Canada Health Infoway

2023

Pan-Canadian Projectathon

Symposia

Agenda

Session 1: Keynote*: International Interoperability Experience - Switzerland	10:00 – 10:55 AM
Session 2: Primer to the pan-Canadian Interoperability Strategy and Shared Roadmap	11:05 – 11:55 AM
Session 3: Canadian FHIR Exchange (CA:FeX) 2.0	12:05 – 12:50 PM
BREAK	12:50 – 1:30 PM
Session 4: Clinical Session: Achieving pan-Canadian alignment on data elements	1:35 – 2:30 PM
Closing Remarks	2:30 – 3:00 PM

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Advancing Pan-Canadian Interoperability through Pan-Canadian Collaboration

Pan-Canadian Projectathon Symposium

Welcoming remarks

March 23, 2023

Michael Green, President & CEO,
Canada Health Infoway

Our Journey

Building the Infrastructure
Established foundational infrastructure, with investments in core components of an EHR and included standardization of data capture.

Digitization of Health Records
Provisioned EMRs, digital health tools and telehealth solutions, which enabled the capture of clinical information by clinicians in a digital vs. paper format.

Driving Access to Care
Supported proliferation of consumer-facing solutions to increase access to care. Empowered patients to access their health information electronically.

Building on the Foundation
Leveraging what's been done to date, we are pleased to support **strategic federal commitments in advancing data interoperability** and improving health care services for Canadians, aimed at driving better care and outcomes for all.

WE ARE HERE

The time for transformation is now.
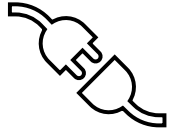
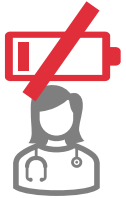We have the foundational infrastructure in place – **let's connect it.**

Other industries have proven what's possible – **let's catch up.**

The health system's status quo is not sustainable – **let's change it.**

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Where interoperability can make a difference:

Provider Burnout
- Duplicate entry, poor data integrity, siloed systems, multiple sign-ins, documentation and administrative tasks
- 73% of survey participants reported at least 1 symptom of burnout*

Inefficient and Costly Care
- Poorly organized data, siloed systems, manual workflows lead to increased cost of care
- Drives up wait-times and inappropriate use of healthcare resources

Poor Patient Access & Experience
- Limited access and control over health information, impacting ability to participate in care and make informed decisions
- Repeat medical history taking

Disconnected Care
- Poor clinical communication tools and interoperability limit ability for providers within circle of care to delivery multi-disciplinary services effectively and efficiently
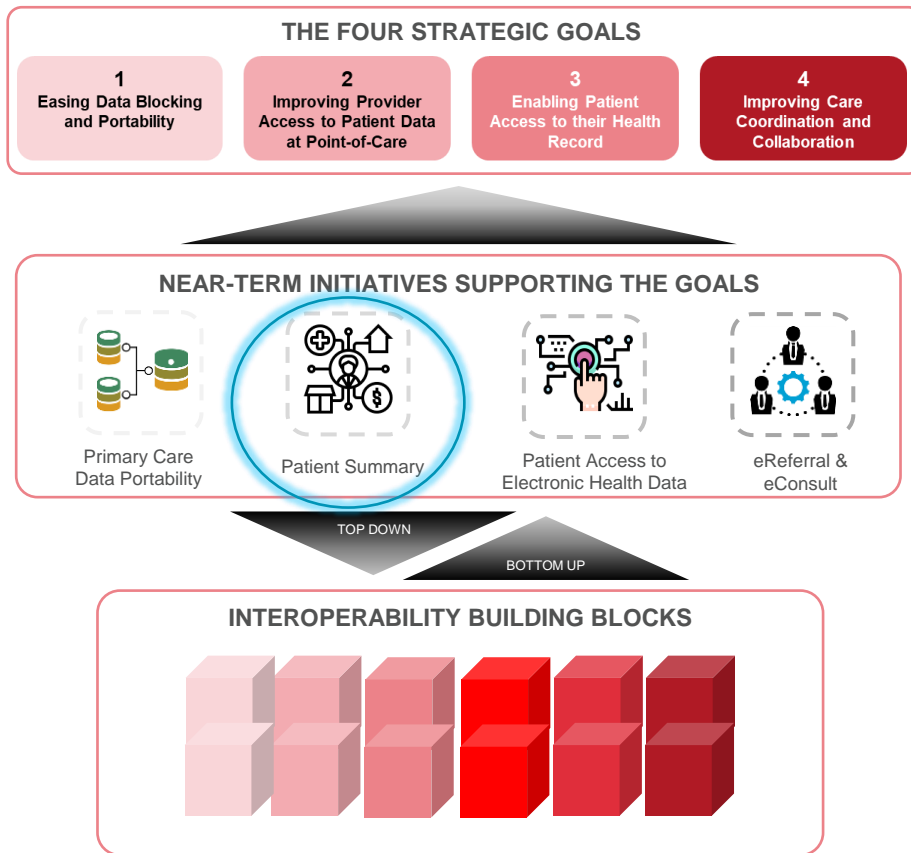
Limitations on Patient Safety
- Dispersed, inaccessible patient data, missing information impacts clinical decisions, including testing, medication, diagnoses, etc.
- Archaic and insecure provider-provider information sharing (i.e., fax)

Limited Secondary Decision-Making
- Segmented and poor quality data, housed in multiple repositories
- Limited ability to efficiently analyze population data to support health system decisions and influence policy

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*Ontario Medical Association physician survey (March 2021)

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A shared roadmap to guide our shared work:

THE FOUR STRATEGIC GOALS

1	2	3	4
Easing Data Blocking and Portability	Improving Provider Access to Patient Data at Point-of-Care	Enabling Patient Access to their Health Record	Improving Care Coordination and Collaboration

NEAR-TERM INITIATIVES SUPPORTING THE GOALS

Primary Care Data Portability

Patient Summary

Patient Access to Electronic Health Data

eReferral & eConsult

TOP DOWN

BOTTOM UP

INTEROPERABILITY BUILDING BLOCKS

Strategic goals across the country and the health system.

Near-term initiatives to drive those goals forward.

As initiatives advance, key **interoperability building blocks** will be developed/matured.

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Pan-Canadian interoperability must be driven by pan-Canadian collaboration.

The Roadmap belongs to all, supports all, and will be implemented hand-in-hand with all.

- Advancing pan-Canadian interoperability requires **partnership, collaboration and alignment** across the entire health ecosystem.

- Infoway will leverage more than **two decades of progress and experience** to convene, guide, and collaborate on this work.

- This week's events demonstrate the power of strong collaboration – **we can't make the journey without you.**

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What your work will mean for Canadians:

Canadians' health information will **move with them through the system,** making it easier and more convenient for them to get the care they need.

Canadians will be empowered to **access, manage and share their health information,** whenever and wherever they connect.

Canadians will be safer as their care plans, test results, medications and referrals **won't fall through the cracks** – and neither will they.

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Tomorrow will be better - if today, we are bold.

- Canadians deserve a world-class health system in which they can get the care they need, where and when they need it.

- To deliver on its promise to Canadians, the health system needs the ability to share information safely and securely.

- Your work is helping to realize a healthier Canada – *thank you.*

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![Canada Health Infoway]

Thank you!

interoperability@infoway-inforoute.ca

VISIT OUR WEBSITE
infoway-inforoute.ca

VISIT OUR SURVEY WEBSITE
insights.infoway-inforoute.ca/

LET'S CONNECT ON LINKEDIN
linkedin.com/company/canada-health-infoway/

LET'S CONNECT ON TWITTER
@infoway

Martin Smock, Dr. rer. nat.

February 2020 – Present

- eHealth Suisse Employee

- Responsible for technical specifications and interoperability

- IHE Switzerland Board Member

- (Active) Member of IHE ITI Technical Committee

Prior to February 2020:

- Product owner and software architect at Swiss Post and Swisscom

- Product owner and software architect for logistic solutions

- PhD in theoretical physics at Universität GHS Essen

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eHealth in Switzerland

M. Smock, Dr. rer. nat.
eHealth Suisse

Digital Health in Switzerland

- 9 Million Habitants

- 4 Languages

- 26 Regions resp. Cantons

- Private care providers

  - 300 Hospitals

  - 1'500 Nursing homes

  - 1'800 Pharmacies

  - 2'000 Home Care Organizations

  - 18'000 Medical Practices

1 Zürich
2 Bern
3 Luzern
4 Uri
5 Schwyz
6 Obwalden
7 Nidwalden
8 Glarus
9 Zug
10 Fribourg / Freiburg
11 Solothurn
12 Basel-Stadt
13 Baselland
14 Schaffhausen
15 Appenzell Ausserrhoden
16 Appenzell Innerrhoden
17 St. Gallen
18 Graubünden / Grischun / Grigioni
19 Aargau
20 Thurgau
21 Ticino / Tessin
22 Vaud / Waadt
23 Wallis / Valais
24 Neuchâtel / Neuenburg
25 Genève / Genf
26 Jura
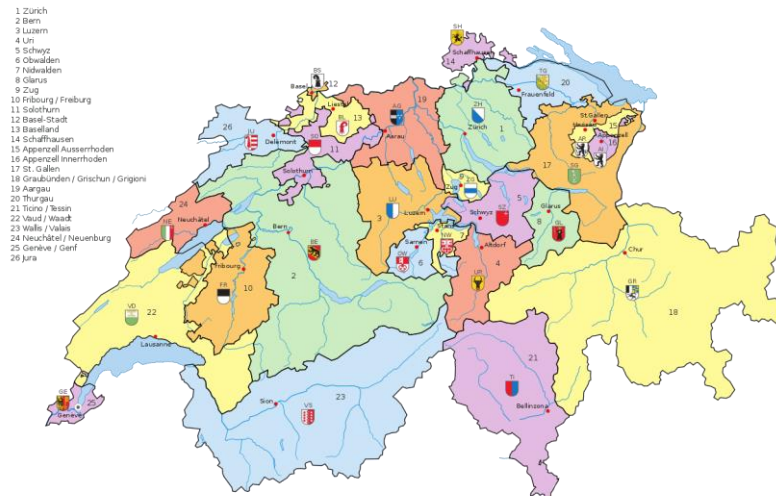
Digital Health in Switzerland

- While the overall quality of the Swiss healthcare is ranked high, the degree of digitalization and digitalized services quite low.

- The number of medical practices using electronic documentation tools now exceeds 80%, but is significantly lower than in other countries.

- Most used communication is exchange of health data between healthcare professionals via E-Mail.

- The use of other digitalized services (e.g., Telemedicine, Prescription) is limited.

- Patients are typically don't have access to their health data.
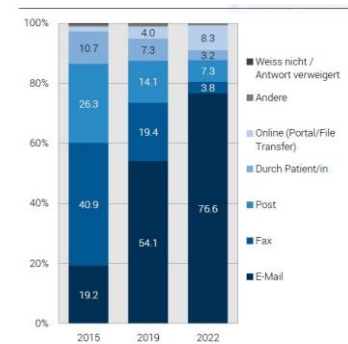
Quelle: Commonwealth Fund – International Health Policy Survey 2015, 2019 und 2022   © Obsan 2023

Health Care on federal and cantonal level

Federal Level

- One ministry of health with responsibility for certain topics, e.g., health insurance and epidemics control.

Cantonal Level

- 26 ministries of health

- 26 health laws and regulations

- 26 healthcare systems

Swiss Electronic Patient Record

- The political and legal competence for Health is in the hands of the 26 cantons.

- While the laws and regulations are harmonized to a certain degree, there are local differences.

- Starting from 2010 several cantons started projects for cantonal electronic health records.

- To ensure interoperability for cross cantonal exchange and harmonization, the federal government was authorized to build the legal basis for a nationwide electronic health record.

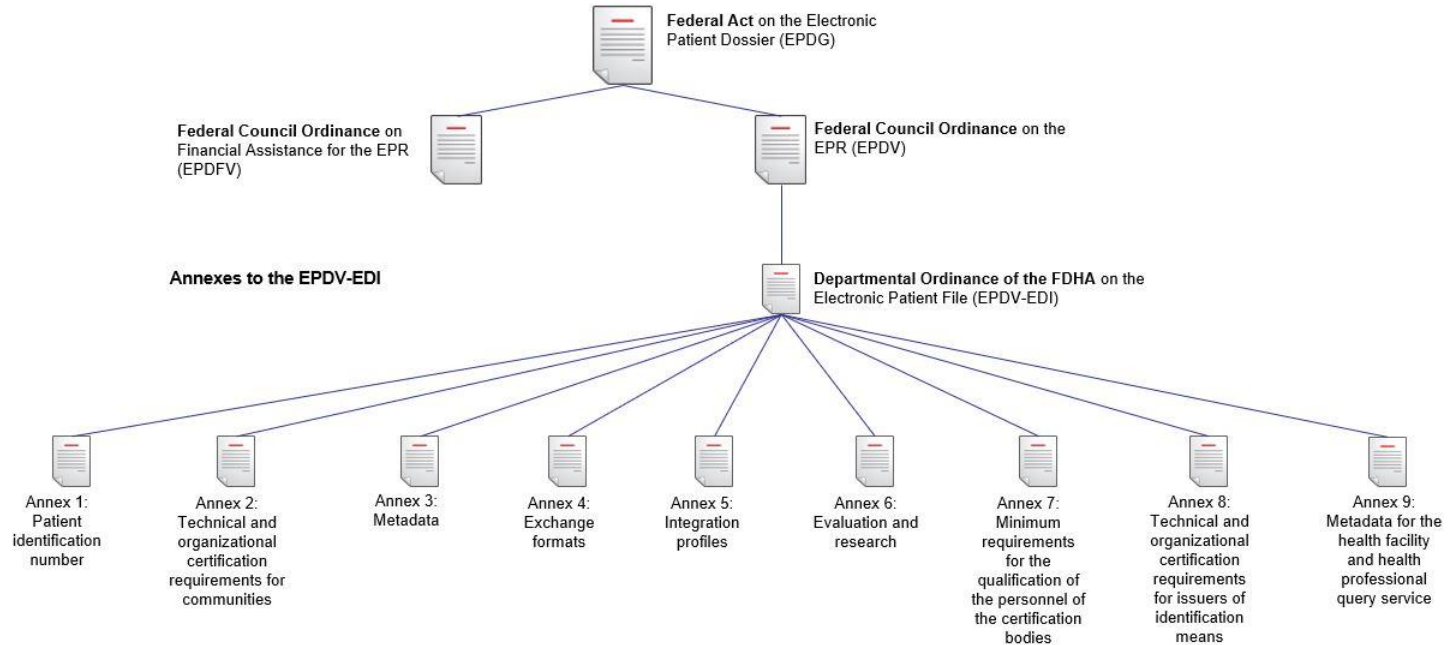# Swiss Electronic Patient Record

- Legal requirements:

  - Internet based platform for health information exchange.

  - Document based.

  - Patient Opt-In.

  - Managed by the patients.

  - Breaking the glass access for healthcare professionals.

  - Mandatory for Hospitals, Birth Clinics and Nursing Homes.

  - Strong identification and authentication.

 - Strong data privacy and protection.

Legal Framework

Federal Act on the Electronic Patient Dossier (EPDG)

Federal Council Ordinance on Financial Assistance for the EPR (EPDFV)

Federal Council Ordinance on the EPR (EPDV)

Annexes to the EPDV-EDI

Departmental Ordinance of the FDHA on the Electronic Patient File (EPDV-EDI)

Annex 1: Patient identification number

Annex 2: Technical and organizational certification requirements for communities

Annex 3: Metadata

Annex 4: Exchange formats

Annex 5: Integration profiles

Annex 6: Evaluation and research

Annex 7: Minimum requirements for the qualification of the personnel of the certification bodies

Annex 8: Technical and organizational certification requirements for issuers of identification means

Annex 9: Metadata for the health facility and health professional query service

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Swiss Electronic Patient Record

- Legal requirements:

  - The operation of the Swiss EPR is delegated to 8 communities.

  - Communities are organisations of healthcare professionals and the cantons.

  - Communities may be regional or operate nationwide.

  - Mandatory certification to ensure data privacy and protection.

  - Communities got financial aids to setup the infrastructure and the required processes.
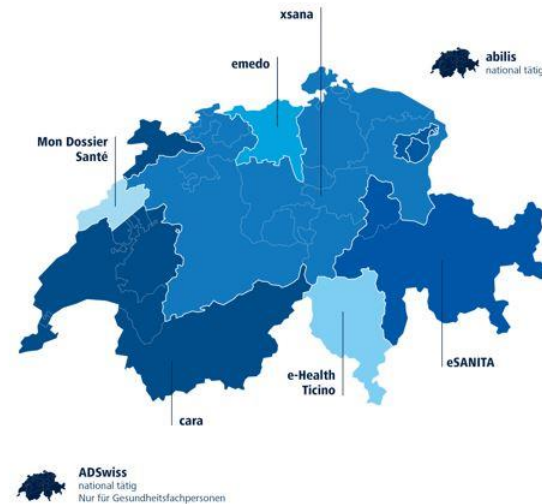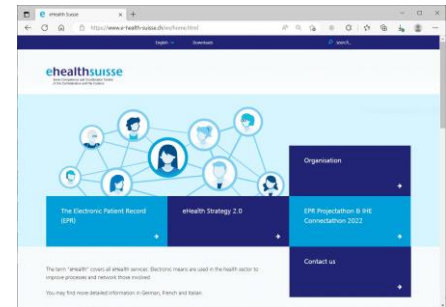
Role of eHealth Suisse

- eHealth Suisse was founded to support the roll out of the Swiss EPR.

- eHealth Suisse is managed by the cantons and the federal government.

- eHealth Suisse has duties in

    - Communication and campaigns.

    - Coordination of stakeholders

    - Development of technical foundations.
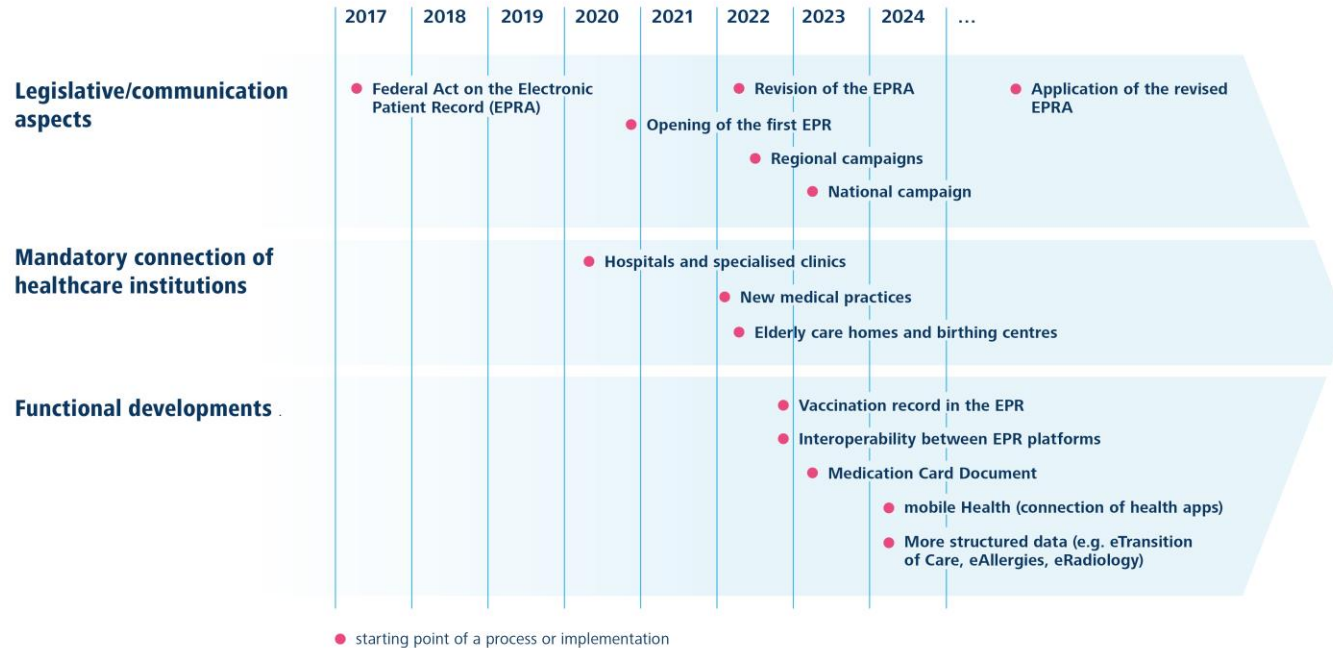
Role of eHealth Suisse

Especially:

- Selection, supplementation and updating of **norms, standards and integration profiles.**

- Development and updating of the conceptual and technical bases for the **certification requirements.**

- Elaboration, supplementation and updating of the requirements for the **technical components.**

- **Technical specifications** and **test events** to ensure interoperability.

- **Semantics, structured data** and **documents** for vaccination, medication, allergies, etc.

Swiss Electronic Patient Record

Implementation of the EPR in Switzerland

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | ... |

Legislative/communication aspects
- Federal Act on the Electronic Patient Record (EPRA) (2017)
- Opening of the first EPR (2021)
- Revision of the EPRA (2022)
- Regional campaigns (2022)
- National campaign (2023)
- Application of the revised EPRA (2024)

Mandatory connection of healthcare institutions
- Hospitals and specialised clinics (2020)
- New medical practices (2022)
- Elderly care homes and birthing centres (2022)

Functional developments
- Vaccination record in the EPR (2022)
- Interoperability between EPR platforms (2022)
- Medication Card Document (2023)
- mobile Health (connection of health apps) (2024)
- More structured data (e.g. eTransition of Care, eAllergies, eRadiology) (2024)

● starting point of a process or implementation

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Basic Design: Swiss EPR

- The Swiss EPR is made up of Communities, Identity Providers and Central services.

- Community: Organizational unit consisting of healthcare professionals and medical institutions which run a common health exchange infrastructure (affinity domain).

- Identity Provider: Certified IdP providing authentication means on Level of Assurance LOA2.

- Central Services: Services operated by the FOPH for sharing operational data (e.g., metadata, healthcare professional, etc.).

IdP   Central Services

Community

Community

Community

Basic Design: Interoperability

- The Parties communicate using standard based interfaces and protocols to ensure cross community interoperability.

- IHE ITI Profiles: When possible IHE Profiles are used and adapted to Swiss specific requirements in a national extension.

- National Profiles: When no IHE Profile can be applied, a Swiss national profile was specified using the IHE ITI as a template.

- IHE ITI Profiles with the national extension and the national profiles are mandatory by law.

IdP   Central Services

Community

Community

Community
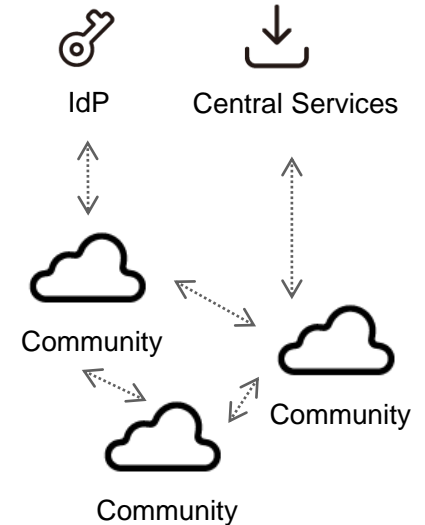
Further Development

- **Collect, sort, prioritize and process further development** and updating requirements in consultation with the FOPH and the stakeholders concerned

- **Establish and maintain a process** for the orderly introduction of new releases in operational EPR operations (release management)

- **Developing solution concepts** for new use cases and transactions as part of the further development of the EPR

- **Ensuring the technical correctness** when adapting or expanding existing IHE profiles or new national integration profiles, including enabling the corresponding tests using the reference environment

- **Development of new exchange formats** and maintenance of existing exchange formats for the EPR incl. development and maintenance of the necessary technical and semantic tools (e.g. terminology server)

Further Development
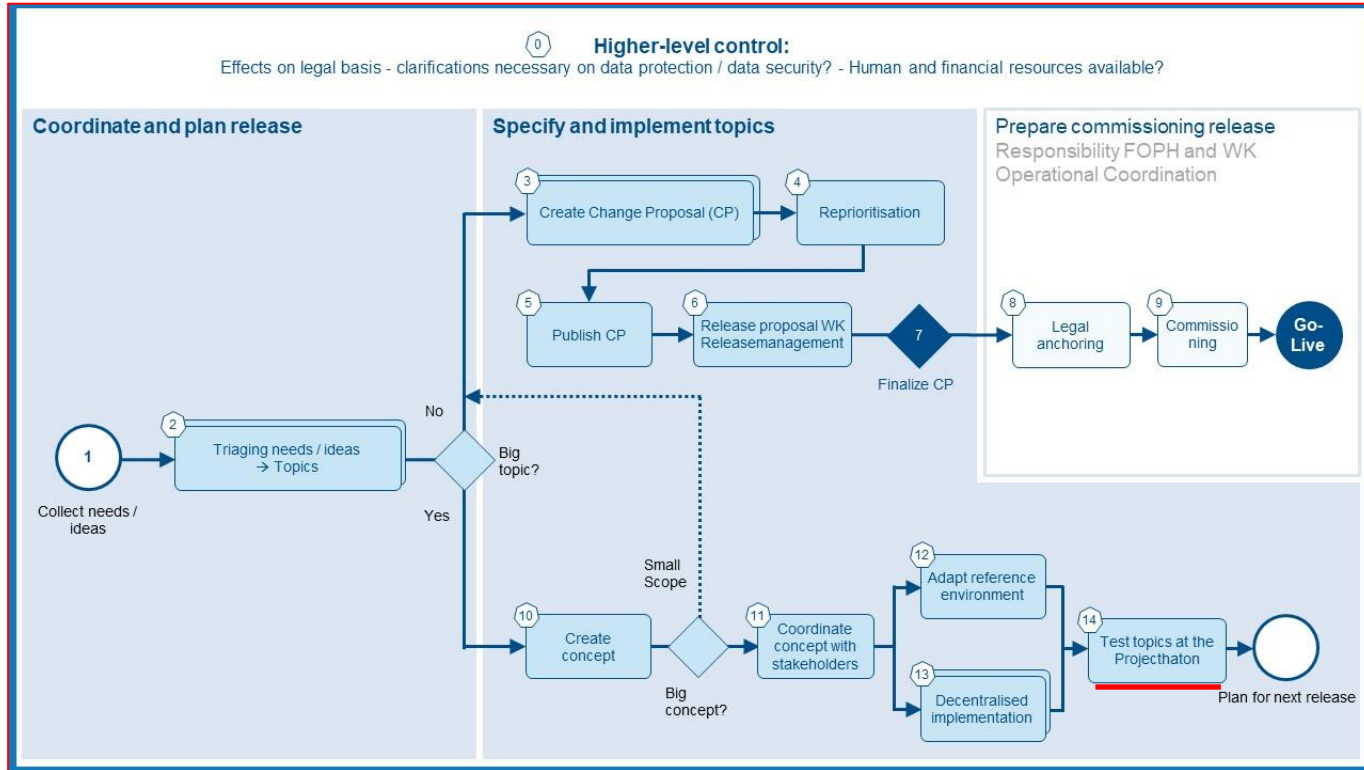
EPR Projectathon

- Annual testing of interface profiles and exchange formats since 2017.

- Additional testing events with special focus, e.g., eMedication.

- Important milestone for specifications:

  - Inform stakeholders of changes and additions

  - Enable vendors to implement and test

  - Quality management of the specifications

 - Forum to exchange experience and best practices

EPR Projectathon

| Year	Projectathon	IHE-EU Connectathon	Number of firms	Number of participants	Countries
2017	1st		16	79	CH, D, AT
2018	2nd	EPR corner	23	88	CH, D, PL
2019	3rd	EPR corner	19	82	CH, D, F
2020	4th		16	51	CH, D
2021	eMedication		5	23	CH, USA
2021	5th		19	67	CH, D, USA
2022	6th	together with the EPR-Projectathon	59 / 19	300 / 54	CH, DE, USA, FR, BE

FHIR content profiles

- The Swiss EPR was intended to implement Use Cases from the beginning, e.g. medication, vaccination, etc..

- The Swiss EPR started with a document sharing infrastructure to match the basic need to exchange unstructured documents (e.g. PDF).

- Currently we "step by step" add support for Use Cases with structured documents, starting with vaccinations in 2023.

- Planned extensions are: Medication, Allergies, Patient Summary and Questionnaires.

- We stopped supporting CDA and move forward with FHIR bundles and resources in close cooperation with HL7 Switzerland.
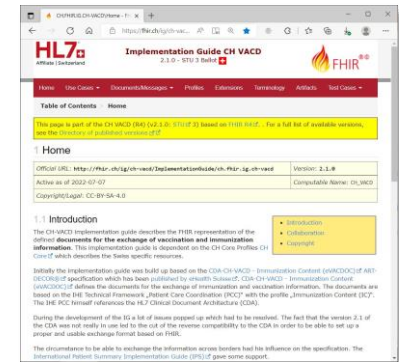
Lessons learned

- The decision to "learn from others" and use the IHE profiles is a overall success. Vendor independency and the testability of the profiles accelerated the invention of the Swiss EPR.

- The effort to maintain the national profiles and national extension is significant but manageable.

- Monthly meetings with the vendors helped us to increase the quality of the national extensions, national profiles and the change management.

- Annual projectathon helped to analyse and fix technical problems on a short time scale.
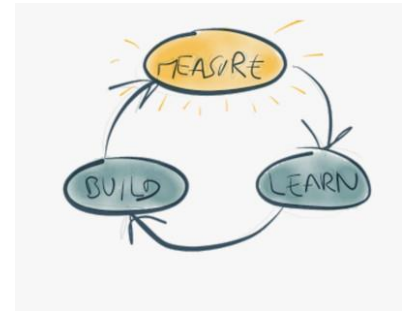
Lessons learned

- The Swiss EPR is more a cultural than a technical project.

- The roll out takes much more time than initially expected.

- Strong public funding is important and has been underestimated.

- It's important that those affected actively participate in the project.
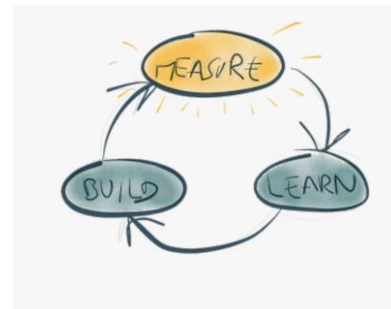
Revision of the federal act

Intended changes:

- More regulatory competence for the government.

- Improved funding.

- Patient Opt-Out.

- Mandatory participation of all health professionals.

- Simplified access for medical research.

- Integration of the planned national E-ID.

Next steps

- The Swiss EPR is now established and ready for use.

- The participation starts slowly, around 20'000 health records today.

- The Federal Office of Public Health currently sets up a two phase campaign for health professionals and patients.

- Recent surveys indicate that around 50% of the Swiss citizens plans to open an EPR and 57% of the healthcare professionals in medical practices intend to join a community.
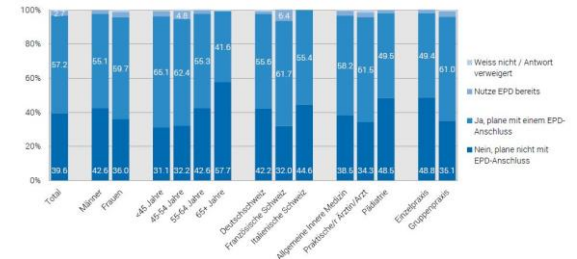
Quelle: Commonwealth Fund – International Health Policy Survey 2022   © Obsan 2023

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Next steps

- End of 2022 the Swiss parliament authorized the federal government to promote digitalization in the health sector.

- Currently we are working on a proposal for measures in the DigiSanté project to be presented to the parliament.

- The proposal will cover (among other):

  - Proposal for the legal foundation of digital healthcare.

  - Define the digital services required for a Swiss health data space.

  - Provision of medical services provided by the government.

  - Digitalization of the services of the Federal Office for Public Health.

  - Financial funding.

DigiSanté

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Thank you for your attention