



Medical Care Epidemiology: From Variation to Low-Value Care

Facilitators

- **Prof. Joachim Marti, PhD**
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- **Prof. Arnaud Chiolerio, MD PhD**
Population Health Laboratory (#PopHealthLab), University of Fribourg
Department of Epidemiology, McGill University, Canada
- **Reto Jörg and Jonathan Zufferey**, Swiss Health Observatory (OBSAN)

Lecturers:

Dr. Stéphane Cullati (Unifr), Prof. Nicolas Rodondi (Unibe), Prof. Matthias Schwenkglens (Unibas, Uzh), Dr. Olivier Grübner (Unilu), Dr. Marie-Annick Le Pogam (Unisanté, Unil), Dr. Kevin Selby (Unisanté, Unil), Prof. Marie-Anne Durand (Unisanté, Unil).

Description

Important variation in healthcare practices is observed between countries, regions, and providers. A part of this variation reflects heterogeneity in patient populations, needs, and preferences, whereas other parts reflect poor incentives, quality issues, institutional factors, or misalignment with patient preferences, for instance. Several conceptual and methodological challenges are associated with the study of variation, including distinguish between the “good” (i.e. warranted) and the “bad” variation (i.e. unwarranted); accessing the appropriate data to measure variation, as well as deploying the right methodological tools; and isolating the causes/determinants of variation that can go from provider-level factors (i.e., financial incentives, new technologies, guidelines, medical education), to demand-side factors (needs, patient preferences, insurance coverage, attitudes, health literacy), as well as institutional and organizational factors (e.g. health system governance).

The course will combine lectures, workshops, and hands-on exercises to provide students with the theoretical and empirical toolbox required to approach the issue of variation in healthcare in a scientifically rigorous way. More precisely, it will cover the following topics:



- 1) Theoretical and clinical background, historical perspective, concepts, and definitions of quality of care and variation in healthcare.
- 2) In-depth discussion of the distinction between warranted vs. unwarranted variation and related concepts (preference-sensitive care, supply-sensitive care, low-value care etc.)
- 3) Methods of studying variation in healthcare (risk adjustment, standardization, multi-level models, spatial analysis, etc.), including extensive hands-on exercises
- 4) Methods of quality-of-care monitoring, including low-value care
- 5) Using healthcare epidemiology to inform policymaking on how to improve the healthcare system.

Objectives

After the course, students will:

- 1) Get an in-depth understanding of the data and methods used to describe and explain variation in healthcare utilization;
- 2) Be able to conduct basic analysis of healthcare variation, from data exploration and hypothesis generation to more advanced analytical methods;
- 3) Know how to interpret variation data from both a clinical and policy perspective;
- 4) Know how to monitor quality of care and tools to reduce low value care;
- 5) Discuss interventions and policies aimed at reducing unwarranted variation and improving quality of care, at various levels (i.e., provider, health system, area).

Date

7 – 11 July 2025

Eligibility

Open to SSPH+ PhD students, senior researchers, and professionals in the public health field.

Course Structure

In class, combination of lectures, workshops and hands-on exercises.

Assessment

Group presentations (during week) and report (after the course). A selection of reports synthesizing evidence of causes of variation in specific clinical areas might be published in the Swiss Atlas of Health Care alongside corresponding indicators.

Credits

2 ECTS (prep. Work: 20h, contact: 36h)

(1 ECTS corresponds to appr. 25-30 hours workload)



Location University of Lausanne

Course Fees

	2 ECTS
SSPH+ IGC PhD and MD Students	30 CHF
Postdocs from SSPH+ partner institutes	30 CHF
External PhD students, external MD Students and Swiss Public Health Doctors in training	600 CHF
Others	1'600 CHF

Registration <https://www.conftool.com/ssph-phd-courses2025/>

Deadline for Registration 7 June 2025