SNOMED CT in Switzerland
Document exchange in national EPR and nursing

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Exchange Formats and Semantics

eHealth Suisse, Swiss Competence and Coordination Centre of the Confederation and the Cantons

A federal republic with 26 health regions

Cantonal Level

- Establish "eHealth" in the regional healthcare system.

Federal Level

- National legal framework for common rules, standards and infrastructure.

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eHealth Suisse – national coordination since 2008
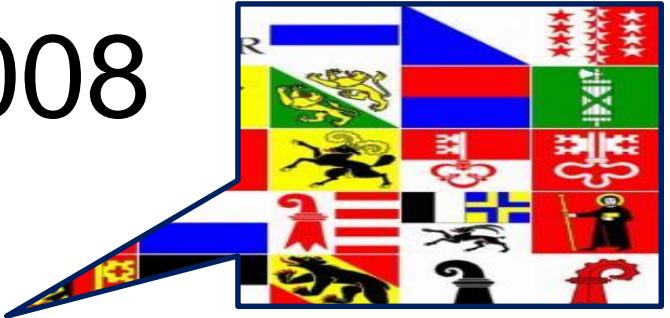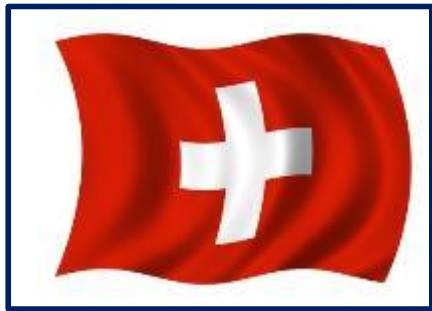
- Plan for the implementation of the „eHealth Strategy for Switzerland"
- Definition of an architecture and of standards
- Coordination between cantonal projects
- Establish a technical "reference environment" for testing
- …
- …

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The project

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The National Electroni... ...nt Record (EPR)

Elektronisches Impfdossier

Homecare

Rehabilitation

Telemedicine
(Call Center)

eAustrittsbericht

eMedikation

Specialist

Doctor

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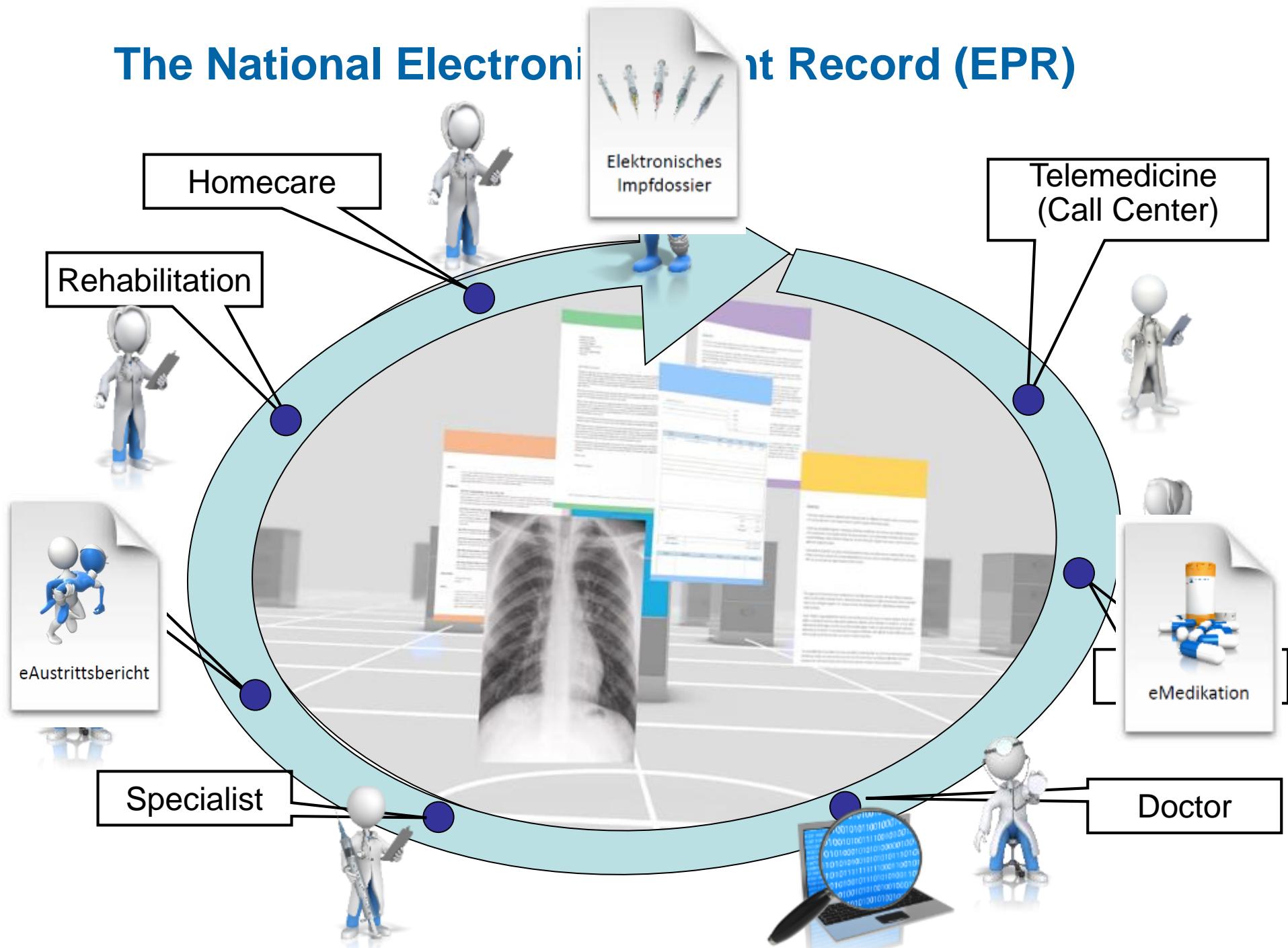
Linking cantonal projects under national rules

Federal Act on the Electronic Patient Record (EPRA)

Only **certified «Communities»** are integrated into the «Circle of Trust» of the national EPR

EPR
Electronic Patient Record

«Community» = Organization of health care providers or their institutions

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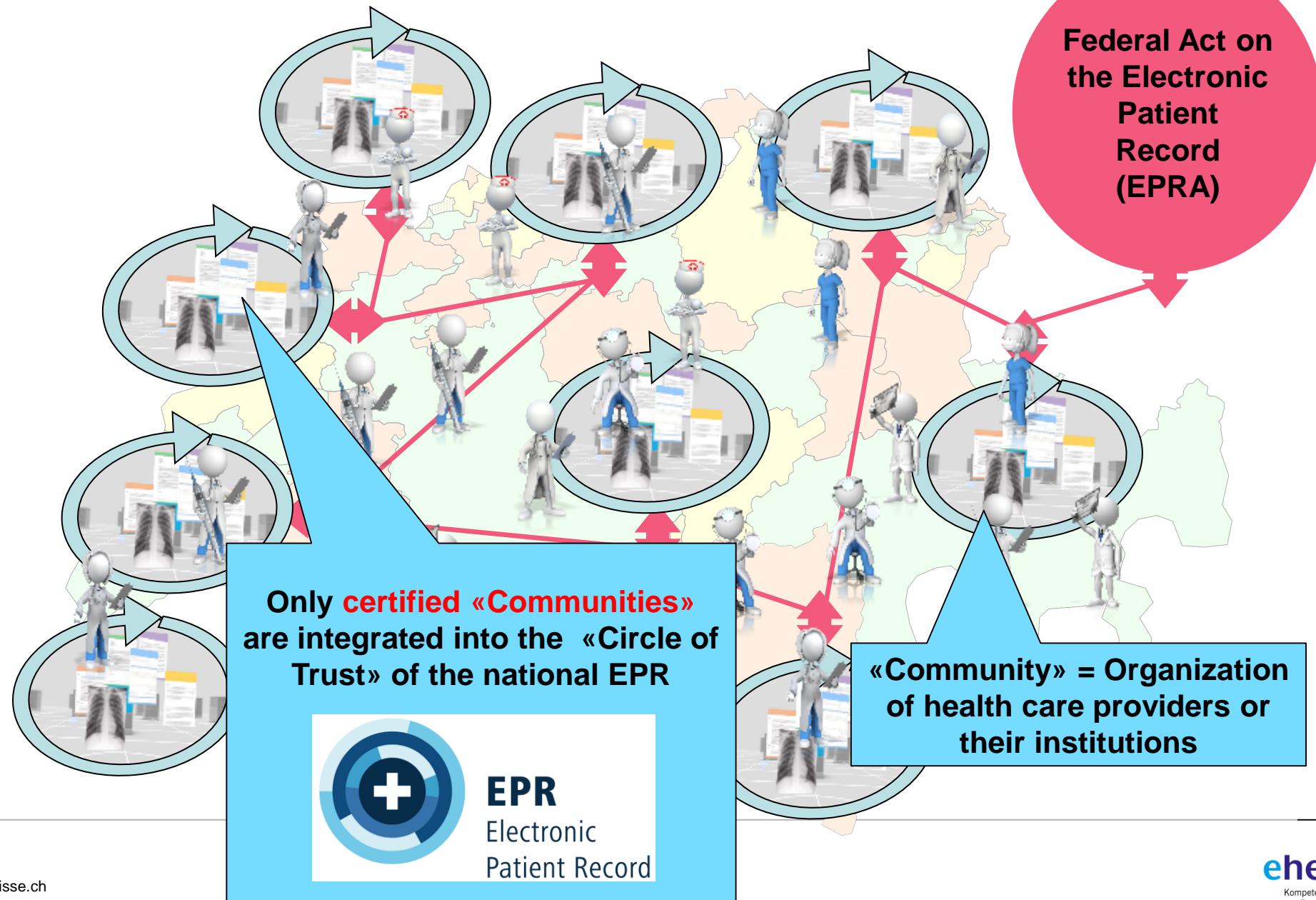
The EPRA has come into force on April 15th 2017

Transition period for health professionals until they
have to be connected to a «Community»:

- Hospitals: 3 years (April 2020);

- Nursing homes: 5 years (April 2022);

- Outpatient care: Voluntary

- Citizens / patients: Voluntary

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Use cases

mHealth

eImpfen

eMedikation

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8
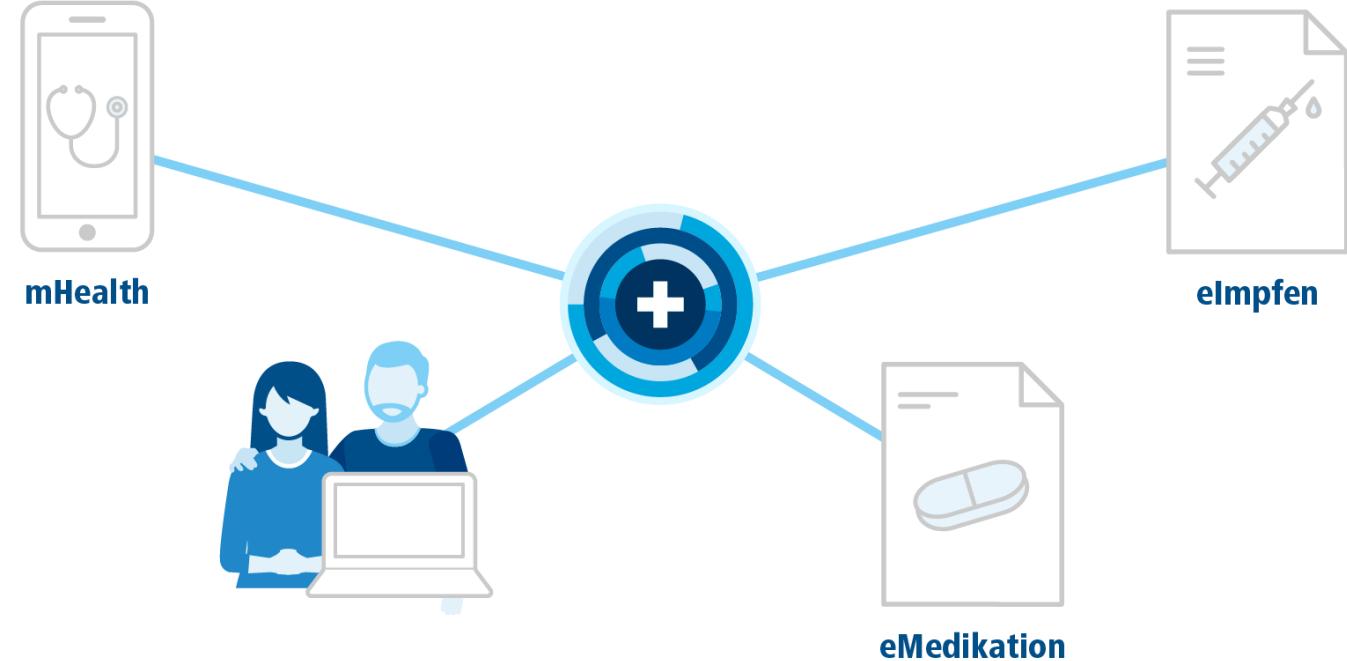
Exchange documents

- HL7 CDA Documents (official)
    - Vaccination
    - Lab
    - eMedication (based on IHE Pharm)
- Other projects (based on CDA but not defined by law)
    - Rescue protocol
    - Transition of Care (interdisciplinary discharge summary)
    - few other local projects

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Metadata

- IHE XDS Metadata (some mapped to CDA attributes)
- Use of SNOMED in
    - Author role (e.g. physician, nurse, therapist etc.)
    - Document class (e.g. note on consultation, progress report etc.)
    - Document type (e.g. referral note, laboratory report etc.)
    - Facility Type (e.g. hospital, private based home etc.)
    - Practice Setting (e.g. general surgery, cardiology)

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Translation

Challenge: 4 languages in Switzerland
- Each language has multiple dialects

Developing of value sets for metadata including SNOMED CT difficult in the target language
- Use of English as «reference terminology» for all
- Develop value sets in the English version
- Translate afterwards (Translation Service Provider TSP with review of domain experts)

Definition Set

TSP

Initial Translation

Internal Validation

Validation by domain experts

Publication

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13
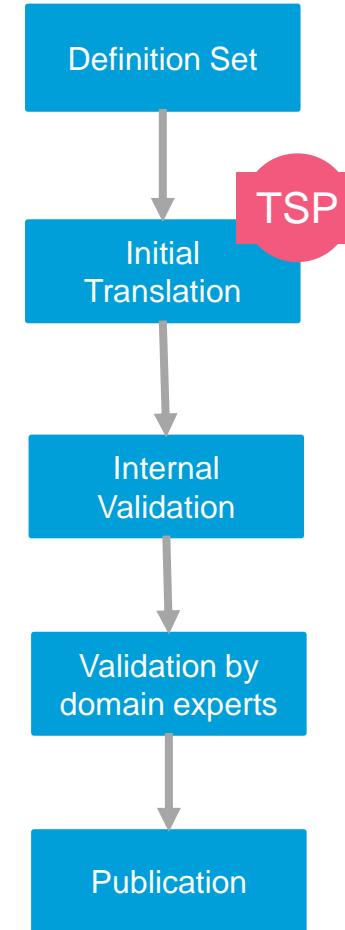
Nursing Showcase

- Developed by experts in nursing

- Aims to show:
  - Which problems/procedures are captured in a hospital and private home-based care information system?
  - Where are «terminological changes» needed?
  - When has the information to be re-entered manually in an information system?

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Results

	State of health	Health intervention
Hospital	· ePA-AC · NANDA-I	· LEP Nursing 3
Home care	· RAI-HC · Diagnosis documentation near to NANDA-I	RAI Home Care
Reference terminology	· ICNP · SNOMED CT	· ICNP · SNOMED CT

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Results II

Intervention				
Description	RAI-HC	LEP Nursing	ICNP	SNOMED CT
Patient can't reach his lower body part and back and therefore needs help for the personal hygiene	10104 Semi-cleaning at the washbasin (incl. intimate care)	I_23078 Semi-cleaning the Patient	10044803 Washing The Patient	225429000 Personal hygiene interventions (procedure)

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Conclusion of the showcase

- Improve awareness for the need of a reference terminology
- SNOMED CT can fill the gap for inter-institutional information exchange, especially in nursing
- Show case can be extended to include further health professionals and their information system

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Summary

- SNOMED used primarily in metadata and national defined HL7 CDA documents in the Swiss EPR

- Nursing showcase improves awareness for semantic interoperability and the need for a reference terminology

- Use of English for «semantic interoperability» between the three main languages in Switzerland

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