

HL7 CDA-CH

Specification for a number of electronic medical documents
in the context of the national Swiss eHealth Strategy

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Agenda

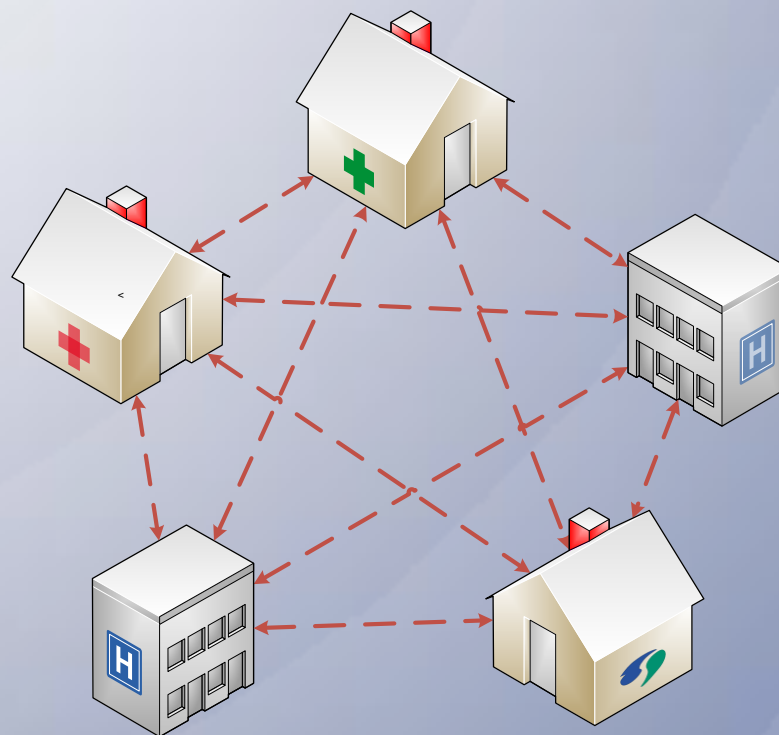
1. Motivation
2. Basics for HL7 CDA-CH
3. CDA-CH
4. Case Study „hip joint replacement“
5. Discussion, conclusions and lessons learned

Motivation

- Swiss „eHealth“ strategy
 - Based on HL7 there might several goals of the national strategy be solved efficiently, sustainably and interoperable over multiple countries.
 - Example: goal A1
Until the end of 2008 standards for the exchange of relevant information from the patient's personal medical dataset are available
 - HL7 Switzerland actively participates in the national efforts related to the Swiss eHealth strategy.

Motivation

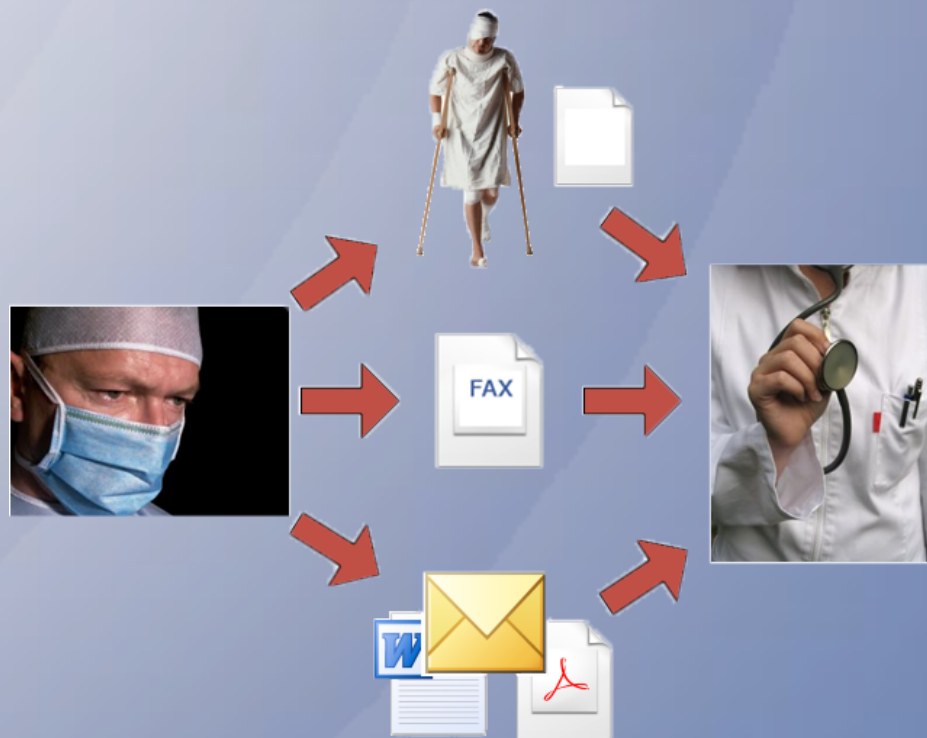
- During complex clinical treatment patients may need to visit multiple healthcare organizations



Motivation

Documents during patient treatment:

- History of present illness at admission
- Consultation notes
- Operative notes
- Discharge or transfer summarization notes
- Medication
- ...and much more

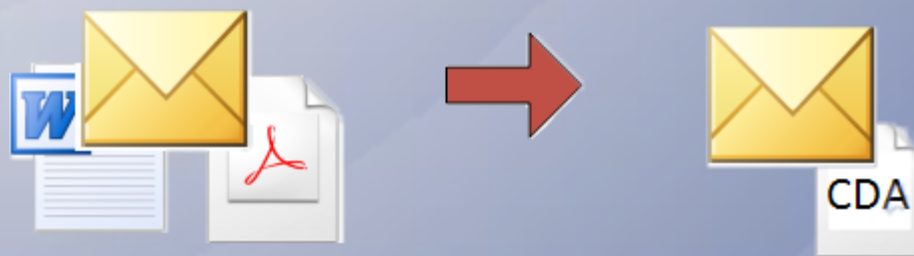


Motivation

Documents during patient treatment:

- Human readability and
- machine readability,
- without losing information caused by media transitions

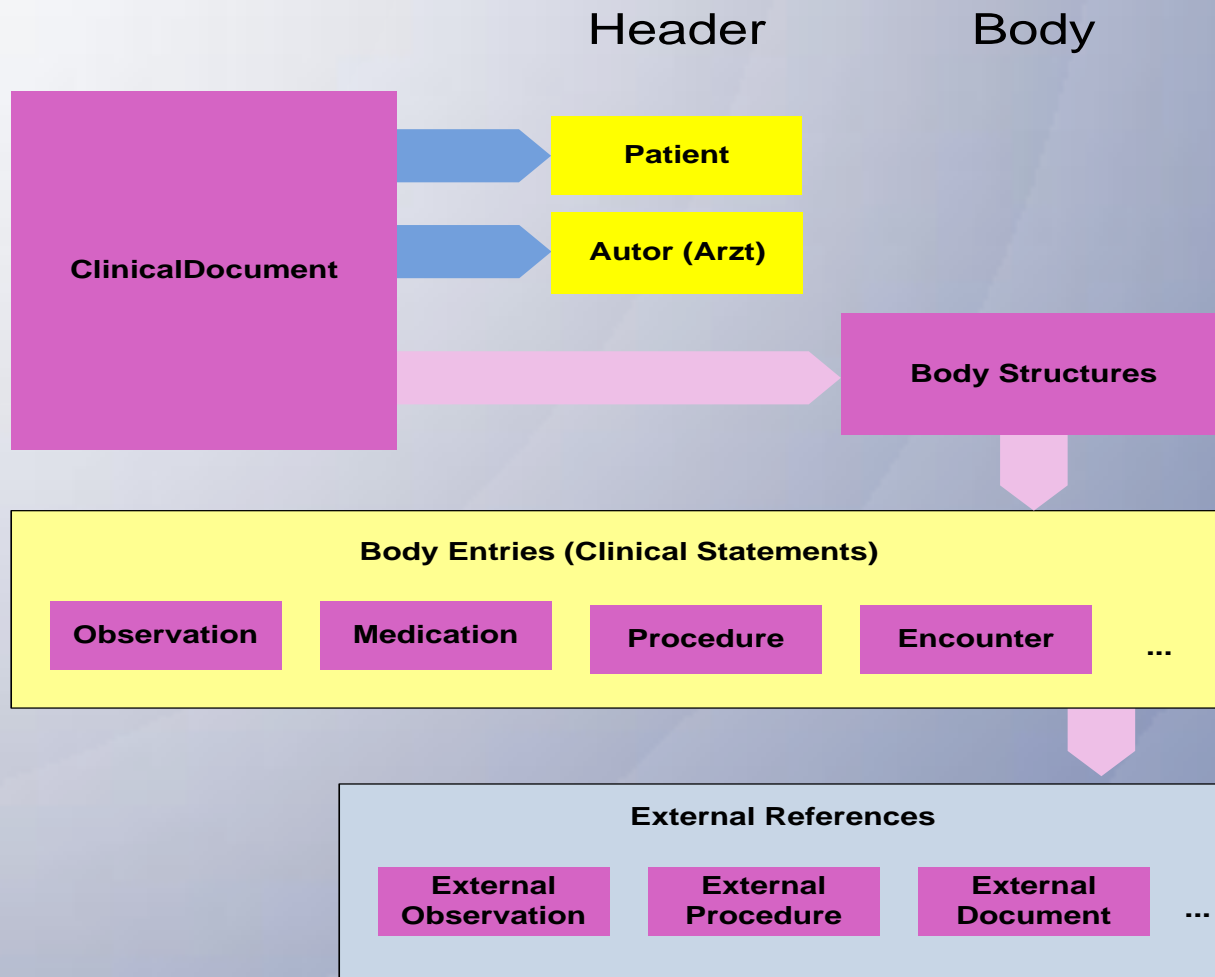
→ HL7 CDA instead of Word, PDF



Interoperability

- In Switzerland we want to achieve interoperability across multiple stakeholders in public health:
 - Using standards - like HL7 V3
 - Using worldwide unique IDs of objects – like OIDs
 - Using specialized and well known code systems – like LOINC, SNOMED, ICD
 - Using integration profiles and implementation guides – like IHE, VHitG

Basics: HL7 V3 / CDA R2

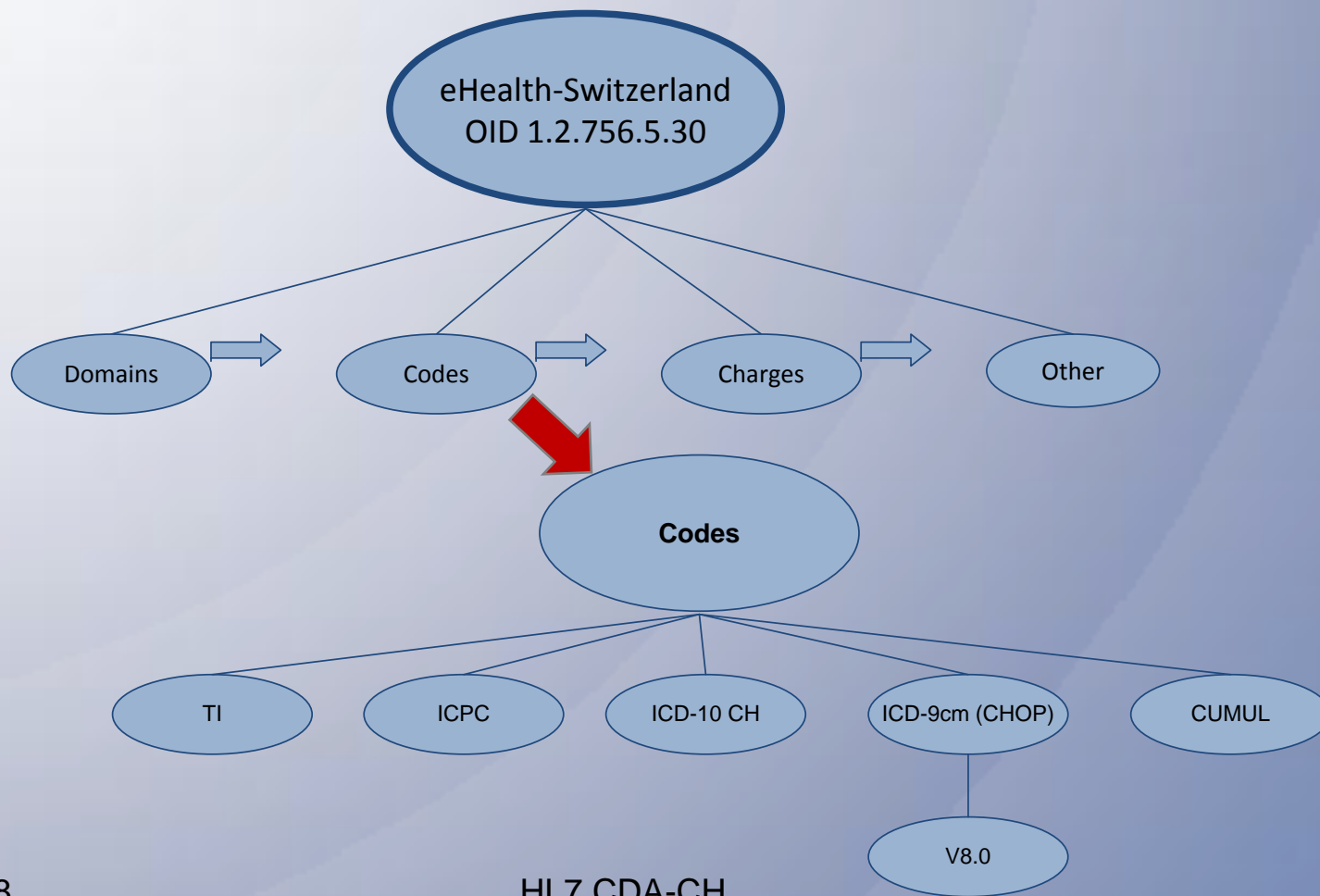


Basics: HL7 V3 / CDA R2

Our key success factors match exactly the scope of CDA:

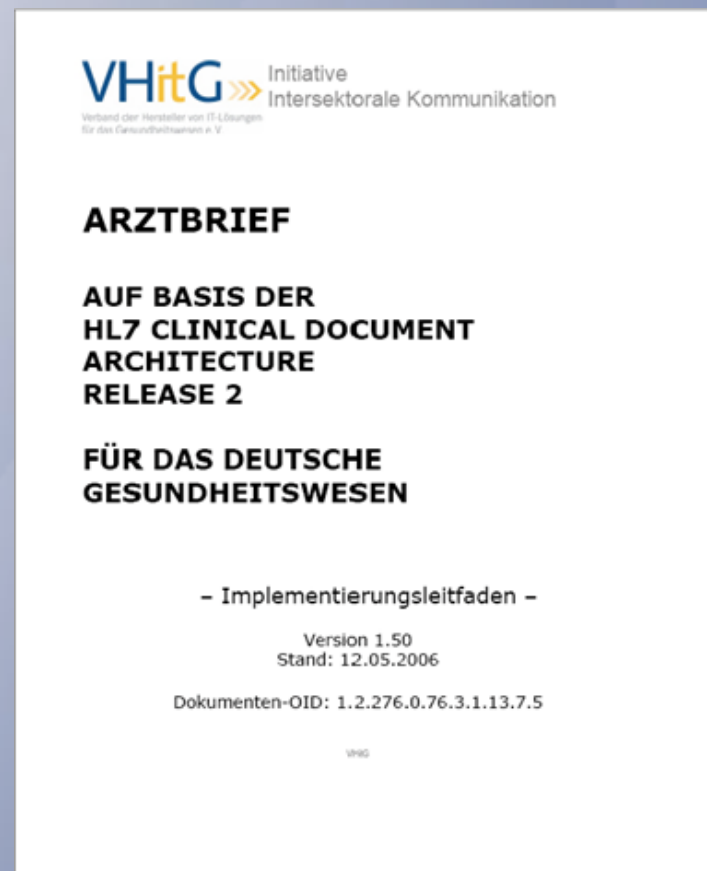
- CDA Header
 - enable clinical document **exchange across** and within **institutions**
 - facilitate clinical **document management**
 - facilitate compilation of an individual patient's clinical documents into a **lifetime electronic patient record** (goal A7 of the Swiss eHealth Strategy)
- CDA Body
 - can be either an unstructured **blob**,
 - or can be comprised of **structured markup** containing sections, entries und external references
 - allows to structure information in multiple levels (CDA level 1-3)

Basics: OID



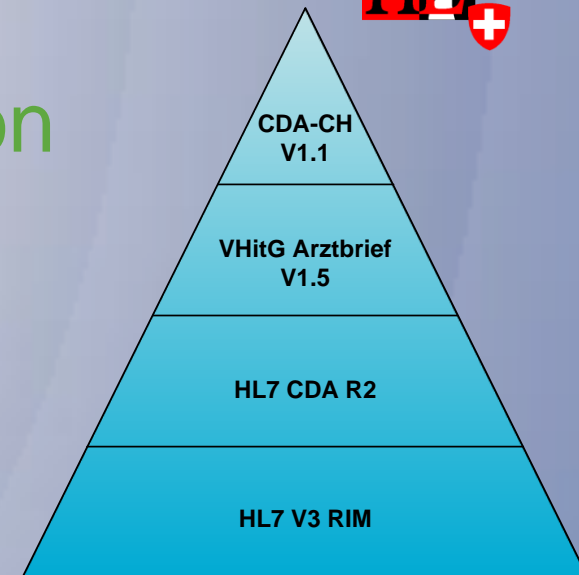
Basics: VHitG Arztbrief

- German CDA Implementation guide
- Based on CDA R2
- 150 pages
- 4 application scenarios
- A lot of samples – in German :-)
- Implementation rules – applicable for Switzerland



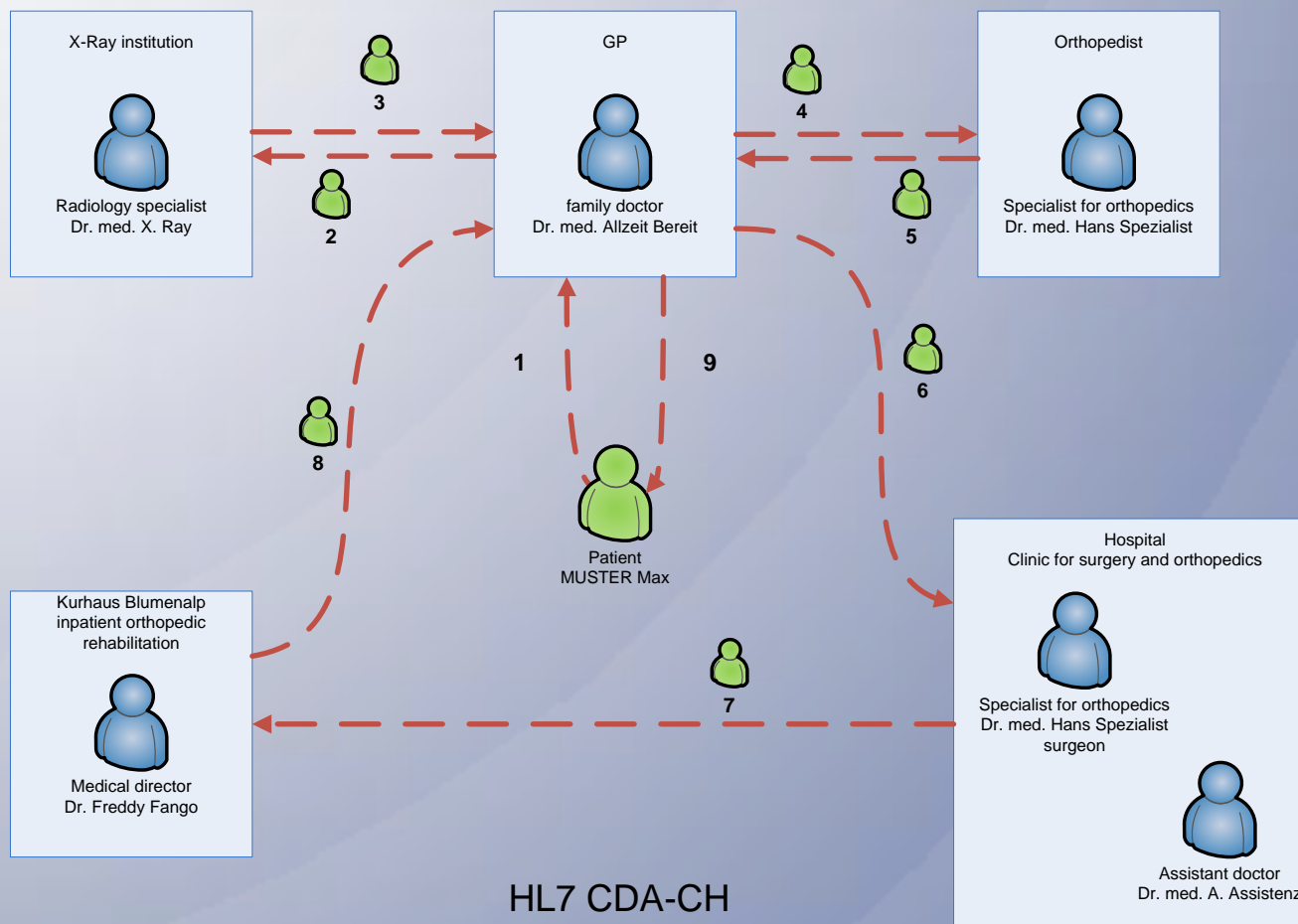
CDA-CH Specification

- Based on the German VHitG Arztbrief
- Specifies how Swiss specialties are handled („Swissness“)
- Contains case study „hip joint replacement“
- Supporting documents available
 - 10 examples of medical documents exchanged between the involved health professionals of the case study:
 - Sample letters (pdf)
 - Sample CDA document (xml)
 - Sample Stylesheet for rendering in a Webbrowser
- Translations
 - German (Original), French, Italian
- Public consultation for nomination as a national standard closed



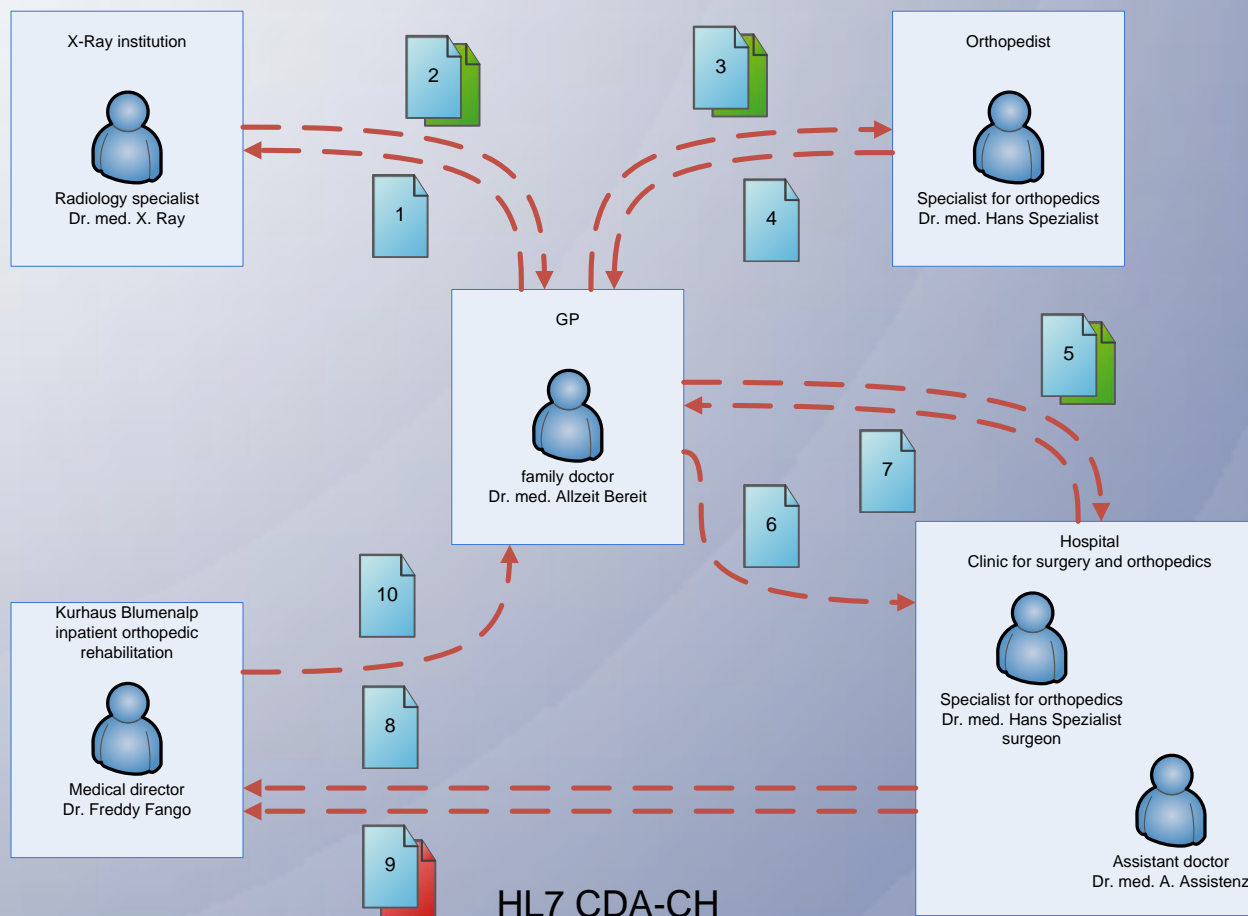
Case study „hip joint replacement“

- Patient – Workflow



Case study „hip joint replacement“

- Document - Workflow → Supporting Documents



Implementation of the case study

CDA
(XML)



Stylesheet
(XSL)



Präoperative Untersuchung - Windows Internet Explorer

M:\Projekte\HL7 Schweiz\xEPR Arbeitsgruppe\CDA-CH_SupportingDocuments\V1.1\de\6-P Google CH

Präoperative Untersuchung

Patient:	MUSTER Max	Geburtsdatum:	12. Dezember 1938
	Leidensweg 10 9999 Specimendorf Tel p: +41.32.685.12.34 Tel g: +41.32.123.77.88	Patienten IDs:	123.71.332.1151.2.756.5.30.1.6.1 8733 1.2.756.888888.3.1
Erzeugt am:	28. Oktober 2007	Geschlecht:	männlich

Präoperative Untersuchung

Status

- cardiopulmonal:
- gastrointestinal:
- urogenital:
- neurologisch:
- Bewegungsapparat:

Aktuelle Befunde aus der körperlichen Untersuchung, häufig gegliedert nach Organsystemen

Laborwerte

Analysenbezeichnung	Referenzwert	27.10.2007
Glucose [mmol/l]	4.2 - 6.1	5.8

Fertig Lokales Intranet | Geschützter Modus: Aktiv 100%

Summary

- HL7 CDA-CH Specification (ge, fr, it)
incl. Supporting Documents
www.hl7.ch (click „Der HL7-Standard“, „Publikationen“)
- OID registration authority (www.oid-register.ch)
- Public consultation for nomination as a national standard closed with only positive feedback

Conclusion

- In Switzerland about 80% of GPs use Paper and not yet Software for their internal medical documentation
 - All GPs use computers for payroll, administrative work and internet access
- **CDA does not require investments* at receivers site**
- Human readability
(thanks to CDA)
 - Rendering in each available Web Browser
(thanks to XML/XSL)

* Investments needed as soon as the information should be electronically processed

Lessons learned

- CDA-CH supports a useful part of the needed standardization and is **today** ready to use
- Nomination as a national standard
- The HL7 working group did a good job and therefore there are further projects around the Swiss „eHealth“ strategy in the pipeline

Upon questions

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