THE ECONOMICS OF HEALTH CARE POLICY

SYLLABUS

HKS SUP-572, HSPH HPM-227cd, FAS ECONOMICS 1460

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Section Meetings on selected Fridays at 10:00, L332, HKS

COURSE OUTLINE

Introduction, Costs, and Financing (Class 1)

Demand for Health Care and Health Insurance (Classes 2-4)

Quality of Care, Variations, Comparative Effectiveness Analysis, Malpractice (Classes 5-9)

Insurance Markets, the Affordable Care Act, and Managed Care (Classes 11, 14-15)

Testimony 1 (Classes 12-13)

Reimbursement Policy and Medicare Parts A, B, C, and D (Classes 16-20)

Medicaid and Long Term Care (Class 21)

Workforce and a Wrapup (Class 22)

Testimony 2 (Classes 23-24)

The required reading is in **bold**. You can download almost all of reading through Harvard

(http://lib.harvard.edu/e-resources/index.html); this syllabus has the URLs. National Bureau of Economic Research (NBER) working papers can be downloaded free if you go to the NBER website (www.nber.org) through a Harvard account. I have assigned portions of four books, Free for All?, Inside National Health Reform, Pricing the Priceless, and Incentives and Choice in Health Care. They are all on reserve in the HKS library. If you prefer to purchase them, the first three are all in paperback. I will put some modest amounts of additional material on the course website as the semester progresses.

This is a long reading list, but I have annotated it to let you know why the reading is there so you can read for the main points. I have also included a considerable amount of optional reading, so although the syllabus is long, it appears even longer than it is. There is also a supplementary reading list on the course website that you may find useful for the testimony exercises.

For each class session I will post slides on the class web site the week prior to the class. The course web site is the FAS my.harvard.edu website; anyone with a Harvard ID has access to this site. (I have posted the slides for class 1 on the HSPH and HKS websites as well, but will not continue this practice.) **I expect you to have gone through the slides before the class and to have done the required reading for that class.** My suggestion is that you do the reading first, but note that the slides have embedded questions that we will talk about in class, so you need to have been through the slides before class. Or you may want to read the slides first to get an overview, then do the reading, and then go back to the slides.

A course requirement is to formulate two questions on the reading or slides for each class, and e-mail both me and the assistants your questions by noon the day before the class. In addition, feel free to include in your e mails requests for class discussion of certain issues raised in either the reading or reactions pro or con that you had to the material. I will use what you send me to help structure the class, and a component of many classes will be a discussion based on your e-mails. The corollary is that I will **not** discuss each slide in class, and there isn't time to do that anyway.

I have tried to make the slides reasonably self-explanatory. In many cases I have added explanatory material in the footer or in the notes to the slides; in those cases I have put an * in the body of the slide to alert you. I have also tried to spell out acronyms in the footer or in the notes. Although I try to avoid them, I will no doubt occasionally lapse into acronyms in class; if you don't understand them, raise your hand; you will doing your classmates a favor.

In addition to the requirement to submit two questions before each class, a second requirement of the course is to prepare "testimony" on two different occasions, one near the middle of the semester and the other at the end of the semester. You should write five double-spaced pages or less, taking a position for or against a policy position that is relevant to the policy domains we covered in earlier class sessions; for the second testimony the entire course is fair game. Although almost all of the course material is about the US health care system, I encourage international students to write about analogous issues in their home countries. With the exception of the uninsured in the US, similar problems to those in the US can be found in all the OECD countries and increasingly in middle income countries.

In addition to writing your own testimony, everyone will read around ten testimonies of other students and prepare one question per testimony for each author ("the witness"), who will answer selected questions about his or her testimony in class. I and the assistants will select the questions to be answered since there will not be time to answer all the questions. We will give you some (but not a lot!) of lead time on the priority we have assigned the questions that you will answer, so it behooves you to think about all the questions you get on your testimony. There will be an opportunity in class for give and take between the persons asking and answering the questions and others as well if someone else wants to follow up. **Do NOT read** your either your questions or your answers; it is fine to have a few notes with you when you come to the front of the class to answer questions, but the time in class should be a conversation between two people, not reading from a prepared text. At an actual hearing in the US Congress, witnesses summarize their written testimony, usually in one or two minutes (Cabinet members have more leeway but they do not read their statements either), and then just respond to questions that they do not know in advance, though they certainly may have anticipated them. (Committee staff will often have suggested what the committee is interested in.) I will post examples of previous students' testimonies on the course website. For more professional (and longer than you are expected to write) examples of testimony, see http://www.medpac.gov/. At the bottom of the home page is a red box titled "Search Documents". Click on the pull-down menu beside "Document Type" and select "Congressional testimony."

Most policy makers neither want nor expect testimony to be laden with footnotes or citations. You should respect their expectations, and not make your testimony look like a law review article. That said, for purposes of this class you must still respect the scholarly standards of attribution and citation. That is, any words, data, or substantial ideas you take from someone else must be credited to the original author through a standard scholarly citation. Any substantial borrowing from others that is not so credited is plagiarism, which is one of the few ways you can

get yourself expelled from Harvard. (This is not hypothetical; it has unfortunately happened in this class.) Please resolve this tension as follows: Write your testimony along the lines of the examples, i.e., without extensive footnoting or citation. BUT… add to the back of the formal memo a page of documentation, giving the sources of key information you have used in your memo. Document your sources in sufficient detail that a reader (e.g., you, if 3 months after writing the memo you are called upon by your boss to document your data sources) could locate and recover your key sources. Treat this documentation as an annex that would not necessarily be included in the memo handed in to the decision maker, but that would be appended to the back of the "file copy." *Such documentation is required for this class*. It's also a good practice when you leave this classroom for the world outside. Because I did not formerly require this documentation, however, the examples on the website do not have it.

Finally, there will be an in-class examination during the last class of the semester.

Your grade will depend upon:

1) your participation in class;
2) your questions for each class session;
3) the two testimony exercises, including the quality of your questions for others and your answers to the questions on your own testimony, and;
4) the in-class examination in the final class session.

The exam and the two testimonies will each count for about 20 percent of the grade, with your questions for each class session and in-class participation accounting for the rest. I use the Kennedy School suggested grading curve as a guideline – around 40 percent A's or A-'s – but this is not rigid.

The course assistants will conduct a review session on several Fridays; this is an optional session. You should submit topics or questions you would like covered to the assistants beforehand; they are not expected to prepare new material to cover in these sessions.

This course has several objectives:

1. ***To enable you to think critically about health care policy.*** This is the primary aim. Note that I slipped in the word "care" between "health" and "policy;" there is a literature around health policy as well, especially around promoting healthy behaviors, but there is not time to go into this literature. (Most, if not all, of you will likely think the reading list is already too

long.) The course will also not deal with classic public health issues, such as food and water safety. Henceforth, I will just use a shorthand of health policy. I put this aim first, because of a quote that I find apt from Eric Hoffer: "In times of change, learners inherit the earth, while the learned find themselves beautifully equipped to deal with a world that no longer exists."

2. ***To acquaint you with past analytical efforts in health policy, primarily by economists, who, however, often are writing for non-economists (since when they write for other economists in economics journals they are often highly technical)***. This is intended to accomplish several things:

   a) To teach you some of what is known and not known about health policy;
   b) To show you how the economic theory and statistical methods you have learned in other classes have been applied to issues of health policy; and
   c) To show you the connection between policy analysis and actual policy. Although there may not always seem to be an obvious connection, the manner in which issues appear on the policy agenda often is influenced by analysis, frequently with a substantial lag. Of course, there is also a reverse flow; what appears on the analysis agenda is certainly influenced by policy, though sadly by the time the analysis is done it is sometimes too late. A good policy analyst, like a good stock market analyst, is always trying to guess where things will be in a few years; both types of analysts are often wrong.

3. ***To acquaint you with some of the relevant political and legislative history of health policy issues***. In this course we will deal with several policy issues: the demand for medical care; the quality and organization of care, including tort law; pricing and reimbursement; and the health care workforce. These issues all have legislative and political histories, frequently long histories. Several of the optional books listed near the beginning of the syllabus (below) describe not only the history of American medical care generally but also the history of several of the issues that the course takes up, especially those around financing.

4. To distinguish ***where within the health care sector the market seems to work reasonably well and where it does not work so well and what the public policy options are for improving it in those domains where it does not work so well***. For many reasons medical care does not resemble a classic textbook competitive market that is economically efficient, but incentives, including non-monetary incentives, are always important. You will

have to decide where market failures are more tolerable and where government failures are more tolerable. Reasonable persons can and do differ on this issue.

5. I would also like to think you will ***learn something about the difference between good and bad research***. Toward that end I devote a few classes in the first part of the course primarily to research methods; the purpose of these classes is to make you a better consumer of research.

Rules of Classroom Conduct

I will follow the HKS rules for classroom conduct:

1. Be on time. Class starts at 8:40 am. At that time you should all be in your seats and ready to start class.
2. Bring your name card. It not only helps me learn your names but also helps your fellow students know who made a particular comment if I can refer to you by name.
3. Laptops, tablets, and smartphones are NOT to be used in class.
4. No side conversations. This is distracting to me and to your fellow students. If you have a question, please raise your hand. I prefer, of course, that you ask your questions in the material you submit to me the day before, but inevitably some questions will occur to you during class. Please ask; if you don't understand something, the chances are good someone else doesn't either. If you don't want to ask during class, please ask me after class or send me or the assistants an e-mail.
5. Eat responsibly. Try to minimize the impact on others. Drinks are allowed.
6. Please leave during class for emergencies only. If you have to leave during class, please try to create a minimal disruption. If you must arrive late or leave early for a particular class, please let me know in advance.
7. **Cell phones off.** If there is an extraordinary reason why you must keep your phone on (e.g., you are awaiting critical medical news) please silence your ringer and let me know in advance that you may receive a call. Leave class to conduct your conversation.

Academic Integrity Policy:

You should write your own testimony and your own questions on the testimony of others. The testimony is not a group exercise. And of course the examination is not a group exercise.

One note on the Syllabus and on the slides: I will use the acronym ACA to mean the Affordable Care Act. On December 24, 2009 and March 21, 2010 the House and Senate respectively passed the Patient Protection and Affordable Care Act of 2010. Three days after President Obama signed this Act into law, the House and Senate both passed the Health Care and Education Reconciliation Act, which amended the original legislation. By the ACA I mean the amended Act. Even though most of you will be familiar with key provisions of the ACA, in the slides I have tried to be self-explanatory when I refer to specific provisions. If you want a summary of the Act, you can read the second section of the McDonough book below, though the book does not deal with the 20,000+ pages of regulations to implement the Act that have been issued in the last four years and it did not anticipate the Supreme Court decision making Medicaid expansion optional. If you are interested, you can read my early analysis of the Act, but that is not required reading:

> Joseph P. Newhouse, "Assessing Health Reform's Impact on Four Key Groups of Americans," Health Affairs, September 2010, 29(9):1714-24.

Background Material: General

Background material on a number of topics covered in the course, as well as other topics in health policy, is available at www.kff.org. Although I assume you will have some basic familiarity with US health care financing institutions (e.g., you will have taken HKS HCP-100 or one of the undergraduate health policy courses), non-US students may find the descriptions of the Medicare and Medicaid programs on this website helpful, especially for the latter part of the course. There is additionally a host of other background material on this website. Three other useful websites are http://www.cbo.gov/topics/health-care, which has all the Congressional Budget Office materials related to health, www.medpac.gov, the Medicare Payment Advisory Commission (MedPAC) site, which is extremely useful for Medicare issues, and www.macpac.gov, which has material on Medicaid. Finally, a summary of a great many policy issues is available at http://www.healthaffairs.org/healthpolicybriefs/archives.php?search=&x=11&y=4.

This is the year when much of the ACA is being implemented, and undoubtedly the experience across the 50 states will differ. That, plus the intensely partisan nature of the debate on the ACA, will make it difficult to get an accurate read on what exactly is happening. In addition to the sources in the prior paragraph, one source book for journalists, that may be helpful for you, is from the Alliance for Health Reform, and can be found at http://www.allhealth.org/sourcebookTOC.asp?SBID=7.

OPTIONAL:

Victor R. Fuchs, Who Shall Live? 3rd edition; Singapore: World Scientific, 2011. A classic monograph. The 3rd edition reprints the 1974 first edition in its entirety and also has some additional later essays of Fuchs appended, along with a new introduction giving Fuchs' views on how health and health care have evolved in the past four decades. The book is focused on the US. I will *not* take up this book in class, but it is an excellent exposition of the application of several elementary economics principles to health care, especially the need for choice. Although the numbers are now dated, the analysis is generally still relevant. Everyone making a career in health policy should read this classic book at some point, but you don't need to read it to understand this course.

Background: Historical (US)

In addition to the Fuchs book, I recommend that those of you intending to work in US health care policy read at least one of the following books at some point in your health policy career for historical background. Although the course will not explicitly draw on them, they all provide material on the political history of several issues the course considers. All are in paperback.

OPTIONAL:

John E. McDonough, Inside National Health Reform; Berkeley: University of California Press, 2011. Part I is an insider's account of the enactment of the ACA; Part II is an analysis of the ACA, title by title. Parts of Part II appear on the reading list below. Not surprisingly, parts of the book are already out of date, most notably the chapter on Medicaid (Title II), which was written before the Supreme Court's decision made Medicaid expansion optional, as well as the material on the Class Act, which the Secretary decided could not be implemented.

Stuart Altman and David Shactman, Power, Politics, and Universal Health Care; Amherst, NY: Prometheus Books, 2011. A history of the past 40 years by a participant in many of the chapters.

David Blumenthal and James Morone, The Heart of Power, Berkeley: University of California Press, 2009. Health policy in each Presidential administration from Franklin

Roosevelt to George W. Bush except for President Ford. In my view, however, their rather harsh views of administration economists reflect advocacy rather than analysis in that they do not substantively rebut the arguments of the economists that they disparage. And they seem to ignore that many economists were (in their terms) constructive contributors, e.g., Stuart Altman (in both the Nixon administration and in the Clinton transition), Gail Wilensky (in Bush1), and Mark McClellan (in Bush2).

Paul Starr, The Social Transformation of American Medicine, New York: Basic, 1982. A classic work on the history of American medical care through the 1970's.

Rosemary Stevens, In Sickness and in Wealth: American Hospitals in the Twentieth Century, Baltimore: Johns Hopkins, 1999. Another history, written from the hospital perspective.

Julius Richmond and Rashi Fein, The Health Care Mess; Cambridge: Harvard University Press, 2005. Part history, part memoir of two participants in health policy over the second half of the 20th century.

Background: Economics

This is a course in the economics of health policy rather than a course in health economics, meaning the course investigates a number of health policy issues through the lens of economics rather than starting with economic theory and showing its applications to health policy. The difference, however, is more in emphasis than substance, and health economics textbooks cover most of the course topics in some fashion. For those who wish to see a textbook treatment, I mention three textbooks here; finding the relevant sections should not be difficult.

Charles E. Phelps, Health Economics, 5th edition; Prentice-Hall, 2012.

Sherman Folland, Allen C. Goodman, and Miron Stano, The Economics of Health and Health Care, 7th edition; Prentice-Hall, 2012.

Thomas E. Getzen, Health Economics and Financing, 4th edition, John Wiley & Sons, 2010.

An indispensable reference work for more advanced students of health economics is:

Handbook of Health Economics, vol. 1, eds., Anthony J. Culyer and Joseph P. Newhouse; Amsterdam: North Holland, 2000, and vol. 2, 2012, eds. Mark V. Pauly, Thomas G. McGuire, and Pedro Pita Barros. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science?_ob=TitleSrchURL&_method=submitForm&sterm=Handbook%20of%20Health%20Economics&_acct=C000014438&_version=1&_userid=209690&md5=f46d423af8c0c93de3d0773e6328d322. I have put several chapters from the Handbook on the reading list, although only two are on the required list because many chapters are hard going unless you have the requisite economics background. A mathematical intermediate microeconomics course such as HKS API-101A, FAS Economics 1011a, or HSPH HPM-206 and an undergraduate econometrics class will suffice for much of the Handbook, but a graduate level microeconomics course such as FAS Economics 2020 (HKS API-111, 112) and graduate level econometrics is necessary for some parts.

Health Care Systems Other than the United States

Although the US health care financing and delivery systems are exceptional in some respects, there is much variety in the rest of the world as well. If you wish to see sketches of 14 industrialized countries' health care systems, including the US, see International Profiles of Health Care Systems, 2013, eds. Sarah Thomson, Robin Osborn, David Squires, and Miraya Jun; The Commonwealth Fund, November 2013, http://www.commonwealthfund.org/~/media/Files/Publications/Fund%20Report/2013/Nov/1717_Thomson_intl_profiles_hlt_care_sys_2013.pdf. In addition, I have placed some short descriptive papers on specific countries on the supplementary list, most of which are now out of date in particulars. Finally, there are a few papers on this reading list with results on the topics we study that draw on experience in other countries, especially the UK and the Netherlands.

A short paper that discusses the differences between the US health care system and the rest of the OECD is Victor R. Fuchs, "How and Why US Health Care Differs from that in Other OECD Countries," JAMA, January 2, 2013, 309(1):33-4. Fuchs cites distrust of government and reluctance to redistribute; population heterogeneity (likely related to the reluctance to redistribute); and US political institutions. http://jama.jamanetwork.com.ezp-prod1.hul.harvard.edu/Issue.aspx?journalid=67&issueID=926163&direction=P

CLASS 1 - OVERVIEW OF MEDICAL COST DRIVERS AND HEALTH CARE FINANCING; FINANCING MEDICAL COSTS (January 28)

This first class session is an overview of issues around health care costs, focusing on why costs have risen, how they are financed, and the policy issues raised by different financing methods. Each method of financing creates economic inefficiencies; although the slides for this class touch on those inefficiencies related to taxation, such inefficiencies are covered much more extensively in any economics of public finance course. This session also takes up issues around the future financing of Medicare and Medicaid. I defer the issue of financing employment-based insurance to the next class. There is a lot of reading for this class, but many of the papers are short. The Cutler-Zeckhauser chapter can be postponed if the load for this class is too great for your time.

Victor R. Fuchs, "Major Trends in the U.S. Health Economy since 1950," New England Journal of Medicine, March 15, 2012, 366(11):973-7. A historical (since 1950) retrospective, written for the 200th anniversary of the Journal by the doyen of American health economists. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/pdf/10.1056/NEJMp1200478

Henry J. Aaron and Paul B. Ginsburg, "Is Health Spending Excessive? If So, What Can We Do About It?" Health Affairs, September/October 2009, 28(5):1260-75. An overview of the cost issue. Note that their Table 2 is in the same spirit as my slide comparing the excess of US health care cost growth over GDP growth to some other individual countries. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/28/5/1260.abstract

Alan M. Garber and Jonathan Skinner, "Is American Health Care Uniquely Inefficient?" Journal of Economic Perspectives, 22(4), Fall 2008, pp. 27-50. Suggests US health care is not on the flat-of-the-curve, as some infer from the US' lower life expectancy and higher spending, but is instead inside the production possibility frontier (see slides for class 1). More on this point in classes 5-9. See also the Cutler and Ly paper in the optional reading. http://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.22.4.27

David M. Cutler, Sanjay Vijan, and Allison B. Rosen, "The Value of Medical Spending in the United States, 1960-2000," New England Journal of Medicine, 355(9), August 31, 2006, pp. 920-7.The paper makes the case that the benefits from the increased spending on medical care in the last half of the 20th century were worth it on the basis of reductions in mortality without even considering gains in morbidity, though less so for the elderly. http://www.nejm.org/doi/pdf/10.1056/NEJMsa054744

Victor R. Fuchs, "Eliminating 'Waste' in Health Care," JAMA, December 9, 2009, 302(22):2481-2. Economists and clinicians define waste differently –but the economists' definition is exceedingly hard to implement. You should think about why this is. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/302/22/2481.full.pdf

M. Gregg Bloche, "Beyond the 'R Word'? Medicine's New Frugality," New England Journal of Medicine, May 24, 2012, 366(21):1951-3. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1203521 In practice reducing the rate of growth of cost will involve not giving some medical services with positive benefits (or doing more of that than is done now). Some of the public still believes that cost should not be a factor in determining medical treatment, at least judging from the traction that the words "rationing health care" get in the public debate, but this is inevitable given that the rate of growth must come down.

David M. Cutler and Richard J. Zeckhauser, "The Anatomy of Health Insurance," in Handbook of Health Economics, eds., Anthony J. Culyer and Joseph P. Newhouse; Amsterdam: North-Holland, 2000. http://pdn.sciencedirect.com.ezp-prod1.hul.harvard.edu/science?_ob=MiamiImageURL&_cid=273392&_user=209690&_pii=S1574006400801705&_check=y&_origin=browse&_zone=rslt_list_item&_coverDate=2000-12-31&wchp=dGLbVlt-zSkWA&md5=ba79a3050c98f9bc98534149210b5444/1-s2.0-S1574006400801705-main.pdf. This chapter is an excellent introduction to and summary of the economics of health care financing. It is relevant to many parts of the course, although I do not intend to work through the chapter in this or subsequent classes. The chapter uses the calculus in some places; for those of you whose calculus is rusty, keep reading; the authors mostly explain verbally what they are doing. You do not have to have read the chapter to understand much of the material for the first several class sessions, but I have placed this chapter under the first class on the reading list not only because it serves as background for many parts of the course but also because some of the early material in the course anticipates later material, and this chapter introduces some of that later material. In other words, you will understand the course as it unfolds better if you read this chapter now.

OPTIONAL:

Victor R. Fuchs, "Three 'Inconvenient' Truths About Health Care," New England Journal of Medicine, 359(17), October 23, 2008, pp. 1749-51. A short summary of key

facts about cost growth. Somewhat duplicative of his 2012 paper, but trenchantly argued. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp0807432.

Sheila Smith, Joseph P. Newhouse, and Mark Freeland, "Income, Insurance, and Technology," Health Affairs, September/October 2009, 28(5):1276-84. This work updates the Newhouse 1992 paper (below) with seventeen new years of data and an explicit accounting of the endogeneity of technological change. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/28/5/1276.abstract

On the recent cost slowdown, see Amitabh Chandra, Jonathan Holmes, and Jonathan Skinner, "Is This Time Different? The Slowdown in Healthcare Spending" NBER Working Paper 19700, December 2013. http://www.nber.org/papers/w19700?utm_campaign=ntw&utm_medium=email&utm_source=ntw. There has been a recent slowdown in the excess of health care spending over GDP. Whether this is the recession, the ACA, more cost sharing, or something else is highly contentious, as is the degree to which it will continue. If you are interested in that question, this is a good recent source.

David M. Cutler, Your Money or Your Life: Strong Medicine for America's Health Care System; New York: Oxford University Press, 2004. A book length version of the Cutler, et al. article that is on the required list. I recommend the entire book; it is optional because of the length of the reading list, but if you are so inclined, the book itself is short (123 pages), is written for a general audience, and is highly readable. The introduction and Chapters 1-6 are the most relevant to the material in this class, but the remainder is the book is relevant to other parts of the course.

The following are two papers if you want more on what might account for differences in the level of spending between the US and the rest of the world.

David M. Cutler and Dan P. Ly, "The (Paper)Work of Medicine: Understanding International Medical Costs," Journal of Economic Perspectives, Spring 2011, 25(2):3-26. This paper focuses on the size of administrative cost in the US relative to elsewhere. We will get into administrative cost in some detail in class 14. http://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.25.2.3

Miriam J. Laugesen and Sherry A. Glied, "Higher Fees Paid To US Physicians Drive

Higher Spending For Physician Services Compared To Other Countries," Health Affairs, September 2011, 30(9):1647-56. The title gives the punch line. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/30/9/1647

Victor R. Fuchs and John B. Shoven, "Funding Health Care for All Americans," An overview of the financing options for health care. The Fuchs-Emanuel plan that is referred to in the latter part of the document is a proposal to give everyone a health insurance voucher and have them buy insurance through an exchange similar to the Massachusetts Connector. This paper is on the reading list, however, because of its lucid explanation of the various financing options for health care.http://www.fresh-thinking.org/docs/workshop_071018/FundingHealthCareForAllAmericans-AnEconomicPerspective.pdf

Martin S. Feldstein, "The Effect of Taxes on Efficiency and Growth," Cambridge, MA: NBER Working Paper 12201, May 2006. A non-technical paper that quantifies the inefficiencies induced by the American tax system. For those of you that want to read something on this subject but have not taken a public finance course, this would be a good choice. http://papers.nber.org.ezp-prod1.hul.harvard.edu/papers/w12201

Katherine Baicker and Jonathan Skinner, "Health Care Spending Growth and the Future of U.S. Tax Rates," in Tax Policy and the Economy," ed. Jeffrey R. Brown, Chicago: University of Chicago Press, 2011. To finance CBO projected federal health care spending (note CBO's projections are somewhat higher than the CMS Office of the Actuary's), top marginal tax rates could rise to 70% by 2060; deadweight loss is $1.48 per dollar collected and GDP declines (relative to trend) by 11%. http://www.nber.org.ezp-prod1.hul.harvard.edu/papers/w16772

Ezekiel J. Emanuel and Victor R. Fuchs, "The Perfect Storm of Overutilization," JAMA, June 18, 2008, 299(23):2789-91. A non-technical listing of the various factors responsible for the high level of costs in the US compared with other countries. Emanuel served in the Obama Administration as Special Adviser to OMB Director Peter Orszag during the 2010 health reform debate. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/299/23/2789.short

For a contrary view to the many who believe that the US medical care system not only spends more but delivers less, the last part largely based on mortality data, see Samuel

Preston and Jessica Ho, "Low Life Expectancy in the United States: Is the Health Care System at Fault?" University of Pennsylvania Population Studies Center Working Paper Series, http://repository.upenn.edu/cgi/viewcontent.cgi?article=1012&context=psc_working_papers or for those who prefer a short version, see the *New York Times* story http://query.nytimes.com/gst/fullpage.html?res=9902E7DE103DF931A1575AC0A96F9C8B63&sec=&spon=&pagewanted=2.

Joseph P. Newhouse, "Medical Care Costs: How Much Welfare Loss?" Journal of Economic Perspectives, 6:3, Summer 1992, pp. 3-21. This paper distinguishes the margin of costs at a point in time from that of costs over time and argues that the growth in costs over time is on average justified by the growth in the benefits. That is a similar argument to the required Cutler, et al. paper above and is also found in the slides. http://links.jstor.org.ezp1.harvard.edu/sici?sici=0895-3309%28199222%296%3A3%3C3%3AMCCHMW%3E2.0.CO%3B2-M.

Chapin White, "Health Care Spending Growth: How Different Is The United States From The Rest Of The OECD?" Health Affairs, January/February 2007, 26(1):154-61, places more emphasis on the differences in the US rate of growth with other countries, while I emphasize the similarities. There are some differences in our methods: 1) White's initial year is 1970, mine is 1960 for most countries just to get a longer time series; 2) I focus on the largest economies (and I discount Germany because of reunification) whereas White looks at the entire OECD; 3) White looks at health care cost growth relative to GDP growth and accounts for aging, but these two differences roughly cancel out. Even though White emphasizes US exceptionalism, he also shows that the US is nowhere near the outlier in the rate of growth that it is in levels. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/cgi/reprint/26/1/154 If you want to see how these ideas/debates in the academic literature filter in to the policy process, have a look at Congressional Budget Office, "Technological Change and the Growth of Health Care Spending," January 2008, http://www.cbo.gov/ftpdocs/89xx/doc8947/01-31-TechHealth.pdf.

CLASSES 2 - 4: THE DEMAND FOR MEDICAL CARE AND COST SHARING

CLASS 2 –THE INCIDENCE OF EMPLOYER PAID PREMIUMS; HEALTH CARE COSTS AND THE LABOR MARKET; THE THEORY OF DEMAND FOR MEDICAL CARE SERVICES (January 30)

We finish the financing discussion that we began in class 1 by taking up the incidence of employer-paid premiums and then drawing out some consequences for labor markets. The increase in health care costs links to the change in real wages, a topic covered in this class, as well as to the number of uninsured (covered in Class 11).

A good bit of this class, however, is devoted to the demand for medical care as a function of cost sharing in insurance (i.e., how much the patient pays at the point of service), with the limiting form of cost sharing being no insurance. The intent of insurance is to reduce risk to the individual, but in doing so it generally changes individual actions. The economics literature refers to this phenomenon as moral hazard, a term it borrowed from the actuarial literature. In this case the moral hazard refers to the increase in demand for medical care as individuals have more complete insurance. (In some other contexts it refers to a decreased effort to prevent illness such as not exercising or not eating sensibly.) The class covers the theory of the demand for medical care and moral hazard. This part of the class is largely a review of the theory of the consumer that should be familiar from your prior economics course(s). The reading, however, does not cover the important distinction between positive and normative economics nor the key challenges to applying normative economics to medical care, but the slides cover those topics. Make sure you understand the distinction between positive and normative. There are a number of challenges to applying standard normative economics to medical care. I cover these challenges in the slides for this class, but I revisit this topic in class 10 when we come back to the market for health insurance; see especially the Beshears, et al. paper for that class.

Lawrence H. Summers, "Some Simple Economics of Mandated Benefits," <u>American Economic Review</u>, 79(2): 177-183, May 1989. Covers the basic economics of the incidence of employer paid insurance premiums. Incidence refers to who ultimately pays a tax or a mandate; it is one of the hardest economic concepts for non-economists. Although Summers is discussing mandated benefits, the theory he describes applies to employer-paid premiums even if not mandated, as is the case in the US (given no enforcement of employer penalties in 2014). Although the notion that employees ultimately bear the cost of employer-paid premiums is almost universally accepted by economists (but often not by non-economists!), the slides note some important caveats and draw out some implications of the theory in this

class. Those interested in more on this topic should consult Mark Pauly's book that is on the supplementary material reading list. The link to the Summers' paper is: http://links.jstor.org.ezp1.harvard.edu/sici?sici=0002-8282%28198905%2979%3A2%3C177%3ASSEOMB%3E2.0.CO%3B2-N

Katherine Baicker and Dana Goldman, "Patient Cost Sharing and Health Care Spending Growth," Journal of Economic Perspectives, Spring 2011, 25(2):47-68. This paper has a misleading title, in that it has little to do with the relationship between cost sharing and spending growth but a lot to do with the relationship between cost sharing and the level of spending. Nonetheless, it is a good recent review of the cost sharing literature. The slides do not cover this material. http://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.25.2.47

Joshua T. Cohen, Peter J. Neumann, and Milton C. Weinstein, "Does Preventive Care Save Money? Health Economics and the Presidential Candidates," New England Journal of Medicine, February 14, 2008, 358(7):661-663. The health policy analysts', as opposed to the general public's, view of how public policy should approach preventive care. The provisions of the ACA, however, show the power of the general public's view by mandating that preventive care services have no cost sharing. http://content.nejm.org.ezp-prod1.hul.harvard.edu/cgi/reprint/358/7/661.pdf Related to this topic is the reaction of the public to the fall 2009 recommendations of the US Preventive Task Force on breast and cervical cancer screening and the fall 2011 recommendation on the Prostate Specific Antigen (PSA) test for prostate cancer. If you want something more on these topics, there is a short discussion of the 2009 Task Force recommendations that explains false positives at http://www.nytimes.com/2009/12/20/business/20view.html?adxnnl=1&hpw=&adxnnlx=1261314342-1pI1E0YZlZtkh/RiLmbQxg and the 2011 Task force recommendations at http://www.nytimes.com/2011/10/07/health/07prostate.html?scp=2&sq=psa%20test%20harris&st=cse

OPTIONAL:

> Joseph P. Newhouse and Anna Sinaiko, "What We Know and Don't Know about the Effects of Cost Sharing on Demand for Medical Care – and So What?" in Incentives and Choice in Health Care, eds. Frank A. Sloan and Hirschel Kasper; Cambridge: MIT Press, 2008, pp. 156-184. A review of the RAND Health Insurance Experiment (Class 4) and some subsequent literature. The book is on reserve in the HKS library.

The following two papers expand the usual theory of demand and moral hazard to consider multiple goods. The usual theory, which treats one good, can be found in any of the textbooks listed at the beginning, and the slides go over it as well.

Randall P. Ellis and Willard G. Manning, "Optimal Health Insurance for Prevention and Treatment," Journal of Health Economics, December 2007, 26(6):1128-50 is a formal treatment of the standard theory of demand with both preventive and treatment services. The main result is that preventive services should have less cost sharing than treatment services, which comes from the individual's ignoring the savings on treatment costs accruing to others in the insurance pool when deciding on the amount of preventive care. Ellis and Manning also show that if there are uncompensated monetary losses of treatment, such as time and travel, insurance rates on insured treatment services should be lower than they otherwise would be. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S0167629607000598

Dana Goldman and Tomas J. Philipson, "Integrated Insurance Design in the Presence of Multiple Medical Technologies," American Economic Review, May 2007, 97(2): 427-432. An argument similar to that of Chernew, et al., Newhouse-Sinaiko, and Ellis-Manning above, showing that if two services are substitutes, say hospital care and drugs (meaning more hospitalization if I don't take my drugs), the cost sharing on drugs should be lower than if the two services were unrelated. http://www.ingentaconnect.com.ezp-prod1.hul.harvard.edu/content/aea/aer/2007/00000097/00000002/art00075

Joseph P. Newhouse, "Reconsidering the Moral Hazard-Risk Avoidance Tradeoff," Journal of Health Economics, September 2006, 25(5), 1005-14. My own views on usual analysis of moral hazard. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S0167629606000555

The slides discuss the normative assumptions needed to treat consumer and producer surplus as a measure of welfare. One frequently mentioned concern is the inability of the consumer/patient to judge the advice of the physician. This type of problem is not limited to health care, and the type of good or service where it arises is called a credence good. For more on credence goods (but this article is long and somewhat hard going), see Uwe Dulleck and Rudolf Kerschbamer, "On Doctors, Mechanics, and Computer Specialists: The Economics of Credence Goods," Journal of Economic Literature, March 2006, 44(1):5-42.

Health Insurance and the Labor Market. Around 60 percent of non-elderly Americans receive health insurance through their place of employment or their spouse's place of employment, and around 30 percent of the elderly have supplementary insurance (to Medicare) through their prior employer. Employment-based insurance has consequences both for who pays the costs of health insurance and for the efficiency with which the labor market operates, especially the phenomenon of "job lock," which refers to workers not moving to jobs that they would otherwise move to because doing so would entail a change in their health insurance. (There is also "marriage lock" for similar reasons.) For material on job lock from employment-based health insurance, see the Gruber *Handbook* chapter on the supplementary reading list and the literature cited there. I will not deal with job lock in class.

The slide with the Kolstad-Kowalski data on wages in Massachusetts is by far the strongest evidence I know of on the incidence of employer paid premiums, but one other paper along those lines is:

> Katherine Baicker and Amitabh Chandra, "The Labor Market Effects of Rising Health Insurance Premiums," Journal of Labor Economics, July 2006, 24(3):609-634.http://www.jstor.org.ezp-prod1.hul.harvard.edu/stable/10.1086/505049

Another paper that deals with the consequences of rising health costs for median household income is:

> David I. Auerbach and Arthur L. Kellerman, "A Decade of Health Care Cost Growth Has Wiped Out Real Income Gains for an Average US Family," Health Affairs, September 2011, 30(9):1630-6. http://content.healthaffairs.org/content/30/9/1630.full.pdf+html

> Jeffrey Liebman and Richard J. Zeckhauser, "Simple Humans, Complex Insurance, Subtle Subsidies," paper prepared for a Tax Policy Center conference, February 24, 2008. http://www.taxpolicycenter.org/tpccontent/healthconference_zeckhauser.pdf. Also in Using Taxes to Reform Health Insurance, eds. Henry J. Aaron and Leonard E. Burman, eds., Washington: Brookings, 2009. A paper directed at how insights from behavioral economics might affect health policy. We will see more along these lines in class 10. The concluding section has positive comments on the role of the employer in structuring the market for health insurance that are relevant to the debate over replacing employment-based insurance, a debate that will continue as the nation implements exchanges.

Because of the many two-worker families, it is advantageous for each employer to provide less subsidy for dependent insurance, so that the family elects dependent coverage from the other employer. (Sometimes this takes the form of a bonus for not insuring dependents through one's own employer.) For a model of dependent health insurance as a ruinous game, see:

David Dranove, Kathryn Spier, and Laurence Baker, "Competition Among Employers Offering Health Insurance," Journal of Health Economics, January 2000, 19(1): 121-140. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S0167629699000077

Many health policy analysts feel that insurance should not be employment based (e.g., Fuchs and Emanuel), a view embodied in the 2009-2010 debate in the Wyden-Bennett bill. That bill, however, did not attract a lot of political support. I believe this reflects the political difficulty of changing from employment-based insurance because of the amount of redistribution it would entail and, if a public program were the alternative, the amount of money that would be shifted to the government budget. Furthermore, precisely because of worker investment in firm-specific capital, it is not clear that workers would promptly receive in wages what firms now pay in health insurance premiums, so the redistribution that a move from employment-based insurance would cause is not easy to predict, at least in the short run. Moreover, the Liebman-Zeckhauser paper above raises issues about whether a move from employment-based insurance is a good idea anyway. Nonetheless, the health insurance exchanges envisioned in the ACA will likely cause some reduction in employment-based insurance.

Frank A. Scott, Mark C. Berger, and John E. Garen, "Do Health Insurance and Pension Costs Reduce the Job Opportunities of Older Workers?" Industrial & Labor Relations Review, July 1995, 48 (4), pp. 775-91. This is one of the few papers in the literature that bears on incidence *within* a firm. It shows that companies with health insurance as a fringe benefit are less likely to hire 55-64 year old workers than companies without, as are companies with more rather than less health generous plans, suggesting that the incidence within the work group is *not* age-specific. This result contrasts with the Gruber papers on the Supplementary list which suggest subgroup-specific incidence. http://www.jstor.org.ezp-prod1.hul.harvard.edu/stable/2524356

A paper on the other side of this debate is Jay Battacharya and M. Kate Bundorf, "The Incidence of the Health Care Cost of Obesity," *Journal of Health Economics*, May 2009,

28(3):649-58. Shows that the incremental health care costs of obesity appear to be passed on in the form of lower cash wages, because obese workers without health insurance do not show a wage difference, whereas obese workers with health insurance do. In effect, the cost of health insurance accounts for a non-trivial amount of the apparent wage discrimination faced by obese females.

Workers 65 years of age and older face potential discrimination in the labor market because of a Medicare requirement that Medicare is the secondary payer for workers who are eligible for Medicare but who can obtain health insurance from their employer (provided the employer has 20 or more workers). This requirement means that Medicare pays health care bills first. It was adopted in 1983 to prevent crowdout, i.e., employers dropping coverage of workers age 65 and over. It has had the effect, however, that older workers with employer based insurance pay payroll taxes on their earnings to finance Medicare with little or no offsetting benefit. (Still most current workers who are over 65 are getting a very good deal from Medicare, in terms of their lifetime taxes to finance their lifetime benefit.) This implicit tax on earnings is roughly 15-25% at ages 65-74 for men and is 20-30% for women, thus discouraging work at older ages. See Gopi Shah Goda, John B. Shoven, and Sita Nataraj Slavov, "Implicit Taxes on Work from Social Security and Medicare," in Tax Policy and the Economy, ed. Jeffrey R. Brown, Chicago: University of Chicago Press, 2011. An earlier version is available as http://www.nber.org.ezp-prod1.hul.harvard.edu/papers/w13383.

What Services Are Covered? Non-coverage is the extreme form of cost sharing, which is why these papers appear in the cost-sharing section of the reading list, even though their main thrust differs from the other material in this section. See the supplementary list for descriptions of this issue in the UK and, in the context of drugs, Australia. We will come at this problem somewhat obliquely in Class 8 since policy issues around outcomes research and comparative effectiveness frequently arise in this context. Also the material in Classes 14-20 is relevant here, since a service may not be covered under a medical necessity clause (Class 14) and, even if covered, the reimbursement level in Medicare may affect supply (Classes 16-20).

Muriel R. Gillick, "Medicare Coverage for Technological Innovations – Time for New Criteria?" New England Journal of Medicine, 350(21), May 20, 2004, pp. 2199-2203. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMsb032612
Describes three major Medicare coverage decisions. See also the editorial by Sean Tunis in the same issue. It has proven politically difficult for a US public insurance program to incorporate cost formally in coverage decisions (see the paper by Foote in the

supplementary reading for Class 17). Note that in the Medicare context coverage and reimbursement are distinct issues and that a decision to reimburse at a low rate could effectively vitiate a decision to cover. I return to reimbursement of new technology in Class 17.

Mark B. McClellan and Sean R. Tunis, "Medicare Coverage of ICDs," New England Journal of Medicine, 352(3), January 20, 2005, pp. 222-224. ICDs are implantable cardioverter defibrillators to prevent sudden cardiac death; they cost about $30,000 per case. Medicare liberalized its coverage criteria in 2005 at a ballpark cost of $3 billion, but the quid pro quo was that data were to be collected on effectiveness in subgroups in order to potentially sharpen the coverage decision. It has followed this precedent in several subsequent coverage decisions. Keep this point in mind when we come to the discussion of randomized trials versus observational studies in Class 8. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp048354. Medicare coverage can be mandated by Congress, though it is more commonly left to CMS.

David M. Eddy, "Benefit Language: Criteria That Will Improve Quality While Reducing Cost," JAMA, 275, February 28, 1996, pp. 650-657. Even if a service is covered, the insurance contract typically limits coverage to "medically necessary services," and a service that is medically necessary for one person may not be so for another. Eddy suggests language to replace the "medically necessary" language and makes the point – often misunderstood by the general public and the press – that benefit language is about how common resources are best used, not a "club" held over the heads of patients and providers for insurer profits. Eddy's argument, however, has not made much headway in the US. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/275/8/650.extract

CLASS 3 - THE DEMAND FOR INSURANCE AND RISK AVERSION: THE METHODOLOGY FOR ESTIMATING THE DEMAND FOR HEALTH CARE (February 4)

We begin this session with the demand for insurance, which from an economic point of view is a demand for risk reduction or for smoothing of resources available over time for consumption. Insurance can both change behavior (moral hazard) as well as reduce risk. The tradeoff between risk reduction and efficiency losses from changing behavior is sometimes referred to as Zeckhauser's dilemma after his classic 1970 paper, which is on the supplementary reading list.

This class also focuses on the various non-experimental methods that have been used to study the response of demand to variation in cost sharing and the advantages and disadvantages of those methods. The intent of this class is to help your understanding of the strengths and weaknesses of the empirical studies in the literature. The methods used to study demand for medical care turn up in many other applied contexts. You can think of this class as part of an introduction to research methods, which bears on my goal of improving your ability to tell good work from bad.

The slides for this class go over the various methods of estimating how demand or utilization responds to price. I expect you to test your methodological understanding by critiquing the methods of the three studies below; I will ask you about them in class. If you want to test your understanding of methods further, try to critique the methods of other papers on the Optional reading for Class 4 or the supplementary reading list.

Anne Scitovsky and Nelda McCall, "Coinsurance and the Demand for Physician Services: Four Years Later," Social Security Bulletin, May 1977, 40:19-27. An early, classic study of the effect of varying copayment, in my view one of the first to credibly establish that demand does respond to consumer incentives. http://www.heinonline.org.ezp-prod1.hul.harvard.edu/HOL/Page?handle=hein.journals/ssbul40&collection=journals&set_as_cursor=0&men_tab=srchresults&id=349

Amitabh Chandra, Jonathan Gruber, and Robin McKnight, "The Impact of Patient Cost Sharing on the Poor: Evidence from Massachusetts," NBER Working Paper 18023, April 2012. http://www.nber.org/papers/w18023.pdf?new_window=1 Substantively this paper finds similar effects of cost sharing as the RAND Experiment (class 4), but no evidence of effects on hospitalizations or ER use in a low income population. Another paper by the same three authors that has similar methods is optional, "Patient Cost Sharing, Hospitalization Offsets, and the Design of Optimal Health Insurance for the Elderly," American Economic Review, March 2010, 100(1):193-213. This latter paper, based on a California sample, finds larger effects of cost sharing than the RAND Experiment (Class 4) and also large offset effects on other types of spending. http://www.aeaweb.org.ezp-prod1.hul.harvard.edu/articles.php?doi=10.1257/aer.100.1.193 The authors make no attempt to reconcile the different results of these two papers, though one obviously involves the elderly and the other does not. I am less interested in the substantive difference in findings between the two papers and more interested in having you understand the methods the authors use in

the assigned paper. The authors use what the economics literature calls a regression discontinuity design; one group of people had their copayments increased (those from 100-200% of the FPL). Some people in another group (those from 200-300% of the FPL) had their copayments increased and others in that group had them increased even more. How does this design compare to Scitovsky-Snyder? Don't get bogged down in the econometrics of Generalized Linear Models in the estimation section; that is not the main point of assigning this reading. Focus instead on the variation that is generating the authors' results. This is called identification in econometrics.

Amal Trivedi, Husein Moloo, and Vincent Mor, "Increased Ambulatory Care Copayments and Hospitalizations among the Elderly," New England Journal of Medicine, January 28, 2010, 362(4):320-8. Shows that increased copayment led to fewer ambulatory visits and more hospitalizations among the elderly, consistent with the second Chandra, et al. paper above, but not the first. What variation generates the results on the effects of cost sharing? http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMsa0904533

OPTIONAL:

For those of you that have the economics background to understand it, work by Chetty and Szeidl explain why consumers may appear more risk averse to intermediate losses than standard theory would predict. I give the intuition in the slides for the class. This may partially explain the aversion to high deductible plans unless they are funded by the employer (i.e., the employer makes a lump sum transfer that can be used for out-of-pocket health spending and carries over with interest to the following year). The concept of loss aversion, however, is another (not mutually exclusive) explanation of why consumers don't like high deductible plans.

Raj Chetty and Adam Szeidl, "Consumption Commitments and Risk Preferences," Quarterly Journal of Economics, May 2007, 122(2):831-74. http://qje.oxfordjournals.org.ezp-prod1.hul.harvard.edu/content/122/2/831.full.pdf+html

Shifting back to the topic of empirical methods, there is a debate in economics about the value of program evaluation and experimentation more generally. If you want to read more about this, there have been several recent collections of papers with varying views. One is in the June 2010 Journal of Economic Literature, with articles by Deaton, Imbens, and Heckman (best to read these in reverse order), as well as a lead article by Lee and Lemieux on regression discontinuity

designs. The Summer 2011 Journal of Economic Perspectives has several articles on field experiments (the Ludwig, et al. paper explicitly refers to the RAND Health Insurance Experiment (Class 4), though it falsely says it was the most expensive such experiment). The Spring 2010 Journal of Economic Perspectives also has a relevant symposium on taking the con out of econometrics (if you only have time for one paper in this symposium, read the Angrist and Pischke paper). Finally the March 2012 Journal of Economic Literature has two reviews of a book by Abhijit Banerjee and Esther Duflo of MIT advocating randomized experiments in developing countries ; the reviews are by Martin Ravallion and Mark Rosenzweig and give you a flavor of the debate between those who favor reliance on controlled experiments (Banerjee-Duflo) and those who favor reliance on observational data.

CLASS 4 –EMPIRICAL EVIDENCE AND IMPLICATIONS OF THE DEMAND FOR HEALTH CARE: THE RAND AND HEALTH INSURANCE EXPERIMENTS (February 6)

Although it ended more than three decades ago, the RAND Health Insurance Experiment results are still taken as the gold standard for the effects of cost sharing on utilization and health outcomes and are still frequently referred to by all sides in debates over cost sharing. The Oregon Experiment is of much more recent vintage and answers a different question. Whereas the RAND Experiment looked at the effect of varying cost sharing within an insured population, the Oregon Experiment looked at the consequences of no insurance vs Medicaid, an issue that we will take up later in the semester (Class 11). The slides warn you to be prepared to discuss the differences in both the design and the results/conclusions of the RAND Experiment and the Oregon Experiment.

This class will cover the design and results of both the RAND and the Oregon Experiments, and applications of demand analysis, including the economics and politics of a catastrophic benefit in Medicare (no reading assigned) and Health Savings Accounts and Health Reimbursement Accounts (no reading assigned).

Joseph P. Newhouse and the Insurance Experiment Group, Free for All? Lessons from the RAND Health Insurance Experiment, Harvard University Press, 1993, ch. 2, p. 41, chapter 11. The slides cover some of the design issues, which are covered in more detail in chapter 2 of Free for All? Also, as a tie back to the theory of coinsurance in Class 2, be prepared to answer how the Participation Incentive in the RAND Experiment should be treated theoretically. One indication of the continued importance of the RAND Experiment is that

the Kaiser Family Foundation commissioned Jonathan Gruber to put his views of the Experiment on paper in 2006 because they assumed cost sharing would be an issue in the ACA debate. So if you want to see someone else's take on the RAND results, see Jonathan Gruber, "The Role of Consumer Copayments for Health Care: Lessons from the RAND Health Insurance Experiment and Beyond," Menlo Park, The Henry J. Kaiser Family Foundation, October 2006. http://www.kff.org/insurance/7566.cfm. Looking at Gruber is strictly optional, however. Yet another take is Aron-Dine, et al. in the Optional Reading.

Katherine Baicker, Sarah Taubman, Heidi Allen, Mira Bernstein, Jonathan Gruber, Joseph P. Newhouse, Eric Schneider, Bill Wright, Alan Zaslavsky, Amy Finkelstein, and the Oregon Health Study Group, "The Oregon Experiment – Medicaid's Effects on Clinical Outcomes," New England Journal of Medicine, May 2, 2013, 368(18):1713-22. The Oregon Experiment showed reduced depression and improved self-rated health, but no statistically significant change in the biomarkers (blood pressure, cholesterol, Hba1c). RAND, however, did detect a main effect on blood pressure. What do you think accounts for the difference in the blood pressure results?

Niteesh K. Choudhry, Jerry Avorn, Robert J. Glynn, Elliott M. Antman, Sebastian Schneeweiss, Michele Toscano, Lonny Reisman, Joaquim Fernandes, Claire Spettell, Joy L. Lee, Raisa Levin, Troyen Brennan, and William H. Shrank, "Full Coverage for Preventive Medications after Myocardial Infarction," New England Journal of Medicine, December 1, 2011, 365(22):2088-97. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMsa1107913 Tests "value-based" insurance design (VBID), a notion popularized by Mark Fendrick and Michael Chernew (see Chernew, et al. in the Optional reading). The idea is to promote adherence by lowering the price to the patient of efficacious medications for chronic disease in order to improve outcomes, reduce total medical care cost, and reduce risk to the patient. Be prepared to answer in class how this notion fits with the concept of moral hazard.

This paper reports the results of one of the first randomized trials of the VBID concept in the context of medication following myocardial infarction ("heart attack"). For such patients statins, beta blockers, ACE inhibitors, and ARB's were free. Patients were enrolled over a 33 month period and followed for at least 9 months. Adherence improved, some outcomes improved, and the increased cost of drugs roughly offset the decreased cost of hospitalization and physician treatment. Risk to the patient was reduced both because the patient did not have to pay for drugs and because cost of other medical treatment fell. Even with free drugs,

however, adherence was poor, a result that replicates the result for all preventive treatment of the RAND HIE (Free for All?, ch. 5, not required).

Benjamin D. Sommers, Katherine Baicker, and Arnold M. Epstein, "Mortality and Access to Care After State Medicaid Expansions," New England Journal of Medicine, September 13, 2012, 367(11):1025-34. Shows access improved and mortality fell among states that expanded Medicaid. The slides cover a potential statistical issue with this study known as the ecological fallacy. Can you reconcile the mortality results in this paper with the results in the Baicker, et al. paper above? http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMsa1202099

Robert H. Brook, "Health Policy and Public Trust," JAMA, July 9, 2008, 300(2):211-3. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/cgi/reprint/300/2/211 This editorial could also fit at the end of the course, but I put it here because one of Brook's examples is the RAND Health Insurance Experiment, where he was the lead physician researcher. (The Rogers, et al. paper in the Optional reading for Class 16 is another of his examples.) By having you read this, I hope you acquire a feel for the environment in which a policy researcher operates. If some of you manage policy research in your career, I hope you will remember this paper. If you want to read more (but not too much more) along these lines, you can get reprise of the main theme, which also serves as a transition to the next unit on quality at Robert H. Brook, "Quality, Transparency, and the US Government," JAMA, April 1, 2009, 301:13:1377-8. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/301/13/1377.full

OPTIONAL:

> Amy Finkelstein, Sarah Taubman, Bill Wright, Mira Bernstein, Jonathan Gruber, Joseph P. Newhouse, Heidi Allen, Katherine Baicker, and the Oregon Health Study Group, "The Oregon Health Insurance Experiment: Evidence from the First Year," Quarterly Journal of Economics, August 2012, 127(3):1057-1106. http://qje.oxfordjournals.org.ezp-prod1.hul.harvard.edu/content/127/3/1057.full.pdf+html Results of Oregon at Year 1 with much more detail on the design of the Study than is in Baicker, et al.
>
> Sarah Taubman, Heidi L. Allen, Bill J. Wright, Katherine Baicker, and Amy N. Finkelstein, "Medicaid Increases Emergency-Department Use: Evidence from Oregon's Health Insurance Experiment," Science Express, January 2, 2014. Shows results similar to those

from the RAND Health Insurance Experiment; see O'Grady, et al. below. http://www.sciencemag.org.ezp-prod1.hul.harvard.edu/content/early/2014/01/02/science.1246183.full.pdf

Aviva Aron-Dine, Liran Einav, and Amy Finkelstein, "The RAND Health Insurance Experiment , Three Decades Later," Journal of Economic Perspectives, Winter 2013, 27(1):197-222. Although clearly indicating RAND was a landmark study, they worry about potential bias from refusal and attrition. I include this paper for balance, though I think it reflects an excessive concern with internal validity in contemporary economics journals; I value internal validity too, but the method for calculating "Lee bounds" that they use in my view will almost always yields such loose bounds as to not be useful - even bordering on silly. Note also that the RAND health status results are less vulnerable to attrition than the spending results that Aron-Dine et al. are concerned with because we were able to obtain end-of-experiment measures on 85% of those who left prematurely and did not die (77% including those who died). The issues around refusal and attrition are covered in ch. 2 of Free for All? – they are of obvious importance in assessing the results – and at greater length in a 2008 response to an earlier commentary by John Nyman that Aron-Dine, et al. cite.

Charles M. Kilo and Eric B. Larson, "Exploring the Harmful Effects of Health Care," JAMA, July 1, 2009, 302(1):89-91. Free for All? concluded that there may have been no observed effect on health outcomes from the additional services on the free plan because among a relatively healthy group of non-elderly, the additional services may have done as much harm as good. Three decades later this commentary in JAMA concludes that not much is known about harms. Although the authors' comment that "the benefits that US health care currently deliver [sic] may not outweigh the aggregate health harms it imparts" seems (to me) vastly overblown, if amended to apply at the margin, the comment may well be true. Note also the US Preventive Task Force recommendation about mammography for women between 40 and 50 and the 2011 statement on PSA screening took explicit account of harms. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/302/1/89.short

Evelyn Korkor Ansah, Solomon Narh-Bana, Sabina Asiamah, Vivian Dzordzordzi, Kingsley Biantey, Kakra Dickson, John Owusu Gyapong, Kwadwo Ansah Koram, Brian M. Greenwood, Anne Mills,Christopher J. M. Whitty, "Effect of Removing Direct Payment for HealthCare on Utilisation and Health Outcomes in Ghanaian Children: A Randomised Controlled Trial," PLoS Medicine, January 6, 2009, 6(1):48-57. The HIE findings redux in a Ghanaian setting.

http://www.plosmedicine.org/article/info:doi/10.1371/journal.pmed.1000007

Michael Chernew, Mayur R. Shah, Arnold Wegh, Stephen N. Rosenberg, Iver A. Juster, Allison B. Rosen, Michael C. Sokol, Kristina Yu-Isenberg, and A. Mark Fendrick, "Impact of Decreasing Copayments on Medication Adherence Within a Disease Management Environment," Health Affairs, January/February 2008, 27(1):103-12. Decreasing cost sharing can improve adherence. See Choudhry, et al. in the required list. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/27/1/103.full.pdf+html

A mid-2013 review of VBID studies found that VBID usually improved quality but did not save money, similar to the finding in Choudhry, et al. above. Joy L. Lee, Matthew Maciejewski, Shveta Raju, William H. Shrank, and Niteesh K. Choudhry , "Value-Based Insurance Design: Quality Improvement But No Cost Savings," Health Affairs, July 2013, 32(7):1251-7. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/32/7/1251.full.pdf+html

J. Michael McWilliams, Alan M. Zaslavsky, Ellen Meara, and John Z. Ayanian, "Impact of Medicare Coverage on Basic Clinical Services for Previously Uninsured Adults," JAMA, August 13, 2003, 290(6), pp. 757-64. When uninsured individuals turned 65 and became eligible for Medicare, they used more services compared with those who were insured when they turned 65. If you compare the increases for cholesterol, mammography, and prostate, they are pretty close the Oregon values. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/cgi/reprint/290/6/757. Note the subsequent study by these authors in the Optional Class 11 reading.

David Card, Carlos Dobkin, and Nicole Maestas, "Does Medicare Save Lives?" Quarterly Journal of Economics, May 2009, Vol. 124, No. 2: 597–636. A paper with the same basic design as the McWilliams, et al. study, but showing that for those admitted to the hospital through the emergency room, those over 65 receive somewhat more services and have somewhat lower mortality rates that persist for at least 9 months. http://qje.oxfordjournals.org.ezp-prod1.hul.harvard.edu/content/124/2/597.short

Thomas DeLeire, Laura Dague, Lindsey Leininger, Kristen Voskuil, and Donna Friedsam, "Wisconsin Experience Indicates That Expanding Public Insurance to Low-Income Childless Adults Has Health Care Impacts," Health Affairs, June 2013, 32(6):1037-44. Results more dramatic that Oregon from insuring a previously uninsured adult population,

but just a simple before-after design.

Nicole Lurie, Nancy B. Ward, Martin F. Shapiro, and Robert H. Brook., "Termination from Medi-Cal: Does It Affect Health?" New England Journal of Medicine, August 16, 1984, 311(7):480-4. The move from no insurance to some insurance may be more important than the move from some insurance to full insurance, which was what the RAND Experiment tested. Why might Lurie's effects be overstated as an estimate of what would happen to health status if all the uninsured were given Medicaid coverage? For the purpose of answering this question ignore the shift of the Medicaid population into managed care, which occurred subsequent to the Lurie, et al. article; I am after a methodological issue. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/pdf/10.1056/NEJM198408163110735

Richard Kronick, "Health Insurance Coverage and Mortality Revisited," Health Services Research, August 2009, 44(4):1211-31. Unlike the Lurie study, Kronick concludes that being uninsured probably does *not* raise the risk of mortality. Related to the Lurie, et al., McWilliams, et al., and Kronick papers, note also the Institute of Medicine monograph series in the supplementary reading for Class 11, especially Care Without Coverage: Too Little, Too Late, as well as the Haas, et al. article under the supplementary materials for the Medicaid section. Kronick is especially critical of the IOM estimate. Kronick is now the Administrator of the Agency for Healthcare Research and Quality (AHRQ). (The Oregon Experiment finds no impact on mortality, but had almost no power to detect an effect.) http://onlinelibrary.wiley.com.ezp-prod1.hul.harvard.edu/doi/10.1111/j.1475-6773.2009.00973.x/full

Judith R. Lave, Christopher R. Keane, Chyongchiou J. Lin, et al., "Impact of a Children's Health Insurance Program on Newly Enrolled Children," JAMA, June 10, 1998, 279(22), pp. 1820-1825. Similar conclusion to Lurie, et al.; tangible benefits moving from no insurance to almost complete insurance in a managed care plan among children in families with incomes under 235% of the poverty level. http://jama.ama-assn.org.ezp1.harvard.edu/cgi/reprint/279/22/1820

Robert Kaestner and Anthony T. Lo Sasso, "Does Seeing the Doctor More Often Keep You out of the Hospital?" National Bureau of Economic Research Working Paper 18255, July 2012, http://www.nber.org/papers/w18255. Consistent with the HIE, the authors find the answer to be no.

Kevin F. O'Grady, Willard G. Manning, Joseph P. Newhouse, et al., "The Impact of Cost Sharing on Emergency Department Use," New England Journal of Medicine, August 22, 1985, 313:484-90. Shows results on use of the ED consistent with the Taubman, et al paper from Oregon above. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/nejm198508223130806

John T. Hsu, Maggie Price, Richard Brand, Vicki Fung, Tom Ray, Bruce Fireman, Joseph P. Newhouse, and Joseph V. Selby, "Cost Sharing for Emergency Care: Findings on Adverse Clinical Events from the Safety and Financial Ramifications of ED Copayments Study (SAFE)," Health Services Research, October 2006, 41(5):1801-20. http://onlinelibrary.wiley.com.ezp-prod1.hul.harvard.edu/doi/10.1111/j.1475-6773.2006.00562.x/abstract Findings consistent with O'Grady, et al. but not Mortensen (below).

Karoline Mortensen, "Copayments Did Not Reduce Medicaid Enrollees' Nonemergency Use of Emergency Departments," Health Affairs, September 2010, 29(9), 1643-50. Why do you think Mortensen got different results than O'Grady, et al.? http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/29/9/1643.abstract

The first of the following three items takes up cost sharing in Medicare Parts A and B and the next two deal with cost sharing in the Medicare prescription drug benefit. I put them here because cost sharing for Medicare remains a policy issue.

Medicare Payment Advisory Commission, Report to the Congress: Aligning Incentives in Medicare; June 2010, ch. 2 and ch. 1, June 2012. Can be skimmed. Main idea is that cost sharing in Medicare is wrong headed, lack of catastrophic cap induces demand for supplementary coverage, which in turn leads to greater on budget cost. http://www.medpac.gov/chapters/Jun10_Ch02.pdf and http://www.medpac.gov/chapters/Jun12_Ch01.pdf

Congressional Budget Office, Issues in Designing a Prescription Drug Benefit for Medicare; Washington: CBO, October 2002, chapter 2. A review of several issues that had to be resolved as part of a Medicare drug benefit. The monograph discusses the how cost sharing might be structured at the beginning of chapter 2 and the assumption on demand elasticity relevant to the CBO cost estimates at the beginning of chapter 4. Other parts of this document are relevant to later sections of the course; in particular, chapter 3 is relevant to

the discussion of selection, and the discussion of the possibility of price setting on page 29 is relevant to the last part of the course on administered prices. (As a side remark, I believe CBO minimizes the degree to which price setting is likely ultimately to be used in the Medicare drug benefit by saying the relevant cases are "exceptional;" one piece of evidence for my view was the adamant opposition of the pharmaceutical industry to any single government administered Medicare plan.) Available on the web at http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/39xx/doc3960/10-30-prescriptiondrug.pdf

The RAND Experiment, of course, did not stress the supply system in any local market; i.e., it estimated a partial equilibrium outcome. In the following paper Amy Finkelstein estimates that the long-run effects were much larger. On what is her identification of these effects based? Note also that the effects she observes are conditional on the Medicare method of cost reimbursement of hospitals; with a different reimbursement system (e.g., prospective payment) the effects would likely have differed. We will come to the importance of reimbursement systems in classes 16 and 17.

Amy Finkelstein, "The Aggregate Effects of Health Insurance: Evidence from the Introduction of Medicare," Quarterly Journal of Economics, February 2007, 122(1):1-37. Would you say the estimated effects (granting the validity of her identification for the sake of argument) reflect induced new technology or greater investment in existing technology? http://qje.oxfordjournals.org.ezp-prod1.hul.harvard.edu/content/122/1/1.short

A related issue is whether physicians facing a variety of insurance policies in their practices tend toward uniformity in how they treat their patients. Some evidence that this is the case is in:

Sherry Glied and Joshua Graff Zivin, "How Do Doctors Behave When Some (but not all) of Their Patients Are in Managed Care?" Journal of Health Economics, 2002, 21(3):337-53. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S016762960100131X

Note the Glied-Graff Zivin data are consistent with the RAND Experiment's finding that most of the effect of varying patient payment was on the patient's propensity to seek care; how physicians treated the patients once in the system seemed relatively little influenced by patient payment. See also Richard G. Frank and Richard J. Zeckhauser, "Custom Made Versus Ready to Wear Treatments: Behavioral Propensities in Physicians Choices," Journal of Health Economics December 2007, 26(6): 1101-27. http://www.sciencedirect.com.ezp-

prod1.hul.harvard.edu/science/article/pii/S0167629607000562

CLASSES 5 - 9 - QUALITY OF CARE

I start with an overall view of these five classes. Historically, the public debate in the US over health policy has focused much more on cost and access than on quality. (Access is a term with several meanings, including financial, geographic, racial/ethnic, and cultural, but in the American context it probably most often refers to financial access, meaning the uninsured and underinsured. In other countries, such as the UK, access often refers to shorter waiting times for elective procedures, a meaning that is almost wholly absent in the American context.) In contrast to cost and access, the American debate over health policy until relatively recently did not highlight quality as a problem. In recent years, however, the view among experts - but probably less among the general public - is that there are important problems with the quality of care in the US (and elsewhere as well). At the same time, expert opinion is now somewhat more nuanced about cost (see the Cutler article in class 1 and his book above). Behind the change of expert opinion on quality lies a vast literature that both documents problems and proposes remedies. One aspect of the issue around quality of care is the role of IT and the electronic medical record; its rate of adoption has a lot to do with economics.

The next three classes cover the following: a) the various explanations and significance of geographic variation in the utilization and quality of services; b) the Institute of Medicine definition of quality (see slides); c) the entities that affect quality (no reading assigned on this topic; see slides); d) the RAND definition of appropriateness of care; e) the findings of the literature on public reporting of provider quality; and f) the business case for quality or lack of it. Class 8 covers comparative effectiveness research or improved knowledge of "what works among whom," and class 9 deals with malpractice and its effects – for good or ill – on quality.

CLASS 5 – GEOGRAPHIC VARIATION (February 11)

In keeping with the spirit of teaching you something about methods and distinguishing better from poorer research, I will begin the group of classes on quality with the debate over geographic variation in the use of services. As you will see, there is considerable controversy here; I will ask you in class where you come out in the debate between the Dartmouth researchers and their critics. Note that to keep this introductory discussion coherent, there

are a number of readings in bold font that are NOT required.

The vast literature about geographic variation within the United States began with studies of variation in *use* and *cost*, much of it coming from John (Jack) Wennberg, Elliott Fisher, and others at Dartmouth over the past four decades. See the Dartmouth Atlas in the Optional reading and the slide from Class 1 on variation in Medicare, repeated in the slides for this class, which is from the Atlas. The Dartmouth group has emphasized the role of the physician and the physician's discretion, although why physician decision making clustered geographically was somewhat murky.

Geographic variation relates to quality in that if areas are otherwise homogeneous, at least many of the areas must not have the optimal rate of use. Many of the writings of the Dartmouth group go further and interpret the data as saying that the high spending areas buy very little if anything of value for their incremental spending (see the Fisher, et al. Part 2 paper in the Optional reading). In other words, the US could save a lot of money if all of the US looked like the low spending areas. Atul Gawande, in a well-known 2009 New Yorker article that was picked up by the *New York Times* and put on page 1 in the Sunday paper, furthered this line of thinking. (Neither the *New Yorker* article nor the *Times* article is required, but if you want to read the Gawande article it is at http://www.newyorker.com/reporting/2009/06/01/090601fa_fact_gawande. If you subscribe to the *Times*, you can get the *Times* article at http://www.nytimes.com/2009/06/09/us/politics/09health.html?scp=37&sq=medicare&st=nyt.) I have excerpted the beginning of the *Times* article about Gawande on a slide.

A representative Dartmouth paper is Elliott S. Fisher, David E. Wennberg, Therese A. Stukel, Daniel J. Gottlieb, F. L. Lucas, Etoile L. Pinder, "The Implications of Regional Variations in Medicare Spending. Part 1: The Content, Quality, and Accessibility of Care," Annals of Internal Medicine, 138(4), February 18, 2003, pp. 273-287. http://search.epnet.com.ezp1.harvard.edu/login.aspx?direct=true&db=aph&an=9116419&loginpage=Login.asp&scope=site

The Dartmouth work on geographic variation precipitated a (very delayed) counter reaction, which I want to take up in class, as much for its methodological interest as its substantive interest. I have relegated some of the challenges to the Dartmouth view of the world to the Optional reading list, not because I think they are unimportant but because the reading for this class is already very long! See especially Romley, et al. (the slides for this class

have one chart from this paper), Doyle on Florida, and Franzini, et al. on McAllen and El Paso in the Optional reading. The first two both challenge the Dartmouth view that the additional spending doesn't buy very much.

On the political front, the variation in Medicare spending so amply documented by Dartmouth has by now been so widely disseminated that: a) It arguably led to the floors in wage adjusters and in Medicare Advantage reimbursement that we take up in classes 17 and 19 respectively and which many view as favoring rural areas; and b) Dartmouth has always focused on Medicare, not commercially insured spending, but the varying Medicare/commercial reimbursement ratios across areas was an important factor in killing the public option in the ACA debate. The areas with high commercial margins relative to Medicare did not want to accept Medicare rates, which is what the public option would have used.

The debate over geographic variation in Medicare led the Congress as part of the debate over the ACA to support an Institute of Medicine (IOM) study of the issue, which I chaired; the following are two short papers that summarize the IOM committee's report; the full report is in the Optional reading. What do the IOM findings say about the Dartmouth view of the world?

Joseph P. Newhouse and Alan M. Garber, "Geographic Variation in Medicare Services," New England Journal of Medicine, April 18, 2013, 368(16):1465-8.
http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1302981

Joseph P. Newhouse and Alan M. Garber, "Geographic Variation in Health Care Spending in the United States," JAMA, online first, September 25, 2013, 310(12):1227-8..
http://jama.jamanetwork.com.ezp-prod1.hul.harvard.edu/article.aspx?articleid=1735200

Turning to some of the methods issues that have arisen and that are taken up in the reading below, MedPAC has pointed out that the map you saw in Class 1 looks very different after making various adjustments for covariates; Dartmouth has fired back at MedPAC. Bach has challenged Dartmouth's methods for dealing with endogeneity and Dartmouth has responded. Cooper has gotten into a debate with Baicker and Chandra that also bears on the issue of workforce (Class 22).

The Dartmouth map you saw in Class 1 (and that is repeated in the slides for this class)

shows variation in input-price adjusted Medicare spending in Parts A and B of Medicare thus excluding spending on Medicare Advantage, or Part C, and on drugs, Part D across Dartmouth defined 306 market areas. (Input price adjustment accounts for, among other things, the generally higher wages in major metropolitan areas.) Within these market areas there is also variation; see the Blue Cross Blue Shield data on Massachusetts on the slides, which also appear in the IOM report.

The Fisher, et al. article above (as well as the companion Fisher, et al. article in the Optional reading) carried the Dartmouth group past many of their early studies that simply documented variation in use and tried to show that the high use areas did not buy much for their additional spending (i.e., flat-of-the-curve medicine). In particular, Fisher, et al. relate variation in Medicare spending on end-of-life care across regions to variation in five-year mortality rates, functional outcomes, and satisfaction for Medicare patients with hip fracture, AMI, or colorectal cancer. They find no relationship. Much of this is in the companion article that is optional, but there are also slides documenting Fisher's views. Bach (below), however, challenges them on this method, as does Cooper (also below).

The next five readings can all be found at http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/webexclusives/index.dtl?year=2008. Go to the December 4 date when you get to the web site, http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/early/2004/04/07/hlthaff.w4.184.full.pdf+html. The sixth reading (Sutherland, et al.) continues the exchange between Dartmouth and Cooper. Focus on the methodological questions that are at issue; I will ask you about them in class. In order to keep the amount of reading for this class down, I have not assigned the original Baicker-Chandra paper that set off this exchange, but if you want to see it, it is Katherine Baicker and Amitabh Chandra, "Medicare Spending, The Physician Workforce, And Beneficiaries' Quality Of Care," Health Affairs, 2004, Web Exclusive: W4-184-197 http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/early/2004/04/07/hlthaff.w4.184.full.pdf+html.

Richard A. Cooper, "States with More Physicians Have Better-Quality Health Care," Health Affairs, web exclusive, 28(1):w91-102.http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/28/1/w91.abstract

Katherine Baicker and Amitabh Chandra, "Cooper's Analysis is Incorrect," Health Affairs, web exclusive, 28(1):w117-118.http://content.healthaffairs.org.ezp-

prod1.hul.harvard.edu/content/28/1/w116.abstract

Richard A. Cooper, "States with More Health Care Spending Have Better-Quality Health Care: Lessons About Medicare," Health Affairs, web exclusive, 28(1):w103-115.http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/28/1/w103.abstract

Jonathan Skinner, Amitabh Chandra, David Goodman, and Elliott S. Fisher, "The Elusive Connection Between Health Care Spending and Quality," Health Affairs, web exclusive, 28(1):w119-123.http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/28/1/w119.abstract

Richard A. Cooper, "More Is More and Less Is Less: The Case of Mississippi," Health Affairs, web exclusive, 28(1):w124.http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/28/1/w124.extract

Jason M. Sutherland, Elliott S. Fisher, and Jonathan S. Skinner, "Getting Past Denial – The High Cost of Health Care in the United States," New England Journal of Medicine, September 24, 2009, 361(13):1227-30. Takes up Cooper's objection that some of the variation across regions is due to factor prices (Dartmouth: true, but only some of it), health status (Dartmouth asserts very little is due to health status, but this is disputed; see Zuckerman, et al. below as well as the MedPAC reading, both of which take a different view), and poverty (Dartmouth: very little). Dartmouth believes the latter two factors mostly balance out across Hospital Referral Regions. The Dartmouth group tries to show that most of the variation is in intensity or utilization per person after controlling for race, income, and health factors. The two Fisher, et al. papers are representative. http://content.nejm.org.ezp-prod1.hul.harvard.edu/cgi/reprint/361/13/1227.pdf

As a side note, two New York Times reporters decided to take on Dartmouth in articles that were run on the front page of the newspaper. If you are a subscriber to the Times, you can download this for free at http://www.nytimes.com/2010/06/03/business/03dartmouth.html. This reading, however, is optional.

Others besides Cooper and the New York Times have climbed into the ring with Dartmouth:

Stephen Zuckerman, Timothy Waidmann, Robert Berenson, and Jack Hadley, "Clarifying Sources of Geographic Differences in Medicare Spending," New England Journal of Medicine, July 1, 2010, 363(1):54-62. Contrary to Sutherland, et al., above, these authors argue that adjusting for health status matters. MedPAC analysts reached roughly similar results. Medicare Payment Advisory Commission, "Regional Variation in Medicare Service Use," January 2011, http://www.medpac.gov/documents/Jan11_RegionalVariation_report.pdf. The MedPAC report is not required reading, but I listed it here because Cooper comments on it also. Cooper's comment on MedPAC is not required either, but if you haven't had enough of Cooper, you can see Richard A. Cooper, "Response to MedPAC Report,"http://buzcooper.com/2011/01/07/medpac-poverty-and-geographic-variation-in-health-care/.

Dartmouth, however, argues that adjusting for health status in the manner Zuckerman and MedPAC (and also Zhang, et al. in the slides) do is illegitimate because the health status adjustment is based on diagnoses on claims forms and the intensity of coding diagnoses varies by region. Yunjie Song, Jonathan Skinner, Julie Bynum, Jason Sutherland, John E. Wennberg, and Elliott S. Fisher, "Regional Variations in Diagnostic Practices," New England Journal of Medicine," July 1, 2010, 363(1):45-53. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/nejmsa0910881 They show recorded diagnoses on claims forms seem to be endogenous. If this is correct, can one adjust for it given the data they present? We will come back to this issue in Class 19.

Another focus of debate around Dartmouth's claim that high use regions don't get much benefit has been how Dartmouth treated the potential endogeneity of use. A flavor of this debate is in: Peter B. Bach, "A Map to Bad Policy — Hospital Efficiency Measures in the Dartmouth Atlas," http://www.nejm.org/doi/full/10.1056/NEJMp0909947 and Jonathan Skinner, Douglas Staiger, and Elliott S. Fisher, "Looking Back, Moving Forward," http://www.nejm.org/doi/full/10.1056/NEJMp1000448 and their responses to each other, New England Journal of Medicine, February 18, 2010, 362(7):569-74.

OPTIONAL:

> The Dartmouth Atlas of Health Care. This justly famous publication presents all sorts of variation in care in great and colorful detail. You can see it for free at http://www.dartmouthatlas.org/

Jonathan Skinner, "Causes and Consequences of Regional Variations in Health Care," in Handbook of Health Economics, vol. 2; eds. Thomas G. McGuire, Mark V. Pauly, and Pedro Pita Barros; Amsterdam: Elsevier, 2011. An excellent summary of the literature by an eminent Dartmouth economist.

Elliott S. Fisher, David E. Wennberg, Therese A. Stukel, Daniel J. Gottlieb, F. L. Lucas, Etoile L. Pinder, "The Implications of Regional Variations in Medicare Spending. Part 2: Health Outcomes and Satisfaction with Care," Annals of Internal Medicine, 138(4), February 18, 2003, pp. 288-298. The companion article to Part 1 in the required reading. http://search.epnet.com.ezp1.harvard.edu/login.aspx?direct=true&db=aph&an=9116425&loginpage=Login.asp&scope=site

Institute of Medicine, "Pursuing Value in Health Care: Target Decision Making, Not Geography," eds. Joseph P. Newhouse, Alan M. Garber, Robin P. Graham, Margaret A. McCoy, Michelle Mancher, Ashna Kibria, July 2013, www.iom.edu. In case you want to dip into the report that the two Newhouse and Garber papers above are based on.

John A. Romley, Anupam B. Jena, and Dana P. Goldman, "Hospital Spending and Inpatient Mortality: Evidence From California," Annals of Internal Medicine, February 1, 2011, 154(3):160-7.http://www.annals.org.ezp-prod1.hul.harvard.edu/content/154/3/160.short Shows gains from additional spending at the hospital level. How do you reconcile this with Fisher, et al. in the required reading?

Joseph J. Doyle, Jr., "Returns to Local-Area Healthcare Spending: Using Health Shocks to Patients far from Home," American Economic Journal: Applied Economics, July 2011, 3(3):221-243. Shows, contrary to the Fisher papers above, that areas of high spending may have some positive returns. Despite Doyle's example, however, there is a lot of evidence behind the conventional Dartmouth conclusion that the high spending areas get little for their extra spending. http://www.nber.org/papers/w13301

Michael E. Chernew, Lindsay Sabik, Amitabh Chandra, Teresa E. Gibson, and Joseph P. Newhouse, "Geographic Correlation between Large Firm, Commercial Spending and Medicare Spending," American Journal of Managed Care, February 2010, 16(2):131-8.http://www.ajmc.com/media/pdf/AJMC_2010febChernew_131to138.pdf. An early exploration of the relationship between Medicare and commercial spending.

Dartmouth seems to agree with Chernew, et al. that variation in commercial insurance looks different. In the following paper, which is co-authored by Jonathan Skinner, they find the (in)famous difference between McAllen and El Paso, Texas that Atul Gawande highlighted in his New Yorker article does not hold up in commercial data. Luisa Franzini, Osama I. Mikhail, and Jonathan S. Skinner "McAllen And El Paso Revisited: Medicare Variations Not Always Reflected In The Under-Sixty-Five Population," Health Affairs, December 2010, 29(12): 2302-9. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/29/12/2302.short Given the role of post-acute care in the Medicare differences and that post-acute care is not that important in the under 65, perhaps that is not surprising.

Mark Chassin, Robert H. Brook, Rolla Edward Park, et al., "Variations in the Use of Medical and Surgical Services by the Medicare Population," New England Journal of Medicine, 314(5), Jan. 30, 1986, pp. 285-290. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/pdf/10.1056/NEJM198601303140505 Geographic variation in rates of use is not an artifact of small samples, which the initial articles in this literature, especially the early Dartmouth papers from Jack Wennberg, used. This article is a precursor to the same authors' required article in Class 6.

Charles E. Phelps, "Diffusion of Information in Medical Care," Journal of Economic Perspectives, 6:3, Summer 1992, 23-42. Puts the variation debate in an economic framework. See also his chapter in the Handbook of Health Economics. http://www.jstor.org.ezp-prod1.hul.harvard.edu/stable/2138298

CLASS 6 – QUALITY AND ITS MEASUREMENT; APPROPRIATENESS AND GUIDELINES (February 13, holiday on February 18)

Overviews

Institute of Medicine, Crossing the Quality Chasm; Washington: National Academy Press, 2001, Executive Summary. This call-to-action report, though now over a decade old, is still often cited and is a good starting point for this topic. Although much of the monograph does not deal with the economics of quality directly, note the text about payment policies around recommendations 10 and 11. We will take up the issues of financial incentives and the "business case for quality" (or the lack of it) in the next class; it is also taken up in Chapter 8

of this book (not assigned). The push for financial incentives for quality performance has subsequently gone forward under the banner of pay for performance (P4P, next class). http://www.nap.edu/catalog.php?record_id=10027

OPTIONAL:

> Especially if you are an MD or a medical student, I suggest you read Atul Gawande's 2011 Harvard Medical School commencement address, which emphasizes the need for physicians to change the traditional views they have had of themselves in order to make delivery system reform successful in terms of both improving quality and lowering cost. You can find this at http://www.newyorker.com/online/blogs/newsdesk/2011/05/atul-gawande-harvard-medical-school-commencement-address.html. If you are a Gawande fan, another Gawande New Yorker article whose theme is related to the Cowboys and Pit Bulls article is http://www.newyorker.com/reporting/2012/08/13/120813fa_fact_gawande

Quality of Care Measurement

As per the slides, the traditional measures of quality are classified into structural, process, and outcome measures. The first reading gives a now somewhat dated assessment of the state of quality using process measures and the next two readings take up the relationship between process and outcome measures.

Elizabeth A. McGlynn, Steven M. Asch, John Adams, et al., "The Quality of Health Care Delivered to Adults in the United States," New England Journal of Medicine, 348(26), June 26, 2003, pp. 2635-2645. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMsa022615 This classic paper gave a rather dismal overall assessment of the quality of care in the US at the time. Only 55 percent of patients whose charts were sampled received guideline level care, although if the medical record were incomplete, the results would understate the quality actually being delivered (but failure to document is itself a quality problem). You may also want to read the editorial on this subject by Earl Steinberg in the same issue, but that is Optional. A follow-on paper by the same group (Asch, et al., "Who Is at Greatest Risk for Receiving Poor-Quality Health Care?" New England Journal of Medicine, March 16, 2006, 354(11):1147-1156) http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMsa044464 that is also Optional shows that the variation in these percentages across demographic subgroups is low. See also the Kerr, et al. paper in the Optional reading, showing that the geographic variation

in these percentages is also low. In short, the poor performance seems to extend across the board. The slides document improvement in several of the measures since the time of these data, but there is still scope for substantial improvement.

Although process measures are widely used, outcome measures are almost universally conceded to be what is desired if only they were more feasible. The following paper is about the weak relationship between process and outcome measures.

Ashish Jha, "Measuring Hospital Quality," JAMA, July 5, 2006, 296(1):95-97. A short, clear exposition of the relationship - or the lack of it - between process and outcome measures. To keep the amount of required reading down, I have not assigned the two articles that Jha is primarily discussing, but of course you are welcome to pursue those. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/296/1/95.short

OPTIONAL:

Institute of Medicine, To Err Is Human; Washington, DC: National Academy Press, 1999, Executive Summary. Put the issue of patient safety and error in medicine on the public agenda. Made the point, which is made even more strongly in the Quality Chasm report, that improving quality is a systems problem. There is a dubious (in my view) extrapolation to the entire US of studies of deaths from error in New York, Colorado, and Utah, but this extrapolation now seems to have made it into urban legend (see the Supplementary reading list under Malpractice). Nonetheless, whatever the right number, there can be little doubt that deaths from medical error are a large number. This IOM report was the subject of a Presidential news conference when it was released, and it sufficiently impressed President Clinton that he returned to the subject in his general press conference the following day.

Each year the federal government issues a National Health Quality Report, with data over time on many measures of quality. The 2012 version can be found at http://www.ahrq.gov/research/findings/nhqrdr/nhdr12/nhdr12_prov.pdf, although its title has now morphed into the National Health Disparities Report.

Rodney A. Hayward, "Performance Measurement in Search of a Path," New England Journal of Medicine, 356(9), March 1, 2007, pp. 951-953. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMe068285 Editorial commenting on an(other) article in which improvement in process measures did not translate into outcome

improvement. Follows on the Jha, et al. paper on the required list.

Eve A. Kerr, Elizabeth A. McGlynn, John Adams, Joan Keesey, and Steven M. Asch, "Profiling the Quality of Care in Twelve Communities: Results from the CQI Study," Health Affairs, May/June 2004, 23(3), pp. 247-256. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/23/3/247.abstract. Follow on from the McGlynn 2003 New England Journal of Medicine paper on the required list. Shows relatively little variation across 12 cities in overall quality measures.

And if you want to read an anecdotal account that brings to mind Ralph Nader's famous title, *Unsafe at any Speed*, see Ashish Jha's blog post at http://cognoscenti.wbur.org/2013/04/05/medical-errors-ashish-jha.

Peter S. Hussey, et al., "How Does the Quality of Care Compare in Five Countries?" Health Affairs, May/June 2004, 23(3), pp. 89-99. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/23/3/89.full Quality of care is variable across countries and there is relatively little correlation among measures.

(In)Appropriateness and Guidelines

Mark R. Chassin, et al., "Does Inappropriate Use Explain Geographic Variations in the Use of Health Care Services? A Study of Three Procedures," JAMA, 258(18): November 13, 1987, 2533-2537. This paper follows from their 1986 paper on the optional list above, the results from which are on the slides. A classic study that formulated a definition of appropriateness and was a main contributor to the guidelines movement of the 1990s, now termed evidence-based medicine. That is, guidelines were formulated to support increasing the proportion of appropriate procedures. How does the RAND group's definition of appropriateness compare with an economist's definition? Notice that the results of this paper conflict with the general view of the Dartmouth group that the low-rate regions have it right. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/cgi/reprint/258/18/2533.

OPTIONAL

Mary Beth Landrum, Ellen R. Meara, Amitabh Chandra, Edward Guadagnoli, and Nancy L. Keating, "Is Spending More Always Wasteful? The Appropriateness of Care and Outcomes among Colorectal Cancer Patients," Health Affairs, January 2008, 27(1):159-68. Shows

that high Medicare spending regions for colorectal cancer patients do more appropriate and inappropriate care, similar to Chassin, et al. Outcomes are similar, suggesting the negative effects of the inappropriate care diluted the beneficial effects of the appropriate care, similar to the interpretation of the RAND Experiment results in class 4. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/27/1/159.full.pdf+html

Harlan M. Krumholz and Thomas H. Lee, "Redefining Quality – Implications of Recent Clinical Trials," New England Journal of Medicine, June 12, 2008, 358(24): 2537-9. Discusses two well-known trials that imply the simple targets of many guidelines such as Hba1c < 7 for Type 2 diabetics – and the associated public reporting, pay-for-performance, and network tiering efforts built around these guidelines – are not sufficient, and that the existing guidelines specifying a target also need to account for how the target was reached. Right now they do not do so. http://content.nejm.org.ezp-prod1.hul.harvard.edu/cgi/reprint/358/24/2537.pdf

Robert H. Brook, "Assessing the Appropriateness of Care – Its Time Has Come," JAMA, September 2, 2009, 302(9):997-9. Advocating the RAND group's definition of appropriateness as an explicit method for rationing services. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/cgi/reprint/302/9/997

Lisa Rosenbaum and Daniela Lamas, "Cents and Sensitivity – Teaching Physicians to Think About Costs," New England Journal of Medicine, July 12, 2012, 367(2):99-101. Two young physicians point out how medical education and culture militate against consideration of cost.

See also the Garber and Skinner paper under Class 1, Optional Reading.

Coordination Failures

Thomas Bodenheimer, "Coordinating Care — A Perilous Journey through the Health Care System," New England Journal of Medicine, March 6, 2008, 358(10):1064-71. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMhpr0706165. The American delivery system has a high proportion of specialists treating the same patient, which raises the problem of co-ordination among the physicians. This issue will also surface in Class 22. This article describes the issue and some possible remedies.

Andrew B. Bindman, Jonathan D. Blum, and Richard Kronick, "Medicare's Transitional Care Payment – A Step Toward the Medical Home," New England Journal of Medicine, February 21, 2013, 368(8):692-4. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/pdf/10.1056/NEJMp1214122 A policy response to coordination problems. For a followup to this paper see the Optional reading.

OPTIONAL:

> Andrew B. Bindman, Jonathan D. Blum, and Richard Kronick, "Medicare Payment for Chronic Care Delivered in a Patient-Centered Medical Home," JAMA, September 18, 2013, 310(11):1125-6. A followup paper describing the rule implementing the proposal described in the required reading.

CLASS 7 – QUALITY IMPROVEMENT: PUBLIC REPORTING AND PAYING/PENALIZING FOR QUALITY (February 20)

Public Reporting

There are a number of not mutually exclusive policy instruments that one might use to improve quality. Giving consumers better information about the quality of care delivered by various providers is one often proposed instrument. Lee shows the upside of quality reporting, but Dranove, et al. show that public reporting may induce selection and Hofer, et al. show that we may never have good quality measures at the level of the individual generalist physician (though this is a contested view).

Thomas H. Lee, "Eulogy for a Quality Measure," New England Journal of Medicine, September 20, 2007, 357(12): 1175-7. A short piece demonstrating (in my view) the upside of measurement and public reporting. Administration of beta blockading drugs, a treatment that should have been routine following heart attacks but was far from routine in the early 1990s, was one of the first measures of process quality developed by the National Committee for Quality Assurance (NCQA). The original measure was whether the patient got the drug within 7 days of discharge, but use got so close to 100% that the NCQA changed the measure to whether the patient was on a beta-blocker 6 months after the heart attack; see the notes to the slides from Class 6 on improvement. http://content.nejm.org.ezp-prod1.hul.harvard.edu/cgi/reprint/357/12/1175.pdf

David Dranove, Daniel P. Kessler, Mark McClellan, and Mark Satterthwaite, "Is More Information Better? The Effects of 'Report Cards' on Health Care Providers," Journal of Political Economy, June 2003, 111(3), pp. 555-588. This paper, which provides evidence of discrimination against severely ill patients from the NY and PA reporting systems on cardiac surgeons, shows (what to me is) convincing evidence that the New York and Pennsylvania reporting schemes induced selection against higher risk patients and possibly raised mortality among AMI patients. The selection described in this paper is a discouraging result for reporting outcome-based measures, let alone paying on them, because risk adjustment for cardiac surgery was and probably still is the most advanced system of risk adjustment for health outcomes that we have, and the results here suggest to me that the cardiac surgeons did not believe it was good enough. Of course, the welfare gains from the provider actions in New York described in Marshall, et al. (Optional reading) may still have outweighed the welfare losses from the selection that Dranove, et al. describe. You may also want to look at the Hannan, et al. paper on the supplementary list, which, using different methods, offers a contrary view to this paper. We will encounter selection in other contexts later in the course, starting in Class 10.
http://www.journals.uchicago.edu.ezp-prod1.hul.harvard.edu/doi/pdf/10.1086/374180

Timothy P. Hofer, Rodney A. Hayward, Sheldon Greenfield, Edward H. Wagner, Sherrie H. Kaplan, and Willard G. Manning, "The Unreliability of Individual Physician 'Report Cards' for Assessing the Costs and Quality of Care of a Chronic Disease," JAMA, 281(22), June 9, 1999, pp. 2098-2105. Shows the difficulty of assessing the quality of care at the individual physician level even for a common disease (diabetes). Although there is a division of opinion on whether individual providers can be meaningfully profiled, this paper is rather discouraging about the prospects. See Dimick, et al. and Nyweide, et al. in the Optional reading for more on the issue of sample size at the individual provider level. There is some material from Dimick, et al. in the slides. http://jama.ama-assn.org.ezp1.harvard.edu/cgi/content/abstract/281/22/2098

OPTIONAL:

R. Tamara Konetzka, Daniel Polsky, Rachel M. Werner, "Shipping Out Instead of Shaping Up: Rehospitalizations from Nursing Homes as an Unintended Effect of Public Reporting," Journal of Health Economics, March 2013, 32(2):341-52. Public reporting induced nursing homes to rehospitalize high risk patients so they would look better. http://ac.els-cdn.com.ezp-prod1.hul.harvard.edu/S0167629612001816/1-s2.0-

S0167629612001816-main.pdf?_tid=92bf5120-d393-11e2-8793-00000aab0f6b&acdnat=1371064335_d04611e9716ac255f76f0931ae339a02

Martin N. Marshall, Paul G. Shekelle, Sheila Leatherman, and Robert H. Brook, "The Public Release of Performance Data: What Do We Expect to Gain? A Review of the Evidence," JAMA, 283(14), April 12, 2000, pp. 1866-1874, http://jama.ama-assn.org.ezp1.harvard.edu/cgi/reprint/281/22/2098and the editorial "Public Release of Performance Data" by Arnold M. Epstein in the same issue, pp. 1884-1886. http://jama.ama-assn.org.ezp1.harvard.edu/cgi/reprint/283/14/1884 Consumers/patients do not appear to respond to information, although providers do; note especially the results on page 1872 with respect to the exodus of low-volume surgeons in NY. See also supportive results in the Cutler, et al. reading on the supplementary reading list. The literature reviewed in this paper is now dated, but the conclusions still hold.

Rachel M. Werner and Eric T. Bradlow, "Relationship Between Medicare's Hospital Compare Performance Measures and Mortality Rates," JAMA, December 13, 2006, 296(22):2694-2702. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/cgi/reprint/296/22/2694. Showing that hospitals that rank higher on the CMS Hospital Compare process measures have marginally lower risk-adjusted mortality rates for AMI, CHF, and pneumonia, another demonstration of the weak association between process and outcome measures.

Rachel M. Werner, Edward C. Norton, R. Tamara Konetzka, and Daniel Polsky, "Do Consumers Respond to Publicly Reported Quality Information? Evidence from Nursing Homes," Journal of Health Economics, January 2012, 31(1):50-61. http://ac.els-cdn.com.ezp-prod1.hul.harvard.edu/S0167629612000021/1-s2.0-S0167629612000021-main.pdf?_tid=819b75dfb07ea27b306429362092a53f&acdnat=1339070594_84bb2c0635c32df661658bdea2189c42. The answer is yes, but minimally.

Matthew P. Muller and Allan S. Detsky, "Public Reporting of Hospital Hand Hygiene Compliance – Helpful or Harmful?" JAMA, September 8, 2010, 304(10): 1116-7. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/304/10/1116.extract

Gautam Gowrisankaran, "Competition, Information Provision, and Hospital Quality," in Incentives and Choice in Health Care, eds. Frank A. Sloan and Hirschel Kasper; Cambridge: MIT Press, 2008. A review written from the perspective of an economist.

Mark R. Chassin, Edward L. Hannan, and Barbara A. DeBuono, "Benefits and Hazards of Reporting Medical Information Publicly" New England Journal of Medicine, February 8, 1996, 334:394-398. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJM199602083340611 Raw mortality from CABG fell and risk adjusted mortality fell even more after publicizing hospital and surgeon-specific mortality rates in New York State.

Jesse Green and Neil Wintfeld, "Report Cards on Cardiac Surgeons: Assessing New York State's Approach," New England Journal of Medicine, 332, May 4, 1995, 1229-1232. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJM199505043321812 The risk adjustment effect on mortality may have been largely coding rather than real. We have already encountered a coding issue with risk adjustment (Class 5, Song, et al.) and will encounter this issue in other contexts in the course as well.

Justin B. Dimick, H. Gilbert Welch, and John D. Birkmeyer, "Surgical Mortality as an Indicator of Hospital Quality: The Problem with Small Sample Size," JAMA, August 18, 2004, 292(7): 847-851. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/292/7/847.short Showing that even at the hospital level obtaining adequate sample sizes to detect differences in surgical mortality across individual hospitals is a problem.

David J. Nyweide, William B. Weeks, Daniel J. Gottlieb, Lawrence P. Casalino, Elliott S. Fisher, "Relationship of Primary Care Physicians' Patient Caseload With Measurement of Quality and Cost Performance," JAMA, December 9, 2009, 306(22):2444-50. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/302/22/2444.abstract

Paying/Penalizing for Quality/Performance

These readings deal with paying more for higher quality care, usually called "pay for performance," "P4P," or sometimes "the business case for quality," a topic that anticipates the last section of the course on administrative pricing in medical care. Some later reading that is relevant to this topic is also in Class 18 and in the optional Norton 1992 paper in Class 21, which treats this topic in the nursing home context. The UK has put much more money on the table for quality than the US and has seen what appears to be a once-and-for-all improvement; see the Doran and Roland paper and the slides (and for more on the UK see

Campbell, et al. in the Optional Reading). This topic and these papers could go either here or in classes 16-18 on reimbursement. I have put them here because they bear directly on quality (or value) in the medical care delivery system. Note that P4P is a "supply-side incentive" to improve quality, whereas the provision of information is a "demand-side incentive." Many believe demand-side incentives to improve quality are minimal because patients cannot judge quality, but see Redelmeier, et al. in the Optional reading for Class 18 for evidence that there is a demand response (though in that particular case almost certainly not a socially optimal one).

Ashish K. Jha, Karen E. Joynt, E. John Orav, and Arnold M. Epstein, "The Long Term Effect of Premier Pay for Performance on Patient Outcomes," New England Journal of Medicine, April 26, 2012, 366(17):1606-15. Jha et al. find no effects on mortality from the largest P4P project yet in the US relative to simple public reporting. The P4P was based on process measures. An earlier evaluation of this demonstration, which is in the slides (Lindenauer, et al.) had shown modest improvement in process measures, and based in part on those results, the ACA mandated value-based purchasing for Medicare, which has gone into effect and which we come to later in the course. The Jha, et al. results are consistent with the tenuous connection between process and outcome measures covered in Class 6.

Tim Doran and Martin Roland, "Lessons From Major Initiatives To Improve Primary Care In The United Kingdom," Health Affairs, May 2010, 29(5):1023-9. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/29/5/1023.abstract A mixed but on the whole upbeat assessment of various British reforms starting in 1998, including the P4P initiative.

Jordan M. VanLare, Jonathan D. Blum, and Patrick H. Conway, "Linking Performance with Payment: Implementing the Physician Value-Based Payment Modifier," JAMA, November 28, 2012, 308(20):2089-90. http://jama.jamanetwork.com.ezp-prod1.hul.harvard.edu/searchresults.aspx?q=conway&t=&p=1&s=1&c=0 A short description of Medicare's first foray into P4P for physicians.

Robert A. Berenson and Deborah R. Kaye, "Grading a Physician's Value – The Misapplication of Performance Measurement," New England Journal of Medicine, http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/pdf/10.1056/NEJMp1312287. Why Medicare's implementation of paying for quality may not succeed.

OPTIONAL:

Karen E. Joynt and Ashish K. Jha, "A Path Forward on Medicare Readmissions," New England Journal of Medicine, March 28, 2013, 368(13):1175-7. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/pdf/10.1056/NEJMp1300122 Readmission measures used for financial reimbursement should account for socio-economic status (see also the slides), be weighted for days since discharge, and should account for mortality (competing risks).

Karen E. Joynt and Ashish K. Jha, "Thirty Day Readmissions – Truth and Consequences," New England Journal of Medicine, April 12, 2012, 366(15):1366-9. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/pdf/10.1056/NEJMp1201598 Suggests not penalizing hospitals for readmissions because relatively few are preventable by the hospital. Note that the MedPAC data on the slide on potentially preventable readmissions disagrees with Joynt and Jha.

Meredith B. Rosenthal, Richard G. Frank, Zhonghe Li, and Arnold M. Epstein, "Early Experience with Pay-for-Performance: From Concept to Practice," JAMA, 294(14), October 12, 2005, pp. 1788-1793. http://jama.ama-assn.org.ezp1.harvard.edu/cgi/reprint/294/14/1788 Evaluates a program that rewarded physicians who met targets on cervical cancer screening, mammography, and hemoglobin A1c testing. Finds little effect on quality; the rewards go to those who are already doing well. This paper was very influential in dampening some of the early enthusiasm for P4P. What does this paper tell you about the most appropriate design of a P4P program? If you would rather read an economics journal article that uses more complete data from the same P4P program (but reaches the conclusion that there is a positive but quite modest effect), read Kathleen J. Mullen, Richard G. Frank, and Meredith B. Rosenthal, "Can You Get What You Pay For? Pay-for-Performance and the Quality of Healthcare Providers," RAND Journal of Economics, Spring 2010, 41(1):64-91. http://onlinelibrary.wiley.com.ezp-prod1.hul.harvard.edu/doi/10.1111/j.1756-2171.2009.00090.x/abstract

Meredith B. Rosenthal, "Beyond Pay for Performance – Emerging Models of Provider Payment Reform," New England Journal of Medicine, September 18, 2008, 359(12):1197-1200. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp0804658 Not a lot has changed in this domain since this 2008 paper. An overview of where things stood.

Meredith B. Rosenthal and R. Adams Dudley, "Pay-for-Performance: Will the Latest Payment Trend Improve Care? JAMA, February 21, 2007, 297(7):740-4. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/297/7/740 The table gives a concise summary of key dimensions of a P4P plan and points to literature on evidence.

For a summary of a large scale US effort to pay for performance in California, go to http://www.iha.org/pdfs_documents/p4p_california/P4PWhitePaper2_June2009_FullReport.pdf

Ruth McDonald and Martin Roland, "Pay for Performance in Primary Care in England and California: Comparison of Unintended Consequences," Annals of Family Medicine, March/April 2009, 7(2):121-7. http://annfammed.org/content/7/2/121.full Interviews of 20 PCPs in England and California. California MDs report forced disenrollment of noncompliant patients.

Clemens S. Hong, Steven J. Atlas, Yuchiao Chang, S.V. Subramanian, Jeffrey M. Ashburner, Michael J. Barry, et al., "Relationship Between Patient Panel Characteristics and Primary Care Physician Clinical Performance Rankings," JAMA, September 8, 2010, 304(10):1107-13. Using HEDIS measures to pay appear to discriminate against MDs with more low SES patients.http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/304/10/1107.short

Institute of Medicine, Rewarding Provider Performance: Aligning Incentives in Medicare, Washington: National Academies Press, 2007. See especially chapter 4 on structuring the any P4P scheme, as well as chapter 5, pp. 118-130 on the accountable unit, IT, and statistical issues. Also Appendix B has an annotated bibliography as of 2006. For a summary, see Elliott S. Fisher, "Paying for Performance – Risks and Recommendations," New England Journal of Medicine, November 2, 2006, 355(18), pp. 1845-1847. http://content.nejm.org.ezp1.harvard.edu/cgi/reprint/355/18/1845.pdf

Peter K. Lindenauer, Denise Remus, Sheila Roman, Michael Rothberg, Evan M. Benjamin, Allen Ma, and Dale W. Bratzler, "Public Reporting and Pay for Performance in Hospital Quality Improvement," New England Journal of Medicine, 356(5), February 1, 2007, pp. 486-496. Gains in quality at a set of hospitals with pay for performance and public reporting relative to a set with only public reporting. The P4P scheme was a 1 or 2 percent bonus for hospitals in the top two deciles of hospitals that applied; note that the group of

applicants was *not* randomly selected. Underperforming hospitals, however, were subject to penalties in the third year. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMsa064964

Stephen Campbell, David Reeves, Evangelos Kontopantelis, Bonnie Sibbald, and Martin Roland, "Effects of Pay for Performance on the Quality of Primary Care in England," New England Journal of Medicine, July 23, 2009, 361(4):368-78 http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMsa0807651and Stephen Campbell, David Reeves, Evangelos Kontopantelis, Bonnie Sibbald, and Martin Roland, "Quality of Primary Care in England with the Introduction of Pay for Performance," New England Journal of Medicine, July 12, 2007, 357(2):181-90. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMsr065990The UK has put much more weight (money) on P4P than the US; this study shows modest gains in two of three quality indicators (with the third indicator trending in the right direction) used to compensate British GPs, albeit there was a prior favorable trend so it is not clear the P4P was causal. The improvement, however, came at considerable cost to Her Majesty's Treasury, and the improvement appeared to be a one-off event.

J. William Thomas and Kathleen Ward, "Economic Profiling of Physician Specialists: Use of Outlier Treatment and Episode Attribution Rules," Inquiry, Fall 2006, 43(3):271-282. http://www.inquiryjournalonline.org.ezp-prod1.hul.harvard.edu/doi/pdf/10.5034/inquiryjrnl_43.3.271There is currently a lot of pressure from purchasers to drive accountability to the level of the individual physician. This article uses a simulation to derive best rules for treating outliers and attributing services to an individual physician. Best methods differ by specialty, and the authors say they were unsuccessful in identifying cost-inefficient physicians.

Sheila Leatherman, Donald M. Berwick, Debra Iles, et al., "Making the Business Case for Quality," Health Affairs, 22(2), March/April, 2003, pp. 17-30. Some case studies of what happened, or perhaps more accurately what did not happen, when various delivery organizations tried to improve quality through payment reforms.http://search.epnet.com.ezp1.harvard.edu/login.aspx?direct=true&db=aph&an=9332346&loginpage=Login.asp&scope=site

Paying health care providers on quality measures is analytically similar to paying on performance measurement in elementary and secondary education, a domain where there is

considerably more literature than in health care services. I list both a theoretical and empirical paper from this literature in the supplementary reading if any of you want to pursue this further.

Health Information Technology (Health IT or HIT)

One of the hopes for increased quality in health care is greater use of IT. For those of you interested in this subject, look at these readings and follow cites if you are interested in more. I personally think one of the more likely places to look for gains from more widespread HIT is greater use of clinical decision support software, but the meaningful use regulations do not (as yet) require it. The reason to think that clinical decision support will help is in the title of a 2010 paper in PLoS Medicine entitled "Seventy-five Trials and Eleven Systematic Reviews a Day: How Will We Ever Keep Up" (Hilda Bastian, Paul Glasziou, and Iain Chalmers, September 2010, 7(9):e1000326). (This is not on the Optional list; the title is here as a "factoid.") Interestingly, however, the author's conclusion is that the number of clinical trials and systematic reviews need to be reduced, not the conclusion I would draw.

The following three articles give the state of play as of 2013.

Chun-Ju Hsiao, Ashish K. Jha, Vaishali Patel, Michael F. Furukawa, and Farzad Mostashari, "Office-Based Physicians Are Responding to Incentives And Assistance by Adopting and Using Electronic Health Records," Health Affairs, August 2013 (32(8):1470-7.

Michael F. Furukawa, Vaishali Patel, Dustin Charles, Matthew Swain, and Farzad Mostashari, " Hospital Electronic Health Information Exchange Grew Substantially in 2008-12," Health Affairs, August 2013 (32(8):1346-54.

Catherine M. DesRoches, , Dustin Charles, Michael F. Furukawa, Maulik S. Joshi, Peter Kralovec, Farzad Mostashari, Chantal Worzala, and Ashish K. Jha, "Adoption of Electronic Health Records Grows Rapidly, But Fewer Than Half of US Hospitals Had at Least a Basic System in 2012, Health Affairs, August 2013 (32(8):1478-85.

Julia Adler-Milstein, Claudia Salzberg, Calvin Franz, E. John Orav, Joseph P. Newhouse, and David W. Bates, "Do Electronic Health Records Save Money? Evidence from Community Practices," Annals of Internal Medicine, July 16, 2013, 159(2):97-104. Negligible savings with community wide adoption of health IT.

Mary Reed, Jie Huang, Ilana Graetz, Richard Brand, John Hsu, Bruce Fireman, Marc Jaffe, "Outpatient Electronic Health Records and the Clinical Care and Outcomes of Patients With Diabetes Mellitus," Annals of Internal Medicine, October 2, 2012, 157(7):482-9. Some encouraging results on blood sugar and cholesterol control from implementation of HIT at Kaiser Northern California.

David Blumenthal, "Wiring the Health Care System: Origins and Provisions of a New Federal Program," and "Implementation of the Federal Health Information Technology Initiative," New England Journal of Medicine, December 15 and 22, 365(22 and 23):2323-9 and 2426-31. The rationale and early implementation of the federal Health IT initiative of 2009 by the person in charge of it looking back on the first two years.

Julia Adler-Milstein and Ashish K. Jha, "Sharing Clinical Data Electronically: A Critical Challenge for Fixing the Health Care System," JAMA, April 25, 2012, 307(16):1695-6. As advertised.

David Blumenthal and Marilyn Tavenner, "The 'Meaningful Use' Regulation for Electronic Health Records," New England Journal of Medicine, August 5, 2010, 363(6):501-5. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/pdf/10.1056/NEJMp1006114 Short summary of the final regulations on meaningful use.

David Blumenthal, "Stimulating the Adoption of Health Information Technology," New England Journal of Medicine, April 9, 2009, 360(15):1477-9. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp0901592A summary of the Stimulus Act of 2009's (aka ARRA) provisions to spur the adoption of Health IT. The author, a former MD-MPP from HKS, was the National Coordinator for Health Information Technology from 2009-2011.

Ashish K. Jha, Catherine M. DesRoches, Eric G. Campbell, Karen Donelan, Sowmya R. Rao, Timothy G. Ferris, Alexandra Shields, and David Blumenthal, "Use of Electronic Records in U.S. Hospitals," New England Journal of Medicine, April 16, 2009, 360(16):1628-38. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMsa0900592The title might more accurately have been "Non-Use of Electronic Records in U.S. Hospitals," at least as of 2008.

Antitrust and Guideline Development

John D. Kraemer and Lawrence O. Gostin, "Science, Politics, and Values," JAMA, February 11, 2009, 301(6):665-7. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/301/6/665.full An editorial excoriating the Connecticut Attorney General, Richard Blumenthal (now Senator Blumenthal), for bringing an antitrust case against the Infectious Diseases Society of America for its guidelines in treating Lyme Disease. An example of tension between the law and professionalism. More on antitrust in class 14.

A Speculative and Somewhat Pessimistic Overview of Some Causes of Poor Quality:

Joseph P. Newhouse, "Why Is There a Quality Chasm?" Health Affairs, 21(4), July/August 2002, 13-25. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/21/4/13.full Some fundamental hurdles to good performance in medical care, though admittedly there is no ready measure by which to compare quality in medicine with quality in other industries.

CLASS 8 – COMPARATIVE EFFECTIVENESS RESEARCH (February 25)

In the late 1980s and early 1990s "outcomes research," meaning how alternative treatment methods were related to outcomes, was touted in some places as a silver bullet to improve quality and/or lower cost. Outcomes research has now been renamed comparative effectiveness research, which in principle is to lead to greater knowledge of what is effective treatment and thereby enhance evidence-based medicine and value for money in health care. ARRA, the stimulus bill of 2009, substantially increased the funding for comparative effectiveness research, and the ACA established the Patient-Centered Outcomes Research Institute (PCORI, see slides) to continue this work.

The McClellan, et al. paper illustrates what I think is the main methodological issue of comparative effectiveness or outcomes research. This issue has limited progress – and progress likely will continue to be slow. It also illustrates some general issues in using observational data to make causal inferences and thus relates back to the earlier class on methods used to study demand for medical care. Many of the slides for this class go over the McClellan, et al. article, focusing on the methodology, as well as problems in the alternative to

the use of observational data, the randomized controlled trial.

Mark McClellan, Barbara J. McNeil, and Joseph P. Newhouse, "Does More Intensive Treatment of Acute Myocardial Infarction Reduce Mortality?" JAMA, 272(11), September 21, 1994, 859-866. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/272/11/859

Randall S. Stafford, Todd H. Wagner, and Philip W. Lavori, "New But Not Improved? Incorporating Comparative-Effectiveness Information into FDA Labeling," New England Journal of Medicine, September 24, 2009, 361(13):1230-3. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp0906490 Discusses active comparator versus placebo controlled trials; see slides.

Daniel F. Martin, Maureen G. McGuire, and Stuart L. Fine, "Identifying and Eliminating Roadblocks to Comparative-Effectiveness-Research," New England Journal of Medicine, July 8, 2010, 363(2):105-7. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1001201 Passing a law and appropriating funds is hardly the end of the story when it comes to getting comparative effectiveness research actually carried out. This short paper comes from a group carrying out a high priority CER trial and describes the roadblocks they encountered from the government.

Ruth R. Faden and Kalipso Chalkidou, "Determining the Value of Drugs – The Evolving British Experience," New England Journal of Medicine, April 7, 2011, 364(14):1289-91. Whatever cost-effectiveness means in theory, in practice it turns out not to be formulaic. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1101047

OPTIONAL:

> Justin Timbie, Eric C. Schneider, Kristin van Busum, and D. Steven Fox, "Five Reasons that Many Comparative Effectiveness Studies Fail to Change Patient Care and Clinical Practice," Health Affairs, October 2012, 31(10):2168-75. Deals with why clinical trials frequently do not change practice; their first reason is economic incentives. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/31/10/2168.full.pdf+html
>
> Katharine Cooper Wulff, Franklin G. Miller, and Steven D. Pearson, "The Ongoing Saga of Vertebroplasty: Can Coverage Be Rescinded When Negative Trial Results Threaten A Popular Procedure?" Health Affairs, December 2011, 30(12):2269-76.

http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/30/12/2269.full.pdf+html A rather dark view of the possibilities for benefit from CER.

Adam Elshaug and Alan M. Garber, "How CER Could Pay for Itself – Insights from Vertebral Fracture Treatments," New England Journal of Medicine, April 14, 2011, 364(15):1390-3. http://www.nejm.org/doi/pdf/10.1056/NEJMp1101475 A sunnier view of the same set of facts as in the prior paper.

David Cutler, "The Lifetime Costs and Benefits of Medical Technology," Journal of Health Economics, November 2007, updates the McClellan, et al. 1994 paper using 17 years of followup. After 17 years, revascularization and/or its associated treatments with circa 1987 technology look like a good deal. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S0167629607000586

David M. Kent and Rodney A. Hayward, "Limitations of Applying Summary Results of Clinical Trials to Individual Patients: The Need for Risk Stratification," JAMA, September 12, 2007, 298(10):1209-12. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/298/10/1209.short Emphasizes that an average treatment effect may not be useful to the clinician.

David Howard and Yu-Chu Shen, "Comparative Effectiveness Research, COURAGE, and Technological Abandonment," National Bureau of Economic Research Working Paper WP17371, August 2011. http://www.nber.org.ezp-prod1.hul.harvard.edu/papers/w17371 Although many have touted the expected benefits of CER, Howard and Shen find little effect in one example.

Mary E. Tinettti and Stephanie A. Studenski, "Comparative Effectiveness Research and Patients with Multiple Chronic Conditions," New England Journal of Medicine, June 30, 2011, 364(26):2478-81. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1100535 Read if you want to focus on the difficulties of handling comorbidities in CER.

CLASS 9 – TORTS AND PROFESSIONAL LIABILITY/MALPRACTICE (even the terminology here is loaded!) (February 27). Testimony 1 due before the February 27 class.

The American plaintiff's bar believes they are an agent for quality improvement.

Much of the public seems to agree, although virtually all physicians feel otherwise. Whichever view one takes, I believe it is important to understand the role the law of torts plays in US health care. The law of torts is also relevant in Canada and the UK, among other places.

Most of the reading and the class session is around professional liability or malpractice, but there is also an issue of product liability of drug and device makers; specifically whether FDA approval to market a drug or device should exempt the manufacturer from tort liability. In two cases the Supreme Court determined that it should exempt device manufacturers but not brand drug manufacturers (Riegel vs. Medtronic, 2008, Wyeth vs. Levine, 2009) (the decisions differed because of different wording of the underlying statutes). In a subsequent decision, however, the Court did exempt generic drug manufacturers (Pliva vs. Mensing, 2011). There have been efforts in the Congress, not yet successful, to make device manufacturers also liable, and I suspect there will be efforts to make generic manufacturers liable. Almost all of the following reading is on professional liability/malpractice, but I included one short reading on liability for drugs and devices.

Daniel Kessler, "Evaluating the Medical Malpractice System and Options for Reform," Journal of Economic Perspectives, Spring 2011, 25(2):93-110. http://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.25.2.93 A good introduction to this topic.

Allen Kachalia and Michelle M. Mello, "New Directions in Medical Liability Reform," New England Journal of Medicine, April 21, 2011, 364(16):1564-72. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMhpr1012821 A summary of the empirical literature as of early 2011.

David M. Studdert, Michele M. Mello, Atul Gawande, Tejal K. Ghandi, Allen Kachalia, Catherine Yoon, Ann Louise Puopolo, and Troyen A. Brennan, "Claims, Errors, and Compensation Payments in Medical Malpractice Litigation," New England Journal of Medicine, 354:19, May 11, 2006, pp. 2024-2033. The legal system does a reasonable (albeit expensive) job of distinguishing negligent and non-negligent cases, once cases are filed, and filing is a reasonable way for a plaintiff's attorney to proceed to determine if there is negligence or not. http://content.nejm.org.ezp1.harvard.edu/cgi/reprint/354/19/2024.pdf

David M. Studdert, Matthew J. Spittal, Michelle M. Mello, A. James O'Malley, and David G. Stevenson, "Relationship between Quality of Care and Negligence Litigation in Nursing

Homes," New England Journal of Medicine, March 31, 2011; 364, 1243-50. http://www.nejm.org/doi/pdf/10.1056/NEJMsa1009336 Poorly performing nursing homes are more likely to be sued, but not much more likely than well performing homes.

Gregory D. Curfman, Stephen Morrisey, and Jeffrey Drazen, "Why Doctors Should Worry About Preemption," New England Journal of Medicine, July 3, 2008, 359(1):1-3. http://content.nejm.org.ezp-prod1.hul.harvard.edu/cgi/reprint/359/1/1.pdf Takes up the issue of whether FDA approval of a drug or device should exempt the manufacturer from tort liability if safety problems arise downstream.

OPTIONAL:

If you want some empirical evidence on state dependent utility beyond what is in the slides, read one or both of the following:

Amy N. Finkelstein, Erzo Luttmer, and Matthew Notowidigo, "What Good Is Wealth Without Health? The Effect of Health on the Marginal Utility of Consumption," NBER Working Paper 14089 (http://www.nber.org/papers/w14089). A short discussion of the issues by the same authors is in the May 2009 American Economic Review, 99(2):116-21.

Moshe Levy and Adi Rizansky Nir, "The Utility of Health and Wealth," Journal of Health Economics, March 2012, 31(2):379-92. This paper shows that data from cancer and diabetes patients support a utility function of the form U = health * log(wealth), which is consistent with the Finkelstein, et al. finding that better health increases the marginal utility of wealth.

The next two readings below are books that go into malpractice in much greater depth than the two required journal articles above. I used to require students in the course to read one of the two books, but the length of the reading list together with the availability of the Studdert, et al., survey has led me to make them Optional. For those of you writing testimony on malpractice/professional liability, however, it would be a good idea to at least dip into one of these books, as well as into some of the articles that follow.

Paul C. Weiler, Medical Malpractice on Trial, Harvard, 1991. A non-technical book that covers the subject.

Patricia Danzon, Medical Malpractice; Harvard University Press, 1985, Chapters 1-4, 7, 8, 12, 13. Those who want a more formal economic approach will prefer this book to Weiler's, but be warned, the writing style is considerably harder going. A more distilled version is Danzon's chapter in the Handbook of Health Economics. The slides make some use of Danzon's exposition.

Paul C. Weiler, Howard H. Hiatt, Joseph P. Newhouse, Troyen A. Brennan, Lucian L. Leape, and William G. Johnson, A Measure of Malpractice: A Study of Medical Injury, Malpractice Litigation, and Patient Compensation; Cambridge: Harvard University Press, 1993. This book summarizes the methods and results from the Harvard Medical Practice Study to which Kessler refers.

A. Russell Localio, et al., "Relation Between Malpractice Claims and Adverse Events Due to Negligence," New England Journal of Medicine, 325:4, July 25, 1991, 245-251. http://www.nejm.org/doi/full/10.1056/NEJM199107253250405 The tort system is noisy, though the later evidence from Studdert, et al. (reproduced in the slides) in the required reading is that it is less noisy, probably because Localio, et al., is based on a much smaller study that Studdert, et al.

Troyen A. Brennan, Carol M. Sox, and Helen R. Burstin, "Relation between Negligent Adverse Events and the Outcomes of Medical-Malpractice Litigation," New England Journal of Medicine, 335, December 26, 1996, 1963-7. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJM199612263352606 Outcome at tort appears in practice to depend upon disability.

Michelle Mello, Amitabh Chandra, Atul Gawande, and David Studdert, "National Costs of the Medical Liability System," Health Affairs, September 2010, 29(9):1569-77. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/29/9/1569.abstract Reaches an estimate that malpractice system accounts for 2.4% of total health spending. Several cites to relevant literature. Note that both this study and Kessler say there is no evidence on the deterrence effect.

Daniel Kessler and Mark McClellan, "Do Doctors Practice Defensive Medicine?" Quarterly Journal of Economics, May 1996, 111(2): 353-90. http://qje.oxfordjournals.org.ezp-prod1.hul.harvard.edu/content/111/2/353.full.pdf+html

Finds that changes in liability law appear to affect the cost of treating AMI without measurable effects on outcomes. More generally, defensive medicine is notoriously hard to pin down. This paper offers some evidence of it, but in a limited area.

Daniel Kessler and Mark B. McClellan, "How Liability Law Affects Medical Productivity," Journal of Health Economics, 21(6), November 2002, pp. 931-955. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S0167629602000760 Still stronger evidence of defensive medicine than in the preceding paper.

Katherine Baicker, Elliott S. Fisher, and Amitabh Chandra, "Malpractice Liability Costs and the Practice of Medicine in the Medicare Program," Health Affairs, May/June 2007, 26(3):841-52. Another paper on defensive medicine, using a fixed-effects model with states as the unit of observation to explain growth in Medicare spending as a function of growth in malpractice premiums. They estimate an elasticity of total Medicare spending with respect to malpractice premiums of 0.1. On the basis of their estimate, they conclude that the 60% growth in malpractice premiums between 2000 and 2003 might have caused total health care spending to rise 6%. This three year period, however, was a period of very rapid growth in premiums; from 1993-2001 real premiums only rose about 1% per year. They also find imaging and evaluation and management services are the most responsive to variation in premiums. Although they don't note it, the results on imaging and to a lesser degree on evaluation and management are helpful because they strengthen a defensive medicine interpretation. Because areas with higher rates of procedures will have more patient injuries and likely more claims, causality could go from procedures to premiums, but this will not be the case for imaging and mostly not for evaluation and management (with the exception of claims for failure to diagnose).http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/26/3/841.abstract

Janet Currie and W. Bentley MacLeod, "First Do No Harm? Tort Reform and Birth Outcomes," Quarterly Journal of Economics, May 2008, 123(2):795-830. Shows deterrence appears to work for obstetrics. Reform of the joint and several liability rule to say that a defendant must be responsible for some minimum share of the harm to be liable (this is modeled as an increased share of the liability the obstetrician faces) leads obstetricians to perform fewer C-sections, fewer inductions, and result in fewer complication , whereas damage caps cause the opposite.http://qje.oxfordjournals.org.ezp-prod1.hul.harvard.edu/content/123/2/795.short

Laurence R. Tancredi and Randall R. Bovbjerg, "Creating Outcomes-Based Systems for Quality and Malpractice Reform: Methodology of Accelerated Compensation Events(ACEs)," Milbank Memorial Fund Quarterly, 1992;70(1):183-216. http://www.jstor.org.ezp-prod1.hul.harvard.edu/stable/3350089. One alternative to tort.

Michelle M. Mello and Thomas H. Gallagher, "Malpractice Reform – Opportunities for Leadership by Health Care Institutions and Liability Insurers," New England Journal of Medicine, April 15, 2010, 362(15):1353-6. Sketches three versions of "disclose-and-offer" models, in which the health care institution admits error, apologizes, offers compensation, and uses the results to improve safety going forward. This approach is still in its infancy but has the virtue that it can be implemented by health care institutions and may be a way around the impasse over tort reform. Kessler comments on this reform. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1001603

Aaron Kesselheim, "Safety, Supply, and Suits – Litigation and the Vaccine Industry," New England Journal of Medicine, April 21, 2011, 364(16):1485-7. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1102182 Describes the no-fault system in place for vaccine-related injuries and why the Supreme Court distinguished vaccines from its earlier decision on devices in Wyeth vs. Levine.

The Profession versus the Market

Thomas H. Lee and Troyen A. Brennan, "Direct-to-Consumer Marketing of High-Technology Screening Tests," New England Journal of Medicine, 346(7), February 14, 2002, 529-531. http://content.nejm.org.ezp1.harvard.edu/cgi/reprint/346/7/529.pdf
I have put this article, which raises issues around quality of care, on the reading list for you to think about, although it is something of a departure from the other reading in this section. Lee and Brennan argue that medical care should not be like any other consumer good and specifically that consumers should not be allowed to spend their own money on the tests that they discuss in the paper. Setting aside issues of enforceability, the case that the consumer should not be allowed to make a mistake is clearly strengthened by the argument that in the specific cases they take up there is really no advantage to the consumer (and several disadvantages) to buying the good in question. The argument goes on, however, that the profession of medicine is different than other suppliers of goods and

services and that it "should act in a unified fashion when faced with critical choices," meaning consumer sovereignty can be trumped by professionalism. How would this argument be applied (or should it apply?) if there were some small, but real benefit to these tests? Also, does "acting in a unified fashion" mean medicine should be exempt from antitrust laws? Even if it should be exempt, is it at all realistic to think that 700,000+ American physicians would act in a unified fashion on decisions to administer a non-invasive test where the likelihood of a malpractice claim is much lower than the likelihood of a false positive? More generally, how does a profession with its own norms and ethics fit into a market system?

OPTIONAL:

Donald M. Berwick, "The Epitaph of Profession," British Journal of General Practice, e-publication. This short essay, which is something of a counterpoint to Lee and Brennan by an MD-MPP from HMS and HKS who was Acting Administrator of CMS in the first Obama administration, is **strongly recommended** for mid-career MDs. Berwick, an international leader in quality improvement efforts, was knighted by the Queen for his efforts to improve care in the National Health Service (one of four Americans to have been knighted at the time he was knighted).http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2629825/pdf/bjgp59-128.pdf/?tool=pmcentrez

Troyen A. Brennan, "Luxury Primary Care – Market Innovation or Threat to Access?" New England Journal of Medicine, April 11, 2002, 346(15), 1165-1168. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/nejm200204113461513 Another paper taking up the tension between professional ethics and the market. Read this if you are interested in the issues raised by the Lee and Brennan paper.

CLASSES 10, 11, 14, 15 – INSURANCE MARKETS AND THEIR SPECIAL PROPERTIES; MANAGED CARE

Refer back to the Cutler-Zeckhauser chapter in the Handbook of Health Economics at this point (Class 1).

CLASS 10 - THE ECONOMICS OF THE INSURANCE MARKET (March 4)

The Rothschild-Stiglitz paper below is a classic paper on selection, but will likely be slow going for those with a weaker economics background. As a result, the slides go over the paper. Note that Rothschild and Stiglitz assume the only thing that matters in the choice of insurance is the person's risk type, but other characteristics may matter as well. In particular, if risk aversion is stronger among better risks, there could be favorable rather than adverse selection, meaning it is disproportionately the better risks who choose the more complete insurance.

There is a vast literature on selection, some of which is alluded to in the Cutler-Zeckhauser chapter assigned in Class 1, and a bit of which is assigned for this class. A bit more is assigned for Class 19. Coming back to the reading for this class, Cutler and Reber show how actions by an employer can induce selection. Zick, et al. is in my view a nice, short example of selection behavior, albeit on a small scale. Finally, I will put an excerpt on the class website from TheHill.com in March 2007 that illustrates selection behavior well. The details are as follows. In 2006 Humana, a private insurer, offered an enhanced Medicare Part D drug plan that covered brand name drugs in the donut hole. No other insurer offered such a plan (though several offered plans that covered generic drugs in the donut hole). This Humana plan was selected against and suffered substantial losses, so much so that their stock price fell about 25% from January to May (it then rose for the rest of the year). In 2007 Humana withdrew the plan from the market. Inexplicably (to me), given Humana's experience, Sierra Health Plan, another insurer (subsequently acquired by United Health Care) decided it would offer such a plan in 2007. Their experience repeated that of Humana. The excerpt on the web describes a complaint that Sierra filed with CMS in March, 2007, essentially alleging that Humana was dumping high cost enrollees on them.

The last two required readings, Beshears, et al. and Loewenstein, et al., come from behavioral economics. Behavioral economics has numerous applications in health care; this is just a sampler.

Michael Rothschild and Joseph Stiglitz, "Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information," Quarterly Journal of Economics, November 1976, 90(4): 629-650.
http://links.jstor.org.ezp1.harvard.edu/sici?sici=0033-5533%28197611%2990%3A4%3C629%3AEICIMA%3E2.0.CO%3B2-N
A classic paper on asymmetric information and the insurance market, and one of the papers for which Stiglitz won the Nobel Prize. Try to understand it on your own, but don't bog down

if you are having trouble. Maybe the slides can help.

David M. Cutler and Sarah J. Reber, "Paying for Health Insurance: The Tradeoff Between Competition and Adverse Selection," Quarterly Journal of Economics, 113(2), May 1998, pp. 433-466. http://links.jstor.org.ezp1.harvard.edu/sici?sici=0033-5533%28199805%29113%3A2%3C433%3APFHITT%3E2.0.CO%3B2-N Theory and empirical evidence on a death spiral with imperfect risk adjustment. Note that in this paper the insurance plans (or contracts in Rothschild-Stiglitz jargon) are fixed, whereas they are not fixed in the Rothschild-Stiglitz model.

Cathleen D. Zick, Charles J. Mathews, J. Scott Roberts, Robert Cook-Deegan, Robert J. Pokorski, and Robert C. Green, "Genetic Testing For Alzheimer's Disease And Its Impact On Insurance Purchasing Behavior," Health Affairs, March/April 2005, 24(2):483-90. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/24/2/483.full A nice empirical example of selection.

John Beshears, James J. Choi, David Laibson, Brigitte C. Madrian, "How Are Preferences Revealed?" Journal of Public Economics, 2008, 92:1787-94. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S0047272708000728. A short, relatively non-technical summary of the behavioral economics literature on when people seem to make "bad" choices. The characteristics of products where this occurs seem to fit both medical care and health insurance. You might think about how this relates back to the discussion in class 2 of the applicability of standard welfare economics to medical care and the usual treatment of moral hazard.

George Loewenstein, Kevin G. Volpp, and David A. Asch, "Incentives in Health: Different Prescriptions for Physicians and Patients," JAMA, April 4, 2012, 307(13):1375-6. Applications of behavioral economics principles to structuring demand and supply side incentives (we are coming to the latter). http://jama.jamanetwork.com.ezp-prod1.hul.harvard.edu/Issue.aspx?journalid=67&issueID=23309&direction=P

OPTIONAL:

> Liran Einav and Amy Finkelstein, "Selection in Insurance Markets: Theory and Empirics in Pictures," Journal of Economic Perspectives, Winter 2011, 25(1):115-38.

http://pubs.aeaweb.org.ezp-prod1.hul.harvard.edu/doi/pdfplus/10.1257/jep.25.1.115 A longer and somewhat more technical version of this paper is Liran Einav, Amy Finkelstein, and Mark R. Cullen, "Estimating Welfare in Insurance Markets Using Variation in Prices," Quarterly Journal of Economics, August 2010, 125(3):877-922. http://qje.oxfordjournals.org.ezp-prod1.hul.harvard.edu/content/125/3/877.full.pdf Primarily of theoretical interest in how to measure welfare loss from adverse selection, but the authors do apply the framework to selection in an employer group plan and finds adverse selection with small welfare consequences. I cover the main idea in the slides, but the paper is accessible with intermediate microeconomics.

Mark Pauly and Yuhui Zeng, "Adverse Selection and Challenges to Stand-Alone Prescription Drug Insurance," August 2003, NBER Working Paper 9919 (http://www.nber.org.ezp-prod1.hul.harvard.edu/chapters/c9869.pdf). Shows that drug spending is more persistent than other medical spending. In a simulation if drug spending is offered by itself, this persistence potentially results in a death spiral, but this is not necessarily the case if it is offered as part of insurance for all medical services. I will return to this paper in Class20.

Richard Frank, Jacob Glazer, and Thomas McGuire, "Measuring Adverse Selection in Managed Health Care," Journal of Health Economics, November 2000, 19(6): 829-854. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S016762960000059X A classic paper showing profits (and losses) to be made by differential coverage of selected services by plans that take full risk. Highly relevant to the discussion in class 19.

Liran Einav, Amy Finkelstein, and Paul Schrimpf, "The Welfare Cost of Asymmetric Information: Evidence from the U.K. Annuity Market," NBER Working Paper 13228, July 2007 (http://economics.sas.upenn.edu.ezp-prod1.hul.harvard.edu/~hfang/teaching/socialinsurance/readings/fudan_hsbc/Finkelstein_einav_schrimpf07(2.14).pdf) Estimates the welfare cost of asymmetric information in this market at about 2% of premiums (but about 25% of the relevant cost, which is the money at stake from varying the guarantee period), and notes that mandates to deal with the selection could either improve or decrease welfare.

Hanming Fang, Michael P. Keane, and Dan Silverman, "Sources of Advantageous Selection: Evidence from the Medigap Insurance Market," Journal of Political Economy,

April 2008, 115(2):303-350. http://web.ebscohost.com.ezp-prod1.hul.harvard.edu/ehost/pdfviewer/pdfviewer?sid=020b57fa-ada5-4aa0-9e66-1165200bef01%40sessionmgr14&vid=4&hid=21 Shows selection in this market conditioning on health status. Heterogeneous risk preferences, however, do not appear to play a large role.

Jörg Spenkuch, "Moral Hazard and Selection Among the Poor," Journal of Health Economics, January 2012, 31(1):72-85. http://ac.els-cdn.com.ezp-prod1.hul.harvard.edu/S0167629611001706/1-s2.0-S0167629611001706-main.pdf?_tid=df8bf155eefeab8cdb8c1af52bb2d609&acdnat=1339070890_6f6ba48618158ec5db192d6e48cd945c. Shows both moral hazard and on average adverse selection on observables, especially self-assessed health, in the Seguro Popular Experiment in Mexico. Interestingly there was not sorting on Hba1C, blood pressure, BMI, or cholesterol levels.

Medicare Payment Advisory Commission, "Report to the Congress: Benefit Design and Cost Sharing in Medicare Advantage Plans," December 2004. http:www.medpac.gov/documents/Dec04_CostSharing.pdf An example of a β contract in Rothschild-Stiglitz terms.

If you want more on the employer's decision on subsidies, read
Nolan Miller, "Pricing Health Benefits: A Cost-Minimization Approach," Journal of Health Economics, 2005, 24:931-49. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science?_ob=MiamiImageURL&_cid=271672&_user=209690&_pii=S0167629605000342&_check=y&_origin=search&_zone=rslt_list_item&_coverDate=2005-09-30&wchp=dGLzVlS-zSkWA&md5=e7512228c46a2257e8d4a9326f31b0a6/1-s2.0-S0167629605000342-main.pdf

Another paper on how systematic departures from rational models increase with age is Tibor Besedes, Cary Deck, Sudipta Sarangi, and Mikhael Shor, "Age Effects and Heuristics in Decision Making," Review of Economics and Statistics, May 2012, 94(2):580-95. http://www.mitpressjournals.org.ezp-prod1.hul.harvard.edu/doi/pdf/10.1162/REST_a_00174

Friedrich Breyer, M. Kate Bundorf, and Mark V. Pauly, "Health Care Spending Risk, Health Insurance, and Payment to Health Plans," in Handbook of Health Economics, volume 2, Amsterdam: North-Holland, 2012, pp. 691-762. A review of the literature, but

like many such reviews, I believe it is hard going unless you have already read the underlying papers. http://ac.els-cdn.com.ezp-prod1.hul.harvard.edu/B9780444535924000116/1-s2.0-B9780444535924000116-main.pdf?_tid=58681ad8-1314-11e2-8de0-00000aab0f26&acdnat=1349899067_9361fea94815ea2ab7bbb0f33860324b

Nathaniel Hendren, "Private Information and Insurance Rejections," NBER working paper 18282 http://www.nber.org/papers/w18282.pdf?new_window=1. Clarifies the intuition in the R-S model that trade may not take place at any price if private information sufficiently dominates.

CLASS 11 – THE ACA, HEALTH REFORM, AND INSURANCE MARKET(S), PART 1 (March 6)

The ACA has ten titles, but two of its key parts are:

i) A mandate that individuals have a minimally adequate insurance policy, as defined in the law, or pay a financial penalty, along with income-related subsidies for those without employer provided insurance; and

ii) Reforms in the market for individual and non-self-insured employer plans. The reforms include prohibition of pre-existing condition clauses (insurers must cover all medical conditions from the effective date of coverage), guaranteed issue (insurers must cover all applicants), and guaranteed renewal (anyone paying the premium can renew).

These two features have dramatically changed the individual and small group insurance markets. A description of the ACA's reforms in these markets is in:

John E. McDonough, Inside National Health Reform, Berkeley, University of California Press, pp. 109-139. McDonough's chapter is mainly descriptive, and is written from the point of view of a Democratic Senate staffer who was a key participant in the legislative process that led to the ACA. To promote these reforms, then Speaker Pelosi labeled insurers "immoral villains." Do you agree with her? Why or why not? (You might note McDonough's discussion of the politics of this issue on page 78 of his book.)

The slides go into some detail on the various insurance submarkets. As the last class brought out, selection is most acute in the individual and small group markets. Large employers usually self-insure and even if they do not, they tend to get a reasonably representative distribution of risks. Because of smaller numbers, small firms tend to have greater variance in their mix of risks and are more vulnerable to selection.

The Uninsured

At this point prior the academic literature on the uninsured is obsolete. We certainly still have uninsured, but they are now often non-citizens, persons who are eligible for but have not taken up Medicaid, persons under 100% of the Federal Poverty Level in states that have not expanded Medicaid, or persons not complying with the mandate.

The Individual and Small Group Market

This is the part of the insurance market that (in my view) prior to the ACA functioned least well, primarily because of reasons stemming from selection and for that matter probably will remain the part of the market that functions least well. The ACA contains numerous reforms to this market, including a public exchange that is initially limited to persons in the individual and small group markets who are not covered by employer-provided insurance. To a degree that was not anticipated by the framers of the ACA, however, private exchanges are also being established, and some employers are using that device to change their insurance arrangements to a defined contribution plan. To keep the amount of required reading down and because the existing literature on the individual and small group market is out of date, nothing is assigned here, but the Baicker and Dow article below, written before the ACA, provides an economic analysis of this market.

OPTIONAL:

Katherine Baicker and William H. Dow, "Risk Selection and Risk Adjustment: Improving Insurance in the Individual and Small Group Markets," Inquiry, Summer 2009, 46(2):215-28. http://www.inquiryjournalonline.org.ezp-prod1.hul.harvard.edu/inqronline/?request=get-document&issn=0046-9580&volume=046&issue=02&page=0215 If you read this paper, don't spend much time on the "Current Policy Responses" section; what was "current" when they wrote this in 2009 is not so current now.

J. Michael McWilliams, Ellen Meara, Alan M. Zaslavsky, and John Z. Ayanian, "Use of Health Services by Previously Uninsured Medicare Beneficiaries," New England Journal of Medicine, July 12, 2007, 357(2):143-53. http://globalag.igc.org/health/us/2007/useofhealthservices.pdf A followup to their study on the class 4 Optional list. This study shows that those with hypertension, stroke, diabetes, and heart disease who were uninsured before age 65 had a larger increase in physician and hospital use after age 65 than those who were insured, suggesting there may be downstream cost offsets (and potentially improved outcomes) from covering persons before age 65.

Jonathan Gruber and Kosali Simon, "Crowd-out 10 Years Later: Have Recent Public Insurance Expansions Crowded Out Private Health Insurance?" Journal of Health Economics, March 2008, 27(2):201-17. http://hogwarts.spia.uga.edu/~afertig/policy1/SimonGruber2008.pdf

Randall D. Cebul, James B. Rebitzer, Lowell J. Taylor, and Mark E. Votruba, "Unhealthy Insurance Markets: Search Frictions and the Cost and Quality of Health Insurance," American Economic Review, August 2011, 101(5):1842-71. http://pubs.aeaweb.org.ezp-prod1.hul.harvard.edu/doi/pdfplus/10.1257/aer.101.5.1842 A paper on the extent of market power in the insurance industry that looks to the public option as market perfecting. They focus on the issue of the insurer-consumer transaction, however, and do not deal with how a public insurer would contract with providers, an issue we are coming to in classes 16-20.

The 2006 Massachusetts legislation was a concrete step toward expanded insurance coverage and was the model for the ACA. The following exchange should bring you up to speed on Massachusetts (although some of the details had to change in 2014 to conform to the ACA).

Douglas Holtz-Eakin and Jonathan Gruber, "What Can Massachusetts Teach Us About National Health Insurance Reform?" Journal of Policy Analysis and Management, Winter 2011, 30(1):177-95. http://onlinelibrary.wiley.com.ezp-prod1.hul.harvard.edu/doi/10.1002/pam.20555/pdf I suggest starting with the Gruber essay rather than Holtz-Eakin's, because Gruber lays out the anatomy of the Massachusetts reform. Holtz-Eakin, a former CBO Director and Republican health analyst, focuses on the difficulties of getting cost control. Massachusetts deliberately started with an expand-

insurance-first-and-worry-about-cost-second strategy (see the Kingsdale Optional reading). Gruber, who advised then Governor Romney during the formative period of the Massachusetts reform and subsequently advised the Obama administration about the ACA and sits on the Connector board in Massachusetts, focuses on the expansion of coverage/access. Do you think this debate over cost control foreshadows future debate on the ACA? Note that Massachusetts has a substantial federal subsidy, which of course is not an option for financing the ACA unless one is prepared to deficit finance and raise the debt/GDP ratio (see class 1).

Massachusetts exempts about 1% of its population from the mandate to have health insurance on the grounds that insurance is not affordable for them. How should one think about affordability and exemptions? That was certainly an issue in the federal debate and is the subject of the next reading; its author was the Assistant Secretary for Planning and Evaluation in DHHS from 2010-2012. Given the pressure on the federal budget, the debate over subsidy levels and who can afford what is likely to continue.

Sherry A. Glied, "Mandates and the Affordability of Health Care," Inquiry, Summer 2009, 46(2):203-14. http://www.inquiryjournalonline.org.ezp-prod1.hul.harvard.edu/doi/pdf/10.5034/inquiryjrnl_46.02.203 Glied takes up the issue of what is affordable and how large subsidies need to be. Included in this issue is the issue of exemptions from a mandate. The US also subsidizes food (e.g., food stamps, WIC) and housing (e.g., vouchers). Like health care, there are also safety net providers for food (soup kitchens) and housing (homeless shelters). How does health care differ from food and housing? What problems do those differences that create?

Glied raises the issue of how much inequality in health care the US is willing to tolerate. Solidarity is a frequently used term in the EU; it is less in evidence in the US literature. Think about that in the context of this reading.

Thomas H. Lee and Ezekiel Emanuel, "Tier 4 Drugs and the Fraying of the Social Compact," New England Journal of Medicine, July 24, 2008, 359(4), pp. 333-5. http://content.nejm.org.ezp-prod1.hul.harvard.edu/cgi/reprint/359/4/333.pdf. We will come to tiered drugs in class 20 (though Lee and Emanuel explain the meaning), but the authors' general thrust leads to a somewhat dark view of the possibilities for reducing differences by income group in the US.

OPTIONAL:

Jon Kingsdale, "Implementing Health Care Reform in Massachusetts: Strategic Lessons Learned," Health Affairs, published online 28 May 2009. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/28/4/w588.short Why both Massachusetts and the Obama Administration started with an expand-insurance-first strategy and implicitly why cost control is so hard. In July 2012 Massachusetts passed legislation aimed at reducing the rate of cost increase, but in my view the enforcement tools are weak reflecting the political difficulty of cost control.

Robert Steinbrook, "Controlling Health Care Costs in Massachusetts With a Global Spending Target," JAMA, September 26, 2012, 308(12):1215-6. A short summary of the July 2012 legislation. http://jama.jamanetwork.com.ezp-prod1.hul.harvard.edu/article.aspx?articleid=1352960. If you want more on Massachusetts, see "Summary of Chapter 224 of The Acts of 2012," http://bluecrossmafoundation.org/Policy-and-Research/Reports-By-Topic/Health-Care-Costs-and-Affordability/~/media/Files/Publications/Policy%20Publications/Chapter%20224%20summary.pdf
and also "Chapter 224 of The Acts of 2012: Implications for MassHealth," MassHealth is Medicaid in Massachusetts. http://bluecrossmafoundation.org/Policy-and-Research/Reports-By-Topic/Massachusetts-Medicaid/~/media/Files/Publications/Policy%20Publications/Chapter%20224%20Implications%20for%20MassHealth%20summary.pdf.

The Tax Treatment of Employer Paid Premiums

The tax treatment of premiums is a long-standing policy issue, one that surfaced in a major way in the debate over the ACA with its "Cadillac tax" of 40% on health insurance premiums that is to take effect in 2018. The current exclusion of employer-paid premiums from taxable income, arguably the major spur to the development of the employment-based insurance system in the US, is the largest "tax expenditure" in the US tax code. The slides cover some material, but I have not required any reading on this subject, partly because I haven't seen much that is new. There are two papers in the supplementary list. The Bowles-Simpson Deficit Reduction Commission recommended capping the exclusion at the 75th percentile of premiums in 2014 and phasing it out by 2038. What effect would phasing it out

have? It also recommended reducing the 40 percent "Cadillac" tax rate to 12 percent. If you want to see their proposal, you can find it at http://www.fiscalcommission.gov/sites/fiscalcommission.gov/files/documents/TheMomentofTruth12_1_2010.pdf, page 31, but that is not required.

TESTIMONY 1 ("CLASSES" 12 and 13; March 11 and 13)

CLASS 14 (March 25) THE ACA, HEALTH REFORM, AND INSURANCE MARKETS, PART 2: MINIMUM LOSS RATIO REGULATION AND ADMINISTRATIVE COST

Minimum Loss Ratio Regulation

The ACA put in place Minimum Loss Ratios (MLR), which are 80 percent for individual and small group insurance and 85 percent for large group insurance, meaning insurers must pay out at least that percentage in benefits or give policyholders refunds. You should think about why this provision was in the bill and whether you agree with it. The ACA also contained a provision for the Secretary to review rates, although she has no enforcement powers; those remain at the state level. The first reading gives you some background on premiums. You can see more on the MLR in the Optional reading.

American Academy of Actuaries, "Premium Setting in the Individual Market," web publication available at http://www.actuary.org/pdf/health/premiums_mar10.pdf

The following paper by Robinson is also relevant to the MLR issue and raises a number of points about the relationship between measures of accounting cost and economic cost (MLR's are based on accounting cost). This relationship is important for you to understand both because the issues involved surface in other contexts and because of its relevance to the argument that there is a great deal of administrative waste in the American health care financing system and the proposals to deal with that by limiting insurers' administrative cost, one motivation for the MLR provisions. Similar accounting issues also arise around the profitability of pharmaceutical companies, especially the allocation of joint costs to product lines (i.e., different drugs in the case of pharma); we touch on this context in class 20. The slides also take up this issue.

James C. Robinson, "Use and Abuse of the Medical Loss Ratio to Measure Health Plan Performance," Health Affairs, 16(4), July/August 1997, pp. 176-187.

http://content.healthaffairs.org/cgi/reprint/16/4/176
The MLR is often taken as a measure of administrative costs (the higher the loss ratio, the less the administrative costs). Robinson gives several reasons why the loss ratios of insurance companies and health plans doesn't provide useful information for policy (though investors take them seriously as a measure of the "quality" of a company's earnings), and hence why policy proposals to regulate that rate do not seem desirable. Why do we not see such regulations in other industries?

OPTIONAL:

> The MLR language in the ACA seemed motivated by a view that insurer profits are excessive. Insurance company profit margins, however, are not abnormal among American industries. Nor are they a large portion of total health care costs. See Uwe E. Reinhardt, "The Baucus Plan: A Winner's Curse for Insurance Companies," http://economix.blogs.nytimes.com/2009/09/18/the-baucus-plan-a-winners-curse-for-insurance-companies/. If you want to pursue this topic further, see Reinhardt's subsequent post, "How Much Money Do Insurance Companies Make? A Primer," http://economix.blogs.nytimes.com/2009/09/25/how-much-money-do-insurance-companies-make-a-primer/. His post "What Portion of Premiums Should Insurers Pay Out in Benefits?" has a more positive view of minimum loss ratio regulation than the slides do, although in my view the post is more a comment on the failings of the individual and small group markets. http://economix.blogs.nytimes.com/2009/10/02/what-portion-of-premiums-should-insurers-pay-out-in-benefits/.
>
> American Academy of Actuaries, "Minimum Loss Ratios," web publication available at http://www.actuary.org/pdf/health/loss_feb10.pdf. The issues mentioned in this brief, of course, have now been settled by regulation, although they may at some point be reconsidered.

Administrative Costs and Fraud

Administrative costs are part of the debate over the desirability of a single-payer system, and the next readings deal with administrative cost in the US system. After reading these papers, ask yourself: What is the question at issue? Is it the right question? If not, what is the right question and do these papers help you get the answer to that question?

Steffie Woolhandler, Terry Campbell, and David U. Himmelstein, "Costs of Health Care Administration in the United States and Canada," New England Journal of Medicine, 349(8), August 21, 2003, pp. 768-775. http://content.nejm.org.ezp1.harvard.edu/cgi/reprint/349/8/768.pdf. A frequently cited paper by single payer advocates, prominent among whom are Woolhandler and Himmelstein. Shows higher administrative costs in the US system than in the Canadian and argues that the difference can cover the medical costs of the uninsured.

Henry J. Aaron, "The Costs of Health Care Administration in the United States and Canada," New England Journal of Medicine, 349(8), August 21, 2003, pp. 801-803. http://content.nejm.org.ezp1.harvard.edu/cgi/reprint/349/8/801.pdf Argues that there are methodological issues with Woolhandler, et al.'s conclusion of higher administrative costs. What are these methodological issues? How do you come out? How would you treat taxes that for-profit insurer's pay for this purpose? (The slides note this was an issue with the ACO's MLR regulations.)

Robert A. Book, "Medicare Administrative Costs Are Higher, Not Lower, Than for Private Insurance," http://www.heritage.org/research/reports/2009/06/medicare-administrative-costs-are-higher-not-lower-than-for-private-insurance. A contrary view to the argument of many single payer advocates that Medicare has lower administrative cost.

Dante Morra, Sean Nicholson, Wendy Levinson, David N. Gans, Terry Hammons, and Lawrence P. Casalino, "US Physician Practices Versus Canadians: Spending Nearly Four Times As Much Money Interacting With Payers," Health Affairs, August 2011, 30(8):1443-50. http://xa.yimg.com/kq/groups/19160869/272862993/name/US-+Canada.pdf Contrast their estimate with Woolhandler, et al.'s.

William C. Hsiao, "State-Based Single-Payer Health Care — A Solution for the United States?" New England Journal of Medicine, March 31, 2011, 364(13):1188-90. http://sphweb.sph.harvard.edu/health-care-financing/files/hsiao_2011_-_state-based_single_payer.pdf Focus on Hsiao's estimate of administrative saving from fraud under a single payer. To understand where his estimate comes from, however, you have to read http://www.leg.state.vt.us/jfo/healthcare/FINAL%20REPORT%20Hsiao%20Final%20Report%20-%2017%20February%202011_3.pdf pp. 46-48. What would you say about his estimate of 5% savings from less fraud? We will take that up in class. In addition to his estimates of

savings from less fraud, Hsiao also estimates savings in administrative cost at insurers, hospitals, and physicians from Vermont's moving to a single payer system. Pp. 34-46 of the final report shows the derivation of savings in those domains. The estimate relies on several studies, including a forerunner of the Morra, et al. paper (the forerunner is Casalino, et al. in the Optional reading), so since we will discuss Morra, et al., anyway, and to keep the reading down, pp. 34-46 are Optional, though I am happy to take up Hsiao's estimates of administrative cost savings at insurers and providers if you are interested.

OPTIONAL:

> Lawrence Casalino, Sean Nicholson, David N. Gans, Terry Hammons, Dante Morra, Theodore Karrison, and Wendy Levinson, "What Does It Cost Physician Practices to Interact with Health Insurance Plans?" Health Affairs Web Exclusive, May 14, 2009, w533–w543.http://isites.harvard.edu/fs/docs/icb.topic849365.files/Casalino%20et%20al%202009%20Cost%20of%20MD%20Hosp%20Interaction.pdf An earlier paper based on the same survey that Morra, et al. (above) use with a slightly different number for the cost to physician practices from interacting with health plans.
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> Steffie Woolhandler and David U. Himmelstein, "Costs of Care and Administration at For-Profit and Other Hospitals in the United States, New England Journal of Medicine 336(11), March 13, 1997, pp. 769-774. http://www.medicalreformgroup.ca/Woolhandler.cost.us.pdf Another, earlier paper by these authors arguing that administrative costs are high in the US system.
>
> Stuart H. Altman and David Shactman, "Should We Worry About Hospitals' High Administrative Costs?, New England Journal of Medicine, 336(11), March 13, 1997, pp. 798-799. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/nejm199703133361111 A response to Woolhandler and Himmelstein: Not to worry about the high administrative costs.
>
> Also note the Cutler and Ly paper in the Optional reading for Class 1.

Antitrust (Competition Policy in EU nomenclature)

Although the 2009-2010 debate on the ACA emphasized insurer concentration, in my view is the concentration on the provider side is a larger problem.

United States of American and the State of Michigan vs. Blue Cross Blue Shield of Michigan, which is posted on the course website. Read the first four pages of the complaint as an example of market power in the insurance industry.

Bob Kocher and Ezekiel J. Emanuel, "Overcoming the Pricing Power of Hospitals," JAMA, September 26, 2012, 308(12):1213-4. Suggests three steps to counter hospital market power. http://jama.jamanetwork.com.ezp-prod1.hul.harvard.edu/article.aspx?articleid=1362033

OPTIONAL:

Because of the technical nature of antitrust, I have not included any additional required reading, but it is important. Recall that the IOM report on geographic variation in commercial spending (class 5) showed that most of the variation was attributable to differences in provider markups. Although the IOM report didn't show it, these varying markups are surely related to varying degrees of market power.

For those of you who just want something brief on this topic, see the following two papers:

Martin Gaynor and Robert Town, "The Impact of Hospital Consolidation – Update," July 2012, http://www.rwjf.org/files/research/5973.74582.synthesisprojectupdate.hospitalconsolidation.pdf.

Leemore Dafny, "Hospital Industry Consolidation — Still More to Come?" New England Journal of Medicine. On line December 12, 2013, http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/pdf/10.1056/NEJMp1313948 Some details on the difficulty of enforcing antitrust laws in the hospital sector.

The Attorney General of Massachusetts has issued two reports on provider concentration in Massachusetts and its relationship to price. http://www.mass.gov/ago/docs/healthcare/2011-hcctd-full.pdf http://www.mass.gov/ago/docs/healthcare/final-report-w-cover-appendices-glossary.pdf

And for those of you who want to go into issues of provider and insurer concentration and have some background in the economics of industrial organization, the following is an excellent chapter in the 2011 Handbook of Health Economics. But this chapter, as you will discover if you

look at the Handbook, is extremely long.

Martin Gaynor and Robert J. Town, "Competition in Health Care Markets," and David Dranove, "Health Care Markets, Regulators, and Certifiers," both in the Handbook of Health Economics, vol. 2, eds. Thomas G. McGuire, Mark V. Pauly, and Pedro Pita Barros; Amsterdam: Elsevier, 2012. http://ac.els-cdn.com.ezp-prod1.hul.harvard.edu/B9780444535924000098/1-s2.0-B9780444535924000098-main.pdf?_tid=e4e3f5e6-162e-11e2-91a0-00000aacb360&acdnat=1350240324_0f2d8e33257812c7786ad43b738b57c6

Martin Gaynor, "Health Care Industry Concentration: Testimony before the House Ways and Means Committee, September 2010. http://waysandmeans.house.gov/UploadedFiles/Gaynor_Testimony_9-9-11_Final.pdf An abridged version of his Handbook chapter.

Paul B. Ginsburg, "Wide Variation in Hospital and Physician Payment Rates Evidence of Provider Market Power," Center for Health System Change, Research Brief 16, November 2010. http://hschange.org/CONTENT/1162/1162.pdf A short descriptive paper.

Leemore Dafny, "Estimation and Identification of Merger Effects: An Application to Hospital Mergers," Journal of Law and Economics, August 2009, 52(3):523-50. Shows that competitor hospitals in areas where two hospitals merge can raise prices because of greater market concentration.

Glenn A. Melnick, Yu-Chu Shen, and Vivian Yaling Wu, "The Increased Concentration of Health Plan Markets Can Benefit Consumers Through Lower Hospital Prices," Health Affairs, September 2011, 30(9):1728-33. Finds 64 percent of hospitals (revenue weighted) operate in health plan markets that are not concentrated (HHI $\leq$ 1800) and only 7 percent operate in markets that are (HHI > 3200). Also finds hospital prices in the most insurer concentrated markets are 12 percent lower than in the most insurer competitive markets. Emphasizes reducing hospital concentration.

David M. Cutler, Mark McClellan, and Joseph P. Newhouse "How Does Managed Care Do It?" RAND Journal of Economics, 31:3, August 2000, pp. 526-48. http://www.jstor.org.ezp-prod1.hul.harvard.edu/stable/10.2307/2600999 Shows that the main effect of managed care

for heart attack patients in Massachusetts is on unit prices paid to hospitals and physicians.

Carol Propper and Neil Söderlund, "Competition in the NHS Internal Market: An Overview of Its Effects on Hospital Prices and Costs," Health Economics, May 1998, 7, pp. 187-97. http://onlinelibrary.wiley.com.ezp-prod1.hul.harvard.edu/doi/10.1002/(SICI)1099-1050(199805)7:3%3C187::AID-HEC349%3E3.0.CO;2-F/pdf Summarizes a small number of studies of the effects of attempting to introduce a modicum of price competition into the British National Health Service. My take is that effects of modest interventions are modest.

Daniel P. Kessler and Mark B. McClellan, "Is Hospital Competition Socially Wasteful?," Quarterly Journal of Economics, May 2000, 115(2): 577-616. http://web.ebscohost.com.ezp-prod1.hul.harvard.edu/ehost/pdfviewer/pdfviewer?sid=97d812e0-0350-4c37-8e8e-3c9fef0a7eda%40sessionmgr4&vid=4&hid=21 Defines a novel measure of competition among hospitals and shows that more competition is welfare improving, contrary to an earlier literature on the medical arms race, which postulated that competition led to excess cost without corresponding benefits to quality.

A related issue, suggested by Kocher and Emanuel, is whether there should be a mandate for price transparency to consumers. Although frequently advocated (and relative to many health policy issues, not strongly partisan), the evidence is on the whole not terribly supportive of its efficacy. If you are interested in this issue, here are two short papers to get you started:

Anna D. Sinaiko and Meredith B. Rosenthal, "Increased Price Transparency in Health Care – Challenges and Potential Effects," New England Journal of Medicine, March 10, 2011, 364(10):891-4. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1100041

David Cutler and Leemore Dafny, "Designing Transparency Systems for Medical Care Prices," New England Journal of Medicine, March 10, 2011, 364(10):894-5. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1100540

CLASS 15 –DELIVERY SYSTEM REFORM AND MANAGED CARE (March 27)

The organization of the traditional American delivery system was predominantly independent physicians, practicing in solo practice or small groups, and affiliated with one or more hospitals. The physicians operated largely autonomously, essentially ordering for their commercially and Medicare insured patients any covered service they thought was likely to benefit their patients. Moreover, the physicians often did not co-ordinate with each other (class 6), and seeking preventive care was largely left to an individual patient's initiative. Hospitals recognized that physicians brought patients, and therefore generally catered to what physicians wanted, especially those physicians in more lucrative specialties (classes 17 and 22). Financing, that is insurance, and medical care delivery were two distinct industries with little integration. Insurers were largely passive, essentially reimbursing services that a physician ordered as long as the insurance policy covered them. Although some of you may think this description is just history and irrelevant to the present day, there are still parts of the US, especially in smaller towns and rural areas, where this traditional organization is dominant. Moreover, parts of this description are applicable to delivery systems of other countries, including the Canadian system, where public insurance functions largely as a passive reimburser of services and there are numerous small scale physician practices.

Managed care tries to integrate, at least partially, insurance and delivery of care and in so doing affects the quantity and quality of services relative to a passive indemnity insurer. In a favorable interpretation care management would reduce moral hazard (see slides), but whether its effect on quality is positive or negative is an empirical question. Supporters think the effect is positive; many single-payer advocates, who in many cases seem to have a traditional Medicare-for-all scheme in mind, think it is negative. Many physicians are also negative, feeling that it challenges their professional autonomy, though that is beginning to fade somewhat as managed care has become more established and more sophisticated in how it operates. Although managed care has evolved in some settings into a semi-cooperative relationship between insurers and physicians, bargaining between physicians and managed care plans over rates/discounts in a fee-for-service context is zero sum.

Empirically, efforts to ascertain how managed care affects quality face many methodological difficulties, starting with the current dominance of managed care other than in traditional Medicare (by traditional Medicare I mean Parts A and B), which makes it essentially impossible to find a comparison group among the under 65. More generally, the effects of managed care presumably depend upon the particular techniques used to manage care or affect utilization. Those techniques have changed over time, in particular command-and-control techniques have diminished in their intensity, and now tend to be less intrusive at

the point of service. For a review of the older literature, see the Glied chapter in the Optional reading.

Outside the US many countries have incentives to "manage" care and to deal with moral hazard, though the arrangements are not generally termed managed care. For example, certain drugs may not be on the formulary, or the MD may ration because certain facilities are not available or are fully booked. Much of the American quality improvement literature (e.g., the IOM Quality Chasm book, class 6) believes there must be an organized system of care to improve quality. Is an organized system possible in the US context without "managed care" and/or without medical providers taking at least some financial risk? When that happened in the 1990s, there was a backlash with legislatures' introducing "Patient Protection Acts," the intent of many of which was to gut managed care and preserve the traditional delivery system. The McDonough reading assigned for Class 11 has a flavor of that. His discussion on pages 29 and 30 notes that many of the patient protections that failed legislatively in the 1990's are part of Title 1 of the ACA. Indeed, the legislation initially passed by the House and Senate in 2009 was entitled the *Patient Protection* and Affordable Care Act, my italics.) My judgment at this point is that the Title 1 provisions around approvals, coverage denials, and appeals have had little real effect either way, but I have not seen any systematic data.

Managed care was a small part of the US health care delivery system for many decades, but as noted above it is now dominant outside traditional Medicare. A potentially important and more recent change in the US delivery system is an increasing number of physicians being employed rather than self-employed (class 18). We will see one reason for this in Class 17.

The following two readings compare use and quality of care in "unmanaged" Traditional Medicare (Parts A and B) with "Managed Medicare" (Part C). On the whole, Part C comes out looking relatively good, although the number of comparisons one can make are limited.

Bruce Landon, Alan M. Zaslavsky, Robert Saunders, L. Gregory Pawlson, Joseph P. Newhouse, and John Z. Ayanian, "Analysis Of Medicare Advantage HMOs Compared With Traditional Medicare Shows Lower Use Of Many Services, 2003-9," Health Affairs, December 2012, 31(12), 2609-17. Shows some benefits of integration in Medicare Advantage vs traditional Medicare. http://content.healthaffairs.org.ezp-

prod1.hul.harvard.edu/content/31/12/2609.full.pdf+html

John Z. Ayanian, Bruce E. Landon, Alan M. Zaslavsky, Robert Saunders, L. Gregory Pawlson, and Joseph P. Newhouse, "Quality of Care in Medicare Advantage and Traditional Medicare," Health Affairs, July 2013, 32(7):1228-35. Like the Landon, et al. study, Medicare Advantage on the whole looks as good or better than traditional Medicare, although the ability to compare is perhaps surprisingly limited to a few dimensions.
http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/32/7/1228.full.pdf+html

Another recent change is a move toward hospitals and physicians taking financial risk; i.e., taking capitation or partial capitation. This obviously changes provider financial incentives markedly, in particular the incentives to integrate and coordinate care by adding care managers, disease management, and other services that are (by common consensus) underprovided in the fee-for-service system greatly increase. Likewise, some services that are highly profitable in the fee-for-service system may be reduced. These incentives and their effects come up in this class with respect to Accountable Care Organizations and also in class 19 when we deal with Part C of Medicare, the Medicare Advantage program.

OPTIONAL:

Ateev Mehrotra, Arnold M. Epstein, and Meredith Rosenthal, "Do Integrated Medical Groups Provide Higher-Quality Medical Care than Individual Practice Associations," Annals of Internal Medicine, December 5, 2006, 145(11):826-33. The authors' answer is yes.

Accountable Care Organizations

Provider entities that take risk have various names, but the ACA terms them Accountable Care Organizations (ACO's) and that name is now generally used. Indeed, the ACA has brought into being groups that are reimbursed at traditional Medicare rates and in addition share in deviations from an initial target that is an estimate of spending if instead the group were reimbursed by traditional Medicare and trended forward by spending growth in national traditional Medicare. The group shares savings if Medicare spending is kept below the target and in a few cases shares a portion of any spending above the target. Most programs are Shared Savings programs, which are a regular part of Medicare; there were around 250 organizations taking part, including 13 in eastern Massachusetts. There are also now 23 Pioneer ACO's (of an original 32). There are differences between the Pioneer

program and the Shared Savings program, but those differences are not important for the purposes of the class.

Governance of provider organizations that take risk is in my view a large issue, although for now the vast majority of these organizations are only taking upside risk, i.e., sharing in savings but not in losses. I think it is still an open question to what degree the governance of ACOs will ultimately be dominated by: a) hospitals with largely employed physicians, much like a staff HMO; or b) by physician groups that will contract with hospitals and other providers such as home health agencies for services; or c) will be genuinely joint ventures among hospitals and physicians or some joint entity that sits above both (the last is essentially the Kaiser Permanente model). Regardless, a lot of hope – probably too much hope – for cost reduction is being placed in these efforts. The Berenson and Burton reading below gives you background on this effort.

ACO's are something of a halfway house between an episode-based bundled payment that includes MDs, for example, a lump sum for all the care involved in a given surgical procedure, and full-blown capitation, a fixed per member per month payment. They arose in part because some policy analysts, seeking ways to improve the quality of care and lower cost, came to the realization that not only were cost reduction and quality improvement probably not going to come about without the delivery system evolving towards more organized forms of practice and less individual physician autonomy, but that trying to move from the present system to organizations that would accept full risk (or more accurately having a large proportion of patients in such organizations) was a bridge too far in the short run. Hence, the movement for accountable care organizations (ACO's), which the ACA embraced. Successful ACO's, however, could become Medicare Advantage plans, which take full risk (Class 19), although reimbursement is currently not neutral between ACO's and Medicare Advantage plans. (I do not propose to get into the non-neutrality, but it is a non-trivial issue for the future of the Medicare program.) Importantly, the Medicare ACO demonstration does not require patients to enroll in or otherwise select an ACO; rather CMS attributes patients to an ACO. (Medicare Advantage plans, however, do require an active choice to enroll.)

Of course, it does not make much sense for an organized delivery system to invest in the infrastructure required to take financial risk and then limit its patient population only to Medicare patients. Thus, many of the systems that are participating in the Medicare demonstrations also have or plan to have commercially insured patients and in some cases Medicaid patients.

The slides cover some key design issues that CMS faced in the Medicare ACO demonstration; e.g., is attribution of patients to ACO's retrospective or prospective? It is prospective for Pioneer ACO's (based on the prior year) and retrospective (based on the current year) for Shared Savings ACO's, though the organization receives quarterly updates on who is likely to be assigned. Is assignment of patients to providers made on a majority or plurality rule? The proportion assigned is considerably higher with a plurality rule, which is how it is done.

Robert Berenson and Rachel A. Burton, "Accountable Care Organizations in Medicare and the Private Sector: A Status Update," The Urban Institute, November 2011. Outlines current policy toward ACO's from a CMS/Medicare perspective. Some of you may be interested in their box on how CMS modified its proposed rule on ACO's, when the proposed rule attracted a great deal of negative comment. The slides have a bit more here. http://www.urban.org/uploadedpdf/412438-Accountable-Care-Organizations-in-Medicare-and-the-Private-Sector.pdf.

Lawton R. Burns and Mark V. Pauly, "Accountable Care Organizations May Have Difficulty Avoiding the Failures of Integrated Delivery Networks of the 1990's," Health Affairs, November 2012, 31(11):2407-16. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/31/11/2407.full.pdf A skeptical view of the current enthusiasm for ACO's and a reminder that delivery system reform is not easy. The appendix to the online version is an excellent bibliography on several different techniques of medical management and other topics bearing on the organization of the delivery system, including care coordination, disease management, patient centered medical homes, health IT, clinical decision support, computerized order entry, electronic health records, PCP's, physician practice organizations, providers' experience with strategic and organizational change, retail clinics, specialty hospitals (class 17), ambulatory surgery centers (class 18), transitional care programs, and the triple aim. It's a lengthy list!

OPTIONAL:

The slides allude to the tension between the potential for greater efficiency and better outcomes from increased vertical and horizontal integration in health care on the one hand, and the potential for pricing abuses in the commercial market from the accumulation of market power. If you want to read more on this, the following is for you.

Katherine Baicker and Helen Levy, "Coordination versus Competition in Health Care Reform," New England Journal of Medicine, August 29, 2013, 369(9):789-91. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1306268?query=featured_home

Gary E. Bacher, Michael E. Chernew, Daniel P. Kessler, and Stephen M. Weiner, "Regulatory Neutrality Is Essential to Establishing a Level Playing Field for Accountable Care Organizations," Health Affairs, August 2013, 32(8): 1426-32. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/32/8/1426.full.pdf+html Points out need for neutrality between Medicare Advantage and Accountable Care Organizations in antitrust, solvency, governance, and reimbursement. Although some envision that successful ACO's taking partial risk would evolve into Medicare Advantage plans that take full risk, a non-neutral regulatory environment may inhibit this.

Carrie H. Colla, David E. Wennberg, Ellen Meara, Jonathan S. Skinner, Daniel Gottlieb, Valerie A. Lewis, Christopher M. Snyder, and Elliott S. Fisher, "Spending Differences Associated with the Medicare Prepaid Group Practice Demonstration," JAMA, September 12, 2012, 308(10):1015-23. http://jama.jamanetwork.com.ezp-prod1.hul.harvard.edu/data/Journals/JAMA/24854/joc120071_1015_1023.pdf. I have included this on the reading list for one methodological point. Substantively, the Prepaid Group Practice Demonstration that they discuss was a forerunner of the ACO demonstrations; although the Prepaid Group Practice Demonstration's initial results were mixed across the 10 sites (see also the Iglehart paper in the Optional reading), as one can see in the paper, the overall results were nonetheless sufficient for the Congress to authorize the Medicare ACO demonstrations in the ACA. The methodological point is that authors underestimated their standard errors. See if you can figure out why.

Paul Markovich, "A Global Budget Pilot Project Among Provider Partners and Blue Shield of California Led to Savings in the First Two Years," Health Affairs, September 2012, 31(9):1969-76. Early days, but shows promising signs.

Sara Singer and Stephen M. Shortell, "Implementing Accountable Care Organizations: Ten Potential Mistakes and How to Learn from Them," JAMA, August 17, 2011, 306(7):758-9. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/306/7/758.short Now that federal policy is promoting ACO's, some cautionary notes are being heard.

John K. Iglehart, "Assessing an ACO Prototype – Medicare's Physician Group Practice Demonstration," New England Journal of Medicine, January 20, 2011, 364(3):198-200. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1013896 Skeptics of ACO's as a cost containment device find support here. They point to the fact that half of the 10 practices in the demonstration did not demonstrate savings and that the participating organizations were those best able to carry out the management the proponents envision. On the other hand, the proponents might say these organizations were already high up the curve and could not do much better. (The target for cost comparisons is traditional Medicare beneficiaries in the same service area.)

Elliott Fisher and Stephen Shortell, "ACO's: Making Sure We Learn from Experience," http://www.commonwealthfund.org/Blog/2012/Apr/ACOs-Making-Sure-We-Learn-from-Experience.aspx?omnicid=20. A short blog posting from two early backers of ACO's (Fisher coined the term) that I think accurately describes the challenges and how little is known, despite the current enthusiasm (which the authors have done much to create).

Francois deBrantes, Meredith B. Rosenthal, and Michael Painter, "Building a Bridge from Fragmentation to Accountability – The Prometheus Payment Model," New England Journal of Medicine, September 10, 2009, 361(11):1033-6. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp0906121 Describes a current leading model for episode based payment.

Global Payment

As already noted, along with and indeed part of the movement to create Accountable Care Organizations, there is currently much discussion of moving away from fee-for-service payment to more bundled or global payment. The next three readings deal with this issue and serve as a bridge to the next several classes on reimbursement. I have put this material here rather than in class 19, which will deal with capitation in the Medicare program, because of its link to reorganization of the delivery system. The deBrantes, et al. proposal discusses why their reform is more limited in this regard. The assumption here is that physician groups can successfully manage risk. There were some spectacular failures to do so in California in the 1990s (alluded to in the Burns and Pauly article above), but the current enthusiasm does not feature much discussion of these.

My take is that at this point much if not most of the policy world has accepted that a

decentralized fee-for-service system is inefficient – or at least that any give up in quality and outcomes from greater centralization/management is worth the saving in cost - and is now trying to devise ways to reorganize the delivery system. How rapidly those who actually have to carry out this reorganization, meaning physicians and hospitals in particular, act and how successful they will be are open questions. That is, there is little doubt that ACOs or analogous entities will start, but how many will start how quickly and how many will ultimately succeed are open questions. Almost surely the reorganization that seems to be underway is likely to take many years with some failures along the way. And in the short run most of the savings are likely to accrue to providers – not purchasers. Indeed, if they don't accrue to providers, there is not likely to be much reorganization of the delivery system (since the assumption is that providers have to lead the reorganization effort and that the effort is going to require some upfront investment)! Song, et al. provide some evidence on this point from Massachusetts.

Zirui Song, Dana Gelb Safran, Bruce E. Landon, Mary Beth Landrum, Yulei He, Robert E. Mechanic, Matthew P. Day, and Michael E. Chernew, "The 'Alternative Quality Contract,' Based On A Global Budget, Lowered Medical Spending And Improved Quality," Health Affairs, August 2012, 31(8):1885-94. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/early/2012/07/09/hlthaff.2012.0327.full.pdf+html Reports on a large scale effort to shift providers from fee-for-service reimbursement to taking risk. Importantly, the effort was voluntary (why is that important?) and this paper reports results from the first two years (why is that important?). Cost reduction was modest, and was achieved primarily by shifting referrals away from high-cost providers (why is that important?). Who got these cost reductions? 10% of revenues were at stake for achievement of quality standards; quality modestly improved.

OPTIONAL:

J. Michael McWilliams, Bruce E. Landon, and Michael E. Chernew, "Changes in Health Care Spending and Quality for Medicare Beneficiaries Associated with a Commercial ACO Contract," JAMA, August 28, 2013, 310(8):829-36. http://jama.jamanetwork.com.ezp-prod1.hul.harvard.edu/article.aspx?articleid=1733718 Shows positive spillovers from the Alternative Quality Contract onto Medicare beneficiaries.

Disease Management

One claim of managed care organizations and firms selling disease management services is that active management can reduce health care costs. This claim is supported in the first paper but not the second. The third paper contains a critique of the design of the trial reported by McCall and Cromwell; I will ask you in class what you make of the difference in results between the first two studies.

David E. Wennberg, Amy Marr, Lance Lang, Stephen O'Malley, and George Bennett, "A Randomized Trial of a Telephone Care-Management Strategy," New England Journal of Medicine, September 23, 2010, 363(13):1245-55. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMsa0902321

Nancy McCall and Jerry Cromwell, "Results of the Medicare Health Support Disease-Management Pilot Program," New England Journal of Medicine, November 3, 2011, 365(18):1704-12. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMsa1011785

Michael S. Barr, Sandra M. Foote, Randall Krakauer and Patrick H. Mattingly, "Lessons For The New CMS Innovation Center From The Medicare Health Support Program," Health Affairs, July 2010, 29(7):1305-9. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/29/7/1305.short Excluding the first and last section, this is really a commentary on an earlier version of a report on the Medicare Health Support Demonstration. Does it make an effective critique?

Networks

As brought out in the slides, a principal tool of managed care is to establish networks of providers. From the managed care side, this can be viewed as acting as a prudent purchasing agent for the consumer. But consumers are not heterogeneous, and some consumers will have high valuations for out-of-network providers. The tensions created around this are implicit in the letter to Ronald Williams that I have posted on the course website. What the letter does not say - and I am guessing that the signatories did not know - was that the provider in question was seeking a 40% increase in rates. Shortly after the letter was sent, the 40% figure was negotiated downward, and the provider in question became in-network, so the issue the signatories raised became moot. Nonetheless, the tension about out-of-network providers - or for that matter providers in a non-preferred tier - is inherent in the role of the insurer as purchasing agent for a heterogeneous group. These tensions may start

to surface in the narrow network plans in the exchanges.

OPTIONAL:

James C. Robinson, "Managed Consumerism in Health Care," Health Affairs, 24(6), November/December 2005, pp. 1478-1489. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/24/6/1478.short Focus on his discussion of how health plans add value.

Medicare Payment Advisory Commission, "Report to the Congress: Improving Incentives in the Medicare Program," June 2009, chs. 2,3. www.medpac.gov/document_TOC.cfm?id=576Has discussions of accountable care organizations and of episode based payment for those who want more on these subjects.

Sherry Glied, "Managed Care," in Handbook of Health Economics; eds. Anthony J. Culyer and Joseph P. Newhouse; North-Holland, 2000. http://www.sciencedirect.com.ezp1.harvard.edu/science?_ob=PublicationURL&_tockey=%23TOC%2324609%232000%23999989999.7998%23584858%23FLP%23&_cdi=24609&_pubType=HS&_auth=y&_acct=C000014438&_version=1&_urlVersion=0&_userid=209690&md5=a27d303a142408c7e6fe06be6bdd9bca. A review of the literature as of 2001. Although the literature discussed here is a decade or more old, much of it is still relevant.

Jayasree Basu and Lee Mobley, "Do HMOs Reduce Preventable Hospital Admissions for Medicare Beneficiaries?" Medical Care Research and Review, October 2007, 64:544-67. http://mcr.sagepub.com.ezp-prod1.hul.harvard.edu/content/64/5/544.full.pdf+html

Stephen Shortell and Lawrence Casalino, "Health Care Reform Requires Accountable Care Systems," JAMA, July 2, 2008, 300(1):95-7. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/300/1/95.short Sketches five models for introducing greater organization into American medical care and is an early version of the current movement to restructure the delivery system around Accountable Care Organizations. I was a discussant of a (much) longer version of this paper at a conference. If you want, you can see my comments at http://www.fresh-thinking.org/workshops/work_070301.htm) (I was also a discussant of a paper by Harold Luft at the conference; ignore my comments on the Luft paper), but my comments are strictly optional. If you do read my comments, you will discover that I am skeptical of how rapidly ACO's can spread, though less so some four

years later, and also believe that some of them will fail with negative consequences; other approaches that are partial steps in the direction of having providers take risk are coming forward including the Patient Centered Medical Home (PCMH); see slides.

Robert Berenson, Paul B. Ginsburg, and Nicole Kemper, "Unchecked Provider Clout in California Foreshadows Challenges to Health Reform," Health Affairs, April 2010, 29(4):699-705. They raise concern about ACOs market power raising prices to private payers, and, based on what they see as the recent ineffectiveness of antitrust policy, they propose regulatory approaches such as price caps or all-payer rate setting. I view the recent experience antitrust experience as more mixed than Berenson, et al., however; e.g., the Evanston Hospital case http://www.ftc.gov/opa/2007/08/evanston.shtm and also the Michigan Blue Cross case above. (The Michigan case is not yet decided, but the facts to me look to be strongly in favor of the Justice Department.)

Jonathan C. Javitt, James Rebitzer, and Lonny Reisman, "Information Technology and Medical Missteps: Evidence from a Randomized Trial," Journal of Health Economics, May 2008, 27(3): 585-602. Showing a 6 percent savings from the use of decision support delivered electronically. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S016762960700077X

The slides refer to tiering physicians based on cost and quality. If you want to see how Aetna does this, go to http://www.aetna.com/plansandproducts/health/medical/Aexcel_Methodology_v3_2010.pdf

Howard H. Goldman, Richard G. Frank, M. Audrey Burnam, et al., "Behavioral Health Insurance Parity for Federal Employees," New England Journal of Medicine, 354(13), March 30, 2006 , pp. 1378-86. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMsa053737 Managed care meant that parity for mental health benefits did not appear to increase total costs. Contrast these results with those of the RAND HIE with respect to mental health; the HIE, of course, took place in an unmanaged setting.

Laurence C. Baker, "Association of Managed Care Market Share and Health Expenditures for Fee-for-Service Medicare Patients," JAMA, February 3, 1999, 281:432-37. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/281/5/432.short Increases in

HMO market share (Medicare and non-Medicare) are associated with lower growth of Medicare fee-for-service spending ("spillover").

Bruce E. Landon, Alan M. Zaslavsky, Shulamit L. Bernard, et al., "Comparison of Performance of Traditional Medicare vs. Medicare Managed Care," JAMA, April 14, 2004, 291(14): 1744-52. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/291/14/1744.short Results of consumer surveys (CAHPS) of Medicare enrollees show traditional Medicare enrollees rated their care higher but reported receiving fewer preventive services and had more trouble with paperwork.

Andrew Bindman, Arpita Chattopadhyay, Dennis H. Osmand, William Huen, and Peter Bacchetti, "The Impact of Medicaid Managed Care on Hospitalizations for Ambulatory Care Sensitive Conditions," Health Services Research, February 2005, 40(1): 19-37. http://onlinelibrary.wiley.com.ezp-prod1.hul.harvard.edu/doi/10.1111/j.1475-6773.2005.00340.x/full Ambulatory care sensitive conditions are those for which proper ambulatory care can reduce hospitalization and are a widely used measure of quality. Results show a 29 percent reduction in ambulatory care sensitive hospitalizations in mandatory managed care compared with traditional fee-for-service Medicaid.

Anna Aizer, Janet Currie, and Enrico Moretti, "Does Managed Care Hurt Health? Evidence from Medicaid Mothers," Review of Economics and Statistics, August 2007, 89(3):385-99. http://www.mitpressjournals.org.ezp-prod1.hul.harvard.edu/doi/pdf/10.1162/rest.89.3.385 Shows that change to Medicaid managed care in certain California counties lowered prenatal use and increased low birth weight.

Lawrence P. Casalino, "Disease Management and the Organization of Physician Practice," JAMA, January 26, 2005, 293(4): 485-488. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/293/4/485.short A short piece describing disease management and the chronic care model. I interpret these methods as modifications of traditional practice intended to improve outcomes and have grouped them with managed care. Indeed, disease management is typically implemented through an insurer or managed care company.

John K. Iglehart, "The National Committee for Quality Assurance," New England Journal of Medicine, 335, September 26, 1996, 995-999. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJM199609263351322 Describes the NCQA, a

private effort to rate the quality of health plans. You should think about the extent to which regulation of health plans should remain a private activity. This reading could also fit in the quality of care section.

George L. Jackson, Benjamin J. Powers, Ranee Chatterjee, Janet Prvu Bettger, Alex R. Kemper, Vic Hasselblad, Rowena J. Dolor, R. Julian Irvine, Brooke L. Heidenfelder, Amy S. Kendrick, Rebecca Gray, and John W. Williams Jr., "The Patient-Centered Medical Home: A Systematic Review," Annals of Internal Medicine, 158(3):169-78. A review of the rather weak evidence on patient centered medical homes.

CLASSES 16 – 21 - PAYING HEALTH PLANS AND PROVIDERS OF CARE

All but two of the remaining substantive class sessions are taken up with issues of reimbursement of health plans and health care providers and the consequences of different methods. Virtually all developed countries use some form of administered pricing or, alternatively, budgets, which have an implicit shadow price, to reimburse health care providers. The readings in this section almost all come from the American Medicare program, partly because Medicare reimbursement methods are an important policy issue in American health policy and partly because there is a lot of literature on the Medicare program.

General Background on the Medicare Administered Pricing Systems

Before moving into the specifics of the various Medicare administered price systems, it is good to digest some general material.

Medicare Payment Advisory Commission, Payment System Basics. Available on the web at http://medpac.gov/payment_basics.cfm. Links to primers on the various prospective payment systems will appear. Those you should definitely look at include the hospital acute inpatient services system, the outpatient hospital services system, the four post-acute payment systems (home health, skilled nursing facility, inpatient rehabilitation facility, long-term care hospital), the physician system, the Medicare Advantage system, and the Part D system, since those are the ones we take up. But you can put off the last three in that list for a week if you are swamped with work.

CLASSES 16 AND 17: MEDICARE PAYMENT TO INSTITUTIONAL PROVIDERS : PART A

CLASS 16 - THE INPATIENT HOSPITAL PROSPECTIVE PAYMENT SYSTEM (IPPS) (April 1)

By far the largest of the different hospital payment systems (in dollar terms) used in Medicare is the IPPS. To educate yourself about it, read the MedPAC primer entitled "Hospital acute inpatient services payment system," as per the instructions above.

In addition, there are separate Medicare reimbursement systems for the four post-acute providers - home health, skilled nursing, rehabilitation, and long-term care - and still another for hospice, which is sometimes considered a post-acute provider. The MedPAC website also has pdf's that describe these payment systems, and you should read them.

I will assume in the slides that you have read these primers. Before we get into the minutiae of Medicare's administered pricing systems, virtually all economists favor competitive pricing over administered prices. A standard method for eliciting competitive prices is bidding or auctions, but strategic behavior in auctions can undermine their function. Medicare, however, has more basic problems; as the slides explain, it is politically and substantively difficult for Medicare to exclude suppliers who are not low bidders. Beneficiaries do not want "their doctor" excluded, and in any event all or almost all doctors in certain specialties and localities would have to be included to have sufficient capacity (see class 22). Medicare, however, has finally (after nearly a decade of trying, see the material on the course website) introduced bidding for the retail side of durable medical equipment (how much should it matter where a beneficiary buys a wheelchair as long as travel distance is not excessive?). But it has done so in what seems to me to be a strange way. See Ian Ayres and Peter Crampton, "Fix Medicare's Bizarre Auction Program," New York Times, September 30, 2010 http://www.law.yale.edu/news/12307.htm. A technical (and much lengthier) description of the problem is Brian Merlob, Charles R. Plott, and Yuanjun Zhang, "The CMS Auction: Experimental Studies of a Median-Bid Procurement Auction with Nonbinding Bids," Quarterly Journal of Economics, May 2012, 127(2):793-827. This latter reading is Optional.

Now on to the Medicare payment systems.

Joseph P. Newhouse, Pricing the Priceless: A Health Care Conundrum; Cambridge: MIT Press, 2002, chapter 1. Sets out examples of the issues around administered prices. Note that the MS-DRG system that the hospital IPPS uses is, in effect, "risk adjustment" for hospital admissions where diagnoses and severity levels are the main adjusters. Since the time the book was written, the IPPS system has adopted more categories (i.e., it shifted from the DRG to the MS-DRG system); the slides cover the newer system.

Jeroen N. Strujis and Caroline A. Baan, "Integrating Care through Bundled Payments – Lessons from the Netherlands," New England Journal of Medicine, March 17, 2011, 364(11):990-1. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1011849 The slides for this class discuss the concept of power and that deciding on the appropriate power of a payment systems involves tradeoffs. Although it does not use this jargon, this short paper illustrates some of those tradeoffs, as well as raising concerns about market power from organizations capable of providing more integrated care.

OPTIONAL:

Mark Pauly, "Insurance Reimbursement," in Handbook of Health Economics, eds. Anthony J. Culyer and Joseph P. Newhouse; North-Holland, 2000. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S1574006400801699. General discussion of the issue of the supply price in health care. Related in principle to payment of all health care providers, not just hospital payment.

Paul B. Ginsburg, "Recalibrating Medicare Payments for Inpatient Care," New England Journal of Medicine, November 16, 2006, 355(20), pp. 2061-2064. http://content.nejm.org.ezp-prod1.hul.harvard.edu/cgi/reprint/355/20/2061.pdf. Covers much of the same ground as the MedPAC Payment Basics document. After more than 20 years, Medicare refined its relative payments in an effort to reduce the number of overpriced DRGs. Even though this was done on a budget neutral basis, the industry (or parts of it) successfully lobbied for a 3 year transition (a change from the initial proposed rule of no transition).

For a description of a similar system for reimbursing hospitals in England, see Department of Health, "A Simple Guide to Payment by Results, November 2012,

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/156241/PbR-Simple-Guide-FINAL.pdf.pdf

And for those who have a strong economics background with a taste for theory, a classic article on regulating prices or quantities when the regulator only has a prior distribution on the true cost function and relies on the firm to report it – essentially the conditions in Medicare - is David Baron and Roger Myerson, "Regulating a Monopolist with Unknown Costs," Econometrica, July 1982, 50(4):911-30. http://www.jstor.org.ezp-prod1.hul.harvard.edu/stable/pdfplus/1912769.pdf?acceptTC=true. Myerson shared the 2007 Nobel Prize in economics for his work on mechanism design, which is the domain of this article. The article shows that to induce the firm to truthfully report its costs, a regulator must pay it a surplus, the amount of which depends on a regulator's prior distribution about the firm's true cost function and the weight the regulator places on consumer surplus relative to producer surplus. Although the hospital's accounting costs are auditable, the cost function, which determines the economically optimal price, is not.

One of the ongoing debates in the literature is the how much, if any, hospitals obtain higher prices from private insurers if Medicare cuts its reimbursement, which is termed cost shifting. Some literature believes the markets are separable and that hospitals are maximizing in the private market so there is no cost shift. For an example see Chapin White, "Contrary to Cost Shift Theory, Lower Medicare Hospital Payment Rates for Inpatient Care Lead to Lower Private Payment Rates," Health Affairs, May 2013, 32(5):935-43. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/32/5/935.full.pdf+html. A second paper in this vein is by Chapin White and Vivian Wu, "How Do Hospitals Cope with Sustained Slow Growth in Medicare Prices?" Health Services Research, 2013, published on line at http://onlinelibrary.wiley.com.ezp-prod1.hul.harvard.edu/doi/10.1111/1475-6773.12101/pdf. Both White and White and Wu look at actual private prices, which is better than looking at the accounting margins as I did in Pricing the Priceless, I did find evidence of cost shifting. (In his sole authored paper White instruments for Medicare prices, but you have to read the appendix to really understand what he did.) On the other hand, cost functions are almost certainly not separable between Medicare and private markets (e.g., the same nurses treat both patients), so if there is any change in Medicare volume from a change in reimbursement, one would expect private prices to move in an opposite direction. There is also the argument made in Pricing the Priceless that in competitive markets hospitals have to recover their joint costs. And there is evidence for this view as well. Vivian Wu,

"Hospital Cost Shifting Revisited: New Evidence from the Balanced Budget Act of 1997," International Journal of Health Care Finance and Economics, March 2010, 10(1):61-83 http://download.springer.com.ezp-prod1.hul.harvard.edu/static/pdf/320/art%253A10.1007%252Fs10754-009-9071-5.pdf?auth66=1386690742_67a1a2e340ee6ca14a532cdb743b79f8&ext=.pdf uses the cuts in Medicare reimbursement from the 1997 Balanced Budget Act and finds that hospitals prices to private payers in urban markets, which are more competitive than rural markets, rose about $0.20 for a $1 cut in Medicare reimbursement.

Effects of the Hospital PPS on Quality of Care

OPTIONAL:

Julian Pettengill and James Vertrees, "Reliability and Validity in Hospital Case Mix Measurement," Health Care Financing Review, December 1982, pp. 101-128. Only an abstract is available online. http://ukpmc.ac.uk/abstract/MED/10309909. I will post a pdf of this paper on the course website for those who are interested. Describes how the initial DRG system was built, which is broadly similar to the method for the MS-DRG system. Provides a description of the original DRG system, but at a price in terms of more detail than you probably wanted to read.

William H. Rogers, David Draper, Katherine L. Kahn, et al., "Quality of Care Before and After Implementation of the DRG-Based Prospective Payment System: A Summary of Effects," JAMA, 264:15, Oct. 17, 1990, 1989-97. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/264/15/1989.short The major empirical evaluation on this subject. Now mostly of historical interest.

Mark McClellan, "Hospital Reimbursement Incentives: An Empirical Analysis," Journal of Economics and Management Strategy, 6:1, Spring 1997, pp. 91-128. http://onlinelibrary.wiley.com.ezp-prod1.hul.harvard.edu/doi/10.1111/j.1430-9134.1997.00091.x/pdf An effort to understand the incentives of the PPS. McClellan debunks the notion that payment is independent of utilization under the PPS.

Specialty Hospitals

One could treat the emergence of specialty hospitals in some areas of medicine such as

cardiac hospitals as either technological change or as a response to flaws in the payment system or both. Such hospitals have been highly contentious, leading to a moratorium on new construction in the Medicare Modernization Act of 2003 that was continued in the ACA. I have included one optional reading, but have left the rest to the slides. There is more material on the Bibilographic list, and I give you an example of the pushback against the ACA ban in the slides.

Specialty Hospitals

OPTIONAL:

John K. Iglehart, "The Uncertain Future of Specialty Hospitals," New England Journal of Medicine, 352(14), April 7, 2005, pp. 1405-1407.
http://content.nejm.org.ezp1.harvard.edu/cgi/reprint/352/14/1405.pdf

CLASS 17 - SELECTED ISSUES IN MANAGING AN ADMINISTERED PRICE REIMBURSEMENT SYSTEM: GEOGRAPHIC ADJUSTMENT; OUTLIERS; REIMBURSEMENT OF TEACHING HOSPITALS; REIMBURSEMENT OF POST-ACUTE CARE; TECHNOLOGICAL CHANGE (April 3)

The Medicare payment system illustrates many issues of administered price systems, as described in the Pricing the Priceless chapter that was assigned for the last class. In this class I have assigned additional reading on some of these issues, given optional reading on others, and referred you to the supplementary list for still others. Any of you proposing to write testimony on Medicare reimbursement – or reimbursement generally - would do well to read into the optional and supplementary reading and dip into relevant chapters of the March and June MedPAC reports.

**Medicare Payment Advisory Commission, "Report to the Congress: Medicare Payment Policy," March 2013, pp. 151-153.
http://www.medpac.gov/chapters/Mar13_Ch07.pdf Preliminary remarks on reimbursement to post-acute providers that are in agreement with the slides.**

Bundling or Global Payments

Moving to more aggregated or global payment and away from disaggregated fee-for-service payments is much in the current health policy buzz. The following two readings are about bundled payments.

Glenn Hackbarth, Robert Reischauer, and Anne Mutti, "Collective Accountability for Medical Care – Toward Bundled Medicare Payments," New England Journal of Medicine, July 3, 2008, 359(1):3-5. http://content.nejm.org.ezp-prod1.hul.harvard.edu/cgi/reprint/359/1/3.pdf Following a stream of academic literature that advocated bundling post-acute payments, including the MedPAC report referenced in this paper, the ACA authorized a demonstration of bundled inpatient and post-acute payments for 3 days before and 30 days after an admission for up to 8 conditions that the Secretary may choose. The demonstration has now started. The demonstration includes some models that also bundle physician services together with inpatient and post-acute services, a much larger task than simply bundling post-acute providers, though that task is also taken up by Accountable Care Organizations (and potentially Medicare Advantage plans).

Robert Mechanic and Christopher Tompkins, "Lessons Learned Preparing for Medicare Bundled Payments," New England Journal of Medicine, November 15, 2012, 367(20):1873-5. Makes points that post-acute is a large component of spending for one major disease and that bundling will pose implementation issues from randomness at smaller hospitals. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/pdf/10.1056/NEJMp1210823

John K. Iglehart, "Bundled Payment for ESRD – Including ESA's in Medicare's Dialysis Package," New England Journal of Medicine, February 17, 2011, 364(7):593-5. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1014187 Shows how critical the choice of definition of the bundle is, both for cost purposes, which is the context of much of the current debate, but also clinically, since the Medicare payment policy for End Stage Renal Disease (ESRD) – in particular the exclusion for decades of most drugs from the bundle of services Medicare paid for - arguably induced poor clinical care. Bundling introduces different incentives for poor clinical care; note CMS' efforts to monitor this. More generally, the US has for practical purposes a single-payer system for those with ESRD (those with the disease who have employment-based insurance have that insurance pay for the first 33 months of their care; after that, Medicare takes over for the remainder of the person's life.) The ESRD program also illustrates many of the problems of administered pricing.

OPTIONAL:

Neeraj Sood, Peter J. Huckfeldt, José J. Escarce, David C. Grabowski, and Joseph P. Newhouse, "Medicare's Bundled Payment Pilot for Acute and Postacute Care: Analysis and Recommendations on Where to Begin," Health Affairs, September 2011, 30(9):1708-17.http://content.healthaffairs.org/content/30/9/1708.abstract#search=%22Medicare%E2%80%99s%20Bundled%20Payment%20Pilot%20Acute%20Postacute%20Care%3A%20Analysis%20Recommendations%20Where%20Begin%22 Analyzes two issues with respect to the bundling demonstration referred to above and in the slides: which conditions to include in the demonstration and how many days after discharge the episode should end.

Richard A. Rettig, "Special Treatment – The Story of Medicare's ESRD Entitlement," New England Journal of Medicine, February 17, 2011, 364(7):596-8. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1014193 Gives the history of how ESRD came to be covered by Medicare. A few years ago coverage for ALS (Lou Gehrig's Disease) was added; those are the only diseases covered by Medicare independent of age or disability status.

Geographic Adjustment and the Wage Index

Margaret Edmonds and Frank A. Sloan, "Geographic Adjustment in Medicare Payment: Phase I: Improving Accuracy," Washington: NAP, 2011, chapter 1, pages 1-6 to 1-16 and page 1-21, chapter 2 (all). This report is copyrighted, but you can download a pdf for your personal use for free by registering at www.iom.edu. (Registering will also give you free web access to other Institute of Medicine reports.) This report covers geographic adjustment for both the IPPS and the physician payment systems (Class 18) and recommends changes. Those changes seem well justified to me on a policy basis; to date, however, the Congress has not adopted the recommendations reflecting their political sensitivity (and possibly the dysfunctionality of Congress). Quite a lot of money turns on the hospital wage index and the Geographic Practice Cost Index (GPCI), the name for the analogous geographic adjuster in the physician system; see the values on the map on page 1-10 of the report. The wage index differs across the country by more than a factor of 2, meaning a hospital in a high wage area gets much more for treating the same patient as an otherwise identical hospital in a low wage area. The wage index, however, is only applied to the labor portion of factor costs plus certain non-labor costs that are assumed to vary geographically. As a result, only around 70% of the cost is adjusted by the wage index, so the payment does not change by the full factor of 2 difference.

OPTIONAL:

Carol Propper and John van Reenen, "Can Pay Regulation Kill? Panel Data Evidence on the Effect of Labor Markets on Hospital Performance," Journal of Political Economy, April 2010 118(2):222-73. http://www.jstor.org.ezp-prod1.hul.harvard.edu/stable/10.1086/653137?ai=t6&mi=0&af=R The issue of setting wages according to varying labor market conditions is not only an issue in the US. This is a study of the UK NHS, which, like some other countries, including Canada, imposes the same nominal wage throughout the system despite cost of living differences. (London is an expensive place to live.) They find that a 10% increase in the outside wage is associated with a 7% increase in the hospital death rate, suggesting that a hospital in a high outside wage area (e.g., London) attracts lower quality workers.

Payment to Teaching Hospitals

Teaching hospitals throughout the world have higher costs than non-teaching hospitals. How to reimburse teaching hospitals has therefore been a policy concern from the outset of the PPS, since there was obviously going to be a problem if teaching and non-teaching hospitals were paid the same amount for the same observable patient characteristics. This issue is covered in Pricing the Priceless, ch. 1 and in the slides.

OPTIONAL:

Alan Benson, "Firm-Sponsored General Education and Mobility Frictions: Evidence from Hospital Sponsorship of Nursing Schools and Faculty," Journal of Health Economics, January 2013, 32(1):149-59. Uses the same model of general training vs specific training as in Pricing the Priceless and the slides and applies it to hospital provided nursing education. Although nursing education is general, he applies an earlier hypothesis of Acemoglu and Pischke to argue that it may be analytically more similar to specific because of low geographic mobility of nurses.

Technological Change

There are many aspects to the topic of managing technological change in an administered price system that I do not cover in the slides. One of the most important is the

overarching issue that the amount of technological change we observe is almost certainly related to the incentives of the financing system. On this point see the Weisbrod paper on the supplemental reading list. One issue in dealing with technological change in the context of administered pricing is deciding what change or innovation justifies its cost (assuming the change is cost increasing) and is therefore worth paying for. This is partly a coverage decision and partly a decision on how much to pay conditional on a decision to cover. The issue of whether the benefits exceed the costs is in the realm of willingness-to-pay studies, as well as studies employing QALYs, DALYs, etc. A complication is that something that is actually used to treat patients may be (and usually is) worth it for some patients and not for others, so a decision to cover likely means some receive the service who don't benefit (sometimes who will benefit is unknown and so this can generate knowledge about who benefits; see class 7 on CER) and a decision not to cover likely means some who will benefit won't get the service.

On the reimbursement front, it should be clear that technological change should generally lead to some payment adjustment, since the existing reimbursement system is calibrated for the earlier technology. There are two related issues: how much to update budgets in administered price systems in order to pay for cost-increasing change; and how to update reimbursement when costs fall as something new scales up and learning-by-doing takes place. More concretely, these issues all have to do with how to incorporate new procedures, drugs, and devices into administered price systems, and the following reading deals with that issue.

Medicare Payment Advisory Commission, Report to the Congress: Medicare Payment Policy, March 2001, chapter 3 (http://www.medpac.gov/publications/congressional_reports/Mar01%20Ch3.pdf). How to incorporate new technology is an issue that plagues all administered price systems. In the Balanced Budget Reform Act (BBRA) the Congress authorized pass through payments for certain drugs, biologicals, and devices. Such payments potentially alter the nature of competition in the market for these products and give certain companies incentives to mark up prices.

OPTIONAL:

> If you want a short piece on QALYs that analyzes some of their shortcomings for judging health benefit as well as the opposition to using them, see Peter J. Neumann, "What Next for QALYs?", JAMA, May 4, 2011, 305(17):1806-7. http://jama.ama-assn.org.ezp-

prod1.hul.harvard.edu/content/305/17/1806.short

Outpatient Facility Payment

Outpatient payment is another dilemma in Medicare payment policy, but it is covered in the slides, and I have not assigned any further readings. Outpatient department payment needs to be considered in conjunction with physician payment because of substitution possibilities between providing services in outpatient departments and physician offices. There is also a MedPAC tutorial on the outpatient hospital payment system.

OTHER OPTIONAL READING ON THESE TOPICS:

Postacute Care

Melinda Beeuwkes Buntin, Carrie Hoverman Colla, and Jose J. Escarce, "Effects of Payment Changes on Trends in Postacute Care," Health Services Research, August 2009, 44(4): 1188-1210. http://onlinelibrary.wiley.com.ezp-prod1.hul.harvard.edu/doi/10.1111/j.1475-6773.2009.00968.x/full The shift to a new (prospective rather than cost up to a limit) payment system shifted patients among postacute care sites. Shows substitutability of the sites.

Severity or Within-DRG Heterogeneity, Outliers

Emmett B. Keeler, Grace M. Carter, and Sally Trude, "Insurance Aspects of DRG Outlier Payments," Journal of Health Economics, September 1988, pp. 193-214. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/0167629688900252 This paper led to a substantial change in how Medicare paid for outliers in the early 1990s. It is an excellent example of how analysis can change policy.

Technological Change

Nancy M. Kane and Paul D. Manoukian, "The Effect of the Medicare Prospective Payment System on the Adoption of New Technology -- The Case of Cochlear Implants," New England Journal of Medicine, 321:20, November 16, 1989, pp. 1378-1383. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJM198911163212006

An instructive case study from the early days of the PPS, showing how administered pricing can have an important effect on technological change.

Daron Acemoglu and Amy Finkelstein, "Input and Technology Choices in Regulated Industries: Evidence from the Health Care Sector," Journal of Political Economy, October 2008, 116(5):837-80. http://web.ebscohost.com.ezp-prod1.hul.harvard.edu/ehost/pdfviewer/pdfviewer?sid=81d08915-005d-4fc0-b8ac-12c331602c0f%40sessionmgr11&vid=4&hid=21 Elaborates on a point made in chapter 1 of Pricing the Priceless, namely that hospitals substituted capital for labor with the introduction of the PPS, which capped operating costs but initially not capital costs. Capital costs are now included in the DRG rate.

Care at the End of Life and the Hospice Benefit

This topic should perhaps be somewhere else in the course because it is certainly about more than reimbursement, but, given the course outline, it seems to fit best in a Medicare section, partly because over 75 percent of the deaths each year are among Medicare beneficiaries and partly because over a quarter of Medicare dollars in a year are spent on the 5-6 percent of beneficiaries who die (11 percent of annual Medicare dollars are spent on persons in their last month of life). Over 20 percent of these deaths occur in a hospice (60 percent of the cancer deaths now do), and hospice by 2010 was an $13 billion a year benefit (over 2 percent of the Medicare program). I have put the topic on the reading list, but because of the length of the required reading, I have made the entire subject optional. Some of you may wish to pursue it for your testimony.

Institute of Medicine, Approaching Death; Washington: National Academy Press, 1997. An excellent overview of the issues. See also the more recent IOM report on the quality of palliative care on the supplemental list under the quality of care section.

SUPPORT Principal Investigators, "A Controlled Trial to Improve Care for Seriously Ill Hospitalized Patients: the Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatments (SUPPORT)," JAMA, November 22/29, 1995, 274(20), pp. 1591-1598. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/274/20/1591.short. A classic study documenting shortcomings in end-of-life care.

Medicare Payment Advisory Commission, Report to the Congress: Medicare Beneficiaries'

Access to Hospice, Washington: The Commission, May 2002. http://www.medpac.gov/documents/may2002_HospiceAccess.pdf A short report to the Congress, which is concerned about the rapidly rising costs of the hospice benefit and reports of late entry by beneficiaries into hospice. The question of whether rural residents are getting a fair shake from Medicare also surfaces.

Ezekiel J. Emanuel and Linda L. Emanuel, "The Economics of Dying: The Illusion of Cost Savings at the End of Life," New England Journal of Medicine, 331, February 24, 1994, pp. 540-544. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJM199402243300806 This paper is about end-of-life care rather than hospice and makes what in my view is a compelling case that, as a percentage of medical spending, waste at the end of life is rather small.

Daniel P. Kessler and Mark B. McClellan, "Advance Directives and Medical Treatment at the End of Life," Journal of Health Economics, 23(1), January 2004, pp. 111-127. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S0167629603001036 Advance directives appear to improve care but do not save money.

Randall Krakauer, Claire M. Spetell, Lonny Reisman, and Marcia J. Wade, "Opportunities To Improve The Quality Of Care For Advanced Illness," Health Affairs, September/October 2009 , 28:5:1357-59. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/28/5/1357.short . Removing the requirement to not seek treatment for the terminal disease improves participation in hospice and overall saves money among the commercially insured.

Amy S. Kelley, Partha Deb, Qingling Du, Melissa D. Aldridge Carlson, and R. Sean Morrison, "Hospice Enrollment Saves Money For Medicare And Improves Care Quality Across A Number Of Different Lengths-Of-Stay," Health Affairs, March 2013, 32(3):552-61. Hospice saves Medicare money.

"A New Medicare End-of-Life Benefit for Nursing Home Residents," Health Affairs, January/February 2010, 29(1):130-5.

Upcoding

OPTIONAL:

Medicare Payment Advisory Commission, Report to the Congress: Medicare Payment Policy, March 2012, pp. 55-56. Shows the coding response to MS-DRGs. For earlier material on coding effects see the supplementary reading list. This issue will come up again in class 19.

CLASS 18 – PHYSICIAN PAYMENT (April 8)

One important point to take away from the readings for this class is that the prices physicians receive alter the services they deliver to their patients. As a result, both in instances of administered pricing, such as Medicare, as well as with negotiated prices, the details of physician prices matter for how patients are treated.

To provide a concrete context for this class, review (or read) the outline of Medicare physician payment with the MedPAC Payment Basics on physician payment. Also read:

Paul B. Ginsburg, "Rapidly Evolving Physician-Payment Policy — More Than the SGR," New England Journal of Medicine, January 13, 2011, 364:172-6. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMhpr1004028 A descriptive paper.

Paul B. Ginsburg, "Fee-for-Service Will Remain a Feature of Major Payment Reforms, Requiring More Changes in Medicare Physician Payment," Health Affairs, September 2012, 31(9): 1977-83. Although many seem to believe that the shift to global or bundled payment eliminates the concern about fee schedules and relative value scales, the Ginsburg reading argues that this is not the case - even assuming that global or episode payment becomes nearly universal. Not only are Medicare relative value scales likely to remain, at least for now, the basis for pricing bundles, but they are also likely to retain a considerable role in physician reimbursement within most larger entities that share risk or take full risk. Ginsburg, who was the first executive director of the Physician Payment Review Commission (one of the predecessors of MedPAC), also gives some history of Medicare physician payment.

The Theory of Physician Payment and Supplier Induced Demand

Thomas G. McGuire, "Physician Fees and Behavior," in Incentives and Choice in Health Care, eds. Frank A. Sloan and Hirschel Kasper, pp. 263-288; Cambridge: MIT Press, 2008.

The economics of fee-based payment. Concludes that optimal payment is a base payment plus a fee at marginal cost. To what degree does the medical home (class 15) resemble this arrangement? One of the policy applications of the economic theory in this chapter in the Medicare context is the so-called offset effect, or how much of a general change in fees will be "offset" by changes in the quantity of services delivered by physicians. I cover this point in the slides, but if you want more, see the work CMS relies upon to estimate the offset effect, which is available on the CMS website http://www.cms.gov/actuarialstudies/downloads/physicianresponse.pdf. The CMS website material is optional.

Meredith B. Rosenthal, "Beyond Pay for Performance – Emerging Models of Provider-Payment Reform," New England Journal of Medicine, September 18, 2008, 359(12):1197-1200. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp0804658 The US, like many countries, has traditionally had a highly disaggregated fee-for-service reimbursement system for physicians. This is a descriptive article on emerging models of payment that would be more bundled or more aggregated. Those of you more oriented toward economics may want to start with the McGuire chapter (the next reading), which draws much more on economic analysis, and then come to Rosenthal's more descriptive paper.

OPTIONAL:

For those of you who want a more technical and more extensive treatment of physician payment than McGuire's chapter in the Sloan and Kasper book, read the following chapter:

Thomas G. McGuire, "Physician Agency," in Handbook of Health Economics, eds. Anthony J. Culyer and Joseph P. Newhouse; North-Holland, 2000. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S1574006400801687. If you have the economics background to absorb it, this is an excellent synthesis.

Thomas G. McGuire and Mark V. Pauly, "Physician Response to Fee Changes with Multiple Payers," Journal of Health Economics, 1991, 10(4): 385-410. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/016762969190022F A seminal paper for those wanting to go even further than the Handbook chapter.

One issue that ties back to the P4P issues in Class 7 is the power of demand side versus supply side incentives with respect to quality. A paper that bears on this – and finds a demand response, albeit probably a socially undesirable one – is a study of demand for Ontario physicians after the province introduced a $36.25 payment for physicians who provided a medical warning to patients that they were unfit to drive. Although total physician visits did not much change, visits by the patients to the physicians who warned them decreased 23 percent. This is not the main point of the paper; the main point is a 45 percent reduction in road crashes and an increase in emergency department visits for depression, but some patients clearly did not want to return to physicians who gave them bad news and sought care elsewhere. The paper is Donald A. Redelmeier, Christopher J. Yarnell, Deva Thiruchelvam, and Robert J. Tibshirani, "Physicians' Warnings for Unfit Drivers and the Risk of Trauma from Road Crashes," New England Journal of Medicine, September 27, 2012, 376(13):1228-36.

Empirical Literature on the Effect of Fee Changes on Physician Behavior

An empirical application of the theory McGuire outlines is the following:

Mireille Jacobson, Craig C. Earle, Mary Price, and Joseph P. Newhouse, "How Medicare's Payment Cuts for Cancer Chemotherapy Drugs Changed Patterns of Treatment," Health Affairs, July 2010, 29(7):1391-9. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/29/7/1391.short In 2005 Medicare drastically cut how much it paid oncologists for the chemotherapeutic agents they administered to their cancer patients. This paper examines how the treatment of lung cancer patients changed. Oncologists responded to the cut by increasing the amount of chemotherapy (the income effect) and substituted toward those drugs whose profitability had fallen least (the substitution effect). Furthermore, this effect was concentrated among oncologists in community practice, whose incomes were directly affected as opposed to those working in clinics or at hospitals, whose income was not directly affected by these cuts. There is a much longer NBER working paper on this subject in the Optional reading, and the slides cover some material from that paper.

OPTIONAL READING:

Mireille Jacobson, Craig C. Earle, and Joseph P. Newhouse, "Geographic Variation in Physicians' Responses to a Reimbursement Change," New England Journal of Medicine,

December 1, 2011, 365(22):2049-52. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1110117. A follow on study to the article above by Jacobson, et al. showing a great deal of variability across states in the response to the payment change; while oncologists on balance increased the rate of chemotherapy, in a quarter of the states they decreased it. The number of patients is large, so the variation is real. Jacobson, et al. have no explanation for the variation.

Mireille Jacobson, Tom Y. Chang, Joseph P. Newhouse, and Craig C. Earle, "Physician Agency and Competition: Evidence from a Major Change to Medicare Chemotherapy Reimbursement Policy," NBER Working Paper #19247, July 2013, http://papers.nber.org/papers/W19247?utm_campaign=ntw&utm_medium=email&utm_source=ntw. Shows that oncologists not only increased chemotherapy in response to Medicare's fee cut, but that the mortality rate fell as a result. Moreover, the rate fell more in the states that increased chemotherapy the most, and it fell more among the oldest old. Whether this was because oncologists had earlier underestimated the beneficial effects of chemotherapy before being induced to give more or whether it was because they (and possibly the patients) preferred not to put their patients through the rigors of chemotherapy despite the gain in life expectancy is unknowable.

An analogous effect to that found by Jacobson, et al. is found for Chinese physicians; if they share in profits in proportion to drug spending, spending is 43% higher for insured patients. Americans generally buy orally administered drugs (pills) from a pharmacy, and American physicians have no financial stake in which (orally administered) drug they prescribe (assuming they have not taken global risk, which is still atypical). In contrast, East Asian patients, including Chinese, generally buy drugs from their physician or hospital, who charge a markup on those drugs. See Fangwen Lu, "Insurance Coverage and Agency Problems in Doctor Prescriptions: Evidence from a Field Experiment in China," which is posted on the course web site.

An additional paper on this subject in a Chinese setting is Janet Currie, Wenchuan Lu, and Wei Zhang, "Patient Knowledge and Antibiotic Abuse: Evidence from an Audit Study in China," Journal of Health Economics, September 2011, 30(5):933-49. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S0167629611000622 China, like many countries, exhibits a high degree of antibiotic use, which is thought to increase resistance to antibiotics (a worldwide externality). This paper, like the Lu paper (and the Jacobson, et al. paper on

chemotherapy), builds off the incentives Chinese physicians have to prescribe because they dispense the antibiotic. Currie, et al. had simulated patients visit physicians and describe symptoms that should not have led to antibiotic use. Nonetheless, antibiotic prescribing was high (around 60%), and expensive (not first-line) antibiotics were frequently prescribed, exacerbating the resistance problem and burdening the patient with greater out-of-pocket cost. A subset of the simulated patients indicated to the physician that they had learned from the internet that antibiotics should not be prescribed for flu or cold-like symptoms. This intervention markedly reduced antibiotic use.

Jeffrey Clemens and Joshua Gottlieb, "Do Physicians' Financial Incentives Affect Medical Treatment and Patient Health?" November 2011, http://www.people.fas.harvard.edu/~jdgottl/papers/GottliebJMP.pdf. Analyzes a change in Medicare fees that resulted from a change in the definition of market areas and finds that an increase in fees was associated with an increase in services (the substitution effect dominated the income effect).

Empirical Literature on the Basis of Payment

Relative to the literature on fee-for service pricing, there is much less literature on the effect of the *basis* of payment (why do you think this is?), an issue that has come to the fore with the advent of greater bundling and various forms of risk-based payment to providers (but see Pricing the Priceless). Krasnik, et al. show the effect of changing from full to partial capitation, which can also be interpreted as a (partially) income-compensated fee change. Hickson, et al. show positive effects of fee-for-service relative to salary; that paper is highly unusual because the data come from a randomized trial, albeit a very small one. Note that physician incentives in salaried systems relate to the criteria for promotion and merit increases, which are typically difficult to observe directly or even infer. Don't spend a lot of time with these papers; read for the main result.

Allan Krasnik, Peter P. Groenewegen, Poul A. Pedersen, Peter van Scholten, Gavin Mooney, Adam Gottschau, Henk A. Flierman, and Mogen T. Damsgaard, "Changing Remuneration Systems: Effects on Activity in General Practice," British Medical Journal, 300, June 30, 1990, 1698-1701.
http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=1663335&blobtype=pdf. Shows the effects of a change from full to partial capitation for the Danish General Practitioner (GP) results in increased provision of services per visit, fewer referrals, and less hospitalization.

Uses the concept of supplier-induced demand, but without the usual normative connotation.

Gerald B. Hickson, William A. Altmeier, and James M. Perrin, "Physician Reimbursement by Salary or Fee-for-Service: Effect on Physician Practice Behavior in a Randomized Prospective Study," Pediatrics, September, 1987, vol. 80(3), pp. 344-350. http://search.epnet.com.ezp1.harvard.edu/login.aspx?direct=true&db=aph&an=4732496&loginpage=Login.asp&scope=site A study in which 18 pediatric residents were randomly assigned to be paid by salary or fee-for-service. Those paid fee-for-service did more of things that were deemed good (e.g., continuity, fewer missed recommended visits).

OPTIONAL:

Heike Hennig-Schmidt, Reinhard Seltin, and Daniel Wiesen, "How Payment Systems Affect Physicians' Provision Behavior: An Experimental Investigation," Journal of Health Economics, July 2011, 30(4):637-46. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S0167629611000452 Reports on laboratory experiments showing medical students overprescribe in FFS, underprescribe in capitation, but that, consistent with McGuire, both patient benefit and profit matter.

Mark Dusheiko, Hugh Gravelle, Rowena Jacobs, and Peter Smith, "The Effect of Financial Incentives on Gatekeeping Doctors: Evidence from a Natural Experiment," Journal of Health Economics, 25(3), May 2006, pp. 449-478. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S0167629605000792 In the 1990s the Conservative government introduced higher powered physician reimbursement for General Practitioners in the British National Health Service. GPs had long been capitated for their own services, but did not bear any financial consequences for decisions to hospitalize. In the new arrangement the government gave larger groups of GPs the option to receive a larger capitation and bear risk for (pay for) elective admissions ("fundholding") from the capitation. (This has some similarities with Accountable Care Organizations.) This method was abolished in 1999 by the Labor government, and GPs were no longer at risk (but was reintroduced by Labor in 2005 and now there is a new variant under the Conservative government). This study shows that when fundholding was abolished, elective admissions increased 3.5 to 5.1 percent among GPs who had been fundholders relative to the increase among those who had not, suggesting that the financial risk associated with fundholding had kept down elective admissions. I have made this optional because it will be harder going for those with weaker economics backgrounds. See also a followup article by Dusheiko, et al.

on the supplementary list that deals with patient satisfaction and process measures of care.

Jason Barro and Nancy Beaulieu, "Selection and Improvement: Physician Responses to Financial Incentives," NBER Working paper 10017, October 2003 (http://www.nber.org.ezp-prod1.hul.harvard.edu/papers/w10017.pdf). Shows that Florida physicians who were switched from a salaried basis of payment to a fee-for-service like payment increased the profitability of their practices (i.e., increased their number of billable services).

Hendrik Schmitz, "Practice Budgets and the Patient Mix of Physicians – The Effect of a Remuneration System on Health Care Utilization," Journal of Health Economics, December 2013, 32(6)1240-9. Shows that when Germany introduced both an individual budget cap for publicly insured patients and a global budget for physician expenditures, the number of visits by publicly insured patients fell and the number by the privately insured rose.

David Madden, Anne Nolan, and Brian Nolan, "GP Reimbursement and Visiting Behavior in Ireland," Health Economics, 14(10), October 2005, pp. 1047-1060. http://onlinelibrary.wiley.com.ezp-prod1.hul.harvard.edu/doi/10.1002/hec.995/pdf Switching from fee-for-service to capitation in Ireland did *not* seem to affect visit rates to GPs.

Jack Hadley and James D. Reschovsky, "Medicare Fees and Physicians' Medicare Service Volume: Beneficiaries Treated and Services per Beneficiary," International Journal of Health Care Finance and Economics, 6(2), June 2006, pp. 131-150. http://www.springerlink.com.ezp-prod1.hul.harvard.edu/content/5p80j52176701488/fulltext.pdf Finds that Medicare service volume is positively related to fees and that the income effect is important only at high Medicare shares. See also the paper by Hadley, Reschovsky, Catherine Corey, and Stephen Zuckerman, "Medicare Fees and the Volume of Physician Services," Inquiry, Winter 2009/2010, 46(4):372-90 for similar findings (http://www.inquiryjournalonline.org.ezp-prod1.hul.harvard.edu/doi/pdf/10.5034/inquiryjrnl_46.4.372).

Uwe Dulleck and Rudolf Kershbamer, "On Doctors, Mechanics, and Computer Specialists: The Economics of Credence Goods," *Journal of Economic Literature*, March 2006, 44(1): 5-42. http://www.jstor.org.ezp-prod1.hul.harvard.edu/stable/10.2307/30032295 A survey of the literature on credence goods (goods with an information asymmetry between producer

and consumer), with a theoretical model that ties together a rather diverse literature in economics; as the title indicates, the literature considered goes beyond physicians. Also in the Optional reading for class 2.

Rose Anne Devlin and Sisira Sarma, "Do Physician Remuneration Schemes Matter? The Case of Canadian Family Physicians," Journal of Health Economics, September 2008, 27(5): 1168-81. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S0167629608000568 Shows that FFS payment induces substantially more visits among Canadian family physicians. Although all provinces offer an FFS scheme, they also offer various alternative schemes. The authors find that physicians who select FFS see fewer patients than those who do not, a puzzling finding but possibly an artifact of the econometrics employed (the authors note that one of their estimators is highly sensitive to specification).

Medicare's Controls on Physician Spending, the Medicare Fee Schedule, and the Resource-Based Relative Value Scale

OPTIONAL:

William C. Hsiao, Peter Braun, Daniel Dunn, et al., "Resource Based Relative Values: An Overview," JAMA, 260(16), October 28, 1988, 2347-2353. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/260/16/2347.short An overview and basic description of the initial RBRVS. There are numerous other articles that go into detail on the RBRVS in the same issue of the JAMA as this article; they are on the supplementary list.

Practice Costs

Medicare Payment Advisory Commission, Report to the Congress: Medicare Payment Policy, March 2006, chapter 4 (available at www.medpac.gov). Should be read by anyone contemplating writing testimony on this topic.

Balance Billing

See the supplementary reading.

Older Literature

There is a huge, old, and in my view unhappy, literature that discusses supplier-induced demand (SID) that I have relegated to the supplementary reading list. It is to some degree covered by the McGuire chapter in the Handbook of Health Economics.

CLASS 19 - MEDICARE PAYMENT OF HEALTH PLANS, RISK ADJUSTMENT, AND A WRAPUP ON MEDICARE PARTS A, B, AND C (April 10)

Medicare Reimbursement of Health Plans and Risk Adjustment

A note at the outset: There are a very large number of slides for this class, but several of them go over material in the reading below. If you do the reading and understand it, these slides will just be a review. The last several slides try to summarize the material on Medicare in the past three classes and put it in the context of the course overall. These are important slides.

Start by reading or reviewing the MedPAC tutorial on health plan payment. If you want more than the MedPAC tutorial, see the Pope, et al. reading below that is optional.

Starting in 2006 Medicare Part C reimbursement moved away from a take-it-or-leave-it price toward something that more closely resembles a defined contribution approach, which had the effect of freeing up health plan prices (i.e., not setting a take-it-or-leave-it price), although elements of administered pricing remain in the price Medicare pays health plans because of risk adjustment (this is part of the "managed" in the term "managed competition").

The Republican alternative to the administered pricing issues we have been studying in Parts A and B is to go to a full-blown defined contribution plan ("premium support"), which in the Wyden-Ryan incarnation would include Parts A and B as one option, though one can reasonably interpret the Republican efforts more as an attempt to limit the growth in federal spending rather than an effort to move from administered pricing. There are numerous questions to be addressed in any premium support proposal, including whether traditional Medicare would be an option, what the amount of the voucher would be, and at what rate it would increase over time. If you are interested in this subject, you can find a discussion of those issues and others in the Optional reading.

One of the key issues in the debate over including traditional Medicare in a defined contribution arrangement is the degree of possible selection and whether, if it were included as an option, traditional Medicare would go into a death spiral from adverse selection or whether risk adjustment is now good enough to preclude that. The degree to which risk adjustment can mitigate selection incentives, of course, is also a key issue in the exchanges, both public and private. The reading and slides include a lot of material on risk adjustment and selection, which is also featured in a number of non-US systems. I will ask you about issues related to the inclusion of traditional Medicare as an option in a voucher/premium support scheme.

The van de Ven and Schut paper below is about the implementation of managed competition in the Netherlands starting in 2006. The paper lays out the issues around managed competition, assuming competition among insurers. Reflecting its EU provenance, it uses slightly different jargon like risk equalization instead of risk adjustment, but you should have no difficulty with that. I recommend that you read the full paper because I think it is an excellent exposition of the issues (though you will likely want to skim some of the details about the Dutch system) and because it may help American students by seeing similar issues outside the American context. But for those of you who absolutely, positively can't afford the time, here is an abridged version: Wynand P.M.M. van de Ven and Frederik T. Schut, "Universal Mandatory Health Insurance In The Netherlands: A Model For The United States?" Health Affairs, May/June 2008; 27(3): 771-781. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/27/3/771.short and here is the full version: Wynand P.M.M. van de Ven and Frederik T. Schut, "Risk Equalization in an Individual Health Insurance Market: The Only Escape from the Tradeoff between Affordability, Efficiency and Selection, the Netherlands as a Case Study," http://www.fresh-thinking.org/docs/workshop_070503/PaperVandeVenSchut02apr07.pdf

As a counterpoint to van de Ven and Schut, read

Kieke G.H. Ohkma, Ph.D., Theodore R. Marmor, Ph.D., and Jonathan Oberlander, "Managed Competition for Medicare? Sobering Lessons from the Netherlands," New England Journal of Medicine, July 28, 2011, 365(4):287-9. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1106090 At least two of these three authors have for many years advocated a highly regulated financing system. Be prepared in class to discuss what you think van de Ven and Schut would have said about Ohkma, et al.

Two key issues in the debate over Part C are:

1) the advantages of managed care in Medicare (class 15); and

2) the degree of selection.

As the McGuire, et al. paper in the Optional reading shows, the history of Part C is not positive – indeed, some might call it dismal. McGuire, et al. however, end their survey at 2008, and the Landon, et al. and Ayanian et al. reading in Class 15 put Medicare Advantage in a more favorable light from a quality of care point of view. The following two readings look at selection in Medicare Advantage. They suggest that the introduction of health-status-based risk adjustment into Medicare along with the lock-in in the mid 2000's substantially reduced, but probably did not completely eliminate favorable selection.

Joseph P. Newhouse, Jie Huang, Mary Price, J. Michael McWilliams, and John Hsu, "Steps To Reduce Favorable Risk Selection In Medicare Advantage Largely Succeeded, Boding Well For Health Insurance Exchanges," Health Affairs, December 2012, 31(12), 2618-28. The slides go over this paper as well. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/31/12/2618.full.pdf+html

> J. Michael McWilliams, John Hsu, and Joseph P. Newhouse "New Risk-Adjustment System Was Associated With Reduced Favorable Selection In Medicare Advantage," Health Affairs, December 2012, 31(12), 2630-40. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/31/12/2630.full.pdf+html

Yunjie Song, Jonathan Skinner, Julie Bynum, Jason Sutherland, John E. Wennberg, and Elliott S. Fisher, "Regional Variations in Diagnostic Practices," New England Journal of Medicine, July 1, 2010, 363(1):45-53. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/nejmsa0910881 This article was required reading for class 5, but it is also relevant here. Recall that it shows that Medicare beneficiaries who moved and who had similar baseline health status risk adjustment scores had scores that grew more (i.e., resulted in greater reimbursement) in high spending regions. In other words, these results suggest health status as measured by diagnosis coded on claims forms, is endogenous. Although Song, et al. do not suggest this, an implication is that the HCCs should not be used as they are now (i.e., in the language of Stam, et al., Optional reading. they have elements of an N-type adjuster). Ultimately whether one acts on this implication depends on how much of the observed variation in CMS-HCC scores reflects real health status variation versus

differences in coding; the more it reflects coding, the weaker the case for using CMS-HCCs. Unfortunately Song, et al.'s work cannot shed light on this.

OPTIONAL:

Thomas G. McGuire, Joseph P. Newhouse, and Anna D. Sinaiko, "An Economic History of Medicare Part C," The Milbank Quarterly, June 2011, 89(2):289-332. Just what the title says it is. http://onlinelibrary.wiley.com.ezp-prod1.hul.harvard.edu/doi/10.1111/j.1468-0009.2011.00629.x/pdf

J. Michael McWilliams, Christopher C. Afendulis, Thomas G. McGuire, and Bruce E. Landon, "Complex Medicare Advantage Choices May Overwhelm Seniors--Especially Those With Impaired Decision Making," Health Affairs, September 2011, 30(9), . http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/30/9/1786.short This paper uses the Health and Retirement Survey data to look at those enrolling in Medicare Advantage (MA).There are three findings of note, two of which the authors discuss: a) More choices can deter change (this is also found with enrollment in 401(k) plans); and b) More generous benefits (because of higher reimbursement in a county) leads to greater enrollment, but this enrollment is disproportionately among beneficiaries with higher cognitive functioning (there is also an analogous result for 401(k) plans); c) There is also dog that did not bark; self-reported general health and self-reported specific conditions showed little difference between the traditional Medicare (TM) group and the MA group, suggesting selection on observable health measures is modest, a finding that comes to the fore in the McWilliams, et al. reading that is required. What do these findings imply about a voucher scheme?

Jason Brown, Mark Duggan, Ilyana Kuziemko, William Woolston, "How Does Risk Selection Respond to Risk Adjustment? Evidence from the Medicare Advantage Program," NBER Working Paper 16977, April 2011. http://www.nber.org.ezp-prod1.hul.harvard.edu/papers/w16977 Uses the Medicare Current Beneficiary Survey (the same data as McWilliams, et al. above) to document a change in the selection pattern after the implementing of the CMS-HCC risk adjuster that they estimate increased government spending. They focus on reimbursement for those who switched from traditional Medicare (TM) to Medicare Advantage (MA) relative to spending in the prior year when the beneficiary was in TM. They show that the difference between these two values increased with the introduction of the CMS-HCC system (see Table 3, col. 6, row

two) and they conclude that the introduction of the CMS-HCCs worsened selection. An appendix to Newhouse, et al. (above) has the data on the slides that use a much larger sample and suggest the opposite, namely that the introduction of the HCCs reduced selection; see also the 3rd paragraph from the end in the text that makes the same calculation as Brown, et al. Note also that McWilliams, et al. also find a different result. One lesson I would take from this paper for the aspiring analyst: If you have a result that is highly improbable, which I consider their finding of increased selection after the introduction of CMS-HCC's to be, you need to be very sure about the result.

The next two readings are about risk adjustment outside the US.

Wynand P.M.M. van de Ven, Konstantin Beck, Florian Buchner, et al., "Risk Adjustment and Risk Selection on the Sickness Fund Insurance Market in 5 European Countries," Health Policy, 65/1, Supplement, 2003, pp. 75-98. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S0168851002001185 This is a summary article of a special issue of the journal on risk adjustment as of a decade or more ago in the following five countries: Belgium; Netherlands; Germany; Israel; and Switzerland. There are other papers on each specific country in the same supplement. One can also glean some material on the organization and financing of care in these systems. The entire issue is also available electronically through the Harvard Library System.

Jacob Glazer and Thomas G. McGuire, "Making Medicare Advantage and Middle-Class Program," Journal of Health Economics, March 2013, 32(2):463-73. Raises the question of who belongs in managed care and concludes that Medicare should use choices around premium policy to influence that choice. http://ac.els-cdn.com.ezp-prod1.hul.harvard.edu/S016762961200183X/1-s2.0-S016762961200183X-main.pdf?_tid=c80024fc-d395-11e2-8793-00000aab0f6b&acdnat=1371065285_c6602a189ae8199dc8d0d812957fe3f9

The following reading summarizes the Cameron government's efforts to move toward more bundling in the UK.

Martin Roland and Rebecca Rosen, "English NHS Embarks on Controversial and Risky Market-Style Reforms in Health Care," New England Journal of Medicine, April 7, 2011, 364(14):1360-6. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMhpr1009757

The next two readings are on premium support.

Congressional Budget Office, "A Premium Support System for Medicare: Analysis of Illustrative Options," September 2013. Analyzes a system with a voucher at the level of the average bid and the second lowest bid.

Lisa Potetz and Beth C. Fuchs, "The Nuts and Bolts of Medicare Premium Support Proposals," Henry J. Kaiser Family Foundation, June 2011, http://www.kff.org/medicare/upload/8191.pdf.

The next several articles focus on risk adjustment at the plan level, mostly, though not entirely, in the Medicare context. Note that the same issue applies below the plan level when plans give capitation contracts to physician groups or integrated delivery systems. The imperfections of risk adjustment open the door to possible selection, as we have said above. An interesting question is why risk adjustment is prevalent in Medicare (and Medicaid) but very little used in private (commercial) health insurance. These readings came from a time when Medicare used a take-it-or-leave-it price for health plans, though that does not really affect the risk adjustment issue.

Gregory Pope, John Kautter, Randall P. Ellis, et al., "Risk Adjustment of Medicare Capitation Payments Using the CMS-HCC Model," Health Care Financing Review, 25:4, Summer, 2004, pp. 119-141. http://escholarship.umassmed.edu/cgi/viewcontent.cgi?article=1723&context=qhs_pp This paper lays out CMS-HCCs, the method CMS uses for risk adjustment for health plan payments under Part C, in great detail. If you are interested in writing testimony about risk adjustment, you should read this paper.

Pieter J.A. Stam, Rene C.J.A. van Vliet, and Wynand P.M.M. van de Ven, "A Limited-Sample Benchmark Approach to Assess and Improve the Performance of Risk Equalization Models," Journal of Health Economics, May 2010, 29(3), pp. 426-37. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S0167629610000147 Makes the point that risk adjusters should be on variables one wants to adjust for and exclude variables one does not want to pay for, especially price.

Wynand P.M.M. van de Ven and Randall P. Ellis, "Risk Adjustment in Competitive

Health Plan Markets," in Handbook of Health Economics, eds. Anthony J. Culyer and Joseph P. Newhouse; North-Holland, 2000. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S1574006400801730. Excellent summary; written from both a European and an American perspective, but it is long.

Joseph P. Newhouse, "Risk Adjustment: Where Are We Now?" Inquiry, 35, Summer 1998, pp. 122-131. http://proquest.umi.com.ezp-prod1.hul.harvard.edu/pqdlink?vinst=PROD&fmt=6&startpage=-1&ver=1&clientid=18857&vname=PQD&RQT=309&did=33195534&exp=12-27-2016&scaling=FULL&vtype=PQD&rqt=309&TS=1325195318&clientId=18857 Makes the case for partial capitation, a form of which has now surfaced as the "medical home." (See also Newhouse, Beeuwkes Buntin, and Chapman and Newhouse 1994 in the supplementary reading for earlier papers on this subject.)

Joseph P. Newhouse, "Reimbursing Health Plans and Health Providers: Selection versus Efficiency in Production." Journal of Economic Literature, 34(3):1236-1263. http://www.jstor.org.ezp-prod1.hul.harvard.edu/stable/10.2307/2729501 A review of the literature, now dated, but provides an analytical framework to think about the issue.

For a skeptical view that risk adjustment can ever function satisfactorily, at least outside a highly regulated market framework, see:

Mark Duggan, "Does Contracting Out Increase the Efficiency of Government Programs: Evidence from Medicaid HMOs," Journal of Public Economics, 2004, 88:2549-72. http://www.nber.org.ezp-prod1.hul.harvard.edu/papers/w9091

David Stevenson, John Z. Ayanian, Alan M. Zaslavsky, Joseph P. Newhouse, and Bruce E. Landon, "Service Use at the End of Life in Medicare Advantage versus Traditional Medicare," Medical Care, 2013, in press. Shows greater use of hospice, lesser use of the hospital, and markedly less use of the Emergency Department among decedents in MA compared with matched decedents in TM.

A Wrap Up of Medicare , Parts A, B, and C

OPTIONAL:

As noted above, some of the support and some of the opposition to the defined contribution proposals in Medicare revolves around the idea that it may well be a device for shifting more of the cost of financing the elderly's medical care from the non-elderly to the elderly. The following reading makes the important point that the division of burden between these groups should be seen in the larger context of financing pensions and long-term care.

Victor R. Fuchs, "Health Care for the Elderly: How Much? Who Will Pay for It?" Health Affairs, January/February 1999, 18(1), pp. 11-21. http://content.healthaffairs.org/content/18/1/11.full.pdf+html Lays some groundwork for the debate over Medicare financing in pointing out that the Medicare and Social Security (and the elderly component of Medicaid) financing problems need to be considered together. Increasingly this is the case. Related to the material in the first class on financing Medicare.

Robert F. Coulam, Roger D. Feldman, Bryan E. Dowd, "Competitive Pricing and the Challenge of Cost Control in Medicare," Journal of Health Politics, Policy, and Law, 2011. http://jhppl.dukejournals.org.ezp-prod1.hul.harvard.edu/content/36/4/649.full.pdf+html Reviews the history of attempts to introduce competitive pricing into the Medicare program and why most have failed.

CLASS 20–THE ECONOMICS OF PHARMACEUTICALS AND MEDICARE PART D (April 15)

If you haven't already read it, you should begin with the MedPAC document on Part D Payment Basics.

Ernst R. Berndt, Thomas G. McGuire, and Joseph P. Newhouse, "A Primer on the Economics of Pharmaceutical Pricing in Health Insurance Markets," Forum for Health Economics & Policy, 2011, 14(2), (Prescription Drug Insurance), Article 10 http://www.degruyter.com.ezp-prod1.hul.harvard.edu/view/j/fhep.2011.14.issue-2/1558-9544.1301/1558-9544.1301.xml?format=INT. Also NBER Working Paper 16879. http://www.nber.org.ezp-prod1.hul.harvard.edu/papers/w16879 After reading this you should understand the interaction between supply and demand prices.

John Hsu, Vicki Fung, Jie Huang, Mary Price, Richard Brand, Rita Hui, Bruce Fireman, William H. Dow, John Bertko, and Joseph P. Newhouse, "Fixing Flaws in Medicare Drug

Coverage That Prompt Insurers To Avoid Low-Income Patients," Health Affairs, December 2010, 29(12):2335-43. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/29/12/2335.short How administered pricing can go awry in what is often touted as a model for introducing competition into Medicare. The particular problem with risk adjustment for the LIS group that is discussed in this article should have been easily fixed a year or two after the program began, in that much better data to estimate the adjustment were at that point readily available, but CMS did not re-estimate this until 2011. I am not sure why it took so long; although CMS was strapped for resources, this adjustment is easy to estimate, and the misestimation appeared to be causing beneficiaries to have to change plans (and formularies).

Richard G. Frank, "Medicare Drug Prices and the Deficit," New England Journal of Medicine, November 3, 2011, 365(18):1657-9. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1109926 The design of Part D assumes competition among drug manufacturers will be effective, but also designates 6 protected therapeutic classes, which effectively eliminates competition in those classes. What, if anything, should Medicare do about this?

OPTIONAL READING

Fiona Scott Morton and Margaret Kyle, "Markets for Pharmaceutical Products," in Handbook of Health Economics, vol. 2; eds. Thomas G. McGuire, Mark V. Pauly, and Pedro Pita Barros; Amsterdam: Elsevier, 2011. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/B9780444535924000128. A reference work covering a great deal of ground. covering just about everything you wanted to know about the pharmaceutical industry, both in the US and worldwide.

Patricia M. Danzon and Sean Nicholson, eds., The Oxford Handbook of the Economics of the Pharmaceutical Industry, New York: Oxford University Press, 2012. Another reference work. unfortunately not available on line, but is at the Law School library. http://hollis.harvard.edu/?itemid=|library/m/aleph|013027665

Mark Duggan and Fiona Scott Morton, "The Effect of Medicare Part D on Pharmaceutical Prices and Utilization," American Economic Review, March 2010, 100:1, 590–607. http://pubs.aeaweb.org.ezp-prod1.hul.harvard.edu/doi/pdfplus/10.1257/aer.100.1.590 Shows that the basic architecture of Part D – increase the price elasticity facing

manufacturers for Medicare beneficiaries without prior drug insurance – worked in the sense that prices fell at least 24 percent. Also supports the notion that there is a potential problem for drugs facing little or no price competition (see the Frank and Newhouse paper below); price declines did not appear in the categories in which there were few substitutes. See their Table 5.

Yuting Zhang, Julie M. Donohue, Judith R. Lave, Gerald O'Donnell, and Joseph P. Newhouse, "The Effect of Medicare Part D on Drug and Medical Spending," New England Journal of Medicine, July 2, 2009, 361(1):52-61. Part D lowered spending in Parts A and B for previously uninsured (for drugs) MA participants (better compliance) and raised it for those who were reasonably well insured (polypharmacy). http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMsa0807998

Jason Abaluck and Jonathan Gruber, "Heterogeneity in Choice Inconsistencies among the Elderly: Evidence from Prescription Drug Plan Choice," American Economic Review, May 2011, 101(3):377-81. Only 12 percent of beneficiaries chose plans that minimized their cost, and the excess expected payment was about $300. Beneficiaries overweighted certain premiums relative to expected cost sharing. http://pubs.aeaweb.org.ezp-prod1.hul.harvard.edu/doi/pdfplus/10.1257/aer.101.3.377. A longer version is available as "Choice Inconsistencies Among the Elderly: Evidence From Plan Choice in the Medicare Part D Program," American Economic Review, 101(4), June 2011, p. 1180-1210, http://pubs.aeaweb.org.ezp-prod1.hul.harvard.edu/doi/pdfplus/10.1257/aer.101.4.1180

Jeffrey R. Kling, Sendhil Mullainathan, Eldar Shafir, Lee C. Vermeulen, and Marian V. Wrobel, "Comparison Friction: Experimental Evidence from Medicare Drug Plans," Quarterly Journal of Economics, February 2012, 127(1):199-236. This paper describes an intervention that was a letter sent to a random group of Medicare Part D beneficiaries with personalized cost information on the cost of alternative plans. The intervention group had an 11 percentage point increased rate of plan switching, which saved the beneficiaries on average $100. Even if information on Part D plans is (in my view) good on the CMS website, encouraging persons to use it makes a difference. http://qje.oxfordjournals.org.ezp-prod1.hul.harvard.edu/content/127/1/199.full.pdf+html

Joseph P. Newhouse, "How Much Should Medicare Pay for Drugs?" Health Affairs, 23:1, January/February 2004, pp. 89-102.

http://search.epnet.com.ezp1.harvard.edu/login.aspx?direct=true&db=aph&an=12017104&loginpage=Login.asp&scope=site. Covers some basic economics of the drug industry. The December 2003 legislation establishing the Medicare drug benefit precludes price controls. For reasons explained in the subsequent paper I do not think this has worked altogether satisfactorily.

Richard G. Frank and Joseph P. Newhouse, "Should Drug Prices Be Negotiated Under Part D of Medicare? And If So How?" Health Affairs, January/February 2008, 27(1), pp.33-43. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/27/1/33.short The answers to the two questions in the title in Richard's and my view turn out to be more gray than black or white. See also the Duggan-Scott Morton optional reading for some empirical support.

F. M. Scherer, "The Pharmaceutical Industry," in Handbook of Health Economics, eds. Anthony J. Culyer and Joseph P. Newhouse; Amsterdam: North Holland, 2000, pp. 1297-1336. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S1574006400800384 An overall description of the economics of the pharmaceutical industry by a distinguished economist of industrial organization. Not very technical.

Thomas H. Lee, "Me-Too" Products: Friend or Foe?" New England Journal of Medicine, January 15, 2004, 350:3, pp. 211-212. http://content.nejm.org.ezp1.harvard.edu/cgi/reprint/350/3/211.pdf A short paper making the point that me-too products are the mechanism that price or product competition can work for improving welfare (though Lee eschews this piece of economic jargon).

Alan M. Garber and Mark B. McClellan, "Satisfaction Guaranteed – 'Payment by Results' for Biologic Agents," New England Journal of Medicine, October 18, 2007, 357(16): 1575-1577. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/nejmp078204 Johnson and Johnson and the British National Health Service have agreed that J&J will only be reimbursed for a biotech agent to treat multiple myeloma if the treatment is successful. If this method of reimbursement spreads to other agents or other purchasers, it is a large change in incentives for manufacturers and potentially improves efficiency. The article explains why and speculates on whether the method may spread.

Daron Acemoglu and Joshua Linn, "Market Size in Innovation: Theory and Evidence from

the Pharmaceutical Industry," Quarterly Journal of Economics, August 2004, 119(3):1049-90. http://qje.oxfordjournals.org.ezp-prod1.hul.harvard.edu/content/119/3/1049.full.pdf Showing substantial response in innovation to market size. Using the aging of the population as an exogenous change in market size for various drugs and exploiting the differential use of various classes of drugs by different age classes, they find a large response of innovation to market size.

Amy Finkelstein, "Static and Dynamic Effects of Health Policy," Quarterly Journal of Economics, May 2004, 119(2): 527-64. http://qje.oxfordjournals.org.ezp-prod1.hul.harvard.edu/content/119/2/527.full.pdf Ingenious use of clinical trial data to show effects of increased demand on research (see Table 1). Uses three case studies to show potentially large dynamic effects in one case, negative but small effects in the two others.

Richard G. Frank, "Prescription Drug Prices: Why Do Some Pay More Than Others Do?," Health Affairs, March/April 2001, 20(2): 115-128. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/20/2/115.full.pdf+html Explains in greater detail the price discrimination point made in the slides.

Congressional Budget Office, "Prescription Drug Pricing in the Private Sector," January 2007, http://www.cbo.gov/ftpdocs/77xx/doc7715/01-03-PrescriptionDrug.pdf. More background on drug pricing; more descriptive than the Scott Morton-Kyle or the Danzon-Nicholson chapters.

Haiden A. Huskamp, Meredith B. Rosenthal, Richard G. Frank, and Joseph P. Newhouse "The Medicare Prescription Drug Benefit: How Will the Game Be Played?" Health Affairs, March/April 2000, 19(2): 8-23. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/19/2/8.full.pdf+html How these authors would have structured a Medicare drug benefit.

Julie M. Donohue, Marisa Cevasco, and Meredith B. Rosenthal, "A Decade of Direct-to-Consumer Advertising to Consumers," New England Journal of Medicine, August 16, 2007, 357(7):673-681. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMsa070502 Some basic facts, including that DTC is a minor percentage of pharmaceutical marketing expense.

Frank A. Sloan and Chee-Ruey Hsieh, "Effects of Incentives on Pharmaceutical Innovation," available from me on request. Reviews the literature.

John Robst, Jesse Levy, and Melvin Ingber, "Diagnosis-Based Risk Adjustment for Medicare Prescription Drug Plan Payments," Health Care Financing Review, Summer 2007, 28(4): 15-30. http://www.cmms.hhs.gov/HealthCareFinancingReview/downloads/07Summerpg15.pdf Describes the risk adjustment method for Part D plan payments.

Fiona Scott Morton, "The Strategic Response by Pharmaceutical Firms to the Medicaid Most-Favored-Customer Rules," RAND Journal of Economics, Summer 1997, 28(2): 269-290. http://web.ebscohost.com.ezp-prod1.hul.harvard.edu/ehost/pdfviewer/pdfviewer?sid=a0732c1b-234b-4605-be15-88852cc6644c%40sessionmgr11&vid=4&hid=21 Shows that requiring Medicaid get a best price raised prices given to other firms including the VA.

Others aspects of pharmacy benefit management in addition to formularies are step therapy, sometimes referred to as fail first, and prior authorization. If you are interested in these topics, here are a few papers; they are mostly studies of Medicaid populations, because of the availability of data.

Tami L. Mark, Teresa M. Gibson, Kimberly McGuigan, and B.C. Chu, "The Effects of Antidepressant Step Therapy Protocols on Pharmaceutical and Medical Utilization and Expenditures," American Journal of Psychiatry, October 2010;167(10):1202-9. http://ajp.psychiatryonline.org.ezp-prod1.hul.harvard.edu/data/Journals/AJP/1817/appi.ajp.2010.09060877.pdf Step therapy for antidepressants reduced antidepressant use but raised overall cost. Note that antidepressants are a protected class in Part D.

Michael A. Fischer, Niteesh K. Choudhry, and William C. Winkelmayer, "Impact of Medicaid Prior Authorization on Angiotensin-Receptor Blockers: Can Policy Promote Rational Prescribing?" Health Affairs, May/June 2007, 26(3):800-7. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/26/3/800.short Step therapy reduced use of ARBs (used for hypertension and heart failure) moderately. Authors worry about need to switch drugs if formularies change or if MD is confronted with multiple formularies.

Michael A. Fischer, Steven Schneeweiss, Jerry Avorn, and Daniel H. Solomon, "Medicaid Prior-authorization Programs and the Use of Cyclooxygenase-2 Inhibitors," New England Journal of Medicine, November 18,2004,351(21):2187-94. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMsa042770 Cyclooxygenase-2 (Cox-2) inhibitors are a type of non-steroidal anti-inflammatory drug, the best known of which are Vioxx (now off the market) and Celebrex. Prior authorization reduced use.

Stephen B. Soumerai, Fang Zhang, Dennis Ross-Degnan, Daniel E. Ball, Robert F. LeCates, Michael R. Law, Tom E. Hughes, Daniel Chapman, and Alyce S. Adams, "Use of Atypical Antipsychotic Drugs for Schizophrenia in Maine Medicaid Following a Policy Change," Health Affairs.May-June, 2008,27(3):w185-95. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/27/3/w185.short Prior authorization substantially reduced use among schizophrenics, very likely with adverse consequences..

Yuting Zhang, Alyce S. Adams, Dennis Ross-Degnan, Fang Zhang, and Stephen B. Soumerai, "Effects of Prior Authorization on Medication Discontinuation among Medicaid Beneficiaries with Bipolar Disorder," Psychiatric Services.April 2009, 60(4):520-7. http://ps.psychiatryonline.org.ezp-prod1.hul.harvard.edu/data/Journals/PSS/3876/09ps520.pdf Prior authorization reduced use of non-preferred agents, but also appeared to increase the risk of discontinuing therapy. Similar results in Christine Y. Lu, et al. Medical Care. January 2010, 48(1):4-9.

David Grande, "The Cost of Drug Coupons," JAMA, June 13, 2012, 307(22):2375-6. A two page economic analysis of the coupons. http://jama.jamanetwork.com.ezp-prod1.hul.harvard.edu/Issue.aspx?journalid=67&issueID=24193&direction=P

Joseph Ross and Aaron Kesselheim, "Prescription-Drug Coupons – No Such Thing as a Free Lunch," New England Journal of Medicine, September 26, 2013, 369(13):1188-9. Another, similar (to Grande) two page analysis of coupons with more data than Grande. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/pdf/10.1056/NEJMp1301993

CLASS 21 – MEDICAID AND LONG-TERM CARE (April 17; Testimony 2 due before

class)

I group Medicaid and long-term care together because Medicaid is the major vehicle in the US for financing long-term care. Medicaid, however, also plays a very different role as the insurer of most under low-income persons. In addition, it fills in most of the cost sharing requirements for low income elderly eligible for Medicare, that is, it acts as their Medigap plan. This class covers both the Medicaid program and long-term care.

Medicaid: General Background

The Medicaid program does not have nearly as much literature written about it as the Medicare program for several reasons. (Note: When I say Medicaid I include the S-CHIP program as well. The S-CHIP program covers low income children in households whose incomes are too high to be Medicaid eligible.) First, whereas Medicare is a federal program, meaning it has for practical purposes uniform eligibility and benefit coverage throughout the nation, Medicaid is a state administered program, financed through federal matching funds, and the (federal) law offers states many options, including in principle not having a Medicaid program. Although in fact all states have an original Medicaid and an S-CHIP program, not all states have chosen to expand Medicaid to those previously not eligible; see the slides. In short, unlike Medicare, Medicaid differs from state to state, making it difficult to describe the program in a concise way. Moreover, these differences have increased over time because, starting in the Clinton administration, there has been a great expansion of the use of waivers for states to modify their Medicaid programs. In fact, at this time all states have applied for exemptions from certain federal requirements, which have mostly been granted, but the states have differed in what they have applied for and done.

Second, within each state Medicaid was historically three functionally somewhat different programs, one for low-income mothers and children, one for (certain of) the disabled, and one for low-income elderly. To those three we can now add low income persons who were not previously eligible in those states that have elected to expand Medicaid. This latter group is primarily childless adults. In terms of Medicaid dollars, the coverage for the elderly is primarily coverage of chronic long-term care, although as noted above Medicaid also wraps around Medicare to cover cost sharing for acute services for the low income elderly (and, importantly, before Medicare Part D was enacted in 2006 it provided a drug benefit for Medicaid eligibles).

Third, outside analysts have traditionally had a more difficult time obtaining Medicaid claims data than Medicare claims data, in part because each state controls its own data. (It remains harder to obtain and work with Medicaid data than with Medicare data, but Medicaid data availability has improved considerably in recent years.) Complicating the analysis of Medicaid data (relative to Medicare), individuals may move in and out of eligibility monthly, and when they move out there are obviously no Medicaid claims data or other Medicaid administrative data on their behavior. Furthermore, states have now moved most Medicaid eligibles into managed care, where data are scantier.

Finally, and related to the first point above, variation across the states in covered services and eligibility limits the possible analysis; for example, if one state covers chiropractic and another doesn't, not only are there no claims data on chiropractic in the state that doesn't cover it but it is hard to know whether differences in services that might be affected by that coverage (e.g., orthopedic surgeons) are attributable to the coverage difference or some other difference (e.g., physician fee differences). Although Mr. Justice Brandeis famously said that states were the laboratories of democracy, an *n* of 50 (or slightly more because of the District of Columbia, Puerto Rico, and American territories also have Medicaid programs) makes it hard to infer causality in many instances.

Medicaid is certainly a large program, considering the sum of state and federal monies. But because there is less literature and because the issues pertaining to provider reimbursement are analytically similar to the Medicare issues that we have just been through, I have given Medicaid less play than Medicare in the course. For those of you particularly interested in the Medicaid program, an excellent source of information are the reports of the Medicaid and CHIP Payment and Access Commission, or MACPAC (www.macpac.gov), which was established by the ACA. Two other excellent sources of information about Medicaid are the Kaiser Family Foundation website (http://www.kff.org/archive/health.html); click on an index of documents for Medicaid/uninsured and the Commonwealth Fund web site (www.cmwf.org). The CMS website (www.cms.hhs.gov) also has Medicaid data. The slides focus mostly on the issues of financing and co-ordination that Medicaid raises before they turn to issues of long-term care.

Because of the ACA much of the historical literature on Medicaid is no longer relevant. Still, it is what we know about Medicaid today.

Vernon K Smith, Ph.D., Kathleen Gifford, Eileen Ellis, Robin Rudowitz, and Laura Snyder,

"Medicaid in a Historic Time of Transformation: Results from a 50-State Medicaid Budget Survey for State Fiscal Years 2013 and 2014," pp. 1-13. Summarizes Medicaid as the country heads into expansion under the ACA and also much greater use of managed care for the dual eligible population. http://kaiserfamilyfoundation.files.wordpress.com/2013/10/8498-medicaid-in-a-historic-time1.pdf

John K. Iglehart, "Expanding Eligibility, Cutting Costs – a Medicaid Update," New England Journal of Medicine, January 12, 2012, 366(2):105-7. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1113561 A summary of the status of the program.

Medicaid: Acute Care

Benjamin D. Sommers and Arnold M. Epstein, "Why States Are So Miffed About Medicaid – Economics, Politics, and the 'Woodwork Effect', " New England Journal of Medicine, July 14, 2011, 365(2):100-2. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp1104948 The differential geographic and fiscal impact of the ACA's Medicaid expansion.

OPTIONAL:

The Kaiser Commission on Medicaid and the Uninsured, "Medicaid, A Primer, 2013," http://kaiserfamilyfoundation.files.wordpress.com/2010/06/7334-05.pdf. Much of this you may already know, and in any event it is probably more than you wanted to know. I would have preferred a shorter summary, but haven't found one. If you are going to do your testimony on Medicaid, however, this will be useful.

The slide showing that higher Medicaid fees raise MD participation comes from Sandra Decker, "In 2011 Nearly One-Third Of Physicians Said They Would Not Accept New Medicaid Patients, But Rising Fees May Help," Health Affairs, August 2012, 31(8):1673-9. http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/31/8/1673.full.pdf+html

Medicaid includes a Disproportionate Share program, which is an effort to allocate funds to safety net hospitals. As the slides describe, however, from a federal point of view the states have abused this program. What follows are two papers critical of the

Disproportionate Share program.

Katherine Baicker and Douglas Staiger, "Fiscal Shenanigans, Targeted Federal Health Care Funds, and Patient Mortality," Quarterly Journal of Economics, February 2005, 120(1):345-86. http://qje.oxfordjournals.org.ezp-prod1.hul.harvard.edu/content/120/1/345.full.pdf+html Shows variable state diversion of funds; where hospitals actually got more resources, mortality fell.

Mark G. Duggan, "Hospital Ownership and Public Medical Spending," Quarterly Journal of Economics, November 2000, 115(4):1343-73. http://web.ebscohost.com.ezp-prod1.hul.harvard.edu/ehost/pdfviewer/pdfviewer?sid=320e39ee-a190-461b-97f5-0faf65f383e7%40sessionmgr13&vid=4&hid=21 Non-profit and for-profit hospitals skimmed low cost Medicaid eligibles; unlike Baicker and Staiger, Duggan finds no effect on mortality.

As noted above, states have options on who is eligible. The following are papers both an outcome effects of expansion and crowdout effects (dropping of private insurance).

Janet Currie and Jonathan Gruber, "Saving Babies: The Efficacy and Cost of Recent Expansions of Medicaid Eligibility for Pregnant Women," Journal of Political Economy, 1996, 104:1263-1296. http://web.ebscohost.com.ezp-prod1.hul.harvard.edu/ehost/pdfviewer/pdfviewer?vid=3&hid=21&sid=d246bf55-fd64-4141-afbf-e70711455c91%40sessionmgr13 Medicaid expansions appeared to reduce infant mortality, but at a rather high price per year of life saved especially as one moves up the income scale. Other authors, however, do not find an effect; see, for example, the papers by Haas, et al. and Epstein and Newhouse in the supplementary readings.

Janet Currie and Jonathan Gruber, "Health Insurance Eligibility, Utilization of Medical Care, and Child Health," Quarterly Journal of Economics, 1996, 111: 431-466. http://qje.oxfordjournals.org.ezp-prod1.hul.harvard.edu/content/111/2/431.full.pdf More on the same lines.

Leemore Dafny and Jonathan Gruber, "Public Insurance and Child Hospitalizations: Access and Efficiency Effects," Journal of Public Economics, January 2005, 89(1):109-29. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S0047272704000076 Expansion of Medicaid did

not reduce hospitalization of children because of additional outpatient care (what the authors term the "efficiency" effect, but which also can be termed an offset effect) but rather increased it (what the authors term an "access" effect). The increased hospitalizations, however, are concentrated among non-discretionary admissions.

There is a substantial literature on the issue of crowdout or the degree to which expansions of Medicaid cause the rate of private insurance coverage to fall; you can find more on this topic on the supplementary list. Alas, the findings are quite diverse. See also the reading for class 11 and the results for the Oregon Experiment (Class 4), which show relatively little crowdout.

David Cutler and Jonathan Gruber, "Does Public Insurance Crowd Out Private Insurance," Quarterly Journal of Economics, 1996, 111: 391-430. http://qje.oxfordjournals.org.ezp-prod1.hul.harvard.edu/content/111/2/391.full.pdf

Lisa Dubay and Genevieve Kenney, "Did Medicaid Expansions for Pregnant Women Crowd Out Private Coverage?" Health Affairs, 16(1), January/February 1997, pp. 185-193. http://content.healthaffairs.org/content/16/1/185.full.pdf

David Cutler and Jonathan Gruber, "Medicaid and Private Insurance: Evidence and Implications," Health Affairs, 16(1), January/February 1997, pp. 194-200. http://www.economics.harvard.edu/files/faculty/13_Medicaid%20and%20Private%20Insurance.pdf

Medicaid and Medicare: Issues Around Dual Eligibles

The slides deal with issues around financing and co-ordination of services, but if you want more read:

OPTIONAL:

David Grabowski, "Medicare and Medicaid: Conflicting Incentives for Long-Term Care," Milbank Quarterly, 2007, 85(4): 579-610. http://onlinelibrary.wiley.com.ezp-prod1.hul.harvard.edu/doi/10.1111/j.1468-0009.2007.00502.x/pdf An excellent summary of the problems caused by split funding.

Medicare Payment Advisory Commission, "Coordinating the Care of Dual Eligible

Beneficiaries," ch. 5 of Report to the Congress: Aligning Incentives in Medicare, June 2010. http://www.medpac.gov/chapters/Jun10_Ch05.pdf Lays out the issues. A more recent but more specialized piece is Medicare Payment Advisory Commission, "Coordinating Care for Dual Eligible Beneficiaries," ch. 5 of Report to the Congress: Medicare and the Health Delivery System, June 2011. http://www.medpac.gov/chapters/Jun11_Ch05.pdf Note the MACPAC has a considerably more positive view of the role of managed care plans in the care of the dual eligibles than does MedPAC.

Long-Term Care

Financing long-term care is an issue that the ACA took up with the CLASS Act, although the Secretary announced in October 2011 that the CLASS Act provision would not be implemented, and the 2013 fiscal cliff legislation permanently repealed it. With the aging of the baby boomers, however, financing long-term care will only become a more pressing issue. Long-term care insurance, either public or private, differs from health insurance in several respects; it is more oriented toward insuring an estate (hence, more like life insurance) than ensuring the future living standards of the insured (since the individual may well spend the rest of his or her life in institutional care). Also compared with health insurance, a substantially greater component of the cost covers hotel services rather than medical services. Americans have been more willing to see inequalities with respect to hotel services than with respect to medical care (though of course there are inequalities in medical care) and more willing to see the hotel services self-financed. Even more than most of the other topics, the course just scratches the surface of this one. The slides touch on a few more "economic" points, but there are numerous potential topics for Testimony. A web based resource on long term care is http://ltcfocus.org/default.aspx

Jeffrey R. Brown and Amy Finkelstein, "Insuring Long-Term Care in the United States," Journal of Economic Perspectives, Fall 2011, 25(4):119-42. A survey of the policy issues from an economics perspective, focusing on why there is such a small market for private long-term care insurance. The finger points squarely at Medicaid. http://pubs.aeaweb.org.ezp-prod1.hul.harvard.edu/doi/pdfplus/10.1257/jep.25.4.119

OPTIONAL:

Although this is now only of historical interest, for a summary of the ACA's provisions in

long-term care see the Kaiser Family Foundation, "Medicaid Long-Term Services and Supports: Key Changes in the Health Reform Law," June 2010, http://www.kff.org/healthreform/upload/8079.pdf and for a summary of the CLASS Act see http://www.kff.org/healthreform/upload/8069.pdf

The following two articles are a pair of short papers from an entire issue of Health Services Research that is devoted to the Cash & Counseling Demonstration and Evaluation, an effort to move financing policy toward care of the disabled away from a policy of financing services toward a policy of providing the disabled with cash and allowing them to buy services, including services of family members. Accompanying this demonstration was an evaluation that shows (in my view) largely favorable results, more or less in line with what a standard economic model would have predicted. My sense is that this type of program has now become widespread, but I have seen no data. Other papers in the issue of Health Services Research provide more detail.

A.E. Benjamin and Mary L. Fennell, "Putting the Consumer First: An Introduction and Overview," Health Services Research, 42(1), Part II, February 2007, 353-361. http://onlinelibrary.wiley.com.ezp-prod1.hul.harvard.edu/doi/10.1111/j.1475-6773.2006.00694.x/pdf

Peter Kemper, "Commentary: Social Experimentation at its Best: The Cash and Counseling Demonstration and its Implications," Health Services Research, 42(1), Part II, February 2007, 577-586. http://onlinelibrary.wiley.com.ezp-prod1.hul.harvard.edu/doi/10.1111/j.1475-6773.2006.00696.x/pdf

The financial risk of long-term care expenses will become more acute as time passes, something you might find relevant from both a policy and personal point of view. For some data see Anthony Webb and Natalia Zhivan, How Much Is Enough? The Distribution of Lifetime Health Care Costs," CRR WP 2010,February 2010. http://crr.bc.edu/images/stories/Working_Papers/wp_2010-1.pdf.

Another thrust of policy in this domain has been to try to keep people in their homes as long as possible. A classic demonstration in this domain is described in:

Peter Kemper, "The Evaluation of the National Long Term Care Demonstration: Overview of the Findings," Health Services Research, 23(1): 161-174, April 1988.

http://www.ncbi.nlm.nih.gov.ezp-prod1.hul.harvard.edu/pmc/articles/PMC1065495/pdf/hsresearch00089-0167.pdf Showed that increasing community services did not save money but did have benefits for the group that received the services. For more on the study see Weissert and Kane in the supplementary readings, as well as the other papers in the special issue of Health Services Research in which this paper appears.

Amy Finkelstein and Kathleen McGarry, "Multiple Dimensions of Private Information: Evidence from the Long-Term Care Insurance Market," American Economic Review, September 2006, 96(4):938-58. http://pubs.aeaweb.org.ezp-prod1.hul.harvard.edu/doi/pdfplus/10.1257/aer.96.4.938 Showing that there can be some pooling in insurance markets because highly risk averse persons will pay higher loadings.

Jeffrey R. Brown, Nora B. Coe, and Amy Finkelstein, "Medicaid Crowdout of Private Long-Term Care Insurance Demand: Evidence from the Health and Retirement Survey," in Tax Policy and the Economy, vol. 21, ed. James Poterba; Cambridge: MIT Press, 2007. Available from Harvard websites as http://www.nber.org.ezp-prod1.hul.harvard.edu/papers/w12536. Attributes low demand for private long-term care insurance to Medicaid crowdout, but also estimates that if all states had as restrictive an asset test as the most restrictive state, penetration would only rise from 9 to 12 percent. Think about why crowdout by Medicaid appears to be such a much larger factor in the demand for private long-term care insurance than for private health insurance.

Jeffrey R. Brown and Amy Finkelstein, "Why Is the Market for Long-Term Care Insurance So Small? "Journal of Public Economics, 2007, 91(10):1967-91. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S0047272707000321 Finds large differences in loadings for men and women (much lower for women) but no corresponding coverage differences; they then point to Medicaid crowdout as an explanation, since women are more likely to use Medicaid. See also the Pauly paper on Medicaid crowdout on the supplementary reading list.

Jeffrey R. Brown and Amy Finkelstein, "The Interaction of Public and Private Insurance: Medicaid and the Long-Term Care Insurance Market," American Economic Review, June 2008, 98(3):1083-1102. http://pubs.aeaweb.org.ezp-prod1.hul.harvard.edu/doi/pdfplus/10.1257/aer.98.3.1083 Estimates that Medicaid crowds

out private insurance for about two-thirds of the population.

Edward C. Norton, "Incentive Regulation of Nursing Homes," Journal of Health Economics, 11(2), August 1992, 105-128. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/0167629692900305 Changing the basis of payment to something approximating pay-for-performance appeared to have desirable effects.

Brant E. Fries, Don P. Schneider, William J. Foley, Marie Gavazzi, Robert Burke, and Elizabeth Cornelius, "Refining a Case-Mix Measure for Nursing Homes: Resource Utilization Groups (RUG-III)," Medical Care, 32(7), July 1994, pp. 668-685. http://www.jstor.org.ezp-prod1.hul.harvard.edu/stable/10.2307/3766161 Basic descriptive article on RUGs, the basis for payment used by most state programs (and now used for the Medicare SNF benefit)

Edward Norton, "Long-Term Care," in Handbook of Health Economics, eds. Anthony J. Culyer and Joseph P. Newhouse; North-Holland, 2000. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/S157400640080030X A now dated survey of the literature from an economics perspective.

The Pepper Commission Report, available at: http://www.allhealth.org/publications/Uninsured/Pepper_Commission_Final_Report_73.pdf Before the ACA the last serious effort at the federal level to deal with long-term care insurance. It is also interesting to look at the remainder of the report to see how many issues from the late 1980s are still on the policy agenda.

CLASS 22 - PHYSICIAN WORKFORCE ISSUES AND SOME CLOSING THOUGHTS (April 22)

Physician Workforce

The slides present an economic framework for thinking about workforce issues with respect to both the total number of physicians and their specialty distribution. From this framework I conclude that workforce planning as usually conceived is virtually an impossible problem in practice, a view I think is consistent with the experience in this domain, which I sketch below. The possibility of substituting lower level personnel for physicians was first put

in an economic framework by Uwe Reinhardt in his PhD dissertation in the late 1960s. (It is described in Reinhardt's paper on the Optional list.) Reinhardt's early work emphasized the possibility of substituting allied health personnel such as physician assistants and nurses for physicians in producing medical services. Although there has been some substitution (e. g., advanced practice nurses, including nurse midwives and nurse anesthetists), the medical profession has mostly been able to maintain entry barriers by lobbying at the state level for practice restrictions by maintaining scope of practice laws. Surprisingly, much of the subsequent literature on manpower policy has ignored substitution possibilities, although they are now receiving more mentions as a means for addressing the shortage of primary care physicians (PCP's).

The slides also present an economic framework for geographic distribution. Current US policy is based on the view that the market fails; I do not believe the market fails, as is made clear in the reading below (although one may not like the results the market produces). The slides also cover why the view developed that the market fails; I think it has persisted largely for reasons of political economy.

The slides also give one person's view (mine ☺) of the history of the workforce issue. In 1968, based in part on an analysis by the 1967 National Health Manpower Commission that declared there was a shortage of physicians, the US began to subsidize the construction of new medical schools and offered financial incentives to existing medical schools to increase the number of students enrolled (PL 90-490, the Health Manpower Act of 1968). (An earlier 1963 Act was the first federal aid for medical schools, but it was modest by the standards of the 1968 act.) The result was a doubling of the number of US medical school graduates over a period of about eight years, with consequences that remain to this day.

Only a few years later, in the early 1970s, the focus of the workforce debate changed from a presumption of a general shortage to a view that total numbers were adequate, even though the stock of physicians had little changed. Although we were thought to have enough (or would have enough in the future) physicians in total, the new view was that physicians were maldistributed by specialty (not enough primary care physicians; this argument can also be found in the Health Manpower Commission Report) and geography (too many in metropolitan areas, too few in rural areas). The two issues of specialty and geographic maldistribution have echoed through the debate ever since. The Council on Graduate Medical Education (COGME), a federally appointed group, for many years recommended in its annual reports that 50 percent of American physicians should be generalists (historically

this number has been and remains under 40 percent; see the slides), although starting in its 2005 report COGME backed away from this view. In response to the concerns about geographic distribution, the federal government has implemented relatively small scale interventions (at least by comparison with federal payments for physician services in Medicare and Medicaid), such as the National Health Service Corps and modestly higher Medicare payments in "shortage" areas.

The generalist-specialist debate also surfaced in the ACA (as it did in the failed 1993 Clinton reform) as a concern over whether there will be enough primary care physicians if insurance coverage is substantially expanded. There were echoes of this controversy in the Cooper-Dartmouth controversy (class 5).

Returning to the total numbers issue, by the late 1970s the issue took another turn. Even though the doubling of the flow of medical school output had not yet much affected the total stock of physicians (the initial larger cohorts were just coming out of residency, although a substantial number of international medical school graduates were starting to appear on the scene giving rise to another controversy in this domain about international medical graduates and the brain drain), the Graduate Medical Education National Advisory Committee (GMENAC), using very different analytical methods from the 1967 National Commission, concluded there would be a growing physician surplus that would become very large by the year 2000. (Images of physicians having to drive taxicabs to earn a living were bandied about in cocktail party conversations.) The surplus view propounded by GMENAC dominated policy thinking until sometime in the 1990s. There were some dissenting voices in the 1980s, but they did not much affect policy. (Cooper, et al., below attribute the ending of federal subsidies for undergraduate medical education to the GMENAC analysis predicting a surplus of MDs, but I think it is fairer to attribute it to the general hostile attitude of the Reagan administration to discretionary domestic spending.) Starting in the mid-1990s, with no sign of a physician surplus on the horizon, some started talking again about a physician shortage, and even a shortage of specialists. If anything, that view has become more widespread, and, as you can see in the slides, both allopathic and osteopathic school enrollments have started to rise in recent years and a few new schools have opened.

The aficionado and historian in this area might want to read the reports of the 1967 Commission and the GMENAC, mostly to see what passed for policy analysis in another era, but they are not on the web as best I can tell and so not very accessible today. In the bibliographic reading I give you some cites and some places on the web where you can get a

sense of this debate. I go into this extended history in part to give you a flavor of methods in policy analysis studies and how they can influence conclusions and policy.

Although this class is on the physician workforce, there is also a large literature on nurses and nursing labor markets, some of which is pertinent to minimum nurse staffing requirements in some jurisdictions, most notably California. Limitations of time have led me to leave that important topic out of the course. For those interested, I put one brief reading in the Optional reading suggesting that the forecasting ability in nursing labor markets is no better than in physician labor markets.

David Blumenthal, "New Steam from an Old Cauldron – The Physician Supply Debate," New England Journal of Medicine, 350(17), April 22, 2004, pp. 1780-1787. http://content.nejm.org.ezp1.harvard.edu/cgi/reprint/350/17/1780.pdf An excellent historical overview and analysis, although in my view it gives too short shrift to the role of the 1967 National Health Manpower Commission in actually influencing policy. Blumenthal, a former MD-MPP, is now the President of the Commonwealth Fund.

Richard A. Cooper, Thomas E. Getzen, Heather J. McKee, and Prakash Laud, "Economic and Demographic Trends Signal an Impending Physician Shortage," Health Affairs, January/February 2002, 22(1): 140-154. http://search.epnet.com.ezp1.harvard.edu/login.aspx?direct=true&db=aph&an=6115974&loginpage=Login.asp&scope=site Cooper is a leading current proponent of the view that there is not a physician surplus. If you want to get a flavor of some of the "steam" of Blumenthal's title, read some of the "Perspectives" that immediately follow Cooper et al. in the same issue. Cooper, et al.'s methods are in the same spirit as the 1967 Commission and the Schwartz, Sloan, and Mendelsohn paper in the 1988 NEJM that is on the bibliographic list in that all of them rely on projecting historical trends in demand forward.

The next two articles highlight a related debate; whether there should be workforce policy or attempts to intervene in the market at all.

Kevin Grumbach, "Fighting Hand-to-Hand Over Physician Workforce Policy," Health Affairs, September/October 2002, 21(5), pp. 13-27. http://search.epnet.com.ezp1.harvard.edu/login.aspx?direct=true&db=aph&an=9580856&loginpage=Login.asp&scope=site Grumbach advocates workforce planning and recounts the history of this issue in the 20th century. He does predict that the US is headed back to what he

terms a "retail" market for physician labor; a decade later I don't think many would agree with him on that point. Note also that he says teaching hospitals are "utterly dependent" on Medicare GME dollars to fund residencies (see class 17).

Uwe Reinhardt, "Dreaming the American Dream: Once More Around on Physician Workforce Policy," Health Affairs, September/October 2002, 21(5), pp. 28-32. http://search.epnet.com.ezp1.harvard.edu/login.aspx?direct=true&db=aph&an=9580857&loginpage=Login.asp&scope=site A response to Grumbach; Reinhardt argues that with no overall policy control of demand in the US (but is that now on the horizon?) that workforce control is undesirable.

OPTIONAL:

John K. Iglehart, "The Uncertain Future of Medicare and Graduate Medical Education," New England Journal of Medicine, October 6, 2011, 365(14):1340-5. http://www.nejm.org/doi/pdf/10.1056/NEJMhpr1107519 Reviews the recent history of Medicare's graduate medical education payments and the (as of the fall 2011) legislative debate over them and future health care manpower. These payments will undoubtedly come up in the budget debates. This could have been assigned for class 17 as well.

David I. Auerbach, Douglas O. Staiger, Ulrike Muench, and Peter I. Buerhaus, "The Nursing Workforce in an Era of Health Care Reform," New England Journal of Medicine, April 18, 2013, 368(16):1470-2. Predictions of nursing shortages do not seem to be coming true.

Specialty Distribution:

David A. Kindig, James M. Cultice, and Fitzhugh Mullan, "The Elusive Generalist Physician: Can We Reach a 50% Goal?" JAMA, September 1, 1993, 270, pp. 1069-1073. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/270/9/1069.short A view, written during the earlier Clinton reform debate, that there are too few generalists, which remains the dominant view.

Richard A. Cooper, "Seeking a Balanced Physician Workforce for the 21st Century," JAMA, 272, September 7, 1994, 680-687. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/272/9/680.short A more skeptical view on specialty

distribution. There is also the debate on this issue that we covered in class 5.

OPTIONAL:

Sean Nicholson, "Medical Career Choices and Rates of Return," in Incentives and Choice in Health Care, eds. Frank A. Sloan and Hirschel Kasper; Cambridge: MIT Press, 2008. Frames the issue in a standard labor economics framework.

Gary S. Becker and Kevin M. Murphy, "The Division of Labor, Co-ordination Costs, and Knowledge," Quarterly Journal of Economics, 107(4), November 1992, pp. 1137-1160. http://web.ebscohost.com.ezp-prod1.hul.harvard.edu/ehost/pdfviewer/pdfviewer?sid=3b93104e-8dcd-4e01-b04f-a05ef36d9d25%40sessionmgr4&vid=2&hid=21 I put this paper here because the primary care physician has the role of co-ordination, and the difficulty and cost of that role clearly increases with the stock of knowledge. In fact, the logic of this paper is that there is an optimal degree of specialization, an argument that has to my knowledge not surfaced in the health services research or manpower planning debate at all.

Actual empirical work on the value of specialization is conflicting:

John Z. Ayanian, Mary Beth Landrum, Edward Guadagnoli, and Peter Gaccione, "Specialty of Ambulatory Care Physicians and Mortality among Elderly Patients after Myocardial Infarction," New England Journal of Medicine, 2002, 347(21):1678-86. Shows ambulatory treatment by cardiologists following a heart attack reduced mortality; i.e., in this case treatment by a specialist was better care. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/pdf/10.1056/NEJMsa020080

Peter J. Pronovost, Derek C. Angus, Todd Dorman, Karen A. Robinson, Tony T. Dremsizov, Tammy L. Young, "Physician Staffing Patterns and Clinical Outcomes in Critically Ill Patients: A Systematic Review," JAMA, November 6, 2002, 288(17):2151-62. Specialists (intensivists) in ICU's reduce mortality 30-40%. http://jama.ama-assn.org.ezp-prod1.hul.harvard.edu/content/288/17/2151

Mitchell M. Levy, John Rapoport, Stanley Lemeshow, Donald B. Chalfin, Gary Phillips, and Marion Danis, "Association between Critical Care Physician Management and Patient

Mortality in the Intensive Care Unit," Annals of Internal Medicine, June 3, 2008, 148(11):801-9. Specialists in ICU's increase mortality, contrary to Provonost, et al.. http://www.annals.org.ezp-prod1.hul.harvard.edu/content/148/11/801.full

Geographic Distribution:

Meredith Rosenthal, Alan Zaslavsky, and Joseph P. Newhouse, "The Geographic Distribution of Physicians Revisited," Health Services Research, December 2005, 40(6, Part I):1931-52. http://onlinelibrary.wiley.com.ezp-prod1.hul.harvard.edu/doi/10.1111/j.1475-6773.2005.00440.x/pdf My views on the geographic distribution issue, which are contrary to almost all of the literature, which favors the maldistribution and market failure notions. The bibliographic reading list gives some of those papers. The papers in the literature generally rely upon physician/population ratios by county or groupings of counties to demonstrate maldistribution. As shown in this paper, such indicators are seriously flawed as measures of access to physician services. Interestingly, Grumbach's paper on the reading list above, which clearly is unsympathetic to a market-based approach to workforce, argues that the market does, and within reasonably broad limits should, determine geographic distribution.

OPTIONAL:

Miron Stano, "An Analysis of the Evidence on Competition in the Physician Services Markets," Journal of Health Economics, September 1985, 4:197-211. http://www.sciencedirect.com.ezp-prod1.hul.harvard.edu/science/article/pii/0167629685900293 Physicians seem to distribute themselves more widely with more physicians, consistent with standard location theory.

Catherine Dower and Edward O'Neill, "Primary Health Care Workforce in the United States," Princeton: Robert Wood Johnson Foundation, 2011. http://www.rwjf.org/files/research/070811.policysynthesis.workforce.rpt.pdf. A relatively recent statement of what I take to be the mainstream view on this issue. Their main conclusion (the bold is in the original) is: "**Many individuals in the United States—particularly those in rural, frontier or underserved communities—experience challenges to obtaining primary health care.** Indeed, the maldistribution of primary care providers is a well-documented challenge for some regions and some populations, including children. …" If one reads through their report, however, the few cites they have for this point are consistent with standard location theory.

Closing Thoughts:

David Parkin, John Appleby, and Alan Maynard, "Economics: The Biggest Fraud Ever Perpetrated on the World?" Lancet, published on line October 2, 2013, pp. e11-e15. Builds off a series of tweets from Richard Horton, a physician and the editor of Lancet, that give the view many physicians and others have of economics. The tweets are in a box that opens the paper ("Economics, second only to 'management', may just be the biggest fraud ever perpetrated on the world"). Parkin and his colleagues present a brief for the defense. Although I hope the course has convinced you of the value of economic thinking and analysis in health care, I have put this paper at the close of the course to give you a perspective on the role of economics in health care.
http://ac.els-cdn.com.ezp-prod1.hul.harvard.edu/S0140673613611782/1-s2.0-S0140673613611782-main.pdf?_tid=4cac9fee-7c62-11e3-9c7f-00000aab0f26&acdnat=1389624918_e00071e6b37991be0dcda432bc6353b8

Meredith B. Rosenthal, "What Works in Market-Oriented Health Policy?" New England Journal of Medicine, May 21, 2009;360(21):2157-60. http://www.nejm.org.ezp-prod1.hul.harvard.edu/doi/full/10.1056/NEJMp0903166 Summarizes demand-side cost and information strategies as well as reimbursement strategies. I think she underplays the potential for cost sharing to reduce iatrogenic services, but otherwise an overview of much of the course.

Joseph Antos, John Bertko, Michael Chernew, David Cutler, Dana Goldman, Mark McClellan, Elizabeth McGlynn, Mark Pauly, Leonard Schaeffer, and Stephen Shortell, "Bending the Curve: Effective Steps to Address Long-Term Healthcare Spending Growth," American Journal of Managed Care, October 2009, 15(10):676-80. Numerous sensible recommendations from 10 distinguished (and bipartisan) experts on reducing the rate of cost growth, though they do not take up the question of the potential magnitude and timing of cost reductions if their recommendations were implemented. Although they don't say it, I think they believe there is a synergistic effect on cost across the recommendations.
http://www.ajmc.com/media/pdf/AJMC_09Oct_Antos_Reprt676to80.pdf?utm_source=Listrak&utm_medium=Email&utm_term=/media/pdf/AJMC_09Oct_Antos_Reprt676to80.pdf&utm_content=newhouse@hcp.med.harvard.edu&utm_campaign=AJMC+e-Table+of+Contents+(October+2009)

Katherine Baicker and Amitabh Chandra, "Myths And Misconceptions About U.S. Health Insurance," Health Affairs, November/December 2008, 27(6):w533-43.
http://content.healthaffairs.org.ezp-prod1.hul.harvard.edu/content/27/6/w533.full.pdf+html
If you absorbed the course, this should be mostly familiar territory. If it isn't, you get a second bite at the apple.

"CLASSES"23 AND 24 - TESTIMONY 2 (April 24 and April 29)

"CLASS" 25 - IN CLASS EXAMINATION (May 1)