5-DAY CERTIFIED UNIVERSITY COURSE

Causal Inference for Assessing Effectiveness in Real World Data and Clinical Trials:

A Practical Hands-on Workshop

Registration Fee

_ Course fee academic/public ..... Euro 1,980
Early booking fee until 8 December 2019 Euro 1,480

_ Course fee commercial ..... Euro 3,850
Early booking fee until 8 December 2019 Euro 2,850

_ Discounts

Group Registrations – Save 15%
Register with three or more colleagues and save!

Alumni – Save 20%
UMIT Alumni or if you have previously participated in a Continuing Education Program Course on HTADS, you are eligible for a discount on this course.

Course fees include a comprehensive syllabus, an extensive binder with background reading material, course certificate, snacks and lunch, but not travelling and accommodation. Certificates will be provided to all participants. You can earn 4 ECTS credits if you pass the exam at the end of the course.

Registration for this course can be made online. Payment details and cancellation policy are available on www.umit.at/htads

Contact & Course Location

Continuing Education Program on HTA & Decision Sciences (HTADS)

Institute of Public Health, Medical Decision Making and HTA

UMIT – University for Health Sciences, Medical Informatics and Technology

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HTADS CONTINUING EDUCATION health technology assessment and decision science
UMIT

What is the Continuing Education Program on Health Technology Assessment & Decision Sciences (HTADS)?

Prof. Uwe Siebert, MD, MPH, MSc, ScD
HTADS Program Director

Health Technology Assessment (HTA)

has been defined by the International Network of Agencies for HTA (INAHTA) as "a multidisciplinary field of policy analysis studying the medical, economic, social, and ethical implications of development, diffusion and use of health technologies (e.g., drugs, devices, surgical procedures, prevention techniques)". In conducting HTA, the discipline of decision sciences has become increasingly relevant.

Decision Science (DS)

is the application of explicit and quantitative methods to analyze decisions under conditions of uncertainty (e.g., meta-analysis, decision-analytic modeling, cost-effectiveness analysis). In recent years, HTA and DS have become very important to health care policymakers. In order to keep pace with these developments, the UMIT – HTADS Program was designed to provide excellent quality education and comprehensive training in the key issues of HTA and DS for anyone involved in the health sector. The course faculty is drawn from leading international experts from universities, industry, HTA agencies and representatives from other relevant areas who are committed to provide inde´pendent teaching of state-of-the-art principles.

Further HTADS Courses

Scientific Writing for Life Sciences
3-Day Certified University Course, 7-9 November 2019

Winter School in Clinical Epidemiology
5-Day Certified University Course, 17-21 February 2020

Modeling Approaches for HTA:
A Practical Hands-On Workshop
3-Day Certified University Course, February 2020

Introduction to Health Technology Assessment
4-Day Certified University Course, 2020

Course Faculty

Prof. Uwe Siebert, MD, MPH, MSc, ScD
Professor of Public Health (UMIT), Adjunct Professor of Health Policy and Management (Harvard University),
Past-President of the Society for Medical Decision Making (SMDM),
Chair, Dept. of Public Health, Health Services Research and HTA,
UMIT – University for Health Sciences, Medical Informatics and Technology, Hall i.T., Austria

Dr. Nicholas Latimer, BSc, MSc, PhD
Senior Research Fellow in Health Economics, Health Economics and Decision Science,
School of Health and Related Research, University of Sheffield, Sheffield, UK, Yorkshire Cancer Research Senior Fellow

Prof. Ian White, MA, MSc, PhD
Professor of Statistical Methods for Medicine
MRC Clinical Trials Unit at University College London

Target Audience

The 5-Day Certified University Course in Causal Inference is aimed at members of:

- Healthcare & health policy organizations, national HTA agencies
- Regulatory agencies (EMA, FDA, etc.)
- Pharmaceutical & medical device industry
- Academia and research institutions
- Health insurances/sickness funds
- Consultancy organizations

This is an introductory course. A pre-requisite is basic knowledge of biostatistics and familiarity with the software package STATA and R or the willingness to learn. Course language is English. Computer examples will be programmed in STATA and R.

Course Description

Causal inference in medicine, epidemiology, and health technology assessment is the process of drawing a conclusion about a causal relationship between an exposure/intervention and an outcome. It provides important information for health policy decision makers, HTA agencies, clinical guideline developers and researchers to derive valid causal interpretations from study results in health and medicine.
This course covers the key concepts and methodological approaches to causal inference in observational and experimental data, including real-world evidence, randomized controlled trials (RCTs) as well as pragmatic trials with a specific focus on adjustment for time-varying confounding, selection bias and treatment switching. Further aspects include study design with real world data analysis, deriving different estimands, the use of causal graphs, adjustment for compliance and adjustment for multiple lines of treatments.

The course combines lectures on theoretical concepts, discussions, case study exercises, and hands-on computer lab sessions. Practical applications using real world case examples address health interventions from different health technologies and different disease areas.

By the end of the course, participants will be familiar with:

- Concepts and methods of causality, counterfactuals and causal inference
- Framing and interpreting causal research questions
- Use of causal diagrams (directed acyclic graphs, DAGs) in observational studies and clinical trials
- The paradigmatic shift from traditional statistical analysis to causal analysis and the difference between naive methods and causal methods
- Adjustment for fixed and time-varying confounding and treatment switching/adherence
- Use of causal methods (g-formula, inverse probability weighting with marginal structural models, g-estimation with structural nested models)
- The target trial concept
- Applying publicly available software to case examples
- Programming analyses in STATA and R using inverse probability weighting (IPW) with marginal structural models (MSM) and g-estimation with rank-preserving structural failure time models (RPSFTM)
- How to identify the appropriate adjustment method
- Recommendations and guidelines on adjustment methods