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HL7® FHIR® established as the standard – so what does that mean?

Digital Health Projectathon - Workshop

Portrait

PhD. sc. nat. Roeland Luykx

- Chair/President HL7 Benutzergruppe Schweiz
- Founder & CEO RALY GmbH
- 20+ years eHealth Experience
- eHealth Consultant
- Expert eHealth Standards (HL7, IHE,...)

So what does that mean? - Agenda

Some Facts

- DigiSanté
- Swiss Health Data Space (SwissHDS)
- The HL7® FHIR® Standard
- Trademark HL7® FHIR®
- FDMG Decision: HL7® FHIR® mandatory as foundation for SwissHDS

So what does that mean?

- Does the decision solve interoperability
- What's Next?

Q & A

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Some Facts

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DigiSanté

DigiSanté

- DigiSanté is the Swiss federal government's multi-year program to digitalise and modernise healthcare data flows across the Swiss health system
- It is coordinated by the Federal Office of Public Health (FOPH) together with cantons, associations, and industry partners
- The programme bundles multiple initiatives – from electronic patient records to registries and reporting – under one strategic umbrella
- The Swiss Health Data Space (SwissHDS) and the FDMG's decision to mandate HL7® FHIR® are both concrete building blocks delivered under DigiSanté

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Swiss Health Data Space (SwissHDS)

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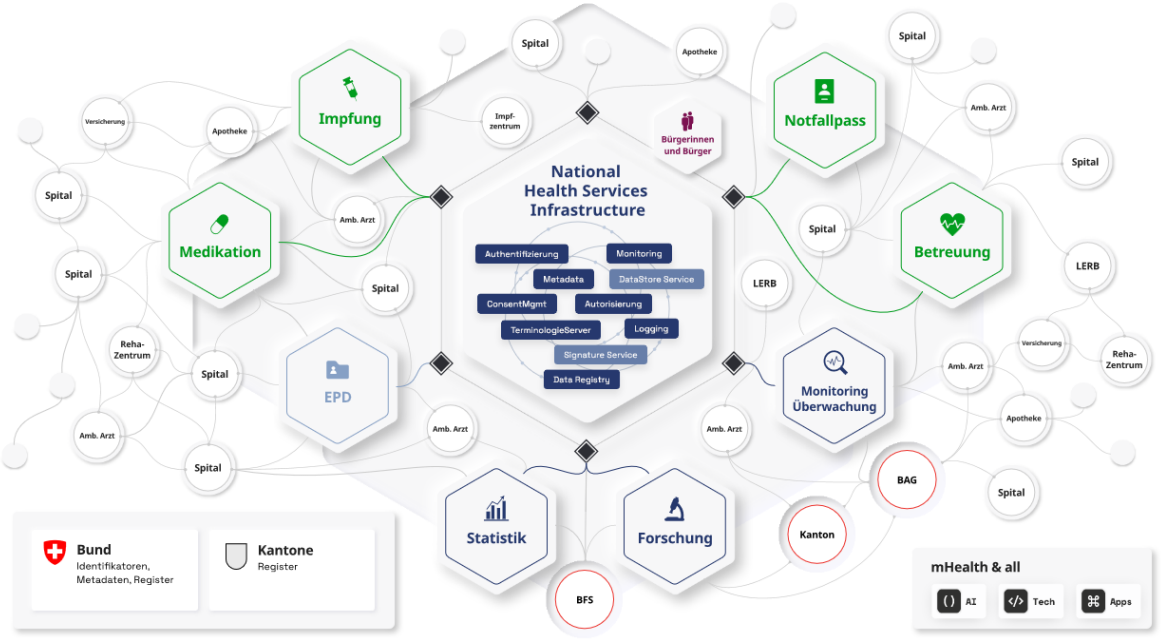
- SwissHDS is the planned national infrastructure and governance framework for secure, structured exchange and reuse of health data in Switzerland
- It aims to connect existing and future data sources – EPR, registries, cantonal systems – through common technical and semantic standards
- HL7® FHIR® has been designated as the mandatory technical foundation for data exchange within SwissHDS
- Governance, scope, and rollout timeline are being defined progressively by the FDMG and DigiSanté programme bodies



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The HL7® FHIR® Standard

The HL7® FHIR® Standard

- FHIR => Fast Healthcare Interoperability Resources
- A modern, web-based standard (REST, JSON/XML) for exchanging structured healthcare data between systems
- Built from modular “Resources” (Patient, Observation, Medication, etc.) that can be combined and extended for different use cases
- Designed for fast implementation and testing, and extended through “profiles” for national or domain-specific needs (IG’s)
- Developed and maintained by HL7 International, with active, open, community-driven development

The HL7® FHIR® Standard

- **R4** (2019, production standard): basis for CH Core and the Swiss EPR; widest vendor and tooling support, ~83% of FHIR users today
- **R5** (2023, trial use): new capabilities such as topic-based subscriptions, but breaking changes and limited vendor adoption so far
- **R6** (ballot since Jan 2026, final expected 2027+): designed to stay backward-compatible with R4's normative resources

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- Using in i.e. documents, presentations in a place of prominence refer to it as the "HL7® FHIR® standard"
- In subsequent uses, please refer to it as the "FHIR® standard" or "FHIR®", using the ® symbol as often as practical

Trademark HL7® FHIR®

Respect also the other HL7 Standards

- Incorrect usage: HL7 vs FHIR as keywords!
  - HL7 means the organization
  - FHIR is the standard of HL7
- Correct usage: i.e. HL7® v2 vs HL7® FHIR®

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FDMG Decision: HL7® FHIR® Mandatory for SwissHDS

FDMG Decision: HL7® FHIR® Mandatory for SwissHDS

- As part of the DigiSanté program, the Fachgruppe Datenmanagement Gesundheit (FDMG) has designated HL7® FHIR® as the mandatory foundation for data exchange within the Swiss Health Data Space (SwissHDS)
- The decision applies to interfaces and data-exchange formats developed under SwissHDS going forward, not only to brand-new systems
- Swiss-specific FHIR profiles and implementation guides will define how the standard is applied to concrete use cases (e.g. EPR, referrals, lab results), see Swiss FHIR IG registry: fhir.ch
- Details on exact scope, timeline, and enforcement are still being finalised by the FDMG and DigiSanté governance bodies

HL7® FHIR® Version Decision

Now

Adopt CH Core (R4) as SwissHDS baseline

Bind SwissHDS interfaces to R4, aligned with the EPR and EU EHDS direction.

As needed

Allow scoped R5-pattern extensions

Only for capabilities R4 genuinely lacks, such as event subscriptions — never a full R5 IG.

Ongoing

Engage in the R6 ballot

HL7 Switzerland shapes normative resources so Swiss needs are reflected in R6.

2027-28

R6 goes normative; MVP phase closes

Reassess migration once R6 is stable and SwissHDS exits its 2026-2028 MVP phase.

2030

Operate against a live EHDS and E-GD

SwissHDS in its services and interfaces phase, E-GD replacing the EPR, EHDS primary and secondary use operational across the EU — R4-to-R6 migration should be underway, not still pending.

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So, what does that mean?

So, what does that mean?

- Organisations should start familiarising themselves with FHIR®
  - Invest in education using FHIR®
  - Look at the Swiss Implementation Guides (see fhir.ch)
  - Creating and storing structured data
- Review current interfaces and roadmaps for FHIR® readiness; plan budget and resources for adoption
- Engage with HL7 Switzerland's working groups to help shape and give feedback on upcoming Swiss profiles (Balloting Process)
- Watch for FDMG and DigiSanté publications on scope, deadlines, and conformance requirements

So, what does that mean?

Education

- HL7 International Training (https://www.hl7.org/training)
- HL7 Austria (https://www.hl7.at/schulungen)
- ahdis AG (https://www.ahdis.ch/en/training)
- RALY GmbH (https://www.raly.ch/en/training)
- Lot more possibilities…

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Does the Decision Solve Interoperability?

What Does “True” Interoperability Require?

- **Structural**: a common technical format so systems can correctly parse and exchange data – this is what FHIR® solves directly
- **Semantic**: shared meaning of data elements, via common terminologies and value sets (e.g. SNOMED CT, LOINC) and agreed Swiss profiles
- **Organizational / process**: aligned governance, policy, and workflows across institutions – technology alone does not solve this
- **Identity resolution**: reliably matching the same patient or provider across systems
- **Conformance & testing**: verifying that implementations actually follow the profiles correctly, not just claim FHIR® support -> Testing at PAT!
- **Security, privacy & consent**: access control and consent management that travels with the exchanged data

Does the Decision Solve Interoperability?

- Structural — solved: FHIR® gives Switzerland a common technical format for exchange
- Semantic — partly: depends on Swiss profiles and terminology bindings still being agreed and maintained
- Organizational, identity, conformance, security/consent — not solved by the mandate alone: these require separate governance, testing, and policy work

Verdict: FHIR® is a strong, necessary foundation – but “true” interoperability depends on how consistently the remaining layers are implemented and governed across the ecosystem

Does the Decision Solve Interoperability?

The APIs to these domains should be done in a common way,
otherwise, the investment increases to implement all these API's separately

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What's Next?

What's Next?

- Decision making on the "open" key points mentioned before, especially the semantic
- Decision making on the roadmap using which FHIR® version.
- Continued collaboration between FDMG, DigiSanté, and HL7 Switzerland to define Swiss FHIR® profiles and governance
- Community feedback opportunities: working groups, projectathons, and public consultations
- Your input matters – get involved with the standardization organizations (ehealthstandards.ch) to help shape the Swiss ecosystem

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Q & A

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