

# **NEKN61: Advanced Health Economics**

## **Spring 2016**

Course organizer: Jan Bietenbeck

Office: Alpha 1 building, room 4107

Office hours: Thursdays from 11:00-12:00

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Instructors: Jan Bietenbeck, Ulf Gerdtham, and Yana Pryymachenko (TA)

### **Course information**

This course provides a graduate-level overview of current issues in theoretical and empirical health economics. It focuses on topics that are directly relevant to health care policy, including determinants of demand for health care, causes and consequences of health care spending growth, cost-effectiveness analysis in health care, and measurement of health inequalities. These topics will be discussed in lectures and seminars on the basis of selected academic articles and chapters in academic volumes.

### **Course literature**

The course literature consists of the academic articles and chapters listed below. For each lecture, the list identifies 2-3 articles that constitute the required readings for the topic. You are expected to read these required readings before class. Prior reading will facilitate a livelier classroom discussion, in which you are strongly encouraged to participate. Further optional readings, which are listed under a separate heading for each lecture, are meant to give more background information on, or additional examples of, the topic covered. All required readings can be accessed online via the LU Libraries.

Research in health economics is predominantly empirical, and many of the articles on the reading list require a good understanding of the standard empirical methods in applied

microeconomics (panel data methods, difference-in-differences, instrumental variable estimation, and regression discontinuity designs). If you feel that you need to refresh your knowledge of these methods, you can consult an undergraduate econometrics textbook (e.g. “Measuring 'Metrics” by J. Angrist and J.-S. Pischke, which is available in the LU Libraries)

There is no graduate-level textbook on health economics that covers all the topics discussed in this course. Nevertheless, for some lectures, the book by Bhattacharya, Hyde, and Tu provides useful background reading (the relevant chapters are indicated under 'further optional readings' below). Unfortunately, this book is not available in the LU Libraries. If you would like to take a look at this book, please contact me (I have a spare copy in my office).

### **Examination and grading**

Your final grade depends on

1. your performance on two reading examinations (R1 and R2, at most 25 points);
2. your activity in two seminars (S1 and S2, at most 25 points); and
3. an essay that you have to write and present in a seminar (S3, at most 50 points).

The maximum amount of points that you can obtain is 100, i.e. each point is worth exactly 1% of the final grade. The standard LUSEM grading scale applies: A = 85-100 points, B = 75-84 points, C = 65-74 points, D = 55-64 points, E = 50-54 points, and F (fail) = 0-49 points. In the following, each of the examination elements is described in more detail.

#### *Reading examinations R1 and R2*

The reading examinations test your knowledge of the required readings for the course. R1 covers the readings for lectures 1-5, while R2 covers the readings for lectures 6-10. In each examination, you can obtain a maximum of 12.5 points (25 points in total for R1 and R2). Questions on these examinations do not ask about any knowledge beyond that given in the required readings and are therefore easy to answer if you have fully understood the articles. Examples of possible questions on these examinations will be given during the lectures. Please note that in order to pass the course, you have to pass both reading examinations. Retaking R1 or R2 is possible only if the result on the first examination was F (fail).

### *Seminars S1 and S2*

In these seminars, students present and discuss academic articles on a particular topic in health economics. For the presentation, students should get together in pairs. Each pair then gets assigned to one of two groups (group 1 or group 2). Within this group, each pair gets assigned one of six papers to present. Each pair of students only presents one article in this course (either in S1 or in S2). However, each student must attend both seminars of the group she is assigned to. The schedule for the presentations is as follows:

#### **Group 1 (student pairs 1-6)**

Seminar S1: 02/09 08:00-10:00

Student pair 1 presents paper 1

Student pair 2 presents paper 2

Student pair 3 presents paper 3

Seminar S2: 03/10 08:00-10:00

Student pair 4 presents paper 4

Student pair 5 presents paper 5

Student pair 6 presents paper 6

#### **Group 2 (student pairs 7-12)**

Seminar S1: 02/11 08:00-10:00

Student pair 7 presents paper 1

Student pair 8 presents paper 2

Student pair 9 presents paper 3

Seminar S2: 03/11 08:00-10:00

Student pair 10 presents paper 4

Student pair 11 presents paper 5

Student pair 12 presents paper 6

Each presentation should last for at most 20 minutes (we'll be strict about this). It should summarize the paper's main points and it needs to include topics or questions for discussion on the final presentation slide. It is up to you to decide whether only one of you or both of you present the paper (both students will get the same grade for the presentation). After the presentation, there will be a 10-15 minutes discussion among all attending students, with the student pair who presented the paper acting as discussion leaders. In order to be able to participate in this discussion, all students should read the three papers for the seminar beforehand. After the discussion and a short break, we'll move on to the next paper.

Your grade for the seminars will be based on the quality of your presentation and on your level and quality of participation in the discussions. You can obtain a maximum of 16 points for the seminar in which you present and a maximum of 9 points for the seminar in which you do not present (25 points in total for S1 and S2). If you miss a seminar for whatever reason you will obtain 0 points for it.

### *Essay and seminar S3*

Your final grade also depends on an essay that you will write on a topic in health economics. This essay has to be written individually and it should be based on the course literature as well as on additional articles and/or books that are relevant to the topic. You can freely choose your topic as long as it relates to the contents of the course. Some suggestions for topics and further guidelines on writing the essay will be provided during the second week of the course. Students will have to present their essays during a seminar (S3) during the final week of the course, and they will have to discuss another student's essay (also during S3).

***Please note: further instructions regarding the format of presentations in S3 will be posted on Live@Lund in due course.***

### **Schedule**

The current schedule for the course can be found on the final page of this syllabus as well as on Live@Lund. Please note that there is no final exam for this course, so you can ignore the final exam and re-take exam dates posted on the Live@Lund schedule (they are put up there automatically by the system and apparently cannot be removed).

## **Lecture 1: Introduction**

### Required readings:

Arrow, K. J. (1963). Uncertainty and the welfare economics of medical care. *The American Economic Review*, 53(5), 941–973.

### Further optional readings:

Chapters 2 and 3 in Bhattacharya, J., Hyde, T., and P. Tu, (2014). *Health Economics*. Palgrave Macmillan.

## **Lecture 2: Demand for health care and health**

### Required readings:

Aron-Dine, A., Einav, L., and A. Finkelstein, (2013). The Rand Health Insurance Experiment: Three Decades Later. *Journal of Economic Perspectives*, 27(1), 197–222.

pp.75-89 in Zweifel, P., Breyer, F., and M. Kifmann, (2009). *Health Economics*. Springer.

*Note: focus more on the intuition behind the key equations than on the math itself*

### Further optional readings:

Chapters 2 and 3 in Bhattacharya, J., Hyde, T., and P. Tu, (2014). *Health Economics*. Palgrave Macmillan.

Finkelstein, A., Taubman, S., Wright, B., Bernstein, M., Gruber, J., Newhouse, J. P., Allen, H., Baicker, K., and Oregon Health Study Group, (2012). The Oregon Health Insurance Experiment: Evidence from the First Year. *The Quarterly Journal of Economics*, 127(3), 1057–1106.

Grossman, M., (1972). On the Concept of Health Capital and the Demand for Health. *Journal of Political Economy*, 80(2), 223–225.

## **Lecture 3: The persistence of early childhood investments**

### Required readings:

pp.1322-1328 in Almond, D., and Currie, J. (2011). Human Capital Development before Age

Five. In *Handbook of Labor Economics* (Vol. 4, pp. 1315–1486).

Almond, D. (2006). Is the 1918 Influenza pandemic over? Long-term effects of in utero Influenza exposure in the post-1940 US population. *Journal of Political Economy*, 114(4), 672–712.

Hoynes, H. W., Schanzenbach, D. W., and D. Almond (2015). Long Run Impacts of Childhood Access to the Safety Net. *American Economic Review*, forthcoming. (Click [here](#) to access the latest version of this article)

Further optional readings:

Almond, D., and Currie, J. (2011). Human Capital Development before Age Five. In *Handbook of Labor Economics* (Vol. 4, pp. 1315–1486).

Almond, D., & Currie, J. (2011). Killing Me Softly: The Fetal Origins Hypothesis. *Journal of Economic Perspectives*, 25(3), 153–172.

Heckman, J. J. (2007). The economics, technology, and neuroscience of human capability formation. *Proceedings of the National Academy of Sciences*, 104(33), 13250–13255.

**Lecture 4: Physician-induced demand**

Required readings:

Gruber, J., and M. Owings (1996). Physician financial incentives and cesarean section delivery. *The Rand Journal of Economics*, 27(1), 99–123.

Gruber, J., Kim, J., & Mayzlin, D. (1999). Physician fees and procedure intensity: The case of cesarean delivery. *Journal of Health Economics*, 18, 473–490.

Further optional readings:

Johnson, E.M. (2014). Physician-Induced Demand. In *Encyclopedia of Health Economics*, Elsevier (Vol.3 pp.77-82).

Johnson, E. M., & Rehavi, M. M. (2015). Physicians Treating Physicians: Information and Incentives in Childbirth. *American Economic Journal: Economic Policy*, forthcoming.

## **Lecture 5: The economics of life style**

### Required readings:

Cawley, J. (2004). The Impact of Obesity on Wages. *Journal of Human Resources*, 39, 451-474.

Gerdtham, U.-G., Lundborg, P., Lyttkens, C. H., and P. Nystedt (2016). Do Education and Income Really Explain Inequalities in Health? Applying a Twin Design. *The Scandinavian Journal of Economics*, 118(1), 25-48.

## **Lectures 6 & 7: Causes and consequences of rising health care expenditures**

### Required readings:

Newhouse, J. P. (1992). Medical care costs: how much welfare loss? *The Journal of Economic Perspectives*, 6(3), 3–21.

Cutler, D. M., McClellan, M., Newhouse, J. P., & Remler, D. (1998). Are Medical Prices Declining? Evidence from Heart Attack Treatments. *The Quarterly Journal of Economics*, 113(August), 991–1024.

Cutler, D. M., & McClellan, M. (2001). Is Technological Change In Medicine Worth It? *Health Affairs*, 20(5), 11–29. <http://doi.org/10.1377/hlthaff.20.5.11>

Skinner, J. S., Staiger, D. O., & Fisher, E. S. (2006). Is Technological Change In Medicine Always Worth It? The Case Of Acute Myocardial Infarction. *Health Affairs*, 25(2), w34–w47.

Almond, D., Jr, J. D., Kowalski, A., & Williams, H. (2010). Estimating marginal returns to medical care: Evidence from at-risk newborns. *The Quarterly Journal of Economics*, 125(2), 591–634.

### Further optional readings:

Chernew, M. E., & Newhouse, J. P. (2012). *Health Care Spending Growth. Handbook of Health Economics Volume 2* (Vol. 2). Elsevier B.V.

## **Lecture 8: Health and economic development**

### Required readings:

Acemoglu, D., & Johnson, S. (2007). Disease and development: the effect of life expectancy on economic growth. *Journal of Political Economy*, 115(6), 925–985.

Fortson, J. G. (2011). Mortality risk and human capital investment: the impact of hiv/aids in sub-saharan africa. *The Review of Economics and Statistics*, 93(1), 1–15.

Juhn, C., Kalemli-Ozcan, S., & Turan, B. (2013). HIV and fertility in Africa: First evidence from population-based surveys. *Journal of Population Economics*, 26(3), 835–853.

## **Lecture 9: Economic valuation of health**

### Required readings: none

### Further optional readings:

Chapter 14 in Bhattacharya, J., Hyde, T., and P. Tu, (2014). *Health Economics*. Palgrave Macmillan.

Dolan, P. (2000). The measurement of health-related quality of life for use in resource allocation decisions in health care. *Handbook of Health Economics*, 1723-1760.

## **Lecture 10: Measuring inequality in health**

### Required readings:

Erreygers, G. Correcting the Concentration Index, *Journal of Health Economics* 2009; 28: 504–515

van Doorslaer, E, Koolman, X. 2004. Explaining the differences in income-related health inequalities across European countries. *Health Economics* 13:609-628.

### Further optional readings:

Wagstaff, A., Van Doorslaer, E., Watanabe, N. On decomposing the causes of health sector inequalities with an application to malnutrition inequalities in Vietnam. *Journal of Econometrics* 2003; 112, 207–223.



## Schedule

Instructors: Jan Bietenbeck (JB), Ulf Gerdtham (UG), Yana Pryymachenko (YP)

Office hours are held on Thursdays from 11:00-12:00 (Alfa 1 building, room 4107)

| <b>Date</b>  | <b>Time</b>   | <b>Room</b> | <b>Content</b>                                     |
|--|---------------|-------------|--|
| Tue 1/19   | 08:00 – 10:00 | EC1:135     | Lecture 1 (JB): Introduction                       |
| Thu 1/21   | 08:00 – 10:00 | EC1:135     | Lecture 2 (JB): Demand for health care and health  |
| Tue 1/26   | 08:00 – 10:00 | EC1:135     | Lecture 3 (JB): Early childhood investments        |
| Thu 1/28   | 08:00 – 10:00 | EC1:135     | Lecture 4 (JB): Physician-induced demand           |
| Tue 2/2  | 08:00 – 10:00 | EC1:135     | Lecture 5 (UG): The economics of life style        |
| Thu 2/4  | 08:00 – 10:00 | EC1:135     | Reading examination 1 (JB)                         |
| Tue 2/9  | 08:00 – 10:00 | EC1:135     | Seminar 1 – group 1 (JB, YP)                       |
| Thu 2/11   | 08:00 – 10:00 | EC1:135     | Seminar 1 – group 2 (JB, YP)                       |
| Tue 2/16   | 08:00 – 10:00 | EC1:135     | Lecture 6 (JB): Rising health care expenditures I  |
| Thu 2/18   | 08:00 – 10:00 | EC1:135     | Lecture 7 (JB): Rising health care expenditures II |
| Tue 3/1  | 08:00 – 10:00 | EC1:135     | Lecture 8 (JB): Health and economic development    |
| Thu 3/3  | 12:00 – 14:00 | EC1:135     | Lecture 9 (JB): Economic valuation of health       |
| Tue 3/8  | 08:00 – 10:00 | EC1:135     | Lecture 10 (UG): Measuring inequality in health    |
| Thu 3/10   | 08:00 – 10:00 | EC1:135     | Seminar 2 – group 1 (UG, YP)                       |
| Fri 3/11   | 08:00 – 10:00 | EC1:135     | Seminar 2 – group 2 (UG, YP)                       |
| Mon 3/14   | 08:00 – 10:00 | EC1:135     | Reading examination 2 (JB)                         |
| Wed 3/16   | 08:00 – 12:00 | EC1:134     | Seminar 3 (essay presentations)                    |
| Thu 3/17   | 08:00 – 12:00 | EC1:135     | Seminar 3 (essay presentations)                    |
| Fri 3/18   | 12:00 – 16:00 | EC2:069     | Seminar 3 (essay presentations)                    |
| Wed 3/30   | 08:00 – 12:00 | EC1:135     | First re-take of reading examinations 1 and 2      |
| <i>Still to be scheduled: second re-take of reading examinations 1 and 2</i> |               |             |  |