

# University of Alberta

## Department of Sociology

Winter 2017

### Sociology 452/552:B1 *Mortality and Population Health*

Mondays 2:00 - 4:50 pm  
Location TB 125

(“Policy about course outlines can be found in Course Requirements, Evaluation Procedures and Grading of the University Calendar.”)

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#### **POLICY ON ELECTRONIC RECORDING OF LECTURES**

Section 23.4(4) of the *University of Alberta Academic Calendar* stipulates:

*“Audio or video recording, digital or otherwise, of lectures, labs, seminars or any other teaching environment by students is allowed only with the prior written consent of the instructor or as a part of an approved accommodation plan. Student or instructor content, digital or otherwise, created and/or used within the context of the course is to be used solely for personal study, and is not to be used or distributed for any other purpose without prior written consent from the content author(s).”*

#### **BRIEF DESCRIPTION OF THE COURSE**

This course examines health, mortality and morbidity trends, differentials and explanations thereof, in both historical and contemporary contexts. Emphasis is placed on the examination of conceptual frameworks aimed at explaining health, illness, and mortality trends, patterns and differentials within and across populations. The orientation is interdisciplinary but with strong emphasis on material published in leading sociological, demographic and epidemiological journals. Students in this course that there is a fair amount of reading involved and that a large portion of one’s final grade will be determined by a term paper submitted at the end of classes; there will also be a series of presentations throughout the term. The course is open to senior undergraduate and graduate students. Graduate students will be expected to perform at graduate level standards on all aspects of the course.

#### **COURSE REQUIREMENTS**

1. Class presentations based on pre-assigned readings (weight = 35%)
2. Term paper (weight = 35%)
3. Presentation of draft term papers (weight = 15%)
4. Class participation (weight = 15%).

## REQUIRED READINGS

There is no required textbook for this course. Most of the relevant reading materials should be available online. Older required readings not accessible electronically will be posted on E-Class.

## TOPICS AND CLASS SCHEDULE

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<u>Week</u>	<u>Date</u>	<u>Topic</u>
1	January 9	Introduction, Basic Concepts and Themes
2	January 16	Explanations of Mortality Change through History
3	January 23	Early life Conditions, Health and Mortality
4	January 30	Evolutionary and Biodemographic Perspectives on Longevity
5	February 6	Social and Economic Determinants of Health and Mortality
6	February 13	Sex Differences in Health and Mortality
<i>February 20-24</i>		<i>Winter Break—No Classes</i>
7	February 27	Social Relationships, Health and Mortality
8	March 6	Suicide and Other Life-Threatening Behaviors
9	March 13	Societal Trauma, Health and Mortality
10	March 20	Migration, Health and Survival
11	March 27	Selected Topics
12	April 3	Presentation of Draft Term Papers
13	April 10	Submission of Term Papers; Conclusion to the Course

## Presentation of Pre-assigned Readings

Each week students will be assigned readings for presentation to the class on the following week (this is independent of the common readings for the class). Based on past experience one can expect to give between 3 and 5 presentations throughout the term (but this is dependent on the number of students in the class). The purpose of these presentations is to reinforce the ideas and conceptual frameworks introduced each week by the instructor and to stimulate further thinking on a given topic. Students are responsible for locating the assigned reading material in the library or online for this part of the course. The student will distribute to the class a typed summary of his/her presentation (two single-spaced typed pages has been standard practice). Based on past experience, each presentation lasts approximately 15 minutes, with about 5 additional minutes for discussion. The criteria below, each scored out of 20, will be applied to evaluate these presentations:

1. Comprehensiveness (covers the main points)
2. Clear understanding of the reading
3. Clarity of presentation
4. Raises stimulating questions for discussion
5. Overall judgment of quality of presentation.

## Term Paper

Students in this class will prepare a term paper on a relevant topic of their choice. Papers should not exceed 13 double-spaced typed pages (including tables, figures, footnotes and references). Proper rules of scholarship must be followed. Completed term papers are due on the last meeting of the class. **NOTE:** Late papers will not be accepted.

## Presentation of Draft Term Papers

The penultimate class meeting of the term will be devoted to the presentation of draft term papers. This will give students the opportunity to receive valuable feedback for possible revision before final submission of the paper. **NOTE:** Missed presentations will be assigned a score of 0.

## Grades

Term grades will be recorded as percentages and transformed to letter grades in accordance with the following schedule:

Percentage Score	Letter Grade	Numerical Score
0-49	F Failure	0.0
50-53	D Minimum Pass	1.0
54-57	D+ Poor	1.3
58-61	C-	1.7
62-65	C Satisfactory	2.0
66-69	C+	2.3
70-73	B-	2.7
74-77	B Good	3.0
78-81	B+	3.3
82-85	A-	3.7
86-90	A Excellent	4.0
91-100	A+	4.0

**Note:** If a final term grade is on the margin of a cut-off point, it will be raised to the next higher category. For example, if a student's overall term score is 90.5, the final grade will be 91, and will receive A+ as a final grade. If a student's overall term grade is 90.4, the score assigned will be 90, and will receive a final grade of A, and so forth. The average undergraduate performance is expected to vary by level of the course: C+ in 100 or 1<sup>st</sup> year courses, B- in 200 and 300 or 2<sup>nd</sup> year courses, and B in 400 or 4<sup>th</sup> year courses. At the undergraduate level, grades D and above are passing grades; at the graduate level, passing grades are C+ and above. See the University of Alberta Calendar for more information.

## Academic Integrity

“The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Code of Student Behaviour (online at [www.governance.ualberta.ca](http://www.governance.ualberta.ca)) and avoid any behaviour which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.”

## Sample “Summary” of Individual reading Presentation

Student’s Name: \_\_\_\_\_

Student’s ID: \_\_\_\_\_

Date of Presentation: \_\_\_\_\_

Bibliographic source: Gruenberg, Ernest M. 1977. “The Failures of Success.” The Milbank Memorial Fund Quarterly/Health and Society 55 (1): 3-24.

The author argues that our success in prolonging life by using new drug therapies is in actuality a failure in success. The biggest breakthrough in this regard took place in mid to late 1930s with the discovery of sulfonamides (sulfa drugs).

His view is that we now treat life-threatening infections with generally effective anti-infection agents such as antibiotics. In so doing, we are often prolonging the life of the individual without really eliminating the disease. As a consequence people with illnesses now live longer in a state of sickness. This also means that the prevalence of chronic diseases in society has been increasing.

Take the example of a patient with heart disease. Many such patients develop complications in mid life. With proper treatment such individuals can go on living for a long period of time. However, they never really get rid of the disease; they have it until they die.

The other point is that by prolonging life in this way, one rarely dies from the disease being attended to by drug therapy. Rather, the death of the person is usually due to related complications to the initial disease. “That is the major but unintended effect of many technical improvements stemming from health research. These increasingly common chronic conditions represent the failures of success. Their growing prevalence and longer duration is a product of progress in health technology.” (5)

Mongolism: Mongolism has always been associated with great susceptibility to respiratory infections. It appears that people with Down’s syndrome rarely lived past one decade in the past. But in recent years their life expectancy has been going up significantly. It is now not uncommon to see mongoloids living seven or more decades.

This type of example highlights Gruenberg’s point that “we” (as a society) can now extend the life of the mongoloid but have not paid much attention to the prevention of this condition. All “we” have done is to develop the technology to detect whether the fetus is mongoloid or not, and then allow the mother to terminate her pregnancy if she wishes to.

Senile Brain Disease: This represents senility due to hardening of the arteries. As the population ages, this is going to represent more and more cases. We can prolong life of such individuals into very old age by using certain drug therapies, but we have not developed any drug to prevent dementia or to eliminate it.

Arteriosclerosis: In earlier times, this disease was terminated in people who died from other causes such as pneumonia or stroke. But now we have means to control these killers, such that as a consequence arteriosclerosis is more prevalent and its duration is longer.

Hypertension: we can now control it with drugs, but we have not discovered a way to prevent it from occurring.

Schizophrenia: The life expectancy of schizophrenics has been rising due to treatments that reduce mortality from infectious diseases, or conditions that typically killed schizophrenics early in life in past years. We can't prevent schizophrenia, however.

Diabetes: The discovery of insulin in 1922 dramatically changed the life expectancy of diabetics. In earlier periods, diabetics died early in life from pneumonia and other infectious diseases. However, with life extension, they now die from vascular complications, which is associated with old age.

Spina Bifida: This is a congenital anomaly of the spine. In 1963 surgical methods were developed to save newborn babies with this type of condition. However, over half of the survivors were severely disabled. They were doubly incontinent, immobile and often retarded and incoherent. Thus, life prolongation in this case has meant that families will be "blessed with severely crippled children."

#### The Central Point of the Article

As we make progress in treating disease, we also prolong life and at the same time we increase the prevalence of sickness in the population. Success then means failures in some respects. Medicine must place more emphasis on finding out what causes a lethal disease and then determine ways to prevent it from happening. This requires a new way of thinking in medicine and epidemiology.

## List of Required Readings

### 1. Introduction, Basic Concepts and Themes

Young, Kue T. 1998. "Measuring health and disease in populations (I)." Pp. 23-58 in Kue T. Young, *Population Health: Concepts and Methods*. New York: Oxford University Press.

### 2. Explanations of Mortality Change Through History

Omran, Abdel R. 1971. "The epidemiological transition: A theory of the epidemiology of population change." *The Milbank Memorial Fund Quarterly* 49 (4): 509-538. Reprinted in *Bulletin of the World Health Organization*, 2001, 79(2): 161-170.

Olshansky, S. Jay and A. B. Ault. 1986. "The fourth stage of the epidemiologic transition: The age of delayed degenerative diseases." *The Milbank Quarterly* 46 (3): 355-391.

Rogers, Richard G. and Robert Hackenberg. 1987. "Extending epidemiologic transition theory: A new stage." *Social Biology* 34 (3-4): 234-243.

### 3. Early Life Conditions, Health and Mortality

Barker, David J.P. and C. Osmond. 1986. "Infant mortality, childhood nutrition, and ischemic heart disease in England and Wales." *The Lancet* (May 10):1077-1081.

Barker, David J.P. 1995. "Fetal origins of coronary heart disease." *British Medical Journal* 311 (15 July): 171-174.

Philip, A. G. 1995. "Neonatal mortality rate: is further improvement possible?" *Journal of Pediatrics* 126: 427-433.

### 4. Evolutionary and Biodemographic Perspectives on Health and Longevity

Dong, Xiao, Brandon Milholland and Jan Vijg. 2016. "Evidence for a Limit to Human Lifespan." *Nature* 538 (7624): 257-259.

Kirkwood, Thomas. 2010. "Why Can't We Live Forever?" *Scientific American* 42: 42-49.

Fries, James. 1980. "Aging, natural death, and the compression of morbidity." *The New England Journal of Medicine* (July 17): 130-135. Reprinted in *Bulletin of the World Health Organization* 2002, 80(3): 245-250.

Oeppen, J. and James W. Vaupel. 2002. "Demography. Broken limits to life expectancy." *Science* 296: 1029-1031.

## 5. Social and Economic Determinants of Health and Mortality

Vagero, Denny and Anthony M. Garco. 2016. "Does unemployment cause long-term mortality? Selection and causation after the 1992–96 deep Swedish recession." *The European Journal of Public Health* 26 (5): 778–783.

Marmot, Michael .1995. "Social Status and Mortality: The Whitehall Studies." Pp. 243-260 in Alan Lopez, Graziella Caselli and Tapani Valkonen (eds.), *Adult Mortality in Developed Countries: From Description to Explanation*. Oxford: Clarendon Press.

Wilkinson, Richard G. and Michael Marmot. 2001. "Psychosocial and Material Pathways in the Relation Between Income and Health: A Response to Lynch et al." *British Medical Journal* 322 (19 May): 1233-1236.

## 6. Sex Differences in Health and Mortality

Austad, S.N. 2006. "Why women live longer than men: sex differences in longevity." *Gender Medicine* 3: 79-92.

Pampel, Fred C. 2002. "Cigarette use and the narrowing sex differential in mortality." *Population and Development Review* 28:77-104.

Rogers, Richard G., Bethany G. Everett, Jarron M. Saint Onge and Patrick M. Krueger. 2010. "Social, behavioral, and biological factors, and sex differences in mortality." *Demography* 47 (3): 555-578.

## 7. Social Relationships, Health and Mortality

Yang, Claire, Courtney Boen, Karen Gerken, Ting Li, Kristen Schorpp, and Kathleen Mullan Harris. 2016. "Social relationships and physiological determinants of longevity across the human life span." *Proceedings of the National Academies of Science* 113(3): 578–583.

Syme, S.L. and Lisa F. Berkman. 1979. "Social Networks, host resistance and mortality: A nine-year follow-up study of Alameda County residents." *American Journal of Epidemiology* 109 (2): 186-204.

Hummer, Robert A., Richard D. Rogers, C. B. Nam and C. G. Ellison. 1999. "Religious Involvement and U.S. Adult Mortality." *Demography* 36 (2):273-285.

## 8. Suicide and Other Life-Threatening Behaviors

Thorlindsson, Thorolfur and Thoroddur Bjarnason. 1998. "Modeling Durkheim on the micro level: A study of youth suicidality." *American Sociological Review* 63 (1): 94-110.

Phillips, David P. 1974. "The Influence of suggestion on suicide: Substantive and theoretical implications of the Werther effect." *American Sociological Review* 39 (3): 340-354.

Stack, Steven. 1987. "Celebrities and suicide: A Taxonomy and Analysis, 1948-1983." *American Sociological Review* 52 (3): 401-412.

## 9. Societal Trauma, Health and Mortality

Tsai, C., and Atheendar S. Venkataramani, "2015. "Communal bereavement and resilience in the aftermath of a terrorist event: Evidence from a natural experiment." *Social Science & Medicine* 146:155e163.

Catalano, Ralph and Terry Hartig. 2001. "Communal Bereavement and the Incidence of Very Low Birthweight in Sweden." *Journal of Health and Social Behavior* 42, (4): 333-341.

## 10. Migration, Health and Survival

Zoua M. Vang, Jennifer Sigouin, Astrid Flenon, and Alain Gagnon. 2016. "Are immigrants healthier than native-born Canadians? A systematic review of the healthy immigrant effect in Canada." *Ethnicity & Health*, DOI: 10.1080/13557858.2016.1246518

Stout Clarke, Jerry Morrow, Edward N. Brandt and Stewart Wolf. 1964. "Study of an Italian-American community in PA. Unusually low incidence of death from myocardial infarction." *Journal of the American Medical Association* 188 (1):845-849.

Antecol, H. and K. Bedard. 2006. "Unhealthy assimilation: Why do immigrants converge to American health status levels?" *Demography* 42 (2): 337-360.