

EPID 210 Epidemiology of Aging (2 units) Winter 2018 draft

Instructor. Mary N Haan, Professor of Epidemiology

Class room: Mission Hall, 10:30-12 Wednesdays

Objectives:

This seminar course will provide an overview of topics and methods for the epidemiology of aging with a focus on common chronic diseases in older populations. Translation of epidemiologic concepts to interventions in older populations and patients will be a focus. This course is designed to work simultaneously with the T32 Training program in chronic disease and aging lead by Drs. Haan, Hiatt and Glymour (see Table 2). This means that all students in EPI 210 may also attend the T32 seminar (held alternate Wednesdays 830-10:00 in MH 2500). Attendance at these extra lectures is not required for EPI 210, but presents an opportunity to hear talks by faculty and advanced postdoctoral scholars in the field.

Prerequisites: This course is appropriate for any graduate student, faculty, fellow or post doc in a health sciences discipline who is interested in the topic. Emphasis is on active discussion and short focused presentations by students.

Reading: Articles will be available on-line by UCSF Box, DROP BOX or by email:

Course requirements:

Class participation (40%). Since the course is a seminar, and is based on active discussion and reading of materials, attendance is critical. Plan to attend all meetings.

Questions/Answers (30%). Three times during the term, each student must prepare a question for discussion. The questions must be submitted to the entire class in writing by email on the Monday before the Wednesday in question. More than one student can submit a question on any given date. Students will present their questions to the class/teacher and lead a 15-minute discussion (see **discussion leading guidelines**). They will summarize in writing the discussion of their questions and hand that (2-3 double spaced pages) in as an assignment by the end of Friday the week of the discussion.

Table of lectures, discussions EPID 210				
Week 1, 1/10				
	Time(min)	Topic/Lecture	Synopsis	Lecture Slides
Lecture 10:30-12	90	1 Overview of epidemiology of aging & course introduction	Q: What is the epidemiology of aging?	Week1b
Week 2,1/17				
Lecture 10:30-11:10	40	2 Biology of aging	Basics of biological/physiological changes common in aging populations. lecture Q: What are three social, biological or genetic factors that influence longevity?	Week2b
Week 3, 1/24				
Lecture 10:30-12		3 Aging-related diseases & disorders	Changes in prevalence and incidence of various diseases with age. Frailty as an aging syndrome Q: What is frailty and how will it affect treatment of patients?	Week3b
Week 4, 1/31				
Lecture 10:30-11:10		4 Epidemiologic methods in aging	Risk factors for disease in the elderly; competing risk/role of selective survival; age/period/cohort effects; measurement difficulties (e.g., due to physical, cognitive or sensory impairments)	Week4b

			Q: What is the likely effect on risk estimates for CVD in people over 80 of a major flu epidemic that occurred when they were 30?	
Week 4 questions Session 2 11:15-12 Name		Topic	Student Question/Answer:	
1				
2				
3				
Week 5, 2/7				
Lecture	10:30-12	5 Methods of analysis: Application of longitudinal methods in aging populations	Longitudinal analysis and aging populations Q: What statistical models are most appropriate for modeling the association between age and change over time in cognitive test scores?	Week5b
Week 6, 2/14				
Lecture	40 min	6 Guidelines for statin use in elderly	Presentation of key recommendations for treatment in people aged 60+ Q:Should people over 65 be treated differently with statins? What are the pros and cons?	Week6b
Week 6 questions Session 3 (name)		Topic	Questions:	
1				
2				
3				
Week 7, 2/21				
Lecture	10:30-12	7 Hypertension control in the elderly	Comparison of JNCI 8 guidelines to recommendations of SPRINT trial Q: What is the evidentiary base for the JNCI 8 recommendations in people over 65?.	Week7b
Week 8, 2/28				
Lecture	40	8 Cognitive function and dementia	Changes in cognition with age; risk factors for cognitive impairment and dementia; potential for prevention	Week8b
Week 8 questions, session 4 (name) 1		Student	Student Questions/Answer:	

2				
3				
Week 9, 3/1				
9 Lecture	40	9 Depression/Mood	Changes in prevalence of mood disorders with age; risk factors and outcomes	Week9b
Week 9 questions, Session 5 (name)		Topic		Week10b
1				
2				
3				
Week 10, 3/14				
10 Lecture		10 Physical function, disability and comorbidity	Factors influencing physical function, disability and comorbidity in older populations; risk factors and outcomes.	

EPI 210 READINGS		
Week	Topic	These are provided online at UCSF Box. Dr Haan will provide access.
1	1 Overview of epidemiology of aging	Crimmins EM. Trends in health of the elderly. Ann Rev Public Health 2004. Lutz W, Sanderson W, Scherbov S. The coming acceleration of global population aging. Nature 2008;451:716-719. Fried LP et al. Frailty in older adults: Evidence for a phenotype J of Geron: Medi Sciences 2001. Vol 56a.
2	2 Biology of aging	Crewes 2003; Hardy 2015
3	3 Aging-related diseases & disorders	Ferrucci L, Giallauria F, Guralnick J. Epidemiology of aging. Radiol Clin North Am 2008;46:643-645 Frisoli A, et al Frailty predictors...Arch Geron Ger 2015. Finn M, et al Influence of frailty on outcomes in CVD..Rev Esp Cardio 2015; 68(8): 653..
4	4 Epidemiologic methods in aging	Newman AB. Overview of design, implementation and analyses of longitudinal studies on aging. 2010 Goodwin JS. Embracing complexity 2003. Rajan K. Cognitive turning point. J of Gerontology: Med Scie (2017: Vol 00.) Raghanathan TE. Missing data. ARPH 2004.
5	5 Methods of analysis: Application of longitudinal methods in aging populations and cohorts	Doll R, mortality of doctors in relation to their smoking habits; BMJ 2004 Doll R. mortality in relation to smoking: 50 years' observations on male British doctors. BMJ 2004. Mishra G et al Structured approach Int J Epid 2009
6	6 Case study: Guidelines for statin use in elderly	Odden MC, Cost effectiveness and population impact of statins. Annals of Int Medicine 2015. Alperovitch Primary prevention with lipid lowering...BMJ 2015: 350-. Hirabayashi N. Assoc diabetes and hippocampal atrophy . Diabetes Care; 2016;39:1543-1549.
7	7 Hypertension control in the elderly	Sprint Trial 2015 NEJM JNCI 8 guidelines on BP control 2014.
8	8 Cognitive function and dementia	Barnes et al. AD projections Lancet 2011.

		Latham Nature Neuroscience. Correlations demystified. P 6-8
9	9 Depression/mood	Byers AL, Yaffe K, Covinsky KE, Friedman MB, Bruce ML. High occurrence of mood and anxiety disorders among older adults: The National Comorbidity Survey Replications. Arch Gen Psychiatry 2010;67:489-496.
10	10 Physical function, disability and comorbidity: what it is and how to measure it.	Covinsky KE, Lindquist K, Dunlop DD, Yelin E. Pain, functional limitations and aging. JAGS 2009;57:1556-1561. Calderon-Larranaga A. Assessing and measuring Multimorbidity..(J Gerontology: Med Scie 12/21/16 Garcia MA et al. Physical functioning and disability trajectories by age of migration among Mexican Elders in the US. J of Gerontology: Social Sciences; 2017, Vol no 00 No, 00 1-11..