Emergency Medical Service Registry (EMSR) WS v2
Consultation
Cookbook
Version 1.3

This document is provided to you, free of charge, by the

eHealth platform

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To the attention of: the "IT expert" willing to integrate this web service.

1. Document management

1.1 Document history

Version	Date	Author	Description of changes / remarks
1.0	29/12/2020	SMALS	First version
1.1	24/03/2021	SMALS	Added example requests and responses + getSDS with New fields
1.2	02/08/2022	eHealth	§ 2.3 eHealth document references (updated) § 5.2.6 Tracing (updated)
1.3	28/11/2023	SMALS	New search type for getSDS & getSheetList

2. Introduction

2.1 Goal of the service

The purpose of this service is to provide authenticated ambulance services and hospitals with a set of methods for registering and consulting Emergency Medical Service Registry (EMSR) sheets and consulting SDS (Short Data Service° data.

GetSheet method will be available for hospitals and ambulance services.

RegisterPartA, RegisterPartB, GetSds method will be available for ambulance services.

The registering of sheet is done in 2 times: first part A is sent when the patient arrives at the hospital with available patient information and transaction I. Later, within 5 days part B is sent with all patient information and transaction II.

On the sheet consultation the system concatenates transaction I, II and adds SDS data (in particular timings) as transaction III. Patient information is always retrieved from part B.

It is possible to retrieve SDS data separately using the GetSds method, for example to retrieve the address.

2.2 Goal of the document

In this cookbook, we explain the structure and content aspects of the possible requests and the replies of EMSR WS. An example illustrates each of those messages. In addition, a list of possible errors can be found in this document.

This information should allow (the IT department of) an organization to develop and use the WS call.

Some technical and legal requirements must be met in order to allow the integration of EMSR WS in client applications.

This document is neither a development nor a programming guide for internal applications; eHealth partners always keep a total freedom within those fields. Nevertheless, in order to interact in a smooth, homogeneous and risk controlled way with a maximum of partners, eHealth partners must commit to comply with specifications, data format, and release processes described within this document. In addition, our partners in the health sector must also comply with the business rules of validation and integration of data within their own applications in order to minimize errors and incidents.

2.3 eHealth document references

All the document references can be found in the technical library on the eHealth portal[1]. These versions or any following versions can be used for the eHealth service.

ID	Title	Version	Date	Author
1	EMSR v2 KMEHR Messages Cookbook	3.1	25/03/2021	eHealth platform
2	STS HolderofKey - Cookbook	1.	13/07/2022	eHealth platform

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[1] *https://www.ehealth.fgov.be/ehealthplatform/*
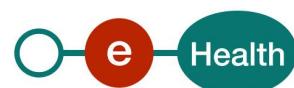
| 3 | Cookbook end-to-end vercijfering voor bekende bestemmeling / encryption end-to-end vers destinataire connu | 2.9 | 18/07/2022 | eHealth platform |

2.4 External document references

All documents can be found through the internet. They are available to the public, but not supported by the eHealth platform.

ID	Title	Source	Date	Author
1	OASIS – WSs security – SAML Token Profile 1.1	https://www.oasis-open.org/committees/download.php/16768/wssv1.1-spec-os-SAMLTokenProfile.pdf	01/02/2006	OASIS Standard
2	Basic Profile Version 1.1	http://www.ws-i.org/Profiles/BasicProfile-1.1-2004-08-24.html	24/08/2004	Web Services Interoperability Organization

3. Support

3.1 Helpdesk eHealth platform

3.1.1 Certificates

In order to access the secured eHealth platform environment you have to obtain an eHealth platform certificate, used to identify the initiator of the request. In case you do not have one, please consult the chapter about the eHealth Certificates on the portal of the eHealth platform

- *https://www.ehealth.fgov.be/ehealthplatform/nl/ehealth-certificaten*

- *https://www.ehealth.fgov.be/ehealthplatform/fr/certificats-ehealth*

For technical issues regarding eHealth platform certificates

- Acceptance: *acceptance-certificates@ehealth.fgov.be*

- Production: *support@ehealth.fgov.be*

3.1.2 For issues in production

eHealth platform contact centre:
- Phone: 02 788 51 55 (on working days from 7 am till 8 pm)
- Mail: *support@ehealth.fgov.be*
- *Contact Form :*
    - *https://www.ehealth.fgov.be/ehealthplatform/nl/contact* (Dutch)
    - *https://www.ehealth.fgov.be/ehealthplatform/fr/contact* (French)

3.1.3 For issues in acceptance

Integration-support@ehealth.fgov.be

3.1.4 For business issues
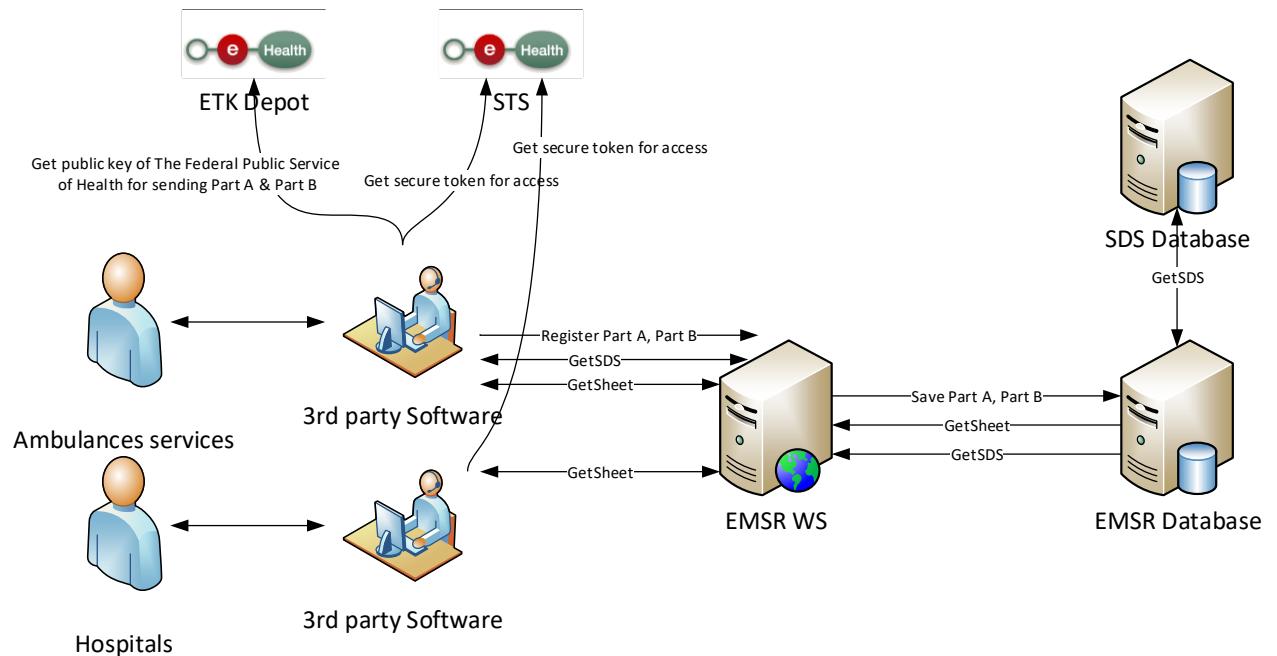
- regarding an existing project: the project manager in charge of the application or service
- regarding a new project or other business issues: *info@ehealth.fgov.be*

3.2 Status

The website *https://status.ehealth.fgov.be* is the monitoring and information tool for the ICT functioning of the eHealth services that are partners of the Belgian eHealth system.

4. Global overview

This general overview presents in a clear manner the use of the Consultation WS.

Step 1.   To use the Consultation WS, you have to contact the WS STS to get a secure token containing the identification of the user (see 5.2.1 Use of the eHealth SSO solution and the STS Cookbook).

Step 2.   Once you have your secure token, you are able to use and contact the Consultation service to call GetSds or GetSheet method.

Step 3.   When you call the GetSheet method, you must provide your public key in the request so that the response is encrypted to you.

Step 4.   When your call has been sent, the system will respond to you with a response message (encrypted sheet or SDS info).

5. Step-by-step

5.1 End-to-End Encryption

In order to secure the information exchanged between hospitals and EMSR WS, most of requests and responses contain encrypted data. Encryption is performed with a public encryption key belonging to the recipient. This means that a request sent to EMSR WS must use EMSR public encryption token and that the response will use the public encryption key of the hospital which sent the request to encrypt the data (The public encryption token key is required in the request). The eHealth platform provides the procedures for creating a pair of private/public keys and the public encryption token.

Process of decryption upon consulting of data (GetSheet):
1)   Verify validity of signature
2)   Decrypt KMEHR data using your private key.

Therefore, the GetSheet request has to contain your public key used to encrypt the GetSheet response.

In XML, the encrypted data is represented in base64 binary format, translating each byte of binary data into an ASCII string format. Thus from XML data, this representation has first to be decoded into byte using the base64 encoding scheme before being decrypted.

Note: While the base64 files are in ASCII format, they should still be encoded using the UTF-8 format.

5.2 Technical requirements

All the xml requests submitted to the WS must be encoded in the UTF-8 format.

5.2.1 Use of the eHealth SSO solution

For each WS accessed on eHealth platform, authentication ensures that the requester is admitted. eHealth certificates are used to trust the requester. In order to use EMSR Consultation, prior authentication has to be made on STS with the use of the eHealth Certificate and with specific parameters. An assertion will be generated that can then be used to make a call and access the EMSR Consultation service.

The complete overview of the profile and a step-by-step implementation to start protecting a new application with SSO @ eHealth is described in the eHealth STS cookbook.

In order to implement a call to the eHealth STS you can reuse the implementation as provided in the "eHealth technical connector":

- ***https://www.ehealth.fgov.be/ehealthplatform/fr/connectors***

- ***https://www.ehealth.fgov.be/ehealthplatform/nl/connectors***

Nevertheless, eHealth implementations use standards and any other compatible technology (WS stack for the client implementation) can be used instead.

The attributes that need to be provided and the attributes that should be certified by eHealth in order to obtain a token valid for EMSR Consultation services are described in section 5.4.2 (if EMSR Consultation is one by an ambulance service) or section 5.4.3 (if EMSR Consultation is done by a Hospital).. To access the EMSR Consultation WSs, the response token must contain "true" for all of the certification attributes. If you obtain "false", contact the eHealth platform to verify whether the requested test cases were correctly configured (See section 3).

5.2.2 EMSR Consultation by Ambulance service

The SAML token request is secured with the eHealth certificate of the ambulance service. The certificate used by the Holder-Of-Key verification mechanism is the same eHealth certificate. The required attributes are the following (AttributeNamespace="urn:be:fgov:identification-namespace"):

- The NIHII number of the ambulance service:
  urn:be:fgov:ehealth:1.0:certificateholder:ambulanceservice:nihii-number and
  urn:be:fgov:ehealth:1.0:ambulanceservice:nihii-number

You must also specify which information must be asserted by the eHealth platform:

- The NIHII number of the ambulance service (AttributeNamespace="urn:be:fgov:identification-namespace"): *urn:be:fgov:ehealth:1.0:certificateholder:ambulanceservice:nihii-number* and *urn:be:fgov:ehealth:1.0:ambulanceservice:nihii-number*

- The ambulance service must be a recognized ambulance service (AttributeNameSpace="urn:be:fgov:certifiednamespace:ehealth"): *urn:be:fgov:ehealth:1.0:certificateholder:ambulanceservice:nihii-number:recognisedambulanceservice:Boolean*

5.2.3   EMSR Consultation by Hospital

The SAML token request is secured with the eHealth certificate of the hospital. The certificate used by the Holder-Of-Key verification mechanism is the same eHealth certificate. The needed attributes are the following (AttributeNamespace="urn:be:fgov:identification-namespace"):

- The NIHII number of the hospital: *urn:be:fgov:ehealth:1.0:certificateholder:hospital:nihii-number* and *urn:be:fgov:ehealth:1.0:hospital:nihii-number*

You must also specify which information must be asserted by the eHealth platform:

- The NIHII number of the hospital (AttributeNamespace="urn:be:fgov:identification-namespace"): *urn:be:fgov:ehealth:1.0:certificateholder:hospital:nihii-number* and *urn:be:fgov:ehealth:1.0:hospital:nihii-number*

- The hospital must be a recognized hospital (AttributeNameSpace="urn:be:fgov:certified-namespace:ehealth"): *urn:be:fgov:ehealth:1.0:certificateholder:hospital:nihii-number:recognisedhospital:boolean*

5.2.4   Security policies to apply

See section 5.1 for the update in the TLS configuration.

We expect that you use SSL one way for the transport layer.

As WS security policy, we expect:

- A timestamp (the date of the request), with a time to live of one minute.(if the message does not arrive during this minute, it shall not be treated).

- The signature with the certificate of

  - the timestamp, (the one mentioned above)

  - the body (the message itself)

  - and the binary security token: an eHealth certificate or a SAML token issued by STS

  This will allow eHealth to verify the integrity of the message and the identity of the message author.

A document explaining how to implement this security policy can be obtained at the eHealth platform. This document, the STS cookbook, can be found on the eHealth portal..

5.2.5   WS-I Basic Profile 1.1

Your request must be WS-I compliant (See Chap 2.4 - External Document Ref).

5.2.6   Tracing

To use this service, the request SHOULD contain the following two http header values (see RFC

https://datatracker.ietf.org/doc/html/rfc7231#section-5.5.3):

1.   User-Agent: information identifying the software product and underlying technical stack/platform. It
     MUST include the minimal identification information of the software such that the emergency contact
     (see below) can uniquely identify the component.
     a.   Pattern: {minimal software information}/{version} {minimal connector information}/{connector-
          package-version}
     b.   Regular expression for each subset (separated by a space) of the pattern: [[a-zA-Z0-9-\/]*\/[0-
          9azA-Z-_.]*
     c.   Examples:
          User-Agent: myProduct/62.310.4 Technical/3.19.0
          User-Agent: Topaz-XXXX/123.23.X freeconnector/XXXXX.XXX
2.   From: email-address that can be used for emergency contact in case of an operational problem.
     Examples:
     From: ***info@mycompany.be***

5.3   Web service

The WS presented in this cookbook is the Consultation WS of EMSR. The Consultation WS has one method:
GetSheet which returns KMEHR content.

The content of KMEHR part is described in the file "ambureg_variables_vxx.xlsx".

The EMSR Consultation webservice has the following endpoints:

*   Integration environment: ***https://services-int.ehealth.fgov.be/EMSR/Consultation/v1***
*   Acceptance environment: ***https://services-acpt.ehealth.fgov.be/EMSR/Consultation/v1***
*   Production environment: ***https://services.ehealth.fgov.be/EMSR/Consultation/v1***

5.3.1   Method getSheetList

The getSheetList method returns the non-encrypted information of zero to many EMSR sheets, which the user
may access.

5.3.1.1   Request
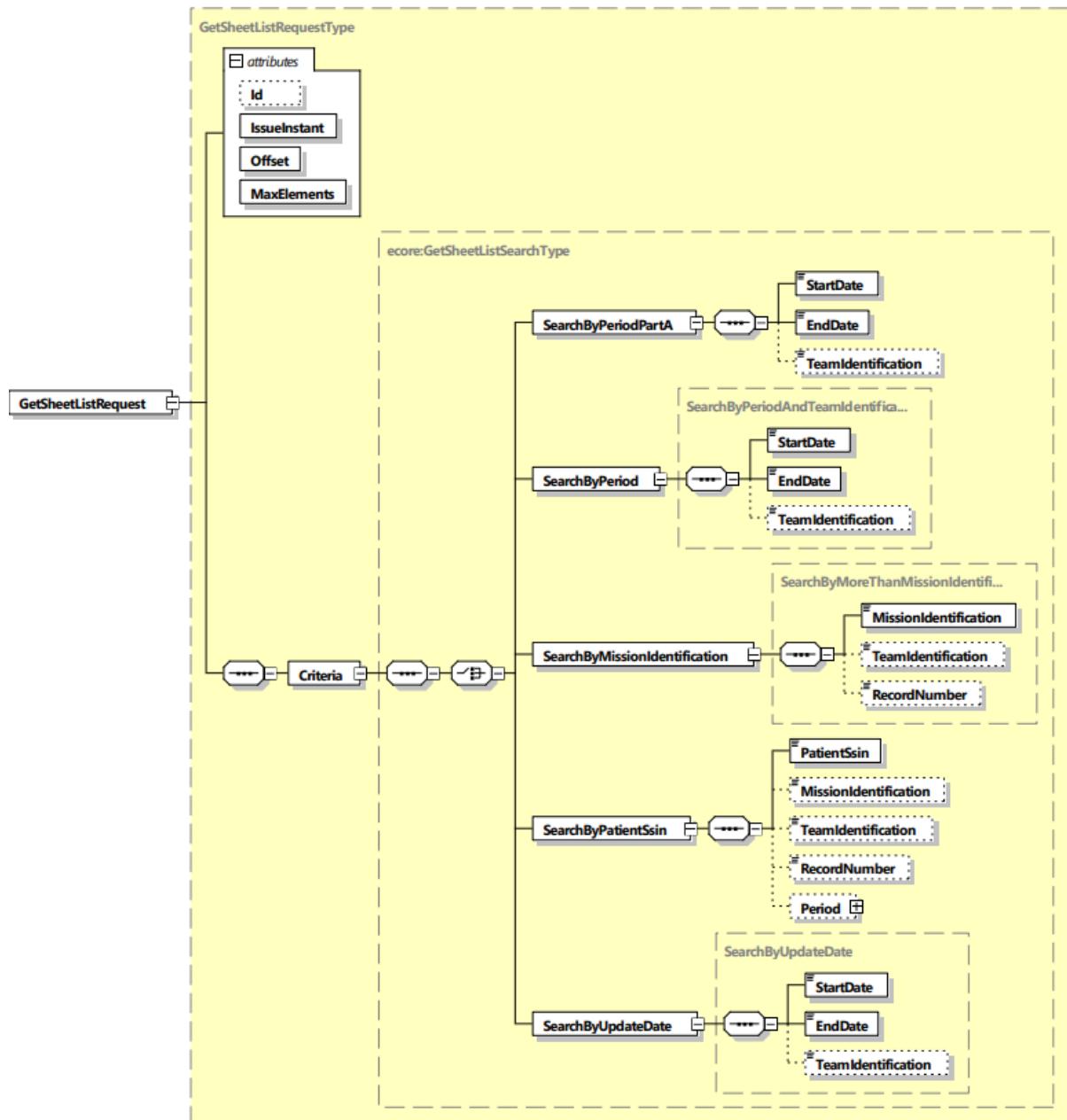
There are several search criteria that can be used to retrieve sheets.

It is possible to make a search of sheets by period between two dates or directly by MissionIdentification if
known. Note that the MissionIdentification is not a mandatory field when registering the part A of a sheet, and
therefore not all sheets have a MissionIdentification number.

Pagination

In the request, *Offset* and *MaxElements* attributes must be specified. Offset is set to 0, and *MaxElements* can be maximum 100. When 100 elements are returned, this means more results are present. A second call can be made with *Offset* set to 100 and *MaxElements* to 100 to gather other results. This can also mean that search criteria were not correctly selected.

The getSheetListRequest has the following attributes:

Field Name	Description	Required
Id	Identifier of the request within the caller system.	No
IssueInstant	Date and time of the request.	Yes

Offset	Index of first element of response	Yes
MaxElements	Number of result per request (max 100)	Yes

The following search methods are possible:

5.3.1.1.1 SearchByPeriodPartA

This search method allows the user to search on the registration date of part A. It provides the possibility to retrieve sheets that are not yet linked to an alert (SDS).

Field Name	Description	Required
StartDate	Beginning of the date range search	Yes
EndDate	End of the date range search	Yes
TeamIdentification	The unique identification number of the team in 9 characters.	No

5.3.1.1.2 SearchByPeriod

This search method allows the user to search sheets using the callDate. The callDate comes from the alert (SDS), thus only sheets linked to an alert (SDS) will be retrieved.

Field Name	Description	Required
StartDate	Beginning of the date range search	Yes
EndDate	End of the date range search	Yes
TeamIdentification	The unique identification number of the team in 9 characters.	No

5.3.1.1.3 SearchByMissionIdentification

This search method allows the user to search on the mission identification. Note that the MissionIdentification is not a mandatory field when registering the part A of a sheet, and therefore not all sheets have a MissionIdentification number.

Field Name	Description	Required
TeamIdentification	The unique identification number of the team in 9 characters.	No
MissionIdentification	Id of the mission	Yes
RecordNumber	This is the sheet number which consists of max 20 characters.	No

5.3.1.1.4 SearchByPatientSsin

This search allows the user to search sheets using the patient national registration number (aka SSIN).

Field Name	Description	Required
PatientSsin	The patient national registration number	Yes
MissionIdentification	Id of the mission	No
TeamIdentification	The unique identification number of the team in 9 characters.	No

RecordNumber	This is the sheet number which consists of max 20 characters.	No
Period	callDate search period	No
Period/StartDate	Beginning of the date range search	Yes
Period/EndDate	End of the date range search	Yes

5.3.1.1.5 SearchByUpdateDate

This search allows the user to search sheets based on the update date of the sheet.

Field Name	Description	Required
StartDate	Beginning of the date range search	Yes
EndDate	End of the date range search	Yes
TeamIdentification	The unique identification number of the team in 9 characters.	No

5.3.1.2 Response

The Response contains three parts:

- Status
- Request
- SheetList

The description of Status can be retrieved in chapter 5.5.4.2 StatusType. The request is the original request sent by the user. The definition is the same as in chapter 5.5.1.1.

The sheet list corresponds to a set of results for the requested search criteria. Each result of the set of results contains the metadata of one sheet.
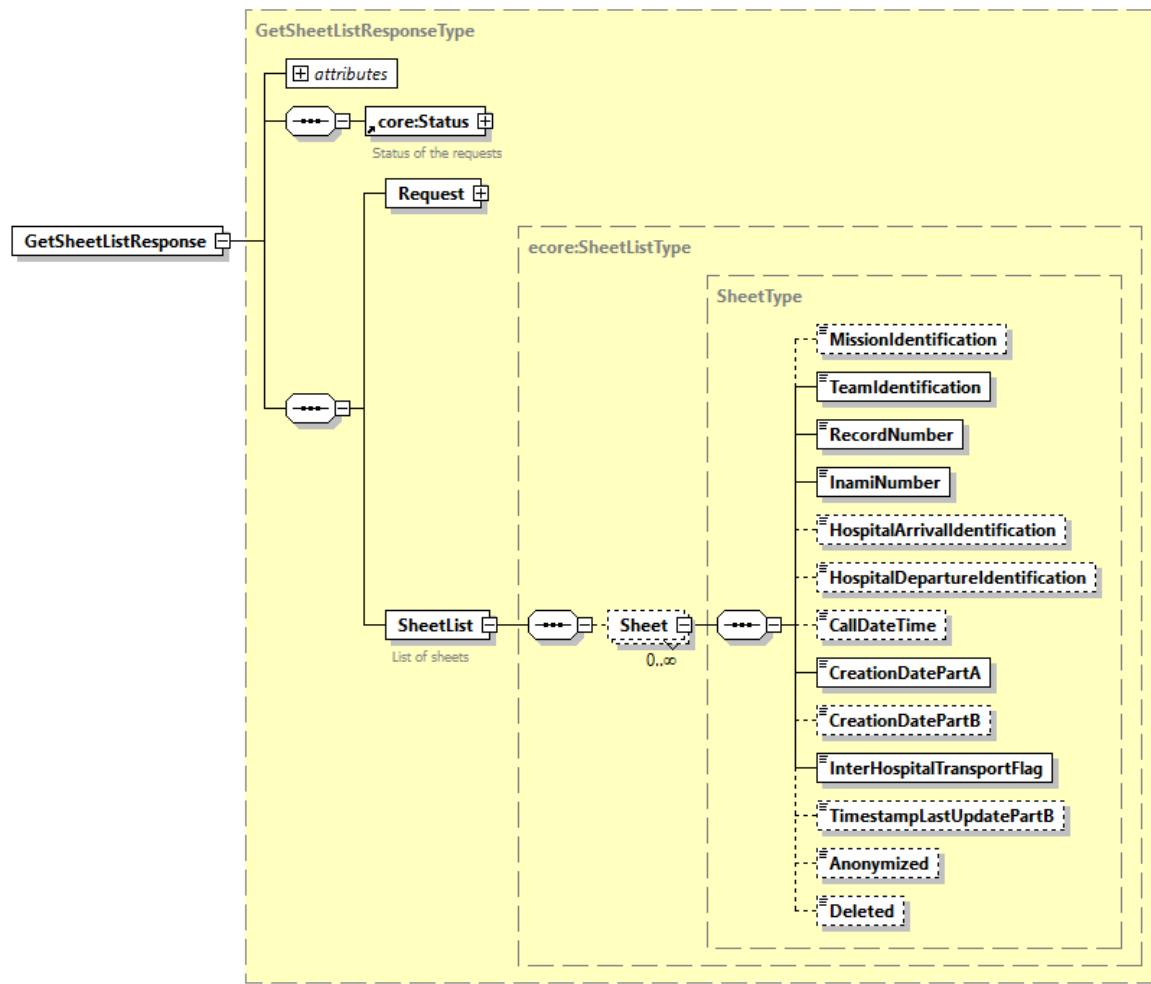
The sheets are ordered in ascending order using the following ordering criteria for SearchByPeriod, SearchByMissionIdentification, SearchByPatientSSIN: *CallDateTime, TimestampLastUpdatePartB, CreationDatePartB and CreationDatePartA.*

For SearchByPeriodPartA, the order is based only on the *CreationDatePartA* field and is also ascending.

For SearchByUpdateDate, the results are also ordered in ascending order, but the ordering criteria are based on *Anonymized, Deleted, TimestampLastUpdatePartB, CreationDatePartB, and CreationDatePartA*.

The following information will be retrieved for each sheet:

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Field Name	Description	Attribute	Mandatory
Id	Identifier of the response.	Yes	Yes
InResponseTo	Id attribute of the request	Yes	No
IssueInstant	Date and time of the response.	Yes	Yes
Offset	Index of first element of response	Yes	Yes
MaxElements	Number of result per request (max 100)	Yes	Yes
Status	See section 5.5.4.2 StatusType	No	Yes
MissionIdentification	The unique identification number of the team in 9 characters.	No	No
TeamIdentification	Id of the mission	No	Yes
RecordNumber	This is the sheet number which consists of max 20 characters.	No	Yes
InamiNumber	INAMI number of the intervening team	No	Yes
HospitalArrivalIdentification	INAMI number of the departure hospital	No	No

HospitalDepartureIdentification	INAMI number of the arrival hospital	No	No
CallDateTime	Call date of the intervention team	No	No
CreationDatePartA	Date of creation Part A	No	Yes
CreationDatePartB	Date of creation Part B	No	No
InterHospitalTransportFlag	• FALSE : no transport between 2 hospital sites • TRUE	No	Yes
TimestampLastUpdatePartB	Update date of Part B	No	No
Anonymized	Date and time of the moment of anonymization of the sheet (only available with the search method SearchByUpdateDate)	No	No
Deleted	Date and time of the deletion of the sheet (only available with the search method SearchByUpdateDate)	No	No

5.3.1.3 Example

Request:

```xml
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:urn="urn:be:fgov:ehealth:emsr:consultation:v2" xmlns:urn1="urn:be:fgov:ehealth:emsr:core:v2">
   <soapenv:Header/>
   <soapenv:Body>
      <urn:GetSheetListRequest Id="id-FBFE19453D50A4BFE61491476862891174" IssueInstant="2016-04-07T10:09:48.288+02:00" Offset="1" MaxElements="10">
         <urn:Criteria>
            <urn1:SearchByMissionIdentification>
               <urn1:MissionIdentification>40203440148</urn1:MissionIdentification>
               <urn1:TeamIdentification>NVLEUV201</urn1:TeamIdentification>
               <urn1:RecordNumber>20121912360638224101</urn1:RecordNumber>
            </urn1:SearchByMissionIdentification>
         </urn:Criteria>
      </urn:GetSheetListRequest>
   </soapenv:Body>
</soapenv:Envelope>
```

Response

```xml
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
   <soap:Body>
      <ns2:GetSheetListResponse Id="_ebc5111b-e488-4275-a6fb-c8e4a16e25e8" InResponseTo="id-FBFE19453D50A4BFE61491476862891174" IssueInstant="2021-02-26T11:42:11.332+01:00" MaxElements="10" Offset="1" xmlns:ns2="urn:be:fgov:ehealth:emsr:consultation:v2" xmlns:ns3="urn:be:fgov:ehealth:commons:core:v2" xmln
```

```xml
s:ns4="urn:be:fgov:ehealth:commons:protocol:v2" xmlns:ns5="http://www.ehealth.
fgov.be/standards/kmehr/schema/v1" xmlns:ns6="http://www.w3.org/2000/09/xmldsi
g#" xmlns:ns7="http://www.w3.org/2001/04/xmlenc#" xmlns:ns8="urn:be:fgov:eheal
th:emsr:core:v2" xmlns:ns9="urn:be:fgov:ehealth:errors:soa:v1">
        <ns3:Status>
            <ns3:StatusCode Value="urn:be:fgov:ehealth:2.0:status:Success"/>
        </ns3:Status>
        <ns2:Request>
            <ns2:Criteria>
                <ns8:SearchByMissionIdentification>
                    <ns8:MissionIdentification>30122790196</ns8:MissionIdentific
ation>
                </ns8:SearchByMissionIdentification>
            </ns2:Criteria>
        </ns2:Request>
        <ns2:SheetList>
            <ns8:Sheet>
                <ns8:MissionIdentification>30122790196</ns8:MissionIdentificati
on>
                <ns8:TeamIdentification>MOAZNI301</ns8:TeamIdentification>
                <ns8:RecordNumber>TSULTTCW692PT</ns8:RecordNumber>
                <ns8:InamiNumber>79646007</ns8:InamiNumber>
                <ns8:HospitalDepartureIdentification>71099812</ns8:HospitalDepa
rtureIdentification>
                <ns8:CallDateTime>2012-10-
05T10:10:56.000+02:00</ns8:CallDateTime>
                <ns8:CreationDatePartA>2020-08-
03T11:17:29.898+02:00</ns8:CreationDatePartA>
                <ns8:InterHospitalTransportFlag>true</ns8:InterHospitalTranspor
tFlag>
            </ns8:Sheet>
            <ns8:Sheet>
                <ns8:MissionIdentification>30122790196</ns8:MissionIdentificati
on>
                <ns8:TeamIdentification>MOAZNI301</ns8:TeamIdentification>
                <ns8:RecordNumber>35U0O8VJ8FUK5</ns8:RecordNumber>
                <ns8:InamiNumber>79646007</ns8:InamiNumber>
                <ns8:HospitalArrivalIdentification>71099812</ns8:HospitalArriva
lIdentification>
                <ns8:HospitalDepartureIdentification>71099812</ns8:HospitalDepa
rtureIdentification>
                <ns8:CallDateTime>2012-10-
05T10:10:56.000+02:00</ns8:CallDateTime>
                <ns8:CreationDatePartA>2020-08-
17T10:50:58.210+02:00</ns8:CreationDatePartA>
                <ns8:InterHospitalTransportFlag>true</ns8:InterHospitalTranspor
tFlag>
```

```xml
            </ns8:Sheet>
            <ns8:Sheet>
                <ns8:MissionIdentification>30122790196</ns8:MissionIdentificati
on>
                <ns8:TeamIdentification>MOAZNI301</ns8:TeamIdentification>
                <ns8:RecordNumber>ZP3DDW5HUPVB0</ns8:RecordNumber>
                <ns8:InamiNumber>79646007</ns8:InamiNumber>
                <ns8:HospitalArrivalIdentification>71099812</ns8:HospitalArriva
lIdentification>
                <ns8:HospitalDepartureIdentification>71099812</ns8:HospitalDepa
rtureIdentification>
                <ns8:CallDateTime>2012-10-
05T10:10:56.000+02:00</ns8:CallDateTime>
                <ns8:CreationDatePartA>2020-08-
03T11:21:09.904+02:00</ns8:CreationDatePartA>
                <ns8:InterHospitalTransportFlag>true</ns8:InterHospitalTranspor
tFlag>
            </ns8:Sheet>
            <ns8:Sheet>
                <ns8:MissionIdentification>30122790196</ns8:MissionIdentificati
on>
                <ns8:TeamIdentification>MOAZNI301</ns8:TeamIdentification>
                <ns8:RecordNumber>HBCRLUUY7V1AM</ns8:RecordNumber>
                <ns8:InamiNumber>79646007</ns8:InamiNumber>
                <ns8:HospitalArrivalIdentification>71099812</ns8:HospitalArriva
lIdentification>
                <ns8:HospitalDepartureIdentification>71099812</ns8:HospitalDepa
rtureIdentification>
                <ns8:CallDateTime>2012-10-
05T10:10:56.000+02:00</ns8:CallDateTime>
                <ns8:CreationDatePartA>2020-08-
03T11:21:19.840+02:00</ns8:CreationDatePartA>
                <ns8:InterHospitalTransportFlag>true</ns8:InterHospitalTranspor
tFlag>
            </ns8:Sheet>
            <ns8:Sheet>
                <ns8:MissionIdentification>30122790196</ns8:MissionIdentificati
on>
                <ns8:TeamIdentification>MOAZNI301</ns8:TeamIdentification>
                <ns8:RecordNumber>V4G2YRCRTJMVT</ns8:RecordNumber>
                <ns8:InamiNumber>79646007</ns8:InamiNumber>
                <ns8:HospitalArrivalIdentification>71099812</ns8:HospitalArriva
lIdentification>
                <ns8:HospitalDepartureIdentification>71099812</ns8:HospitalDepa
rtureIdentification>
                <ns8:CallDateTime>2012-10-
05T10:10:56.000+02:00</ns8:CallDateTime>
```

```
            <ns8:CreationDatePartA>2020-08-
04T10:37:32.577+02:00</ns8:CreationDatePartA>
            <ns8:InterHospitalTransportFlag>true</ns8:InterHospitalTranspor
tFlag>
        </ns8:Sheet>
        <ns8:Sheet>
            <ns8:MissionIdentification>30122790196</ns8:MissionIdentificati
on>
            <ns8:TeamIdentification>MOAZNI301</ns8:TeamIdentification>
            <ns8:RecordNumber>CN3YBN1P4SQTV</ns8:RecordNumber>
            <ns8:InamiNumber>79646007</ns8:InamiNumber>
            <ns8:HospitalArrivalIdentification>71099812</ns8:HospitalArriva
lIdentification>
            <ns8:HospitalDepartureIdentification>71099812</ns8:HospitalDepa
rtureIdentification>
            <ns8:CallDateTime>2012-10-
05T10:10:56.000+02:00</ns8:CallDateTime>
            <ns8:CreationDatePartA>2020-08-
04T10:37:40.466+02:00</ns8:CreationDatePartA>
            <ns8:InterHospitalTransportFlag>true</ns8:InterHospitalTranspor
tFlag>
        </ns8:Sheet>
        <ns8:Sheet>
            <ns8:MissionIdentification>30122790196</ns8:MissionIdentificati
on>
            <ns8:TeamIdentification>MOAZNI301</ns8:TeamIdentification>
            <ns8:RecordNumber>DO6GR30SBI18J</ns8:RecordNumber>
            <ns8:InamiNumber>79646007</ns8:InamiNumber>
            <ns8:HospitalArrivalIdentification>71099812</ns8:HospitalArriva
lIdentification>
            <ns8:HospitalDepartureIdentification>71099812</ns8:HospitalDepa
rtureIdentification>
            <ns8:CallDateTime>2012-10-
05T10:10:56.000+02:00</ns8:CallDateTime>
            <ns8:CreationDatePartA>2020-08-
17T10:51:06.858+02:00</ns8:CreationDatePartA>
            <ns8:InterHospitalTransportFlag>true</ns8:InterHospitalTranspor
tFlag>
        </ns8:Sheet>
        <ns8:Sheet>
            <ns8:MissionIdentification>30122790196</ns8:MissionIdentificati
on>
            <ns8:TeamIdentification>MOAZNI301</ns8:TeamIdentification>
            <ns8:RecordNumber>T7Q8RIYN4HSNN</ns8:RecordNumber>
            <ns8:InamiNumber>79646007</ns8:InamiNumber>
            <ns8:HospitalArrivalIdentification>71099812</ns8:HospitalArriva
lIdentification>
```

```xml
                    <ns8:HospitalDepartureIdentification>71099812</ns8:HospitalDepartureIdentification>
                    <ns8:CallDateTime>2012-10-05T10:10:56.000+02:00</ns8:CallDateTime>
                    <ns8:CreationDatePartA>2020-08-17T10:51:35.047+02:00</ns8:CreationDatePartA>
                    <ns8:InterHospitalTransportFlag>true</ns8:InterHospitalTransportFlag>
                </ns8:Sheet>
                <ns8:Sheet>
                    <ns8:MissionIdentification>30122790196</ns8:MissionIdentification>
                    <ns8:TeamIdentification>MOAZNI301</ns8:TeamIdentification>
                    <ns8:RecordNumber>7H2NPROIONC6Q</ns8:RecordNumber>
                    <ns8:InamiNumber>79646007</ns8:InamiNumber>
                    <ns8:HospitalArrivalIdentification>71099812</ns8:HospitalArrivalIdentification>
                    <ns8:HospitalDepartureIdentification>71099812</ns8:HospitalDepartureIdentification>
                    <ns8:CallDateTime>2012-10-05T10:10:56.000+02:00</ns8:CallDateTime>
                    <ns8:CreationDatePartA>2020-08-17T10:51:39.781+02:00</ns8:CreationDatePartA>
                    <ns8:InterHospitalTransportFlag>true</ns8:InterHospitalTransportFlag>
                </ns8:Sheet>
                <ns8:Sheet>
                    <ns8:MissionIdentification>30122790196</ns8:MissionIdentification>
                    <ns8:TeamIdentification>MOAZNI301</ns8:TeamIdentification>
                    <ns8:RecordNumber>G38TDU46QXSIN</ns8:RecordNumber>
                    <ns8:InamiNumber>79646007</ns8:InamiNumber>
                    <ns8:HospitalArrivalIdentification>71099812</ns8:HospitalArrivalIdentification>
                    <ns8:HospitalDepartureIdentification>71099812</ns8:HospitalDepartureIdentification>
                    <ns8:CallDateTime>2012-10-05T10:10:56.000+02:00</ns8:CallDateTime>
                    <ns8:CreationDatePartA>2020-08-07T09:02:24.449+02:00</ns8:CreationDatePartA>
                    <ns8:InterHospitalTransportFlag>true</ns8:InterHospitalTransportFlag>
                </ns8:Sheet>
            </ns2:SheetList>
        </ns2:GetSheetListResponse>
    </soap:Body>
</soap:Envelope>
```
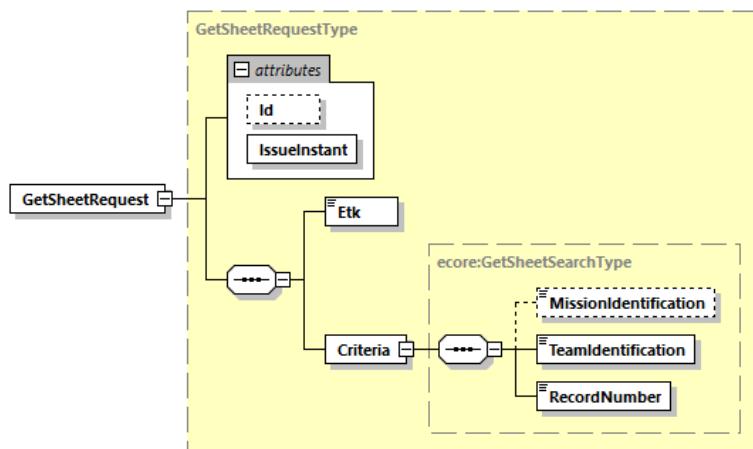
5.3.2 Method getSheet

This search method allows the user to search sheets using the callDate.

5.3.2.1 Request

To consult a sheet, the user has to send the recordnumber and teamIdentification, so that the sheet could be uniquely identified. The missionIdentification can also be used as a third criteria. These values can be found through the results of getSheetList.

| Field Name	Description	Attribute	Required
Id	Identifier of the request within the caller system.	Yes	No
IssueInstant	Date and time of the request.	Yes	Yes
Etk	The ETK which should be used to encrypt the response	No	Yes
MissionIdentification	Id of the mission	No	No
TeamIdentification	This is the unique identification number of the team in 9 characters.	No	Yes
RecordNumber	This is the sheet number. It consists of max 20 characters.	No	Yes

5.3.2.2 Response

The Response contains three parts:
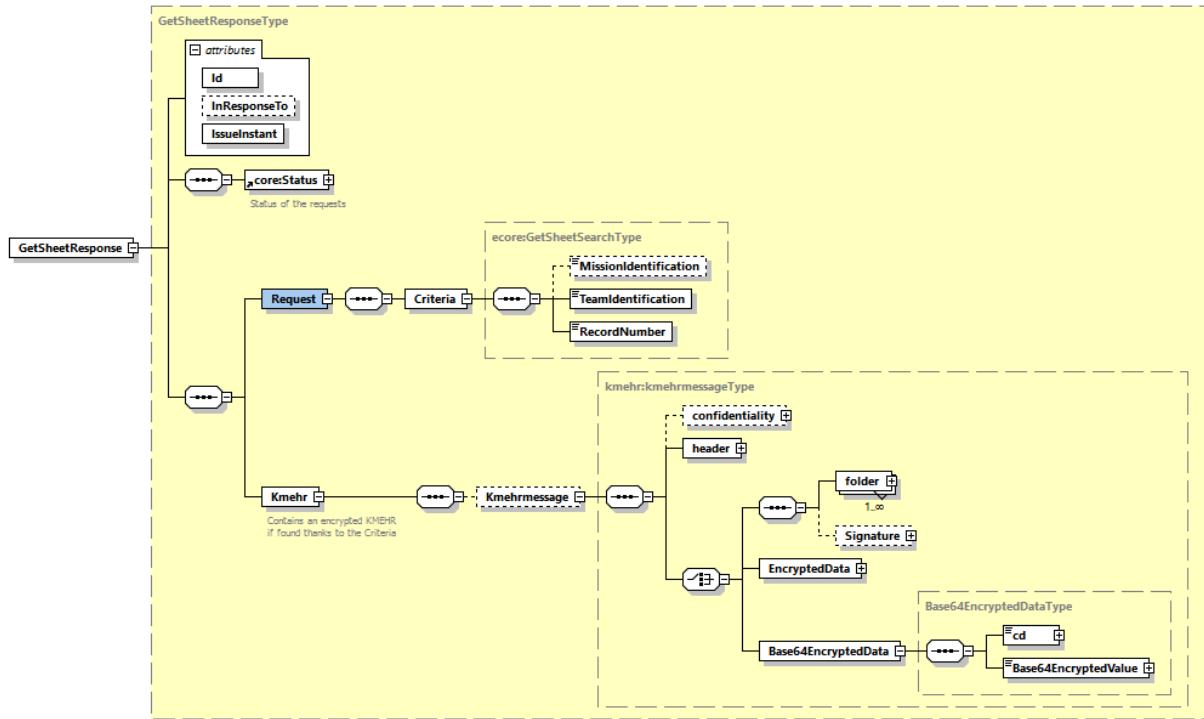
- Status
- Request
- KMEHR

The description of Status can be retrieved in chapter 5.5.4.2 StatusType. The request is the original one sent by the user. The definition is the same as in chapter 5.5.2.1.

The sheet list corresponds to a set of results for the requested search criteria. Each result of the set of results contains the metadata of one sheet.

The KMEHR part is encrypted and described in detail in the KMEHR Cookbook.

Field Name	Description	Attribute	Mandatory
Id	Identifier of the response.	Yes	Yes
InResponseTo	Id attribute of the request	Yes	No
IssueInstant	Date and time of the response.	Yes	Yes
Status	See section 5.2.3.2 StatusType.	No	Yes
Kmehr	Containing an individual KMEHR message that has been encrypted using ETEE and encoded base64. More details in chapter 5.5.3.1.	No	No

5.3.2.3 Example

Request:

```xml
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:urn="urn:be:fgov:ehealth:emsr:consultation:v1" xmlns:urn1="urn:be:fgov:ehealth:emsr:core:v2">
   <soapenv:Header/>
   <soapenv:Body>
      <urn2:GetSheetRequest IssueInstant="?" xmlns:urn2="urn:be:fgov:ehealth:emsr:consultation:v2">
         <urn2:Etk>UjBsR09EbGhjZ0dTQUxNQUFFBUUNBRU1tQ1p0dU1GGUXhEUzhi</urn2:Etk>
         <urn2:Criteria>
            <urn1:TeamIdentification>NVLEUV201</urn1:TeamIdentification>
            <urn1:RecordNumber>NVLEUV201</urn1:RecordNumber>
         </urn2:Criteria>
      </urn2:GetSheetRequest>
```

```
        </soapenv:Body>
</soapenv:Envelope>
```

Response:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xm
lns:urn="urn:be:fgov:ehealth:emsr:consultation:v2" xmlns:urn1="urn:be:fgov:ehe
alth:commons:core:v2" xmlns:urn2="urn:be:fgov:ehealth:emsr:core:v2" xmlns:v1="
http://www.ehealth.fgov.be/standards/kmehr/schema/v1" xmlns:xd="http://www.w3.
org/2000/09/xmldsig#" xmlns:xe="http://www.w3.org/2001/04/xmlenc#">
    <soapenv:Header/>
    <soapenv:Body>
        <urn:GetSheetResponse Id="_123" InResponseTo="_450" IssueInstant="2016-
04-07T10:09:48.288+02:00">
            <urn1:Status>
                <urn1:StatusCode Value="urn:be:fgov:ehealth:2.0:status:Success"/>

            </urn1:Status>
            <urn:Request>
                <urn:Criteria>
                    <urn2:TeamIdentification>NVLEUV201</urn2:TeamIdentification>
                    <urn2:RecordNumber>20121912360638224101</urn2:RecordNumber>
                </urn:Criteria>
            </urn:Request>
            <urn:Kmehr>
                <urn2:Kmehrmessage>
                <v1:header> see KMEHR CookBook </v1:header>
                    <v1:Base64EncryptedData>
                        <v1:cd S="CD-ENCRYPTION-METHOD" SV="1.0">CMS</v1:cd>
<v1:Base64EncryptedValue>UjBsR09EbGhjZ0dTQUxNQUFBUUNBRU1tQ1p0dU1GUXhEUzhi</v1:
Base64EncryptedValue>
                    </v1:Base64EncryptedData>
                </urn2:Kmehrmessage>
            </urn:Kmehr>
        </urn:GetSheetResponse>
    </soapenv:Body>
</soapenv:Envelope>
```

5.3.3 Method *GetSds*

The GetSds method retrieves all the SDS messages related to a specific mission identification. The user's entity will be used implicitly during the search.

These SDS provide in particular information concerning the timings of the interventions (recorded via a radio), as well as certain data of the intervention (which has passed the call to the 112 number, where the intervention took place…).
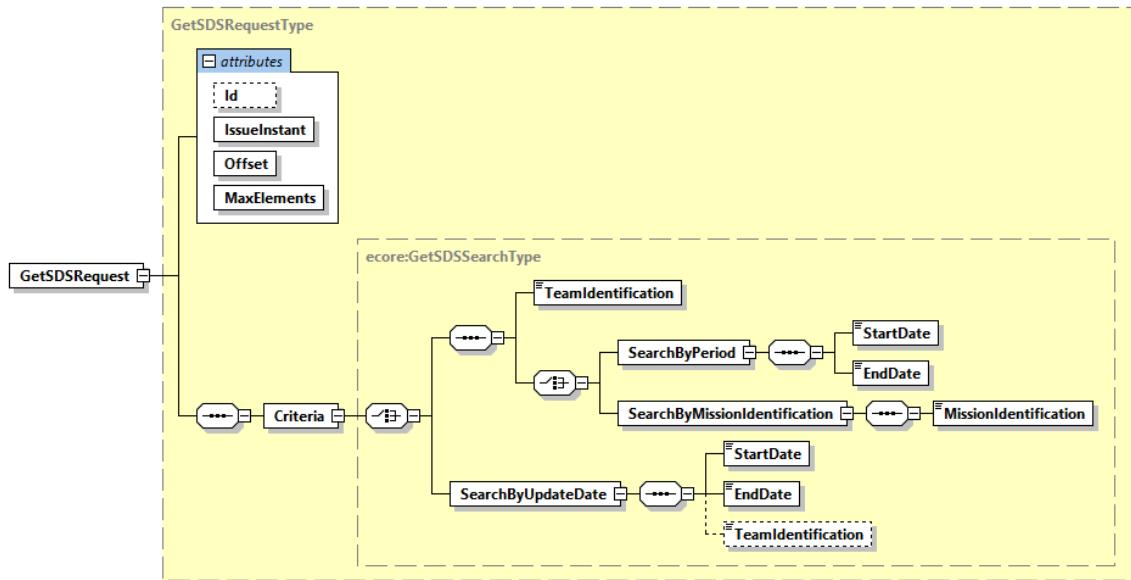
5.3.3.1 *Request*

Pagination

In the request *Offset* and *MaxElements* attributes must be specified. Offset is set to 0, and *MaxElements* can be maximum 100. When 100 elements are returned, this means more results are present. A second call can be

made with *Offset* set to 100 and *MaxElements* to 100 to gather other results. This can also mean that search criteria were not correctly selected.


Figure 1: GetSdsRequest

Field Name	Description	Attribute	Required
Id	Identifier of the request within the caller system.	Yes	No
IssueInstant	Date and time of the request.	Yes	Yes
Offset	Index of first element of response	Yes	Yes
MaxElements	Number of result per request (max 100)	Yes	Yes
StartDate	Beginning of the date range search	No	Yes
EndDate	End of the date range search	No	Yes
TeamIdentification	The unique identification number of the team in 9 characters.	No	Yes
MissionIdentification	Id of the mission	No	Yes

There are three getSDS search types:

- searchByPeriod: searches are based on the call datetime.
- searchByMissionIdentification: searches are based on the mission identification
- searchbyUpdateDate: searches are based on the date of deletion and creation.

5.3.3.2 Response
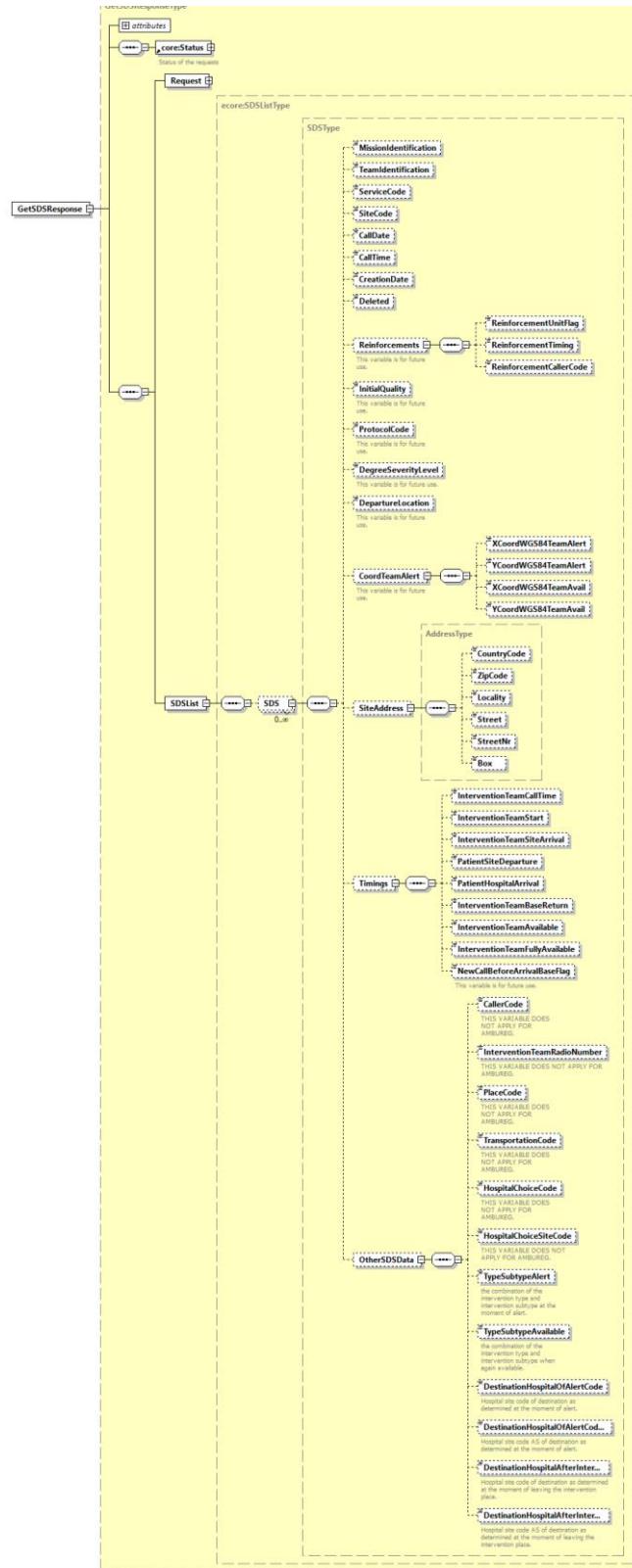
Figure 2: GetSdsResponse

The results are sorted in ascending order. For the searchByPeriod and searchByMissionIdentification, they are ordered by the call datetime and the creation date of the SDS. For the SearchByUpdateDate, it is ordered by the deletion date (if applicable) and the creation date.

In the response you get a list of SDS matching the search criteria.

Field Name	Description	Attribute	Required
Id	Identifier of the request within the caller system.	Yes	No
InResponseTo	Id attribute of the request	Yes	No
IssueInstant	Date and time of the request.	Yes	Yes
Offset	Index of first element of response	Yes	Yes
MaxElements	Number of result per request (max 100)	Yes	Yes
Status	See section 5.3.4.2 StatusType	No	Yes
MissionIdentification	Mission dispatch number	No	No
TeamIdentification	Identification of the team which carried out the intervention	No	No
ServiceCode	The approval number of the service	No	No
SiteCode	Departure site of the day	No	No
CallDate	Date of the call	No	No
CallTime	Time of the call	No	No
creationDate	Date and time of creation of the SDS (only available with the search method SearchByUpdateDate)	No	No
Deleted	Date and time of the deletion of the SDS (only available with the search method SearchByUpdateDate)	No	No
CallerCode (not for this project)	Indicates who made the 100 call. See values below. THIS VARIABLE DOES NOT APPLY FOR AMBUREG.	No	No
ReinforcementUnitFlag	This variable is for future use.	No	No
ReinforcementTiming	This variable is for future use.	No	No
ReinforcementCallerCode	This variable is for future use.	No	No
InitialQuality	This variable is for future use.	No	No
ProtocolCode	This variable is for future use.	No	No
DegreeSeverityLevel	This variable is for future use.	No	No
DepartureLocation	This variable is for future use.	No	No
XCoordWGS84TeamAlert	**This variable will contain the X coordinate of the intervention address.**	No	No

YCoordWGS84TeamAlert	**This variable will contain the Y coordinate of the intervention address.**	No	No
XCoordWGS84TeamAvail	This variable is for future use.	No	No
YCoordWGS84TeamAvail	This variable is for future use.	No	No
SiteAddress	Intervention address	No	No
InterventionTeamCallTime	Date and time of the first ring tone of the call.	No	No
InterventionTeamStart	Departure date and time of the intervention team.	No	No
InterventionTeamSiteArrival	Arrival date and time on site.	No	No
PatientSiteDeparture	Departure date and time of the intervention team from the site.	No	No
PatientHospitalArrival	Arrival date and time of the intervention team at the hospital.	No	No
InterventionTeamBaseReturn	Date and time of the intervention team returns to base.	No	No
InterventionTeamAvailable	Date and time of when the unit goes back to available status.	No	No
InterventionTeamFullyAvailable	Date and time of when the unit is really available at quarter again, after cleaning, replacement of material, etc.	No	No
NewCallBeforeArrivalBaseFlag	This variable is for future use.	No	No
InterventionTeamRadioNumber	*THIS VARIABLE DOES NOT APPLY FOR AMBUREG.*	No	No
PlaceCode (not for this project)	Identifies the type of intervention place. *THIS VARIABLE DOES NOT APPLY FOR AMBUREG.*	No	No
TransportationCode (not for this project)	Code identifying the type of transport. *THIS VARIABLE DOES NOT APPLY FOR AMBUREG*.	No	No
HospitalChoiceCode	*THIS VARIABLE DOES NOT APPLY FOR AMBUREG.*	No	No
HospitalChoiceSiteCode (not for this project)	This indicates why the patient was transported to the mentioned hospital. *THIS VARIABLE DOES NOT APPLY FOR AMBUREG*.	No	No
TypeSubtypeAlert	The combination of the intervention type and intervention subtype at the moment of alert.	No	No

TypeSubtypeAvailable	The combination of the intervention type and intervention subtype when again available.	No	No
DestinationHospitalOfAlertCode	Hospital site code of destination as determined at the moment of alert.	No	No
DestinationHospitalOfAlertCodeAs	Hospital site code authentic source (AS) of destination as determined at the moment of alert. For example, 'AVIQ'.	No	No
DestinationHospitalAfterInterventionCode	Hospital site code of destination as determined at the moment of leaving the intervention place.	No	No
DestinationHospitalAfterInterventionCodeAs	Hospital site code authentic source (AS) of destination as determined at the moment of leaving the intervention place. For example, 'WVG_VAZG'.	No	No

CallerCode:

1 : doctor
2 : SMUR
3 : ambulance
4: hospital
5: home
6: police
7: fire service
8: private individual
9: other
10: unknown
11: PIT

5.3.3.3 Example

Request:

```xml
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:urn="urn:be:fgov:ehealth:emsr:consultation:v2" xmlns:urn1="urn:be:fgov:ehealth:emsr:core:v2">
   <soapenv:Header/>
   <soapenv:Body>
      <urn:GetSDSRequest Id="id-FBFE19453D50A4BFE61491476862891174" IssueInstant="2016-04-07T10:09:48.288+02:00" Offset="10" MaxElements="2">
         <urn:Criteria>
            <urn1:TeamIdentification>MOAZNI101</urn1:TeamIdentification>
            <urn1:SearchByPeriod>
               <urn1:StartDate>2019-02-01T11:43:10</urn1:StartDate>
               <urn1:EndDate>2019-02-03T11:43:10</urn1:EndDate>
            </urn1:SearchByPeriod>
```

```
            </urn:Criteria>
        </urn:GetSDSRequest>
    </soapenv:Body>
</soapenv:Envelope>
```

Response:

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
    <soap:Body>
        <ns2:GetSDSResponse Id="_9d7eb44d-171c-4350-b28d-
c86b83c03831" InResponseTo="id-
FBFE19453D50A4BFE61491476862891174" IssueInstant="2021-02-
26T16:43:48.347+01:00" MaxElements="2" Offset="10" xmlns:ns2="urn:be:fgov:ehea
lth:emsr:consultation:v2" xmlns:ns3="urn:be:fgov:ehealth:commons:core:v2" xmln
s:ns4="urn:be:fgov:ehealth:commons:protocol:v2" xmlns:ns5="http://www.ehealth.
fgov.be/standards/kmehr/schema/v1" xmlns:ns6="http://www.w3.org/2000/09/xmldsi
g#" xmlns:ns7="http://www.w3.org/2001/04/xmlenc#" xmlns:ns8="urn:be:fgov:eheal
th:emsr:core:v2" xmlns:ns9="urn:be:fgov:ehealth:errors:soa:v1">
            <ns3:Status>
                <ns3:StatusCode Value="urn:be:fgov:ehealth:2.0:status:Success"/>
            </ns3:Status>
            <ns2:Request>
                <ns2:Criteria>
                    <ns8:TeamIdentification>MOAZNI101</ns8:TeamIdentification>
                    <ns8:SearchByPeriod>
                        <ns8:StartDate>2019-02-01T11:43:10</ns8:StartDate>
                        <ns8:EndDate>2019-02-03T11:43:10</ns8:EndDate>
                    </ns8:SearchByPeriod>
                </ns2:Criteria>
            </ns2:Request>
            <ns2:SDSList>
                <ns8:SDS>
                    <ns8:MissionIdentification>10190321034</ns8:MissionIdentificati
on>
                    <ns8:TeamIdentification>MOAZNI101</ns8:TeamIdentification>
                    <ns8:ServiceCode>1</ns8:ServiceCode>
                    <ns8:SiteCode>5</ns8:SiteCode>
                    <ns8:CallDate>2019-02-01+01:00</ns8:CallDate>
                    <ns8:CallTime>04:18:15.000+01:00</ns8:CallTime>
                    <ns8:SiteAddress>
                        <ns8:CountryCode>BE</ns8:CountryCode>
                        <ns8:ZipCode>8720</ns8:ZipCode>
                        <ns8:Locality>Oeselgem</ns8:Locality>
                        <ns8:Street>Olsenesteenweg</ns8:Street>
                        <ns8:StreetNr>6</ns8:StreetNr>
                    </ns8:SiteAddress>
```

```xml
<ns8:Timings>
    <ns8:InterventionTeamCallTime>2016-01-04T08:01:00.000+01:00</ns8:InterventionTeamCallTime>
    <ns8:InterventionTeamStart>2016-01-04T08:02:00.000+01:00</ns8:InterventionTeamStart>
    <ns8:InterventionTeamSiteArrival>2016-01-04T08:03:00.000+01:00</ns8:InterventionTeamSiteArrival>
    <ns8:PatientSiteDeparture>2016-01-04T08:04:00.000+01:00</ns8:PatientSiteDeparture>
    <ns8:PatientHospitalArrival>2016-01-04T08:05:00.000+01:00</ns8:PatientHospitalArrival>
    <ns8:InterventionTeamAvailable>2016-01-04T08:06:00.000+01:00</ns8:InterventionTeamAvailable>
</ns8:Timings>
<ns8:OtherSDSData>
    <ns8:CallerCode>9</ns8:CallerCode>
    <ns8:InterventionTeamRadioNumber>12</ns8:InterventionTeamRadioNumber>
    <ns8:PlaceCode>3</ns8:PlaceCode>
    <ns8:TransportationCode>10</ns8:TransportationCode>
    <ns8:HospitalChoiceCode>7</ns8:HospitalChoiceCode>
    <ns8:HospitalChoiceSiteCode>2</ns8:HospitalChoiceSiteCode>
    <ns8:TypeSubtypeAlert>6640601</ns8:TypeSubtypeAlert>
    <ns8:TypeSubtypeAvailable>6640601</ns8:TypeSubtypeAvailable>
    <ns8:DestinationHospitalOfAlertCode>4667002</ns8:DestinationHospitalOfAlertCode>
    <ns8:DestinationHospitalOfAlertCodeAs>WVG_VAZG</ns8:DestinationHospitalOfAlertCodeAs>
    <ns8:DestinationHospitalAfterInterventionCode>4667001</ns8:DestinationHospitalAfterInterventionCode>
    <ns8:DestinationHospitalAfterInterventionCodeAs>WVG_VAZG</ns8:DestinationHospitalAfterInterventionCodeAs>
</ns8:OtherSDSData>
</ns8:SDS>
<ns8:SDS>
    <ns8:MissionIdentification>10190321134</ns8:MissionIdentification>
    <ns8:TeamIdentification>MOAZNI101</ns8:TeamIdentification>
    <ns8:ServiceCode>1</ns8:ServiceCode>
    <ns8:SiteCode>5</ns8:SiteCode>
    <ns8:CallDate>2019-02-01+01:00</ns8:CallDate>
    <ns8:CallTime>04:43:15.000+01:00</ns8:CallTime>
    <ns8:SiteAddress>
        <ns8:CountryCode>BE</ns8:CountryCode>
        <ns8:ZipCode>8720</ns8:ZipCode>
        <ns8:Locality>Oeselgem</ns8:Locality>
        <ns8:Street>Olsenesteenweg</ns8:Street>
```

```xml
                    <ns8:StreetNr>6</ns8:StreetNr>
                </ns8:SiteAddress>
                <ns8:Timings>
                    <ns8:InterventionTeamCallTime>2016-01-
04T08:01:00.000+01:00</ns8:InterventionTeamCallTime>
                    <ns8:InterventionTeamStart>2016-01-
04T08:02:00.000+01:00</ns8:InterventionTeamStart>
                    <ns8:InterventionTeamSiteArrival>2016-01-
04T08:03:00.000+01:00</ns8:InterventionTeamSiteArrival>
                    <ns8:PatientSiteDeparture>2016-01-
04T08:04:00.000+01:00</ns8:PatientSiteDeparture>
                    <ns8:PatientHospitalArrival>2016-01-
04T08:05:00.000+01:00</ns8:PatientHospitalArrival>
                    <ns8:InterventionTeamAvailable>2016-01-
04T08:06:00.000+01:00</ns8:InterventionTeamAvailable>
                </ns8:Timings>
                <ns8:OtherSDSData>
                    <ns8:CallerCode>9</ns8:CallerCode>
                    <ns8:InterventionTeamRadioNumber>12</ns8:InterventionTeamRad
ioNumber>
                    <ns8:PlaceCode>3</ns8:PlaceCode>
                    <ns8:TransportationCode>10</ns8:TransportationCode>
                    <ns8:HospitalChoiceCode>7</ns8:HospitalChoiceCode>
                    <ns8:HospitalChoiceSiteCode>2</ns8:HospitalChoiceSiteCode>
                </ns8:OtherSDSData>
            </ns8:SDS>
        </ns2:SDSList>
    </ns2:GetSDSResponse>
  </soap:Body>
</soap:Envelope>
```
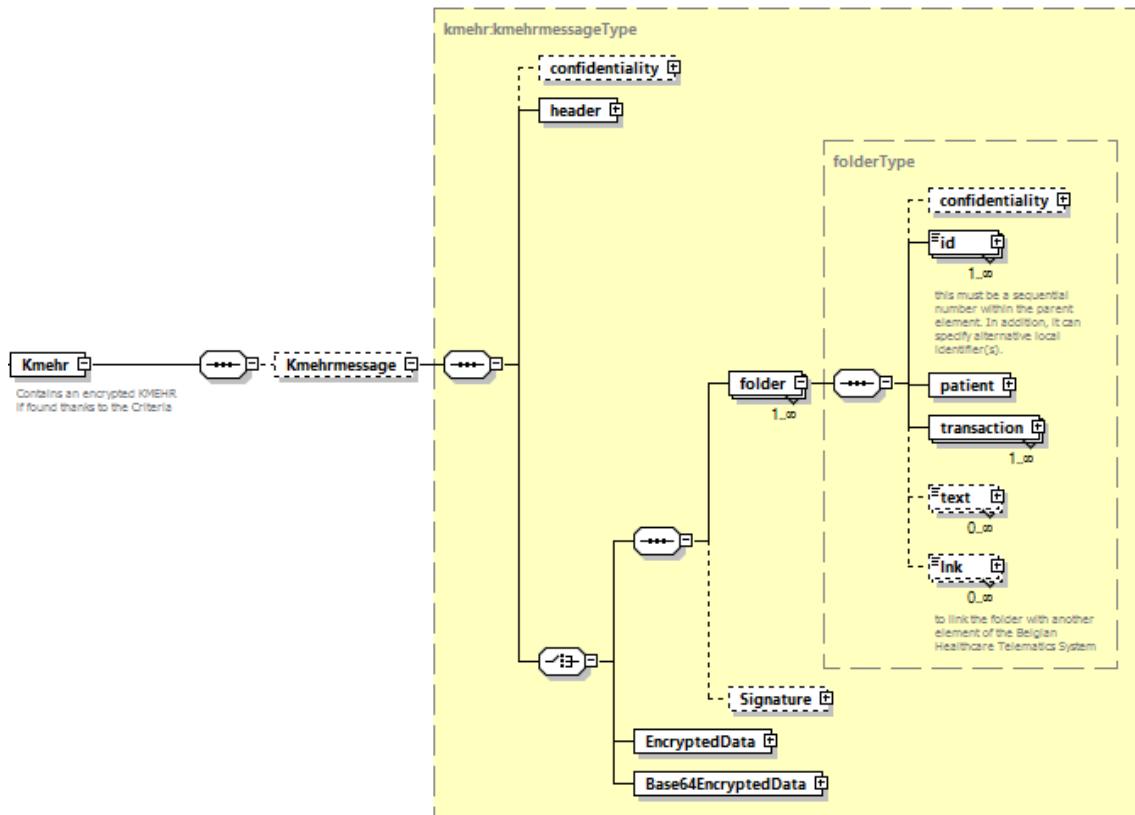
5.3.4 Used Types

5.3.4.1 kmehrmessageType

The KMEHR message is a standard KMEHR type: kmehrmessageType. The KMEHR content can be found under
<Base64EncryptedData>. It is encrypted with the ETK provided by the requestor in the GetSheet request. The
content of KMEHR part is described in the KMHEHR cookbook.

5.3.4.2   StatusType

eHealth SOA service response is composed of an *Status* element. This element is used to indicate the status of the completion of the request, represented by a *StatusCode* and optionally the message describing the status. Additional detail gives extra information on the encountered business errors returned by the target service.
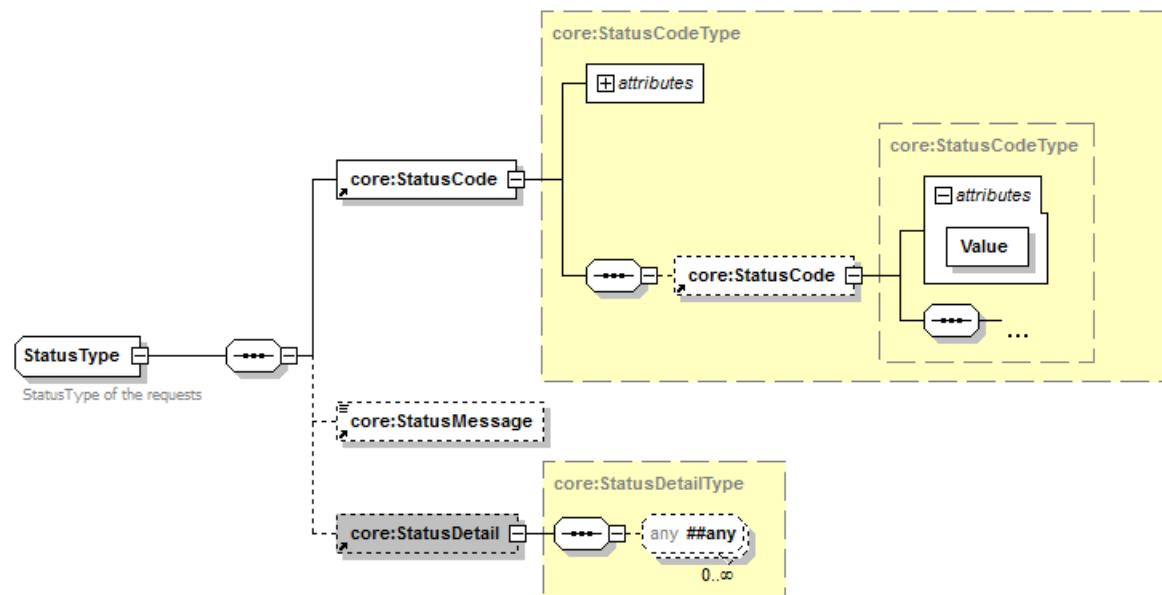

Figure 3: StatusType

Field Name	Description	Attribute	Required
StatusCode	See table further down for a list of possible values	No	Yes
StatusMessage	An optional message describing the error.	No	Yes
StatusDetail	The StatusDetail is defined as a free type, available for service to put any element in it to give extra information on the encountered business errors returned by the target service.	No	No

StatusCode is recursive; therefore *StatusCode* (level 1) could be embedded by an optional sub *StatusCode* (sub level). Each *StatusCode* must have a value attribute and there must be at least a level 1 *StatusCode*.

The response returns at least Level 1 *StatusCode* with one of the following values:

URI	Description
'urn:be:fgov:ehealth:2.0:status:Success'	Completion of the request without errors.
'urn:be:fgov:ehealth:2.0:status:Requester'	Completion of the request with errors caused by the WS consumer.
'urn:be:fgov:ehealth:2.0:status:Responder'	Completion of the request with errors caused by the WS provider.

The optional Level 2 *StatusCode,* if returned, may have different values indicating specific cause of the error such as invalid input, missing input, data not found etc.

URI	Description
'urn:be:fgov:ehealth:2.0:status:Intermediate'	Unknown error.
'urn:be:fgov:ehealth:2.0:status:InvalidInput'	Invalid input error.
'urn:be:fgov:ehealth:2.0:statusMissingInput'	Missing input.
'urn:be:fgov:ehealth:2.0:status:DataNotFound'	No results for the request.
'urn:be:fgov:ehealth:2.0:status:RequestDenied'	Unauthorized request (business level).
'urn:be:fgov:ehealth:2.0:status:RequestUnsupported'	Service does not support the request.

Example:

```xml
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ns8:GetSheet ... Offset="0" MaxElements="100" Id="_14cc837e-de41-4b38-
b23a-f19a91148a83" InResponseTo="bb16782e9-9cea-4af4-8ce4-
e1abe70a9687" IssueInstant="2016-04-07T10:40:57.881+02:00">
      <ns4:Status>
        <ns4:StatusCode Value="urn:be:fgov:ehealth:2.0:status:Success">
          <ns4:StatusCode Value="urn:be:fgov:ehealth:2.0:status:InvalidInput"/
>
        </ns4:StatusCode>
        <ns4:StatusMessage>KMEHR rule 22.3 validation error.</ns4:StatusMessag
e>
      </ns4:Status>
    </ns8:GetSheet>
```

```
    </soap:Body>
</soap:Envelope>
```

See Chap 8 Error and failure messages for further description of StatusCode used in this service.

6. Risks and security

6.1 Security

6.1.1 Business security

In case the development adds an additional use case based on an existing integration, the eHealth platform must be informed at least one month in advance with a detailed estimate of the expected load. This will ensure an effective capacity management.

In case of technical issues on the WS, the partner may obtain support from the contact center.

In case eHealth finds a bug or vulnerability in its software, the partner is advised to update his application with the newest version of the software within 10 business days.

In case the partner finds a bug or vulnerability in the software or WS that eHealth delivered, he is obliged to contact and inform eHealth immediately and he is not allowed to publish this bug or vulnerability in any case.

6.1.2 Web service

WS security used in this manner is in accordance with the common standards. Your call will provide:

- SSL one way

- Time-to-live of the message: one minute.

- Signature of the timestamp, body and binary security token. This will allow eHealth to verify the integrity of the message and the identity of the message author.

- No encryption on the message.

6.1.3 The use of username, password and token

The username, password, and token are strictly personal and are not allowed to transfer.

Each user is responsible for his username, password, and token and is forced to confidentiality of it. Each user is also responsible of any use including use by a third party, until deactivation.

7. Test and release procedure

7.1 Procedure

This chapter explains the procedures for testing and releasing an application in acceptation or production.

7.1.1 Initiation

If you intend to use the eHealth service, please contact ***info@ehealth.fgov.be***. The Project department will provide you with the necessary information and mandatory documents.

7.1.2 Development and test procedure

You have to develop a client in order to connect to our WS. Most of the required info about integration is published on the eHealth portal.

In some cases, the eHealth platform provides you with a mock-up service or test cases in order for you to test your client before releasing it in the acceptance environment.

7.1.3 Release procedure

When development tests are successful, you can request to access the eHealth acceptance environment.

From this moment, you start integration and acceptance tests. eHealth platform suggests testing during minimum one month.

After successful acceptance tests, the partner sends his test results and performance results with a sample of "eHealth request" and "eHealth answer" to the eHealth point of contact by email.

Then eHealth platform and the partner agree on a release date. eHealth platform prepares the connection to the production environment and provides the partner with the necessary information. During the release day, the partner provides eHealth with feedback on the test and performance tests.

For further information and instructions, please contact: ***integration-support@ehealth.fgov.be***.

7.1.4 Operational follow-up

Once in production, the partner using the eHealth service for one of its applications will always test first in the acceptance environment before releasing any adaptations to the application in production. In addition, he will inform eHealth on the progress and test period.

7.2 Test cases

eHealth platform recommends performing tests for all of the following cases:

- getSheetList search by registration date PartA
- getSheetList search by call date
- getSheetList search by missionidentification
- getSheetList search by Patient SSIN
- getSheet

Test the correct handling of error messages, in tables below. Usually there is no point retrying in case of an error. It is better to change the search criteria.

Loops are absolutely forbidden! Load testing is absolutely prohibited!

8. Error and failure messages

There are three different possible types of response:

- If there are no technical or business errors, a business response returns.

- If a business error occurred, it is contained in a business response that undergoes a regular transformation[2] (see chapter 8.1 Business errors).

- In the case of a technical error, you will receive a SOAP fault exception (see chapter 8.2).

8.1 Business errors

See 5.5.4.2 StatusType for description of the StatusCode mechanism.

Business errors are forwarded without any transformation (they are treated as regular business responses).

These error codes first indicate a problem in the arguments sent.

StatusCode	Message	Solution
urn:be:fgov:ehealth:2.0:status:Success (level 1) urn:be:fgov:ehealth:2.0:status:DataNotFound (level 2)	No results for the request	Change one of the search criteria. Diminish the number of search criteria.
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	The Offset attribute cannot be negative	Offset must be >= 0. It can be higher than MaxElements
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	The MaxElements attribute is too high	MaxElements may not exceed 100 items per request
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	The MaxElements attribute cannot be negative or zero	MaxElements must be >=0
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:RequestDenied (level 2)	Combination of team identification and intervention number does not exist in SDS-database	There is no SDS sheet matching the search criteria entered.
urn:be:fgov:ehealth:2.0:status:Requester (level 1) urn:be:fgov:ehealth:2.0:status:InvalidInput (level 2)	The content of the Base64Encrypted Data can't be decrypted	The encrypted part of the request (i.e. the folder part of the KMEHR) could not be decrypted because it is not encrypted correctly for EMSR (see section 3.1).

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[2] *Please refer to the paragraph 5.2.3.2*

8.2   Technical errors

Technical errors are errors inherent to the internal working of a WS. They are returned as SOAP Faults.
The SOA Standard for Errorhandling specifies a structure for SystemError and BusinessError, thrown as SOAP Faults.

A **SystemError** MUST be thrown when a system failure occurred. It is not related to the business of the service. The SOA system error structure is as follows:
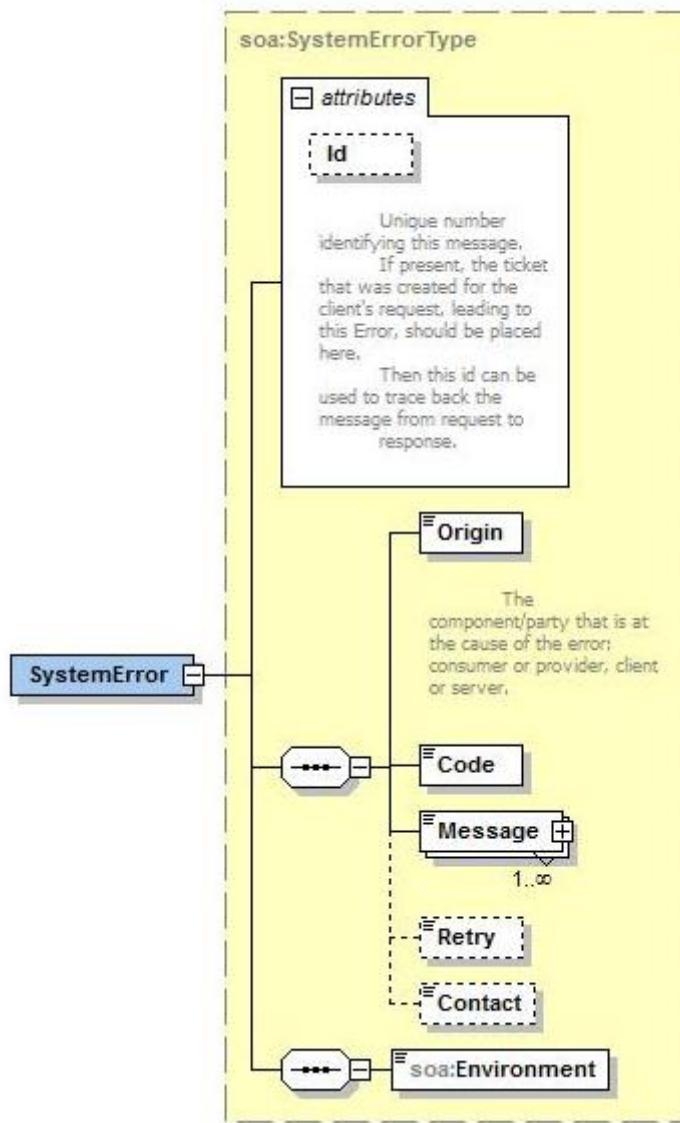

Figure 4 SystemError

The SystemError element MUST contain a unique Id attribute for tracing.
The Origin MUST be set to Server or Provider.

Retry SHOULD be set to true if the consumer can try again immediately without interventions.

Example:

```xml
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
   <soapenv:Body>
      <soapenv:Fault>
         <faultcode>soapenv:Server</faultcode>
         <faultstring>SOA-
02001: Service is not available. Please contact service desk.</faultstring>
         <detail>
            <urn:SystemError Id="Id-
0ab63c6044370e219bb557dd" xmlns:urn="urn:be:fgov:ehealth:errors:soa:v1">
               <Origin>Server</Origin>
               <Code>SOA-02001</Code>
               <Message xml:Lang="en">Service is not available. Please contact
 service desk.</Message>
               <urn:Environment>Acceptation</urn:Environment>
            </urn:SystemError>
         </detail>
      </soapenv:Fault>
   </soapenv:Body>
</soapenv:Envelope>
```

The SOAP Fault element has the following sub elements:

Element name	Descriptions	Mandatory
faultcode	A code for identifying the fault	Yes
faultstring	A human readable explanation of the fault	Yes
faultactor	Information about who caused the fault to happen (the origin)	No
detail	Holds application specific error information related to the Body element. For example, it could include a java stack trace or any other kind of trace, used internally, to document on the cause of this error.	No

The default SOAP faultcode values are defined in an extensible manner that allows for new SOAP fault code values to be defined while maintaining backwards compatibility with existing fault code values.

Element name	Descriptions
versionMismatch	Found an invalid namespace for the SOAP Envelope element.
mustUnderstand	An immediate child element of the Header element, with the mustUnderstand attribute set to "1", was not understood.
client	The message was incorrectly formed or contained incorrect information.
server	There was a problem with the server so the message could not proceed.

Description of the possible SOAP fault exceptions:

Error code	Component	Description	Solution/Explanation
SOA-00001	Undefined	Service error	This is the default error sent to the consumer in case more details are missing.
SOA-01001	Consumer	Service call not authenticated	From the security information provided ● or the consumer could not be identified ● or the credentials provided are not correct
SOA-01002	Consumer	Service call not authorized	● The consumer is identified and authenticated but is not allowed to call the given service.
SOA-02001	Provider	Service not available. Please contact service desk	● An unexpected error has occurred. ● Retries will not work. ● Service desk may help with root cause analysis.
SOA-02002	Provider	Service temporarily not available. Please try later	● An unexpected error has occurred. ● Retries should work. ● If the problem persists service desk may help.
SOA-03001	Consumer	Malformed message	This is default error for content related errors in case more details are lacking.
SOA-03002	Consumer	Message must be SOAP	Message does not respect the SOAP standard
SOA-03003	Consumer	Message must contain SOAP body	Message respects the SOAP standard, but body is missing.
SOA-03004	Consumer	WS-I compliance failure	Message does not respect the WS-I standard.
SOA-03005	Consumer	WSDL compliance failure	Message is not compliant with WSDL in Registry/Repository.
SOA-03006	Consumer	XSD compliance failure	Message is not compliant with XSD in Registry/Repository.
SOA-03007	Consumer	Message content validation failure	From the message content (conform XSD): ● Extended checks on the element format failed. ● Cross-checks between fields failed.