

Workshop on Causal Inference in Health Registry Research



Health Registries for Research
Norway

Thursday 30 November 2017

12.00	Welcome Kjetil Røysland
12.05	Is there a place for causal inference in health registry research? Rolv Terje Lie
12.25	Time-varying confounding, part 1 Rhian Daniel & Bianca de Stavola
13.25	Lunch
13.55	Time-varying confounding, part 2 Rhian Daniel & Bianca de Stavola
14.55	Break
15.10	Current use of instrumental variable analysis in health registry research Øystein Ariansen Haaland
15.25	The aspect of time in Mendelian randomization studies: A neglected source of bias Mats J. Stensrud
16.05	Break
16.20 -17.00	IV in health registry research: Challenges and possibilities Neil Davies
19.00	Dinner

Friday 1 December 2017

09.00	Multiple mediators, part 1 Rhian Daniel & Bianca de Stavola
10.00	Coffee break
10.30	Multiple mediators, part 2 Rhian Daniel & Bianca de Stavola
11.30	Break
11.45	Identification and causal inference using population wide administrative data Kjell G. Salvanes
12.25	Closing remarks Jon Michael Gran
12.40	End



Abstracts



Time-varying confounding

In this session we will give a brief review of the issues arising from time-varying confounding in the context of longitudinal data created by linkage, give an overview of the three main approaches to deal with it (g-computation, g-estimation, IPW), and discuss results from examples arising from UK-based electronic health records. (Bianca de Stavola and Rhian Daniel)



Multiple mediators

In this session we will introduce mediation analysis when it involves a single mediator and then extend it to the more likely settings that involve multiple mediators, linking them to the time-varying confounding issues addressed in session 1. We will consider alternative targets of estimation, compare their interpretation in the light of life-course studies, and illustrate them using data from UK-based cancer registry data. (Bianca de Stavola and Rhian Daniel)



Instrumental variables in health registry research: Challenges and possibilities

Epidemiologists are increasingly using instrumental variable (IV) analysis to estimate causal effects in observational data. If the IV assumptions are not valid, then the IV estimates can be more biased than other approaches. Therefore, a key aspect of any study using IVs is to assess whether the IV assumptions are plausible. In this session, I will describe some recently developed methods to evaluate the IV assumptions. (Neil Davies)



Identification and causal inference using population wide administrative data

More to follow. (Kjell G. Salvanes)



The aspect of time in Mendelian randomisation studies: A neglected source of bias?

There is an important temporal aspect of Mendelian Randomisation studies: The design relies on genetic variants that are carried from conception, but subjects are often recruited in (late) adulthood. First, I will explain how this time lag may introduce bias. Second, I will present a new method to adjust for survivor bias, using family data from health registries. Mats J. Stensrud



Is there a place for causal inference in health registry research?

This opening talk will give a brief review of the histories of health registry research and causal inference, and discuss the potential of the latter in the former. (Rolv Terje Lie)



Current use of instrumental variable analysis (IVA) in health registry research

This talk addresses how IVA is currently being used in health registry research. We give an introduction to IVA and review the literature. (Øystein Ariansen Haaland)

Organizing committee

Odd O. Aalen, Oslo Centre for Biostatistics and Epidemiology

Jon Michael Gran, Oslo Centre for Biostatistics and Epidemiology

Rolv Terje Lie, Department of Global Public Health and Primary Care, University of Bergen

Øystein Ariansen Haaland, Department of Global Public Health and Primary Care, University of Bergen