HOMEWORK ASSIGNMENT NO. 4

THE CONCEPTS OF "EFFICIENCY" AND "ECONOMIC WELFARE" IN THE CONTEXT OF HEALTH CARE

PREAMBLE

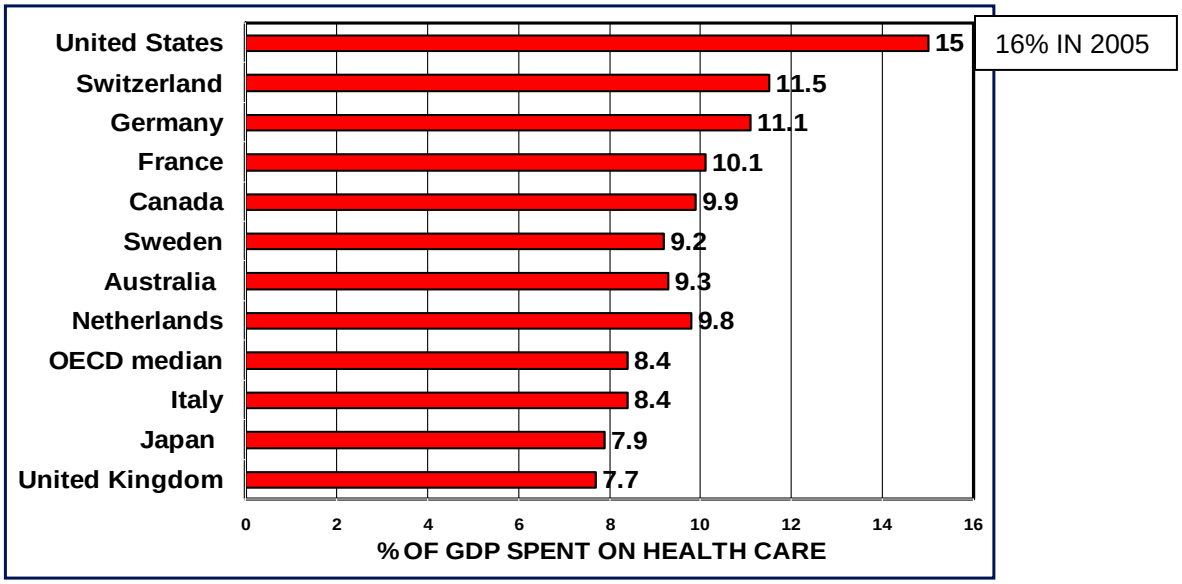
In this homework assignment, you are invited to think whether the individual consumers' demand curve for health care and the horizontal summation of such curves into the market demand for health care ought to be viewed as reliable guides to the social value of health care. You will do this with the help of a somewhat stylized model, designed to bring out the issues clearly, but based on current health policy in the real world. To describe that world to you, we begin with a somewhat lengthy description of the policy issues at hand. Thereafter we present the model and the questions based thereon. So, bear with us on the length of the assignment.

THE POLICY CONTEXT

Although, unlike all other industrialized nations, the United States does not have a universal health insurance system providing coverage to every resident and, in fact, leaves some 45 million mainly low-income Americans without health insurance at any one time, the country does have two large, government-run health insurance programs: (1) the federal Medicare program for Americans aged 65 or older and (2) the federal-state Medicaid program, mainly for children and their mothers in very low-income families, the blind, the disabled and pauperized elderly Americans who are also entitled to Medicare (which does not cover many services needed by the elderly). Jointly, these two government programs account for about 40% of the $1.8 trillion or so the nation now spends on health care. We note in passing that this large overall level of national health spending is, in fact, unrivaled in the world, as is clear from the following two graphs, based on comparable data assembled by the Organization for Economic Cooperation and Economic Development (OECD).

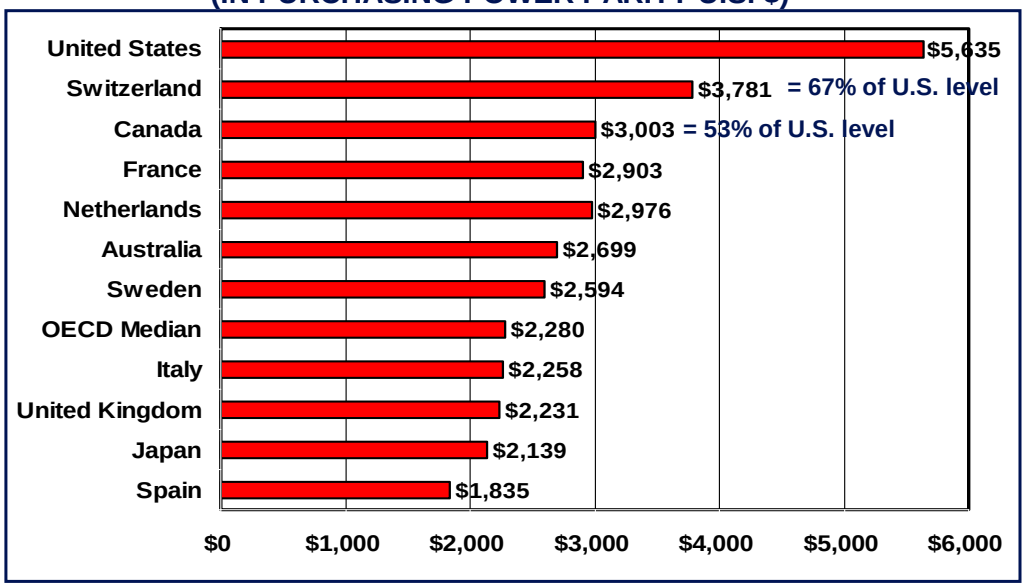
HEALTH SPENDING AS % OF GDP SELECTED OECD COUNTRIES, 2003

(IN PURCHASING POWER PARITY INTERNATIONAL DOLLARS)



SOURCE: OECD DATA 2004

HEALTH SPENDING PER CAPITA, SELECTED OECD COUNTRIES, 2003
(IN PURCHASING POWER PARITY U.S. $)



SOURCE: OECD DATA 2004

In an editorial entitled "Gammon's Law Points to Health-Care Solution" that was published by the prestigious The Wall Street Journal (November 12, 1991), Nobel Laureate economist Milton Friedman, formerly of the University of Chicago and now at the Hoover Institute of Stanford University, sharply attacked the government-run Medicare program for the elderly and the Medicaid program for the disabled and the poor. He concluded thus:

> *The inefficiency, high cost and inequitable character of our medical system can be fundamentally remedied in only one way: by moving in the other direction, toward re-privatizing medical care. ... The reform has two major steps:* ***(1) End both Medicare and Medicaid and replace them with a requirement that every U.S. family unit have a major medical insurance policy with a high deductible, say $ 20,000 a year or 30% of the unit's income during the prior two years, whichever is lower. (2) End the tax exemption of employer provided medical care. ... Each individual or family would, of course, be free to buy supplementary insurance, if it so desired (Emphasis added).***

The "deductible" in a health insurance policy is the annual amount the family must finance with its own resources before any insurance coverage begins. To put Friedman's policy recommendation into perspective, note that in 1990, at about the time Friedman formulated his recommendation, median pretax income in the United States was $29,943 for all households and $35,353 for "families," that is, for households with two or more members. If we assume that Friedman meant to base the recommended deductible not on the sum of the family's income during the past two years but only the average annual family income over the prior two years, then that deductible in 1990 would have been $ 10,500 per year for a family with median pretax income of $ 35,353. The outlays on health care of a relatively health family probably would not have reached that deductible. A family stricken with serious illness almost surely would have had to pay that much out of pocket before insurance coverage would set in. In addition, of course, each family would have to pay the premium for the catastrophic insurance policy.

Professor Friedman injected his editorial into the presidential election campaign of 1991-92, during which health policy had moved to center stage. He acknowledged the contribution to his editorial by fellow Nobel Laureate economist Gary S. Becker of the University of Chicago and by economist Thomas Moore, Ph.D., formerly of President Reagan's Council of Economics Advisors and now at the Hoover Institution of Stanford University. In short, we may regard the editorial as a significant statement made by prominent American economists who sought to influence with their normative analysis both the election and the path of public health policy.

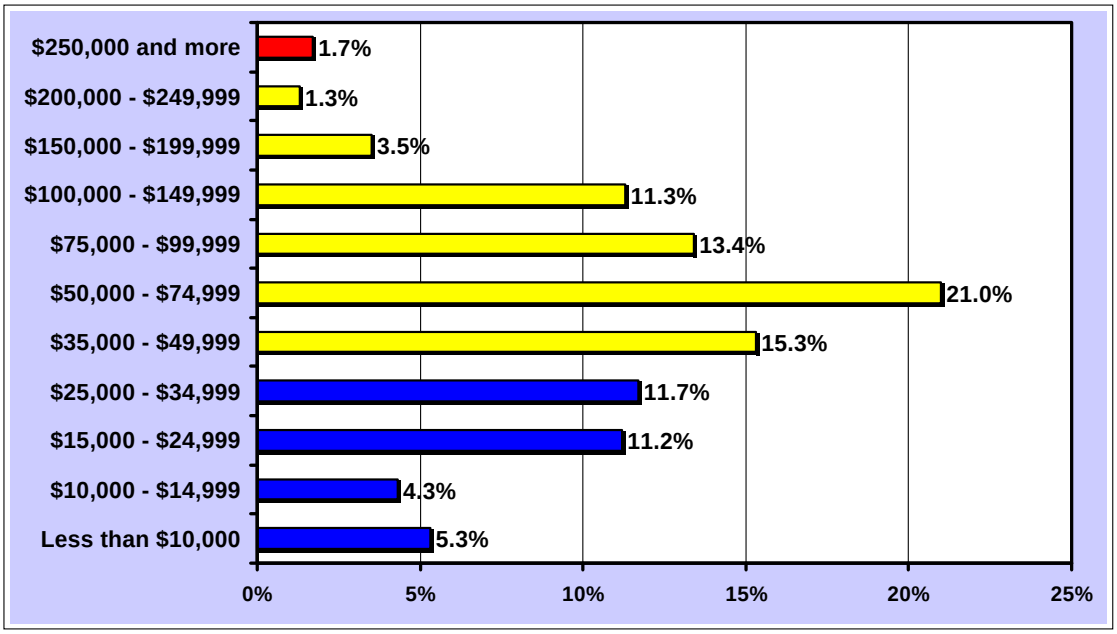
Although Professor Friedman's policy prescription did not gain traction in the early 1990s, it has done so in the meantime in what is now known as "Consumer Directed Health Care" (CDHC. In essence, CHDC is a construct that coupled health insurance with very high cost sharing. For example, a family might be required to pay the first $5,000 of medical bills in a year out of pocket and, thereafter, pay out of pocket 20% of every medical bill, until the family's total out-of-pocket health spending for the year has reached $10,000. For medical bills in excess of $10,000 a year, the insurance company would then pay 100% of the bills. To help families defray these huge out of pocket expenditures, they would be allowed to deposit into a so-called Health Savings Account (HAS) up to $10,000 a year out of pretax income. Thus, for a high-income family in a 50% marginal income-tax bracket, this $10,000 deposit would entail an after-tax sacrifice of only $5,000. On the other hand, for a low-income family in an only 20% marginal income-tax bracket, the after tax sacrifice for the $10,000 deposit would be $8,000. In effect, then, CDHC would make health care cheaper for high income families than for low-income families.

To see what such policies look like, you may want to click on website eHealthInsurance.com, an electronic farmers' market, so to speak, for health insurance policies. You'll be asked to describe your family and give the zip code of your residence. Then the website will feature dozens of policies meeting those specifications. You can click on any four of them to get a neat side-by-side comparison of policies. In the examples shown on the next page, for example, I made myself a 35-year old single mother with three children under age 10 living in Dallas, Texas.

At this time, the CDHC model has become the nouvelle vague of American health policy. It has been endorsed by the Administration and by many members of Congress, and it has become the new, new thing on the health-care conference circuit. This homework assignment therefore is what policy wonks would call highly policy relevant.

Once again, to set these ideas in perspective, we note that, according to Business Week (May 4, 2004) one in four workers in the United States earned $18,000 or less in 2004. They are the people who serve you at the huge discount department stores, in restaurants, in taxis, etc. The income distribution for the United States in 2002 is shown below.

DISTRIBUTION OF FAMILY INCOME, UNITED STATES, 2002
Average income $66,970 (Median about $50,000)



SOURCE: Bureau of the Census website http://ferret.bls.census.gov/macro/032003/faminc.

eHealthInsurance
Over 500,000 health insurance customers

HOME | HEALTH INSURANCE | LIFE INSURANCE | DENTAL PRODUCTS | HELP CENTER

Individual & Family Plans | Small Business Plans | Short-term Plans | Student Plans

Insurance Plan Benefit Details and Comparison

Insurance Plan Summary

	UNICARE Life & Health Insurance Company	Blue Cross and Blue Shield of Texas, A Division OF Health Care Service Corporation	Blue Cross and Blue Shield of Texas, A Division OF Health Care Service Corporation	Blue Cross and Blue Shield of Texas, A Division OF Health Care Service Corporation
Company	UNICARE.	BlueCross BlueShield of Texas	BlueCross BlueShield of Texas	BlueCross BlueShield of Texas
Plan Name	HSA compatible 3	PPO Select Saver	PPO Select Saver	PPO Select Saver
Policy Form Number	TXIHDHPWP0904/TXIAPL1203	PPO-SELSAVER	PPO-SELSAVER	PPO-SELSAVER
Plan Type	PPO	PPO	PPO	PPO
Estimated Monthly Cost	$129.00	$152.00	$207.00	$328.00
Deductible	$10,000	$5,000 individual/$15,000 family	$2,500 individual/$7,500 family	$1,000 individual/$3,000 family
Coinsurance	0%	25%	25%	25%
Out-of-Pocket Limit	$10,000	$8,000 individual/$24,000 family	$5,500 individual/$16,500 family	$4,000 individual/$12,000 family
Lifetime Maximum	$5 Million	$5,000,000	$5,000,000	$5,000,000

Insurance Plan Summary

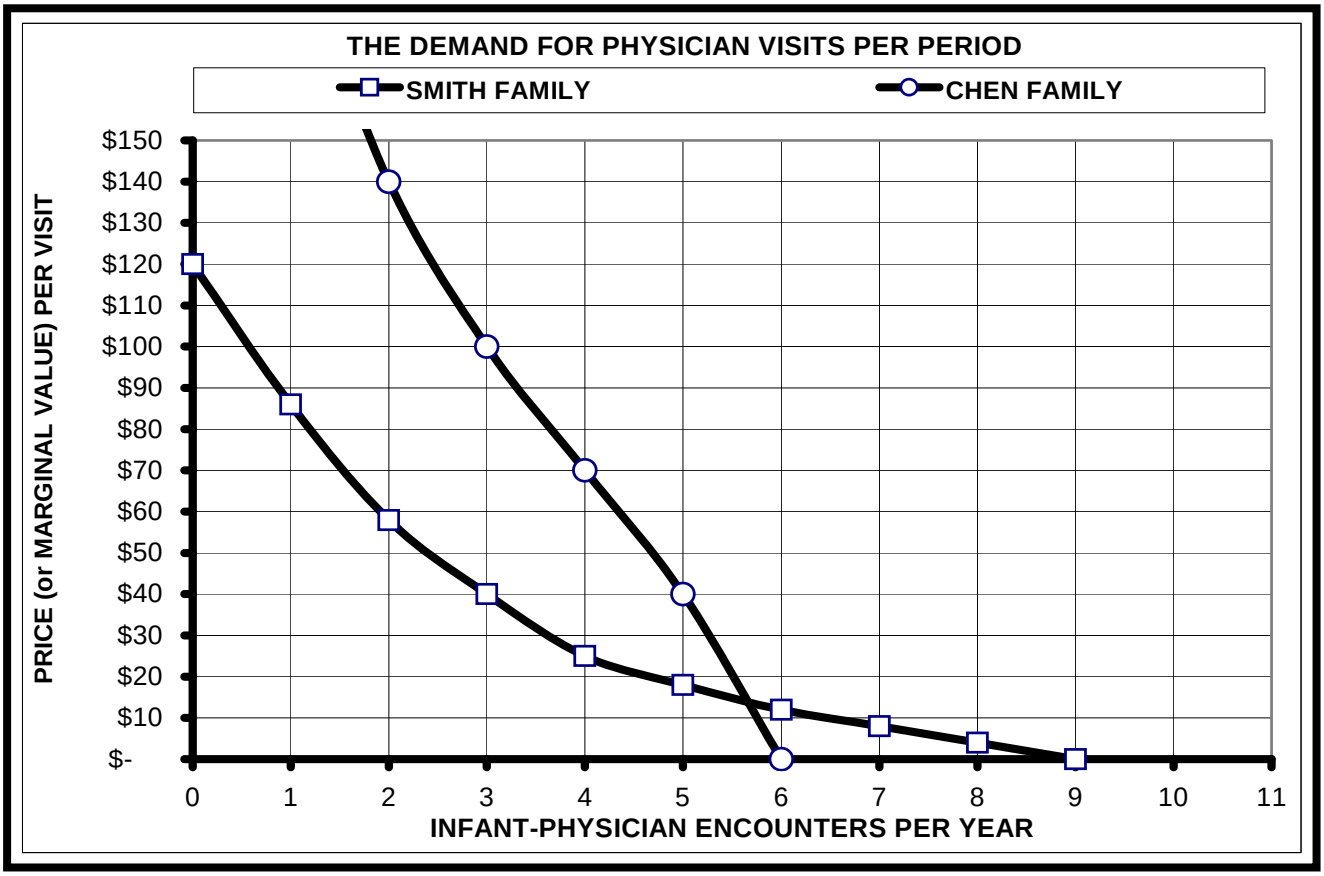
	Blue Cross and Blue Shield of Texas, A Division OF Health Care Service Corporation	Humana Insurance Company	Blue Cross and Blue Shield of Texas, A Division OF Health Care Service Corporation	Blue Cross and Blue Shield of Texas, A Division OF Health Care Service Corporation
Company	BlueCross BlueShield of Texas	HUMANA.	BlueCross BlueShield of Texas	BlueCross BlueShield of Texas
Plan Name	PPO Select Saver	HumanaOne Individual Health Plan	Select Blue Advantage	PPO Select Saver
Policy Form Number	PPO-SELSAVER	TX-70129 COVER 8/2002	PPO-SEL-BLUE-ADV	PPO-SELSAVER
Plan Type	PPO	PPO	PPO	PPO
Estimated Monthly Cost	$152.00	$226.44	$328.00	$328.00
Deductible	$5,000 individual/$15,000 family	$5,000 Individual/ $10,000 Family (Not Aggregate)	$5,000 individual/$15,000 family	$1,000 individual/$3,000 family
Coinsurance	25%	20% after deductible	15%	25%
Out-of-Pocket Limit	$8,000 individual/$24,000 family	$2,000 Single (deductible separate)/no family limit	$10,000 individual/ $25,000 family	$4,000 individual/$12,000 family
Lifetime Maximum	$5,000,000	$5 Million per covered person	$5,000,000	$5,000,000

THE MODEL FOR THIS EXERCISE

Recall that Professor Friedman labeled CDHC more “efficient” than, say, the government-run Medicaid program. To appreciate better the use of the word "efficiency" in this context, consider now two families, the Chens and the Smiths. Assume that the Chens are wealthy and the Smiths are poor. Into each family there has just been born a baby. As it happens, Baby Chen is perfectly healthy. Baby Smith, alas, is somewhat sickly. Both families live in Professor Friedman's ideal world, that is, neither family has health insurance covering visits to the physician's office, although they may have the kind of catastrophic coverage he would allow above the deductible of 30 percent of income.

Assume that the diagram shown below depicts these two families' "marginal-value curves" for visits by the infant with a physician per year (hereafter referred to simply as "visits"). Recall that we can also refer to these "marginal value curves" as "demand curves." Yet another name for them would be "willingness-to-pay curves." They are the curves from which economists infer the social valuation of the things being represented on the horizontal axis. We assume, plausibly, that if their incomes and the health status of their babies had been identical, the two families' marginal-value curves for visits would have been close to identical as well—that is, that they would have roughly the same "taste" for health care. **The two families' "marginal-value curves" in the diagram differ mainly because their incomes differ, as does the health status of their babies.**

With these preliminaries, let us now turn to the set of questions that comprise this homework assignment. Please detach the QUESTION part of this write up starting on the next page, enter your and your preceptors name at the top of the page and answer all questions in the space provided in the body of the text. Please write neatly. You may want to clip in additional pages or graphs. For convenience, we reproduce the graph below once again at the end, so that you may detach it and print it out several times for use in part of your answers.



HERE IS THE ANSWER KEY SENT TO STUDENTS, ALONG WITH THE SERIES OF QUESTIONS THEY WERE ASKED TO ANSWER. THE ANSWER KEY STARTS WITH SOME PRELIMINARY OBSERVATIONS ON THE PURPOSEOF THIS HOMEWORK ASSIGNMENT.

GENERAL OBSERVATIONS

The purpose of this assignment – given in lieu of a lecture – has NOT been to force upon you a particular ethic – an "ideology," if you wish. You should have been able to answer all questions without adopting a particular distributive ethic.

Rather, the objective has been to alert you to the fact that, at the core of the seemingly-value free, seemingly scientifically rigorous economic "welfare" analysis" lies a distinct moral doctrine, and it is this:

THE ETHICAL DOCTRINE BURIED IN ECONOMIC WELFARE ANALYSIS

Scarce resources in society should be allocated to those willing and able to bid the most for them, where the bidding is done with money or some other acceptable medium of exchange.

Rarely is any thought given in welfare economics to the question how the various bidders in the market place came by the money chits with which they bid. By and large, economists view that issue as outside their purview. Among non-economists, however, the answer to that question matters, often crucially.

To illustrate, American economists, among them the well-known Harvard economist Jeffrey Sachs, had a heavy hand in helping to rearrange economic privilege in the Russian economy after the collapse of the Soviet empire. It is well known that, abetted by Western investment bankers, a cadre of fast-footed people – now very wealthy tycoons -- amassed vast segments of hitherto state-owned property for very little of their own money, in a process that is widely acknowledged to have been highly dubious. Yet the position of many economists and of the media pundits they inspire has been that we should let bygones be bygones and that, once private property rights had been established, by whatever shady process, one should now let private markets run their course to allocate economic privilege in the Russian economy. That dictum will, of course, give the tycoons who amassed their wealth by dubious processes not only much economic privilege, but inevitably also much political power. All that may make perfect sense to many American economists. It may not to the Russian people.

As to the matter of ideology concerning health care – the focus of this exercise -- different people can differ honorably on the ethical precepts that should be imposed upon the distribution of health care in a nation. To illustrate, in an article published in the Journal of the American Medical Association (JAMA) of November 5, 1997, I had raised in passing the following question:

> *"As a matter of national policy, and to the extent that a health system can make it possible, should the child of a poor American family have the same chance of avoiding preventable illness or of being cured from a given illness as does the child of a rich American family?"*

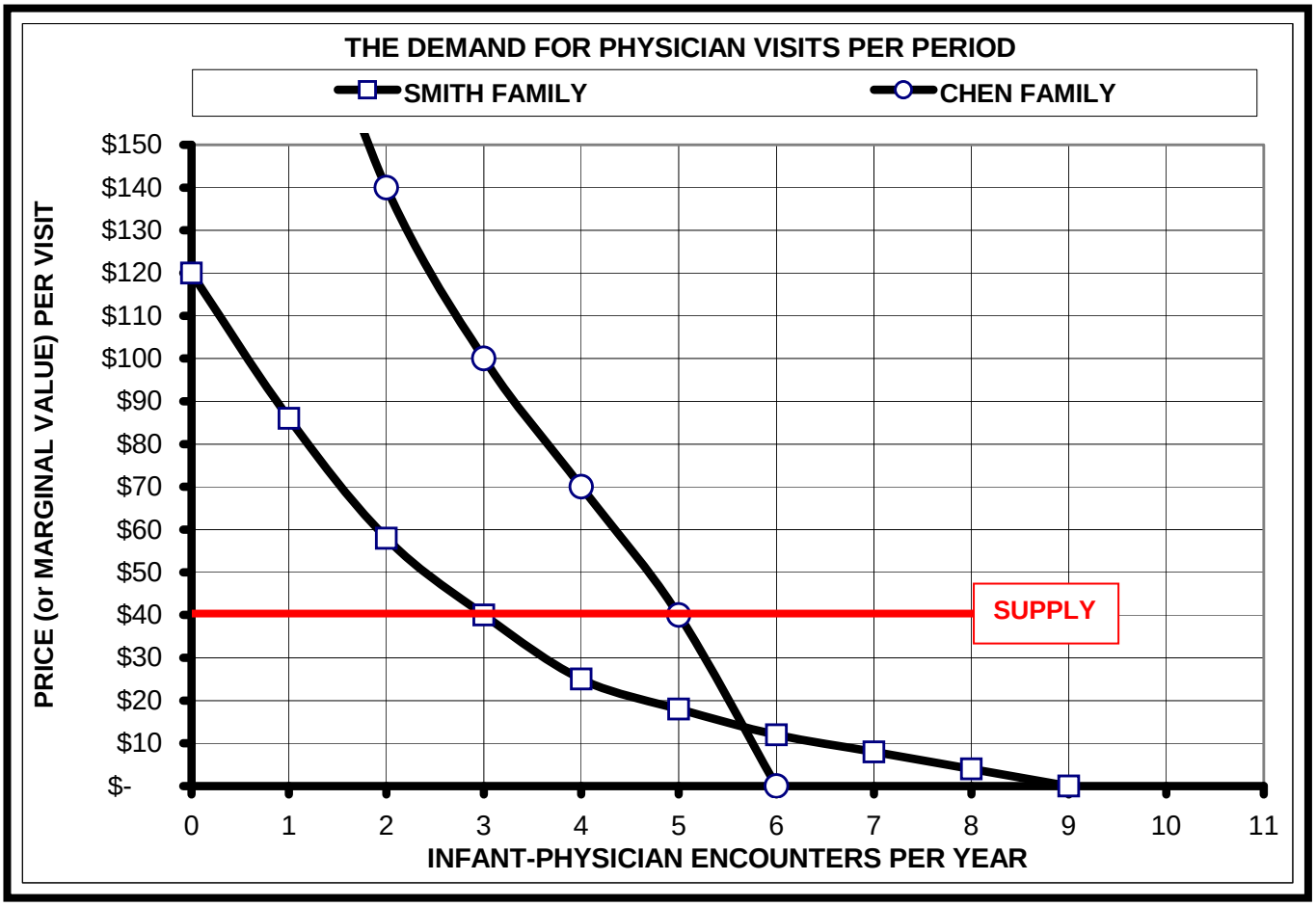
Of the several readers who responded to that question, only one, Richard A. Epstein, LLB, Distinguished Professor of Law of the University of Chicago, answered it forthrightly. He wrote:

"The correct answer is no. … His proposal for equal medical treatment perversely requires more care to children of poor parents than to children of rich ones, precisely because the rich families can more easily avoid injury or illness and can better pick up any slack in health care delivery. Worse, programmatic success depends not just on offering carrots but wielding sticks in overriding parental judgments on children's food, lifestyle and education." (JAMA, vol. 279, No. 10, March 11, 1998.; p. 745.)

I do not share Professor Epstein's view on children in society. Indeed, I had answered my own question in this commentary in the affirmative, on the assumption that we in America aspire to an "equal opportunity" society. Good health is part of that opportunity. But I respect Professor Epstein immensely for having had the courtesy and courage to answer my question so forthrightly.

QUESTIONS POSED TO STUDENTS AND SUGGESTED ANSWERS THERETO.

a. If these two families can procure physician visits in a freely competitive market, at a price of, say, $ 40 per visit, then the free-market allocation of physician visits to the two babies would be:



SUGGESTED ANSWER: For each family, find the rate of visits at which the family's demand curve for visits cuts the supply-curve it faces (i.e., the horizontal line at P = $ 40). Thus, the answer is:

5 visits/year to healthy Baby Chen, and 3 visits/year to sickly Baby Smith

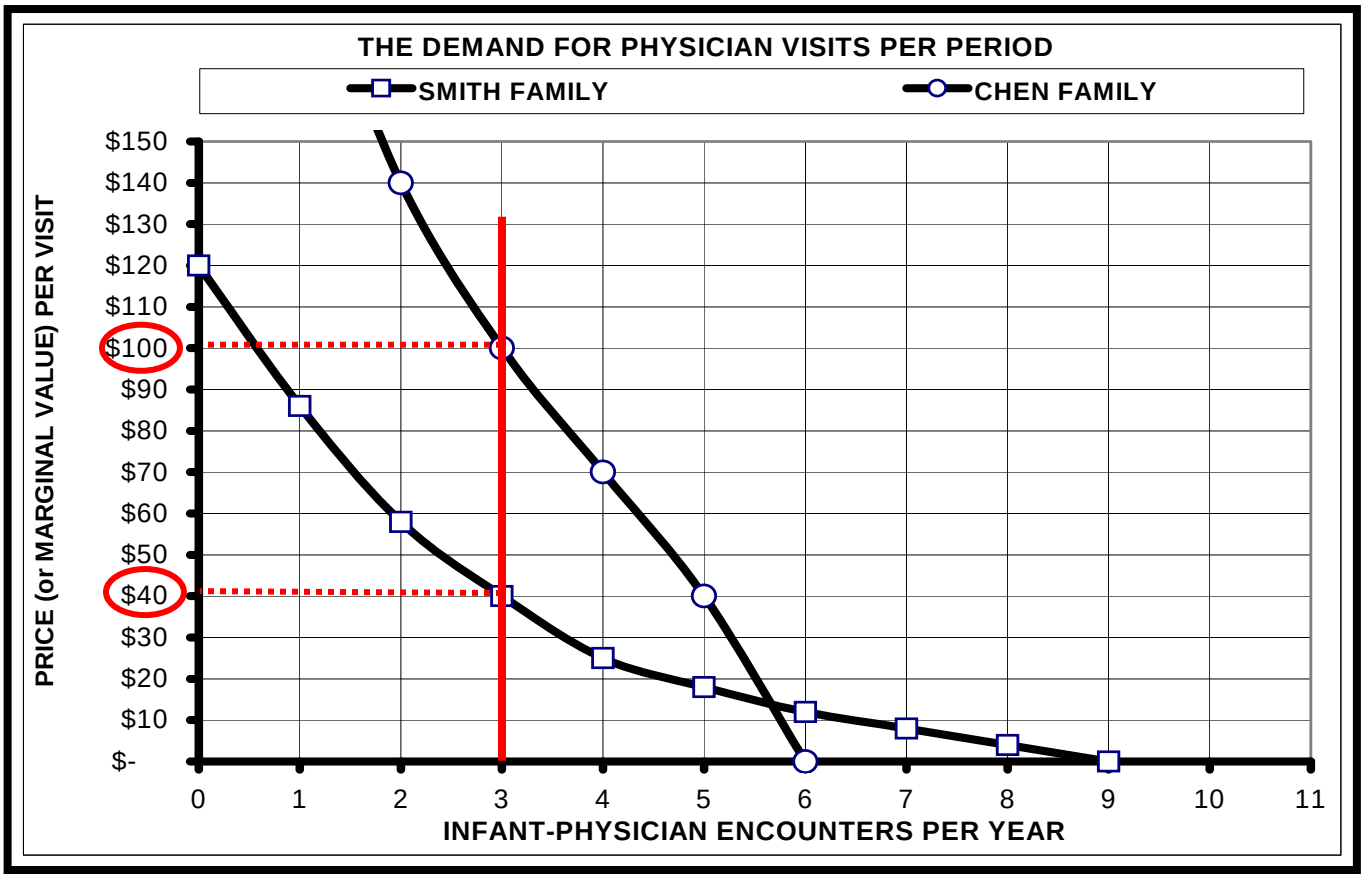
The graph above illustrates this market solution. We assume in that graph that each family can procure any number of pediatric visits it wishes to purchase at a constant $40 per visit—hence the horizontal supply curve from the families' perspective.

This solution may violate many peoples' sense of "fairness" or concepts of clinical soundness. But markets are not designed to be "fair," nor to promote clinical soundness. Similarly, the economic concept of "efficiency" does not include a dimension for "fairness," which, in any event, is a highly subjective concept on which different people can have different ideas (speak: ideologies)

b. Accept for the moment the normative proposition adopted by many (though not all) practicing economists and by the politicians they inspire that the private "marginal-value" (demand) curves of individual consumers or families also represent the marginal social value of the commodities in question. Also assume that the free-market price of $ 40 per visit reflects the social marginal cost of producing visits, including the opportunity cost of the physician's own time. Then, would the free-market allocation of visits you have identified in Part (a) above be "economically efficient" as economists define that term? Explain.

SUGGESTED ANSWER: The allocation then would be judged economically efficient, because it would not be possible to reallocate visits in a way that would leave one of the two families happier and the other no less happy. Furthermore, in equilibrium, the marginal social value placed by each family on the last visit the family had "consumed" (the 5th for the Chens and the 3rd for the Smiths) was equal to the marginal social cost of that visit, one of the conditions implied in an efficient allocation of resources.

c. Continue with the proposition and assumptions made in Part (b). Then the marginal social value of, say, the 3rd visit per year by a baby to the physician is:



SUGGESTED ANSWER: $100 if it is made by healthy Baby Chen and $ 40 if it is made by sickly Baby Smith. As you can see, in a free market the social value imputed by economists to commodities—such as a pediatric visit—can depend on the wealth of its recipients. Whether or not you find that acceptable for health care is a matter of ideology, not of objective science. We would not prescribe to you what you should think on this point – other than to think about it.

d. Recently, in the draft of a paper on health-economics and -policy, a distinguished health-economist wrote: "Freely competitive markets allocate scarce resources to those who value them the most" (emphasis added). *Webster's New World Dictionary of the American Language* (1966; p. 1609) indicates that the verb "to value" is a synonym for "to appreciate." Can you suggest more appropriate language? If so, please do. (In fact, in a subsequent draft the author did change his wording.)

SUGGESTED ANSWER: "Perfectly competitive markets allocate scarce resources to those who are willing and able to pay the most for them, however that ability to pay was achieved."

I was shocked that an experienced economists would have used the words "who value them most" in this context. As Nobel Laureate economist Kenneth Arrow has pointed out, economists frequently used words—such as "efficient", "optimal" or "value"—that have precise technical meanings in economics that may not always dovetail with the connotations imputed to these same words in the vernacular. In the vernacular, "more efficient" is generally thought to be "better" than "less efficient." We have seen that within the context of economic theory, "more efficient" does not necessarily mean "better" than "less efficient."

e. Suppose now that, for some reason, physician visits initially were not allocated through a free-market algorithm, but instead had been allocated to the two families [free of charge to them at the time of receipt] by the government, under some administrative [tax-financed] algorithm, and in a way that had allocated to the sickly Baby Smith 4 visits per year and to the healthy Baby Chen only 2 visits per year. Would such an allocation be Pareto efficient as your text defines that term?

SUGGESTED ANSWER: An allocation of resources (including distribution of output among people) is Pareto efficient (some economists say Pareto optimal) when it is not possible to reallocate resources in a way that makes one person feel better off without making another feel worse off. That is the test you should apply to this situation.

Now, in principle, and because the Smiths may be very strapped for cash, the Chens could pay the Smiths say, $50 for releasing one visit to the Chens and thereby make both families better off. It is so because the Chens would value that extra (third) visit at $100 while Smiths value the fourth vist only at $25. If that trade actually were feasible, then, clearly, the initial allocation of 2 visits to Baby Chen and 4 to Baby Smith could not be labeled Pareto efficient. Of course, if it were, for some reason, impossible to trade these visits for cash, and the Smiths merely lost a visit to the Chens, then the Smiths would feel worse off. Under those circumstances, the original allocation of 2 visits to the Chens and 4 to the Smiths would have to be viewed Pareto efficient.

Now, many economists, following Kaldor, would argue that it is irrelevant whether or not the cash were actually paid by the Chens to the Smiths, as long as the Chens are willing to pay $100 for a third visit while the Smiths would be willing to pay only $25 to hang on to the fourth visits. They would call a reallocation of a visit from the sickly Smith baby to the healthy Chen baby a "potential Pareto improvement" and, thus, an increase in efficiency. A "potential Pareto improvement," you will recall, is a change in the economy under which the gainers from the change could, in principle, compensate (pay) the losers to accept that change, even in fact if that compensation is in fact not made. Because, in principle, the wealthy Chens (who value a third visit at $ 100) could bribe the poor Smiths (who value the fourth visit at only $ 25) to release one visit to the Chens, the original allocation would not be Pareto efficient in this sense. It explains why Nobel Laureate economist Milton Friedman might call such a government allocation "inefficient" while he would judge the free-market allocation "efficient," because in the free market allocation (3 visits to sickly Baby Smith and 5 visits to healthy Baby Chen) both families would value the marginal visit at $40.

Note also that the welfare of the babies themselves is irrelevant to this issue, because they are not enfranchised consumers. Only the parents' perception of the babies' welfare matters. In fact, of course, no nation totally entrusts the welfare of children just to the parents.

f. Would it be a Pareto improvement if, in the situation described in part (e), one visit were taken away from sickly Baby Smith and given instead to healthy Baby Chen? Explain, in a sentence or two.

SUGGESTED ANSWER: A Pareto improvement is a change in the economy under which at least one person actually feel better off and no one actually feels worse off. In this case, the Smiths would lose a visit with the physician. As noted above, unless they were, in fact, sufficiently compensated for that loss to relinquish that visit voluntarily, the reallocation would not be an actual Pareto improvement.

g. Would it be a potential Pareto improvement if, in the situation described in part (e), one visit were taken away from sickly Baby Smith and given instead to healthy Baby Chen? Explain, in a sentence or two.

SUGGESTED ANSWER: As noted under (e) above, a potential Pareto improvement" is a change in the economy under which the gainers from the change could compensate (pay) the losers to accept that change, even in fact if that compensation is not made. In this case, such a compensation would be possible, because the Chens "value" the third visit they would gain at $ 100 while the Smiths "value" the fourth visit they would relinquish only at $ 25. Therefore, as already noted above, the reallocation of a physician visit from the sickly to the healthy child would be a Pareto improvement because, in principle, the Chens could compensate the Smiths for the loss of that visit (say, pay the Smiths $ 30).

h. Would the reallocation of one physician visit from sickly Baby Smith to healthy Baby Chen described in parts (e) represent an increase in economic efficiency as the author of your text defines that term? Explain, in a sentence or two. Be sure to define all of the terms you use in your answer, including "economic efficiency."

SUGGESTED ANSWER: We have already established under (g) that the reallocation of a visit from the sickly Smith baby to the healthy Chen baby would be a potential Pareto improvement. Therefore that reallocation represents an increase in economic efficiency, as many economists are wont to define that term. You will find that use of the term "efficiency" in many economics textbooks. In this connection, see item (l) further on. Of course, if we define "increased efficiency" in this way, then not everyone will judge "increased efficiency" as ipso facto "better," as is argued in the next item.

i. Would the reallocation of one visit from sickly Baby Smith to healthy Baby Chen described in part (e) be a better allocation of resources? Would the author of your text say so? Explain, in a sentence or two.

SUGGESTED ANSWER: On this point, even economists would have divergent views. As on textbook author properly warns students on this point:

"Someone who does not care about the distribution of wealth among people would say all potential Pareto improvements [increases in economic efficiency] are good. Someone who cares about the distribution of wealth would say many potential Pareto improvements are good, but some are not...because [they] can be unfair to the losers."

j. Could the government-administered allocation of physician visits described in part (e) above be properly described as a form of "rationing"? Could the rationing of physician visits in this case be avoided if the government refrained from intervening in the market for physician visits and instead let free market forces determine their allocation? (Not a silly question; many seasoned adults seem to have trouble with it.)

SUGGESTED ANSWER: Economists define rationing as"the allocation of scarce resources among competing ends." The government-administered algorithm described in Part (e) above is one such rationing algorithm. Economists call it "non-price rationing," that is, rationing by means other than price and the individual recipient's ability to pay.

One of the most popular fallacies among seasoned adults is that the allocation of resources through the free market is an alternative to "rationing." It is a distressing commonplace in debates on health policy. In fact, the allocation of resources through markets is but one form of rationing, namely, rationing on the basis of money prices and ability to pay. In using the word "non-price rationing," economists implicitly acknowledges that fact. Most introductory textbooks in economics do not address the issue explicitly at all. A refreshing exception are Michael L. Katz and Harvey S. Rosen who write forthrightly in their Microeconomics (Irwin, 1991) that "prices ration scarce resources" (p.15). Using the economist's peculiar definition of "efficiency," however, it is easy to show that non-price rationing typically is less efficient (in the economist's sense of that term) than is price-rationing.

k. Start with the free-market solution under Part (a) as the initial position. Suppose now the government used general tax revenues to grant the low-income Smith family a subsidy of $30 per visit and that the market price of $40 per visit reflects the marginal social cost per visit. Economists would impute a "welfare loss" (alias "deadweight loss) to such a policy. In a properly executed graph, show the size of this "welfare loss." In your own view, is this really a "welfare loss"? Defend your conclusion as best you can.

SUGGESTED ANSWER: Prior to the implementation of this subsidy, the Smith family demanded 3 visits and pays $ 40 per visit. The Smith family now pays only $ 10 out of pocket per visit. At that price, it will demand 6.5 visits per years (a rate equivalent to 13 visits every two years). Your properly executed graph will show that the marginal monetary value the Smith family would assign to the extra 3.5 visits per year will be lower than the cost of those incremental visits to the government (i.e., taxpayers). The difference is the so-called "deadweight loss" (or "social loss" or simply "social welfare loss" as it is commonly called in economics.)

This narrowly calculated loss of "social welfare," however, excludes from consideration that other members of society might derive satisfaction from the knowledge that poor children, like the Smiths' baby, have adequate health care. In the jargon of economists, there may be "positive externalities" in consumption. We'll cover these toward the end of the course. The value to the rest of societies of these externalities may exceed the narrowly calculated "deadweight loss." In addition, of course, there may also be externalities in the production of good health. In plainer English, it may be of great benefit to the rest of society to prevent Baby Smith from contracting a contagious disease or simply from growing up sickly. In short, the narrowly calculated "deadweight loss" is not the sole criterion on which such policies should be judged.

In your graph, you could have shown the total deadweight loss of the policy as far as the Smith family is concerned as the area above the Smith family's demand curve and below the horizontal supply-curve at P = 40, between the visit rates of 3 and 6.5. That depiction, of course, assumes continuously variable visits rates (e.g., 3.17 visits per year). You could, alternatively, have shown the deadweight loss as discrete vertical bars between the supply curve and the demand curve for the fourth, fifth and sixth visit (assuming a half a visit would not be made). In the answer, we were looking more for the general concept of the welfare loss than the exact depiction of it in the graph.

l. In his textbook *Price Theory and Applications, 3rd. ed.* (St. Paul, MN: West Publishing Company, 1995; p. 247), Steven E. Landsburg writes:

> *The **efficiency criterion** is an alternative way to judge policies. According to the efficiency criterion, any change in policy that makes George $ 2 richer and Martha only $ 1 poorer is a good thing. Any change in policy that makes George $ 1 richer and Martha $ 2 poorer is a bad one. More generally, the efficiency criterion pronounces that between two policies, we should always prefer the one that yields the higher social gain. The preferred policy is said to be **more efficient** than its rival.*

In this context, the words "richer" and "poorer" refer not only to concrete, material wealth, but also to consumers' and producers' surplus. In the *Index* of his text, Landsburg directs us to look up "social gain" for the term "welfare gain," which suggests that he takes them as synonyms. Try to explain why many people, including some economists, do not accept this definition of "welfare gain and -loss," and why they might not concur with Landsburg's proposition.

SUGGESTED ANSWER: This definition of "social gain" abstracts from the relative position George and Martha occupy in society's distribution of wealth. Martha may be dirt poor and therefore look upon $ 1 as a lot of money. George may be very rich and look upon $ 2 as a pittance. Under those circumstances, would we agree that a change that makes George $ 2 richer and Martha $ 1 poorer is ipso facto a "good thing."

In the represent case, Landsburg's definition of "social gain" would treat as a "social gain" a policy that takes away a physician visit from the sickly Smith baby (a visit for which the relatively poor Smith family would have been willing to bid a maximum money price of only $25) and then bestows that visit on the healthy Chen baby (whose parents would be willing to bid a money price of as much as $ 100 for that additional visit), even if the Chens did not bribe the Smith's into accepting that reallocation. As his previously cited editorial suggests, Professor Friedman most probably would go along with that definition of "social gain," as would many other economists.

Professor Landsburg's definition of "social gain" is simply the algebraic sum of the monetary value of the gains reaped by the gainers from a policy minus the monetary value of the losses suffered by the losers from that policy, regardless of who these gainers or losers are, or how wealthy or poor they are. It is a standard definition of "social gain" or "enhancement of social welfare," as economists typically use those terms in their textbooks and in their policy analyses. Quite commonly, in the benefit-cost analyses for particular policies, a policy that yields a "social gain" (increases "social economic welfare") in this sense is styled by economists as a "good thing" and one that causes a "social loss" is styled as a "bad thing."

In fairness to Landsburg, however, it must be mentioned that further on in his text he does point out that

> *"Many economists regard the efficiency criterion [as he had defined it earlier] as a good rough guide to policy choices, though few would defend it as the sole basis on which to make such decisions" (p. 259).*

If you do not buy the economist's definition of "social gain" and "social loss"--and there is no reason why you should--then you probably will not buy at face value many normative analyses produced by economists. Indeed, my advice is that you should be forever suspicious of any normative statement produced by economists. As a first order of business, you should examine what assumption the author of a normative statement has made about the underlying distribution of income before gracing such a statement with respect.