

University of North Carolina School of Public Health  
Department of Epidemiology  
EPID600, Principles of Epidemiology for Public Health  
**Spring 2007 Classroom course materials**

If you obtain EPID600 course materials from a previous semester, be sure to **check for differences** from the latest version. (Note that lecture slides and case study questions have version dates - e.g., see below.)

**Important:** Students who have taken the course are **not permitted** to give you instructor answers to the case studies or past exams. Having access to the instructor answers will compromise the learning value of the case studies. If you have received these materials, please give them to one of the instructors as soon as possible. It is a violation of the Honor Code for you to have access to instructor answers before these have been made available to you by the course instructors. It is also a violation of the Honor Code for you to give instructor answers to another student, whether the student is currently enrolled in this course or not, unless the course instructors have already made those available to the student or you have obtained written (email) permission from Victor Schoenbach.

The course and coursepack are organized into topic modules, most lasting a week. The [classroom course materials](#) contain, for each module, a handout with the lecture slides, module objectives, instructions, case study questions, and case study reading(s).

## Contents

### 1 Introduction to Epidemiology

Objectives, Instructions

Case study reading: Milton Terris. The Epidemiologic Tradition. *Public Health Reports* 1979; 94:203-209

Lecture slides (version date in lower left corner of opening slide)

### 2 Studying Populations

Objectives, Instructions, Case study questions (version date: 6/6/2006, 9/17/2006, 1/7/2007)

Case study reading: Joseph A. McFalls Jr. Population: A Lively Introduction, 4th ed. *Population Bulletin* December 2003;58(4). (<http://www.prb.org/pdf/PopulationLivelyIntro.pdf>)

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### 3 Incidence and Prevalence

Objectives, Instructions, Case study questions (version date: 8/7,11,22,27/2006vs, 9/9,10/2006vs, 1/7,26/2007vs)

Case study reading: Gregson, Simon; Garnett, Geoffrey P.; Nyamukapa, Constance A.; Hallett, Timothy B.; Lewis, James J. C.; Mason, Peter R.; Chandiwana, Stephen K.; Anderson, Roy M. HIV Decline Associated with Behavior Change in Eastern Zimbabwe *Science* 2006(Feb 3);311(5761):664-666

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### 4 Natural History and Population Screening

Objectives, Instructions, Case study questions (version date: 7/23/2005vs, 2/4/2006vs)

Case study reading: Gabriel M. Leung, Tai-Hing Lam, Thuan Q. Thach, Anthony J. Hedley. "Will Screening Mammography in the East Do More Harm than Good?" *American Journal of Public Health* 2002(Nov);92(11):1841-1846

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### 5 Intervention studies

Objectives, Instructions, Case study questions (version date: 7/20/2006vs, 8/21/2006vs, 1/7/2007vs),

Case study reading: John M. Colford, Jr., Timothy J. Wade, Sukhminder K. Sandhu, Catherine C. Wright, *et al.* A randomized, controlled trial of in-home drinking water intervention to reduce gastrointestinal illness. *American Journal of Epidemiology* 2005;161(5):472-482.

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## 6 Cohort Studies

Objectives, Instructions, Case study questions (version date: 12/9,11/2003vs, 2/18/2004vs, 5/28/2004vs),  
Case study reading: Janice E. Williams, F. Javier Nieto, Catherine P. Stanford and Herman A. Tyroler. Effects of an angry temperament on coronary heart disease risk: The Atherosclerosis Risk in Communities Study, *Am J Epidemiol* 2001; 154(3):230-235.

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## 7 Case-control Studies

Objectives, Instructions, Case study questions (version date: 12/10/2001 vs/lka, 2/18/2003 vs, 12/8-11/2003vs),  
Case study reading: Fontham ETH, Correa P, Wu-Williams A, *et al.* (1991). Lung cancer in nonsmoking women: A multicenter case control study. *Cancer Epid Biomarkers & Prev.* 1:35-43. (Notes: HCFA = Health Care Financing Administration, now the Centers for Medicare & Medicaid Services)

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## 8 Cross-sectional Studies

Objectives, Instructions, Case study questions (version date: 12/11/2003vs, 3/8/2006vs, 1/29/2007vs)  
Case study reading: Klevens RM, Giovino GA and Peddicord JP. The association between veteran status and cigarette-smoking behaviors. *American Journal of Preventive Medicine* 1995; 11 (4) 245-50.

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## 9 Selection Bias

Objectives, Instructions, Case study questions (version date: 10/14/2006, 2/5/2007)

Case study reading: Peterman TA. (1995). Can we get people to participate in a study of sexual behavior? *Sexually Transmitted Diseases* 22, 164-168. **and**

J. Frantzen, T.G.W. Speel, L.A. Kiemeny and E.J.H. Meuleman. Cardiovascular Risk Among Men Seeking Help for Erectile Dysfunction. *Annals of Epidemiology* 2006 (February); 16(2):85-90.

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## 10 Information Bias

Objectives, Instructions, Case study questions (version date: 12/10/2001vs/lka, 3/24/2004vs, 7/21/2005vs),  
Case study reading: Gelberg et al. (1995). Fluoride exposure and childhood osteosarcoma: a case-control study. *Am J Public Health* 85(12), 1678-1683.

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## 11 Critical review of epidemiologic studies

Objectives, Instructions, Case study questions (version date: 8/22/2006vs)

(Case study reading not included - TA choice)

Lecture slides (version date in lower left corner of opening slide)

## 12 Confounding

Objectives, Instructions, Case study questions (version date: 11/15,17,23,25/2005vs, 11/29/2006vs, 1/10/2007vs) and statistical analysis tables

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## 13 Causal Inference

Objectives, Instructions

Case study reading: Schiffman MH, Bauer HM, Hoover RN, *et al.* Epidemiologic evidence showing that human papillomavirus infection causes most cervical intraepithelial neoplasia. *J Natl Cancer Inst* 1993; 85:958-964.

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## 14 Role of Epidemiology in Public Health

Objectives, Instructions, Case study questions (version date: 2/4/2007vs)

(Case study is online in-class outbreak exercise.)

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