
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 each hub to its clients (hospitals, GP server, etc.).

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 expected 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.

There are no explicit restrictions on the patient request within the hub because the request is performed by an healthcare party. However, it is recommended that the patient can specify only a request on:

- the documents concerning himself;
- himself as patient;

It is also recommended that the healthcare party, who calls this service, has a therapeutic link (active or revoked) with the patient.

Service name	getPatientAuditTrail
Purpose	<p>This service should be used to get the list of transaction accesses for a given patient.</p> <p>This service should support two main search variants: one limited to the local hub, one for the overall hubs system.</p>
Input parameters	<ul style="list-style-type: none"> - a set of criteria, including at least, <ul style="list-style-type: none"> - the identifier of a patient P or - the identifier of a transaction T - the identifier of the hub owner of T (required for an inter-hub consultation) and, optionally, <ul style="list-style-type: none"> - the identifier of an healthcare party HCP - a time period TP [Begin - End] - search parameters

	<ul style="list-style-type: none"> - the type of research (local, global, or external) - maximal number of allowed results (optional). - the sender S of the request, i.e. the healthcare party that performs the operation call - information about the transaction (id/date/time)
<p>Output parameters</p>	<ul style="list-style-type: none"> - the initial request - an acknowledge indicating the completion of the request - the list of recorded transaction accesses that fulfill the provided criteria: <ul style="list-style-type: none"> - the transaction access is related to P - the transaction access is related to T - and, if the corresponding search criterion is provided in the request, <ul style="list-style-type: none"> o the transaction access is related to HCP o the access date is contained in the time period [B-E], <p>If the search is '<i>local</i>', the list is restricted to the transaction stored within the hub. If the search is '<i>external</i>' the list is restricted to the transaction stored outside of the hub. If the search is '<i>global</i>' the list contains all transaction accesses that fulfill the provided criteria.</p> <p>If the maximum number of allowed results is exceeded, the service returns the more recent transaction accesses that fulfill the provided criteria.</p> <p>Remarks:</p> <ul style="list-style-type: none"> - if one hub that needs to be contacted is not available, a warning exception will be raised and an incomplete list will be returned. - if there is no transaction access that fulfills the provided criteria, the returned list is empty.
<p>Post-condition</p>	
<p>Possible exceptions</p>	<ul style="list-style-type: none"> - Technical error - Invalid or incorrect data : <ul style="list-style-type: none"> - Invalid patient identifier; - Invalid healthcare party identifier; - Invalid transaction identifier; - Invalid time period. - S is not accredited within the hub - S is not allowed to perform the operation according to the hub rules - The transaction T is not associated with P - No therapeutic link between HCP and P - No transaction found with the provided identifier

	<ul style="list-style-type: none"> - Incomplete search (e.g. one hub is not available) - Unsupported time period
Comments	<ul style="list-style-type: none"> - Identification of patient: we strongly recommend the use of the INSS number. However, at the request of some hubs, each hub may make the choice to use a local identification system for this service. Let us recall that all interhub exchanges will exclusively rely on the INSS number. - Identification of healthcare party: an healthcare professional is identified by its INSS number and NIHI number (if available); a hospital is identified by its NIHI number. - About external transaction: if the transaction comes from another hub, the routing information in the author of the transaction must be mentioned in order to know the owner. - Availability of transaction access: the availability of the transaction access throughout the service can be limited in time following the hub policy.

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),
- maximum number of allowed results,
- 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	This information must be coherent with the

		<i>hparty</i> elements. It must at least contain the healthcare party corresponding to the organization responsible of the system.		information provided in the technical identification and authentication system (eg certificate).
	date [1]	Date of request		
	time [1]	Time of request		
	maxrows [0-1]	Maximum number of results returned 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		Several identifiers of the same patient are allowed.
	transaction [0-1]	id [1]	Local identifier of the transaction.	
		author [0-1]	The owner(s) of the transaction	In interhub exchanges, the field is mandatory and must at least contain the hub owner of the transaction. If the field is not present, the transaction is supposed to belong to the current hub.
	hparty [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 : 'local', 'global' or 'external'		If the field is not present, the type of search is 'local'.

2.2.2 Output data

The 'response' parameter gathers the elements relative to the

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

The 'acknowledge' parameter gathers the element relative to the

- service completion,
- errors or exceptions that occurred during the service execution.

The 'transactionaccesslist' parameter covers

- transaction access.

Parameter	Attributes		Comments
response	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	iscomplete [1]	Indicates if the execution has been successfully completed	If the conditions were fulfilled to compute a list of results – even empty -, iscomplete is set to 'true'; it is set to 'false' otherwise.
	error [0-*	Indicates the error/exception descriptions	
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