

eSanté-LABO_WP1-2

Questionnaire for laboratories
26/01/2011 - Version 1.0

Customer

Project	eSanté-LABO	
Project leader	MS	Mike Schwebag
Contractor	MD B	Mars Di Bartolomeo
Represented organism	Ministère da la Santé, Ministère de la Fonction publique et de la Réforme administrative du Grand-Duché de Luxembourg	
Current phase of the project	Réalisation (Rea)	

CR SANTEC

Project	eSanté-LABO	
Work Package	WP1 - Technical Interoperability of LIS in Luxembourg	
Head of the Unit	Claude Poupart	claude.poupart@tudor.lu
Project Manager	Stefan Benzschawel	stefan.benzschawel@tudor.lu
Author	eSanté Team	santec@tudor.lu

List of Dissemination

Name	Organisation	Email	For Validation	For Comments	For Information
Rene Krippes	Direction de la Santé	Rene.Krippes@ms.etat.lu	X		
Jean-Charles DRON	Health Management Solution	jcdron@hms-france.com		X	
Guido BOSCH	CRP Henri Tudor	guido.bosh@tudor.lu		X	
Heiko Zimmerman	CRP Henri Tudor	heiko.zimmerman@tudor.lu		X	
Marcos Da Silveira	CRP Henri Tudor	marcos.dasilveira@tudor.lu		X	
Stefan Benzschawel	CRP Henri Tudor	stefan.benzschawel@tudor.lu		X	
François Wisniewski	CRP Henri Tudor	francois.wisniewski@tudor.lu		X	
Claude Poupart	CRP Henri Tudor	claudio.poupart@tudor.lu	X		

Objectif du Document

The goal of the document is to provide a state of practice (baseline) for laboratory information systems (LIS) in Luxembourg. Through use of a questionnaire, this document will: Identify the data types currently available for patient identification, medical appointments, lab reports and associated metadata.

Identify standard requirements for the information transfer process inside hospitals and non-hospital laboratories, in order to assess their ability to interact with the future eSanté platform.

The results of this survey will provide us with the current state of LIS in Luxembourg. The eSanté Team will compare these results with the technical specifications (data set and standards) of the future eSanté platform (Gap analysis). The ultimate goal is to gain an overview on the workload that each laboratory would have to commit to in order to interact with the future eSanté platform.

Change History

Version	Date	Author	Modification
0.01	22/11/2010	FWI	Adaptation of the eSanté CARA WP9 questionnaire to the eSanté-LABO project
0.03	29/11/2010	FWI	First internal release
0.04	02/12/2010	GBO	English correction and comment
0.05	03/12/2010	HZI	Merge with previous Lab questionnaire
0.06	06/12/2010	FWi	Integration of comment and structure of the questionnaire
0.07	07/12/2010	GBO	Proof reading
0.08	06/12/2010	Fwi	Integration of oral comment
0.09	15/12/2010	Fwi	Integration of HZI comment
0.10	15/12/2010	Fwi	Integration of oral comment
0.17	29/12/2010	Fwi	Integration of RK and JCD comment
0.20	20/01/2011	Fwi	Internal review
0.30	26/01/2011	Fwi	Metadata review

Table of Contents

Contents

Table of Contents.....	5
1. Introduction.....	6
2. Definitions.....	7
3. Standards.....	8
4. Synthesis of LIS used in hospitals.....	8
5. Identification of the participant.....	9
6. Questionnaire.....	9
6.1. Patient Identification.....	10
6.1.1. Issue: Unique identification of one patient.....	10
6.1.2. IHE Profiles and Standards.....	10
Q1. Questions	11
6.2. Laboratory report.....	17
6.2.1. Issue: structuring and validating a lab report.....	17
6.2.2. Standards.....	17
Q2. Questions	20
6.3. Metadata associated with the lab report.....	28
6.3.1. Issue: Describing the administrative and the medical context.....	28
6.3.2. IHE profiles and Standards.....	28
6.3.3. Synthesis of previous work.....	28
Q3. Questions	29

1. Introduction

The eSanté Team is organizing a series of interviews with hospital and non-hospital labs, and with the main LIS providers of the Luxembourgish market. The goal is to define a data platform for the exchange and sharing of medical data consistent with both the needs of a modern health care system and the existing infrastructure in hospital and non-hospital labs. Medical lab analysis has been chosen as one of the first fields to implement this approach. A first meeting with lab managers and LIS integration specialists, and a second meeting with LIS software providers will be held. The attendees will be asked a set of questions in order to update information from previous work (LABO HealthNet and ISIS), and to identify key elements linked to LIS that could have an impact on the definition of the platform.

This set of questions has been organized into three topics:

- Patient identification
- Laboratory report
- Metadata associated with the lab report

Each topic is displayed in the document following the same structure:

- Short description of the issue
- Short description of the standards linked to the issue
- Synthesis of the current knowledge of LIS implementation (if available)
- Questionnaire

This questionnaire has been designed for administrators of LIS and EAI (Enterprise Application Integration) specialists from hospital and non-hospital laboratories in Luxembourg.

2. Definitions

eSanté Platform:

The eSanté platform is the technical, software and organizational infrastructure, which will be put in place by the Luxemburgish government in order to support the secure exchange and sharing of health data in Luxembourg.

In the particular context of the eSanté-LABO project, it is planned that the eSanté platform will have functionalities to exchange and share information for lab reports and their associated metadata.

The two first services of the platform are:

- Sharing of health data
- Exchanging of health data

Sharing of health data through the Shared Patient Health Record (SPHR)

(“Dossier des soins partagé (SPHR)”)

The SPHR aims to optimize the coordination and the continuity of patient care by giving health professionals and patients a folder containing the pertinent health data of the patient and value added services in a unified platform. The SPHR does not substitute other medical record defined or in definition. The essence of the shared information in the SPHR, its organization, its granularity, its level of formalization and standardization have to be adapted to the needs of the health professionals, the patients.

3. Standards

It is foreseen that the set of services implemented in the eSanté platform will be built on standards dedicated to the field of health care (e.g. HL7), labs (e.g. LOINC) and IHE integration profiles.

The platform's design will largely be based on IHE integration profiles. Particularly XDS (**Cross Enterprise Document Sharing**) for document sharing and its derivation XD-LAB for the sharing of laboratory reports, and utilizing the XDR profile (**Cross-Enterprise Document Reliable Interchange**) to exchange documents.

4. Synthesis of LIS used in hospitals

Previous work of the CR SANTEC (such as ISIS, eSanté EFES or HealthNet LABO) provides us with the LIS landscape in Luxembourg as it was in 2008, shown in Table 1.

Lab	LIS	Company	Current version	Migration planned Or comment
CHL	GLIMS	MIPS www.mips.be	7.8	
CHdN		Home made		
HK	JADE	GNT www.gnt.ch	3	
ZK	LAB/400	CORTEX http://website.cegeka.be/en/markets/healthcare/pages/cortex.aspx	Updated regularly	
CHEM	OPUS::L	OSM (Agfa) www.imp-ag.de/produkte/opus/index.html www.osm-gmbh.de/opus/opus.htm		
LNS	GLIMS for <ul style="list-style-type: none"> • Biochimie • Serologie • Hématologie HomeMed for <ul style="list-style-type: none"> • Bacterio, • SUBI (Surveillance biologique et environnementale) • Toxicologie (planned to move to GLIMS) 	MIPS www.mips.be	7.2.5 planned to move to 7.9.2	

Table 1: LIS used by hospitals in Luxembourg in 2008

If your laboratory is not in the table 1 or the information is wrong please complete the field:

LIS:

Company:

Current version:

Migration planned Or comment:.....

5. Identification of the participant

Name of the laboratory or the hospital:

Person who answers this questionnaire

Family name:

First name:

Function:

Email:

Phone:

6. Questionnaire

As mentioned before, the questionnaire deals with the following topics:

- Patient identification
- Laboratory report
- Metadata associated to the lab report

If you have any issues or comments in answering the questionnaire, please contact us at the following email address: **esante_lab@ms.etat.lu**

Please send the answers to this questionnaire to the same address.

6.1. Patient Identification

6.1.1. Issue: Unique identification of one patient

The eSanté platform must be able to associate the report sent to the platform to the concerned patient. Therefore it is necessary that on the institutional (private laboratory or hospital) side a unique patient identifier (UPID) is provided.

6.1.2. IHE Profiles and Standards

6.1.2.1. IHE Profiles

The profile IHE-PAM « Patient Administration Management » is used in transactions ITI-30 « Patient Identity Management » and ITI-31 « Patient Encounter Management » between a source of demographic data and the consumer of demographic data.

Scope:

Exchange of patient identity inside an institution and between institutions

Benefits:

- Improvement of the unique identification of the patient by distribution of the error corrections between applications (avoids double entries, allows merges, updates ...)
- Collection and distribution of all the administrative information of the patient (identification of the patient, the origin, insurances, person to warn)
- Better cooperation between clinical and administrative applications in the health care institutions (ex: cooperative management of the patient's movements)

6.1.2.2. Messages HL7 V2.x (V3)

The transactions IHE ITI-30 and ITI-31 of the IHE-PAM profile can be implemented by HL7-ADT messages (Admit Discharge Transfer). Indeed, these messages transport data to identify a patient (demographic data, etc., in the PID segment), but also provide event information like patient admission (pre-admission), transfer, discharge, update of their personal data and the merger of two different patient identities into one.

Q1. Questions

Q1-1. Which patient identifier is used inside the LIS?
Aim of the question: To make sure that labs unambiguously identify their patients
<ul style="list-style-type: none">- A PID specific to the LIS.- The Unique PID of the HIS or another similar system that deals with patient information- Another identifier like the national security number (<i>matricule</i>).- ...

Q1-2. How are identified EU agents and foreigner patients without matricule?
Aim of the question: - To know current practice that can help to fix rule for a Unique PID

Q1-3. How do you manage the patient identification with subcontractor?
Aim of the question: - To determine if there is currently practice that we can use with the eSanté platform

Q1-4. Which components of patient identification data can you provide?
Example: components of the segment PID



Aim of the question:

Determine the set of data that the laboratory can send to the platform in order to identify a patient

Field Name	Never	Rarely	Often	Always
Patient ID (External ID)				
Patient ID (Internal ID)				
Alternate Patient ID – PID				
Patient Name				
Mother's Maiden Name				
Date/Time of Birth				
Sex				
Patient Alias				
Race				
Patient Address				
Country Code				
Phone Number – Home				
Phone Number – Business				
Primary Language				
Marital Status				
Religion				
Patient Account Number				
SSN Number – Patient (Matricule)				
Driver's License Number - Patient				
Mother's Identifier				
Ethnic Group				
Birth Place				
Multiple Birth Indicator				
Birth Order				
Citizenship				
Veterans Military Status				
Nationality				
Patient Death Date and Time				
Patient Death Indicator				

ELEMENT NAME	Never	Rarely	Often	Always
Other:				
Other:				
Other:				
Other:				

Q1-5. Which standard(s) is (are) used to transmit these identifying data from the HIS to the LIS?

Aim of the question:

- To identify whether labs are able to transmit patient identification information to eSanté

- HL7 ADT: PID segment
- Proprietary
- Other:

Q1-6. How do you manage the identification of a person **who cannot be identified** (e.g. in emergencies, analysis under "X", VIP ...)?

Aim of the question:

- To know if there is a risk in sending data of unidentified patients to eSanté

- The patient receives a **temporary** ID from the HIS/LIS, and this ID will be **merged** with his definitive ID after he has been identified.

- The patient is named with a **definitive** unique ID (such as "Monsieur X + date + hour"). His data will be **updated** with the patient's real data once he has been properly identified.

Q1-7. If you use **temporary** patient IDs do you have a means to distinguish them from **definite** IDs?

Aim of the question:

- To know how temporary IDs are distinguished from definitive IDs.

- A flag
- A naming convention
- A specific range of ID
- Other:

Q1-8. How do you distinguish **unidentified** data (e.g. in emergencies, analysis under "X", VIP ...) from **identified** data?

Aim of the question:

- To understand how unidentified data are distinguished from identified data.

- A flag
- A naming convention
- A specific range of ID
- Other:
- ...

Q1-9. Are there unique patient identifiers in the HIS/LIS, which do **not correspond to physical persons** (e.g. analyses for animals, tests patient IDs etc.)?

Aim of the question:

- Is there a risk that non-patient data will be sent to eSanté (filtering)?

- Only patients are entered in the HIS/LIS system.
- There are data without a connection to a real patient...
- ...

Q1-10. If these identifiers are distinguishable from normal patient IDs, how do you distinguish them?

Aim of the question:

- To know how patient IDs are distinguished from other possible IDs.

- A flag
- A naming convention
- A specific range of IDs
- Other:
- ...

Q1-11. In which system is the merging of two patient identities done?

Aim of the question:

- To determine if the merging is controlled by a standard process or if there are exceptional situations that might lead to errors in eSanté.

- The merging is done in the HIS and then forwarded to and completed in the LIS automatically.
- The merging is usually done in the HIS and then forwarded to and completed in the LIS automatically, but there are sometimes exceptional cases when a manual merge is necessary at the level of the LIS.
- The merging is done in the LIS and then forwarded to and performed in another system.
- ...

Q1-12. If you merge the patient ID, which communication protocol do you use?

Aim of the question:

- To determine a standard protocol that labs are able to use for merging patient IDs.

- HL7 Message: ...
- Proprietary
- Other:

Q1-13. How is the updating/changing of patient identifying demographic data handled between the connected systems?

Aim of the question:

- It needs to be determined if the update of administrative data process is well controlled by a standard process, or if there are exceptional interventions, which might lead to errors in eSanté.

- Changes in one system do not affect connected systems. Therefore, data has to be corrected in both systems.

- Changes are made in the **HIS** and communicated to the connected systems (LIS...).

- Changes are made in the **LIS** and communicated to the connected systems.

- Changes are made in the LIS or the HIS and can be synchronized between systems.

- ...

Q1-14. If you handle the update of administrative data, which communication protocol do you use?

Aim of the question:

- To determine standard protocol that labs are able to use for the update of administrative data.

- HL7 Message: ...

- Proprietary

- Other:

Other comments:

6.2. *Laboratory report*

6.2.1. **Issue: structuring and validating a lab report**

The eSanté platform requires that the laboratories submit only clinically validated reports with the structure defined in the eSanté-LABO project.

Definition of partial result and summary report.

When a Lab receives a prescription, it splits the complete order into individual tests. Depending on the nature of the tests and the lab's internal workflow, the lab can publish (to the prescriber) several results at different moments in time, which we call **partial results**.

After the last test is done, the lab assembles all partial results and sometimes adds an **interpretation** for the whole series of tests. The so-called **summary report** is then sent out to prescriber and patient.

6.2.2. **Standards**

6.2.2.1. **CDA (Clinical Document Architecture) HL7 V3**

The **CDA** standard is a Clinical Documents Architecture based on **XML**. It is possible to build on the schema CDA.xsd models of documents, which are then adapted to most of the medical specialties and to most usage contexts.

A document CDA consists of a header and a body. The header has always the same standard structure. However, the structured content of the body can vary according to needs. The CDA R2 standard defines three possible levels of structure for the document body:

- **Level 1: not structured:** the contents are not in a XML format, (PDF / A-1, txt, rtf, JPEG or tiff), encapsulated in the body.
- **Level 2: structured for the reader:** the text of the document is formatted in XML in the body, organized in a hierarchical list of sections (element section). Inside every section, the text appears in a narrative block (element text), which can be organized by means of structures such as paragraphs, table, notes, figures, references etc. The sections announce their content with a section code associated with a label and optionally with a title. If necessary, sections can also have a deeper hierarchical structure. This level is useful to display the report in structured format for the user.
- **Level 3: structured for the reader and for the Health Information System:** the body of the document is organized in sections, same as in level 2. Moreover, every section can contain one or several entries (element entry) taking structured data from the information system and producing the information contained in the section. The aim of such an entry is to supply the information content in coded and structured form, i.e. machine-readable form, so that it can be imported into the database of the health care professional's Patient Management System (PMS), which consults the document. This level 3 is useful to display the report in structured format and also to export data of the report in other systems.

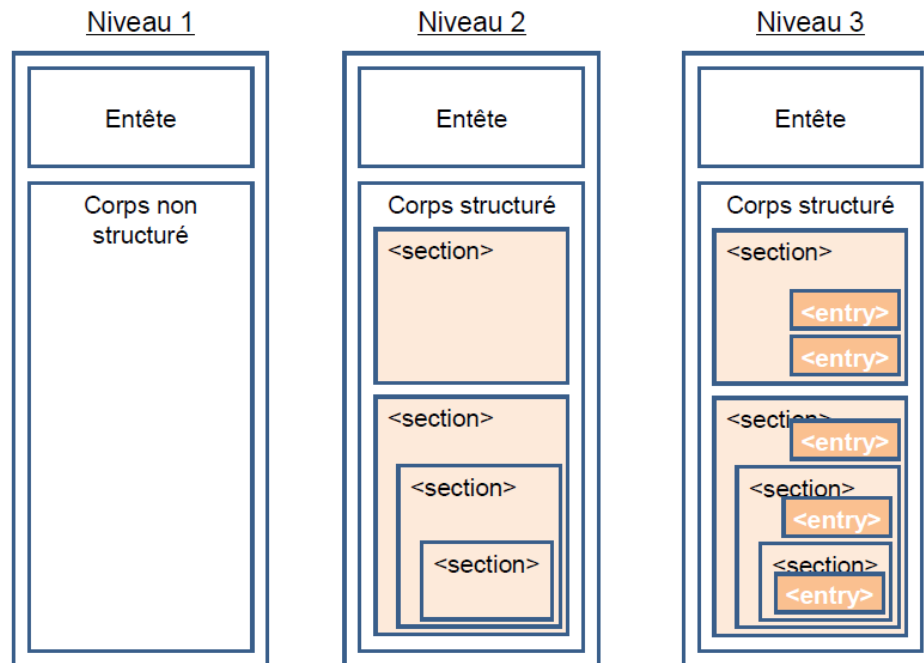


Figure 2: 3 levels of CDA

6.2.2.2. HL7 V2

HL7 message used for the transmission of reports is called the ORU message.

The ORU message is a structured report where each observation is separated into an individual entity and then separated into fields. ORU messages do not carry images; they use varying data types but most often use text, numbers and codes.

In the ORU message, the OBR (Observation request) and OBX (Observation) segments are the most significant due to their functions:

- The **OBR segment** is used in all ORU messages as a report header and it contains important information about the order being fulfilled (i.e. order number, request date/time, observation date/time, ordering provider, etc.). This segment is part of a group that can be used more than once for each observation result that is reported in the message.
- The **OBX segment** transmits the actual clinical observation results as a single observation or observation fragment. OBX segments can also be used more than once in the message, and may be followed by one or more NTE segments in order to provide additional notes and comments about the observation.

6.2.2.3. Synthesis of previous work

Data from the CR SANTEC (like eSanté EFES or HealthNet LABO) provides us with the LIS landscape in Luxembourg as it was in 2008, as shown in Table 2

	Report publishing system for in patient	Report publishing system for out patient	Codification
CHL	<i>Cyberlab (GLIMS)</i>	<i>Post / fax / HealthNet</i>	Internal code
HSL	Test result integrated in the HIS	<i>Post / fax</i>	Internal code
HK	Dedicated software + paper	<i>Post / fax</i>	Internal code
Zitha	Test result integrated in the DIPS	<i>Post / fax / HealthNet</i>	Internal code
CHEM	There is link in the EMR to access test result with an external viewer.	<i>Post / fax</i>	LOINC ???
LNS	N/A but BD of GLIMS is accessed by the personnel under postgre	<i>Post / fax / HealthNet // Pour SUBI par mail encrypté (PGP) en test</i>	Internal code

Table 2 :

If your laboratory is not in the table 2 or the information is wrong please complete the field:

Report publishing system for in patient:.....

Report publishing system for out patient:

Codification:

Q2. Questions

Q2-1. Which domain do you cover and for which domain do you send lab results electronically?

Aim of the question:

- To know the lab domains that eSanté can deal with.

Lab Domain	Not covered	Electronically send out			
		Never	Rarely	Often	Always
Microbiology					
Hematology					
Biochemistry					
Immunallergoly					
In-vitro fertilisation (PMA)					
Immunopathology					
Anapathology					
Other:					
Other:					
Other:					
Other:					
Other:					

Q2-2. Where is stored the report?

Aim of the question:

- To determine if all report are in the LIS

- In the LIS
- In another database:
- ...

Q2-3. Do you send partial lab results to the prescriber?

Aim of the question:

- To know if eSanté will have to deal with partial results.

-Yes, results from a prescription with several tests of potentially various durations are sent to the prescriber, separated into partial results.

- No, skip the questions Q2-4 and Q2-5.

- ...

Q2-4. How are partial results and summary reports distinguished?

Aim of the question:

- To know how eSanté can tell partial results from summary reports.

- Partial results are distinguished by:

- a flag
- a naming convention
- a version
- ...

Q2-5. Are published **partial reports updated? And if so, how?**

Aim of the question:

- To know how eSanté should deal with the update of partial results.

- Addendum, i.e. not removing the original, just adding to it.
- New version replacing the original.
- Modification of the current report, without versioning.
- No update of partial report.
- ...

Q2-6. Are published **summary reports updated? And if so, how?**

Aim of the question:

- To know how eSanté should deal with the update of summary results.

- The already validated report **can** be invalidated. Modifications will be done and then the report will be validated and published again.
- The already validated report **cannot** be invalidated. Modifications are considered as additional information linked or added to the existing report.
- The already validated report **cannot** be invalidated. Modifications are considered as a completely new version of the report, which will replace the existing report (version management).
- ...

Q2-7. Is your lab report structured?

(Structure = separable elements: patient identification (header), main report (body), conclusion and addition of a modification)

Aim of the question:

- To know if the content of the lab report follows a computer readable structure, which will be able to be transformed into a report in HL7, CDA level 2 and 3?

- No, there is no specific structure.

- Yes, the report is "structured", **but** is not computer processable (e.g. template WORD to structure the report).

- Yes, the report is "structured" **and** partially computer processable, i.e. not all elements are represented in a structured way.

- Yes, the report is "structured" **and** fully computer processable.

- ...

Q2-8. If yes, what is the content structure of your lab report?

(Structure = separable elements: patient identification (header), main report (body), conclusion and addition of a modification)

Aim of the question: Informative only

Header:

-
 -

Body:

-
 -

Conclusion:

-
 -

Q2-9. How many templates of reports do you manage today? Can you provide a list or copy of templates?

Aim of the question:

- To determine the effort of the lab to produce new style sheet

Q2-10. Does your laboratory create cumulative reports with anteriority of different encounters with the patient?

Aim of the question:

- To know current practice

Q2-11. Is the report in line with the ISO 15189?

Aim of the question: Informative only

- Yes
- No

Q2-12. What is the system of codes used today to express the measurement units inside a report?

Aim of the question:

To determine if laboratories have the possibilities to use a unified system of codes representing measurement units or not in the future.

- ISO 2955
- International System
- UCUM
- ...

Q2-13. Based on which standard(s) are lab reports exchanged between the LIS and other **internal** systems (publishing, archiving, administrative...)?

Aim of the question:

- Based on the existing transmission formats we will try to determine if there is currently practice that we can use with the eSanté platform

- HL7 Message: ...
 - V2
 - V3
- Proprietary
- Other:

Q2-14. If you communicate your lab report electronically, what standard(s) do you use?

Aim of the question:

- Based on the existing transmission formats we will try to determine the effort required for laboratories to produce reports according to the HL7 CDA standard.

- No electronic communication

Structure

- The report is structured according to the standard HL7 **CDA level 2**.
- The report is structured according to the standard HL7 **CDA level 3**.
- Elements of the report are structured according to the XML file of **HealthNet LABO**.
- Elements of the report are structured according to an XML file (**different** from CDA and HealthNet LABO).
- Unstructured document (e.g. PDF or RTF format).
- Proprietary

Transport

- HL7 messages:
 - V2
 - V3
- Proprietary
- ...

Q2-15. Do you also publish partial results to patients?

Aim of the question: Informative only

- yes, always.
- yes, only if asked for.
- no, he only gets the summary report.

Q2-16. Do you send different summary reports to patient and prescriber?

Aim of the question:

- To determine whether eSanté has to deal with separate distribution paths for summary report interpretations.

- no, this is the same.
- yes, prescriber receives a summary report with interpretation and patient only raw data.
- ...

Q2-17. Do you sometimes insert some graphics inside your lab report?

Aim of the question:

- To determine if results in form of graphics are inserted in the lab report (e.g. as JPEG pictures, charts...).

- Yes, graphics are inserted inside the lab report as a specific object
In format: JPEG, GIF ...
- No, graphics are never inserted into the lab report.
- No, but references to graphics can be found in the lab report.
- ...

**Q2-18. Does your laboratory subcontract tests with other countries¹?
If yes, which domains are you subcontracting and with which country?**

Aim of the question:

- To know if eSanté could receive data from foreign laboratories.

Lab Domain	Belgium	France	Germany	Other country
Microbiology				
Hematology				
Biochemy				
Immunallergoly				
In-vitro fertilisation (PMA)				
Immunopathology				
Anapathology				
Other:				
Other:				
Other:				
Other:				
Other:				

Q2-19. If there is subcontracting, which lab is responsible for publishing the report?

Aim of the question:

- To determine who will transmit the results to eSanté.

- The lab that performs the test.
- The lab who asked for the test.
- Both.

Others remarks:

¹ You make an analyses with other labs

6.3. Metadata associated with the lab report

6.3.1. Issue: Describing the administrative and the medical context

Each lab report is linked to an administrative context (patient identification) and a medical context (lab test). Data associated with these contexts are called *metadata*. In this section, data associated to medical context (lab test) are examined.

These data usually depend on the specific requirements and the internal organization of the laboratory. It is therefore unrealistic to expect a high level of standardization of these metadata between the various laboratories.

In order to enable the data exchange platform eSanté to process metadata associated with the lab report (= make the information understandable for all the different actors and usable for anonymous statistics) it is necessary to standardize these data to a maximal degree.

6.3.2. IHE profiles and Standards

6.3.2.1. IHE Profiles

The IHE Sharing Laboratory Reports content profile (XD-LAB) defines the laboratory report as an electronic content to be shared in a community of healthcare settings and care providers, using one of the document sharing profiles defined in ITI-TF.

6.3.2.2. CDA (Clinical Document Architecture)

Metadata describing the clinical context of the lab report are inserted inside the header of the document CDA.

Remark: Please consult page 17 for more details on HL7 CDA.

6.3.3. Synthesis of previous work

There has been no collection of such data previously.

Q3. Questions

Q3-1. What are the research parameters in your system? (What are data used to retrieve a lab result?)
Aim of the question: - To know the metadata for patient result findings
- Patient identification information: Name, adress, matricule - Diseases - Test types -.....

Q3-2. What are the metadata available in your LIS? (i.e. data that are not patient administrative data or the lab report itself)																																																																																															
Aim of the question: - Provide details on the information in relation to the lab report metadata that eSanté could receive.																																																																																															
<table border="1"> <thead> <tr> <th>Lab test Metadata</th> <th>Never</th> <th>Rarely</th> <th>Often</th> <th>Always</th> </tr> </thead> <tbody> <tr><td>Internal report reference [Uniqueld]</td><td></td><td></td><td></td><td></td></tr> <tr><td>Document title [title]</td><td></td><td></td><td></td><td></td></tr> <tr><td>Author of the report [authorPerson]</td><td></td><td></td><td></td><td></td></tr> <tr><td>Role of the author [authorRole]</td><td></td><td></td><td></td><td></td></tr> <tr><td>Laboratory identification [authorInstitution]</td><td></td><td></td><td></td><td></td></tr> <tr><td>Biologist validiting the lab report (name) [legalAuthenticator]</td><td></td><td></td><td></td><td></td></tr> <tr><td>Report validation time (day, hour and minutes)</td><td></td><td></td><td></td><td></td></tr> <tr><td>Prescriber name [intendedRecipient]</td><td></td><td></td><td></td><td></td></tr> <tr><td>Prescription ID [OrderId]</td><td></td><td></td><td></td><td></td></tr> <tr><td>Prescription date</td><td></td><td></td><td></td><td></td></tr> <tr><td>Other physician in copy [intendedRecipient]</td><td></td><td></td><td></td><td></td></tr> <tr><td>Copy for the patient [intendedRecipient]</td><td></td><td></td><td></td><td></td></tr> <tr><td>Partial result OR summary report</td><td></td><td></td><td></td><td></td></tr> <tr><td>Lab test domains (e.g. Hematology, biochimy...) [typeCode]</td><td></td><td></td><td></td><td></td></tr> <tr><td>Type of specimen (blood, urine, stools, biopsy ...)</td><td></td><td></td><td></td><td></td></tr> <tr><td>Test done in emergency</td><td></td><td></td><td></td><td></td></tr> <tr><td>Abnormal biologic result classification</td><td></td><td></td><td></td><td></td></tr> <tr><td>Sensitive data classification</td><td></td><td></td><td></td><td></td></tr> </tbody> </table>	Lab test Metadata	Never	Rarely	Often	Always	Internal report reference [Uniqueld]					Document title [title]					Author of the report [authorPerson]					Role of the author [authorRole]					Laboratory identification [authorInstitution]					Biologist validiting the lab report (name) [legalAuthenticator]					Report validation time (day, hour and minutes)					Prescriber name [intendedRecipient]					Prescription ID [OrderId]					Prescription date					Other physician in copy [intendedRecipient]					Copy for the patient [intendedRecipient]					Partial result OR summary report					Lab test domains (e.g. Hematology, biochimy...) [typeCode]					Type of specimen (blood, urine, stools, biopsy ...)					Test done in emergency					Abnormal biologic result classification					Sensitive data classification				
Lab test Metadata	Never	Rarely	Often	Always																																																																																											
Internal report reference [Uniqueld]																																																																																															
Document title [title]																																																																																															
Author of the report [authorPerson]																																																																																															
Role of the author [authorRole]																																																																																															
Laboratory identification [authorInstitution]																																																																																															
Biologist validiting the lab report (name) [legalAuthenticator]																																																																																															
Report validation time (day, hour and minutes)																																																																																															
Prescriber name [intendedRecipient]																																																																																															
Prescription ID [OrderId]																																																																																															
Prescription date																																																																																															
Other physician in copy [intendedRecipient]																																																																																															
Copy for the patient [intendedRecipient]																																																																																															
Partial result OR summary report																																																																																															
Lab test domains (e.g. Hematology, biochimy...) [typeCode]																																																																																															
Type of specimen (blood, urine, stools, biopsy ...)																																																																																															
Test done in emergency																																																																																															
Abnormal biologic result classification																																																																																															
Sensitive data classification																																																																																															

[confidentialityCode] (consultation d'annonce)				
Language [languageCode]				
Document format (e.g. CDA + xslt, PDF) [formatCode]				
Version number				
Parent document ID (if exist)				
Parent document relationship (addendum, replacement, etc.)				
Speciment taking date (<i>Prélèvement</i>) Or Brought date (<i>Apporté</i>)				
Specimen reception time (day, hour and minutes)				
Quality of the specimen (Insufficient ...)				
Comments of documents [comments]				
Other :				
Other :				
Other :				

Q3-3. Are metadata sent to other systems (Archiving, publishing, EMR...)?

Aim of the question:

- Based on the existing metadata, we will try to determine the effort required to send data to eSanté in a standardized way.

- No.
- Yes, all of them.
- Yes, partially - > Please tick lab test metadata that you can send

Lab test Metadata	Put a "X" if sent
Internal report reference [Uniqueld]	
Document title [title]	
Author of the report [authorPerson]	
Role of the author [authorRole]	
Laboratory identification [authorInstitution]	
Biologist validating the lab report (name) [legalAuthenticator]	
Report validation time (day, hour and minutes)	
Prescriber name [intendedRecipient]	

Prescription ID [OrderId]	
Prescription date	
Other physician in copy [intendedRecipient]	
Copy for the patient [intendedRecipient]	
Partial result OR summary report	
Lab test domains (e.g. Hematology, biochimy...) [typeCode]	
Type of specimen (blood, urine, stools, biopsy ...)	
Test done in emergency	
Abnormal biologic result classification	
Sensitive data classification [confidentialityCode] (consultation d'annonce)	
Language [languageCode]	
Document format (e.g. CDA + xslt, PDF) [formatCode]	
Version number	
Parent document ID (if exist)	
Parent document relationship (addendum, replacement, etc.)	
Specimen taking date (<i>Prélèvement</i>) Or Brought date (<i>Apporté</i>)	
Specimen reception time (day, hour and minutes)	
Quality of the specimen (Insufficient ...)	
Comments of documents [comments]	
Other :	
Other :	
Other :	

Q3-4. **If so**, based on which standard(s) are metadata exchanged with other systems?

Aim of the question:

- To know if there is standard currently used to send metadata.

- HL7 Message: ...

V2

V3

- Proprietary

- Other:

Q3-5. How the receivers (e.g. prescribers) are identified for electronic communication?

Aim of the question:

- To know the current practice and usage of the CNS code

- CNS code

- Matricule

- Another unique ID: ...

Other remarks:

Sending of the answers

Thank you to send your answers to esante_labo@ms.etat.lu

List of Questions

Patient Identification

- Q1-1 Which patient identifier is used inside the LIS?
- Q1-2 How are identified EU agents and foreigner patients without matricule?
- Q1-3 How do you manage the patient identification with subcontractor?
- Q1-4 Which components of patient identification data can you provide?
- Q1-5 Which standard(s) is (are) used to transmit these identifying data from the HIS to the LIS?
- Q1-6 How do you manage the identification of a person who cannot be identified (e.g. in emergencies, analysis under "X", VIP ...)?
- Q1-7 If you use temporary patient IDs do you have a means to distinguish them from definite IDs?
- Q1-8 How do you distinguish unidentified data (e.g. in emergencies, analysis under "X", VIP ...) from identified data?
- Q1-9 Are there unique patient identifiers in the HIS/LIS, which do not correspond to physical persons (e.g. analyses for animals, tests patient IDs etc.)?
- Q1-10 If these identifiers are distinguishable from normal patient IDs, how do you distinguish them?
- Q1-11 In which system is the merging of two patient identities done?
- Q1-12 If you merge the patient ID, which communication protocol do you use?
- Q1-13 How is the updating/changing of patient identifying demographic data handled between the connected systems?
- Q1-14 If you handle the update of administrative data, which communication protocol do you use?

Laboratory report

- Q2-1 Which domain do you cover and for which domain do you send lab results electronically?
- Q2-2 Where is stored the report?
- Q2-3 Do you send partial lab results to the prescriber?
- Q2-4 How are partial results and summary reports distinguished?
- Q2-5 Are published partial reports updated? And if so, how?
- Q2-6 Are published summary reports updated? And if so, how?
- Q2-7 Is your lab report structured?
- Q2-8 If yes, what is the content structure of your lab report?
- Q2-9 How many templates of reports do you manage today? Can you provide a list or copy of templates?
- Q2-10 Does your laboratory create cumulative reports with anteriority of different encounters with the patient?
- Q2-11 Is the report in line with the ISO 15189?
- Q2-12 What is the system of codes used today to express the measurement units inside a report?
- Q2-13 Based on which standard(s) are lab reports exchanged between the LIS and other internal systems (publishing, archiving, administrative...)?
- Q2-14 If you communicate your lab report electronically, what standard(s) do you use?
- Q2-15 Do you also publish partial results to patients?
- Q2-16 Do you send different summary reports to patient and prescriber?
- Q2-17 Do you sometimes insert some graphics inside your lab report?
- Q2-18 Does your laboratory subcontract tests with other countries?
If yes, which domains are you subcontracting and with which country?
- Q2-19 If there is subcontracting, which lab is responsible for publishing the report?

Metadata associated with the lab report

Q3-1 What are the research parameters in your system? (What are data used to retrieve a lab result?)

Q3-2 What are the metadata available in your LIS? (i.e. data that are not patient administrative data or the lab report itself)

Q3-3 Are metadata sent to other systems (Archiving, publishing, EMR...)?

Q3-4 If so, based on which standard(s) are metadata exchanged with other systems?

Q3-5 How the receivers (e.g. prescribers) are identified for electronic communication?