

Intermediate Observational Epidemiology

Course Instructor:	Dr. Moyses Szklo, Johns Hopkins Bloomberg School of Public Health
Date / Time:	July 10-14, 2016 / 08:30-13:00 (Sackler Faculty of Medicine)
Final Exam:	July 15, 2016 / 9:00-11:00
Credits:	2 Academic Credits
Pre-requisites:	Basic courses in Epidemiology & Biostatistics

Course Description

The course is aimed at students who already have an understanding of epidemiology's basic principles and methods. The course will consist of theoretical presentations and small group discussions of exercises. Topics will include study designs in observational epidemiology, measures of disease frequency (cumulative incidence and rate based, respectively, on survival analysis and person-time), measures of association in case-based case-control, cohort studies, and in case-control studies within a cohort. Other topics will be bias and confounding, and evaluation of interaction in case-control and cohort studies. Topics in the interface of epidemiology and public health policy will be also discussed.

Requirements

Participants must pass the final exam with a grade of at least 60 (D) to receive academic credit. Non-credit participants are not required to take the final exam.

Textbook

Szklo M. and Nieto FJ. Epidemiology: Beyond the Basics. Burlington, MA: Jones & Bartlett Learning, 2014.

Moyses Szklo, MD, DrPH

Dr. Szklo is the Director of the Graduate Summer Institute of Epidemiology and Biostatistics at Johns Hopkins University and professor at Johns Hopkins Bloomberg School of Public Health. Prof. Szklo is also the Editor-in-Chief of the American Journal of Epidemiology. He has been interested in both the natural history and the etiology of cardiovascular diseases. Dr. Szklo was involved in a total metropolitan Baltimore study of the prognosis of patients with acute myocardial infarction, and was one of the first investigators to clearly demonstrate on a population-wide basis the prognostic importance of non-Q infarction, particularly relevant to the assessment of subclinical cardiovascular disease. Dr. Szklo was principal investigator for the Hopkins field center (based in Washington County, Maryland) and chairman of the Steering Committee of the Atherosclerosis Risk in Communities (ARIC) study from 1986 through 2000, in addition to acting as its editor for internal review of manuscripts. He is currently principal investigator of the Multi-Ethnic Study of Atherosclerosis, and chair of its publications committee.

Course Schedule

Sunday, July 10

- 8:30-10:00 Study designs: birth cohort and ecologic studies
 - 10:00-10:30 Break
 - 10:30-12:00 Study designs: cohort and case-control studies, case-cohort, and nested case-control studies
 - 12:00-12:15 Break
 - 12:15-13:00 Exercise on study designs
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Monday, July 11

- 8:30-10:00 Measures of disease frequency: cumulative incidence (survival analysis) and rates/densities (person-year analysis)
 - 10:00-10:30 Break
 - 10:30-12:00 Measures of association in cohort and case-control studies; The parameter estimated by the odds ratio as a function of the control group's sampling frame
 - 12:00-12:15 Break
 - 12:15-13:00 Exercise on odds ratios and relative risks
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Tuesday, July 12

- 8:30-10:00 Selection and information bias; Sensitivity and specificity as a framework to understand misclassification
 - 10:00-10:30 Break
 - 10:30-12:00 Interaction: definitions and evaluation strategies
 - 12:00-12:15 Break
 - 12:15-13:00 Exercise on misclassification
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Wednesday, July 13

- 8:30-10:00 Additive and multiplicative models; Quantitative and qualitative interaction; Public health interaction
 - 10:00-10:30 Break
 - 10:30-12:00 Confounding; Positive and negative confounding; Kaplan-Meyer adjustment technique
 - 12:00-12:15 Break
 - 12:15-13:00 Exercise on interaction
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Thursday, July 14

- 8:30-10:00 Epidemiologic issues in the interface with public health (Part I)
10:00-10:30 Break
10:30-12:00 Epidemiologic issues in the interface with public health (Part II)
12:00-12:15 Break
12:15-13:00 Questions and Wrap Up
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Friday, July 15

- 9:00-11:00 Final Exam (Room TBA, Sackler Faculty of Medicine)
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Contact Information

Ms. Zoe Blatt or Mr. Michael Brik

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