GCH 712: Introduction to Epidemiology

Department of Global and Community Health
George Mason University

Summer 2008

Class Information:
Tuesdays & Thursdays 4:30pm – 7:10pm
Saturdays 1:00pm – 4:00pm
Research I, Room 201

Instructor Information:
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Course Objectives:

1. Define common terms used in population health research.
2. Calculate, interpret, and compare measures of disease frequency in populations.
3. Describe key characteristics of ecological, cross-sectional, case-control, cohort, and experimental study designs.
4. Calculate and interpret measures of association between exposures and health outcomes.
5. Select appropriate epidemiological study designs for use in data collection and analysis.
6. Explain the processes used to collect, manage, and analyze data.
7. Distinguish between association and causation.
8. Identify possible sources of bias, confounding, and effect modification and describe methods for minimizing or adjusting for them.
9. Critically read epidemiologic articles published in peer-reviewed journals.
10. Describe the process for applying epidemiologic principles in surveillance, screening, outbreak investigation, program evaluation, medical research, and other applied settings.

Resources:

- **Textbook:** Epidemiology (3rd edition) by Leon Gordis
- **Suggested Software:** Epi Info for Windows (version 3.4.3) – free download at http://www.cdc.gov/epiinfo

Academic Honesty: George Mason University operates under an honor system, which is published in the University Catalog and deals specifically with cheating, attempted cheating, plagiarism, lying, and stealing. Please familiarize yourself with the honor code, especially the statement on plagiarism. If you have questions about how to correctly cite the contributions of published articles, internet resources, people, and other sources to your work, please talk with the professor.

Students with Disabilities: All students with questions or concerns about this class are encouraged to set up a time to meet with the professor, preferably during the first 2 weeks of the semester. Students with disabilities should work with the Disabilities Resource Center (DRC) to identify appropriate accommodations and communicate those with the professor.

GCH 712: Introduction to Global Health
Proposed Schedule

Date	**Topics**	**Readings** (from Gordis)	**Notes**
May 20 (Tu)	Introduction	Chapter 1	
May 22 (Th)	Measures of Disease Frequency	Chapters 3 & 4a (p. 32-58)	
May 24 (Sa)	Age Adjustment & Survival Analysis	Chapters 4b (p. 58-68) & 6	
May 27 (Tu)	Cross-Sectional, Case-Control, and Cohort Studies	Chapters 9, 10, & 13	QUIZ 1
May 29 (Th)	Measures of Association	Chapters 11 & 12	
May 31 (Sa)	*Synthesis*: Observational Studies	--	Meet in Computer Lab
June 3 (Tu)	Randomized Trials	Chapters 7 & 8	QUIZ 2
June 5 (Th)	Causation and Confounding	Chapters 14 & 15	
June 7 (Sa)	*Synthesis*: Experimental Studies	--	Meet in Computer Lab
June 10 (Tu)	Infectious Disease Epidemiology	Chapter 2	QUIZ 3
June 12 (Th)	Screening	Chapters 5 & 18	
June 14 (Sa)	Chronic Disease Epidemiology	Chapters 16 & 17	
June 17 (Tu)	Epidemiology, Ethics, & Communication	Chapters 19 & 20	
June 19 (Th)	Final Exam	--	EXAM