

## **Mediation – intermediate variables, direct and indirect effects in epidemiology**

2009-Nyhed 10

**Aim and contents:** In observational epidemiology much energy is being spent on control of confounding, while until recently, the equally important problem of intermediate variables has largely been considered important but intractable. During the last decade or so, however, this area has come into focus in methodological research in biostatistics and epidemiology, and the purpose of this course is to present the concepts of mediation, direct and indirect effects. Emphasis will be on concrete methods as well as an up-to-date survey of current status in the area. Computer demonstrations will be included. The participants are expected to bring their own laptops and to have a statistical software packages (Stata, SAS, SPSS) they are familiar with installed.

**Participants:** Danish Ph.D.students and other interested researchers in epidemiology and biostatistics . Working knowledge and experience in analysis of epidemiological data is necessary.

**Form:** Lectures and computer demonstrations.

**Language:** English

**Course material:** A full set of slides will be provided. The course will be based on current papers, and a full reading list will be available ahead of the course. To give a taste, see e.g. Ditlevsen S, Christensen U, Lynch J, Damsgaard MT, Keiding N. The mediation proportion: a structural equation approach for estimating the proportion of exposure effect on outcome explained by an intermediate variable. *Epidemiology* 2005;16:114-20.  
MacKinnon DP, Lockwood CM, Brown CH, Wang W, Hoffman M. The intermediate endpoint effect in logistic and probit regression. *Clin Trials* 2007;4:499-513.  
Pearl J. Direct and indirect effects. In: *Proceedings of the Seventeenth Conference on Uncertainty in Artificial Intelligence*. San Francisco: Morgan Kaufman; 2001:411-420.  
Petersen ML, Sinisi SE, van der Laan MJ. Estimation of direct causal effects. *Epidemiology* 2006;17:276-284.

**ECTS-points:** 5

**Course director:** PhD, MA. MPH Ingelise Andersen, Institute of Public Health Science, Department of Social Medicine, Copenhagen University, Tel: +45 3532 7662. E-mail: inan@pubhealth.ku.dk

**Teachers:** Dr. Stijn Vansteelandt, Gent University, Belgium. Professor Svend Kreiner, Professor Niels Keiding, Professor Finn Diderichsen, all Institute of Public Health, University of Copenhagen. Dr. Laust Mortensen, University of Southern Denmark

**Dates:** 9 and 10 December 2009 and 13, 14 & 15 January 2010. All days from 09.00 – 16.00.

**Place:** Center for Health and Society, Øster Farimagsgade 5, 1399 Kbh K.

**Fee:** DKK. 5.040,-

**Course secretary:** Annegrethe Hansen, Institute of Public Health Science, Department of Social Medicine, Copenhagen University, Tel.: +45 3532 7962. E-mail: a.hansen@pubhealth.ku.dk

**Registration:** Before 1 November 2009

No admission after deadline. Admission for Ph.D. students will be allocated on a first-come, first-served basis. Applications from external participants will be considered after the closing date. The application must be sent to: Ph.D. Administration, Blegdamsvej 3B, DK-2200 Copenhagen N.