

# Lifecare Integration Services

## Product description



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## 1 Introduction

Lifecare integration services is a flexible way to implement integrations between Effica/Lifecare system and 3<sup>rd</sup> party products. This document describes integration services' architecture in general and each integration service product separately.

### 1.1 Benefits

- Data transmission between systems is flexible and the same data is available for separate systems.
- Real time data can be maintained in one single place.
- Real time and essential data is available for 3<sup>rd</sup> parties' systems and for Effica.
- Essential data is transmittable to places required in organization's systems.
- Produced and distributed data is in a specified form and data structure is always the same; data can be duplicated for various kinds of needs.
- Patient safety becomes better in different events of patient work.

### 1.2 National code sets

Lifecare integration services utilizes national code sets.

### 1.3 Available documentation

- Next additional documentation is available for each integration service:
  - Description of transmitted parameters (MS Excel)
  - Service description (WSDL)
  - Example messages (XML)

## 2 Integration services architecture

### 2.1 General functionalities

This chapter describes the architecture of Lifecare integration services and elements which are common to all services.

Structurally the services are Web-services and implemented with WCF (Windows Communication Foundation) technique. Web-service:

- Uses SOAP-protocol for messaging: calls are transmitted over HTTP, requests and responses are in XML-format.
- Describes the service with WSDL document.

#### 2.1.1 Disclosure of information to an external system

Delivery of information to an external system must be registered to a disclosure log. For this purpose a caller-specific user name must be created in Effica. From disclosure log it is afterwards possible to trace e.g. who delivered, what information, whose information, to whom.

#### 2.1.2 Validating the contract key

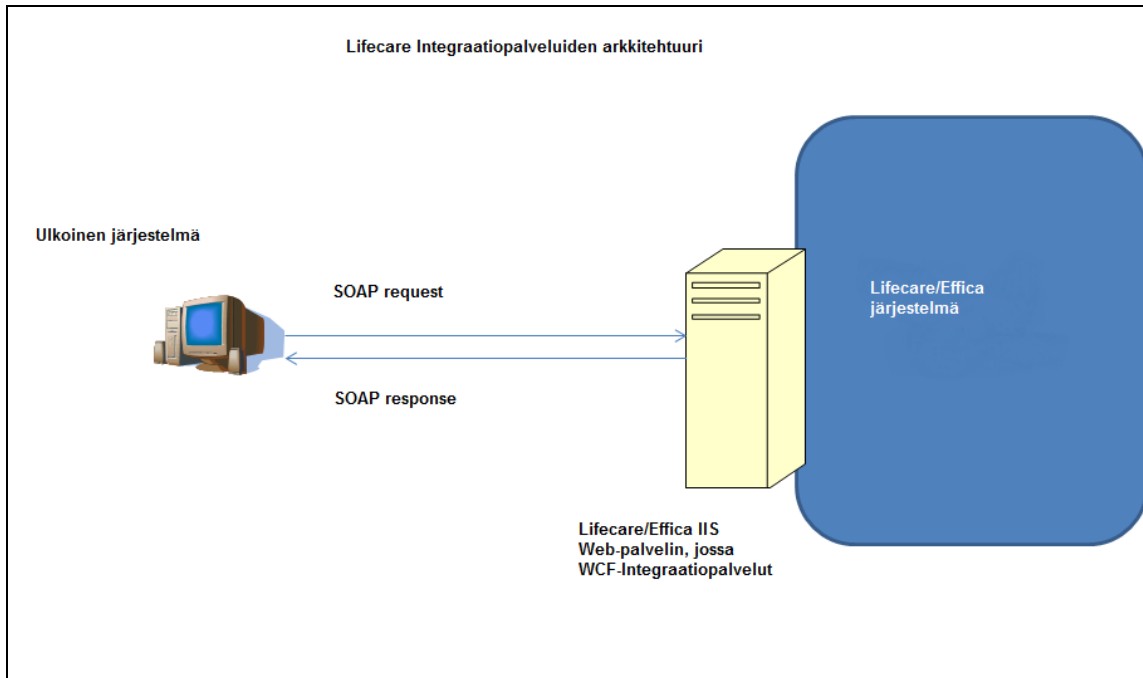
Contract key is a unique identifier for authentication between integration services and 3<sup>rd</sup> parties' systems.

Usage of contract key is agreed on user agreement. Duration of contract is defined in the agreement. Contract key is validated for every service call.

#### 2.1.3 Follow-up of the service usage volume

User agreement on an integration service defines also usage volumes of a service. Follow-up of a service is important in order to avoid jeopardizing the basic functionalities of the patient information system. Exceeding the agreed volume continuously may cause a need for limitations on usage of the service or increasing the capacity of the entire system.

## 2.2 Architectural picture



## 2.3 Web-server requirements

Web-server must match with at least Effica 4.1 MF18 software requirements.

### 3 Patient demographic data integration service

By calling **Patient demographic data integration service** the external system requests from Effica patient data like customer data, next of kin, etc.

By calling **Patient demographic data integration service** the external system can update parts of patient data in Effica, e.g. other address, phone numbers, e-mail address and occupation.

By calling **Patient demographic data integration service** the external system can also maintain patient's next of kin data.

#### Main functions:

- External system requests patient demographic data from Effica one patient at a time.
- External system can update patient demographic data in Effica one patient at a time.

Updating patient demographic data is divided into two separate services:

- Updating patient data allowed to external system to update. E.g. invoicing related data like name, home address and municipal number are not allowed to update. Data allowed to update is e.g. other address, phone numbers, e-mail address, occupation and so on.
- Inserting, updating and deleting patient's next of kin data one patient at a time.

#### 3.1 Patient demographic data request interface

Social security number is used as search word when requesting patient demographic data. If patient data exists in Effica and his/her personal data is not protected with security ban, the service returns patient's population register data and next of kin data.

##### 3.1.1 Request parameters

- Patient's social security number

##### 3.1.2 Response message

- Patient's basic data:
  - Name and occupation
  - Sex, language and nationality as codes
  - Addresses (primary, other and additional)
  - Phone numbers and e-mail address
  - home municipality, domicile and place of birth as codes
- Patient's next of kin data:
  - Social security number
  - Name



- Next of kin's role (principal, chargé d'affaires , payer of bills)
- Language code
- Addresses (primary, other and additional)
- Phone numbers and e-mail address
- Allowed to provide information to next of kin (true/false)
- Notes

### 3.2 Patient demographic data request interface for Home care

By calling Patient demographic data integration service for Home care the external system requests from Effica patient data like customer data, next of kin, etc.

The service returns info about customer's electronic informed consent. At the same time the customer has been provided with information and guidance for electronic services.

The service returns also patient's Home care personal doctor and personal nurse data and customer data of Home care.

#### 3.2.1 Request parameters

##### **Search terms:**

- Patient's social security number

#### 3.2.2 Response message

##### **Patient's basic data:**

- Name and profession
- Gender-, language- and nationality codes
- Addresses (primary, other and additional)
- Phone numbers and e-mail address
- home municipality, domicile and place of birth as codes
- Electronic informed consent
  - When Effica Home care is in use

##### **Patient's next of kin data:**

- Social security number
- Name
- Next of kin's role (principal, chargé d'affaires , payer of bills)
- Language code
- Addresses (primary, other and additional)
- Phone numbers and e-mail
- Allowed to provide information to next of kin (true/false)
- Notes

**Patient's personal doctor and personal nurse:**

- Personal nurse's user ID
- Personal nurse's name
- Function type
- doctor-patient relationship
  - Personal doctor / personal nurse
- Start time of validity of personal doctor / personal nurse
- End time of validity of personal doctor / personal nurse

**Patient's Home care customer data:**

- Function
- Place of operation
- Team
- Start date
- End date
- Home care key code

### 3.3 Patient demographic data update interface

Update of patient data allowed to external system to update. E.g. invoicing related data like name, home address and municipal number are not allowed to update. Data allowed to update is e.g. other address, phone numbers, e-mail address, occupation and so on.

The service returns a success/error message of the update.

#### 3.3.1 Update data

- Patient demographic data:
  - Social security number (key, can not be changed)
  - Occupation
  - Sex, language and nationality as codes
  - Addresses
    - Other and additional addresses
  - Phone numbers and e-mail address
  - Domicile and place of birth as codes
  - Former surname

#### 3.3.2 Response message

- Success or error

### 3.4 Next of kin data update interface

To insert, update and delete patient's next of kin data one at a time. Keys for update and delete are patient's social security number and next of kin's name.

The service returns a success/error message.

### 3.4.1 Update data

- Patient's social security number (key, can not be changed)
- Next of kin's name (key, can not be changed)
- Function
  - Insert, update or delete
- Next of kin's role (principal, chargé d'affaires , payer of bills)
- Language code
- Addresses:
  - primary, other and additional
- Phone numbers and e-mail address
- Allowed to provide information to next of kin (true/false)
- Notes

### 3.4.2 Response message

- Success or error

### 3.4.3 Technical requirements

Software requirements for system using the service:

- Efficacy 4.1 MF20 or later

## 4 Patient record integration service

By calling **Patient record Integration service** the external system can transfer patient records into Effica. Data to be loaded consists of a contact (visit) data one at a time, i.e. data of one or more contact rows and headings related to the contact (e.g. request, research, answer,...). Headings and patient record form names must match with those used in Effica. Patient demographic data must exist in Effica.

Via the interface it is possible to load picture identifiers into Effica. URL of the picture is deduced from the identifier.

### 4.1 Patient record data insert interface

#### 4.1.1 Insertable data

- Patient's social security number
- Date and time of visit
- User name of the doctor in Effica
- Organisation/unit in Effica
- Place of operation in Effica
- Patient record form name in Effica (where the text will be added)
- Function e.g. esh
- Specialty in Effica (e.g. 96 = psychiatry)
- State of the data U (Unfinished), F (Finished), A (Accepted)
- State of the treatment
- Heading related to the patient record text
- Picture identifier
- Definition of the picture identifier
- Patient record text

#### 4.1.2 Response message

- Patient's social security number
- Success or error notification

#### 4.1.3 Restrictions and prerequisites

- Interface does not update existing patient records data but only inserts.
- Patient demographic data must exist in Effica.
- Patient record form must exist in Effica and it must be a continuing form.
- Heading of the patient record text must be acceptable by Effica.
- Picture identifier pattern is *system identifier: picture identifier*, e.g., xxxac:12345. To be agreed with the party sending messages.
- Maximum length of the patient record text is 6000 characters.
- The doctor's user name must exist in Effica.
- The organisation/unit must exist in Effica.
- The place of operation must exist in Effica.
- The function must exist in Effica,
- The specialty must exist in Effica.

#### 4.1.4 Technical requirements

Software requirements for the system using the service:

- Efficca 4.0 MF20 or later if picture links are not used
- Efficca 4.1 MF22 or later if picture links are used

#### 4.2 Patient record request interface

By calling **Patient record request Integration service** the external system can request patient records entered in Efficca.

By calling **Patient record request Integration service** the external system can request maternity clinic card data and childbirth stories entered in Efficca Prenatal Care application.

##### 4.2.1 Request message

By calling **Patient record request Integration service** the external system can request maternity clinic card data and childbirth stories entered in Efficca Prenatal Care application.

##### Contact information:

- Place of operation / Service provider's service unit (THL)
  - National code set service: 1.2.246.537.6.202.2008
  - Service unit as per Sote organization register
- User / Professional's identifier
  - Social security number / SV-identifier / Valvira's Terhikki-identifier /Efficca userid
- Function type / Form of service (THL)
  - National code set service: 1.2.246.537.6.125.2008 PTHAVO – Form of service
- Function

##### Search terms:

- Patient's social security number
- Efficca form
  - Maternity clinic card
  - Childbirth story
- Start date
- End date
- ~~Service event identifier~~ not in use

## 4.2.2 Response message

### **Patient record data:**

- Patient's social security number
- Visit time
- Recipient's identifier
- Form
- Organization
- Place of operation
- Function type
- Function
- Specialty
- State of the information
- State of the treatment
- ~~Service event identifier~~ not in use
- Heading of the patient record (to be used with Maternal care request interface)

### **Contact row data:**

- Heading linked to Effic patient record text

### **Maternity clinic card:**

- General information, Previous pregnancies and childbirths, Blood transfusions and anti-D, Ultrasonography, Sugar tolerance test, Maternity and visits to dispensary outpatient clinic.
- Pregnancy follow up

### **Childbirth story:**

- Anamnesis, Previous pregnancies, Child
- Value
- Extension
- Patient record text
- Recorder
- Recorded, timestamp
- Modifier
- Modified, timestamp

## 4.2.3 Requirements for requesting patient record data (to be checked out)

### **Requesting maternity clinic card and childbirth data:**

Schedule data for specified period is fetched from certain appointment book or place of operation.

#### 4.2.4 Technical requirements

Software requirements for the system using the service:

- Effica V2013Rel3 Upd5 or later (Maternal care modifications)

## 5 Risk data integration service

By calling **Risk data integration service** the external system can request risk data from Effica's risk register.

In Effica the risks are divided into risk types: Multiresistant microbes, Drug allergies and drug reactions, Food allergy, Other allergies, AK-treatment, Foreign body, artificial organs, foreign organs, Risk diseases and immunodeficiency, Blood infection risk, Need of isolation and radioactive radiation, Endocarditis and other antibiotic prophylaxis.

In Effica risks are categorised in critical and non-critical risks. The service provides a possibility to request risks belonging to a given category or all risks at the same time.

### 5.1 Risk data request interface

#### 5.1.1 Request parameters

- Patient's social security number
- Should risk data be requested also from Effica patient record's summary form (true/false)
- Exclusion
  - All, non-critical, critical
- Text without empty lines (true/false)

#### 5.1.2 Response message

- Patient's social security number
- Risk data as text string
- Exclusion
  - All, non-critical, critical

#### 5.1.3 Technical requirements

Software requirements for the system using the service:

- Effica 4.1 MF20 or later



## 6 Ward status integration service

By calling **Ward status integration service** the external system can request data from Effica's Ward management sub-system. Requested data is ward, room and bed.

### Main functions:

- The service returns from Effica the current ward status of every ward of given organisation or the current ward status of a certain ward.
- **PatientTransfers service** returns patient's inward and outward registrations from a ward to another entered in Effica.
- **RavaPoints request service** returns customers' ability to function-evaluations entered in Effica using RAVA-method.

### 6.1 Ward status request interface

The service returns from Effica the current ward status of every ward of given organisation or the current ward status of a certain ward.

The service returns from Effica the ward status of only those wards, where the status has changed after defined date and time. Likewise, when requesting the ward status of a certain ward, the status is returned only if the status has changed after defined date and time.

The service returns the date and time of completion of the data fetch which can be used as a parameter in next request.

#### 6.1.1 Request parameters

- All or changed ward data (K = All / M = Changed)
- Timestamp indicating the starting point of the data to be fetched
- Hospital code
- Ward code if data of a certain ward is requested

#### 6.1.2 Response message

- Ward
  - Ward's organisation code
  - Ward code
  - Ward name
  - Ward in use/not in use
  - Room (repeats according to room count)
    - Room code
    - Room name
    - Room type (male/female/mixed)
  - Bed (repeats according to bed count)
    - Bed code

- Extra bed indicator
- Temporarily closed (closing code)
- Bed in use
- Presence
  - Social security number
  - Isolation type
  - Vacant date
- Reservation data
  - Social security number
  - Date of appearance
- Date and time of request

### 6.1.3 Technical requirements

Software requirements for the system using the service:

- Effica 4.1 MF22 or later

## 6.2 Ward patient transfers request interface

By calling **Ward patient transfers service** the external system can request patient transfers data from Effica's Ward management sub-system. Transfers between wards are entered as inward and outward registrations at the same time in Effica. Internal transfers inside ward are not returned.

The service returns diagnosis data, sending unit and receiving unit from the ward data.

### 6.2.1 Request parameters

- Hospital code
- Timestamp; inward and outward registrations entered after the timestamp are fetched.

### 6.2.2 Response message

- Transfers
  - Type
    - Inward, Outward
  - Patient data
    - Social security number
    - Family name
    - Given names
    - Diagnoses (repeating)
      - Code1
      - AST
      - Code2
      - Specification
      - Type
  - Sending unit
    - Organisation
    - Ward
    - Ward name
  - Receiving unit
    - Organisation
    - Ward
    - Ward name
  - Date and time of registration
    - Date and time of patient's inward or outward registration
- Date and time of request

### 6.2.3 Technical requirements

Software requirements for the system using the service:

- Effica 4.1 MF22 or later

## 6.3 RavaPoints request interface

By calling **RavaPoints request service** the external system can request customers' ability to function-evaluations entered in Efficca using RAVA-method.

### 6.3.1 Request parameters

- Timestamp; date and time indicating the starting point of the fetch. Inserted and updated data is returned.

#### 6.3.1.1 Response message

- Patient's social security number
- Family name
- Given names
- RAVA-points
- Evaluation date
- Efficca user ID
- Efficca user's family name
- Efficca user's given name
- Date and time of the request

### 6.3.2 Technical requirements

Software requirements for the system using the service:

- Efficca 4.1 MF22 or later

## 7 Anamnesis data integration service

By calling **Integration service Anamnesis** the external system can transfer to Effica anamnesis data entered by patient and a notification when anamnesis form is sent to patient for completion.

Service can request information about the existence of patient's anamnesis data generated by external system. Actual anamnesis text is not returned when querying the existence.

Service can request from Effica patient's specified anamnesis data generated by external system.

### Main functions:

- External system can transfer to Effica anamnesis data entered by patient.
- External system can request from Effica the existence of patient's specified anamnesis data e.g. oral health care anamnesis data.
- External system can transfer to Effica a notification when anamnesis form is sent to patient for completion.
- External system can request anamnesis data entered by patient.

### Usage of code sets:

Integration service can utilise applicable national code sets. Own code sets can also be created, e.g. organisation-specific code set based on oid-code. It is possible to use common mutually agreed code sets with external system. Then both parties recognize correctly the meaning of a certain answer.

Additional benefit is achieved by getting indication of the state of anamnesis form, i.e. has patient answered a certain question.

The user may have been asked about smoking (national code 1.2.246.537.6.251.2010) and choices have been:

Identifier ↕	Abbreviation ↕	Long name ↕	Status ↕
1	Daily	Smokes daily	<input checked="" type="checkbox"/>
2	Occasionally	Smokes occasionally	<input checked="" type="checkbox"/>
3	Passively	Notable passive smoking	<input checked="" type="checkbox"/>
4	Non smoker	Not notable smoke-exposure	<input checked="" type="checkbox"/>
9	Not known	No knowledge about smoking	<input checked="" type="checkbox"/>

The user has answered Non smoker when the answer is returned as code (1.2.246.537.6.251.2010.4).

## 7.1 Anamnesis data insert interface

External system can transfer to Effica anamnesis data entered by patient.

The service can insert anamnesis data using messaging interface. If anamnesis data is scanned in from a paper form filled in by patient, the store address of scanned form is inserted instead of actual anamnesis text.

The service can return a notification when anamnesis form is sent to patient for completion.

### 7.1.1 Insertable data

#### Basic data:

- Patient's social security number
- Anamnesis created time
- Anamnesis completed time
- Unique code for the formset
- Code set used in form
  - Applicable national code sets may be used or own code sets can also be created, e.g. organisation-specific code set based on oid-code.
- Form name
- Name of the organisation
- Oid-code of the organisation
- Organisation unit in Effica
- Oid-code of the organisation unit
- Severity rating for the formset
  - 0, 1 = not important, not known, 2 = less important, 3 = critical
- Status of the anamnesis data
  - Sent, received, etc.
- System that collected anamnesis data

#### Form's metadata:

Key for metadata, e.g. document's name, document's id

Value for the key, e.g. document's location URL

#### Contact row:

- Form section's unique id
- Code set used in form section
- Form section's name, e.g. Medication
- Order number of the form section inside the formset
- Criticality of the form section
  - 0, 1 = not important, not known, 2 = less important, 3 = critical

**Questions:**

- Question's unique id
- Code set used on the question
- Question as plain text
- Order number of question in the form section
- Language code
- Criticality of the question
  - 0, 1 = not important, not known, 2 = less important, 3 = critical
- Questions can be linked as parent question and sub questions. Each sub question gets the ID of the parent. E.g. *Medication* comprises *Medicine, Dose, Strength of the drug*.

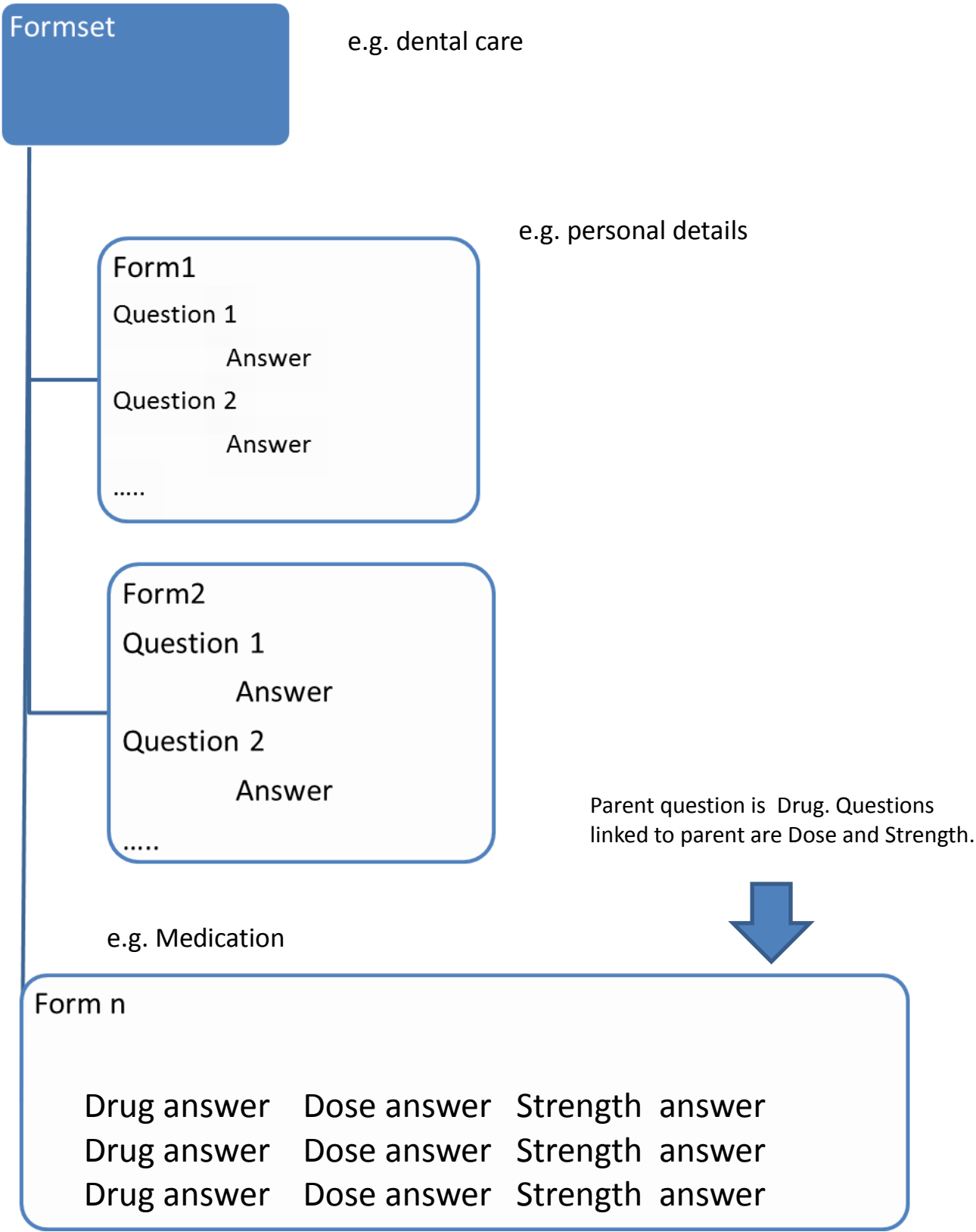
**Answers:**

- Answer's unique id
- Code set used in the answer
- Answer as plain text

### 7.1.2 Answer message

- Patient's social security number
- Success code of the insert

7.1.3 Technical description





## 7.1.4 Technical requirements

Software requirements for the system using the service:

- Efficca 4.1 MF22 or later

## 7.1.5 Additional requirements

User of the service must make sure that the person who entered anamnesis data (patient) has used strong authentication when logging in collecting service.

## 7.2 Anamnesis data request interface

By calling Integration service Anamnesis the external system can request information about anamnesis data transferred to Efficca by external system. Social security number and time span are used to define the requested data.

In addition, more exact definition can be made based on code set used and organisation's name. The service returns information about entering sessions of anamnesis data. For each entering session a unique identifier is returned. The identifier can be used to request the entered actual content.

### 7.2.1 Request parameters

**Basic data:**

- Patient's social security number
- Start time
- End time
- Enquiry formset's unique identifier
- Code set used in formset
- Name of the formset
- Name of the organisation
- Organisation / unit in Efficca

### 7.2.2 Response message

**Basic data:**

- Patient's social security number
- Date and time when the formset was filled in
- Date and time when the formset was completed
- Enquiry formset's unique identifier
- Code set used in formset
- Name of the formset
- Name of the organisation
- Organisation / unit in Efficca
- Unique identifier
  - Key for requesting content of a specific entering session
- Status code of anamnesis data

### 7.2.3 Technical requirements

Software requirements for the system using the service:

- Efficca 4.1 MF22 or later

## 7.3 Anamnesis data request interface using identifier

External system can request anamnesis data entered by patient.

For requesting the content of a specific entering session the unique identifier of the session must be requested before. (Chapter 7.2)

### 7.3.1 Request parameters

- Unique identifier
  - Specific entering session

### 7.3.2 Response message

#### Basic data:

- Patient's social security number
- Date and time when the formset was filled in
- Date and time when the formset was completed
- Enquiry formset's unique identifier
- Code set used in formset
- Name of the formset
- Name of the organisation
- Organisation / unit in Efficca
- Organisation's oid-code
- Criticality of the question
  - 0, 1 = not important, not known, 2 = less important, 3 = critical
- Status
- Gatherer

#### Form's metadata:

Key for metadata, e.g. document's name, document's id  
Value for the key, e.g. document's location URL

#### Contact row:

- Form section's unique id
- Code set used in form section
- Form section's name
- Order number of the form section inside the formset
- Criticality of the form section
  - 0, 1 = not important, not known, 2 = less important, 3 = critical

#### Questions:

- Question's unique id
- Code set used on the question
- Question as plain text

- Order number of question in the form section
- Language code
- Criticality of the question
  - 0, 1 = not important, not known, 2 = less important, 3 = critical
- Questions can be linked as parent question and sub questions. Each sub question gets the ID of the parent.

**Answers:**

- Answer's unique id
- Code set used in the answer
- Answer as plain text

### 7.3.3 Technical requirements

Software requirements for the system using the service:

- Effica 4.1 MF22 or later

## 8 Schedule data integration service

### 8.1 Schedule data request interface

By calling **Schedule data integration service** the external system can request appointment schedule data entered in Efficia.

The service returns appointment schedule data within a specified time span taking into account the given search parameters. If need be the service can request entered, updated and deleted schedule data of a certain period.

When requesting schedule data of specialised health care the service returns also queueing data.

#### 8.1.1 Request message

##### Search terms:

- Appointment book's ID (mandatory / \* = all)
- Function
- Place of operation
- Type of practice
- Status of the appointment
  - All / booked / advance booking / canceled
- Patient's social security number
- Search type
  - All = appointment schedule data within a specified time span
  - Inserted / updated and deleted / inserted, updated and deleted appointments.
- Start time
  - Timestamp, beginning time when requesting schedule data of specified period
  - Timestamp, beginning time of change when requesting inserted, updated or deleted schedule data
- End time
  - Timestamp, end time when requesting schedule data of specified period
  - Timestamp, end time of change when requesting inserted, updated or deleted schedule data

#### 8.1.2 Response message

##### Appointment's basic data:

- Appointment book's ID and name
- Key for appointment
- Status of appointment
- Transaction type (empty, insert, update, delete)
- Start time of appointment
- End time of appointment
- Duration of appointment

- Function
- Place of operation
- Type of practice
- Specialty
- Treating ward
- Customer's social security number
- Recipient, identifier, first name, family name, profession
- Time of update
- Further details of appointment

**Queue data:**

When requesting schedule data of specialised health care the service returns also queueing data.

- Queue type
  - Booking for treatment / research queue
- Date when set in queue
- Prescribing doctor
- Urgency from queue data
- Specialty from queue data
- Treating ward from queue data
- Notes from queue data (notes under the treatment title)
- Diagnosis
- Operations

### 8.1.3 Requirements for requesting schedule data

**Requesting schedule data for a specified period:**

- Schedule data is searched from specified appointment book or specified place of operation.
- Schedule data is searched for one day at a time.

**Requesting modified schedule data:**

- Changes in schedule data can be searched either by place of operation or by type of practice.
- Frequency of searching changes in schedule data is agreed in pursuance of the implementation of the service.

### 8.1.4 Technical requirements

Software requirements for the system using the service:

- Effic 4.1 MF22 or later

## 8.2 Schedule home care data request interface

By calling **Schedule home care data integration service** the external system can request Home care appointment schedule data entered in Effica.

The service returns appointment schedule data within a specified time span taking into account the given search parameters. If need be the service can request entered, updated and deleted schedule data of a certain period.

### 8.2.1 Request message

#### Search terms:

- Appointment book's ID (mandatory / \* = all)
- Function
- Place of operation
- Type of practice
- Patient's social security number
- Status of the appointment
  - All / booked / canceled
- Search type
  - All = appointment schedule data within a specified time span
  - Inserted / updated and deleted / inserted, updated and deleted appointments.
- Start time
  - Timestamp, beginning time when requesting schedule data of specified period
  - Timestamp, beginning time of change when requesting inserted, updated or deleted schedule data
- End time
  - Timestamp, end time when requesting schedule data of specified period
  - Timestamp, end time of change when requesting inserted, updated or deleted schedule data

### 8.2.2 Response message

#### Appointment's basic data:

- Appointment book's ID and name
- Key for appointment
- Transaction type (insert, update, delete)
- Status of appointment
- Start time of appointment
- End time of appointment
- Duration of appointment
  
- Function
- Place of operation
- Type of practice
- Specialty (not in use)
- Treating ward (not in use)

- Customer's social security number
- Recipient, identifier, first name, family name, profession
- Further details of appointment
- Time of update

**Home care schedule data:**

- Home care service number

### 8.2.3 Requirements for requesting schedule home care data

**Requesting schedule home care data for a specified period:**

- Schedule data is searched from specified appointment book, i.e. specified home care team.
- Schedule home care data is searched for one day at a time.

**Requesting modified schedule home care data:**

- Changes in schedule home care data can be searched either by place of operation or by type of practice.
- Frequency of searching changes in schedule home care data is agreed in pursuance of the implementation of the service.

### 8.2.4 Technical requirements

Software requirements for the system using the service:

- Effic 4.1 MF22 or later

### 8.3 Queue data request interface

By calling **Queue data integration service** the external system can request queue data and related diagnosis, operations and appointment schedule data entered in Effica.

The service returns either all queue data or queue data of patients, whose population, schedule or queue data is changed after specified time.

#### 8.3.1 Request parameters

- Search type
- Specialty
- Queue codes (list)
- Queue type (H = booking for treatment / research queue)
- Type of practice (not mandatory)
- Operations (list)
- Start time

#### 8.3.2 Response message

##### Patient data:

- Patient's social security number
- Family name
- Given names
- Sex
- Addresses
- Date of death
- Phone numbers (list)

##### Booking for treatment queue data:

- Queue's unique id
- Queue code
- Treating ward from queue data (unit i.e. Place of operation)
- Creation date
- Ordering doctor (userID, family name, given names, profession)
- Urgency
- Reason for removal
- Remover
- Date when removed from queue
- Estimated check in time
- Time span before check in time
- Customer notes
- Treatment notes
- Further details of the queue



- Further details of other research
- Recipient (userID, family name, given names, profession)
- Operating ward (from operating row of the booking)
- Modifier of the queue data (userID, family name, given names, profession)
  
- Operations (list)
  - Order number, procedure code, side
  
- Diagnoses (list)
  - Order number, diagnosis, punctuation mark, diagnosis

**Effica schedule data data:** (list)

- Estimated operation date and time
- Status (appointment recorded /cancelled)
- Further details
- Recipient

### 8.3.3 Requirements for queue data request

**Modified queue data request:**

- All changed queue data is meant to be requested once in every 24 hours. Outside office hours is recommended.

### 8.3.4 Technical requirements

Software requirements for the system using the service:

- Effica V2013Rel3 or later

## 9 Statistics data integration service

By calling **Statistics data integration service** the external system can transfer to Effica patient's statistical events, i.e. visits.

The service can process the visit data of both primary health care and specialised health care.

### 9.1 Home care statistics data insert interface

By using **Home care statistics data integration service** the external system can transfer to Effica entries related to patient's visit.

Entries concerning home care visits/contacts contain statistical data of primary health care.

#### 9.1.1 Insertable data

##### Contact information:

- Place of operation
- User

##### Statistics data:

- Transaction type (insert)
- Patient's social security number
- Recipient / performer
- Function
- Performer's place of operation
- Performer's team
- Requesting place of operation
- Visitor group
  - National code service: 1.2.246.537.6.123.2008 PTHAVO – Visitor group
    - 1 = Individual visit
    - 2 = Group practice
- Contact type
- Visit type
- Visit's urgency (THL)
  - Default urgency of Effica home care service
  - National code service: 1.2.246.537.6.121.2008
  - PTHAVO – Urgency of treatment – classification
    - V = Immediate need of treatment
    - K = Urgent need of treatment
    - E = Non-urgent need of treatment
- First visit (THL)
  - Default first visit of Effica home care service
  - National code service: 1.2.246.537.6.120.2008 PTHAVO- First visit – classification
    - K = Yes

- E = No
  - Type of practice
    - Not in use with home care
  - Working time type
    - Not in use with home care
  - Place of follow-up treatment
    - Not in use with home care
  - Start time of visit
  - End time of visit
  - Duration of visit (minutes)
- Causes of the visit ICPC2
  - National code service: 1.2.246.537.6.31.2007
  - Symptom-/reason codes of ICPC2 classification
  - Default cause of visit of Effica home care service
- Procedure classification for treatment of outpatients SPAT
  - National code service: 1.2.246.537.6.128.2009
  - Function classification for treatment of outpatients in primary health care (SPAT)
  - Default function classification of Effica home care service
- Follow-up treatment SPAT
  - National code service: 1.2.246.537.6.128.2009
  - Classes 1334-1347 of SPAT-classification
  - Default follow-up treatment of Effica home care service
- Contents of the entries
- Further information

**Home care statistics data:**

- Home care service ID
- Amount of the service
- Non billable (yes / no)
  - If the actual billable customer visit is not invoiced

### 9.1.2 Response message

- The service returns a success/error message.

### 9.1.3 Technical requirements

Software requirements for the system using the service:

- Effica 4.1 MF22 or later

## 9.2 Surgery statistics data insert interface

By using Surgery statistics data integration service the external system can transfer to Effica entries related to patient's visit.

Statistics data can contain entries of surgery related specialised health care.

To enable inserting statistics data the Effica appointment booking information must be entered.

For care notifications there must exist a treatment period linked with a referral in Effica ward management sub system.

Statistics data integration service does not include inserting invoicing data.

### 9.2.1 Insertable data

#### **Contact information:**

- Place of operation
- User

#### **Statistics data:**

- Transaction type (insert)
- Patient's social security number
- Recipient / performer
- Function
- Performer's place of operation
- Requesting place of operation
- Visitor group
  - Not in use with surgery care
- Contact type
- Visit type
- Visit's urgency (THL)
  - Not in use with surgery care
- First visit (THL)
  - Not in use with surgery care
- Type of practice
- Working time type
  - Not in use with surgery care
- Place of follow-up treatment
- Start time of visit
- End time of visit
- Duration of visit (minutes)

- Diagnosis ICD10
  - National code service: 1.2.246.537.6.1 ICD10 classification
- External cause ICD10
  - National code service: 1.2.246.537.6.1.1999 ICD10 classification
  - In ICD10 classification the external cause is an extension code indicating reason of the illness.
- Accident type ICD10
  - National code service: 1.2.246.537.6.1.1999 ICD10 classification
  - Accident type indicates function and scene of the injury related to external cause.
- Causes of the visit ICPC2
  - Not in use with surgery care
- Procedure classification for treatment of outpatients SPAT
  - Not in use with surgical care
- Follow-up treatment SPAT
  - Not in use with surgical care
- Procedures
- Specialty
- Further information
- Scheduled appointment:Key (mandatory)

### 9.2.2 Response message

- The service returns a success/error message.

### 9.2.3 Technical requirements

Software requirements for the system using the service:

- Effic 4.1 MF22 or later

## 10 Code sets integration service

By calling **Code sets integration service** the external system can request Efficca's internal code sets.

### 10.1 Code sets request interface

General interface which can be used for retrieving code values of specific Efficca / Lifecare code sets.

#### 10.1.1 Request parameters

**Search terms:**

- Code set's identifier
  - KHPalv = Home care services
- Start date
- End date

#### 10.1.2 Response message

**Code set data:**

- Code set's name
- Code set's identifier
- Code value
- Code value as plain text
- Start date
- End date
- Further information
- Further information #2

#### 10.1.3 Technical requirements

Software requirements for the system using the service:

- Efficca 4.1 MF22 or later

## 10.2 KHPalv = Home care services

Requesting home care services valid within a specified time span.

### 10.2.1 Response message

**Code set data:**

- |                          |                          |
|--------------------------|--------------------------|
| • Code set's name        | = Home care services     |
| • Code set's identifier  | = KHPalv                 |
| • Code value             | = Home care service ID   |
| • Name                   | = Home care service name |
| • Start date             | = Start date of validity |
| • End date               | = End date of validity   |
| • Further information    |                          |
| • Further information #2 |                          |

## 11 Medication data integration service

### 11.1 Home medication request interface

By calling **Medication data integration service** the external system can request home medication data entered in Effica.

The service returns patient's effective home medicine data.

#### 11.1.1 Request parameters

- ~~Organization~~ not used
- ~~Place of operation~~ not used
- Patient's social security number mandatory

#### 11.1.2 Response message

- Patient's social security number
- Beginning date and time
- Ending date and time
- MedicationID
- Prescriber
- Date and time when medication was previously changed
- Specialist who previously changed the medication

##### **Delivery route: (list)**

- Code
- Description of the route

##### **Dosages: (list)**

- Dosage begin date
- Dosage end date
- Type
  - J = Continuous, T = On demand,
  - A = E.g. medication type used by ICU,
  - KT = Home/On demand, M = Terminable, K = Course
  -
- On hold
- Dosage identifier
- Dosage text
- Prescriber
- Notes
- Specialist who previously changed the dosage



**Medicine:**

- ATC-code
- Effective substance
  - Code
  - Identifier
  - Strength
  - Measure
  - Name of the effective substance
- Name of the medicine
- VNR-code
- Medicine identifier
- State of the medicine (tablet, liquid, ...)
- Package size
- Strength of the medicine
  - Strength
  - Measure
- Prescriber

### 11.1.3 Technical requirements

Software requirements for the system using the service:

- Efficacy V2013Rel3 or later

## 12 Diagnosis data integration service

### 12.1 Diagnosis data request interface

By calling **Diagnosis data integration service** the external system can request diagnosis data entered in Effica.

The service returns patient's all diagnoses from a specified period.

#### 12.1.1 Request parameters

- |                                    |           |
|------------------------------------|-----------|
| • <del>Organization</del>          | not used  |
| • <del>Place of operation</del>    | not used  |
| • Patient's social security number | mandatory |
| • Start time                       | mandatory |
| • End time                         | mandatory |

#### 12.1.2 Response message

- Patient's social security number
- Diagnosis (ICD-10)
- Name of the diagnosis
- Permanent diagnosis
  - Yes / no
- Type of the diagnosis
  - E.g. PAA, KSY
- Effective time
  - Start time, end time

**Other information:**

- Doctor who entered the diagnosis
  - Name, identifier, profession

#### 12.1.3 Technical requirements

Software requirements for the system using the service:

- Effica V2013Rel3 or later

## 13 Laboratory data integration service

### 13.1 Laboratory data request interface

By calling **Laboratory data integration service** the external system can request laboratory data entered in Effica.

The service returns patient's laboratory from a specified period.

#### 13.1.1 Request parameters

- ~~Organization~~ not used
- ~~Place of operation~~ not used
- Patient's social security number mandatory
- Start time mandatory
- End time mandatory

#### 13.1.2 Response message

- Patient's social security number
- **Laboratory tests:**
  - Referral
    - Identifier, date of the referral
- Laboratory test
  - Code, name
- Date of the specimen
- Finding of the laboratory test
  - Finding, measure
- Reference values of laboratory test
  - Min, max

#### **Other information:**

- Laboratory test identifier
- Place of operation, the unit where test was performed
- Place of operation, the ordering unit
- Date of laboratory results
- Report text

#### 13.1.3 Technical requirements

Software requirements for the system using the service:

- Effica V2013Rel3 or later