

FHIR Implementation Guide: Vaccination-Immunization 1.0.17



Inhoud

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1 Introduction

This page describes patient's use case for the retrieval of vaccination results, in a personal health environment (PHR) context. Functional specifications are described at the [functional design wiki page](#). This use case consists of enabling a patient to view his own administered vaccinations in a PHR. The technical specification is described here. HL7 FHIR R4 is used for this purpose. Vaccinations are represented by the Immunization resources in FHIR. A transaction will retrieve all administered vaccinations from the XIS.

Note: This implementation guide builds on the general guidelines described in the [use case overarching principles](#).

2 Actors involved

Actors		Systems		FHIR CapabilityStatements	
Name	Description	Name	Description	Name	Description
Patient	The user of a personal healthcare environment.	PHR	Personal health record	CapabilityStatement: Retrieve Serve (https://simplifier.net/resolve?target=simplifier&canonical=http://nictiz.nl/fhir/CapabilityStatement/imm-RetrieveServe&scope=nictiz.fhir.nl.r4.immunization@1.0.3)	FHIR client/server requirements
(Healthcare) provider	The user of a XIS	XIS	(Healthcare) information system		

3 Use case 1: Retrieve vaccinations

This FHIR implementation guide assumes that the PHR system is able to make a connection to the right XIS that contains the patient's information. It does not provide information on finding the right XIS nor does it provide information about security. Moreover, each transaction is performed in the context of a specific authenticated patient, for whose context (token) has been established using the authentication mechanisms described in the 'Afsprakenstelsel' (<https://www.medmij.nl/afsprakenstelsel/>). Each XIS Gateway is required to perform filtering based on the patient associated with the context for the request, so only the records associated with the authenticated patient are returned. For this reason, search parameters should not be included for patient identification.



3.1 Introduction

The retrieve vaccinations transaction is used by the PHR to retrieve vaccinations from a XIS.

3.2 Actors

Transaction group	Transaction	Actor	Role
Retrieve vaccinations(PULL)	Retrieve vaccinations request	Patient (using a PHR)	Request vaccinations from the XIS
	Retrieve vaccinations response	(Healthcare) provider (using a XIS)	Serves vaccinations to the PHR

3.3 Invocations

3.3.1 PHR: request message

The request message represents an HTTP GET parameterized query from the PHR to the XIS.

3.3.1.1 Trigger events

When the patient (PHR) wants to obtain vaccinations, it issues a retrieve vaccinations request message.

3.3.1.2 Message semantics

Search

The PHR executes an HTTP GET conform to the FHIR [RESTful \(http://hl7.org/fhir/http.html\)](http://hl7.org/fhir/http.html) and [search \(http://hl7.org/fhir/http.html#search\)](http://hl7.org/fhir/http.html#search)

hl7.org/fhir/search.html) specification against the XIS's Observation endpoint. This search query URL is configurable by the PHR and has the following format.

```
GET [base]/Immunization{?[includes]}
```

Search Parameters

The PHR may supply, and the XIS shall be capable of processing, all includes listed below. These includes are a selection of the defined includes. The includes can also be combined to retrieve multiple resources.

Immunization		
Name	Description	Example
patient	This will specify the resource for the patient that the immunization is performed on.	Retrieve the Immunization and Patient resource: <pre>GET [base]/Immunization?_include:patient</pre>
location	This will specify the resource for the location where the Immunization took place.	Retrieve the Immunization and Location resource: <pre>GET [base]/Immunization?_include:location</pre>
performer	This will specify the resource for the healthcareprovider who performed the immunization on the patient.	Retrieve the Immunization and Practitioner or Organization resource: <pre>GET [base]/Immunization?_include:performer</pre>

At this point in time, there are no use cases for filter parameters on the query. The stated query will return a Bundle with all known administered immunizations. Each immunization is conveyed in an Immunization resource. The Immunization resource will contain references to actors such as the patient (Patient resource), the health professional (PractitionerRole and Practitioner resources) and the organization (Organization resource). The client SHALL be able to resolve there referenced resources, as described in the [FHIR R4 Implementation Guide](#).

3.3.1.2.1 Expected actions

The XIS SHALL process the query to retrieve patient's Immunization resources and the referenced resources.

3.3.2 XIS: response message

The XIS returns an HTTP Status code appropriate to the processing as well as a FHIR Bundle including the matching information.

3.3.2.1 Trigger events

The XIS completed processing of the retrieve vaccinations request message.

3.3.2.2 Message semantics

The returned data to the PHR should conform to the profiles listed in the table below. The resources in the response message SHALL conform to the requirements as described in the [FHIR R4 Implementation Guide](#).

MedMij uses the [FHIR Packaging mechanism](#). This conveniently bundles all profiles, terminology, example material and other conformance resources you need into a single archive, which can be downloaded or installed using the appropriate FHIR tooling. This version of the information standard uses the following packages:

- 
- [nictiz.fhir.nl.r4.immunization \(https://simplifier.net/packages/nictiz.fhir.nl.r4.immunization/1.0.3\)](https://simplifier.net/packages/nictiz.fhir.nl.r4.immunization/1.0.3) version 1.0.3 or compatible
 - [nictiz.fhir.nl.r4.zib2020 \(https://simplifier.net/packages/nictiz.fhir.nl.r4.zib2020/0.11.0-beta.1\)](https://simplifier.net/packages/nictiz.fhir.nl.r4.zib2020/0.11.0-beta.1) version 0.11.0-beta.1 or compatible
 - [nictiz.fhir.nl.r4.nl-core \(https://simplifier.net/packages/nictiz.fhir.nl.r4.nl-core/0.11.0-beta.1\)](https://simplifier.net/packages/nictiz.fhir.nl.r4.nl-core/0.11.0-beta.1) version 0.11.0-beta.1 or compatible

Note: packages use [Semantic Versioning \(https://semver.org/\)](https://semver.org/). Other versions can be used at will as long as they have the same *major.minor* number or a *minor* number higher than the stated version.

Profile name	FHIR Resource	HCIM EN	Canonical URL
nl core Vaccination event	Immunization	Vaccination (https://zibs.nl/wiki/Vaccinatie-v4.0(2020NL)))	http://nictiz.nl/fhir/StructureDefinition/nl-core-Vaccination-event (https://simplifier.net/resolve?target=simplifier&canonical=http://nictiz.nl/fhir/StructureDefinition/nl-core-Vaccination-event&scope=nictiz.fhir.nl.r4.nl-core@0.11.0-beta.1)
nl core Patient	Patient	Patient (https://zibs.nl/wiki/Patient-v3.2(2020EN)))	http://nictiz.nl/fhir/StructureDefinition/nl-core-Patient (https://simplifier.net/resolve?target=simplifier&canonical=http://nictiz.nl/fhir/StructureDefinition/nl-core-Patient&scope=nictiz.fhir.nl.r4.nl-core@0.11.0-beta.1)
nl core HealthProfessional	Practitioner	HealthProfessional (https://zibs.nl/wiki/HealthProfessional-v3.5(2020EN)))	http://nictiz.nl/fhir/StructureDefinition/nl-core-HealthProfessional-Practitioner (https://simplifier.net/resolve?target=simplifier&canonical=http://nictiz.nl/fhir/StructureDefinition/nl-core-HealthProfessional-Practitioner&scope=nictiz.fhir.nl.r4.nl-core@0.11.0-beta.1)
nl core HealthProfessional PractitionerRole	PractitionerRole		http://nictiz.nl/fhir/StructureDefinition/nl-core-HealthProfessional-PractitionerRole (https://simplifier.net/resolve?target=simplifier&canonical=http://nictiz.nl/fhir/StructureDefinition/nl-core-HealthProfessional-PractitionerRole&scope=nictiz.fhir.nl.r4.nl-core@0.11.0-beta.1)
nl core HealthcareProvider Organization	Organization	HealthcareProvider (https://zibs.nl/wiki/HealthcareProvider-v3.4(2020EN)))	http://nictiz.nl/fhir/StructureDefinition/nl-core-HealthcareProvider-Organization (https://simplifier.net/resolve?target=simplifier&canonical=http://nictiz.nl/fhir/StructureDefinition/nl-core-HealthcareProvider-Organization&scope=nictiz.fhir.nl.r4.nl-core@0.11.0-beta.1)
nl core HealthcareProvider	Location		http://nictiz.nl/fhir/StructureDefinition/nl-core-HealthcareProvider (https://simplifier.net/resolve?target=simplifier&canonical=http://nictiz.nl/fhir/StructureDefinition/nl-core-HealthcareProvider&scope=nictiz.fhir.nl.r4.nl-core@0.11.0-beta.1)
nl core PharmaceuticalProduct	Medication	PharmaceuticalProduct (https://zibs.nl/wiki/PharmaceuticalProduct-v2.1.2(2020EN)))	http://nictiz.nl/fhir/StructureDefinition/nl-core-PharmaceuticalProduct (https://simplifier.net/resolve?target=simplifier&canonical=http://nictiz.nl/fhir/StructureDefinition/nl-core-PharmaceuticalProduct&scope=nictiz.fhir.nl.r4.nl-core@0.11.0-beta.1)

3.3.2.3 Expected actions

The PHR processes the results according to application-defined rules.

4 Release notes

Release notes can be found on the [functional design page](#).

5 Support

For questions and change requests regarding the information on this page, please create a ticket in [Servicedesk Portal](#) (<https://nictiz.atlassian.net/servicedesk/customer/portal/4>).

Overgenomen van "https://informatiestandaarden.nictiz.nl/index.php?title=MedMij:V6/FHIR_Vaccination-Immunization&oldid=254176"

Deze pagina is voor het laatst bewerkt op 25 mrt 2025 om 10:28.

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