

**PREV 681**  
**EPIDEMIOLOGY OF AGING**  
**Fall 1996, Fridays 2-5 p.m.**

Jay Magaziner, Ph.D. M.S.Hyg., Coursemaster  
Sheryl Itkin Zimmerman, Ph.D., Co-Coursemaster

Course Objectives

Students in the course will have the opportunity to:

1. learn how the principles and methods of epidemiology can be applied to the study of aging.
2. learn about special concepts in the epidemiologic study of older persons.
3. learn about the distinctions between disease and disability.
4. learn about key methodological considerations for conducting epidemiologic studies of older persons.
5. review health assessment techniques which are used for conducting epidemiologic studies of older persons.
6. learn about the epidemiology of selected diseases, syndromes and conditions common to old age.
7. examine primary, secondary and tertiary prevention, as applied to older persons.
8. learn about differing conceptions of long-term care, and their roles in the prevention, intervention, and treatment of illness in older persons.
9. learn how to critically evaluate research in this field.
10. pursue an area of gerontological epidemiology in detail with faculty supervision.

Readings

Readings are organized by session. They should be read prior to class. All readings are required unless specified differently.

Group Discussions

Four discussion sessions have been scheduled during the semester. These sessions will permit an opportunity to discuss course materials and papers. All sessions will allow students and faculty leaders to review materials covered in the course. For the first discussion session, students should prepare a conceptual overview of their course paper. For the second session, an outline should be presented. The third discussion session will be used for a general discussion of progress on papers. During the fourth session, each student will present their paper to the class.

### Evaluation

Students are expected to attend class regularly and to participate in discussions. A short take-home exam will be distributed December 13. It will be due December 20.

A formal research report (approximately 15 pages typed, double spaced) focusing on one area of special interest will be required of all students. This paper will be due December 13. In addition, each student will be given time during the final session (December 20) to give a presentation on his/her work, and to lead a discussion on his/her selected topic. All topics should be discussed with one of the coursemasters early in the semester.

### Office Hours

Instructors are available for consultation by appointment.

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EPIDEMIOLOGY OF AGING  
SYLLABUS - FALL 1996**

**I. The Merger of Gerontology and Epidemiology**

Sept. 6 A. Introduction to the Epidemiology of Aging

Jay Magaziner

(1) Epidemiology/Demography

Magaziner, J. Demographic and epidemiologic considerations for developing preventive strategies for the aged: Our challenge is the future. Maryland Medical Journal, 38, 2:115-120, 1989.

Myers, G.C. Demography of aging. In R.H. Binstock & L.K. George (Eds.), Handbook of Aging and the Social Sciences (pp. 19-44). San Diego: Academic Press, Inc., 1990.

Neugarten, B.L. Age groups in American society and the rise of the young-old. Annals American Academy of Political Social Sciences, 187-98, Sept., 1974.

Suzman, R.M., Manton, K.G., and Willis, D.P. Introducing the oldest old. In R.M. Suzman, D.P. Willis, & K.G. Manton (Eds.), The Oldest Old (pp. 3-14). New York: Oxford University Press, 1992.

Tauber, C.M., Rosenwaike, I. A demographic portrait of America's oldest old. In R.M. Suzman, D.P. Willis, & K.G. Manton (Eds.), The Oldest Old (pp. 17-49). New York: Oxford University Press, 1992.

Wallace, R.B. Aging and disease: From laboratory to community. In R.B. Wallace and R.F. Woolson (Eds.), Epidemiologic Study of the Elderly (pp. 3-9). New York: Oxford University Press, 1992.

Sept. 13 B. Special Concepts in the Epidemiologic Study of Older Persons - 1

(1) Age, Aging, and Cohorts

Jay Magaziner

Hagestad, G.O. and Neugarten, B.L. Age and the life course. In R.H. Binstock and E. Shanas (Eds.), Handbook of Aging and the Social Sciences, (pp. 35-61). 2nd edition. New York: Van Nostrand Reinhold Company, 1985.

Neugarten, B.L. and Danon, N. Sociological perspectives on the life cycle. In P.B. Baltes and K.W. Schaie (Eds.), Lifespan Developmental Psychology: Personality and Socialization (pp. 53-69). New York: Academic Press, 1973.

Preston, S.H. Cohort succession and the future of the oldest old. In R.M. Suzman, D.P. Willis, and K.G. Manton (Eds.), The Oldest Old, (pp. 50-57). New York: Oxford Press, 1992.

Riley, M.W. Aging and cohort succession: Interpretations and misinterpretations. The Public Opinion Quarterly, 37, 35-49, 1973.

Schaie, K.W. Historical time and cohort effects. In Life-span Developmental Psychology Historical and Generational Effects, (pp. 107-121). Orlando: Academic Press, 1984.

(2) Aging vs. Disease

Ann Gruber-Baldini

Johnson, H.A. Is aging physiological or pathological? In H.A. Johnson (Ed.), Relations Between Normal Aging and Disease, (pp. 239-247). New York: Raven Press, 1985.

Rowe, J.W. and Kahn, R.L. Human aging: Usual and successful. Science, 237, 143-149, 1987.

Wallace, R.B. Aging and disease: From laboratory to community. In R.B. Wallace and R.F. Woolson (Eds.), Epidemiologic Study of the Elderly (pp. 3-9). New York: Oxford University Press, 1992. (See September 6).

Sept. 20 C. Special Concepts in the Epidemiologic Study of Older Persons - 2

(1) Disease and Disability: The Complexity of Chronic Illness

Linda Fried

Fried, L.P. and Wallace R.B. The complexity of chronic illness in the elderly: From clinic to community. In R.B. Wallace and R.F. Woolson (Eds.), The Epidemiologic Study of the Elderly, (pp. 10-19). New York, Oxford University Press, 1992.

Fried, L.P., Herdman, S.J., Kuhn, K.E., Rubin, G., Turano, K. Preclinical disability: Hypotheses about the bottom of the iceberg. Journal of Aging and Health, 3, 2:285-300, 1991.

Kaplan, G.A. Maintenance of functioning in the elderly. Annals of Epidemiology, 2, 6:823-834, 1992.

Fried, L.P. and Guralnik, J.M. Disability in older adults: Evidence regarding significance, etiology and risk. Journal of the American Geriatrics Society. In press.

(2) Longitudinal Designs

Jordan Tobin

Fox, K.M., Tobin, J.D., Plato, C.C. Longitudinal study of bone loss in the second metacarpal. Calcified Tissue International, 39, 218-225, 1986.

Tobin, J. Nutrition and organ function in a cohort of aging men. In Nutrition and Aging (pp. 23-34). Orlando: Academic Press, 1986.

Sept. 27 D. Special Concepts in the Epidemiologic Study of Older Persons - 3

(1) The Compression of Morbidity and Active Life Expectancy

Jack Guralnik

Fries, J.F. Aging, natural death, and the compression of morbidity. New England Journal of Medicine, 303, 3:130-135, 1980.

Guralnik, J.M. et al. Educational status and active life expectancy among older blacks and whites. New England Journal of Medicine, 329, 2:110-115, 1993.

Kaplan, G.A. Epidemiologic observations on the compression of morbidity. Journal of Aging and Health, 3, 2:155-171, 1991.

Manton, K.G., Corder, L.S., and Stallard, E. Estimates of change in chronic disability and institutional incidence and prevalence rates in the U.S. elderly population from the 1982, 1984, and 1989 National Long Term Care Survey. Journal of Gerontology: Social Sciences, 48, 4:S153-S166, 1993.

(2) Dimensions of Functioning and Disability: Conceptual Distinctions and Descriptive Epidemiology

Sheryl Itkin Zimmerman

Zimmerman, S.I., Fox, K. and Magaziner, J. Demography and epidemiology of disabilities in the aged. In G. Felthensal, S.J. Garrison, F.U. Steinberg (Eds.), Rehabilitation of the Aging and Elderly Patient (pp. 11-20). Baltimore: Williams & Wilkins, 1994.

Mermelstein, R., Miller, B., Prohaska, T. Measures of health. Health Data on Older Americans: United States, 1992. Vital and Health Statistics of the National Center for Health Statistics, Series 3, No. 27 (pp. 9-75), DHHS Publ No.(PHS) 93-1411, Hyattsville, MD: U.S. Government Printing Office, 1993.

Tweed, D.L., Blazer, D.G., and Ciarlo, J.A. Psychiatric epidemiology in elderly populations. In R.B. Wallace and R.F. Woolson (Eds.), Epidemiologic Study of the Elderly (pp.213-233). New York: Oxford University Press, 1992.

Anthony, J.C. and Aboraya, A. The epidemiology of selected mental disorders in later life. In J. Birren, R.B. Sloane, and G.D. Cohen (Eds.), Handbook of Mental Health and Aging (pp. 27-73). 2nd edition. San Diego: Academic Press, Inc., 1992.



Berkman, L.F., Oxman, T.E., Seeman, T.E. Social networks and social support among the elderly: Assessment issues. In R.B. Wallace and R.F. Woolson (Eds.), Epidemiologic Study of the Elderly (pp. 196-211). New York: Oxford University Press, 1992.

Oct. 11 B. Practical Methodologic Issues

Jay Magaziner  
Sheryl Itkin Zimmerman

Magaziner, J.M. The use of proxy respondents in health studies of the aged. In R.B. Wallace and R.F. Woolson (Eds.), Epidemiologic Study of the Elderly (pp. 120-129). New York: Oxford University Press, 1992.

Guralnik, J.M., Branch, L.G., Cummings, S.R. and Curb, J.D. Physical performance measures in aging research. [Minireview]. Journal of Gerontology:Medical Sciences, 44, 5:M141-M146, 1989.

Guralnik, J.M and Lacroix, A.Z. Assessing physical function in older populations. In R.B. Wallace and R.F. Woolson (Eds.), Epidemiologic Study of the Elderly (pp. 159-181). New York: Oxford University Press, 1992. (See October 4).

Colsher, P.L. Ethical issues in conducting surveys of the elderly. In R.B. Wallace and R.F. Woolson (Eds.), Epidemiologic Study of the Elderly (pp. 39-45). New York: Oxford University Press, 1992.

Herzog, A.R. and Rodgers, W.L. The use of survey methods in research on older Americans. In R.B. Wallace and R.F. Woolson (Eds.), Epidemiologic Study of the Elderly (pp. 60-90). New York: Oxford University Press, 1992.

Kohout, F.J. The pragmatics of survey field work among the elderly. In R.B. Wallace and R.F. Woolson (Eds.), Epidemiologic Study of the Elderly (pp. 91-119). New York: Oxford University Press, 1992.

Kelsey, J.L., O'Brien, L.A., Grisso, J.A., Hoffman, S. Issues in carrying out epidemiologic research in the elderly. In American Journal of Epidemiology, 130, 5:857-866, 1989.

Palumbo, F.B., Magaziner, J.M., Tenney, J.H., Goren, L.M., Warren, J.W. Recruitment of long-term care facilities for research. Journal of the American Geriatrics Society, 35, 2:154-158, 1987.

### **III. Epidemiology of Selected Diseases, Conditions and Syndromes Common to Old Age**

Oct. 18 A. Stroke

Thomas Price

Wolf, P.A., Cobb, J.L. and D'agostino, R.B. Epidemiology of stroke. In Barnett, H.J.M., Stein, B.M., Mohr, J.P., Yetsu, F.M. (Eds.), Stroke: Pathophysiology, Diagnosis and Management (pp.3-27). 2nd edition. New York: Churchill Livingstone, 1992.

B. Delirium and Depression

Peter Rabins

Francis, J., Marin, D. and Kapoor, W.N. A prospective study of delirium in hospitalized elderly. JAMA, 263, 8:1097-1101, 1990.

Blazer, D.G. Is depression more frequent in late life?: An honest look at the evidence. American Journal of Geriatric Psychiatry, 2, 3:193-199, 1994.

Oct. 25 C. Falls Janet Yu-Yahiro

Wild, D., Nayak, U.S.L., Isaacs, B. How dangerous are falls in old people at home? British Medical Journal, 282, 6:266-268, 1981.

Tinetti, M.E., Speechley, M. and Ginter, S.F. Risk factors for falls among elderly persons living in the community. New England Journal of Medicine, 319, 26:1701-1707, 1988.

D. Osteoarthritis Marc Hochberg

Scott, J.C. and Hochberg, M.C. Arthritis and other musculoskeletal diseases. In R.C. Brownson, P.L. Remington, & J.R. Davis (Eds.), Chronic Disease Epidemiology and Control (pp. 285-305). American Public Health Association, 1993.

Osteoarthritis. In Silman, A.J. and Hochberg, M.C. (Eds.) Epidemiology of the Rheumatic Diseases (pp. 257-288). Oxford University Press, 1993.

Nov. 1 E. Vision Impairment Gary Rubin

Salive, M.E., Guralnik, J., Glynn, R.J., Christen, W., Wallace, R.B., Ostfeld, A.M. Association of visual impairment with mobility and physical function. Journal of the American Geriatrics Society, 42, 3:287-292, 1994.

Rubin, G.S., Roche, K.B., Prasada-Rao, P. and Fried, L.P. Visual impairment and disability in older adults. Optometry and Vision Science, 71, 12:750-760, 1994.

Nov. 8 F. Osteoporosis and Other Causes of Hip Fracture Jean Scott

Scott, J.C. Osteoporosis and hip fractures. Rheumatic Disease Clinics of North America, 16, 3:717-740, 1990.

Ross, P.D. Osteoporosis: Frequency, consequences, and risk factors. Archives of Internal Medicine, 156, 13:1399-1411, 1996.

G. Consequences of Hip Fracture Jay Magaziner  
Sheryl Itkin Zimmerman

Magaziner, J.M., Simonsick, E.M., Kashner, T.M., Hebel, J.R., Kenzora, J.E. Predictors of functional recovery one year following hospital discharge for hip fracture: A prospective study. Journal of Gerontology:Medical Sciences, 45, 3:M101-M107, 1990.

Magaziner, J.M., Simonsick, E.M., Kashner, T.M., Hebel, J.R., Kenzora, J.E. Survival experience of aged hip fracture patients. In American Journal of Public Health, 79, 3:274-278, 1989.

Zimmerman, S.I., Fox, K.M. and Magaziner, J. Psychosocial Aspects of Osteoporosis. Physical Medicine and Rehabilitation Clinics of North America, 6, 3:441-453, 1995.

Mossey, J.M., Knott, K., Craik, R. The effects of persistent depressive symptoms on hip fracture recovery. Journal of Gerontology:Medical Sciences, 45 5:M163-168, 1990.

Nov. 15 H. Cardiovascular Disease Roger Sherwin

Sherwin, R., and Lewis, C. The scientific basis for lowering blood cholesterol levels. Clinical Nutrition, 7, 6:225-231, 1988.

I. Dementia Steven Kittner

Organic mental syndromes and disorders. In Diagnostic and Statistical Manual of Mental Disorders/DSM-III-R (pp.97-107; pp.119-123). Third Edition, Revised. Washington, D.C.: American Psychiatric Association, 1987.

Evans, D.A., Funkenstein, H.H., Albert, M.S. et al. Prevalence of alzheimer's disease in a community population of older persons. JAMA, 262, 18:2551-2556, 1989.

Folstein, M., Anthony, J.C., Parhad, I., Duffy, B., Gruenberg, E.M. The meaning of cognitive impairment in the elderly. Journal of the American Geriatrics Society, 33, 4:228-235, 1985.

Stern, Y., Alexander, G.E., Prohovnik, I., Mayeux, R. Inverse relationship between education and parietotemporal perfusion deficit in Alzheimer's disease. Annals of Neurology, 32, 3:371-375, 1992.

Nov. 22 J. Hormone Therapy in Older Women Trudy Bush

Paganini-Hill, A. and Henderson, V.W. Estrogen deficiency and risk of Alzheimer's disease in women. American Journal of Epidemiology, 140, 3:256-261, 1994.

Barrett-Connor, E. and Bush, T.L. Estrogen and coronary heart disease in women. JAMA, 265, 14:1861-1867, 1991.

Ettinger, B., Friedman, G.D., Bush, T. and Quesenberry, C.P. Reduced mortality associated with long-term postmenopausal estrogen therapy. Obstetrics & Gynecology, 87, 1:6-12, 1996.

Bush, T.L., Wells, H.B., Barrett-Connor, E., Marcus, R., Greendale, G., James, M.K., Hunsberger, S., and McGowan, J. (Writing Group for The PEPI Trial Investigators). Hormonal effects on bone mineral density in the spine and hip: Results from the postmenopausal estrogen/progestin interventions (PEPI) Trial. (submitted)

#### IV. Prevention and Long-Term Care: Concepts and Approaches

##### Dec. 6 A. Community Long-Term Care

Lisa Fredman

Fredman, L., Droge, J.A., Rabin, D.L. Functional limitations among home health care users in the National Health Interview Survey Supplement on Aging. The Gerontologist, 32, 5:641-646, 1992.

Kane, R.L., Illston, L.H., Miller, N.A. Qualitative analysis of the Program of All-inclusive Care for the Elderly (PACE). The Gerontologist, 32, 6:771-780, 1992.

Jette, A.M., Tennstedt, S., Crawford, S. How does formal and informal community care affect nursing home use? Journal of Gerontology: Psychological and Social Sciences, 50B, 1:S4-S12, 1995.

##### B. Prevention and Long-Term Care

Pearl German

German, P.S. and Fried, L.P. Prevention and the elderly: Public health issues and strategies. Annual Review of Public Health, 10, 319-332, 1989.

German, P.S. The meaning of prevention for older people: Changing common perceptions. Generations, 18, 1:28-32, 1994.

Kaplan, G.A., Haan, M.N., Cohen, R.D. Risk factors and the study of prevention in the elderly: Methodological issues. In R.B. Wallace and R.F. Woolson (Eds.), Epidemiologic Study of the Elderly (pp. 20-36). New York: Oxford University Press, 1992.

German, P.S., Burton, L.C., Shapiro S., Steinwachs, D.M., Tsuji, I., Paglia, M.J. and Damiano, A.M. Extended coverage for preventive services for the elderly: Response and results in a demonstration population. American Journal of Public Health, 85, 3:379-86, 1995.

Faden, R. and German, P.S. Quality of life: Considerations in geriatrics. [Review] Clinics in Geriatric Medicine, 10, 3:541-551, 1994.

##### Dec. 13 C. Prevention of Disease and Disability

Mel Daly

Patterson, C. and Chambers, L.W. Preventive health care. Lancet, 345, 1611-1615, 1995.

\* Health promotion and disease prevention. Clinics in Geriatric Medicine, 8 1:1-233, 1992 Feb.

\* Guide to Clinical Preventive Services: Report of the U.S. Preventive Services Task Force. 2nd edition. [Manual]. Baltimore: William & Wilkins, 1996.

\* Additional recommended readings.

D. Tertiary Prevention and Rehabilitation

Gerald Felsenthal

Felsenthal, G. and Stein, B.D. Principles of geriatric rehabilitation. In Braddom, R. (Ed.), Textbook of Physical Medicine and Rehabilitation (pp. 1237-1257). Philadelphia: Saunders, 1995.

Felsenthal, G. Rehabilitating older patients: Primary care evaluation, treatment, and resources. Geriatrics, 44, 1:81-90, 1989.

**V. Integration of Gerontology and Epidemiology**

Dec. 20 A. General Discussion

B. Discussion of Exam

C. Student Reports