

Woodrow Wilson School  
Princeton University

Sharon Maccini  
Spring 2007

WWS 594Q session I  
**Public Health in Developing Countries**

Class meetings:

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Course Description:

This course will focus on public health in the developing world, drawing primarily from the field of economics. We will review epidemiological and demographic evidence on the leading causes of mortality and morbidity across time and place, and then discuss economists' approaches to the topic including a summary of economic epidemiology. The course will also focus on how to evaluate the success of health-related policies, looking in depth at several public health issues (smoking, nutrition, HIV control, and the development of vaccines). If time allows, we will consider the interaction between health and wealth at both an individual and national level.

Prerequisite:

A basic understanding of microeconomics and statistics is required. The course will apply basic economic concepts to the topic of health in developing countries, so it will be very helpful to have a grasp on those basic concepts from the beginning of the course. I will not focus on the statistics behind empirical papers; in general, students will only be responsible for getting the basic gist of empirical analysis and be able to discuss the paper's conclusions. If you are unsure of your preparation, please see me.

Course Requirements:

*Class participation* (20 % grade).

Class discussions will be an important part of the seminar. Students are expected to come to class prepared to discuss readings in detail. I reserve the right to call on individual students if necessary to spark discussion.

*Take-home midterm* (30 % grade).

*Final exam* (50% grade).

## Course Outline

(see attached chart on specific dates for lectures and assignments)

- Lecture 1 Introduction/descriptive trends in global health/overview of health measures
- Lecture 2 Determinants of population health across time and place/economists' approach
- Lecture 3 Health systems in developing countries
- Lecture 4 Econometric evaluation/economic epidemiology  
Economic analysis of specific public health issues
- Lecture 5 Smoking
- Lecture 6 Nutrition
- Lecture 7 HIV control
- Lecture 8 Health/wealth introduction
- Lecture 9 Microeconomic and macroeconomic perspective
- Lecture 10 Population/demographic transition
- Lecture 11 Development of vaccines
- Lecture 12 Final

## Readings:

The following reading list is intended as a resource for some literature on the specific topics covered in the course. It is by no means complete. If you are especially interested in a particular topic, hopefully the list will help get you started on further reading. I have also listed some general references in the field of health/development/economics at the end.

*Only the readings marked with "\*\*\*" are required for the course.*

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### *Determinants of Population Health across Time and Place*

**\*\*Black, Robert, Saul Morris and Jennifer Bryce (2003). "Where and Why Are 10 Million Children Dying Every Year?" The Lancet 361: 2226-34.**

\*\*Cutler, David, Angus Deaton and Adriana Lleras-Muney (2006). "The Determinants of Mortality." *Journal of Economic Perspectives* 20 (3):

\*\*Cutler, David and Grant Miller (2005). "The Role of Public Health Improvements in Health Advances: The 20th Century United States." *Demography* 42 (1): 1-22.

\*\*Easterlin, R. (1999). "How Beneficent is the Market? A look at the Modern History of Mortality," *European Review of Economic History* 3(3): 257-294.

Strauss, John and Duncan Thomas (1998). "Measurement of Health" in article Health, Nutrition and Economic Development. *Journal of Economic Literature* 36: 789-798 (section 4).

Preston, Samuel (1996). "American Longevity: Past, Present, and Future." Syracuse University Center for Policy Research Policy Brief #7.

Murray, Chris and Lopez (1997). "Mortality by Cause for Eight Regions of the World: Global Burden of Disease Study." *The Lancet*, 349: 1269-1276.

Diamond, Jared (1999). *Guns, Germs, and Steel: The Fates of Human Societies*. W. W. Norton & Co., New York City.

### *Economists' Approach*

\*\*Fuchs, Victor (1998). *Who Shall Live? Health, Economics, and Social Choice*. World Scientific Publishing Company, Singapore: pp. 17-29 (second half of introduction).

\*\*Landsburg, Steven E. (1993). *The Armchair Economist: Economics & Everyday Life*. The Free Press: New York. Pages 3-9 (Chapter 1 "The Power of Incentives: How Seatbelts Kill").

\*\*Viscusi, Kip (1992). *Fatal Trade-offs: Public and Private Responsibilities for Risk*. Oxford University Press: New York: pp. 17-33 (Chapter 2 "Strategic and Ethical Issues and Evaluation of Life").

### *Health Systems in Developing Countries*

\*\*Banerjee, Abhijit, Angus Deaton and Esther Duflo (2004). "Health Care Delivery in Rural Rajasthan." *Economic and Political Weekly*, 39 (9): 944-9.

\*\*Chaudhury, Nazmul, et al. (2006). "Missing in Action: Teacher and Health Worker Absence in Developing Countries." *Journal of Economic Perspectives* 20 (1): 91-116.

\*\*Filmer, D. and Pritchett (1999). "The Impact of Public Spending on Health: Does Money Matter?" *Social Science and Medicine* 49: 1309-1323.

\*\*Filmer, D., Hammer, J.S., Pritchett, L. (1998). "Health Policy in Poor Countries: Weak Links in the Chain." World Bank Policy Research Working Paper No. 1874. Washington, DC.

\*\*Levine, Ruth and the What Works Working Group (2006). "Millions Saved: Proven Successes in Global Health." Center for Global Development Brief 3 (3).

Bardhan, Pranab (2002). "Decentralization of Governance and Development," *Journal of Economic Perspectives* 16(4): 185-205.

Das, Jishnu and Jeffrey Hammer (2005). "Money for Nothing: The Dire Straits of Medical Practice in Delhi, India," World Bank Policy Research Group Working Paper #3669.

### *Econometric Evaluation*

\*\*Meyer, B. (1995). "Natural and Quasi-Experiments in Economics," *Journal of Business and Economic Statistics* 13(2): 151-161.

\*\*Moffitt, Robert (2003). "Causal Analysis in Population Research: An Economist's Perspective." *Population and Development Review* 29 (3): 448-58.

[For a slightly more technical version of the previous article, see:  
Moffitt, Robert (2005). "Remarks on the Analysis of Causal Relationships in Population Research." *Demography* 42 (1): 91-108.]

Rosenzweig, M. and K. Wolpin (2000). "Natural 'Natural Experiments' in Economics," *Journal of Economic Literature* 38(4): 827-74.

Dow, William, J Holmes, Thomas Philipson and Xavier Sala-i-Martin (1999). "Disease Complementarities and the Evaluation of Public Health Interventions," *American Economic Review* 89(5): 1357-1372.

Don Rubin (1974). "Estimating Causal Effects of Treatments in Randomized and Nonrandomized Studies." *Journal of Educational Psychology*: 66 (5): 688-690.

### *Economic Epidemiology*

\*\*Philipson, Thomas (2000) "Economic Epidemiology and Infectious Diseases," *Handbook of Health Economics Volume I*, Chapter 33: 1762-99. Edited by AJ Cuyler and Joseph P Newhouse, Elsevier Science.

Aylward, B., Hennessey, K., Zagaria, N., Olive, J., and S. Cochi (2000). "When is Disease Eradicable? 100 Years of Lessons Learned," *American Journal of Public Health* 90(10): 1515-1520.

Kremer, Michael (1996). "Integrating Behavioral Choice into Epidemiological Models of AIDS," *Quarterly Journal of Economics*

### *Perception of Risk*

\*\*Slovic, Paul (1987). "Perception of Risk." *Science*: 236 (April 17), pp. 280-285.

\*\*Viscusi, Kip (1992). *Fatal Trade-offs: Public and Private Responsibilities for Risk*. Oxford University Press: New York. Pages 17-33 (Chapter 2 "Strategic and Ethical Issues and Evaluation of Life").

\*\*Weinstein, Neil D (1989). "Optimistic Biases About Personal Risks." *Science*: 246 (December 8), pp. 1232-1233.

### *Smoking*

\*\*Gruber, Jonathan (2001). "Tobacco at the Crossroads: The Past and Future of Smoking Regulation in the United States." *Journal of Economic Perspectives*: 15 (2), Spring, pp. 193-212.

\*\*Manning, Willard and Emmett Keeler, Joseph Newhouse, Elizabeth Sloss, and Jeffrey Wasserman (1989). "The Taxes of Sin: Do Smokers and Drinkers Pay Their Way?" *JAMA*: 261 (11), March, pp. 1604-9.

\*\*Viscusi, Kip (1992). *Smoking*. Oxford University Press, New York. Pages 139-152 (Chapter 7: "The Quest for Rational Risk-taking Decisions").

### *Nutrition*

\*\*Deaton, Angus (2005). "The Great Escape: A Review Essay on Fogel's *The Escape from Hunger and Premature Death, 1700-2100* ." *Journal of Economic Literature* XLIV:.

[Based on: Fogel, Robert (2004). "The Escape from Hunger and Premature Death , 1700-2100: Europe, America, and the Third World. Cambridge University press: Cambridge, United Kingdom. For this course, see especially Chapters 1 and 2 (pp.1-42).]

\*\*Steckel, Richard (1995). "Stature And the Standard of Living." *Journal of Economic Literature* XXXIII: 1903-40.

\*\*Barker, D.J.P. (1998). *Mothers, Babies and Health in Later Life*. Churchill Livingstone:

Edinburgh. Pages 1-12 (Chapter 1 "Clues from Geography"), 43-62 (Chapter 3 "From Birth to Death"), and 181-212 (Chapter 11 "Preventing Chronic Disease: The Future").

Almond, Doug (2005). "Is the 1918 Influenza Pandemic Over? Long-Term Effects of In Utero Exposure in the Post-1940 US Population."

Available at: <http://www.nber.org/~almond/jmp3.pdf>

Almond, Doug and Kenneth Chay (2003). "The Long Run and Intergenerational of Poor Infant Health: Evidence from Cohorts Born during the Civil Rights Era."

Available at: <http://www.nber.org/~almond/cohorts.pdf>

Maccini, Sharon and Dean Yang (2006). "Under the Weather: Health, Schooling and Socioeconomic Consequences of Early Life Rainfall."

Available at: <http://www-personal.umich.edu/~deanyang/papers/papers.html>

### *HIV Control*

\*\*Gertler, Paul, Manisha Shah and Stefano M Bertozzi (2005). "Risky Business: The Market for Unprotected Commercial Sex." *Journal of Political Economy*: 113 (3), pp. 518-550.

Available at: <http://www.journals.uchicago.edu/JPE/journal/issues/v113n3/30530/30530.web.pdf>

\*\*Philipson, Tomas and Richard Posner (1993). *Private Choices and Public Health: The AIDS Epidemic in an Economic Perspective*. Harvard University Press: Cambridge. Pages 1-83 (introduction, Chapter 1 "An Economic Model of Risky Sexual Behavior," and Chapter 2 "Empirical Support for the Economic Approach").

\*\*Oster, Emily (2005). "Sexually Transmitted Infections, Sexual Behavior, and HIV/AIDS Epidemic." *The Quarterly Journal of Economics*, May: 467-515.

\*\*United Nations Department of Economic and Social Affairs Population Division (2005). "Population, Development and HIV/AIDS With Particular Emphasis on Poverty: A Concise Report." United Nations: New York. Pages 1-16.

Available at: <http://www.un.org/esa/population/publications/concise2005/PopdevHIVAIDS.pdf>

### *Link between Health and Wealth*

#### *Microeconomic perspective*

\*\*Deaton, Angus (2002). "Policy Implications of the Gradient of Health and Wealth." *Health Affairs*: 21 (2), March/April.

\*\*Gertler, Paul (2004). "Do Conditional Cash Transfers Improve Child Health? Evidence from PROGRESA's Control Randomized Experiment," *American Economic Review Papers and Proceedings* 94(1): 336-341.

\*\* Smith, James P (1999). "Healthy Bodies and Thick Wallets: The Dual Relation between Health and Economic Status." *Journal of Economic Perspectives* 13: 145-66.

\*\*Morduch, Jonathan (1995). "Income Smoothing and Consumption Smoothing," *Journal of Economic Perspectives* 9(3): 103 - 114.

Case, A. and A. Deaton. 2006. "Health and Wellbeing in Udaipur and South Africa," Unpublished manuscript, Princeton University.

Bleakley, H. (2006). "Disease and Development: Evidence from Hookworm Eradication in the American South," Unpublished manuscript, University of Chicago.

Miguel, E. and M. Kremer. 2004. "Worms: Identifying Impacts on Education and Health in the Presence of Treatment Externalities," *Econometrica* 72(1): 159-217.

Bleakley, H. (2006). "Malaria in the Americas: A Retrospective Analysis of Childhood Exposure," Unpublished manuscript, University of Chicago.

Gertler, P. and J. Gruber. (2002). "Insuring Consumption Against Illness," *American Economic Review* 92(1): 51-76.

Case, A. and A. Deaton. 1998. "Large Cash Transfers to the Elderly in South Africa," *Economic Journal* 108(450): 1330-1361.

Foster, A. 1995. "Prices, Credit Markets and Child Growth in Low-Income Rural Areas," *Economic Journal* 105: 551-70.

Strauss, John and Duncan Thomas (1998). "Health, Nutrition and Economic Development." *Journal of Economic Literature*: 36 (June), pp. 789-.

Lleras-Muney, A. 2005. "The Relationship Between Education and Adult Mortality in the U.S.," *Review of Economic Studies* 72(1): 189-221.

Glewwe, P. (1999). "Why Does Mother's Schooling Raise Child Health in Developing Countries? Evidence from Morocco," *Journal of Human Resources* 34(1): 124-159.

Deaton, A. and C. Paxson. (2003). "Mortality, Education, Income, and Inequality among American Cohorts," in David Wise (ed.), *Themes in the Economics of Aging*. Chicago, IL: The University of Chicago Press.

### *Macroeconomic perspective*

\*\*Acemoglu, Daron, Simon Johnson and James Robinson (2003). "Disease and Development in Historical Perspective," *Journal of the European Economic Association*, 1 (2-3): 397-405.

\*\*Bloom, David E, David Canning and Dean T Jamison (2004). "Health, Wealth, and Welfare." *Finance and Development*, March: 10-15.

\*\*WHO Commission on Macroeconomics and Health (2001). "Macroeconomics and Health: Investing in Health for Economic Development." World Health Organization: Geneva. Pages 1-40 (Executive Summary, sections on "Evidence on Health and Development," and "Channels of Influence from Disease to Economic Development").

Available at:

[http://www3.who.int/whosis/cmh/cmh\\_report/report.cfm?path=whosis,cmh,cmh\\_report&language=english#](http://www3.who.int/whosis/cmh/cmh_report/report.cfm?path=whosis,cmh,cmh_report&language=english#)

Pritchett, L. and L. Summers. (1996). "Healthier is Wealthier," *Journal of Human Resources* 31:841-868.

Bloom, D. and A. Mahal. (1997). "Does the AIDS Epidemic Threaten Economic Growth?" *Journal of Econometrics* 77: 105-124.

Bloom, D. and J. Sachs. (1998) "Geography, Demography, and Economic Growth in Africa," *Brookings Papers on Economic Activity* 2: 207-295.

Becker, G., Philipson, T., and R. Soares. (2005). "The Quantity and Quality of Life and the Evolution of World Inequality," *American Economic Review* 95(1): 277-291.

Young, A. (2005). "The Gift of the Dying: The Tragedy of AIDS and the Welfare of Future African Generations," *Quarterly Journal of Economics* 120: 243-266.

#### *Population and the Demographic Transition*

\*\*Bloom, David E, David Canning and Jaypee Sevilla (2003). "The Demographic Dividend: A New Perspective on the Economic Consequences of Population Change:" Chapters 1, 2 and 4. Available at: <http://www.rand.org/publications/MR/MR1274>

#### *Family planning*

Schultz, T.P. "Demand for Children in Low Income Countries," in Mark Rosenzweig and Oded Stark (eds.), *Handbook of Population and Family Economics Volume 1A*. Oxford: Elsevier Science, 1997.

Becker, Gary (1981). *A Treatise on the Family*. Cambridge, MA: Harvard University Press.

Becker, G and H. Lewis. 1973. "On the Interaction between the Quantity and Quality of Children," *Journal of Political Economy* 81(2): S279-S288.

Miller, Grant (2005). "Contraception as Development? New Evidence From Family Planning in Columbia." NBER working paper

Pop-Eleches, C. "The Impact of an Abortion Ban on Socio-Economic Outcomes of Children: Evidence from Romania," forthcoming, *Journal of Political Economy*.

Qian, N. 2005. "Missing Women and the Price of Tea in China: The Effect of Sex-specific Income on Sex Ratios," Unpublished manuscript, Brown University.

Sen, A. (1992). "Missing Women," *British Medical Journal* 304 PAGES?

Coale, A. (1991). "Excess Female Mortality and the Balance of the Sexes in Population: An Estimate of the Number of "Missing Females"," *Population and Development Review* 17(3): 517-523.

Elaina Rose. (1999). "Consumption Smoothing and Excess Female Mortality in Rural India," *Review of Economics and Statistics* 81(1): 41-49.

Oster, Emily (2005). "Hepatitis B and the Case of Missing Women," *Journal of Political Economy* 113 (6): 1163-1216.

#### *Vaccine Development*

\*\*Attaran, A., and L. Gillespie-White (2001). "Do Patents for Antiretroviral Drugs Constrain Access to AIDS Treatment in Africa?" *Journal of the American Medical Association* 286(15): 1886-1892.

\*\*Kremer, Michael and Rachel Glennerster (2004). *Strong Medicine: Creating Incentives for Pharmaceutical Research on Neglected Diseases*. Princeton University Press.

\*\*Lanjouw, Jean (2003). "Intellectual Property and the Availability of Pharmaceuticals in Poor Countries." *Innovation Policy and the Economy* 3: 91-129.

\*\*Lanjouw, Jean (2004). "Trading Up: How Much Would Poor Countries Pay to Support Pharmaceutical Innovation." Center for Global Development brief 4 (3).

## **General resources on health and development**

### *NGO publications*

The World Bank (1993). *World Development Report: Investing in Health*. Washington, DC: the World Bank.

The World Health Organization's Commission on Macroeconomics and Health (2001). *Macroeconomics and Health: Investing in Health for Economic Development*. Geneva: World Health Organization.

Murray, Chris and A. Lopez (eds.) (1996). *The Global Burden of Disease (Volume 1): A comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020*. Geneva: World Health Organization.

Levine, Ruth and the What Works Working Group. 2004. *Millions Saved: Proven Successes in Global Health*. Washington, DC: Center for Global Development.

Murray, Christopher et al. (eds.) (2002). *Summary Measures of Population Health: Concepts, Ethics, Measurement and Applications*. Geneva: World Health Organization.

### *Economics*

Newhouse, J. and A. Culyer (eds.) (2000). *The Handbook of Health Economics (Volume 1A and 1B)*. Amsterdam: Elsevier Science.

Rosenzweig, M. and O. Stark (eds.) (1997). *The Handbook of Population and Family Economics (Volumes 1A and 1B)*. Amsterdam: Elsevier Science.

Chenery, H. and T.N. Srinivasan (eds.) (1991). *The Handbook of Development Economics (Volumes 1 and 2)*. Amsterdam: Elsevier Science.

Behrman, J. and T.N. Srinivasan (eds.) (1995). *The Handbook of Development Economics (Volumes 3A and 3B)*. Amsterdam: Elsevier Science.

### *Public health/disease references*

Jamison, Dean et al.(eds.) (2006). *Disease Control Priorities in Developing Countries. Second Edition*. New York: Oxford University Press and the World Bank.

Merson, M., Black, R., and A. Mills (2001). *International Public Health: Diseases, Programs, Systems, and Policies*. Gaithersburg, Maryland: Aspen Publishers.