eHealth platform – G19 report

Hub service "getPatientAuditTrail" : functional description

Version	Date	Description
1.0	30/07/2010	First release hub – metahub system.

Introduction

This document aims to provide the *functional description* of the service 'getPatientAuditTrail' that should be provided by one hub to other hubs.
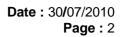
The description is limited to functional elements: purpose, business XML messages. Pragmatic considerations such as security and WSDL descriptions are out-of-scope of this document. The description does not include the overall usage conditions that have to be implemented by the hubs (e.g. regarding the legal aspects).

This document is a part of KMEHR specification. (https://www.ehealth.fgov.be/standards/kmehr/)

The document is structured as follows:

- We first provide a 'functional description' of the service (purpose, input and output parameters independently of their XML representation …).

- We then translate this functional description into a KMEHR service (i.e. we describe the excepted input and output messages)

This document does not contain any XML example. Those examples are available on the kmehr site.

1 Functional description

This service is patient centric and is intended for patients through an healthcare party who is connected to the hub. The service answers to the following questions:

- Who has consulted this document?

- Who has consulted the documents about a given patient?

- What are the documents about a given patient consulted by a given healthcare party?

The patient audit covers the active documents but also the revoked documents. It only deals with the successful consultations of document through the service "GetTransaction" such a consultation is called 'transaction access'. It is composed of:

- the identifier of the patient concerned by the transaction;

- the consulted transaction that is composed of the element id, cd, date, time and author;

- the healthcare party that has consulted the transaction;

- the date and time of the transaction access.

Service name	getPatientAuditTrail
Purpose	This service should be used by a hub to retrieve the list of transaction accesses for a given patient. This service should be called by a hub only to 'propagate' a request from one of its clients. This service is restricted to the transactions stored within the hub

Input parameters	- a set of criteria, including at least,
	
	    - the identifier of a patient P (at least the INSS)
	
	    and/or
	
	    - the identifier of a transaction T
	
	    - the authors of a transaction T (mandatory, must contain the identification of the target hub)
	
	  and, optionally,
	
	    - the identifier of a healthcare party HCP
	
	    - a time period TP [Begin - End].
	
	- search parameters
	
	    - the type of research: must be set either to 'external' or 'global'
	
	    - maximal number of allowed results (optional).
	
	- the sender S of the request, i.e. the hub and the healthcare party that performs the operation call
	
	- information about the request (id/date/time)

Output parameters	- the initial request - an acknowledge indicating the completion of the request

	- the list of recorded transaction accesses in the hub that fulfill the provided criteria :
	
	  - the transaction is related to P,
	
	  - the transaction access is related to T
	
	  - **and,** if the corresponding search criterion is provided in the request,
	
	    o the transaction access is related to HCP
	
	    o the access date is contained in the time period [Begin-End]
	
	Whatever the type of search is (global or external), the list is only composed of transactions accesses owned by the target hub.
	
	If the maximum number of allowed results is exceeded, the service returns the more recent transaction accesses that fulfill the criteria.
	
	If there is no transaction access that fulfills the provided criteria, the returned list is empty.

Usage Conditions (to be checked by the caller hub)	- a national consent exists for P (may be revoked) - a therapeutic link exists between S and P - S is allowed to perform the operation (according to the caller rules)
Post-condition	

Possible exceptions	- Technical error
	
	- Invalid or incorrect data:
	
	  - Invalid patient identifier
	
	  - Invalid healthcare party identifier
	
	  - Invalid transaction identifier
	
	  - Invalid time period
	
	- S is not a hub
	
	- The transaction T is not associated with P
	
	- No transaction found with the provided identifier

Comments	- **About the "Sender":** the sender must at least identify the organization responsible of the caller system. According to the hub implementation of the caller (e.g. regarding logging and access management), it could also identify the healthcare party corresponding to the end-user. - **Identification of healthcare party:** an healthcare professional is identified by its INSS number and NIHII number (if available); a hospital is identified by its NIHII number.

2 Message description

2.1 Syntax: XSchema

Operation name	GetPatientAuditTrail
Input data	request x select
Output data	response x acknowledge x transactionaccesslist

2.2 Semantics: rules and interpretation

2.2.1 Input data

The 'request' parameter gathers the elements relative to

- the information about the request (id, date, time),
- the maximum number of allowed results,
- the sender of the request.

The 'select' parameter covers

- the search criteria

Parameter	Attributes			Comments
request	id [1]	Identification of the request within the caller system.		
	author [1]	The sender of the request represented as a sequence of *hcparty* elements. It must at least contain the hub requester and the healthcare party corresponding to the sender of the initial request (e.g. hospital).		This information must be coherent with the information provided in the technical identification and authentication system (e.g. saml token).
	date [1]	Date of request		
	time [1]	Time of request		
	maxrows [0-1]	Maximum number of results returns by the search.		If more results are found, they will be omitted.
select	patient [0-1]	The identifier of the patient concerned by the transaction access		at least the INSS
	transaction [0-1]	Id[1]	Local identifier of the transaction	

		author[1]	The owner(s) of the transaction	This field is mandatory and must at least contain the hub owner of the transaction.
	hcparty [0-1]	The identifier of the healthcare party concerned by the transaction access		Must at least include NIHII or INSS number according to the type of HCParty. Other local identifiers are allowed.
	begindate[0-1]	The begin of time period		
	enddate[0-1]	The end of time period		
	searchtype [0-1]	Type of search : 'global' or 'external'		Not relevant.

2.2.2   Output data

The 'response' parameter gathers the elements relative to:

- the information about the response (id, date, time),
- the initial request,
- the sender of the response.

The 'acknowledge' parameter gathers the element relative to:

- the service completion,
- the errors or exceptions that occurred during the service execution (only if the service completion is set to 'false').

The 'transactionaccesslist' covers:

- the transaction access.

Parameter	Attributes		Comments
response [1]	id [1]	Identifier of the response within the target hub.	
	author [1]	Sender of the response: the target hub	
	date [1]	Date of response	
	time [1]	Time of response	
	request [1]	Initial request	
acknowledge [1]	iscomplete [1]	Indicates if the execution has been successfully completed	If the conditions were fulfilled to compute a

	error [0-*]	Indicates the error/exception descriptions	list of results – even empty – iscomplete is set to 'true'; iscomplete is set to 'false' otherwise.
transactionaccesslist [0-1]	transactionaccess [0-*]	patient[0-1]	The identifier of the patient concerned by the transaction access. Several identifiers of the same patient are allowed.
		transaction[0-1]	The transaction that is composed of the element id, cd, date, time and author.
		hcparty[0-*]	The chain of healthcare parties that have consulted the transaction (e.g., person within a hospital within a hub)
		accessdatetime[1]	The date and time of the transaction access