

COURSE REPORT

Course code: INTH356	Semester:	Department:
Course title: Observational Epidemiology: Survey, Cohort and Case-Control Studies	Spring 2014	Centre for International Health
Course coordinator: Cecilie Svanes Date: 23.07.14	Approved in: PU - Bente Moen, head Date: 6.10.2014	

INTRODUCTION

Course description: Three week intensive course in observational epidemiology.

Learning Outcomes

At the end of the course the students should be able to

- distinguish the principles of surveys, case-control and cohort studies - and how the three designs differ from each other and from the design of randomized controlled trials
- calculate sample sizes for surveys, cohort studies, and matched and unmatched case control studies, based on simple random sampling and two-stage cluster sampling with stratification
- compare alternative sampling methods (stratified, systematic, cluster, non-random)analyse data sets from surveys, cohort, and case-control studies
- calculate precision and account for design effect in cluster sample surveys
- distinguish the different types of cohort studies, i.e. prospective, retrospective and double cohorts
- distinguish the different types of case-control studies
- suggest relevant designs (plan) for case control and cohort studies and surveys
- compare principles and consequences of density based sampling of controls in case control studies and the importance of using incident rather than prevalent cases
- evaluate the direction and magnitude of selection- and information biases in case-control studies, cohort studies and surveys and discuss how to minimize the above mentioned biases during design and conduct of studies
- distinguish in stratified analysis potential confounding and interaction and ways to differentiate between the two, i.e. adjust for confounding factors using Mantel-Haenszel adjusted relative risk estimates and how best to present and interpret a stratified presentation of effect measures when interaction is present. This knowledge should be based on an understanding and ability to identify effect measure modification
- critically appraise the design, analysis and interpretation of studies conducted by other investigators
- communicate effectively with those involved in conducting public health research

STATISTICS:

Number of students:		Number of students completing the course:				
Grade distribution ->:	A:	B:	C:	D:	E:	F:
Or ->:	Pass: 19			Fail: 1		

SUMMARY OF THE STUDENT EVALUATION (*main points*):

1. Statistical packages. Students thought it would be beneficial if they could have a short introduction session on Stata/SPSS at the start or end of Day 1 (if not possible before that). However, they were able to work their way through STATA by end of Day 1 and SPSS was fairly intuitive. Suggestion: Distribute pre-reading on introduction to SPSS/STATA, including how to import datasets from different packages (e.g. excel format). Also state in course description that although familiarity with basics of statistical software is an advantage, it is not essential; students may view the pre-reading and the program before the course. During the course a formal session on introduction to the software will not be covered.
2. They were pleased to have two sessions on sampling- this should NOT be changed. The session on causal inference should be retained. Suggestion was to introduce case-control on the last Friday of week 2 (? afternoon) so that we could have some additional time for this component.
3. During the exercises a strong emphasis on interpretation is requested rather than only focus on analysis.
4. The amount of time spent on 'recap' of basic concepts could be reduced by referring students to appropriate pre-readings prior to the course. Perhaps also recommend specific sections of the textbook to preview.

COURSE COORDINATORS EVALUATION:

- Teaching and assessment methods: Even more hands-on would be good
- Curriculum: Good, see comments from students above
- Information and documentation – would be good if students were better prepared before course, as there were very large differences between students' pre-course level
- Grade distribution – 19 pass 1 fail - acceptable
- Localities/equipment – auditorium with computers difficult with long distance from back to see screen up front, sound a bit difficult

GOALS AND OBJECTIVES FOR NEXT EVALUATION PERIOD – IMPROVEMENTS TO BE MADE:

- Distribute pre-reading on introduction to SPSS/STATA, including how to import datasets from different packages (e.g. excel format). State in course description that familiarity with basics of statistical software is an advantage.
- Give more specific advice as to pre-reading, to reduce somewhat potential large differences in pre-course knowledge
- Change in course description that there will be given grades, not only pass/fail (some students need grades).