

eHF Record

Web Service Documentation

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Table of Contents

1	Record Web Service Terminology.....	10
1.1	Record	10
1.2	Subject, or Record Subject.....	10
1.3	Personal data.....	10
1.4	Contact data	10
1.5	Emergency Contact	10
1.6	Health Care Provider	10
1.7	Act.....	11
1.8	Encounter	11
1.9	Observation	12
1.10	Substance Administration.....	13
1.11	Expert Entry/Expert Entry	13
1.12	PolicyOrProgram	13
1.13	Covered Person.....	13
2	Web Service Document Overview	14
2.1	Usage Notes:	14
2.2	Most important methods:	14
3	Main Method Parameters	15
3.1	ehf-record-admin	15
3.1.1	Impl:RecordXto	15
3.1.2	Impl:RecordInfoXto.....	16
3.1.3	Impl:AbstractPersonXto.....	17
3.1.4	Impl:EmergencyContactXto.....	18
3.1.5	Impl:OrganizationXto	18
3.1.6	Impl:ContactXto	19
3.1.7	Impl:SubjectXto	19
3.1.8	Impl:ContactPartyXto.....	20
3.1.9	Impl:ContactAddressXto.....	21

3.1.10	Impl:ContactTelecomXto	22
3.1.11	Impl:HealthCareProviderXto.....	22
3.1.12	Impl:AdministrativeContactXto	23
3.2	ehf-record-medical.....	23
3.2.1	Impl:CustomObjectXto.....	24
3.2.2	Impl:CustomActXto.....	24
3.2.3	Impl:DiagnosisXto.....	25
3.2.4	Impl:MedicalProcedureXto	25
3.2.5	Impl:ProcedureXto.....	26
3.2.6	Impl:FindingXto.....	26
3.2.7	Impl:AllergyXto	26
3.2.8	Impl:ManufacturedProductXto.....	27
3.2.9	Impl:EncounterXto	29
3.2.10	Impl:ExternalReferenceXto.....	30
3.2.11	Impl:ActXto	30
3.2.12	Impl:PhysicalQuantityXto.....	31
3.2.13	Impl:SubstanceAdministrationXto	32
3.2.14	Impl:MedicationXto	32
3.2.15	Impl:IntakeInstructionXto	33
3.2.16	Impl:HealthRiskXto	34
3.2.17	Impl:SimpleObservationXto	34
3.2.18	Impl:DiscontinuedInformationXto	35
3.2.19	Impl:ObservationXto	35
3.2.20	Impl:QuantitativeObservationXto.....	35
3.2.21	Impl: QuantitativeObservationDataXto	36
3.2.22	Impl:ParticipantXto	37
3.2.23	Impl:PolicyOrProgramXto.....	37
3.2.24	Impl:CoveredPersonXto	40
3.2.25	Impl:VaccinationXto.....	41
3.2.26	Impl:VaccinationTypeXto.....	41
3.2.27	Impl: AdverseReactionXto	42

3.2.28	Impl:CertificateXto	42
3.2.29	Impl: SupplyInformationXto	42

4 Method Descriptions45

4.1	findRecords.....	45
4.1.1	Description:.....	45
4.1.2	Arguments:	45
4.1.3	Returns:	45
4.2	findAccessibleRecords	45
4.2.1	Description:.....	45
4.2.2	Arguments:	45
4.2.3	Returns:	46
4.3	findRecordByScope.....	46
4.3.1	Description:.....	46
4.3.2	Usage Note:.....	46
4.3.3	Arguments:	46
4.3.4	Returns:	46
4.4	findRecordByUserId	47
4.4.1	Description:.....	47
4.4.2	Usage Note:.....	47
4.4.3	Arguments:	47
4.4.4	Returns:	47
4.5	uploadEmergencyDataSet.....	47
4.5.1	Description:.....	47
4.5.2	Usage Note:.....	47
4.5.3	Arguments:	48
4.5.4	Returns:	48
4.6	downloadEmergencyDataSet	48
4.6.1	Description:.....	48
4.6.2	Usage Note:.....	48
4.6.3	Arguments:	48
4.6.4	Returns:	49

4.7	deleteEmergencyDataSet.....	49
4.7.1	Description:.....	49
4.7.2	Usage Note:.....	49
4.7.3	Arguments:	49
4.7.4	Returns:	49
4.8	create.....	50
4.8.1	Description:.....	50
4.8.2	Usage notes:	50
4.8.3	Arguments:	50
4.8.4	Returns:	50
4.9	loadByScope.....	51
4.9.1	Description:.....	51
4.9.2	Arguments:	51
4.9.3	Returns:	51
4.10	loadByID	51
4.10.1	Description:.....	51
4.10.2	Arguments:	51
4.10.3	Returns:	52
4.11	update.....	52
4.11.1	Description:.....	52
4.11.2	Arguments:	52
4.11.3	Returns:	52
4.12	delete	52
4.12.1	Description:.....	52
4.12.2	Arguments:	52
4.12.3	Returns:	53
4.13	loadEncountersByCode.....	53
4.13.1	Description:.....	53
4.13.2	Arguments:	53
4.13.3	Returns:	53
4.14	createExclusionDiagnosis	53

4.14.1	Description:.....	53
4.14.2	Arguments:	54
4.14.3	Returns:	54
4.15	loadCurrentDiagnosesByScope	54
4.15.1	Description:.....	54
4.15.2	Usage Note:.....	54
4.15.3	Arguments:	54
4.15.4	Returns:	55
4.16	createExclusionAllergy	55
4.16.1	Description:.....	55
4.16.2	Arguments:	55
4.16.3	Returns:	55
4.17	loadCurrentAllergiesByScope.....	55
4.17.1	Description:.....	55
4.17.2	Usage Note:.....	56
4.17.3	Arguments:	56
4.17.4	Returns:	56
4.18	cancelMedication	56
4.18.1	Description:.....	56
4.18.2	Usage notes:	56
4.18.3	Arguments:	56
4.18.4	Returns:	57
4.19	loadCurrentMedicationsByScope	57
4.19.1	Description:.....	57
4.19.2	Arguments:	57
4.19.3	Returns:	57
4.20	loadObservationViewsByScope	58
4.20.1	Description:.....	58
4.20.2	Arguments:	58
4.20.3	Returns:	58
4.21	loadQuantitativeObservationsByCode	58

4.21.1	Description:.....	58
4.21.2	Arguments:	59
4.21.3	Returns:	59
4.22	addObject	59
4.22.1	Description:.....	59
4.22.2	Arguments:	59
4.22.3	Returns:	60
4.23	loadMetaData	60
4.23.1	Description:.....	60
4.23.2	Arguments:	60
4.23.3	Returns:	60
4.24	removeObject	60
4.24.1	Description:.....	60
4.24.2	Arguments:	61
4.24.3	Returns:	61
4.25	createAndAddObject	61
4.25.1	Description:.....	61
4.25.2	Arguments:	61
4.25.3	Returns:	62
4.26	updateObjects.....	62
4.26.1	Description:.....	62
4.26.2	Arguments:	62
4.26.3	Returns:	62
4.27	linkObjects	62
4.27.1	Description:.....	62
4.27.2	Arguments:	62
4.27.3	Returns:	63
4.28	unlinkObjects	63
4.28.1	Description:.....	63
4.28.2	Arguments:	63
4.28.3	Returns:	63

4.29	loadLinkedObjects	64
4.29.1	Description:	64
4.29.2	Arguments:	64
4.29.3	Returns:	64
4.30	loadLinkedObjectsByQualifier	64
4.30.1	Description:	64
4.30.2	Arguments:	64
4.30.3	Returns:	65
4.31	updateSupplyInformation.....	65
4.31.1	Description:	65
4.31.2	Usage notes:	65
4.31.3	Arguments:	65
4.31.4	Returns:	65
4.32	createBulkQuantitativeObservation	66
4.32.1	Description:	66
4.32.2	Arguments:	66
4.32.3	Returns:	66
4.33	loadObservationViewsForObservationCodes	67
4.33.1	Description:	67
4.33.2	Arguments:	67
4.33.3	Returns:	67

1 Record Web Service Terminology

1.1 Record

Each record is associated to exactly one person who represents the subject of the record. All information stored within the record belongs to this person (all data is about this one person).

1.2 Subject, or Record Subject

Per definition, each record contains data about one single person – the subject of the record. Each piece of information within the record is strongly related to this person, e.g. the record contains encounters the subject had with a doctor, diagnoses about diseases the subject suffers from, information about diagnostic and therapeutic procedures that were executed with or by the subject.

1.3 Personal data

The subject of the record is described by several personal attributes like his name, address, gender, birth date, etc. Personal information identifies the subject himself and medical information included within the record (e.g. a laboratory value may have a completely other meaning if the age of a person is taken into consideration).

1.4 Contact data

A contact involves various facilities to establish a contact to a person (e.g. with telephone, e-mail, mail or fax). A Person can be a natural person or a legal person (e.g. organization).

1.5 Emergency Contact

An emergency contact represents the person(s) who should be immediately informed in case of an emergency. This could be a family member, a friend, a neighbor or any other person related to the record subject (e.g. caregiver).

Even though an unlimited set of emergency contacts could be created one of these has to be defined as the primary one.

1.6 Health Care Provider

Several different types of health care providers participate in the medical treatment of a person. Currently, the eHF Record supports the following:

- The family doctor represents the medical professional who is mainly responsible for the general medical treatment of the record subject. Usually, doctor's letters or other medical information created by a specialist is sent to the family doctor for further processing.
- The primary pharmacy is regarded as the main pharmacy of the record subject.

1.7 Act

According to HL7 V3, every happening within the area of medical treatment is an Act,. Each Act may have several participants:

- the author of an Act represents the humans and/or machines that created the statements. This may be a person or organization such as a healthcare provider, a related party such as a family member, or the patient themselves. The author originates the Act and therefore has responsibility for the information given in the Act.
- The data enterer is the party who actually enters data associated with an act into the system. The data enterer (e.g. a typist) of an act may be different from the performer (e.g. a surgery resident) as well as from the author of an act (e.g. the surgeon).
- The performer is a person who carries out a particular act. The performer does not need to be the principal responsible participant, e.g. a surgery resident operating under supervision of an attending surgeon is the performer.

Each Act may also be related to other Acts and may have a number of specialisations. For example, Act has a specialisation called Observation, which itself has a specialisation called Diagnosis. Diagnosis inherits the attributes of both Act and Observation.

1.8 Encounter

An encounter is the meeting of two or more different parties, for example when a patient visits a doctor at the doctor's office or in the hospital. All information that was documented in context with an encounter (e.g. the symptoms the patient observed, the observations the physician made, the diagnosis that he derives from the former, documents related to the encounter like lab results and doctor's letter) could be linked to an encounter instance. Three different types of encounters are supported:

- An ambulant encounter is the meeting of a non-professional and a medical professional in an outpatient facility related to a hospital or in a doctor's office. Out-patient means that the patient just comes for diagnosis and/or therapy and then leaves again.

- An inpatient encounter is the meeting of a non-professional and a medical professional in a hospital where the patient is "admitted" and stays overnight or for several days, weeks or even months.
- An unknown encounter if the meeting is neither an ambulant nor an inpatient encounter.

During an encounter a set of optional certificates could be handed over to the patient (e.g. sick certificate, certificate of disability, letter of confinement etc.).

1.9 Observation

Observation is the process of filtering sensory information through the thought process. Input is received via hearing, sight, smell, taste, or touch and then analyzed through either rational or irrational thought. In the medical context, an observation includes e.g. symptoms, measurements or health risks. One or several observations are the prerequisite to draw a conclusion such as deriving a diagnosis from a set of symptoms and measured values.

Several specializations are derived from the abstract business object Observation:

- A diagnosis is either the process of identifying a disease by its signs, symptoms and results of various diagnostic procedures or as well the conclusion reached through that process. In the context of eHF diagnosis usually means the result of the process rather than the process itself.
- An allergy is a special kind of diagnosis that represents an immune malfunction whereby a person is hypersensitive to typically non-immunogenic substances.
- A health risk or risk factor is an increased risk of disease or infection, e.g. a high blood pressure, a high cholesterol value or smoking cigarettes are health risks that increase the risk of coming down with heart disease.
- A simple observation represents a measurement. This abstract class has two specializations called Quantitative Observation (containing numeric value and optional unit) and Nominal Observation (containing coded value from defined code sets). For quantitative observations units are defined as UCUM codes (the Unified Code for Units of Measure [UCUM] is a code system intended to include *all* units of measures being contemporarily used in international science, engineering, and business. The purpose is to facilitate unambiguous electronic communication of quantities together with their units.).

1.10 Substance Administration

Substance administration includes the documentation of dispensed or planned medications or vaccinations. The following two specializations of this abstract class are derived from this abstract business object:

- A medication is a licensed drug taken to cure or reduce symptoms of an illness or medical condition
- A vaccination contains the details about one or more given vaccination types (e.g. tetanus, diphtheria) and also known adverse reactions (e.g. fever, skin rash).

1.11 Expert Entry/Expert Entry

- For medical data the functional role of the author is regarded as being of relevance: If such an object was created by e.g. a physician it must not be updated by anyone else than the original creator ("expert rule").

A source indicator is related to a author and indicates how good he could estimate the correctness of data he just entered. For example, a doctor might be regarded as "Medical Expert" which means that we expect high quality data from him. However, a non-professional may misinterpret some medical information and therefore produce input of lower quality.

Each product integrating ehf-record can define how a so-called *qualification role* for each user is derived. Based on the qualification role of the user who entered or changed data this data entry is interpreted as an expert entry (e.g. QR = professional) or not (e.g. QR <> professional).

1.12 PolicyOrProgram

PolicyOrProgram contains the details for an insurance relationship. This could be an insurance policy or an insurance program.

1.13 Covered Person

A covered person is an individual who is covered by an insurance policy. This person could be the policy holder itself but also family members of the policy holder.

2 Web Service Document Overview

2.1 Usage Notes:

The transfer objects are described in sub modules record-admin and record-medical. The services are called by the record module which interacts as façade by forwarding the service calls to the sub modules record-admin and record-medical

2.2 Most important methods:

The Web service interface of the eHF record allows you to search for records by different criteria like scope or user Id. Further you can create, update and delete record objects like diagnoses, medications, encounters, emergency data sets and observations.

3 Main Method Parameters

3.1 ehf-record-admin

Parameter	Description
Impl:RecordXto	
Impl:RecordInfoXto	
Impl:AbstractPersonXto	
Impl:EmergencyContactXto	
Impl:OrganizationXto	
Impl:ContractXto	
Impl:SubjectXto	
Impl:ContactPartyXto	
Impl:ContactAddressXto	
Impl:ContactTelecomXto	
Impl:HealthCareProviderXto	
Impl:AdministrativeContactXto	

3.1.1 Impl:RecordXto

Constraints:

```

not self.familyDoctor.oclIsUndefined() implies
self.familyDoctor.primaryContact=true && not
self.primaryPharmacy.oclIsUndefined() implies
self.primaryPharmacy.primaryContact=true &&
self.healthCareProviders->select(p|p.primaryContact=true)-
>size() = 0 && self.emergencyContacts->size() > 0 implies
self.emergencyContacts->select(e|e.primaryContact=true)-
>size() = 1

```

Attribute	Description	Type	Range
-----------	-------------	------	-------

subject	Represents the subject of the record. Each piece of information within the record is strongly related to this person.	impl:SubjectXto	
primary-Pharmacy	The primary pharmacy is regarded as the main pharmacy of the record subject.	impl:HealthCare-ProviderXto	
health-Care-Providers	A HealthCareProvider is an organization or person who delivers health care professionally.	impl:ArrayOfHealth-Care-ProviderXto	
family-Doctor	Represents the medical professional who is mainly responsible for the general medical treatment of the record subject.	impl:HealthCare-ProviderXto	
emergencyContacts	Contains emergency contact information (who should be contacted in the case of an emergency).	impl:ArrayOfEmergencyContactXto	

3.1.2 Impl:RecordInfoXto

Attribute	Description	Type	Range
Scope	Specifies the scope this record belongs to.	xsd:String	
givenName	Specifies the given name of the record subject.	xsd:String	
family-Name	Specifies the family name of the record subject.	xsd:String	
academic-Title	Specifies the academic title of the record subject.	xsd:String	
middle-Name	Specifies the middle name of the record subject.	xsd:String	

subjected	Specifies the ID of the subject of the record. Each piece of information within the record is strongly related to this person.	xsd:String	
birth-Place	Specifies the place the record subject was born.	xsd:String	
birthDate	Specifies the birth date of the record subject.	impl:DateXto	
Gender	Specifies the gender of the record subject.	impl:CodeXto	
Address	Specifies addresses of the record subject.	impl:AddressXto	

3.1.3 Impl:AbstractPersonXto

The *AbstractPersonXto* extends the *ContactPartyXto*.

Attribute	Description	Type	Range
administrativeGenderCode	Specifies the gender of a person.	impl:CodeXto	code system: EXT-GEN-PERSON-GENDER
birthTime	Specifies the birth date of a person.	impl:DateXto	
birth-Place	Specifies the place where a person was born.	xsd:String	
marital-Status-Code	Specifies whether a person is married or divorced etc.	impl:CodeXto	code system: EXT-GEN-PERSON-MARITAL-STATUS
deceased-Indicator	Specifies whether a person is still alive or already dead.	xsd:boolean	default value: false
deceased-Time	Specifies the time a person has died.	impl:DateXto	

organDonorIndicator	Specifies whether a person is willing to donate organs in case of a deadly accident. *	xsd:boolean	
---------------------	--	-------------	--

3.1.4 Impl:EmergencyContactXto

Constraints:

```
self.organization.oclIsUndefined() && self.telecom->size() > 0
```

The *EmergencyContactXto* extends the *AdministrativeContactXto*.

Attribute	Description	Type	Range
relationship	Relationship of an EmergencyContact (e.g. mother, aunt, friend etc.).	impl:CodeXto	code system: C-CONTACT-PERS-REL-EMERGENCY

3.1.5 Impl:OrganizationXto

Constraints:

```
self.organizationTelecoms->size() > 0
```

Attribute	Description	Type	Range
name	Specifies the name of the organization.	xsd:String	
Description	Contains additional textual information related to the organisation.	xsd:String	maximal length: 1024
organizationTelecoms	Specifies telecommunication information about the organization.	impl:ArrayOfContactTelecomXto	
organizationAddresses	Specifies address information about the organization.	impl:ArrayOfContactAddressXto	

type	The type of the organization (eg. Hospital, Pharmacy etc.)	impl:CodeXto	code category: C-ORGANIZATION-TYPE
contact	Specifies naming, address and telecommunication information for a contact person at the organization.	impl:ContactXto	

3.1.6 Impl:ContactXto

Constraints;

```
self.telecom->size() > 0
```

The *EmergencyContactXto* extends the *AdministrativeContactXto*.

Attribute	Description	Type	Range
externalIds	Specifies custom/country specific identifiers for the contact (e.g.social security number).	impl:InstanceIdentifierXto	

3.1.7 Impl:SubjectXto

Constraints:

```
self.telecom->size() > 0 implies self.telecom->select(c|c.primaryContact = true)->size() = 1 && self.organization.oclIsUndefined()
```

The *SubjectXto* extends the *AbstractPersonXto* by following attributes:

Attribute	Description	Type	Range
userId	Specifies the GUID from the eHF Usermgnt	xsd:String	Unique mandatory
externalIDs	Specifies additional external identifiers, e.g. patient Id from a hospital information system or social security number.	impl:ArrayOfInstanceIdentifierXto	

3.1.8 Impl:ContactPartyXto

Attribute	Description	Type	Range
academic-Title	Specifies the academic title of a person.	xsd:String	
confidentiality-Code	Specifies the confidentiality of a contact.	impl:CodeXto	code system: EXT-GEN-ACT-CONFIDENTIALITY
code	Specifies the type of contact.	impl:CodeXto	code category: C-CONTACT-ROLE
family-Name	Specifies the family name of a person.	xsd:String	
givenName	Specifies the given name of a person.	xsd:String	
birthName	Specifies the birth name of a person.	xsd:String	
prefix	The prefix is at the beginning of the person's full name and provides additional information like academic, social or professional name prefixes..	xsd:String	
suffix	The suffix follows a person's full name and provides additional information like academic, social or professional name suffixes.	xsd:String	
middle-Name	Specifies the middle name of a person.	xsd:String	
telecom	Specifies information about different types of telecommunication like telephone, e-mail and fax.	impl:ArrayOfContactTelecomXto	

address	Specifies address information.	impl:ArrayOfContactAddressXto	
organization	Specifies address, naming and telecommunication information about an organization.	impl:OrganizationXto	

3.1.9 Impl:ContactAddressXto

Attribute	Description	Type	Range
country	Specifies the country of an address.	impl:CodeXto	code system: EXT-GEN-ADDRESS-COUNTRY
state	Specifies the state or region.	impl:CodeXto	code category: C-ADDRESS-REGION
postalCode	Specifies the postal code of the city.	xsd:String	
street	Specifies the street and house number.	xsd:String	
city	Specifies the city.	xsd:String	
useCode	Specifies the type of address (e.g. home or working place).	impl:CodeXto	code system: EXT-GEN-ADDRESS-USE default value: WP
zipCodeExtension	Specifies extensions for the postal code.	xsd:String	
line1	Contains general additional address information like floor or room number.	xsd:String	

line2	Contains general additional address information like floor or room number.	xsd:String	
corpus	Contains additional address information used for lacialization.	xsd:String	
flat	Specifies information about the apartment number etc.	xsd:String	

3.1.10 Impl:ContactTelecomXto

Attribute	Description	Type	Range
code	Specifies the technical type of a ContactTelecom like e.g. telephone, fax or e-mail.	impl:CodeXto	code category: C-TELECOM-CODE
primaryContact	Identifies the instance as primary telephone number or primary e-mail address for a person.	xsd:boolean	
value	Specifies the telephone or fax number or the e-mail address (in dependency from the technical type (code)).	xsd:String	mandatory
useCode	Specifies the type of telephone number or e-mail address (e.g. home or working place).	impl:CodeXto	code system: EXT-GEN-TELECOM-USE default value: WP

3.1.11 Impl:HealthCareProviderXto

Constraints:

not self.organization.oclIsUndefined()

The *HealthCareProviderXto* extends the *AdministrativeContactXto*.

Attribute	Description	Type	Range
provider-Group	Specifies the provider group of a health care provider (e.g. Physician, Pharmacy).	Impl:CodeXto	code system:C-PROVIDER-GROUP
speciality	Speciality of a Health Care Provider like Acupuncture or Allergology.	impl:CodeXto	code system:C-PROVIDER-SPECIALITY

3.1.12 Impl:AdministrativeContactXto

The *AdministrativeContactXto* extends the *ContactPartyXto* by following attribute:

Attribute	Description	Type	Range
isOrganization	True if the contact is an Organization.	xsd:boolean	
PrimaryContact	Identifies a contact as primary.	xsd:boolean	

3.2 ehf-record-medical

Parameter	Description
Impl:CustomObjectXto	.
Impl:CustomActXto	
Impl:DiagnosisXto	
Impl:AllergyXto	
Impl:ManufacturedProductXto	
Impl:EncounterXto	
Impl:ExternalReferenceXto	

Impl:ActXto	
Impl:PhysicalQuantityXto	
Impl:SubstanceAdministrationXto	
Impl:MedicationXto	
Impl:VaccinationXto	
Impl:IntakeInstructionXto	
Impl:HealthRiskXto	
Impl:SimpleObservationXto	
Impl:DiscontinuedInformationXto	
Impl:ObservationXto	
Impl:QuantitativeObservationXto	
Impl:ParticipantXto	

3.2.1 Impl:CustomObjectXto

Attribute	Description	Type	Range
code	The code of the custom object.	impl:CodeXto	code system: ICW-BAS-CUSTOM-OBJECT-GEN mandatory

3.2.2 Impl:CustomActXto

Attribute	Description	Type	Range
code	Generic code of the custom Act.	impl:CodeXto	code system: ICW-BAS-CUSTOM-OBJECT-ACT mandatory

3.2.3 Impl:DiagnosisXto

Constraints:

```
self.effectiveTime.beginDate.canonicDate <= ${currentTime}
```

The *DiagnosisXto* extends the *ObservationXto* by the following attributes:

Attribute	Description	Type	Range
target-SiteCode	Specifies details about the anatomical side or system that is affected by the diagnosis.	impl:CodeXto	code category: C-DIAGNOSIS-TARGET-SIDE
qualifierCode	Defines the certainty of a diagnosis like definite diagnosis or suspected.	impl:CodeXto	code category: C-DIAGNOSIS-QUALIFIER default value: G
code	Classifies the diagnosis like admission diagnosis or intermediate diagnosis.	impl:CodeXto	code category: C-DIAGNOSIS-CODE
value	Contains the actual diagnose (in a coded way).	impl:AnnotatedCodeXto	code category: C-DIAGNOSIS-VALUE-CODE mandatory
longTerm	Specifies whether this diagnosis is a long term diagnosis or not	xsd:boolean	

3.2.4 Impl:MedicalProcedureXto

Constraints:

```
not self.effectiveTime.endDate.isoDate.isUndefined() implies self.effectiveTime.beginDate.canonicDate <= self.effectiveTime.endDate.canonicDate
```

The *MedicalProcedureXto* extends the *ProcedureXto* by the following attributes:

Attribute	Description	Type	Range
targetSite-Code	Specifies details about the anatomical side or system that is affected by the <i>MedicalProcedure</i> .	impl:CodeXto	code category: C-PROCEDURE-TARGET-SIDE
Approach-SiteCode	Specifies details about the anatomical side or system from where the target site was approached in the <i>MedicalProcedure</i> .	impl:CodeXto	code category: C-PROCEDURE-APPROACH-SITE
code	Classifies the diagnosis like admission diagnosis or intermediate diagnosis.	impl:CodeXto	code category: C-PROCEDURE-VALUE-CODE
findings	Specifies the list of findings	impl:ArrayOf_tns1_FindingXto	

3.2.5 Impl:ProcedureXto

The *ProcedureXto* extends the *ActXto* by following attribute:

Attribute	Description	Type	Range
description	The description for the procedure	xsd:String	

3.2.6 Impl:FindingXto

Attribute	Description	Type	Range
description	Specifies additional information about the finding.	xsd:String	

3.2.7 Impl:AllergyXto

Constraints:

```
self.effectiveTime.beginDate.canonicDate <= ${currentTime}
```

The *AllergyXto* extends the *ObservationXto* by the following attributes:

Attribute	Description	Type	Range
value	Contains the actual type of an allergy (in a coded way).	impl:Annotate dCodeXto	code system: ICW-GEN-ALLERGY-CODE mandatory
qualifierCode	Defines the diagnosis certainty of an allergy.	impl:CodeXto	code category: C-DIAGNOSIS-QUALIFIER default value: G
adverseReaction	Description of the adverse reaction caused by an allergy.	xsd:String	
severity	Contains the severity of the allergy reaction (e.g. mild, severe and life threatening).	impl:CodeXto	code category: EXT-GEN-ALLERGY-SEVERITY

3.2.8 Impl:ManufacturedProductXto

Constraints:

```
self.code.key.oclIsUndefined() and self.code.value.size()=0  
implies self.name.size()>0
```

Attribute	Description	Type	Range
-----------	-------------	------	-------

name	The name of the medication or vaccination.	xsd:String	
code	Contains the code of the medication or vaccination.	impl:AnnotatedCodeXto	code category: C-MEDICATION-PRODUCT
manufacturerOr- organisation	The manufacturer of the medication or vaccination.	xsd:String	
lotNumberText	The lot number of the medication or vaccination.	Xsd:String	
supply- Code	The package size of a medication product, e.g. small or large package.	impl:CodeXto	code category: C-MEDICATION-PACKAGE-SIZE
administration- UnitCode	The pharmaceutical form for a medication product, e.g. salve or tablets.	impl:CodeXto	code category: C-MED-PRODUCT-FORM
drugCategory	The category for a medication product, e.g. if the medication is only available on prescription.	impl:CodeXto	code category: C-MED-PRODUCT-CATEGORY
quantity	The quantity for the medication product(numeric value + unit).	impl:PhysicalQuantityXto	

3.2.9 Impl:EncounterXto

Constraints:

```
not self.code.key.oclIsUndefined() && self.code.key="AMB" implies self.effectiveTime.endDate.isoDate.oclIsUndefined()
```

The *EncounterXto* extends the *ActXto* by following attributes:

Attribute	Description	Type	Range
reasonCode	Specifies the reason for the encounter.	impl:CodeXto	code system: EXT-GEN-ENCOUNTER-REASON
code	Contains information about the type of encounter (e.g. inpatient or ambulatory).	impl:CodeXto	code system: EXT-GEN-ENCOUNTER-CODE mandatory
priorityCode	Specifies the priority of the encounter (e.g. routine or emergency).	impl:CodeXto	code system: EXT-GEN-ENCOUNTER-PRIORITY
type	Specifies information about the type of the medical appointment	impl:CodeXto	code system: ICW-GEN-ENCOUNTER-CATEGORY
certificates	Specifies a list of certificates, (e.g. sick certificate)	impl:ArrayOfCertificateXto	

description	Specifies additional information about the type of the medical appointment	xsd:String	
-------------	--	------------	--

3.2.10 Impl:ExternalReferenceXto

Attribute	Description	Type	Range
sourceModule	Defines the module of the referenced object, e.g. ehf-document.	impl:CodeXto	code category: C-SYSTEM-MODULE mandatory
referenceId	Concrete instance by ID.	xsd:String	mandatory
classifier	Type of object, e.g. medication in ehf-record or document in ehf-document.	impl:CodeXto	code category: C-SYSTEM-MODULE-CLASSIFIER mandatory

3.2.11 Impl:ActXto

Constraints:

```
not self.effectiveTime.beginDate.isoDate.oclIsUndefined()
```

Attribute	Description	Type	Range
effectiveTime	Specifies the begin and the optional end time of an Act.	impl:TimeIntervalXto	Mandatory
statusCode	Specifies the state of the Act (e.g. completed: act has terminated normally after all of its constituents have been performed).	impl:CodeXto	code system: EXT-GEN-ACT-STATUS
text	Contains additional textual information associated with the Act.	xsd:String	maximal length: 1024

sourceIndicator-Code	Is related to a user and indicates how good he could estimate the correctness of data he just entered. Needed as basis for the Expert Concept.	impl:CodeXto	code category: C-ACT-SOURCE-INDICATOR
confidentiality-Code	Controls the disclosure of information about an Act.	impl:CodeXto	code system: EXT-GEN-ACT-CONFIDENTIALITY default value: N
performer	The person who carries out a particular Act.	impl:ParticipantXto	
dataEnterer	The party who actually enters data associated with an act into the application.	impl:ParticipantXto	
author	Represents the humans and/or machines that authored the statements	impl:ParticipantXto	

3.2.12 Impl:PhysicalQuantityXto

Constraints:

```
not self.value.ocIsUndefined() && not self.unit.key.ocIsUndefined()
```

Attribute	Description	Type	Range
value	The measured value.	impl:Double	Mandatory

unit	The unit of the measured value in UCUM.	impl:UnitCodeXto	code category: C-PQ-UNIT-CODE>
------	---	------------------	--------------------------------

3.2.13 Impl:SubstanceAdministrationXto

The SubstanceAdministrationXto extends the ActXto.

Attribute	Description	Type	Range
product	Identifies the product by providing a unique code.	impl:ManufacturedProductXto	Mandatory
unit	The unit of the measured value in UCUM.	impl:UnitCodeXto	code category: C-PQ-UNIT-CODE>
doseQuantity	Represents the dose quantity (numeric value + unit).	impl:PhysicalQuantityXto	

3.2.14 Impl:MedicationXto

The *MedicationXto* extends the SubstanceAdministrationXto by the following attributes:

Attribute	Description	Type	Range
instruction	Specifies additional information about how and when to take a medication.	impl:IntakeInstructionXto	
intakeStatusCode	Current status of medication intake like planned or acute.	impl:CodeXto	code system: ICW-GEN-MEDICATION-STATUS

code	Specifies whether the medication was prescribed or not.	impl:CodeXto	code category: C-MEDICATION-CODE
discontinuedInformation	Contains additional information about a canceled medication.	impl:DiscontinuedInformationXto	
longTerm	Specifies whether this medication is a long term medication or not	xsd:boolean	
routeCode	Route code for a medication, e.g. infusion or inhalation.	impl:CodeXto	code category: C-MEDICATION-ROUTE-ADM
supplyInfo	Additional prescription information to a medication.	impl:SupplyInformationXto	
supplyStatus	The status of the belonging supply information, e.g. prescribed, received and taken	impl:CodeXto	code category: ICW-GEN-MEDICATION-SUPPLY-STATUS

3.2.15 Impl:IntakeInstructionXto

Attribute	Description	Type	Range
description	Contains information about the intake instruction of a medication.	xsd:String	maximal length: 1024

3.2.16 Impl:HealthRiskXto

Constraints:

```
self.effectiveTime.beginDate.canonicDate <= ${currentTime}
```

The *RiskXto* extends the *ObservationXto* by following attribute:

Attribute	Description	Type	Range
value	Contains the actual risk.	impl:CodeXto	code category: C-HEALTH-RISK-CODE mandatory

3.2.17 Impl:SimpleObservationXto

Constraints:

```
not self.code.key.oclIsUndefined() &&
self.effectiveTime.beginDate.canonicDate <= ${currentTime}
```

The *SimpleObservationXto* extends the *ObservationXto* by following attributes:

Attribute	Description	Type	Range
code	Represents the type of an observation/measurement (e.g. weight or blood pressure).	impl:CodeXto	code category: C-OBSERVATION-CODE mandatory
target-SiteCode	Specifies details about the anatomical site or system that is the focus of the observation.	impl:CodeXto	code category: C-DIAGNOSIS-TARGET-SIDE

interpretation-Code	Interpretation of the observation (abnormal value, normal value).	impl:CodeXto	code system: EXT-GEN-OBSERVATION-INTERPRETATION
---------------------	---	--------------	---

3.2.18 Impl:DiscontinuedInformationXto

Attribute	Description	Type	Range
reason	Specifies the reason why the medication was canceled.	xsd:String	maximal length: 1024
discontinueDate	Defines the date when the medication was canceled.	impl:DateXto	
dataEnterer	Identifies the party who entered additional discontinue information (may be different from the data enterer of the corresponding medication).	impl:ParticipantXto	

3.2.19 Impl:ObservationXto

The *ObservationXto* extends the *ActXto* by following attribute:

Attribute	Description	Type	Range
negationIndicator	The negationIndicator is valued "true" when the observed observation is "not present".	xsd:boolean	

3.2.20 Impl:QuantitativeObservationXto

Constraints:

```
not self.timingEventCode.key.oclIsUndefined() implies
self.code.key="bloodsugar"
```

The *QuantitativeObservationXto* extends the *SimpleObservationXto* by following attributes:

Attribute	Description	Type	Range
value	Represents the result of an observation as physical quantity (numeric value + optional unit).	impl:PhysicalQuantityXto	
timingEventCode	Specifies the time a QuantitativeObservation was executed relative to special events (e.g. before breakfast or after dinner).	impl:CodeXto	code category: C-TIMING-EVENT-MEAL

3.2.21 Impl: QuantitativeObservationDataXto

Constraints: None

Attribute	Description	Type	Range
code	Represents the type of an observation/measurement (e.g. weight or blood pressure).	impl:CodeXto	
timingEventCode	Specifies the time a QuantitativeObservation was executed relative to special events (e.g. before breakfast or after dinner).	impl:CodeXto	
value	Represents the result of an observation as physical quantity (numeric value + optional unit).	impl:PhysicalQuantityXto	
observationContext	A free-text value used to group related observations.	xsd:String	maximal length: 255
effectiveTime	Contains the begin date and end date of the policy, i.e. the time interval in that the insurance is "active".	impl:TimeIntervalXto	

3.2.22 Impl:ParticipantXto

Attribute	Description	Type	Range
userId	The GUID of the user in the eHF usermgnt.	xsd:String	
person	The person data of the participant.	impl:PersonXto	
address	Contains address information.	impl:AddressXto	
device	Contains information of the device like blood pressure measuring device.	impl:DeviceXto	
telecom	Some extra properties for telecom information:tel, fax, url, mobile, email	Impl:Telecom	
specialities	contains a speciality that the participant can be.	impl:Speciality	category name: C-PROVIDER-SPECIALITY
code	Specifies the type of participant (e.g. data enterer or performer).	impl:CodeXto	code system: EXT-GEN-ACT-PARTICIPANT-ROLE

3.2.23 Impl:PolicyOrProgramXto

Constraints:

```
not self.effectiveTime.beginDate.isoDate.oclIsUndefined() &&
self.policyHolder.organization.oclIsUndefined() &&
```

```

not self.insuranceCompany.name.oclIsUndefined() &&

self.insuranceCompany.organizationTelecoms-
>select(c|c.code.key = "TEL")->size()<=1 &&

self.insuranceCompany.organizationTelecoms-
>select(c|c.code.key = "FAX")->size()<=1 &&

self.insuranceCompany.organizationTelecoms-
>select(c|c.code.key = "EMAIL")->size()<=1 &&

self.insuranceCompany.organizationTelecoms-
>select(c|c.code.key = "URL")->size()<=1 &&

self.insuranceCompany.organizationTelecoms-
>select(c|c.code.key = "PAG" or c.code.key = "TELMO")-
>isEmpty() && self.insuranceCompany.organizationAddresses-
>size()<=1 &&

self.code.key = 'PUBLICPOL' implies
self.insuranceCompany.externalIDs->size()>0 &&

not self.insuranceCompany.contact.oclIsUndefined() implies
self.insuranceCompany.contact.organization.oclIsUndefined()
and

self.insuranceCompany.contact.telecom->select(c|c.code.key =
"TEL")->size()<=1 and

self.insuranceCompany.contact.telecom->select(c|c.code.key =
"FAX")->size()<=1 and

self.insuranceCompany.contact.telecom->select(c|c.code.key =
"EMAIL")->size()<=1 and

self.insuranceCompany.contact.telecom->select(c|c.code.key =
"TELMO")->size()<=1 and

self.insuranceCompany.contact.telecom->select(c|c.code.key =
"PAG" or c.code.key = "URL")->isEmpty() and
self.insuranceCompany.contact.address->size()<=1

```

Attribute	Description	Type	Range
-----------	-------------	------	-------

code	Specifies the type of the policy (e.g. a private dental insurance).	impl:CodeXto	code category: C-INSURANCE-POLICY
covered-Person	This is the person who is covered by the policy or program (e.g. policy holder itself or the family member of the policy holder).	impl:CoveredPersonXto	
effectiveTime	Contains the begin date and end date of the policy, i.e. the time interval in that the insurance is "active".	impl:TimeIntervalXto	
insurance-Company	Specifies the insurance company (including contact information).	impl:OrganizationXto	
policy-Holder	Specifies the policy holder. This could be only a person but not an organization.	impl:ContactXto	
statusCode	Contains the status of the insurance relationship (e.g. "active" for valid insurance).	impl:CodeXto	code system: EXT-GEN-ACT-STATUS
externalIDs	Specifies custom/country specific identifiers for the policy.	impl:InstanceIdentifierXto	

The following table lists some OIDs which could be used as the root string of the `impl:InstanceIdentifierXto` in the `impl:OrganizationXto`:

OID	Name	Description
2.16.840.1.113883.3.37.1.5.3	ICW-II-GEN-INSURANCE-DE	German ID for insurance company (ICW specific)
1.2.276.0.76.4.5	root OID for German insurance company numbers (might be used in professional systems)	

3.2.24 Impl:CoveredPersonXto

Constraints:

```
self.organization.oclIsUndefined() &&
self.externalIDs->size()>0 &&
self.address->size()<=1
```

The *CoveredPersonXto* extends the *AbstractPersonXto* by following attribute:

Attribute	Description	Type	Range
coverage-Code	Specifies the type of the coverage like member, family member or retired person.	impl:CodeXto	code category: C-INSURANCE-COVERED-PARTY
externalIDs	Specifies custom/country specific identifiers for the covered person (e.g. insurant number).	impl:InstanceIdentifierXto	

The following table lists some OIDs which could be used as the root string of the *impl:InstanceIdentifierXto*:

OID	Name	Description
2.16.840.1.113883.3.37.1.4.3	ICW-II-GEN-PERSON-INSURANT-DE	German insurant number
2.16.840.1.113883.3.37.1.6.1	ICW-II-GEN-POLICY-PLAN-US	US plan number
2.16.840.1.113883.3.37.1.6.2	ICW-II-GEN-POLICY-GROUP-US	US group number
2.16.840.1.113883.3.37.1.6.3	ICW-II-GEN-POLICY-SUBSCRIBER-US	US subscriber ID
1.2.276.0.76.4.5.[9 digits]	insurance company dependent OID for insurant number (might be used in professional systems)	

3.2.25 Impl:VaccinationXto

Constraints:

```
self.vaccinationTypes->size() > 0 implies
```

```
self.vaccinationTypes->select(code.key<>"other")-
->isUnique(code.key)
```

```
and self.vaccinationTypes->select(code.key=="UNK")
->isUnique(description)
```

Attribute	Description	Type	Range
adverseReactions	Specifies a list of the adverse reactions like fever or skin rash.	impl:ArrayOf_tns1_AdverseReactionXto	
vaccinationTypes	Specifies a list of adverse reactions like fever or skin rash.	impl:ArrayOf_tns1_VaccinationTypeXto	
routeCode	Route code for a vaccination, e.g. injection or swallow.	impl:CodeXto	code category: C-VACCINATION-ROUTE-ADM
classifierCode	Specifies the classifier for a vaccination, e.g. booster or initial immunization.	Impl:CodeXto	Code category: C-VACCINATION-CLASSIFIER

3.2.26 Impl:VaccinationTypeXto

Attribute	Description	Type	Range
-----------	-------------	------	-------

code	Specifies the type of the vaccination like tetanus or diphtheria.	impl:CodeXto	code category: C-VACCINATION-CODE
description	Specifies additional information about the vaccination type.	xsd:String	

3.2.27 Impl: AdverseReactionXto

Attribute	Description	Type	Range
Description	Specifies additional information about the adverse reaction.	xsd:String	

3.2.28 Impl:CertificateXto

Attribute	Description	Type	Range
typeCode	Specifies the type of the certificate like sick certificate.	impl:CodeXto	code category: C-ENCOUNTER-CERTIFICATE
description	Specifies additional information about the certificate.	xsd:String	
validityTime	The time interval for which the certificate is valid.	impl:TimeIntervalXto	

3.2.29 Impl: SupplyInformationXto

Attribute	Description	Type	Range
-----------	-------------	------	-------

prescriptionID	Specifies the identifier of the prescription.	impl:InstanceIdentifierXto	
prescriptionDate	Specifies the prescription date.	impl:DateXto	
receiptDate	Specifies the receipt date.	impl:DateXto	

4 Method Descriptions

4.1 findRecords

4.1.1 Description:

Returns all records the current user has access to. This list is sorted alphabetically with the users own record at the first position (if the user has an own record).

4.1.2 Arguments:

None

4.1.3 Returns:

Description	Data Type
an array of RecordXto objects. The list is empty in case no records are found.	<code>impl:ArrayOfRecordXto</code>

4.2 findAccessibleRecords

4.2.1 Description:

Returns all records the current user has access to. The RecordInfo contains the most important information from a Record. The RecordInfo is light weighted compared to a full Record, as such it is used for the fast searching of records. This list is sorted alphabetically with the users own record at the first position (if the user has an own record).

4.2.2 Arguments:

None

4.2.3 Returns:

Description	Data Type
array of accessible RecordInfoXto objects. The list is empty in case no records are found.	impl:ArrayOfRecordInfoXto

4.3 findRecordByScope

4.3.1 Description:

Loads the record based on the scope.

4.3.2 Usage Note:

The scope to identify the record, must not be null.

4.3.3 Arguments:

Parameter	Description	Data Type	Usage
Scope	the scope of the record. The scope is an identifier to which all record objects are assigned.	xsd:String	R

4.3.4 Returns:

Description	Data Type
the record with all associated data for the scope if exists.	impl:RecordXto

4.4 findRecordByUserId

4.4.1 Description:

Finds the record for a given userId.

4.4.2 Usage Note:

This method can be used when the scope of a user is not available. Retrieving the record by scope is preferable.

4.4.3 Arguments:

Parameter	Description	Data Type	Usage
userId	id of the user (GUID of the user-management)	xsd:String	R

4.4.4 Returns:

Description	Data Type
a record with a user defined by userId or null if no such user exists.	impl:RecordXto

4.5 uploadEmergencyDataSet

4.5.1 Description:

Creates a new (version of the) emergency data set (eds) for a given scope.

4.5.2 Usage Note:

Uploading a new version of the emergency data set replaces the existing version. It is not possible to define two different emergency data sets for one scope.

4.5.3 Arguments:

Parameter	Description	Data Type	Usage
scope	for which a new version of the emergency data set should be uploaded, must not be null.	xsd:String	R
dh	data-handler with the document representing the emergency data set inside, must not be null	impl:DataHandler	R

4.5.4 Returns:

Description	Data Type
the id of the created emergency data set entry. This is a new generated ID for a new version.	xsd:String

4.6 downloadEmergencyDataSet

4.6.1 Description:

Downloads the most current version of the emergency data set (eds) for a scope.

4.6.2 Usage Note:

It's not possible to download previous versions of the emergency data set..

4.6.3 Arguments:

Parameter	Description	Data Type	Usage
scope	for downloading the emergency data set, must not be null.	xsd:String	R

4.6.4 Returns:

Description	Data Type
a DataHandler object with the emergency data set document inside if existing, otherwise returns null.	impl:DataHandler

4.7 deleteEmergencyDataSet

4.7.1 Description:

Deletes all versions of an existing emergency data set (eds) for a scope.

4.7.2 Usage Note:

This method deletes all versions of an existing emergency data set. It's not possible to delete only a specific version.

4.7.3 Arguments:

Parameter	Description	Data Type	Usage
scope	for deleting the emergency data set, must not be null.	xsd:String	R

4.7.4 Returns:

None

4.8 create

4.8.1 Description:

Creates transfer objects.

In this special characteristic of this method, it is only allowed to create medical objects, which are part of the medical record domain model.

4.8.2 Usage notes:

- Before storing the transfer object, all constraints are validated. If one of the constraints is violated, the method call will fail with an appropriate error message.
- This method can be used from device managers to upload observations coming from devices (e.g. blood pressure cuff). This can only be done if the user performing the method is in the role DEV (for device). If this is the case, the observation can be enriched with additional information about the device which measured the observation. Therefore, the observation's `dataEnterer` field provides an additional `device` field. This device object allows to specify the device ID (e.g. serial number) in the field `deviceId`. Beside this information, the `deviceTypeCode` field of the device contains coded information about the type of device. The field `value` can be used to define an additional display name for the device that is used at the user interface.

4.8.3 Arguments:

Parameter	Description	Data Type	Usage
<code>transferObjects</code>	list of transfer objects.	<code>impl:TransferObject</code>	R

4.8.4 Returns:

Description	Data Type
A list of created transfer objects.	<code>impl:TransferObject</code>

4.9 loadByScope

4.9.1 Description:

Loads domain objects for a given scope.

4.9.2 Arguments:

Parameter	Description	Data Type	Usage
scope	the scope of the record	xsd:string	R
transferObjectClass	the concrete transfer object	impl:TransferObject	R

4.9.3 Returns:

Description	Data Type
A list of loaded transfer objects.	impl:TransferObject

4.10 loadByID

4.10.1 Description:

Loads a domain object for a given id

4.10.2 Arguments:

Parameter	Description	Data Type	Usage
id	the id of the transfer object	xsd:string	R
transferObjectClass	the concrete transfer object	impl:TransferObject	R

4.10.3 Returns:

Description	Data Type
A list of loaded transfer objects.	impl:TransferObject

4.11 update

4.11.1 Description:

Updates domain objects.

4.11.2 Arguments:

Parameter	Description	Data Type	Usage
transferObjects	List of transfer objects.	impl:TransferObject	

4.11.3 Returns:

None

4.12 delete

4.12.1 Description:

Deletes domain objects.

4.12.2 Arguments:

Parameter	Description	Data Type	Usage
transferObjects	List of transfer objects.	impl:TransferObject	

4.12.3 Returns:

None

4.13 loadEncountersByCode

4.13.1 Description:

Loads all encounters for a given code (e.g. ambulatory or in-patient) and scope.

4.13.2 Arguments:

Parameter	Description	Data Type	Usage
code	the type of that encounters which should be loaded, must not be null.	impl:CodeXto	R
scope	the scope for loading, must not be null.	xsd:String	R

4.13.3 Returns:

Description	Data Type
an array of EncounterXto objects, if nothing was found the method returns null.	impl:ArrayOfEncounterXto

4.14 createExclusionDiagnosis

4.14.1 Description:

Creates an exclusion diagnosis to an existing diagnosis. An exclusion diagnosis is a new diagnosis that negates the existing one with the same certainty.

4.14.2 Arguments:

Parameter	Description	Data Type	Usage
diagnosisId	existing diagnosis id, must not be null	xsd:String	R
exclusionDate	date when the exclusion diagnosis was diagnosed, must not be null.	impl:DateXto	R

4.14.3 Returns:

Description	Data Type
the new created ExclusionDiagnosisXto for the existing diagnosis.	impl:DiagnosisXto

4.15 loadCurrentDiagnosesByScope

4.15.1 Description:

Loads all diagnoses that are currently “active” for an given scope. A diagnosis is regarded as “active” if there is no end date in the past documented for it.

4.15.2 Usage Note:

When the exclusion date is in the past, then the respective diagnosis is not returned.

4.15.3 Arguments:

Parameter	Description	Data Type	Usage
currentDiagnosesScope	the sope for loading, must not be null	xsd:String	R

4.15.4 Returns:

Description	Data Type
an array of DiagnosisXto objects from the corresponding scope, if nothing found the method returns null.	impl:ArrayOfDiagnosisXto

4.16 createExclusionAllergy

4.16.1 Description:

Creates an exclusion allergy to an existing allergy with the given allergy Id and the given date. . An exclusion allergy is a new allergy that negates the existing one with the same certainty.

4.16.2 Arguments:

Parameter	Description	Data Type	Usage
allergyId	existing allergy id, must not be null	xsd:String	R
exclusionDate	date when the exclusion allergy was diagnosed,	impl:DateXto	R

4.16.3 Returns:

Description	Data Type
the new created exclusion AllergyXto for the existing allergy.	impl:AllergyXto

4.17 loadCurrentAllergiesByScope

4.17.1 Description:

Loads all allergies that are currently “active” for an given scope. An allergy is regarded as “active” if there is no end date in the past documented for it.

4.17.2 Usage Note:

When the exclusion date is in the past, then the respective allergy is not returned.

4.17.3 Arguments:

Parameter	Description	Data Type	Usage
currentAllergiesScope	the scope for loading, must not be null	xsd:String	R

4.17.4 Returns:

Description	Data Type
an array of AllergyXto objects to the corresponding scope, if nothing found the method returns null.	impl:ArrayOfAllergyXto

4.18 cancelMedication

4.18.1 Description:

Cancels an existing medication using the provided discontinued information. As a normal user you cannot delete a medication in the database created by an expert. So you can indicate the end of medication by using this method.

4.18.2 Usage notes:

As a prerequisite the medication has to exist in the database already.

4.18.3 Arguments:

Parameter	Description	Data Type	Usage
medicationId	existing medication id, must not be null	xsd:String	R

discontinuedInformationXto	this new information object contains the cancelation date and a textual description of the reason, must not be null	impl:DiscontinuedInformationXto	R
----------------------------	---	---------------------------------	---

4.18.4 Returns:

Description	Data Type
true, if the cancelation was successful, otherwise false.	xsd:boolean

4.19 loadCurrentMedicationsByScope

4.19.1 Description:

Loads all existing medications for a given scope.

4.19.2 Arguments:

Parameter	Description	Data Type	Usage
currentMedicationScope	the sope for loading, must not be null	xsd:String	R

4.19.3 Returns:

Description	Data Type
an array of MedicationXto objects to the corresponding scope, if nothing found the method returns null.	impl:ArrayOfMedicationXto

4.20 loadObservationViewsByScope

4.20.1 Description:

Returns a list of ObservationViewXto objects for a corresponding time interval, view type and scope.

4.20.2 Arguments:

Parameter	Description	Data Type	Usage
scope	the scope of the observations to be loaded, must not be null.	xsd:String	R
viewCode	CodeXto for the selection of view objects(now supported BMI and BPH), must not be null an Exception will be thrown, an empty list will return an empty array.	impl:ArrayOf CodeXto	R
interval	the time interval where the observations should be in, can be null.	impl:TimeIntervalXto	

4.20.3 Returns:

Description	Data Type
an array of ObservationViewXto (i.e. weight, height, bmi) for the given time interval, scope and code (supported codes are BMI, BPH and chol). If nothing found the array is null..	impl:ArrayOfObservationViewXto

4.21 loadQuantitativeObservationsByCode

4.21.1 Description:

Returns a list of ObservationViewXto objects for a corresponding time interval, scope and code sorted by the begin date of the observations.

4.21.2 Arguments:

Parameter	Description	Data Type	Usage
code	the code of the observations to be loaded, must not be null	impl:ArrayOfCodeXto	R
scope	the scope of the observations to be loaded, must not be null	xsd:String	R
interval	the time interval where the observations should be in, must not be null	impl:TimeIntervalXto	R

4.21.3 Returns:

Description	Data Type
an array of QuantitativeObservationXto objects for the given time interval, scope and code, if nothing found the array is null.	impl:ArrayOfQuantitativeObservationXto

4.22 addObject

4.22.1 Description:

Adds an object.

4.22.2 Arguments:

Parameter	Description	Data Type	Usage
parentQualifier	The type of the parent object.	xsd:QName	R
parentenId	The if of the parent object.	xsd:string	R
childQualifier	The type of the child object.	xsd:QName	R

4.22.3 Returns:

Description	Data Type
A list of TransferObject's	impl:TransferObject

4.23 loadMetaData

4.23.1 Description:

Loads the meta data of an object.

4.23.2 Arguments:

Parameter	Description	Data Type	Usage
objectQualifier	The object from which the meta data should be loaded.	xsd:QName	R

4.23.3 Returns:

Description	Data Type
The meta data of the given object.	impl:ClassMetaData

4.24 removeObject

4.24.1 Description:

Removes a child object from a parent object. If the association is a composition, then the association is deleted as well as the association between child object and parent object. If the association is an aggregation, then only the association is deleted, but the child object still exist.

4.24.2 Arguments:

Parameter	Description	Data Type	Usage
parentQualifier	The type of the parent	xsd:QName	R
parentId	The id of the parent object	xsd:string	R
childQualifier	The type of the child	xsd:QName	R
childId	The id of the child object	xsd:string	R
associationName	The name of the association between parent ad child	xsd:string	R

4.24.3 Returns:

None

4.25 createAndAddObject

4.25.1 Description:

Creates a new object and adds it to a parent object.

4.25.2 Arguments:

Parameter	Description	Data Type	Usage
parentQualifier	The type of the parent	xsd:QName	R
parentId	The id of the parent object	xsd:string	R
childQualifier	The type of the child	xsd:QName	R
childObject	The child object which should be created	impl:TransferObject	R
associationName	The name of the association between parent ad child	xsd:string	R

4.25.3 Returns:

None

4.26 updateObjects

4.26.1 Description:

Updates objects.

4.26.2 Arguments:

Parameter	Description	Data Type	Usage
updateObjects	List of objects which should be updated	impl:TransferObject	R
cascade	If true, then update also child objects.	xsd:boolean	R

4.26.3 Returns:

None

4.27 linkObjects

4.27.1 Description:

Link objects.

4.27.2 Arguments:

Parameter	Description	Data Type	Usage
sourceQualifier	The type of the source object	xsd:QName	R
sourceId	The id of the source object	xsd:string	R

targetQualifier	The type of the target object	xsd:QName	R
targetId	The id of the target object	xsd:string	R
role	The role of the link, e.g. "document"	xsd:string	R

4.27.3 Returns:

None

4.28 unlinkObjects

4.28.1 Description:

Unlink objects.

4.28.2 Arguments:

Parameter	Description	Data Type	Usage
sourceQualifier	The type of the source object	xsd:QName	R
sourceId	The id of the source object	xsd:string	R
targetQualifier	The type of the target object	xsd:QName	R
targetId	The id of the target object	xsd:string	R
role	The role of the link, e.g. "document"	xsd:string	R

4.28.3 Returns:

None

4.29 loadLinkedObjects

4.29.1 Description:

Load linked objects by qualifiers.

4.29.2 Arguments:

Parameter	Description	Data Type	Usage
sourceQualifier	The type of the source object	xsd:QName	R
sourceId	The id of the source object	xsd:string	R
role	The role of the link, e.g. "document"	xsd:string	R

4.29.3 Returns:

Description	Data Type
A list of TransferObject's	impl:TransferObject

4.30 loadLinkedObjectsByQualifier

4.30.1 Description:

Load linked objects by qualifiers. Works as the method loadLinkObjects, but here you have an additional parameter "targetQualifier".

4.30.2 Arguments:

Parameter	Description	Data Type	Usage
sourceQualifier	The type of the source object	xsd:QName	R
sourceId	The id of the source object	xsd:string	R

targetQualifier	The type of the target object	xsd:QName	R
role	The role of the link, e.g. "document"	xsd:string	R

4.30.3 Returns:

Description	Data Type
A list of TransferObject's	impl:TransferObject

4.31 updateSupplyInformation

4.31.1 Description:

Adds or updates the supply information of an existing medication. As a normal user you cannot delete a medication in the database created by an expert. So you can update or add supply information of a medication by using this method.

4.31.2 Usage notes:

As a prerequisite the medication has to exist in the database already.

4.31.3 Arguments:

Parameter	Description	Data Type	Usage
medicationId	existing medication id, must not be null	xsd:String	R
supplyInformation	this new information object contains the additional prescription information, must not be null	impl:SupplyInformationXto	R

4.31.4 Returns:

Description	Data Type
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true, if the update/add was successful, otherwise false.	xsd:boolean
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4.32 createBulkQuantitativeObservation

4.32.1 Description:

This method creates a set of observations in a memory and performance friendly way. By means of the QuantitativeObservationDataXto.observationContext attribute this method also allows the grouping of observations. E.g. Blood-Pressure (BPH) usually consists of 3 values (systolic, diastolic, heart rate). With the observationContext those values can explicitly be grouped together. The observationContext, however, should not be used to group observations of the same type (e.g. a set of weight observations).

For retrieving grouped observations see loadObservationViewsForObservation-Codes.

4.32.2 Arguments:

Parameter	Description	Data Type	Usage
quantitativeOb- servationTem- plate	The template is used to create observations in conjunction with the data array.	impl: Quan- titativeOb- servationXto	R
data	The entries of the data array are used together with the template to create QuantitativeObservations. The data attributes, if specified, will always overwrite the template attributes.	impl: Quan- titativeOb- servation- DataXto	R

4.32.3 Returns:

None

4.33 loadObservationViewsForObservationCodes

4.33.1 Description:

Returns a list of QuantitativeObservation objects for the given observation codes, scope and time interval.

First the existing strategies (BPH, BMI, etc.) are asked if they support the given observation codes. If yes then the corresponding strategy is called. The returned observations are grouped by date/time.

If none of the existing strategies support the observation codes, then a generic view strategy is called which groups observations by observationContext.

The method will not return groups of observations of the same type. E.g. if a list of heart rate observations was uploaded via createBulkQuantitativeObservation and grouped using the observationContext, this method will not return a list of heart rates. Therefore the observationContext should not be used to group observations of the same type (see description of createBulkQuantitativeObservation)

4.33.2 Arguments:

Parameter	Description	Data Type	Usage
observation-Codes	list of observations codes to be searched for, must not be null	impl:ArrayOfCodeXto	R
scope	the scope of the observation views to be loaded, must not be null	xsd:String	R
interval	the time interval where the observations should be in	impl:TimeIntervalXto	

4.33.3 Returns:

Description	Data Type
an array of QuantitativeObservationXto objects for the given observation codes, scope and time interval, if nothing found the array is null.	impl:ArrayOfQuantitativeObservationXto

