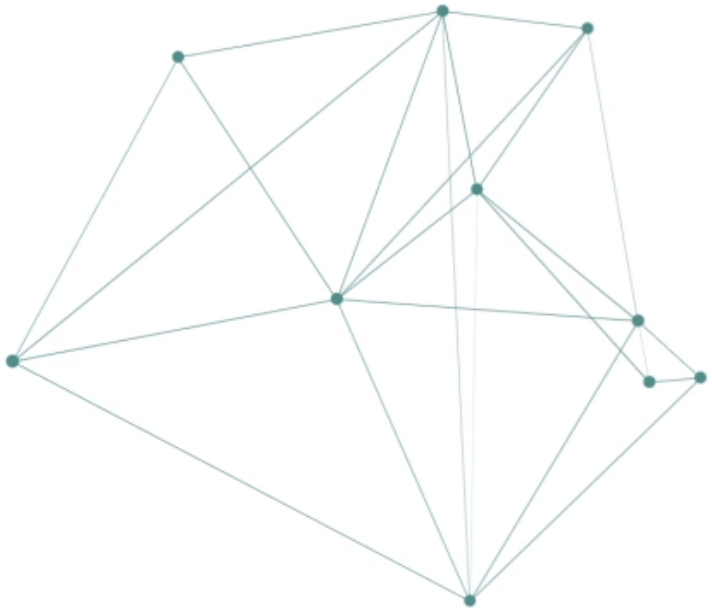
UNIVERSITY OF LUCERNE



Swiss Learning Health System

Health Services Research and Knowledge Translation: A Learning Systems Approach

Sarah Mantwill, PhD – Swiss Learning Health System
Department of Health Sciences & Medicine, University of Lucerne

Outline

Health Services Research

A multidisciplinary field

Learning Health Systems

An approach to knowledge translation

The Swiss Learning Health System

Moving HSR into policy and practice

Health Services Research

A multidisciplinary field

Ignaz Philipp Semmelweis

Health Services Research is…

"… a multidisciplinary field of scientific investigation that studies how social factors, financing systems, organizational structures and processes, health technologies and personal behaviours affect access to health care, the quality and cost of health care and ultimately, our health and wellbeing. (…)"

Lohr & Steinwachs, 2002

Health Services Research is…

"… a multidisciplinary field of scientific investigation that studies how **social factors**, financing systems, organizational structures and processes, health technologies and personal behaviours affect access to health care, the quality and cost of health care and ultimately, our health and wellbeing. (…)"

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Lohr & Steinwachs, 2002

Based on Goodman, 2017

Health Services Research is…

delivery: a population-based health information system can guide planning and regulatory decision-making. *Science* 182(4117):1102–1108.

2. Starfield, B., J. Weiner, L. Mumford, and D. Steinwachs. 1991. Ambulatory care groups: a categorization of diagnoses for research and management. *Health Services Research* 26(1):53–74.
3. McGlynn, E. A., S. M. Asch, J. Adams, J. Keesey, K. Hicks, A. DeCristofaro, and E. A. Kerr, 2003. The quality of health care delivered to adults in the United States. *New England Journal of Medicine* 348(26):2635–2645.
4. Brook, R. H., E. B. Keeler, K. N. Lohr, J. P. Newhouse, J. E. Ware, W. H. Rogers, A. R. Davies, C. D. Sherbourne, G. A. Goldberg, P. Camp, C. Kamberg, A. Leibowitz, J. Keesey, and D. Reboussin, 2006. The health insurance experiment: a classic RAND study speaks to the current health care reform debate. Santa Monica, CA: RAND Corporation.
5. Campbell, E. G., J. S. Weissman, S. Ehringhaus, S. R. Rao, B. Moy, S. Feibelmann, and S. D. Goold. 2007. Institutional academic-industry relationships. *JAMA* 298(15):1779–1786.
6. Girosi, F., A. Cordova, C. Eibner, C. R. Gresenz, E. B. Keeler, J. S. Ringel,

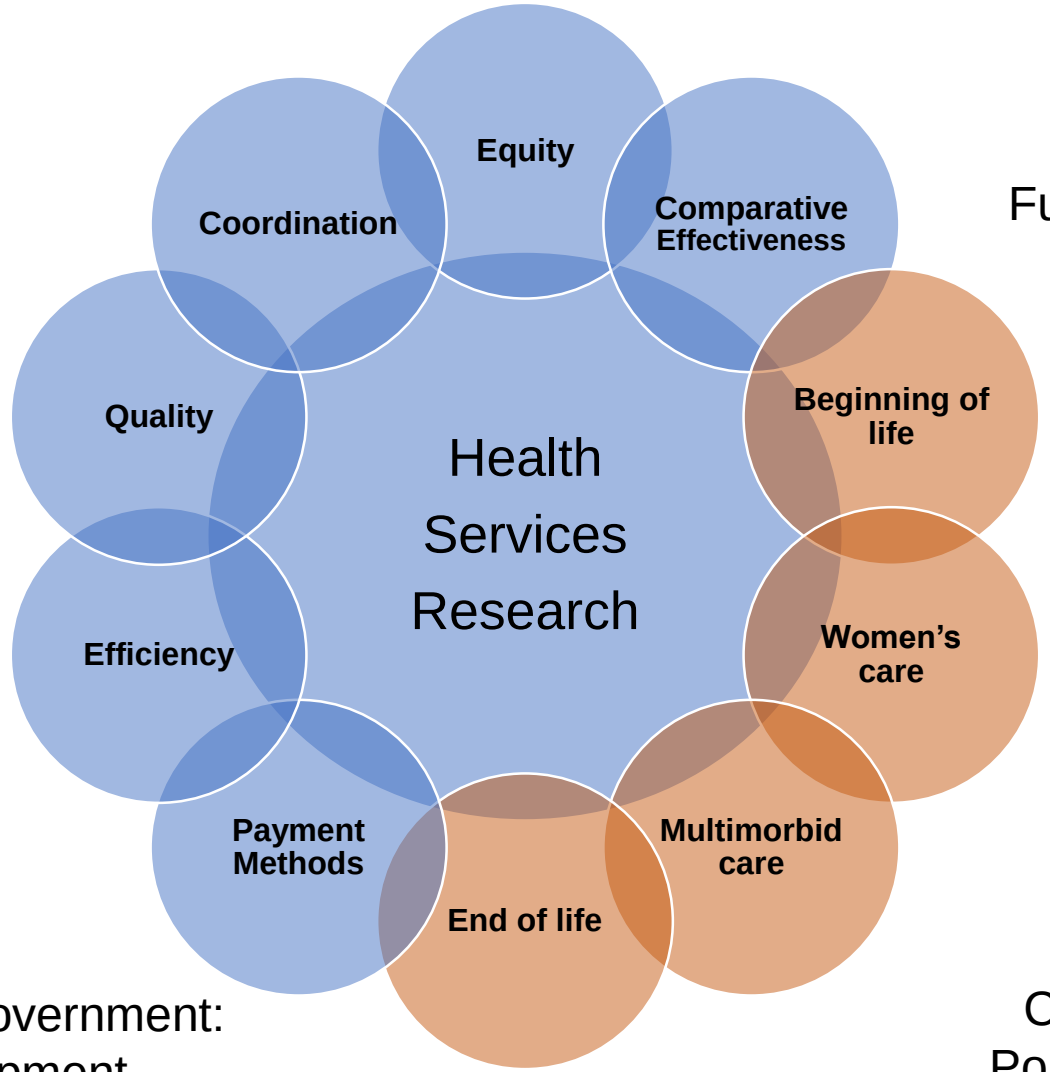
Whicher et al. (2018)

Based on Goodman, 2017

Clinicians:
Quality improvement

Researchers:
Further knowledge

Insurances:
Incentivize value



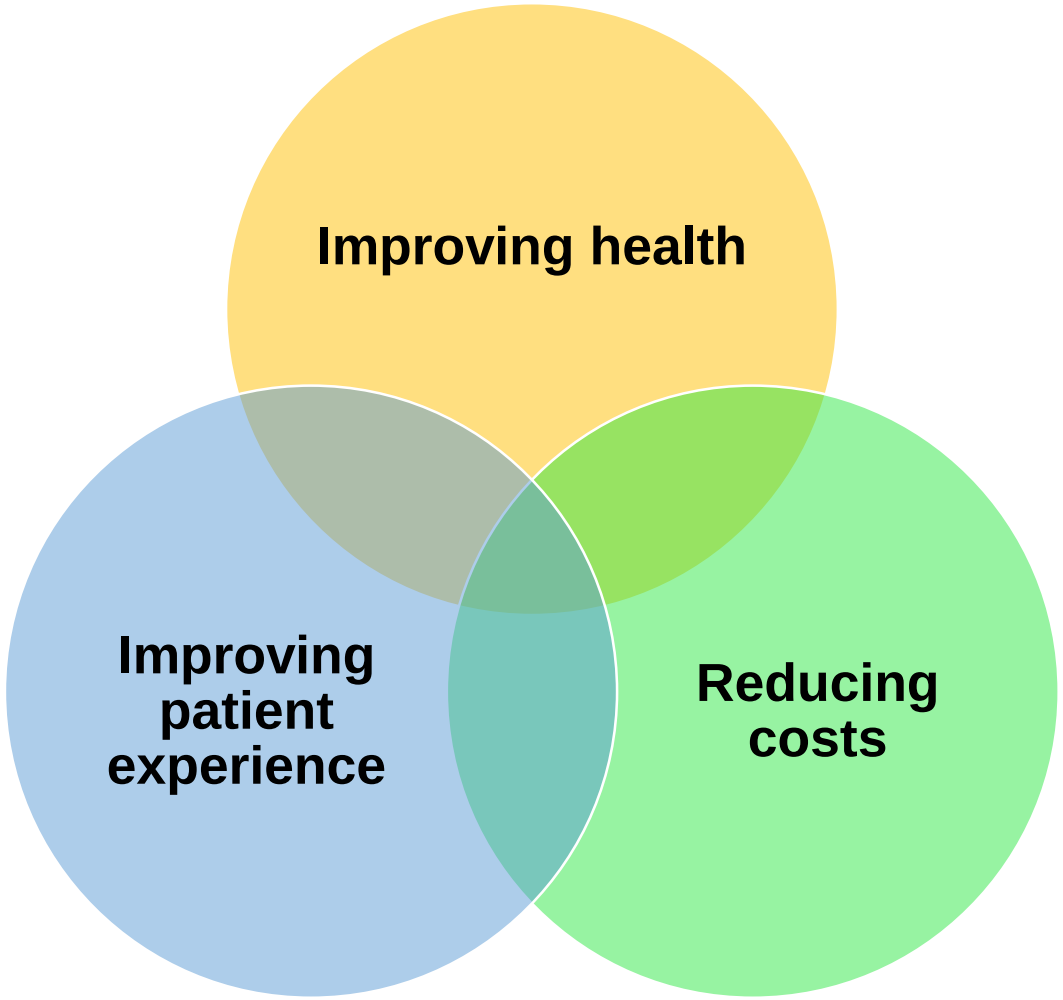
Patients & Public:
Proactive in their care journey

Federal/national government:
Policy development

Cantons/states:
Policy development

Based on Goodman, 2017

Triple aim of Health Services Research



Institute for Healthcare Improvement: http://www.ihi.org

Health Services Research has led to…

- greater transparency in health system performance
- new payment mechanisms, such as diagnosis related groups
- improved patient engagement
- quality improvement
- national funding of health services research
- etc.

Based on Goodman, 2017

HSR activities in Switzerland

Programme «Recherches et réalisations en médecine appliquée» (SAMS 1985)

- annually funding of CHF 200’000 for research in primary care

Federal Office of Public Health (FOPH 2012, FOPH 2015)

- need for strengthening health services research
- missing coordination of activities, lack of a structured network among different stakeholders, no targeted funding mechanism

Swiss Academy of Medical Sciences

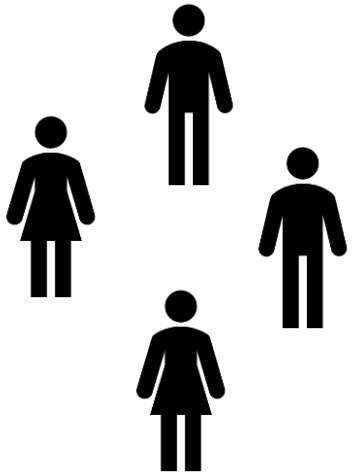
- need for the development of health services research as a third pillar, complementing biomedical and clinical research (SAMS 2014)
- need for a national infrastructure

HSR activities in Switzerland

Funding program “Health Services Research” of the Bangerter-Rhyner Foundation, accompanied by the SAMW (2012-2016)

National Research Program (NRP74) – Smarter Health Care (2017 – 2022)

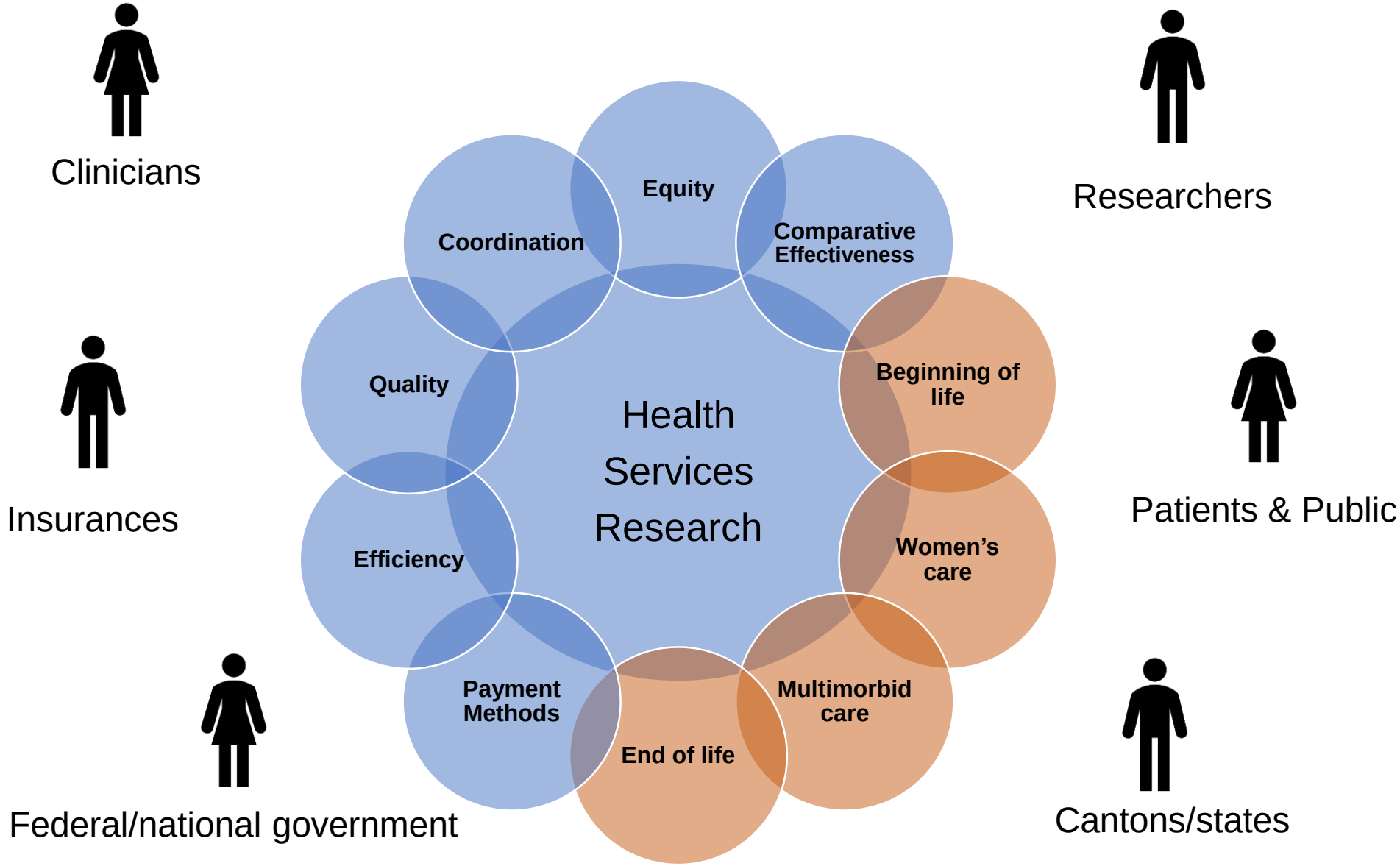
Swiss Learning Health System (since 2017)

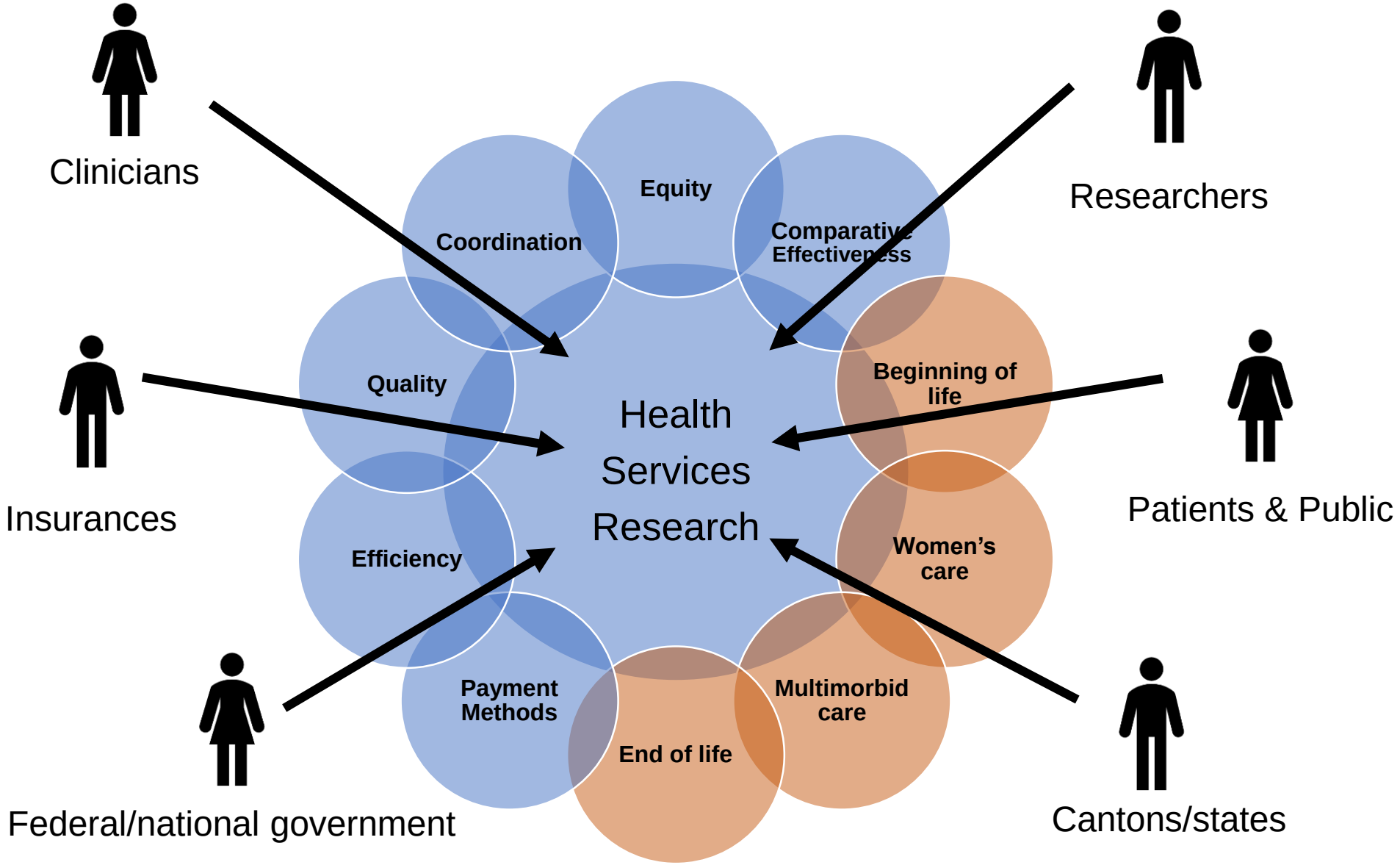


Researchers

knowlegde transfer

Policy and Practice


Clinicians
Researchers
Insurances
Patients & Public
Federal/national government
Cantons/states
Equity
Coordination
Comparative Effectiveness
Quality
Beginning of life
Health Services Research
Efficiency
Women's care
Payment Methods
Multimorbid care
End of life


Clinicians
Researchers
Insurances
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Health Services Research
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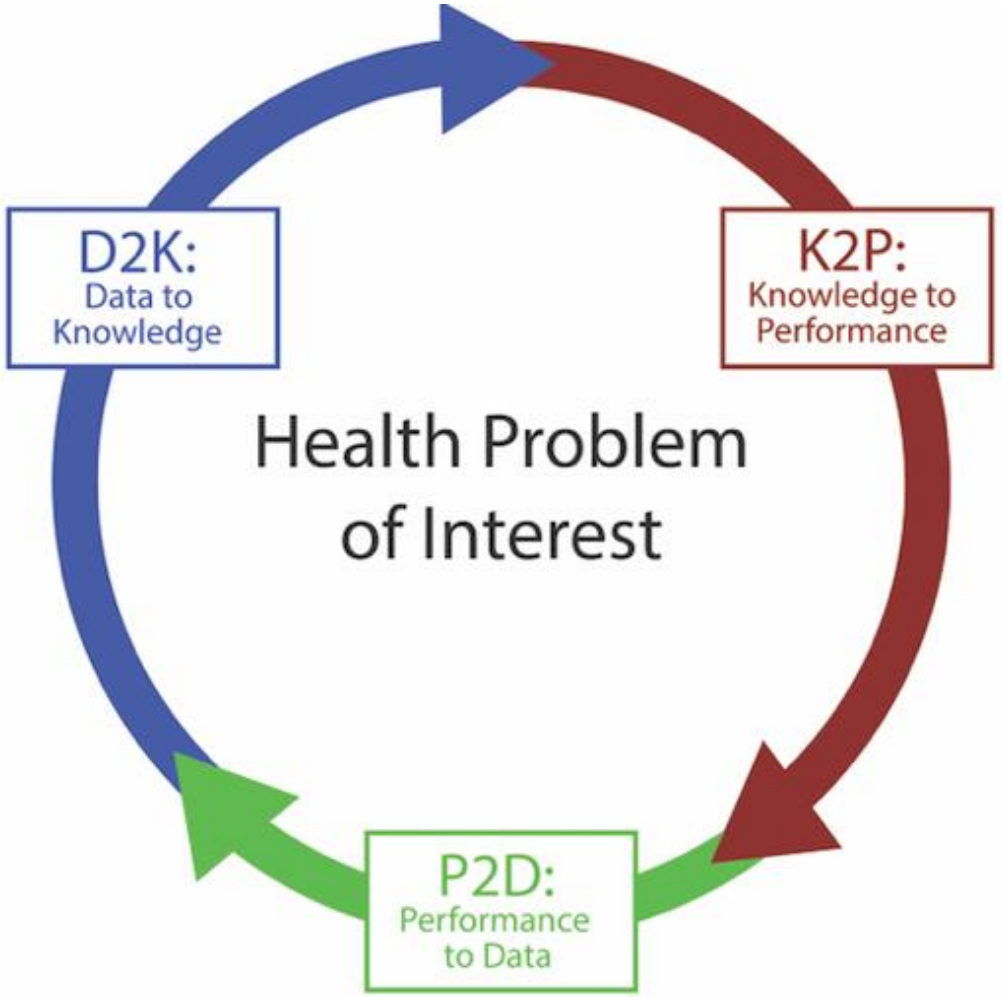
Clinicians

Researchers



Insurances

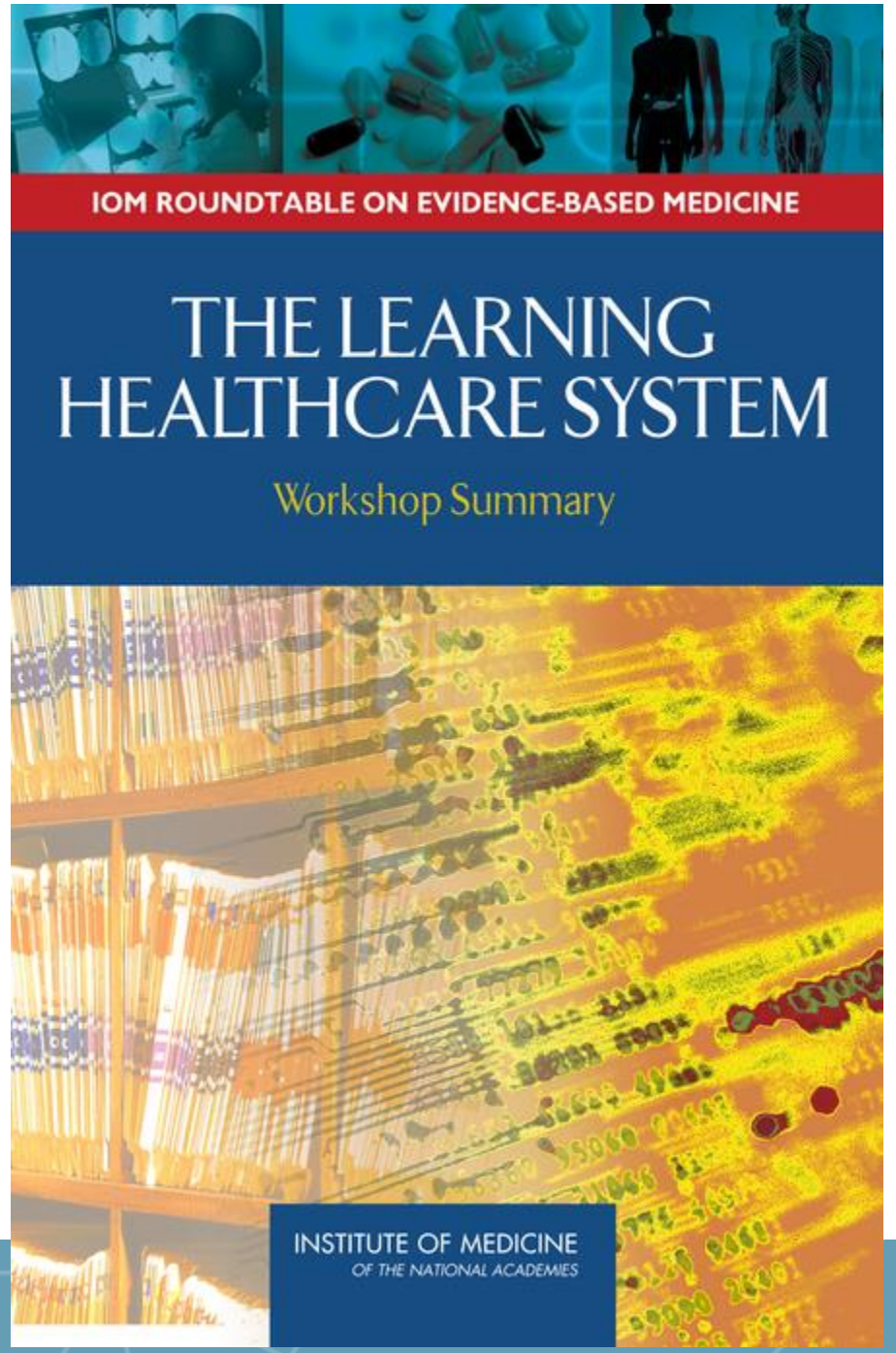
Patients & Public

Federal/national government

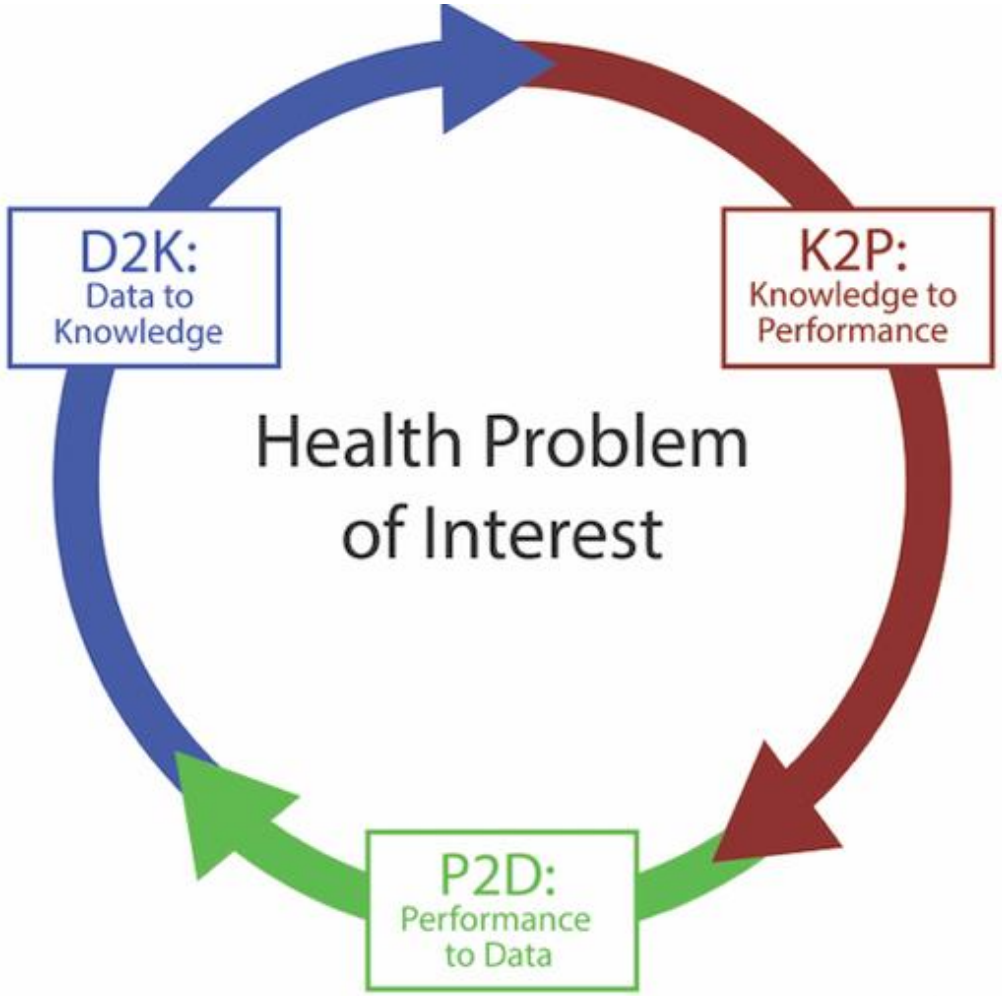
Cantons/states

Learning Health Systems

An approach to knowledge translation


IOM ROUNDTABLE ON EVIDENCE-BASED MEDICINE
THE LEARNING HEALTHCARE SYSTEM
Workshop Summary
INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

Flagship report
Learning health systems: pathways to progress
EDITED BY KABIR SHEIKH AND SEYE ABIMBOLA
Alliance for Health Policy and Systems Research
World Health Organization



Friedman, C. P. (2022)

Learning Health Systems …

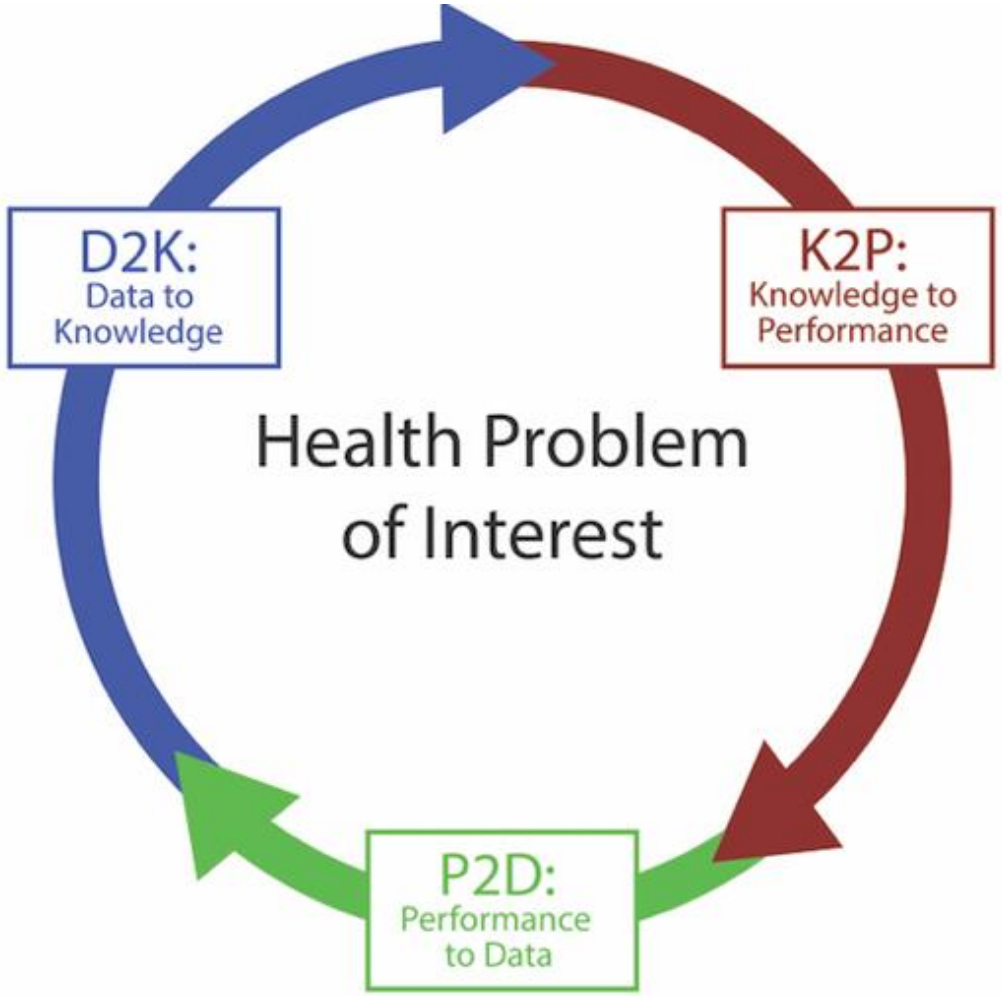
- … are a departure from data practices that are governed by the intended use for data (research, quality improvement, clinical care, public health etc.).

- … aim at enabling continuously and rapidly operating cycles of study, feedback, and practice change, regardless of the original intention for data collection.

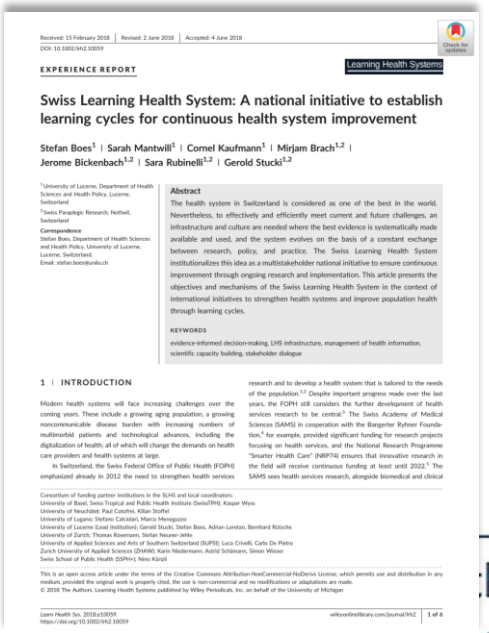
Platt, J. E., Raj, M., & Wienroth, M. (2020)

“Learning Health Systems improve individual and population health by marrying discovery to implementation (…).”

Friedman, C. P. (2022)



Friedman, C. P. (2022).



Received: 15 February 2018 | Revised: 2 June 2018 | Accepted: 4 June 2018
DOI: 10.1002/lrh2.10059

EXPERIENCE REPORT

Learning Health Systems

Swiss Learning Health System: A national initiative to establish learning cycles for continuous health system improvement

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[1]University of Lucerne, Department of Health Sciences and Health Policy, Lucerne, Switzerland
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Stefan Boes, Department of Health Sciences and Health Policy, University of Lucerne, Lucerne, Switzerland.
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Abstract

The health system in Switzerland is considered as one of the best in the world. Nevertheless, to effectively and efficiently meet current and future challenges, an infrastructure and culture are needed where the best evidence is systematically made available and used, and the system evolves on the basis of a constant exchange between research, policy, and practice. The Swiss Learning Health System institutionalizes this idea as a multistakeholder national initiative to ensure continuous improvement through ongoing research and implementation. This article presents the objectives and mechanisms of the Swiss Learning Health System in the context of international initiatives to strengthen health systems and improve population health through learning cycles.

KEYWORDS

evidence-informed decision-making, LHS infrastructure, management of health information, scientific capacity building, stakeholder dialogue

1 | INTRODUCTION

Modern health systems will face increasing challenges over the coming years. These include a growing aging population, a growing noncommunicable disease burden with increasing numbers of multimorbid patients and technological advances, including the digitalization of health; all of which will change the demands on health care providers and health systems at large.

In Switzerland, the Swiss Federal Office of Public Health (FOPH) emphasized already in 2012 the need to strengthen health services research and to develop a health system that is tailored to the needs of the population.[1,2] Despite important progress made over the last years, the FOPH still considers the further development of health services research to be central.[3] The Swiss Academy of Medical Sciences (SAMS) in cooperation with the Bangerter Rhyner Foundation,[4] for example, provided significant funding for research projects focusing on health services, and the National Research Programme "Smarter Health Care" (NRP74) ensures that innovative research in the field will receive continuous funding at least until 2022.[5] The SAMS sees health services research, alongside biomedical and clinical

Consortium of funding partner institutions in the SLHS and local coordinators:
University of Basel, Swiss Tropical and Public Health Institute (SwissTPH): Kaspar Wyss
University of Neuchâtel: Paul Cotofrei, Killian Stoffel
University of Lugano: Stefano Calciolari, Marco Meneguzzo
University of Lucerne (Lead Institution): Gerold Stucki, Stefan Boes, Adrian Loretan, Bernhard Rütsche
University of Zurich: Thomas Rosemann, Stefan Neuner-Jehle
University of Applied Sciences and Arts of Southern Switzerland (SUPSI): Luca Crivelli, Carlo De Pietro
Zurich University of Applied Sciences (ZHAW): Karin Niedermann, Astrid Schämann, Simon Wieser
Swiss School of Public Health (SSPH+): Nino Künzli

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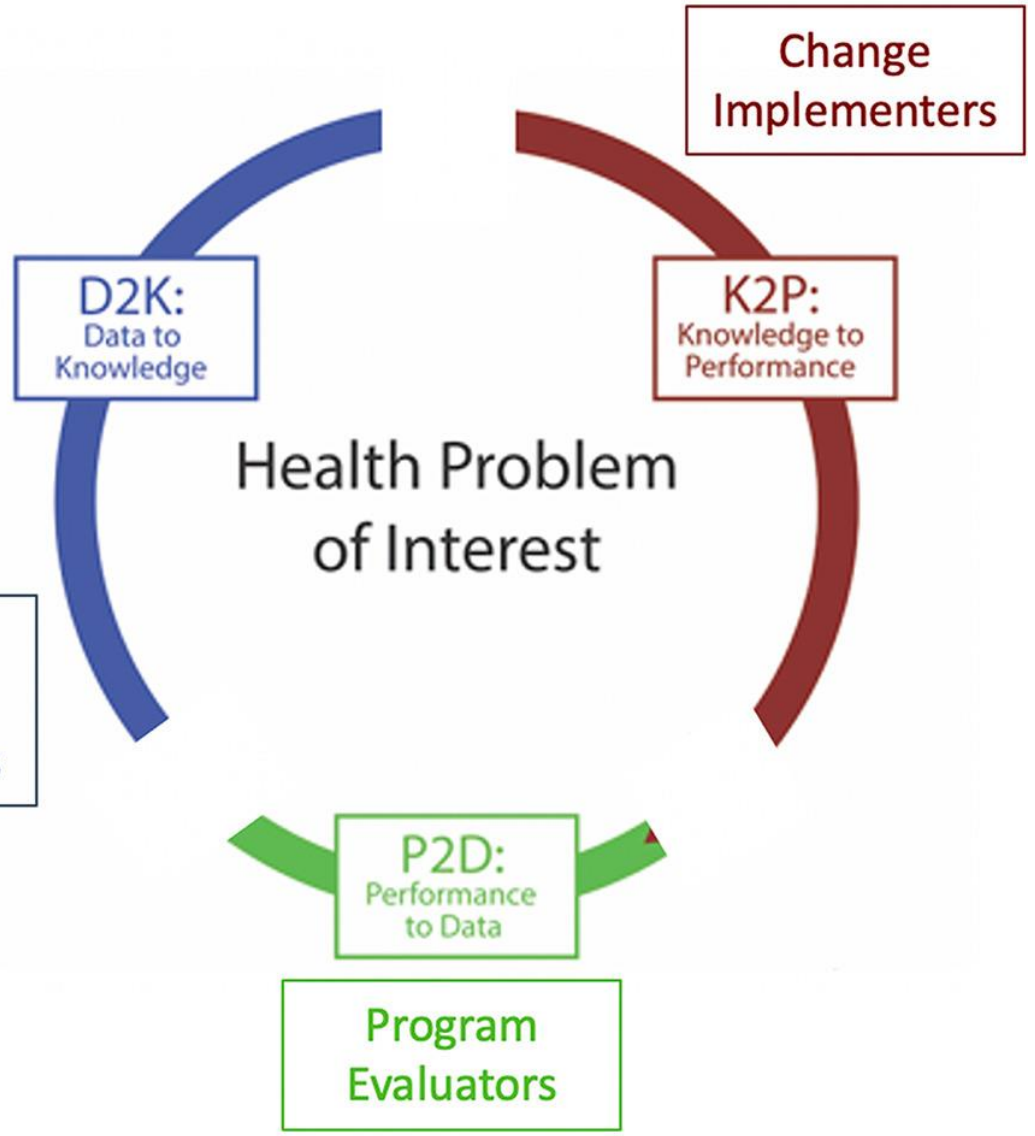
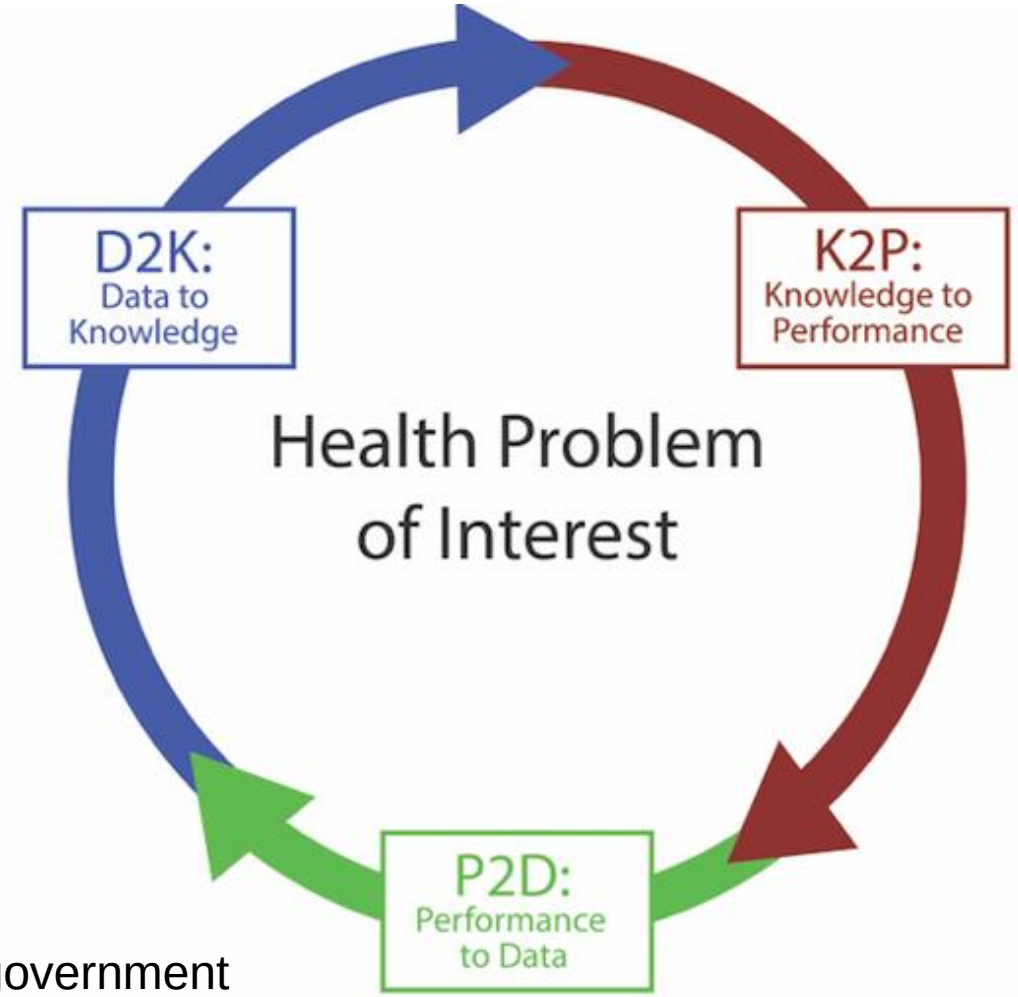


Friedman, C. P. (2022)

Clinicians

Researchers

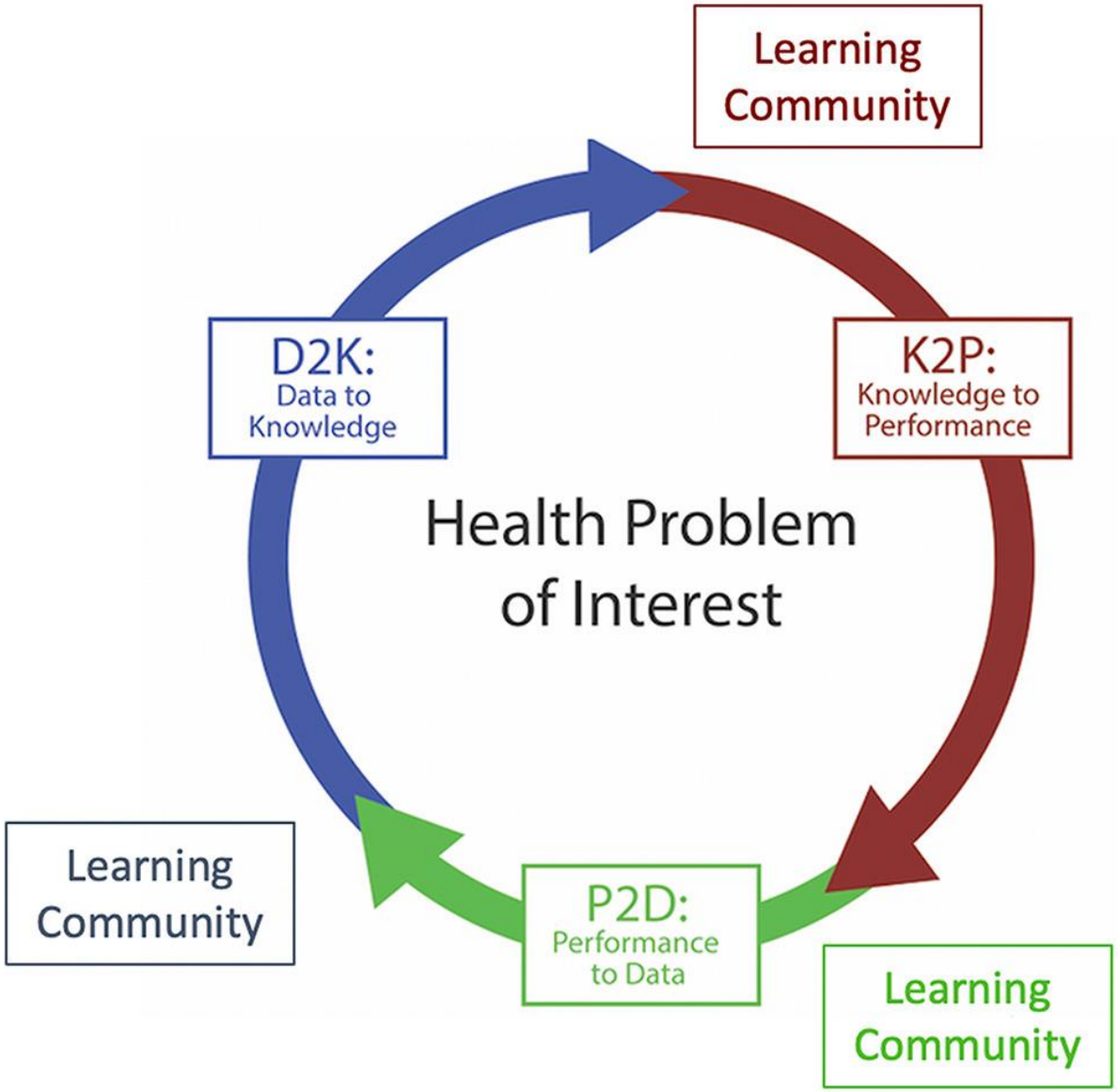


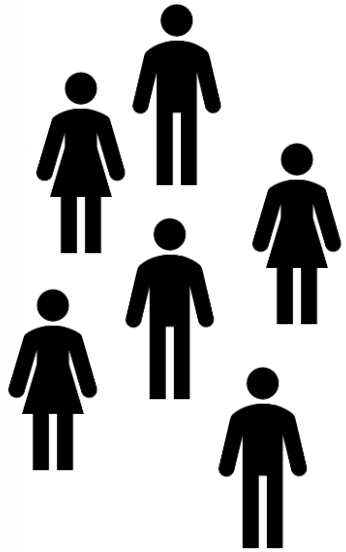
Insurances

Patients & Public

Federal/national government

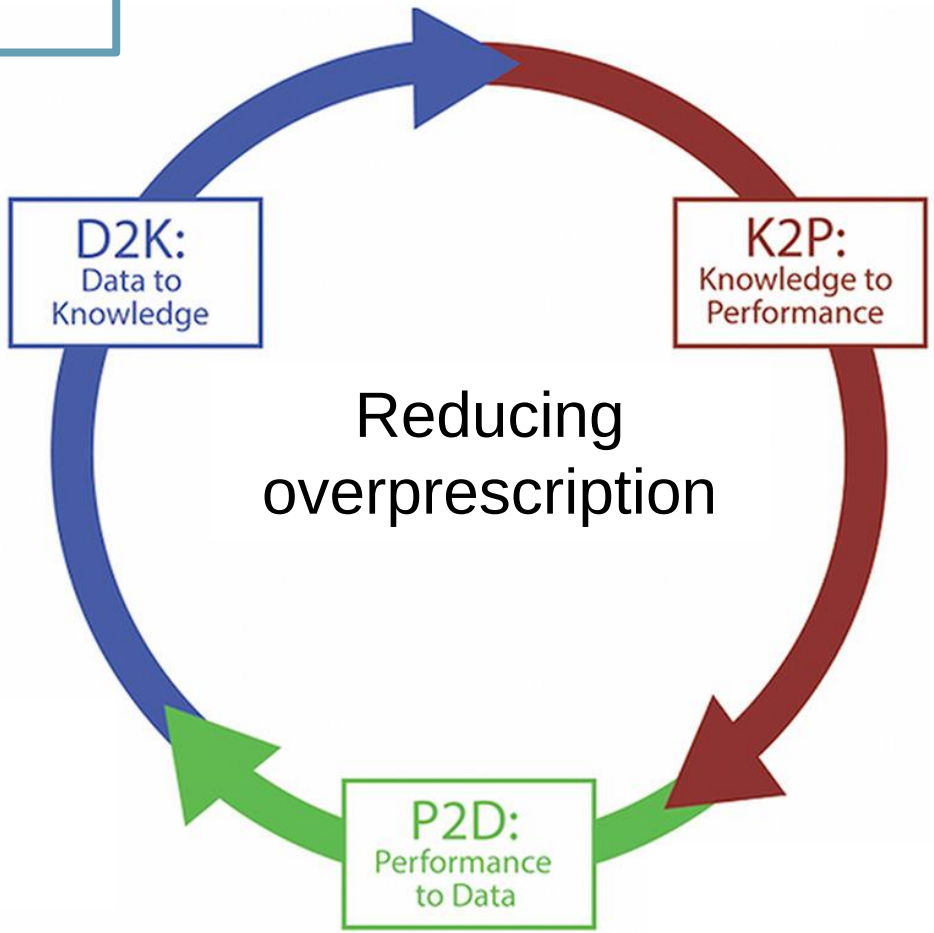
Cantons/states





Friedman, C. P. (2022)

Data analysis and integration of external evidence



Design intervention

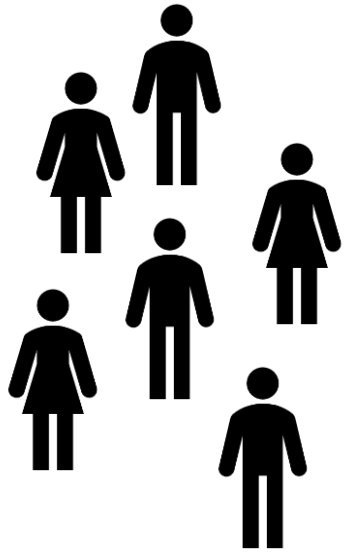
Assemble data

Take action

Capture practice as data

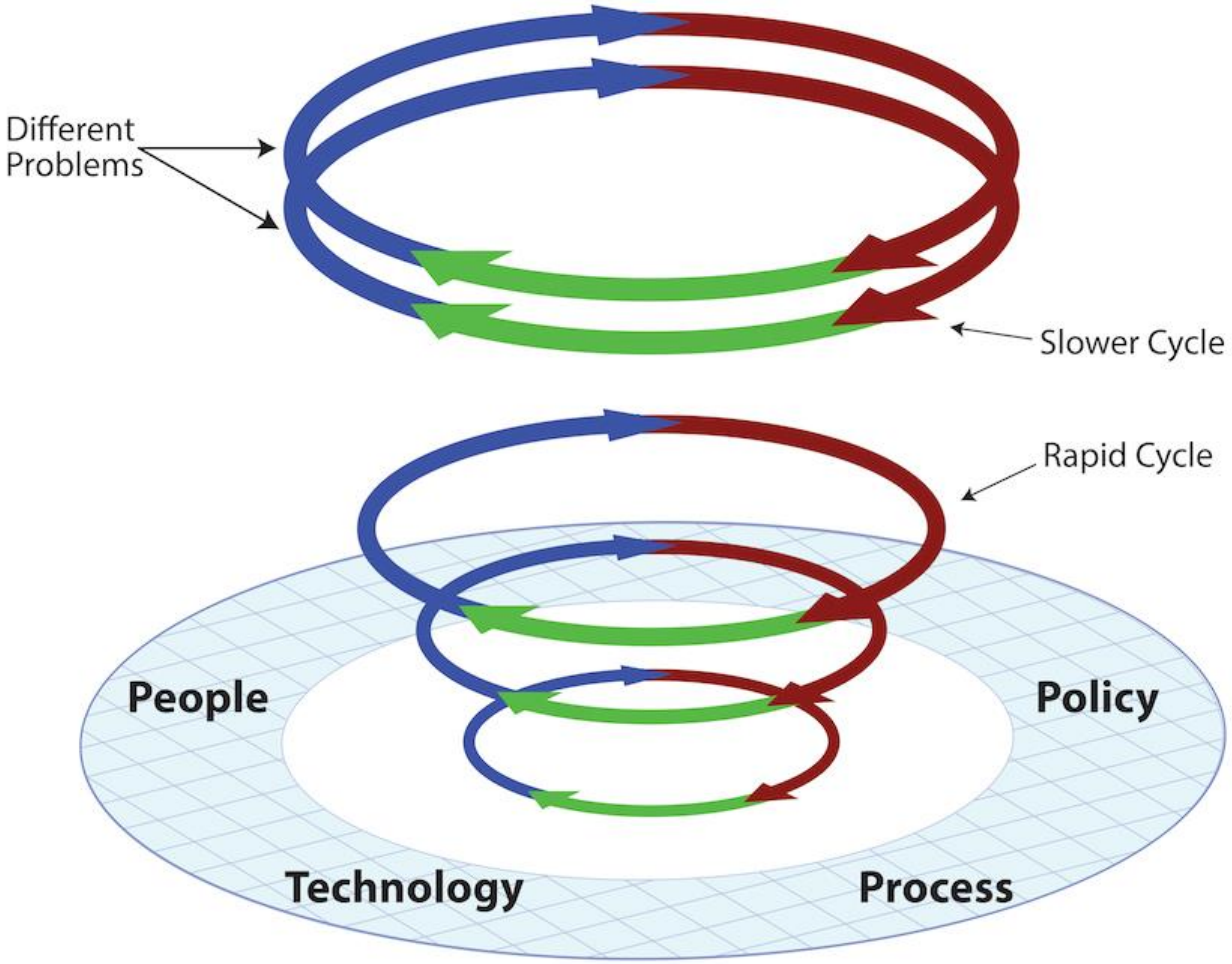
Friedman, C. P. (2022)

Learning Health Systems are a way to address...



www.unhcr.ch

Learning Health Systems need and provide infrastructure



Friedman, C. P. (2022)

The Swiss Learning Health System

Moving HSR into policy and practice

Swiss Learning
Health System

Swiss Learning Health System (SLHS)

Network: 10 universities, 13 institutes/departments

Financed by SERI and academic partners:

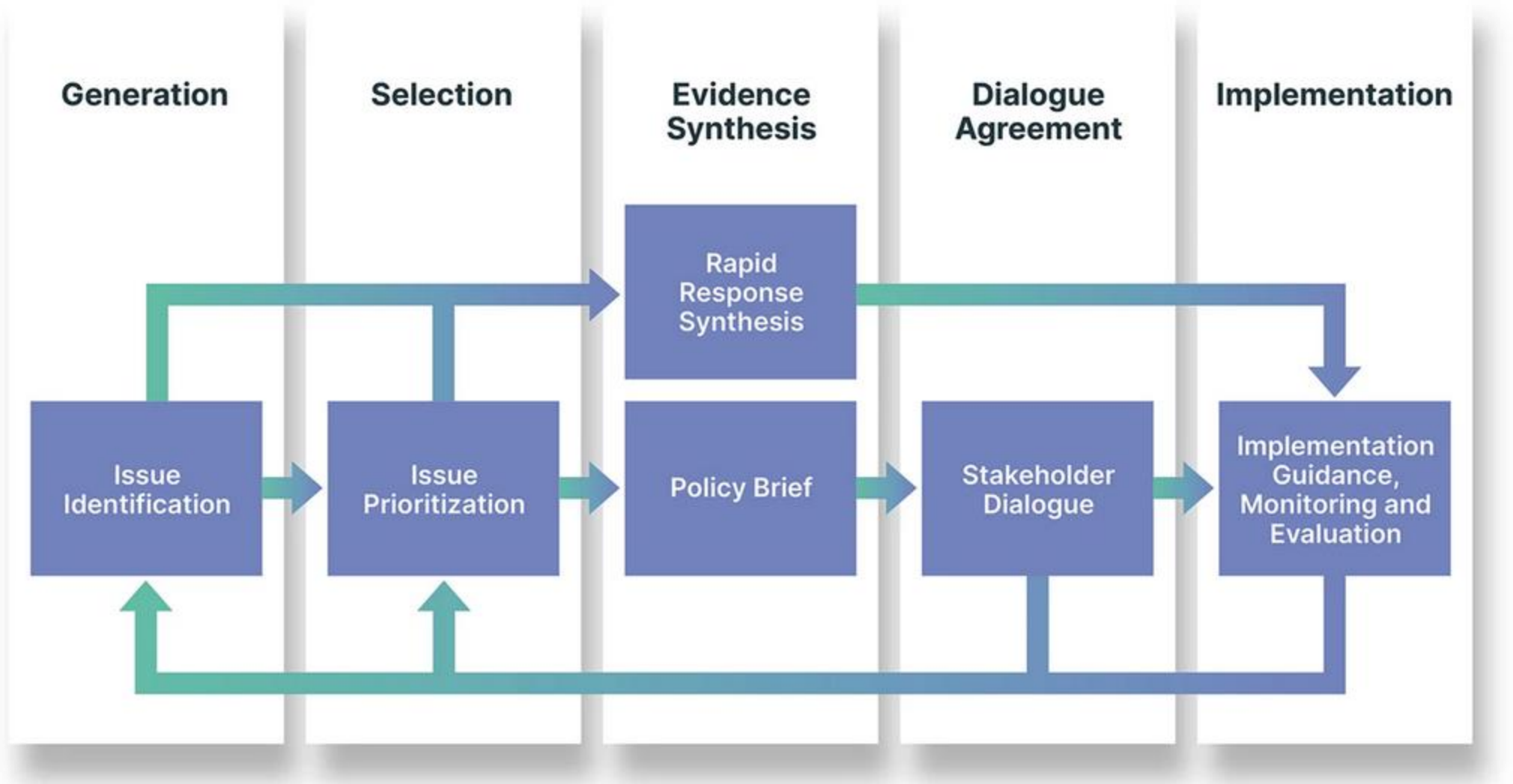
1st funding: 2017 – 2020
20 PhD positions

2nd funding: 2021 – 2024
24 PhD positions

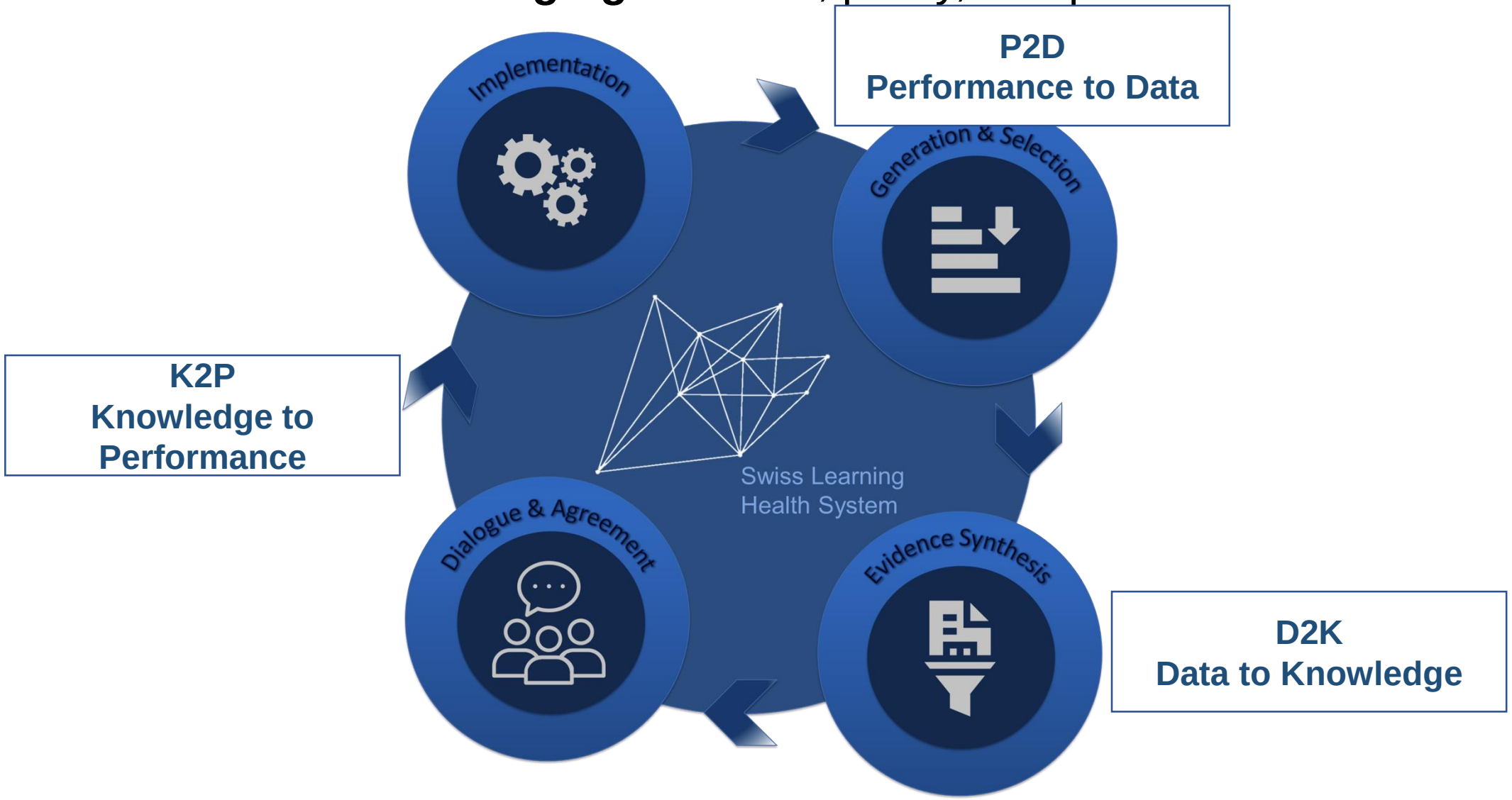
swissuniversities

Overarching objective of the SLHS

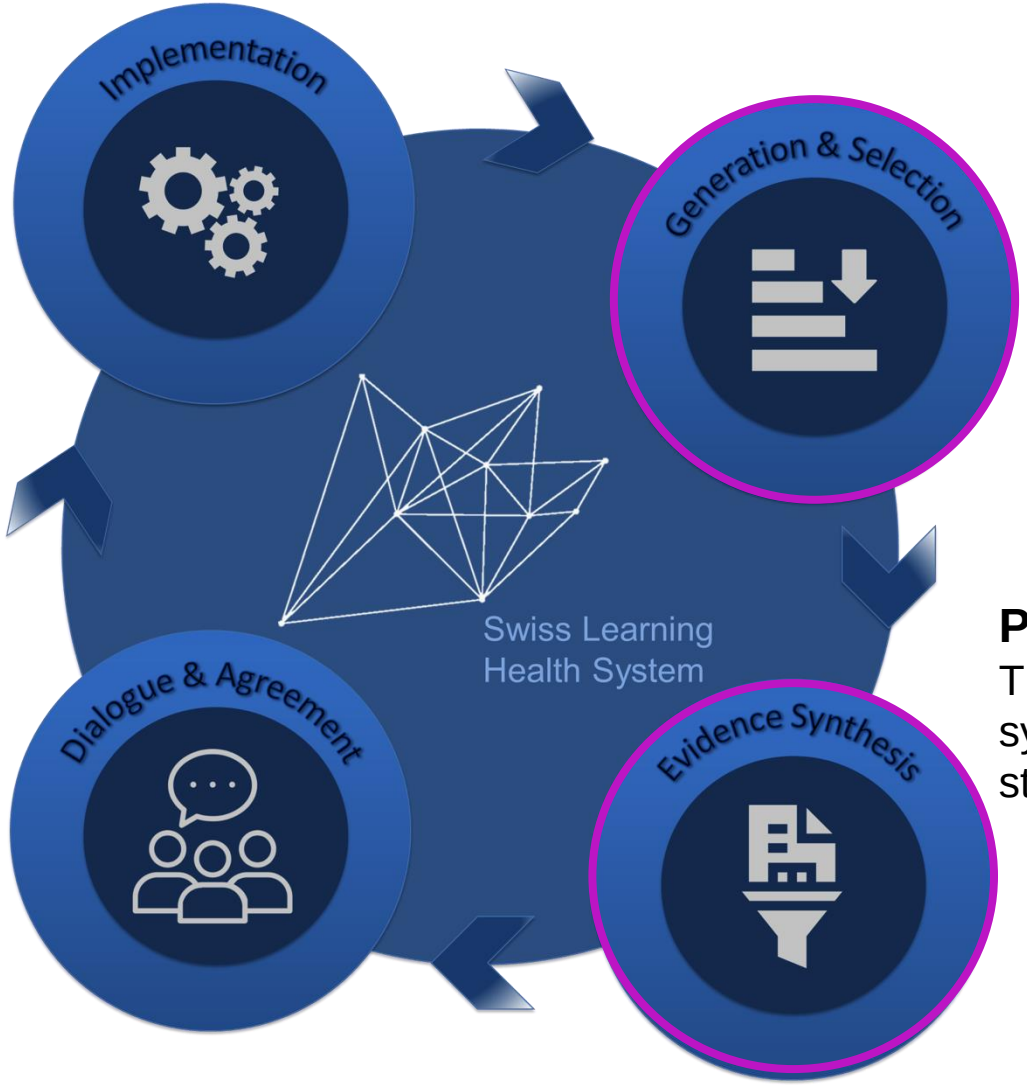
To strengthen the health system and create a culture of shared decision-making in which sound scientific evidence is continuously integrated into the health system.


Generation
Selection
Evidence Synthesis
Dialogue Agreement
Implementation
Rapid Response Synthesis
Issue Identification
Issue Prioritization
Policy Brief
Stakeholder Dialogue
Implementation Guidance, Monitoring and Evaluation

SLHS: Bridging research, policy, and practice



SLHS: Bridging research, policy, and practice

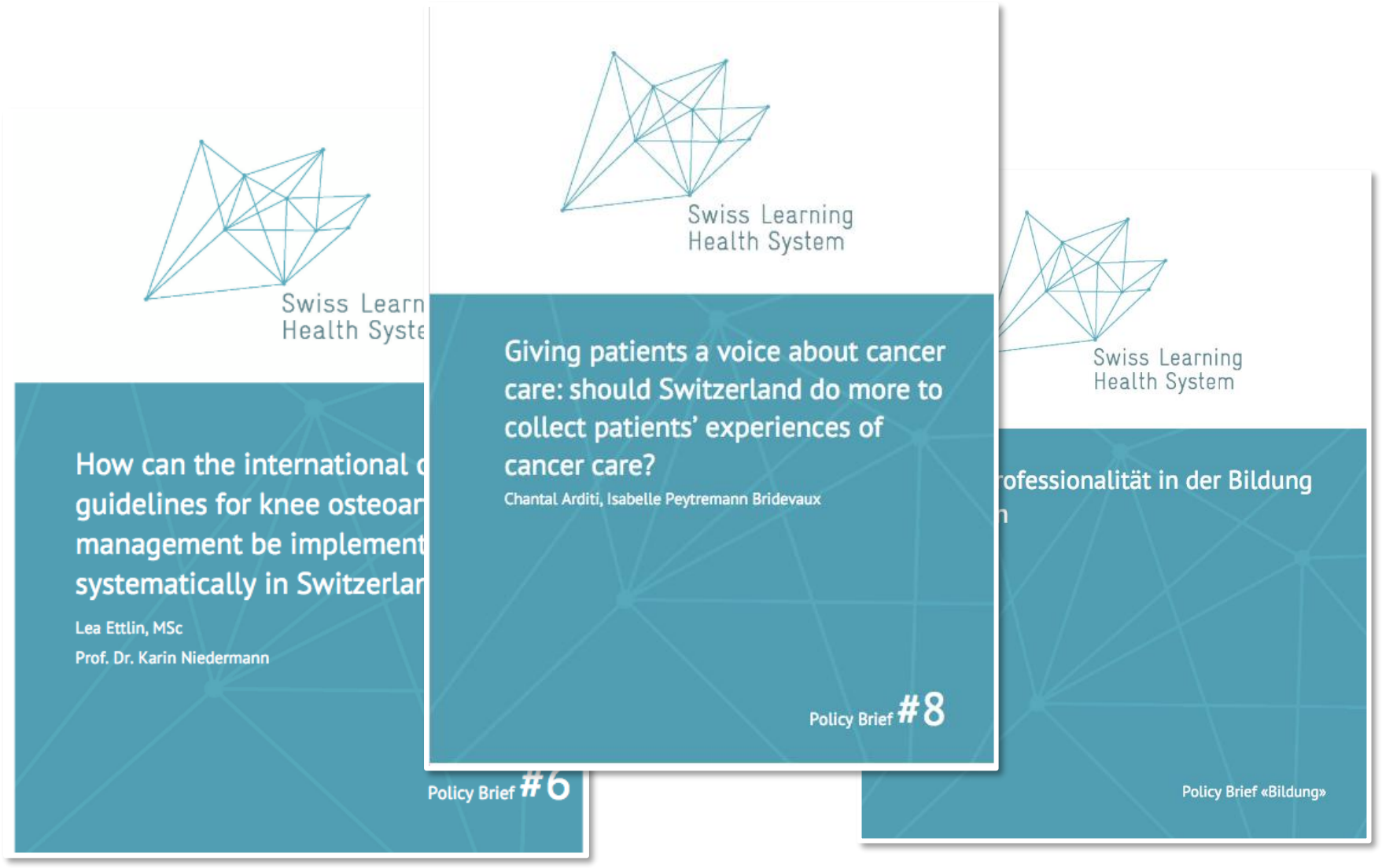


Issue Identification

The SLHS identifies and prioritizes pressing topics and challenges in the Swiss health system.

Policy Briefs

The SLHS produces evidence syntheses (Policy Briefs) as input for stakeholder dialogues.


Swiss Learn
Health Syste
How can the international
guidelines for knee osteoar
management be implement
systematically in Switzerlar
Lea Ettlin, MSc
Prof. Dr. Karin Niedermann
Policy Brief #6
Swiss Learning
Health System
Giving patients a voice about cancer care: should Switzerland do more to collect patients' experiences of cancer care?
Chantal Arditi, Isabelle Peytremann Bridevaux
Policy Brief #8
Swiss Learning
Health System
rofessionalität in der Bildung
Policy Brief «Bildung»

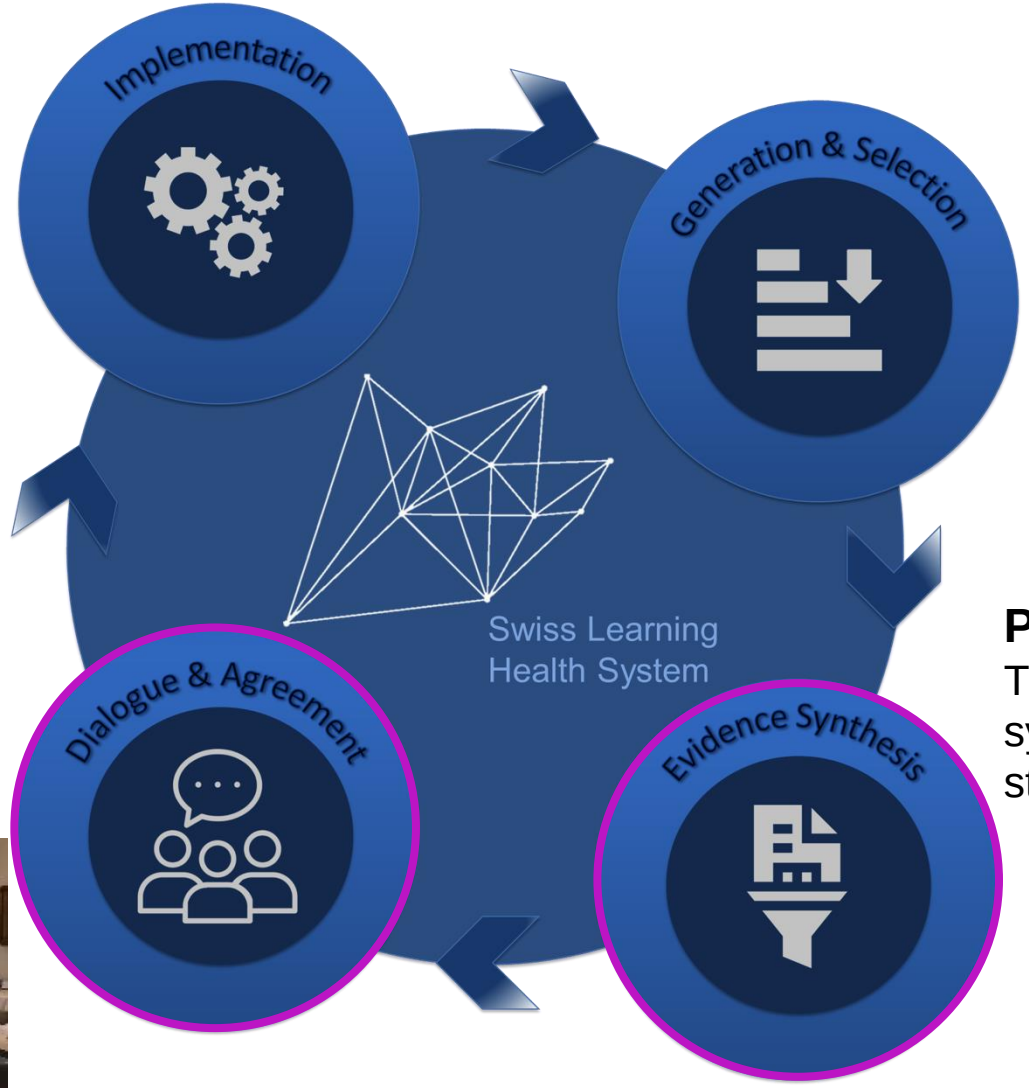
D2K: Policy Briefs

i. describe a problem relevant to decision-makers by explaining relevant contextual factors

ii. present a number of evidence-informed recommendations to a problem; for each possible solution explain all relevant aspects including expected benefits and costs

iii. discuss potential barriers and facilitators to implementation of each possible recommendations

SLHS: Bridging research, policy, and practice



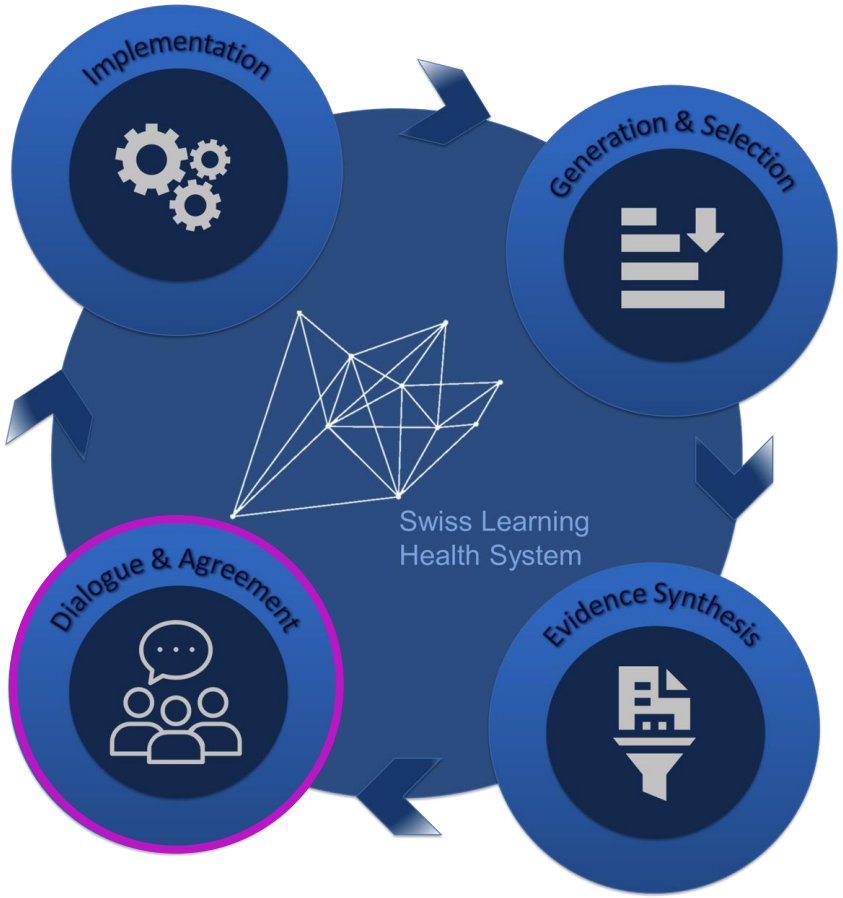
Stakeholder Dialogues
Stakeholder work and discuss issues together to solve problems in the Swiss health system.

Policy Briefs
The SLHS produces evidence syntheses (Policy Briefs) as input for stakeholder dialogues.

D2K & K2P: Stakeholder Dialogue

… is a structured communication process that uses a deliberative dialogue during which stakeholders work collaboratively toward a common understanding with the aim to reach agreement on the problem at hand.

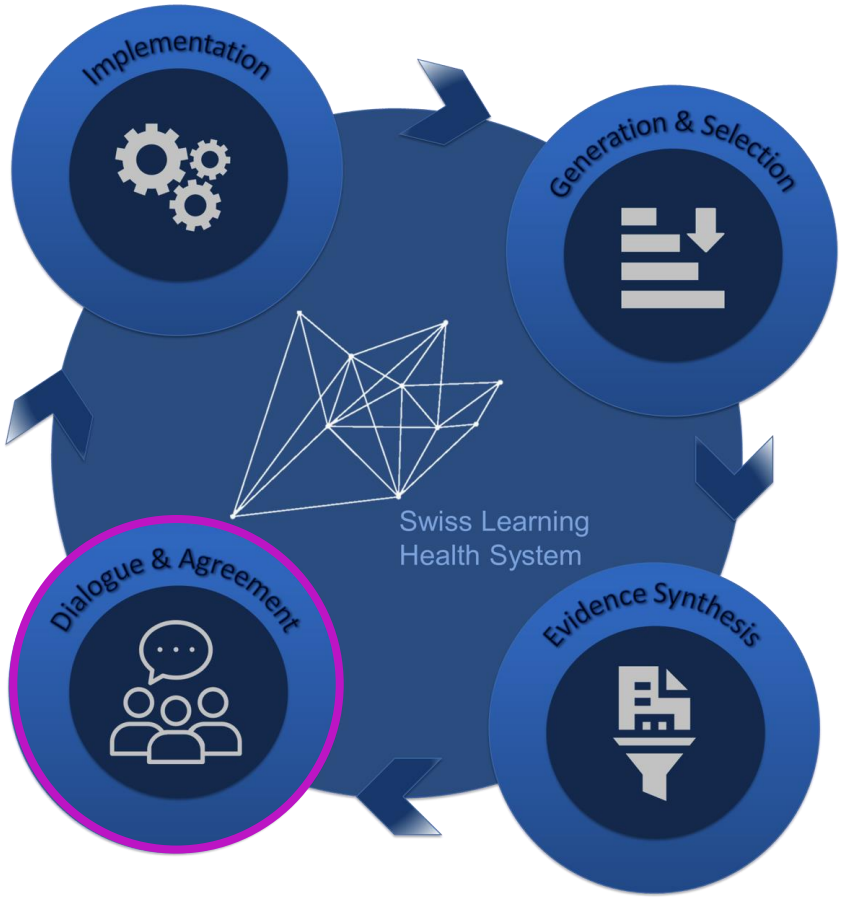
https://www.slhs.ch



D2K & K2P: Stakeholder Dialogue

Potential outcomes of a dialogue

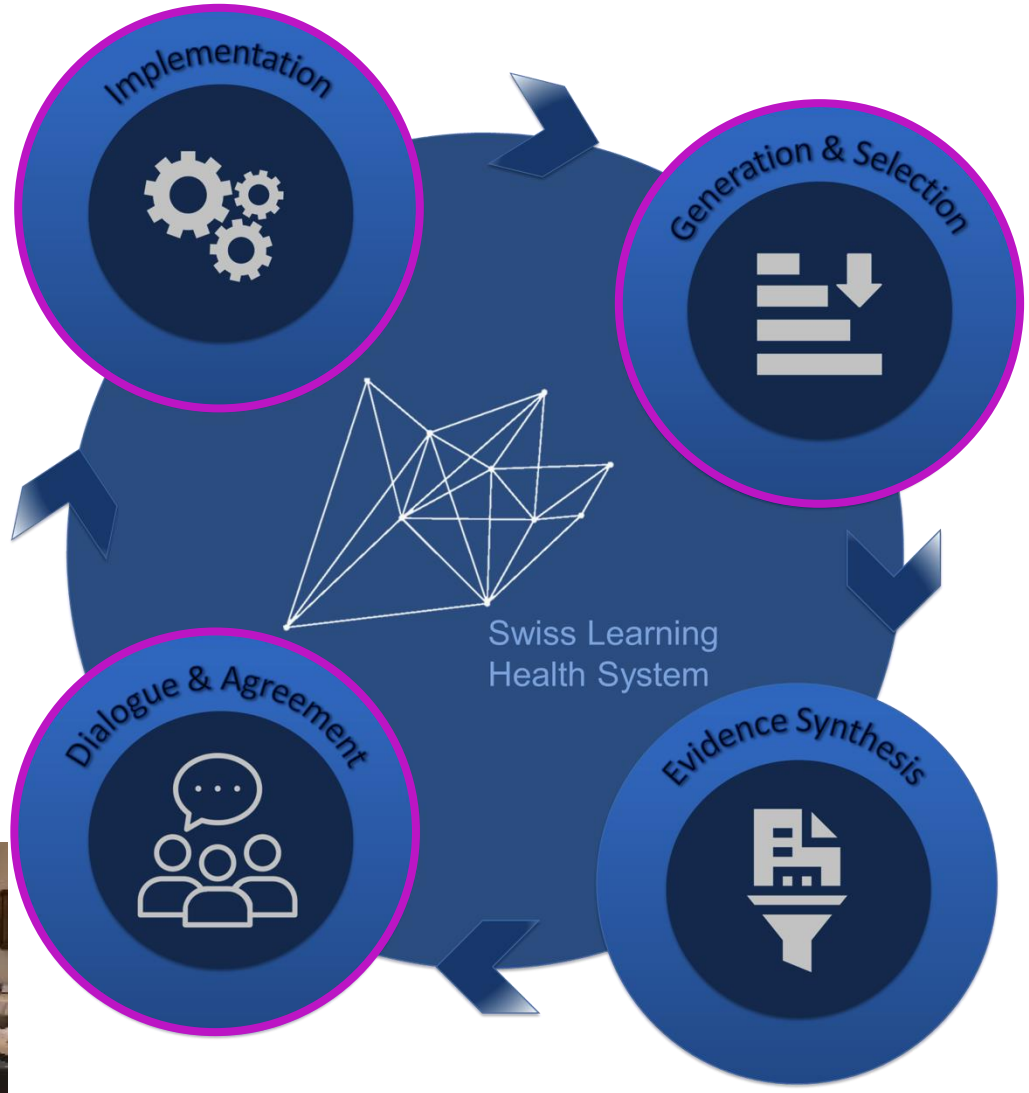
- planning of course of action
- mission/vision statements
- (signed) agreements
- a product (toolbox)
- further/additional research



SLHS: Bridging research, policy, and practice

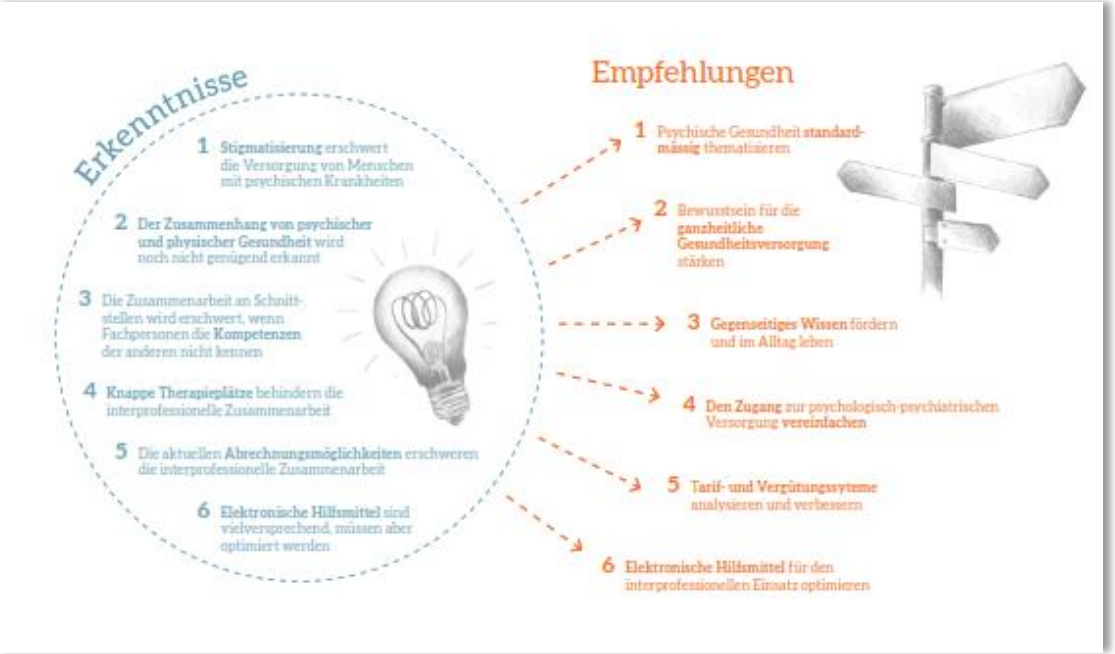
Monitoring and Evaluation
The SLHS monitors and evaluates implementation of measures to enhance the quality of health systems.

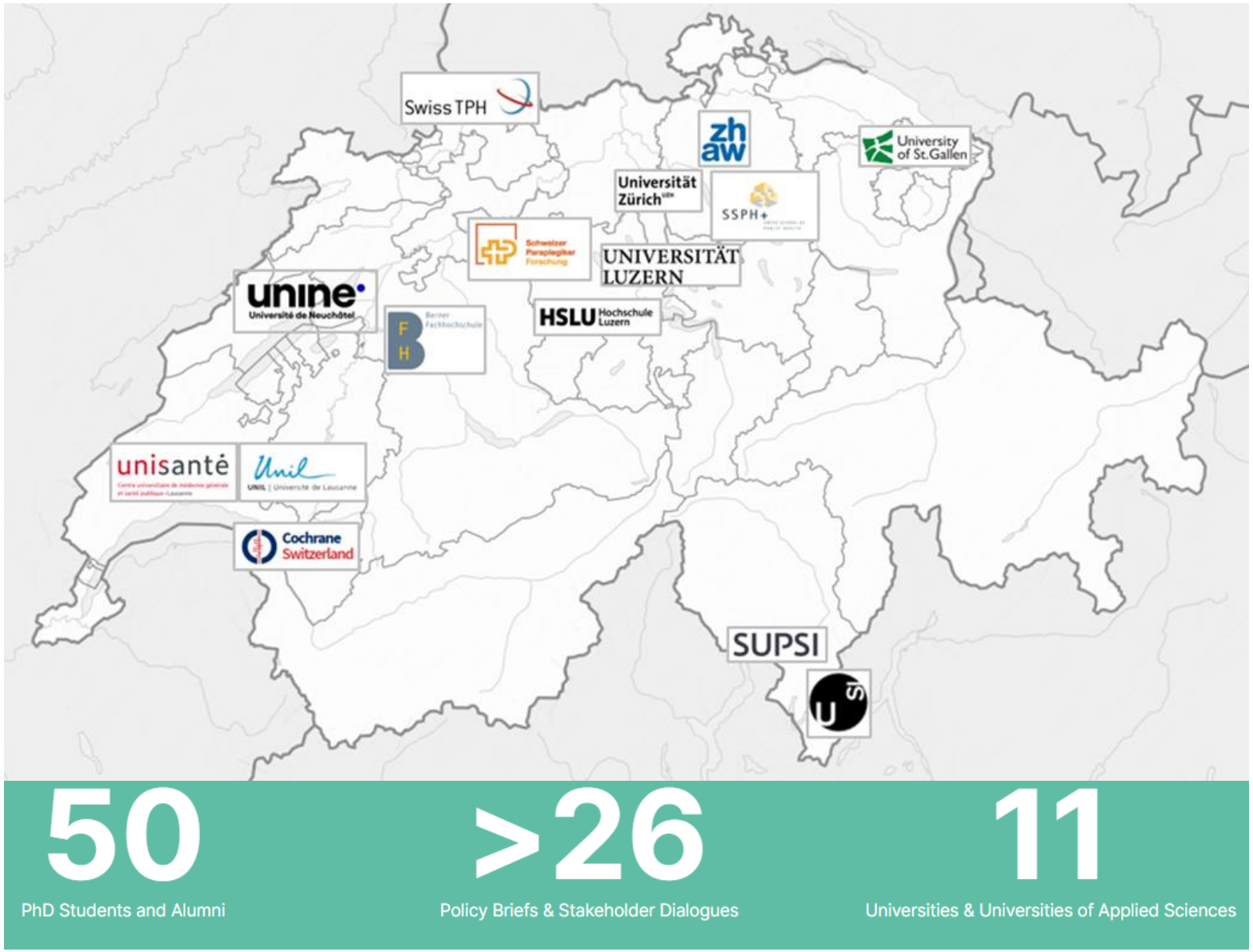
Stakeholder Dialogues
Stakeholder work and discuss issues together to solve problems in the Swiss health system.



Example: PREMs in Cancer Care

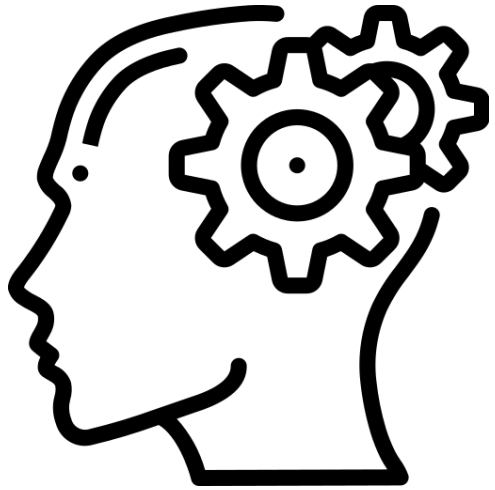
Example: Interprofessional Collaboration




Swiss TPH
zh aw
University of St.Gallen
Universität Zürich
SSPH+
UNIVERSITÄT LUZERN
unine
Université de Neuchâtel
HSLU Hochschule Luzern
unisanté
Unil
Cochrane Switzerland
SUPSI
50
PhD Students and Alumni
>26
Policy Briefs & Stakeholder Dialogues
11
Universities & Universities of Applied Sciences

Building scientific capacity for HSR and LHS

PhD Students | Swiss Learning Health System (slhs.ch)



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Lessons learned until today

Building learning health systems takes time, in particular:

- building learning communities and creating buy-in
- setting priorities that can address real world needs
- identfying and evaluating impact → monitoring is work in progress

Building learning health systems is a conceptual as much as it is a practical endeavour.

Lessons learned until today

However, so far we also have seen the benefits of:

- … creating and engaging in dialogue, a need expressed by many in the field of HSR …
- … , as it allows to create a culture of shared-decision making and co-creation …
- …, and which encourages a culture of continuous learning and improvement …
- … to address wicked problems.

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SSPH+ SWISS SCHOOL OF PUBLIC HEALTH

Swiss Learning Health System

SPHN Swiss Personalized Health Network

Schweizerisches Gesundheitsobservatorium
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Osservatorio svizzero della salute
Swiss Health Observatory

Schweizerische Eidgenossenschaft
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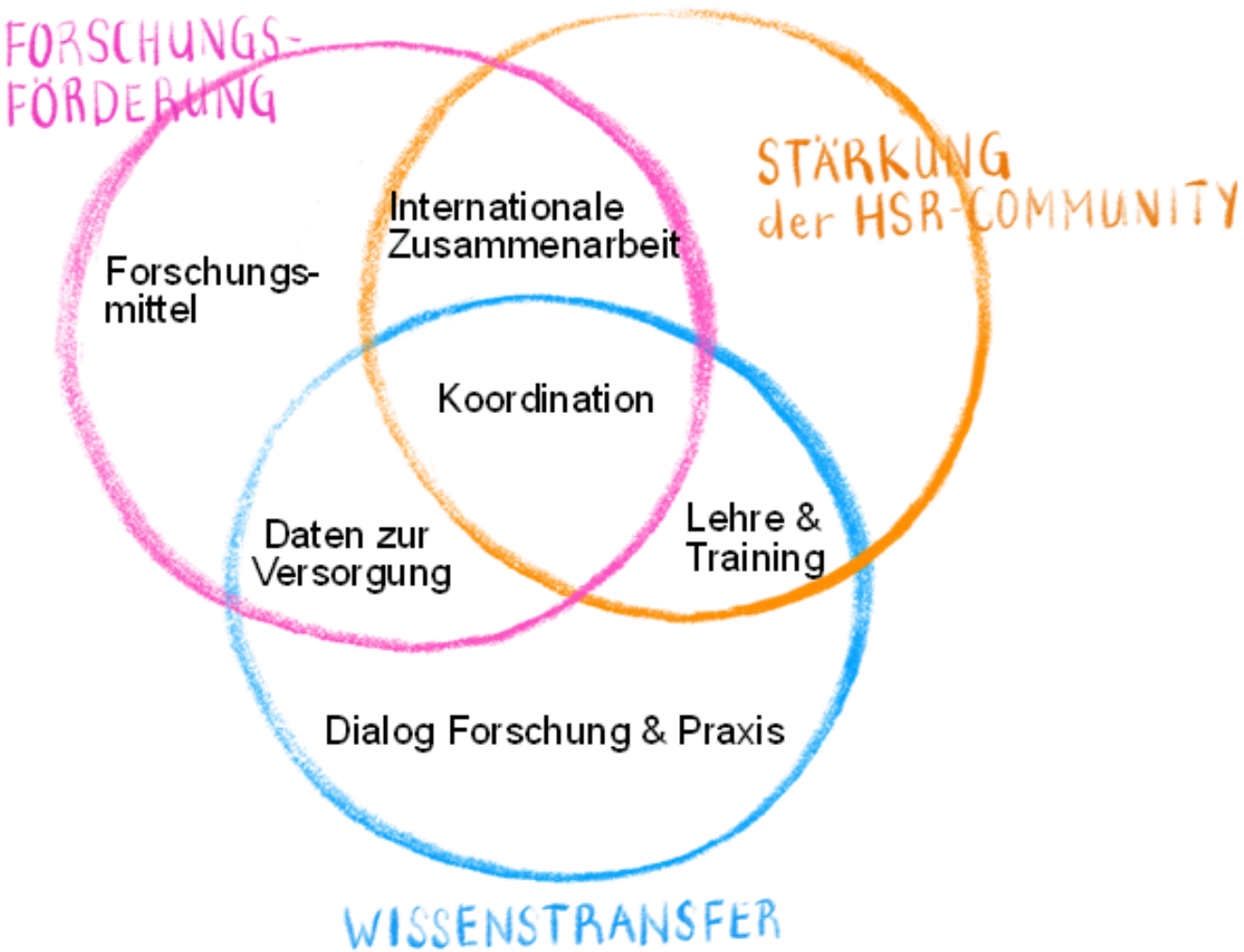
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Home Affairs DHA
Federal Office of Public Health FOPH

CGDKS
Konferenz der kantonalen Gesundheitsdirektorinnen und -direktoren
Conférence des directrices et directeurs cantonaux de la santé
Conferenza delle direttrici e dei direttori cantonali della sanità



Swiss Learning Health System

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