactions. The value can be 'application/xml+fhir' (to represent it as XML) Or 'application/json+fhir' (to represent it as JSON). (Conformance.format = "xml" or "json").

3.4.2.3 Versioning and History

- API Version: 'v1.3.0'.
- FHIR® Version (Conformance.fhirVersion): '1.4.0'.
- Resource Instance Version (Conformance.rest.resource.versioning): 'no-version'. 'VersionId' meta-property is not supported (server) or used (client).
- History (Conformance.rest.resource.readHistory): 'false'. For API v1.3.0, the server is not able to return past versions. 'vRead' interaction is not supported.

3.4.2.4 Request Message

Table 25 – Get/Search Document List - Request Message

Resource URI	[base/fhir/ v1.3.0]/DocumentReference Refer to the "Action URI List" tab in the *My Health Record – API Mapping document for more* details on the possible Action URIs.					
HTTP Method (interaction)	GET (read)					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	string	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	string	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.

Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
Request Parameters (searchParam)						
patient	integer	integer	-	-	1..1	Logical identifier of the patient. Additional validation is performed on the IHI corresponding to the logical identifier of the patient in the URI to check if the logged in user is authorized to perform any operation to the IHI in context.
class	token	string	-	-	0..*	This code is to identify type of the document. Note: either 'class' or 'type' is required in each DocumentReference request. Refer to the A.5 for more details on Class Codes and Type Codes. The request message should formed with the class = ClassCode^^CodingSystem e.g.: '100.16644^^NCTIS'
type	token	string	-	-	0..*	Kind of document Note: either 'class' or 'type' is required in each DocumentReference request. Refer to the A.5 for more details on Class Codes and Type Codes. The request message should formed with the type = TypeCode^^CodingSystem e.g.: '100.16644^^NCTIS'
Optional Request Parameter						
identifier	string	string	-	-	0..*	Master Version Specific Identifier Note, CDA Document ID is used in this search parameter and search with identifier cannot be combined with any other optional search parameters.
author	reference	string	-	-	0..*	Who and/or what authored the document
created	date	yyyy-mm-dd	-	-	0..1	Document creation time. A search can be performed with created 'ge' and 'le' values e.g.: 2016-05-30

						Any future date provided in the request for 'le' will be defaulted to server current date.
status	token	string	-	-	0..1	current (approved)| superseded (deprecated)| entered-in-error (deleted)
slotName	string	string	-	-	0..1	Any other custom slots applicable to metadata as per IHE standard. The list should exclude corresponding IHE slots values for: 'identifier', 'authenticator', 'author', 'custodian', 'format', 'created', 'status'. Refer to the section 'Custom Slots for Search Document List (GET)' for details.
slotValue	string	string	-	-	0..1	Value of the custom slot. This can exist only if the custom 'slotName' is provided.
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

Note: All dates should be in UTC format.

3.4.2.5 Response Message

Based on the MIME header (Accept) or '_format' request parameter, the system will return 'Bundle' of 'DocumentReference' resources in either XML or JSON format.

Refer to the *"My Health Record FHIR Gateway - Sample Requests and Responses"* for further details.

Refer to the "SearchDocumentList" tab in the *My Health Record – API Mapping document for more* details on the response mapping.

3.4.2.6 OperationOutcome Codes

The following table lists error, warning and information messages that provide detailed information about the outcome of attempted system interactions. They are provided as a direct system response, or component of one, where they provide information about the outcome of the operation.

HTTP error codes that are applicable to this service and will be transmitted in the response header along with the OperationOutcome details in the response body.

Refer to the "Search Document List (GET)" section under "FHIR API Error Cases" tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

Please refer to Appendix B.1 API Error for a full list of common errors applicable to all the APIs exposed through My Health Record System.

3.5 Consumer documents

The following APIs are classified under this group:

- Personal Health Summary – Medications (GET)
- Personal Health Summary – Medications (POST)
- Personal Health Summary – Medications (PUT)
- Personal Health Summary – Medications (DELETE)
- Personal Health Summary – Allergies (GET)
- Personal Health Summary – Allergies (POST)
- Personal Health Summary – Allergies (PUT)
- Personal Health Summary – Allergies (DELETE)

3.5.1 Get Personal Health Summary - Medications (GET)

3.5.1.1 Description

This API provides the ability to retrieve Medications from an individual's personal health summary document from the My Health Record system.

This API is accessible by both consumers and providers.

3.5.1.2 Message Specifications

Resource served on the REST interface (Conformance.rest.resource.type): 'MedicationStatement'

FHIR® based resource reference (Conformance.rest.resource.profile) is available at:

- http://hl7.org/fhir/2016May/medicationstatement.html
- http://hl7.org/fhir/2016May/operationoutcome.html

This specification is intended to be used to describe an actual running instance of software (Conformance.kind = 'instance')

For API v1.3.0, the server does not accept unknown elements or extensions when reading resources (Conformance.acceptUnknown = 'no').

The server supports both XML and JSON transactions. The value can be 'application/xml+fhir' (to represent it as XML) Or 'application/json+fhir' (to represent it as JSON). (Conformance.format = "xml" or "json").

3.5.1.3 Versioning and History

- API Version: 'v1.3.0'.
- FHIR® Version (Conformance.fhirVersion): '1.4.0'.
- Resource Instance Version (Conformance.rest.resource.versioning): 'no-version'. 'VersionId' meta-property is not supported (server) or used (client).
- History (Conformance.rest.resource.readHistory): 'false'. For API v1.3.0, the server is not able to return past versions. 'vRead' interaction is not supported.

3.5.1.4 Request Message

Table 26 – Get Personal Health Summary Medications - Request Message

Resource URI	[base/fhir/ v1.3.0]/MedicationStatement

	Refer to the "Action URI List" tab in the *My Health Record – API Mapping document for more* details on the possible Action URIs.					
HTTP Method (interaction)	GET (read)					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	string	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	string	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
Request Parameters (searchParam)						
patient	integer	integer	-	-	1..1	Logical identifier of the patient. Additional validation is performed on the IHI corresponding to the logical identifier of the patient in the URI to check if the logged in user is authorized to perform any operation to the IHI in context.
source._type	string	string	7	7	1..1	Allowed value is 'Patient'
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

3.5.1.5 Response Message

Based on the MIME header (Accept) or '_format' request parameter, the system will return 'Bundle' of 'MedicationStatement' resources in either XML or JSON format.

Refer to the "*My Health Record FHIR Gateway - Sample Requests and Responses*" for further details.

Refer to the "GetPersonalHealthSummary" tab in the *My Health Record – API Mapping document for more* details on the response mapping.

3.5.1.6 OperationOutcome Codes

The API retuns error, warning and information messages that provide detailed information about the outcome of attempted system interactions. They are provided as a direct system response, or component of one, where they provide information about the outcome of the operation.

HTTP error codes that are applicable to this service and will be transmitted in the response header along with the OperationOutcome details in the response body.

Refer to the "Get Personal Health Summary - Allergies (GET)" section under "FHIR API Error Cases" tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

Please refer to Appendix B.1 API Error for a full list of common errors applicable to all the APIs exposed through My Health Record System.

3.5.2 Update Personal Health Summary - Medications (POST)

3.5.2.1 Description

This API provides the ability to create an individual's MedicationStatement in the Personal Health Summary document (type/class code = '100.16685') stored in the My Health Record system. Use this API if there is no Personal Summary Document exits for the individual, or if the existing document doesn't have any Medication section.

As consumers cannot be expected to safely provide coded medicines information, such coding is stripped from uploaded MedicationStatement resources before being persisted.

This API is accessible only by the consumer.

3.5.2.2 Message Specifications

Resource served on the REST interface (Conformance.rest.resource.type): 'MedicationStatement'

FHIR® based resource reference (Conformance.rest.resource.profile) is available at:

- http://hl7.org/fhir/2016May/medicationstatement.html
- http://hl7.org/fhir/2016May/operationoutcome.html

This specification is intended to be used to describe an actual running instance of software (Conformance.kind = 'instance')

For API v1.3.0, the server does not accept unknown elements or extensions when reading resources (Conformance.acceptUnknown = 'no').

The server supports both XML and JSON transactions. The value can be 'application/xml+fhir' (to represent it as XML) Or 'application/json+fhir' (to represent it as JSON). (Conformance.format = "xml" or "json").

The server only supports custom parameter 'docId' in conditional create (Conformance.rest.resource.conditionalCreate = true).

The system internally creates a CDA of the Personal Health Summary document based on the information received in the 'MedicationStatement' bundle or as individual MedicationStatement resource.

3.5.2.3 Versioning and History

- API Version: 'v1.3.0'.

- FHIR® Version (Conformance.fhirVersion): '1.4.0'.
- Resource Instance Version (Conformance.rest.resource.versioning): 'no-version'. 'VersionId' meta-property is not supported (server) or used (client).
- History (Conformance.rest.resource.readHistory): 'false'. For API v1.3.0, the server is not able to return past versions. 'vRead' interaction is not supported.

3.5.2.4 Request Message

The table below summarises the request message when a Bundle containing MedicationStatement resources is uploaded.

Table 27 – Update Personal Health Summary Medications - Request Message POST (Bundle)

Resource URI	[base/fhir/v1.3.0]/MedicationStatement Refer to the "Action URI List" tab in the *My Health Record – API Mapping document for more* details on the possible Action URIs.					
HTTP Method (interaction)	POST (create)					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	string	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	string	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
content-type	string	string	20	21	1..1	application/xml+fhir (or) application/json+fhir This is the MIME type of the body of the request
Request Parameters (searchParam)						
source._type	string	string	7	7	1..1	Allowed value is 'Patient'
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

The request body should contain 'Bundle' of 'MedicationStatement' resources. The 'Bundle.type' in the Bundle resource should be 'transaction' and the 'Bundle.entry' should contain 'request' element with 'request.method' value as 'POST'. This is a custom implementation of Bundle where the Bundle is posted on the MedicationStatement URI instead of using the base URI.

Please refer to Appendix C.1.2 for the processing rules as applicable to the Bundle POST of the MedicationStatement resource.

Refer to the *"My Health Record FHIR Gateway - Sample Requests and Responses"* for further details.

The table below summarises the request message when individual MedicationStatement resource is uploaded.

Table 28 - Update Personal Health Summary Medications - Request Message POST (Individual)

Resource URI	[base/fhir/v1.3.0]/MedicationStatement Refer to the "Action URI List" tab in the *My Health Record – API Mapping document for more* details on the possible Action URIs.					
HTTP Method (interaction)	POST (create)					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	String	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	String	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
content-type	string	string	20	21	1..1	application/xml+fhir (or) application/json+fhir This is the MIME type of the body of the request
Request Parameters (searchParam)						
docId	String	OID or UUID	1	64	1..1	Custom search parameter which should be used to provide the latest personal health summary CDA document ID retrieved from the document reference API.
source._type	string	string	7	7	1..1	Allowed value is 'Patient'

_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

The request body should contains individual 'MedicationStatement' resource.

Please refer to Appendix C.1.3 for the processing rules as applicable to the individual POST of the MedicationStatement resource.

Refer to the *"My Health Record FHIR Gateway - Sample Requests and Responses"* for further details.

Refer to the "GetPersonalHealthSummary" tab in the *My Health Record – API Mapping document for more* details on the FHIR® element mapping.

3.5.2.5 Response Message

Based on the MIME header (Accept) or '_format' request parameter, the system will return 'OperationOutcome' resources in either XML or JSON format.

In case of Bundle POST, the system will return a Bundle resource with HTTP Status Code 201 - Created if the request is successfully executed.

In case of individual POST, the system will return back the newly created resource with logical ID populated.

Refer to the *"My Health Record FHIR Gateway - Sample Requests and Responses"* for further details.

In case of error, an OperationOutcome resource with details as applicable will be returned.

Refer to the "OperationOutcome" tab in the *My Health Record – API Mapping document for more* details on the mapping.

3.5.2.6 OperationOutcome Codes

The API returns the HTTP error codes that are applicable to this service and will be transmitted in the response header along with the OperationOutcome details in the response body.

Refer to the "Update Personal Health Summary - Medications (POST)" section under "FHIR API Error Cases" tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

Please refer to Appendix B.1 API Error for a full list of common errors applicable to all the APIs exposed through My Health Record System.

3.5.3 Update Personal Health Summary - Medications (PUT)

3.5.3.1 Description

This API provides the ability to update an individual's MedicationStatement in the Personal Health Summary document stored in the My Health Record system.

As consumers cannot be expected to safely provide coded medicines information, such coding is stripped from uploaded MedicationStatement resources before being persisted.

This API is accessible only by the consumer.

3.5.3.2 Message Specifications

Resource served on the REST interface (Conformance.rest.resource.type): 'MedicationStatement'

FHIR® based resource reference (Conformance.rest.resource.profile) is available at:

- http://hl7.org/fhir/2016May/medicationstatement.html
- http://hl7.org/fhir/2016May/operationoutcome.html

This specification is intended to be used to describe an actual running instance of software (Conformance.kind = 'instance')

For API v1.3.0, the server does not accept unknown elements or extensions when reading resources (Conformance.acceptUnknown = 'no').

The server supports both XML and JSON transactions. The value can be 'application/xml+fhir' (to represent it as XML) Or 'application/json+fhir' (to represent it as JSON). (Conformance.format = "xml" or "json").

The server doesn't allow the client to create new identities on the server (Conformance.rest.resource.updateCreate = false).

The server doesn't support conditional update (Conformance.rest.resource.conditionalUpdate = false).

The system internally updates the existing CDA of the Personal Health Summary document based on the information received in the 'MedicationStatement' bundle or as individual 'MedicationStatement' resource.

3.5.3.3 Versioning and History

- API Version: 'v1.3.0'.
- FHIR® Version (Conformance.fhirVersion): '1.4.0'.
- Resource Instance Version (Conformance.rest.resource.versioning): 'no-version'. 'VersionId'. meta-property is not supported (server) or used (client).
- History (Conformance.rest.resource.readHistory): 'false'. For API v1.3.0, the server is not able to return past versions. 'vRead' interaction is not supported.

3.5.3.4 Request Message

The table below summarises the update request message using a Bundle containing MedicationStatement resources.

Table 29 - Update Personal Health Summary Medications - Request Message PUT (Bundle)

Resource URI	[base/fhir/v1.3.0]/MedicationStatement Refer to the "Action URI List" tab in the *My Health Record – API Mapping document for more* details on the possible Action URIs.					
HTTP Method (interaction)	PUT (update)					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	String	Bearer	15	54	1..1	OAuth Token

App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	String	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
content-type	string	string	20	21	1..1	application/xml+fhir (or) application/json+fhir This is the MIME type of the body of the request
Request Parameters (searchParam)						
docId	String	OID or UUID	1	64	1..1	Custom search parameter which should be used to provide the latest personal health summary CDA document ID retrieved from the document reference API.
source._type	string	string	7	7	1..1	Allowed value is 'Patient'
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

The request body should contain 'Bundle' of 'MedicationStatement' resources with the document ID in the URI. The 'Bundle.type' in the Bundle resource should be 'transaction' and the 'Bundle.entry' should contain 'request' element with 'request.method' value as 'PUT' or 'POST'. This is a custom implementation of Bundle where the PUT request containing Bundle resource is submitted on the MedicationStatement URI instead of using the base URI.

Please refer to Appendix C.1.4 for the processing rules as applicable to the Bundle PUT of the MedicationStatement resource.

Refer to the *"My Health Record FHIR Gateway - Sample Requests and Responses"* for further details.

The table below summarises the update request message using individual MedicationStatement resource.

Table 30 - Update Personal Health Summary Medications - Request Message PUT (Individual)

Resource URI	[base/fhir/v1.3.0]/MedicationStatement/[id] Note: [id] is the unique logical-id (entry ID) of the MedicationStatment resource in the Personal Health Summary CDA document.

	Refer to the "Action URI List" tab in the *My Health Record – API Mapping document for more* details on the possible Action URIs.					
HTTP Method (interaction)	PUT (update)					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	String	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	String	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
content-type	string	string	20	21	1..1	application/xml+fhir (or) application/json+fhir This is the MIME type of the body of the request
Request Parameters (searchParam)						
docId	String	OID or UUID	1	64	1..1	Custom search parameter which should be used to provide the latest personal health summary CDA document ID retrieved from the document reference API.
source._type	string	string	7	7	1..1	Allowed value is 'Patient'
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

The request body should contain individual 'MedicationStatement' resource with the resource logical-id ('id') in the URI. The ID in the URI and the ID in the resource should match.

Please refer to Appendix C.1.5 for the processing rules as applicable to the individual PUT of the MedicationStatement resource.

Refer to the "*My Health Record FHIR Gateway - Sample Requests and Responses*" for further details.

Refer to the "GetPersonalHealthSummary" tab in the *My Health Record – API Mapping document for more* details on the FHIR® element mapping.

3.5.3.5 Response Message

Based on the MIME header (Accept) or '_format' request parameter, the system will return 'OperationOutcome' resources in either XML or JSON format.

In case of Bundle PUT, based on whether the 'request.method' is set as 'PUT' or 'POST' for each of the resources in the request Bundle entry, the system will return a Bundle resource with HTTP Status Code 200 - Ok for 'PUT' request with the corresponding resource updated and 201 – Created for 'POST' request with the corresponding resource being created.

In case of individual PUT, the system will return back the updated resource with the same logical ID as in the request.

Refer to the *"My Health Record FHIR Gateway - Sample Requests and Responses"* for further details.

In case of error, an OperationOutcome resource with details as applicable will be returned.

Refer to the "OperationOutcome" tab in the *My Health Record – API Mapping document for more* details on the response mapping.

3.5.3.6 OperationOutcome Codes

The API returns the HTTP error codes that are applicable to this service and will be transmitted in the response header along with the OperationOutcome details in the response body.

Refer to the "Update Personal Health Summary - Medications (PUT)" section under "FHIR API Error Cases" tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

Please refer to Appendix B.1 API Error for a full list of common errors applicable to all the APIs exposed through My Health Record System.

3.5.4 Update Personal Health Summary - Medications (DELETE)

3.5.4.1 Description

This API provides the ability to delete an individual's MedicationStatement in the Personal Health Summary document stored in the My Health Record system.

This API is accessible only by the consumer.

3.5.4.2 Message Specifications

Resource served on the REST interface (Conformance.rest.resource.type): 'MedicationStatement'

FHIR® based resource reference (Conformance.rest.resource.profile) is available at:

- http://hl7.org/fhir/2016May/medicationstatement.html
- http://hl7.org/fhir/2016May/operationoutcome.html

This specification is intended to be used to describe an actual running instance of software (Conformance.kind = 'instance')

For API v1.3.0, the server does not accept unknown elements or extensions when reading resources (Conformance.acceptUnknown = 'no').

The server executes only conditional delete and doesn't support any other search parameter than 'patient'.

The server supports both XML and JSON transactions. The value can be 'application/xml+fhir' (to represent it as XML) Or 'application/json+fhir' (to represent it as JSON). (Conformance.format = "xml" or "json").

3.5.4.3 Versioning and History

- API Version: 'v1.0.0'.
- FHIR® Version (Conformance.fhirVersion): '1.4.0'.
- Resource Instance Version (Conformance.rest.resource.versioning): 'no-version'. 'VersionId' meta-property is not supported (server) or used (client).
- History (Conformance.rest.resource.readHistory): 'false'. For API v1.3.0, the server is not able to return past versions. 'vRead' interaction is not supported.

3.5.4.4 Request Message

Table 31 - Delete Personal Health Summary Medications - Request Message DELETE

Resource URI	[base/fhir/v1.3.0]/MedicationStatement/[id] Note: [id] is the unique logical-Id (entry ID) of the MedicationStatement resource in the Personal Health Summary CDA document. [docId] is the unique Document ID of the Personal Health Summary CDA document. This can be retrieved from Search Document List API. Refer to the "Action URI List" tab in the *My Health Record – API Mapping document for more* details on the possible Action URIs.					
HTTP Method (interaction)	DELETE (delete)					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	String	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	String	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
Request Parameters (searchParam)						
patient	integer	integer	-	-	1..1	Logical identifier of the patient. Additional validation is performed on the IHI corresponding to the logical identifier of the patient in the URI to check if the logged in

						user is authorized to perform any operation to the IHI in context.
docId	String	OID or UUID	1	64	1..1	Custom search parameter which should be used to provide the latest personal health summary CDA document ID retrieved from the document reference API.
source._type	string	string	7	7	1..1	Allowed value is 'Patient'
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

Please refer to Appendix C.1.6 for the processing rules as applicable to the Delete of the MedicationStatement resource.

Refer to the *"My Health Record FHIR Gateway - Sample Requests and Responses"* for further details.

3.5.4.5 Response Message

Based on the MIME header (Accept) or '_format' request parameter, the system will return 'OperationOutcome' resources in either XML or JSON format.

The system will return HTTP Status Code 204 - No Content as the response upon successful API call.

Refer to the *"My Health Record FHIR Gateway - Sample Requests and Responses"* for further details.

In case of error, an OperationOutcome resource with details as applicable will be returned.

Refer to the "OperationOutcome" tab in the *My Health Record – API Mapping document for more* details on the various error scenarios.

3.5.4.6 OperationOutcome Codes

The API returns error, warning and information messages that provide detailed information about the outcome of attempted system interactions. They are provided as a direct system response, or component of one, where they provide information about the outcome of the operation.

HTTP error codes that are applicable to this service and will be transmitted in the response header along with the OperationOutcome details in the response body.

Refer to the "Delete Personal Health Summary - Medication (DELETE)" section under "FHIR API Error Cases" tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

Please refer to Appendix B.1 API Error for a full list of common errors applicable to all the APIs exposed through My Health Record System.

3.5.5 Get Personal Health Summary - Allergies (GET)

3.5.5.1 Description

This API provides the ability to retrieve allergies and adverse reactions information from an individual's Personal Health Summary document from the My Health Record system.

This API is accessible by both consumers and providers.

3.5.5.2 Message Specifications

Resource served on the REST interface (Conformance.rest.resource.type): 'AllergyIntolerance'

FHIR® based resource reference (Conformance.rest.resource.profile) is available at:

- http://hl7.org/fhir/2016May/allergyintolerance.html
- http://hl7.org/fhir/2016May/operationoutcome.html

This specification is intended to be used to describe an actual running instance of software (Conformance.kind = 'instance')

For API v1.3.0, the server does not accept unknown elements or extensions when reading resources (Conformance.acceptUnknown = 'no').

The server supports both XML and JSON transactions. The value can be 'application/xml+fhir' (to represent it as XML) Or 'application/json+fhir' (to represent it as JSON). (Conformance.format = "xml" or "json").

3.5.5.3 Versioning and History

- API Version: 'v1.3.0'.
- FHIR® Version (Conformance.fhirVersion): '1.4.0'.
- Resource Instance Version (Conformance.rest.resource.versioning): 'no-version'. 'VersionId' meta-property is not supported (server) or used (client).
- History (Conformance.rest.resource.readHistory): 'false'. For API v1.3.0, the server is not able to return past versions. 'vRead' interaction is not supported.

3.5.5.4 Request Message

Table 32 – Get Personal Health Summary Allergies -Request Message

Resource URI	[base/fhir/ v1.3.0]/ AllergyIntolerance Refer to the "Action URI List" tab in the *My Health Record – API Mapping document for more* details on the possible Action URIs.					
HTTP Method (interaction)	GET (read)					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	string	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID

App-Version	string	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
Request Parameters (searchParam)						
patient	integer	integer	-	-	1..1	Logical identifier of the patient. Additional validation is performed on the IHI corresponding to the logical identifier of the patient in the URI to check if the logged in user is authorized to perform any operation to the IHI in context.
reporter._type	string	string	7	7	1..1	Allowed value as 'Patient'
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

3.5.5.5 Response Message

Based on the MIME header (Accept) or '_format' request parameter, the system will return 'Bundle' of 'AllergyIntolerance' resources in either XML or JSON format.

Refer to the "*My Health Record FHIR Gateway - Sample Requests and Responses*" for further details.

Refer to the "GetPersonalHealthSummary" tab in the *My Health Record – API Mapping document for more* details on the response mapping.

3.5.5.6 OperationOutcome Codes

The API returns error, warning and information messages that provide detailed information about the outcome of attempted system interactions. They are provided as a direct system response, or component of one, where they provide information about the outcome of the operation.

HTTP error codes that are applicable to this service and will be transmitted in the response header along with the OperationOutcome details in the response body.

Refer to the "Get Personal Health Summary - Allergies (GET)" section under "FHIR API Error Cases" tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

Please refer to Appendix B.1 API Error for a full list of common errors applicable to all the APIs exposed through My Health Record System.

3.5.6 Update Personal Health Summary – Allergies (POST)

3.5.6.1 Description

This API provides the ability to create an individual's allergies and adverse reactions information in the Personal Health Summary document stored in the My Health Record system. Use this API if there is no Personal Summary Document exits for the individual, or if the existing document doesn't have any Allergy section.

This API is accessible only by the consumer.

3.5.6.2 Message specifications

Resource served on the REST interface (Conformance.rest.resource.type): 'AllergyIntolerance'

FHIR® based resource reference (Conformance.rest.resource.profile) is available at:

- http://hl7.org/fhir/2016May/allergyintolerance.html
- http://hl7.org/fhir/2016May/operationoutcome.html

This specification is intended to be used to describe an actual running instance of software (Conformance.kind = 'instance')

For API v1.3.0, the server does not accept unknown elements or extensions when reading resources (Conformance.acceptUnknown = 'no').

The server supports both XML and JSON transactions. The value can be 'application/xml+fhir' (to represent it as XML) Or 'application/json+fhir' (to represent it as JSON). (Conformance.format = "xml" or "json").

The server doesn't support conditional create (Conformance.rest.resource.conditionalCreate = false).

The system internally creates a CDA of the Personal Health Summary document based on the information received in the 'AllergyIntolerance' bundle or as individual 'AllergyIntolerance' resource.

3.5.6.3 Versioning and History

- API Version: 'v1.3.0'.
- FHIR® Version (Conformance.fhirVersion): '1.4.0'.
- Resource Instance Version (Conformance.rest.resource.versioning): 'no-version'. 'VersionId'. meta-property is not supported (server) or used (client).
- History (Conformance.rest.resource.readHistory): 'false'. For API v1.3.0, the server is not able to return past versions. 'vRead' interaction is not supported.

3.5.6.4 Request Message

The table below summarises the request message when a bundle of AllergyIntolerance resource is uploaded.

Table 33 – Update Personal Health Summary Allergies - Request Message POST

Resource URI	[base/fhir/v1.3.0]/AllergyIntolerance

	Refer to the "Action URI List" tab in the *My Health Record – API Mapping document for more* details on the possible Action URIs.					
HTTP Method (interaction)	POST(create)					
Request Headers	**Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	string	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	String	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
content-type	string	string	20	21	1..1	application/xml+fhir (or) application/json+fhir This is the MIME type of the body of the request
Request Parameters (searchParam)						
reporter._type	string	string	7	7	1..1	Allowed value is 'Patient'
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

The request body should contain 'Bundle' of 'AllergyIntolerance' resources. The 'Bundle.type' in the Bundle resource should be 'transaction' and the 'Bundle.entry' should contain 'request' element with 'request.method' value as 'POST'. This is a custom implementation of Bundle where the Bundle is posted on the AllergyIntolerance URI instead of using the base URI.

Please refer to Appendix C.1.2 for the processing rules as applicable to the Bundle POST of the AllergyIntolerance resource.

Refer to the *"My Health Record FHIR Gateway - Sample Requests and Responses"* for further details.

The table below summarises the request message when individual AllergyIntolerance resource is uploaded.

Table 34 - Update Personal Health Summary Allergies - Request Message POST (Individual)

Resource URI	[base/fhir/v1.3.0]/AllergyIntolerance Refer to the "Action URI List" tab in the *My Health Record – API Mapping document for more* details on the possible Action URIs.
HTTP Method (interaction)	POST(create)

Request Headers	Type	Format	Min Length	Max Length	Cardinality	Remarks
Authorization	String	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	String	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
content-type	string	string	20	21	1..1	application/xml+fhir (or) application/json+fhir This is the MIME type of the body of the request
Request Parameters (searchParam)						
docId	String	OID or UUID	1	64	1..1	Custom search parameter which should be used to provide the latest personal health summary CDA document ID retrieved from the document reference API.
reporter._type	string	string	7	7	1..1	Allowed value is 'Patient'
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

The request body should contain individual 'AllergyIntolerance' resource.

Please refer to Appendix C.1.3 for the processing rules as applicable to the individual POST of the AllergyIntolerance resource.

Refer to the "*My Health Record FHIR Gateway - Sample Requests and Responses*" for further details.

Refer to the "GetPersonalHealthSummary" tab in the *My Health Record – API Mapping document for more* details on the FHIR® element mapping.

3.5.6.5 Response Message

Based on the MIME header (Accept) or '_format' request parameter, the system will return 'OperationOutcome' resources in either XML or JSON format.

In case of Bundle POST, the system will return a Bundle resource with HTTP Status Code 201 - Created if the request is successfully executed.

In case of individual POST, the system will return back the newly created resource with logical ID populated.

Refer to the *"My Health Record FHIR Gateway - Sample Requests and Responses"* for further details.

In case of error, an OperationOutcome resource with details as applicable will be returned.

Refer to the "OperationOutcome" tab in the *My Health Record – API Mapping document for more* details on the response mapping.

3.5.6.6 OperationOutcome Codes

The API returns the HTTP error codes that are applicable to this service and will be transmitted in the response header along with the OperationOutcome details in the response body.

Refer to the "Update Personal Health Summary – Allergies (POST)" section under "FHIR API Error Cases" tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

Please refer to Appendix B.1 API Error for a full list of common errors applicable to all the APIs exposed through My Health Record System.

3.5.7 Update Personal Health Summary – Allergies (PUT)

3.5.7.1 Description

This API provides the ability to update an individual's allergies and adverse reactions information in the Personal Health Summary document stored in the My Health Record system.

This API is accessible only by the consumer.

3.5.7.2 Message Specification

Resource served on the REST interface (Conformance.rest.resource.type): 'AllergyIntolerance'

FHIR® based resource reference (Conformance.rest.resource.profile) is available at:

- http://hl7.org/fhir/2016May/allergyintolerance.html
- http://hl7.org/fhir/2016May/operationoutcome.html

This specification is intended to be used to describe an actual running instance of software (Conformance.kind = 'instance')

For API v1.3.0, the server does not accept unknown elements or extensions when reading resources (Conformance.acceptUnknown = 'no').

The server supports both XML and JSON transactions. The value can be 'application/xml+fhir' (to represent it as XML) Or 'application/json+fhir' (to represent it as JSON). (Conformance.format = "xml" or "json").

The server doesn't allow the client to create new identities on the server (Conformance.rest.resource.updateCreate = false)

The server doesn't support conditional update (Conformance.rest.resource.conditionalUpdate =false)

The system internally updates the existing CDA of the Personal Health Summary document based on the information received in the 'AllergyIntolerance' bundle or as individual 'AllergyIntolerance' resource.

3.5.7.3 Versioning and History

- API Version: 'v1.3.0'.

- FHIR® Version (Conformance.fhirVersion): '1.4.0'.
- Resource Instance Version (Conformance.rest.resource.versioning): 'no-version'. 'VersionId'. meta-property is not supported (server) or used (client).
- History (Conformance.rest.resource.readHistory): 'false'. For API v1.3.0, the server is not able to return past versions. 'vRead' interaction is not supported.

3.5.7.4 Request Message

The table below summarises the update request message using a Bundle containing AllergyIntolerance resources.

Table 35 - Update Personal Health Summary Allergies - Request Message PUT (Bundle)

Resource URI	[base/fhir/v1.3.0]/AllergyIntolerance Refer to the "Action URI List" tab in the *My Health Record – API Mapping document for more* details on the possible Action URIs.					
HTTP Method (interaction)	PUT(update)					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	String	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	String	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
content-type	string	string	20	21	1..1	application/xml+fhir (or) application/json+fhir This is the MIME type of the body of the request
Request Parameters (searchParam)						
docId	String	OID or UUID	1	64	1..1	Custom search parameter which should be used to provide the latest personal health summary CDA document ID retrieved from the document reference API.
reporter._type	string	string	7	7	1..1	Allowed value is 'Patient'
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR

						application/json+fhir (to represent it as JSON).

The request body should contain 'Bundle' of 'AllergyIntolerance' resources with the document ID in the URI. The 'Bundle.type' in the Bundle resource should be 'transaction' and the 'Bundle.entry' should contain 'request' element with 'request.method' value as 'PUT' or 'POST'. This is a custom implementation of Bundle where the PUT request containing Bundle resource is submitted on the AllergyIntolerance URI instead of using the base URI.

Please refer to Appendix C.1.4 for the processing rules as applicable to the Bundle PUT of the AllergyIntolerance resource.

Refer to the *"My Health Record FHIR Gateway - Sample Requests and Responses"* for further details.

The table below summarises the update request message using individual AllergyIntolerance resource.

Table 36 -Update Personal Health Summary Allergies - Request Message PUT (Individual)

Resource URI	[base/fhir/v1.3.0]/AllergyIntolerance/[id] Note: [id] is the unique logical-id (entry ID) of AllergyIntolerance resource in the Personal Health Summary CDA document. Refer to the "Action URI List" tab in the *My Health Record – API Mapping document for more* details on the possible Action URIs.					
HTTP Method (interaction)	PUT(update)					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	String	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	String	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
content-type	string	string	20	21	1..1	application/xml+fhir (or) application/json+fhir This is the MIME type of the body of the request
Request Parameters (searchParam)						
docId	String	OID or UUID	1	64	1..1	Custom search parameter which should be used to provide the latest personal health summary CDA document ID

						retrieved from the document reference API.
reporter._type	string	string	7	7	1..1	Allowed value is 'Patient'
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

The request body should contain individual 'AllergyIntolerance' resource with the resource logical-id ('id') in the URI. The ID in the URI and the ID in the resource should match.

Please refer to Appendix C.1.5 for the processing rules as applicable to the individual PUT of the AllergyIntolerance resource.

Refer to the "*My Health Record FHIR Gateway - Sample Requests and Responses*" for further details.

Refer to the "GetPersonalHealthSummary" tab in the *My Health Record – API Mapping document for more* details on the FHIR® element mapping.

3.5.7.5 Response Message

Based on the MIME header (Accept) or '_format' request parameter, the system will return 'OperationOutcome' resources in either XML or JSON format.

In case of Bundle PUT, based on whether the 'request.method' is set as 'PUT' or 'POST' for each of the resource in the request Bundle entry, the system will return a Bundle resource with HTTP Status Code 200 - Ok for 'PUT' request with the corresponding resource updated and 201 – Created for 'POST' request with the corresponding resource being created.

In case of individual PUT, the system will return back the updated resource with the same logical ID as in the request.

Refer to the "*My Health Record FHIR Gateway - Sample Requests and Responses*" for further details.

In case of error, an OperationOutcome resource with details as applicable will be returned.

Refer to the "OperationOutcome" tab in the *My Health Record – API Mapping document for more* details on the response mapping.

3.5.7.6 OperationOutcome Codes

The API returns the HTTP error codes that are applicable to this service and will be transmitted in the response header along with the OperationOutcome details in the response body.

Refer to the "Update Personal Health Summary – Allergies (PUT)" section under "FHIR API Error Cases" tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

Please refer to Appendix B.1 API Error for a full list of common errors applicable to all the APIs exposed through My Health Record System.

3.5.8 Update Personal Health Summary - Allergies (DELETE)

3.5.8.1 Description

This API provides the ability to delete an individual's allergies and adverse reactions information in the Personal Health Summary document stored in the My Health Record system.

This API is accessible only by the consumer.

3.5.8.2 Message specifications

Resource served on the REST interface (Conformance.rest.resource.type): 'AllergyIntolerance'

FHIR® based resource reference (Conformance.rest.resource.profile) is available at:

- http://hl7.org/fhir/2016May/allergyintolerance.html
- http://hl7.org/fhir/2016May/operationoutcome.html

This specification is intended to be used to describe an actual running instance of software (Conformance.kind = 'instance')

For API v1.0.0, the server does not accept unknown elements or extensions when reading resources (Conformance.acceptUnknown = 'no').

The server executes only conditional delete and doesn't support any other search parameter than 'patient'.

The server supports both XML and JSON transactions. The value can be 'application/xml+fhir' (to represent it as XML) Or 'application/json+fhir' (to represent it as JSON). (Conformance.format = "xml" or "json").

3.5.8.3 Versioning and History

- API Version: 'v1.3.0'.
- FHIR® Version (Conformance.fhirVersion): '1.4.0'.
- Resource Instance Version (Conformance.rest.resource.versioning): 'no-version'. 'VersionId' meta-property is not supported (server) or used (client).
- History (Conformance.rest.resource.readHistory): 'false'. For API v1.3.0, the server is not able to return past versions. 'vRead' interaction is not supported.

3.5.8.4 Request Message

Table 37 - Delete Personal Health Summary Allergies - Request Message DELETE

Resource URI	[base/fhir/v1.3.0]/AllergyIntolerance/[id] Note: [id] is the unique logical-id (entry ID) of the AllergyIntolerance resource in the Personal Health Summary CDA document. [docId] is the unique Document ID of the Personal Health Summary CDA document. This can be retrieved from Search Document List API. Refer to the "Action URI List" tab in the *My Health Record – API Mapping document for more* details on the possible Action URIs.
HTTP Method	PUT(update)

(interaction)						
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	String	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	String	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
Request Parameters (searchParam)						
patient	integer	integer			1..1	Logical identifier of the patient. Additional validation is performed on the IHI corresponding to the logical identifier of the patient in the URI to check if the logged in user is authorized to perform any operation to the IHI in context.
docId	String	OID or UUID	1	64	1..1	Custom search parameter which should be used to provide the latest personal health summary CDA document ID retrieved from the document reference API.
reporter._type	string	string	7	7	1..1	Allowed value is 'Patient'
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

3.5.8.5 Response Message

Based on the MIME header (Accept) or '_format' request parameter, the system will return 'OperationOutcome' resources in either XML or JSON format.

The system will return HTTP Status Code 204 – No Content as the response upon successful API call.

Please refer to Appendix C.1.6 for the processing rules as applicable to the Delete of the AllergyIntolerance resource.

Refer to the *"My Health Record FHIR Gateway - Sample Requests and Responses"* for further details.

In case of error scenarios, an OperationOutcome resource with details as applicable will be returned.

Refer to the "OperationOutcome" tab in the *My Health Record – API Mapping document for more* details on the various error scenarios.

3.5.8.6 OperationOutcome Codes

The following table lists error, warning and information messages that provide detailed information about the outcome of attempted system interactions. They are provided as a direct system response, or component of one, where they provide information about the outcome of the operation.

HTTP error codes that are applicable to this service and will be transmitted in the response header along with the OperationOutcome details in the response body.

Refer to the "Delete Personal Health Summary - Allergies (DELETE)" section under "FHIR API Error Cases" tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

Please refer to Appendix B.1 API Error for a full list of common errors applicable to all the APIs exposed through My Health Record System.

3.6 Clinical document services

There are two APIs classified under this group:

- Prescription and Dispense List (GET)
- Allergies List – from Shared Health Summary document (GET)

3.6.1 Prescription and Dispense List (GET)

3.6.1.1 Description

This API provides the ability to retrieve Prescription and Dispense information for an individual from the My Health Record system and returns a bundle of MedicationOrder or MedicationDispense resources. A maximum of 99 resources is returned in the response.

This API is accessible by both consumer and provider.

3.6.1.2 Message Specifications

Resource served on the REST interface (Conformance.rest.resource.type): MedicationDispense (for dispense), MedicationOrder (for prescription)

FHIR® based resource reference (Conformance.rest.resource.profile) is available at:

- http://hl7.org/fhir/2016May/medicationorder.html
- http://hl7.org/fhir/2016May/medicationdispense.html
- http://hl7.org/fhir/2016May/operationoutcome.html

This specification is intended to be used to describe an actual running instance of software (Conformance.kind = 'instance')

For API v1.3.0, the application does not accept unknown elements or extensions when reading resources (Conformance.acceptUnknown = ‘no’).

The server supports both XML and JSON transactions. The value can be ‘application/xml+fhir’ (to represent it as XML) Or ‘application/json+fhir’ (to represent it as JSON). (Conformance.format = "xml" or "json”).

Server supports ‘_include’ value as “MedicationPrescription:prescription“ for MedicationDispense API Call (Conformance.rest.resource.searchInclude = ‘MedicationPrescription:prescription’).

3.6.1.3 Versioning and History

- API Version: ‘v1.3.0’.
- FHIR® Version (Conformance.fhirVersion): ‘1.4.0’.
- Resource Instance Version (Conformance.rest.resource.versioning): ‘no-version’. ‘VersionId’ meta-property is not supported (server) or used (client).
- History (Conformance.rest.resource.readHistory): ‘false’. For API v1.3.0, the server is not able to return past versions. ‘vRead’ interaction is not supported.

3.6.1.4 Request Message – MedicationOrder

Table 38 – Get Prescription and Dispense List (MedicationOrder) - Request Message

Resource URI	[base/fhir/ v1.3.0]/MedicationOrder Refer to the “Action URI List” tab in the *My Health Record – API Mapping document for more* details on the possible Action URIs.					
HTTP Method (interaction)	GET (read)					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	string	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	string	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
Request Parameters (searchParam)						
patient	integer	integer	-	-	1..1	Logical identifier of the patient. Additional validation is performed on the IHI corresponding to the logical identifier of the

						patient in the URI to check if the logged in user is authorized to perform any operation to the IHI in context.
datewritten(ge)	date	yyyy-mm-dd	10	10	0..1	From Date is a search criterion to select the MedicationOrder whose start date is after the specific period.
datewritten(le)	date	yyyy-mm-dd	10	10	0..1	To Date is a search criterion to select the MedicationOrder whose start date is before the specific period. Any future date provided in the request for 'le' will be defaulted to server current date.
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

3.6.1.5 Content and Terminology

The tables below summarise My Health Record Specific Extension as applicable to the Get Prescription and Dispense List API.

Content Extension: Medicationdispense Quantity Description

Table 39 – Content Extension: Medicationdispense Quantity Description

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medicationdispense-quantity-description
Name:	Medicationdispense Quantity Description
File Name:	• StructureDefinition-medicationdispense-quantity-description.xml • StructureDefinition-medicationdispense-quantity-description.json
This is an extension on the MedicationDispense.quantity. More information can be found at Appendix E Extension Registry section.	

Content Extension: Medication Formula

Table 40 – Content Extension: Medication Formula

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medication-formula
Name:	Medication Formula
File Name:	• StructureDefinition-medication-formula.xml • StructureDefinition-medication-formula.json

This is an extension on the Medication. More information can be found at Appendix E Extension Registry section.

Content Extension: Medication Additional Therapeutic Good Detail

Table 41 – Content Extension: Medication Additional Therapeutic Good Detail

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medication-additional-therapeutic-good-detail
Name:	Medication Additional Therapeutic Good Detail
File Name:	• StructureDefinition-medication-additional-therapeutic-good-detail.xml • StructureDefinition-medication-additional-therapeutic-good-detail.json
This is an extension on the Medication. More information can be found at Appendix E Extension Registry section.	

Content Extension: Medication Therapeutic Good Strength

Table 42 – Content Extension: Medication Therapeutic Good Strength

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medication-therapeutic-good-strength
Name:	Medication Therapeutic Good Strength
File Name:	• StructureDefinition-medication-therapeutic-good-strength.xml • StructureDefinition-medication-therapeutic-good-strength.json
This is an extension on the Medication. More information can be found at Appendix E Extension Registry section.	

Content Extension: Medicationdispense Unique Prescription Number

Table 43 – Content Extension: MedicationDispense Unique Prescription Number

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medicationdispense-unique-prescription-number
Name:	MedicationDispense Unique Prescription Number
File Name:	• StructureDefinition-medicationdispense-unique-prescription-number.xml • StructureDefinition-medicationdispense-unique-prescription-number.json
This is an extension on the MedicationDispense. More information can be found at Appendix E Extension Registry section.	

Content Extension: Medicationdispense Sequence Number

Table 44 – Content Extension: MedicationDispense Sequence Number

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medicationdispense-sequence-number
Name:	MedicationDispense Sequence Number
File Name:	• StructureDefinition-medicationdispense-sequence-number.xml • StructureDefinition-medicationdispense-sequence-number.json

This is an extension on the MedicationDispense. More information can be found at Appendix E Extension Registry section.

Content Extension: Medicationorder Quantity Description

Table 45 – Content Extension: MedicationOrder Quantity Description

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medicationorder-quantity-description
Name:	MedicationOrder Quantity Description
File Name:	• StructureDefinition-medicationorder-quantity-description.xml • StructureDefinition-medicationorder-quantity-description.json
This is an extension on the MedicationOrder.dispenseRequest.quantity. More information can be found at Appendix E Extension Registry section.	

Content Extension: Medication Generic Name

Table 46 – Content Extension: Medication Generic Name

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medication-generic-name
Name:	Medication Generic Name
File Name:	• StructureDefinition-medication-generic-name.xml • StructureDefinition-medication-generic-name.json
This is an extension on the Medication. More information can be found at Appendix E Extension Registry section.	

3.6.1.6 Response Message

Based on the MIME header (Accept) or '_format' request parameter, the system will return 'Bundle' of 'MedicationOrder' and associated resources in either XML or JSON format.

Refer to the *"My Health Record FHIR Gateway - Sample Requests and Responses"* for further details.

3.6.1.7 Request Message for MedicationDispense

Table 47 – Get Prescription and Dispense List (MedicationDispense) - Request Message

Resource URI	[base/fhir/ v1.3.0]/MedicationDispense Refer to the "Action URI List" tab in the *My Health Record – API Mapping document for more* details on the possible Action URIs.					
HTTP Method	GET					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	string	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID

App-Version	string	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
Request Parameters (seachParam)						
patient	integer	integer	-	-	1..1	Logical identifier of the patient. Additional validation is performed on the IHI corresponding to the logical identifier of the patient in the URI to check if the logged in user is authorized to perform any operation to the IHI in context.
whenhandedover(ge)	date	yyyy-mm-dd	10	10	0..1	From Date is a search criteria to select the documents whose start date is after the specific period.
whenhandedover(le)	date	yyyy-mm-dd	10	10	0..1	To Date is a search criteria to select the documents whose start date is before the specific period. Any future date provided in the request for 'le' will be defaulted to server current date.
_include	string	string	36	36	0..1	Include the prescription reference in the response. Allowed Parameter Value: MedicationDispense:authorizingPrescription
_format	MIME-type	MIME-type	3	21	0..1	The suggested values are application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

Please refer to *Appendix B.1 API Error* for all common error applicable to the Get Prescription and Dispense List API.

3.6.1.8 Response Message

Based on the MIME header (Accept) or '_format' request parameter, the system will return 'Bundle' of 'MedicationDispense' and associated resources in either XML or JSON format.

Refer to the "*My Health Record FHIR Gateway - Sample Requests and Responses*" for further details.

3.6.1.9 OperationOutcome Codes

The API returns error, warning and information messages that provide detailed information about the outcome of attempted system interactions. They are provided as a direct system response, or component of one, where they provide information about the outcome of the operation.

HTTP error codes that are applicable to this service and will be transmitted in the response header along with the OperationOutcome details in the response body.

Refer to the "Prescription and Dispense List (GET)" section under "FHIR API Error Cases" tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

Please refer to Appendix B.1 API Error for a full list of common errors applicable to all the APIs exposed through My Health Record System.

3.6.2 Get Allergies List (SHS) (GET)

3.6.2.1 Description

This API provides the ability to retrieve an individual's allergies and adverse reactions information and returns a bundle of AllergyIntolerance resources from the most recent Shared Health Summary document stored in the consumer's My Health Record. A maximum of 99 resources is returned in the response.

This API is accessible by both consumers and providers.

3.6.2.2 Message Specifications

Resource served on the REST interface (Conformance.rest.resource.type): 'AllergyIntolerance'

FHIR® based resource reference (Conformance.rest.resource.profile):

- http://hl7.org/fhir/2016May/allergyintolerance.html
- http://hl7.org/fhir/2016May/operationoutcome.html

This specification is intended to be used to describe an actual running instance of software (Conformance.kind = 'instance')

For API v1.3.0, the server does not accept unknown elements or extensions when reading resources (Conformance.acceptUnknown = 'no').

The server supports both XML and JSON transactions. The value can be 'application/xml+fhir' (to represent it as XML) Or 'application/json+fhir' (to represent it as JSON). (Conformance.format = "xml" or "json").

3.6.2.3 Versioning and History

- API Version: 'v1.3.0'.
- FHIR® Version (Conformance.fhirVersion): '1.4.0'.
- Resource Instance Version (Conformance.rest.resource.versioning): 'no-version'. 'VersionId' meta-property is not supported (server) or used (client).
- History (Conformance.rest.resource.readHistory): 'false'. For API v1.3.0, the server is not able to return past versions. 'vRead' interaction is not supported.

3.6.2.4 Request Message

Table 48 – Get Allergies List (SHS) - Request Message

Resource URI	[base/fhir/v1.3.0]/AllergyIntolerance

	Refer to the "Action URI List" tab in the *My Health Record – API Mapping document for more* details on the possible Action URIs.					
HTTP Method (interaction)	GET (read)					
Request Headers	**Data Type**	**Format**	**Min Length**	**Max Length**	**Cardinality**	**Remarks**
Authorization	string	Bearer	15	54	1..1	OAuth Token
App-Id	UUID	UUID	36	36	1..1	Application ID
App-Version	string	-	-	-	1..1	This is the application version as presented to the user. This is mandatory.
Platform-Version	String				0..1	Client (endpoint) platform product and version from which the app is executed.
Request Parameters (searchParam)						
patient	integer	integer	-	-	1..1	Logical identifier of the patient. Additional validation is performed on the IHI corresponding to the logical identifier of the patient in the URI to check if the logged in user is authorized to perform any operation to the IHI in context.
reporter._type	string	string	12	12	1..1	Allowed value is "Practitioner".
_format	MIME-type	MIME-type	3	21	0..1	The suggested values can be application/xml+fhir (to represent it as XML) OR application/json+fhir (to represent it as JSON).

3.6.2.5 Content and Terminology

The tables below summarise My Health Record Specific Extension as applicable to the Get Allergies List API.

Content Extension: AllergyIntolerance Type

Table 49 - Content Extension: au-allergyintolerance-detailed-type

Defining URL:	http://hl7.org.au/fhir/StructureDefinition/au-allergyintolerance-detailed-type
Name:	Australian AllergyIntolerance Detailed Type Extension
File Name:	• StructureDefinition-au-allergyintolerance-detailed-type.xml • StructureDefinition-au-allergyintolerance-detailed-type.json
This is an extension on the AllergyIntolerance resource. More information can be found at Appendix E Extension Registry section.	

The table below shows how the three elements of AllergyIntolerance resource will be populated.

Table 50 - AllergyIntolerance Type and Category Mapping

SL No	SNOMED CT Code	Preferred Term	AllergyIntolerance.type Mapping	AllergyIntolerance.category Mapping
1	401207004	Medication side-effect	intolerance	medication
2	235719002	Food intolerance	intolerance	food
3	90092004	Hypersensitivity reaction type II	allergy	N/A
4	12263007	Hypersensitivity reaction type I	allergy	N/A
5	419076005	Allergic reaction	allergy	N/A
6	609406000	Non-allergic reaction	N/A	N/A
7	28031001	Hypersensitivity reaction type IV	allergy	N/A
8	83699005	Hypersensitivity reaction type III	allergy	N/A
9	281647001	Adverse reaction	N/A	N/A
10	404204005	Drug interaction with drug	N/A	medication
11	95907004	Drug interaction with food	N/A	medication
12	79899007	Drug interaction	N/A	medication
13	75478009	Toxicity	intolerance	N/A

3.6.2.6 Response Message

Based on the MIME header (Accept) or '_format' request parameter, the system will return 'Bundle' of 'AllergyIntolerance' resources in either XML or JSON format.

Refer to the *"My Health Record FHIR Gateway - Sample Requests and Responses"* for further details.

Refer to *Appendix B.1 API Error* for a full list of errors applicable to the Get Allergies List API.

3.6.2.7 OperationOutcome Codes

The API returns the HTTP error codes that are applicable to this service and will be transmitted in the response header along with the OperationOutcome details in the response body.

Refer to the “Get Allergies List (SHS) (GET)” section under “FHIR API Error Cases” tab of *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

Please refer to Appendix B.1 API Error for a full list of common errors applicable to all the APIs exposed through My Health Record System.

Appendix A Common

A.1 API List

The following table provides a complete list of the My Health Record Mobility APIs.

Table 51 - My Health Record Mobility APIs

	Service	Service Description	Type
v1.3.0 API List	Individual Initial Authentication	Username and password check with myGov	Login
	Get or Refresh Individual Access Token	Obtain access token for subsequent requests for individual access	Login
	Initial Provider Authentication (JWT)	Obtain access token for subsequent requests for provider access	Login
	Get Record List	Retrieve list of records the user is permitted to access	Read
	Get Patient Details	Retrieve individual's demographics details	Read
	Gain Access to Patient	Gain Access to Patient record	Write
	Get PBS Items	Retrieve PBS items for a record	Read
	Get MBS Items	Retrieve MBS items for a record	Read
	Get Prescription and Dispense List	Retrieve medications list for a record from Prescribe and Dispense CDAs	Read
	Get Allergies List	Retrieve allergies and adverse reactions from Shared Health Summary Data	Read
	Get Personal Health Summary - Medications	Retrieve Personal Health Summary CDA Medication Data	Read
	Get Personal Health Summary - Allergies	Retrieve Personal Health Summary CDA Allergies Data	Read
	Update Personal Health Summary - Medications	Update Personal Health Summary CDA	Write
	Update Personal Health Summary - Allergies	Update Personal Health Summary CDA	Write
	Get / Search Document List	Retrieve document list and metadata. May be filtered based on parameters (e.g. document type)	Read
	Get Document	Retrieve all content for a CDA document	Read

A.2 Representative Type

The following table provides an explanation of representative types in the My Health Record system.

Table 52 - My Health Record Representative Types

Representative Type	Description
self	Self-access
Authorised Representative	
Under 18 – Parental Responsibility Under 18 – Legal Authority Under 18 – Otherwise Appropriate Person 18 and Over – Otherwise Appropriate Person 18 and Over – Legal Authority	An Authorised Representative is someone who can apply for and manage a My Health Record on behalf of another person. For the purposes of the My Health Record system someone can be an Authorised Representative if they: • have parental responsibility for a person under 18; or • have legal authority to act on behalf of a person who is at least 18 and who is not capable of making his or her own decisions. If there is no one with parental responsibility or legal authority, a person who is otherwise appropriate to act on behalf of the individual can be an Authorised Representative. An individual can have more than one Authorised Representative.
Nominated Representative	
Full Access Nominated Representative	A Full Access Nominated Representative is able to perform all the functions of an Authorised Representative in respect of an individual's My Health Record with the exception of cancelling the record, viewing the Access history, and viewing or adding other representatives. A Full Access Nominated Representative must verify their identity to the System Operator.
General Access Nom Representative	The general access setting allows a Nominated Representative to access the individual's My Health Record and view those documents classified as general access.
Restricted Access Nom Representative	The general access setting allows a Nominated Representative to access the individual's My Health Record and view those documents classified as restricted access.

A.3 Display Name of CodeableConcept

A one-to-one mapping for codeSystemName, displayName and codeSystemVersion has been defined between CDA code and FHIR® CodeableConcept. However, where the My Health Record system returns multiple items in a consolidated format (e.g.: FHIR® bundle), these values may differ from those provided in the source CDA.

When returning a FHIR® bundle referencing the national terminologies (SNOMED CT-AU or Australian PBS/MBS Codes etc.), the My Health Record system will attempt to provide a displayName obtained by referencing the default version of the supported terminology loaded into the My Health Record terminology service. Where a code, codeSystem or codeSystemVersion is unknown to this service, the My Health Record system will return the originalText if available, and the displayName of the source CDA's coded concept.

The code and codeSystem values will always match those provided in the source CDA.

A.4 Custom Slots for Search Document List (GET)

Table 69 – Custom Slots for Search Document List (GET)

Parameter Name	Attribute	Example
$XDSDocumentEntryPracticeSettingCode	XDSDocumentEntry. practiceSettingCode	'7562-1^^ANZSIC'
$XDSDocumentEntryServiceStartTimeFrom	Lower value of XDSDocumentEntry. serviceStartTime	2016-05-30T17:20:00Z
$XDSDocumentEntryServiceStartTimeTo	Upper value of XDSDocumentEntry. serviceStartTime	2016-05-30T17:20:00Z
$XDSDocumentEntryServiceStopTimeFrom	Lower value of XDSDocumentEntry. serviceStopTime	2016-05-30T17:20:00Z
$XDSDocumentEntryServiceStopTimeTo	Upper value of XDSDocumentEntry. serviceStopTime	2016-05-30T17:20:00Z
$XDSDocumentEntryHealthcareFacilityTypeCode	XDSDocumentEntry. healthcareFacilityTypeCode	'7562^^ANZSIC'
$XDSDocumentEntryFormatCode	XDSDocumentEntry. formatCode	'1.2.36.1.2001.1006.1.16644.6^^PCEHR_FormatCodes'
$XDSDocumentEntryUniqueId	XDSDocumentEntry. uniqueId	'1.2.13.1.3998.2548746'

A.5 Type Codes and Class Codes

The table below lists the class code and type code as supported by the My Health Record system at present.

Table 53 - Type Codes and Class Codes

Coding System	ClassCode	TypeCode	Display Name
LOINC[1]	60591-5	60591-5	Shared Health Summary
LOINC	57133-1	57133-1	e-Referral
LOINC	51852-2	51852-2	Specialist Letter
LOINC	18842-5	18842-5	Discharge Summary
LOINC	34133-9	34133-9	Event Summary
NCTIS	100.16650	100.16650	Pharmaceutical Benefits Report
NCTIS	100.17042	100.17042	Australian Immunisation Register
NCTIS	100.16659	100.16659	Australian Childhood Immunisation Register

Coding System	ClassCode	TypeCode	Display Name
NCTIS	100.16644	100.16644	Medicare/DVA Benefits Report
NCTIS	100.16671	100.16671	Australian Organ Donor Register
NCTIS Data Components	100.16681	100.16681	Personal Health Note
NCTIS Data Components	100.16685	100.16685	Personal Health Summary
NCTIS Data Components	100.16696	100.16696	Advance Care Directive Custodian Record
NCTIS Data Components	100.16764	100.16764	eHealth Prescription Record
NCTIS Data Components	100.16765	100.16765	eHealth Dispense Record
NCTIS Data Components	100.16957	100.16957	Diagnostic Imaging Report
NCTIS Data Components	100.32001	100.32001	Pathology Report
NCTIS Data Components	100.16870	100.16870	Consumer Entered Measurements
NCTIS Data Components	100.16919	100.16919	Child Parent Questionnaire
NCTIS Data Components	100.16975	100.16998	Advance Care Planning Document
NCTIS Data Components	100.16812	100.16812	Consumer Entered Achievements

Note: The list above may not contain all documents. Any additions to a new Type Code or Class Code which are not listed above, will be included separately.

'Australian Childhood Immunisation Register' has been super superseded by 'Australian Immunisation Register'

A.6 Type and Category Mapping

The table below shows how the three elements of AllergyIntolerance resource will be populated.

Table 54 - AllergyIntolerance Type and Category Mapping

SL No	SNOMED CT Code	Preferred Term	AllergyIntolerance.type Mapping	AllergyIntolerance.category Mapping
1	401207004	Medication side-effect	intolerance	medication
2	235719002	Food intolerance	intolerance	food

SL No	SNOMED CT Code	Preferred Term	AllergyIntolerance.type Mapping	AllergyIntolerance.category Mapping
3	90092004	Hypersensitivity reaction type II	allergy	N/A
4	12263007	Hypersensitivity reaction type I	allergy	N/A
5	419076005	Allergic reaction	allergy	N/A
6	609406000	Non-allergic reaction	N/A	N/A
7	28031001	Hypersensitivity reaction type IV	allergy	N/A
8	83699005	Hypersensitivity reaction type III	allergy	N/A
9	281647001	Adverse reaction	N/A	N/A
10	404204005	Drug interaction with drug	N/A	medication
11	95907004	Drug interaction with food	N/A	medication
12	79899007	Drug interaction	N/A	medication
13	75478009	Toxicity	intolerance	N/A

A.7 Event Notification

The table below lists the different notifications that the API will trigger.

Table 55 – Event Notification

Business Event Name	API Trigger (APINotificationType)	Message (EventNotificationText)
UploadDocumentMetadata	MBS	MBS uploaded
	PBS	PBS uploaded
	PrescriptionRecord	Prescription record uploaded
	DispenseRecord	Dispense record uploaded
UploadDocument	PrescriptionRecord	Prescription record uploaded
	DispenseRecord	Dispense record uploaded
	PHS	PHS uploaded
	SHS	SHS uploaded

Appendix B Referenced Artefacts

B.1 API Error Handling

The system returns an OperationOutcome resource in error conditions.

For search error conditions, the server returns a Bundle with including an OperationOutcome in the search set that contains information and warnings about the search process. The OperationOutcome is included in the search results as an entry with search mode = "outcome". However, the server returns an OperationOutcome only with error/exception details for search failure occurred due to system or backend system exception.

Refer to the "Common System Error Applicable to ALL APIs" section in *My Health Record FHIR® Gateway – Error Mapping* document to find the applicable FHIR® API Error details.

B.2 FHIR® Mapping

Refer to the *My Health Record FHIR Gateway – Data Mapping* document to find the applicable FHIR® API mapping information.

Note: The samples provided in the document are only for reference purposes. The ValueSet and StructureDefinition details as mentioned in the document are not available in the server as FHIR® resources. The URI used in the StructureDefinition and ValueSet is temporary and may get changed in future releases.

Appendix C Personal Health Summary

C.1 Processing Rules: Personal Health Summary Document

This section talks about the processing rules that should be taken into consideration when API call with POST and PUT interaction is performed.

C.1.1 Identifier Types

The section below describes server implementation and handling of Identifiers for Personal Health Summary document:

- **Logical identifier ('id'):** In personal health summary MedicationStatement and AllergyIntolerance resources, the logical identifier is mapped to the entry ID ('entry/substanceAdministration/id') of Personal Health Summary Document.
- **Document ID ('docId'):** This is a custom parameter in the system to represent the Personal Health Summary CDA Document ID. Server expects that the calling system should use Search Document List API to retrieve the latest Personal Health Summary document and use the ID for making respective calls in MedicationStatement or AllergyIntolerance API (POST/PUT/DELETE interactions).
- **Business identifier ('identifier'):** My Health Record system doesn't support 'identifier' for MedicationStatement or AllergyIntolerance API.

C.1.2 Processing Rules for POST Interaction (Bundle)

- Use this if there is no Personal Health Summary Document Exists for the Patient, or the existing document doesn't have the respective section. Example, if the request is for MedicationStatement Bundle then make sure the existing CDA doesn't have any Medication section.
- The POST request SHALL NOT contain combination of POST and GET/PUT/DELETE entries ('request.method') in the bundle. System validates 'request.method' with the API interaction (POST) to ensure that the valid request is received to execute POST interaction. Any mismatch SHALL result an OperationOutcome.
- Each entry in the Bundle SHALL have a fullUrl, server may ignore the value of the fullURL.
- The request Bundle SHALL NOT have any ID.
- Entries in the request Bundle SHALL NOT have any ID. If any ID found, the request should be rejected with 400 error.
- The value of 'request.url' could be same as 'resourceType' found in the bundle.
- If any error occurs during processing any of the resources in the Bundle, entire transaction will be rolled back as failure and an OperationOutcome resource will be returned back.
- The request body SHALL NOT contain any 'identifier'. If provided, system will ignore that value.

- A new CDA will be created based on the content received in the Bundle.

C.1.3 Processing Rules for POST Interaction (Individual)

- The request URI SHALL contain the custom parameter ‘docId’. The value of the ‘docId’ should be retrieved from Search Document List API while calling this API.
- The request body SHALL NOT contain any ‘id’ element. If an ‘id’ element is provided, the server SHALL respond with a HTTP 400 error code, and SHOULD provide an OperationOutcome identifying the issue.
- The request body SHALL NOT contain any ‘identifier’. If provided, system will ignore that.
- A new CDA will be created based on the content received in the individual resource (MedicatinStatement/AllergyIntolerrance).

C.1.4 Processing Rules for PUT Interaction (Bundle)

- The request Bundle SHALL have the ID. This ID represents the Personal Health Summary Document ID and should match with the ID provided in the URI.
- The value of ‘request.url’ could be same as ‘resourceType’ found in the bundle.
- Each entry SHALL have a fullUrl, server may ignore the value of the fullURL.
- Entries in PUT request may contain GET, PUT, POST and DELETE ‘request.method’ combinations.
- Entries in the request Bundle SHALL have ‘id’ if the ‘request.method’ = “PUT” or “GET” or “DELETE”.
- If the ‘request.method’ is a 'PUT' or 'POST', then the entry SHALL contain a resource that becomes the body of the HTTP interaction.
- The processing rule is as follows when multiple combinations of ‘request.method’ is found inside the bundle:
    - Process any DELETE interactions
    - Process any POST interactions
    - Process any PUT interactions
    - Process any GET interactions
- The system expects the Bundle should contain all the entries based on which the CDA document will be created. Any entry missing in the request Bundle will be removed from the updated version of the CDA document. If an empty Bundle is submitted, system will remove the corresponding section from the CDA completely.
- If the “request.method = PUT”, the corresponding entry in the Bundle should have a valid logical ID associated with the resource. Missing logical ID in this case will result an OperationOutcome. The same is applicable for “GET” ‘request.method’.
- If any error occurs during processing any of the resources in the Bundle, entire transaction SHALL be rolled back as failure and an OperationOutcome resource SHALL be returned back.
- The request body SHALL NOT contain any ‘identifier’. If provided, system will ignore that value.

- System doesn't support empty Bundle and Bundle containing only DELETE entries.

C.1.5 Processing Rules for PUT Interaction (Individual)

- Use this when there is already a Personal Health Summary CDA available for the Patient.
- The request URI SHALL contain the custom parameter 'docId'. The value of the 'docId' should be retrieved from Search Document List API while calling this API.
- The request SHALL have the ID. This ID represents the individual entry ID in the Personal Health Summary CDA Document. If 'id' is missing from the request body, system will return back OperationOutcome.
- The request body SHALL NOT contain any 'identifier'. If provided, system will ignore that value.
- A new CDA will be created based on the content received in the individual resource (MedicationStatement/AllergyIntolerance).

C.1.6 Processing Rules for Delete Interaction (Individual)

- The request URI SHALL contain an 'id' element. The 'id' should correspond to an entry ID in the CDA. If not found, an OperationOutcome will be returned back.
- The request URI SHALL contain the custom parameter 'docId'. The value of the 'docId' should be retrieved from Search Document List API while calling this API.
- 'patient' parameter is required in the request URL.
- If there is no PHS CDA exists, an OperationOutcome will be returned to inform that no document exists.
- Once the request is processed successfully, the response will be retuned back with HTTP 204 - No Content code.
- The server executes only conditional delete and doesn't support any other search parameter than 'patient'.
- A new CDA will be created after removing the entry corresponding to the entry ID as received in the DELETE request. If there is only one entry found in the existing CDA and a valid DELETE request is received, then the CDA will be removed.

Appendix D Patient Search by Provider – Alternative Search Criteria

D.1 Search Parameter

If the IHI number is not available for the patient, the provider can search the patient with valid information for all the fields as mentioned below:

Table 56 - Patient Search Parameter

Request Parameters (searchParam)	Data Type	Format	Min Length	Max Length	Cardinality	Remarks
coverageId	string	string/token	16	-	1..1	The values can be any of the following: • Medicare Card Number (11 digits) • DVA File Number
birthdate	date	yyyy-mm-dd	-	-	1..1	Date of Birth of the patient. Part of 'subject' in the Parameter
gender	token	code	4	10	1..1	Gender value as token. Part of 'subject' in the Parameter The allowed values are "male", "female", "other", and "unknown".
family	string	string	1	40	1..1	Family Name of the patient. Part of 'subject' in the Parameter. Not case-sensitive.
given	string	string	1	40	0..1	Given Name of the patient. Part of 'subject' in the Parameter

The above list of search parameters is applicable only when the provider is searching a patient with demographic details. System will ignore them if used in a consumer Patient API.

D.2 Identifier System URL

The table below shows the URL to be used for identifier as the search criteria.

Table 57 - Identifier System URL

#	Identifier Type	System	Remarks	Search Parameter Used
1	Medicare Card Number	http://ns.electronichealth.net.au/id/hi/mc	Value for Identifier.system The value should include IRN number	coverageId
2	DVA File Number	http://ns.electronichealth.net.au/id/hi/dva	Value for Identifier.system	coverageId
3	IHI	http://ns.electronichealth.net.au/id/hi/ihi/1.0	IHI is the default identifier. When searched with IHI, no other search parameters as mentioned in section 3.2.2.4 are required.	Identifier

Please note, system doesn't support all the types of Identifiers as mentioned in the Australian Patient Identifiers portal. System only supports the three Business Identifiers for the patient resource as shown in the table above.

D.3 Access Policy for Providers

My Health Record's system policy enforces the provider to gain access to the patient's record before they can view any details associated with the patient. This applies while viewing demographic details of the patient as well.

Access to the patient's record can be achieved by calling the custom FHIR® operation "$access" on Patient API.

D.4 Provider Access: Status and Types

The below table provides the summary of Access Code status as returned by the Patient API when searched by provider. The value indicates what request parameter is required to perform $access operation using Patient API.

Content Extension: Resource Access Status

Table 58 - Content Extension: Resource Access Status

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/patient-access-criteria
Name:	Resource Access Status Type
File Name:	• StructureDefinition-patient-access-criteria.xml • StructureDefinition-patient-access-criteria.json
This is an extension on the Bundle.search.mode. More information can be found at Appendix E Extension Registry section.	

Terminology: Resource Access Status

Table 59 - Terminology: Resource Access Status

Defining URL:	http://ns.electronichealth.net.au/fhir/v1.3.0/ValueSet/patient-access-criteria
Name:	Patient Access Criteria Type Code
File Name:	• ValueSet-patient-access-criteria.xml • ValueSet-patient-access-criteria.json • CodeSystem-patient-access-criteria.json • CodeSystem-patient-access-criteria.xml
Code Definition	
Code	**Definition**
WithCode	Access can be obtained by invoking $access operation on Patient API with providing an 'accessType' in the request Parameter.
WithoutCode	Access can be obtained by invoking $access operation on Patient API. This interaction doesn't require 'accessType' Parameter.
AccessGranted	Access is granted and can patient details can be obtained without invoking $access operation on Patient API.
The ValueSet is being Referenced from http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/patient-access-criteria and from the Out Parameter when $access operation is performed. More information can be found at Appendix F Terminologies section.	

Appendix E Extension Registry

All extensions are defined under http://hl7.org/fhir/StructureDefinition/. Additional extensions can be found on the My Health Record FHIR Registry at http://ns.electronichealth.net.au/

Table 60 - Extensions

ID	Description	Cardinality	Type	Defining URL
Resource	**Patient**			
patient-access-criteria	A set of codes which specifies the Patient Access Criteria.	0..1	code	**http://ns.electronichealth.net.au/fhir/v1.3.0/ValueSet/patient-access-criteria**
Resource	**RelatedPerson**			
relationship-type	My Health Record System extension to include relationship type of the patient and the related person.	0..1	CodeableConcept	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/relationship-type
Resource	**Medication**			
medication-generic-name	An item of information about a therapeutic good.	0..1	string	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medication-generic-name
medication-brand	The brand of the pharmaceutical item supplied.	0..1	string	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medication-brand
medication-additional-therapeutic-good-detail	My Health Record System extension to include medication additional therapeutic good detail.	0..1	string	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medication-additional-therapeutic-good-detail
medication-form-and-strength	Medication Form and Strength	0..1	string	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medication-form-and-strength
medication-formula	Medication Formula	0..1	string	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medication-formula
medication-therapeutic-good-strength	Medication Therapeutic Good Strength	0..1	string	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medication-therapeutic-good-strength
Resource	**MedicationOrder**			

medicationorder-quantity-description	Free text description of the amount which may consist of the quantity and dose unit.	0..1	string	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medicationorder-quantity-description
Resource	**MedicationDispense**			
medicationdispense-quantity-description	Free text description of the amount which may consist of the quantity and dose unit.	0..1	string	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medicationdispense-quantity-description
medicationdispense-sequence-number	A numeric value that represents the dispense number or sequence number that has been reached for a therapeutic good prescribed with repeats. This count includes the first dispense. It has the value 1 when there are no repeats.	0..1	string	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/medicationdispense-sequence-number
medicationdispense-unique-prescription-number	A system identifier of additional administrative information relevant to this medication action.	0..1	string	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/MedicationDispense-unique-prescription-number
Resource	**AllergyIntolernace**			
au-allergyintolerance-detailed-type	A set of codes which specifies the AllergyIntolerance type for the patient.	0..1	Coding	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/au-allergyintolerance-detailed-type
Resource	**ExplanationOfBenefit**			
eob-item-service	A set of codes which specifies the benefit item accessed by the patient.	1..1	Coding	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/eob-item-service
Resource	**ExplanationOfBenefit**			
patient-access-criteria	A set of codes which specifies the Patient Access Criteria.	1..1	code	http://ns.electronichealth.net.au/fhir/v1.3.0/StructureDefinition/patient-access-criteria

Appendix F Terminologies

This table contains a list of all the value sets and code systems defined as part of the My Health Record System FHIR specification.

Table 61 - Terminologies

ID	Description	Type	Defining URL
eob-item-service	CodeSystem for Explanation Of Benefit Item Service	CodeSystem	http://ns.electronichealth.net.au/fhir/v1.3.0/CodeSystem/eob-item-service
eob-item-service	This is a value set that includes set of codes which specifies the benefit item accessed by the patient.	ValueSet	http://ns.electronichealth.net.au/fhir/v1.3.0/ValueSet/eob-item-service
relationship-type	CodeSystem for Relationship Type	CodeSystem	http://ns.electronichealth.net.au/fhir/v1.3.0/CodeSystem/relationship-type
relationship-type	This is a value set that includes all the codes for relationship type.	ValueSet	http://ns.electronichealth.net.au/fhir/v1.3.0/ValueSet/relationship-type
patient-access-criteria	This code system includes all the codes for Patient Access Criteria as per My Health Record System"	CodeSystem	http://ns.electronichealth.net.au/fhir/v1.3.0/CodeSystem/patient-access-criteria
patient-access-criteria	This is a value set that includes all the codes for Patient Access Criteria.	ValueSet	http://ns.electronichealth.net.au/fhir/v1.3.0/ValueSet/patient-access-criteria

Appendix G Operations

The table below describes the custom FHIR operation defined by the My Health Record system.

Table 62 - Operations

ID	Description	Applicable Resource	Interaction Type	Defining URL
patient-access	The 'access' operation allows the Provider to gain access to the Patient record so that they can view the details associated with the Patient	Patient	POST	http://ns.electronichealth.net.au/fhir/v1.3.0/OperationDefinition/patient-access

Acronyms

Acronym /Term	Meaning
API	Application Programming Interface
FHIR®	Fast Healthcare Interoperability Resources
[base]	The Service Root URL. The Service Root URL is the address where all of the resources defined by this interface are found. The Service Root URL takes the form of "http(s)://server{/path}"
IHI	Individual Healthcare Identifier
JSON	JavaScript Object Notation
MBS	Medicare Benefits Schedule
NIO	National Infrastructure Operator
NOC	Notice of Connection
OAuth	Open Authorisation
PBS	Pharmaceutical Benefits Schedule
Patient	Individual having a My Health Record
REST	Representational State Transfer
SVT	Software Vendor Testing
XML	Extensible Mark-up Language

References

FHIR® Documentation: http://hl7.org/fhir/2016May/index.html