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ABSTRACT

An article on American health care which focuses on health care costs and benefits is combined with a lesson plan on health care issues to enable students to consider both issues of cost effectiveness and morality in decisions about the allocation of health care. The article covers the history of interest in health care, the reasons for the increase in costs, benefits of health care expenditures, and questions for the future. The lesson plan, which is designed for grades 11 and 12, takes two class periods. It includes major concepts, rationale, instructional objectives, materials, and student activities. Various topics of discussion, based on the article, are suggested. Student activities include making a decision about alternative forms of health care and selecting which one of five patients should receive a kidney transplant. (IS)

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HEALTH CARE IN THE UNITED STATES

by John Lewis

[and]

HEALTH CARE ISSUES: A LESSON PLAN

by Joanne R. Dempsey

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HEALTH CARE IN THE UNITED STATES

by John Lewis

AVERAGE COST OF HOSPITAL EXCEEDS \$300 PER PATIENT DAY

Newspaper headlines similar to the above are not uncommon. Americans are becoming increasingly aware of health care costs and their tendency to rise at a rate faster than prices. This trend of rapid increases in the cost of health care began in 1965 and is still continuing today. A look at the market for health care will help us understand the price increases and provide insight into ways prices may be reduced in the future.

HISTORICAL PERSPECTIVE — One of the major reasons for the current interest in health care is its rapidly increasing costs. In 1965, national health care expenditures were 41.7 billion dollars. By 1981 these costs were 286.6 billion dollars — an increase of almost seven-fold. Of this increase about 22 percent resulted from increased usage, 6 percent from increased population, and the remaining 72 percent resulted from increased cost of health care services.

The amount of money spent on health care is only one way to measure its growth. As important is the share of our total resources which are used to provide health care. In 1965 only 6.5 percent of our gross national product was spent on health care services. By 1982 this had increased to 10.4 percent of GNP. If we continue to direct resources to the production of health care at the rate we have since 1965, by the year 2000 over 20 percent of GNP will be devoted to the production of health care. This will result in fewer resources being available for producing other goods and services.

WHY HAVE COSTS INCREASED?

Cost for any good or service increases because of shifts in supply and demand. In the past 20 years several changes have taken place which have an impact on both the demand and supply of health care.

On the demand side, the population has increased. This alone will shift out the demand and, with everything else being equal, increase price. However, this only accounts for about 6 percent of increased cost of health care.

A major cause of the increase in health care cost is the impact of changes in how health care is financed. Table 1 illustrates the dependence on third party payments for selected health care needs.

As Table 1 illustrates, since 1965, the pro-

**TABLE 1 — SOURCE OF PERSONAL HEALTH CARE EXPENDITURES FOR
SELECTED HEALTH CARE SERVICES
(IN PERCENTAGES)**

	1965		1981	
	INDIVIDUAL	THIRD PARTY	INDIVIDUAL	THIRD PARTY
HOSPITAL	17.2	82.8	10.8	88.2
PHYSICIANS	61.2	38.8	37.9	62.1
DENTISTS	96.4	5.4	71.0	29.0
OTHER	77.0	23.0	55.2	44.8

Source: U. S. Department of Health and Human Services, Health Care Financing Administration. HEALTH CARE FINANCE REVIEW, September 1983.

portion of all health care services which are paid for by third parties has increased. The portion of hospital cost paid by third parties increased from 82.8 percent to 88.2 percent and for physician services from 38.8 percent to 62.1 between 1965 and 1981. Third party payers include insurance companies, self-insured industry programs and federal, state, and local government expenditures. The major contribution to the third party payment was government financing of health care expenditure. The percent paid by government increased from 22 percent in 1965 to over 40 percent in 1981 with the total increase in relative share being absorbed by the federal government.

This increase in third party payment has resulted in substantial changes in the incentive provided to people to use medical services. When payments are made by a third party, the out-of-pocket expense to the user of the medical service is reduced. As the direct cost to the user is reduced, the amount of medical services consumed increases. (as price declines, quantity demanded increases.)

This increased usage requires that additional resources be devoted to health care. In general, these additional resources will result in higher production costs and thus the cost of the services will increase. (as quantity supplied increases, price increases). This increase in cost, however, is passed on to the third party payer. The major source of the increase in third party payer since 1965 has been Medicare and Medicaid. These programs increased access to medical care by a large group of people who previously could not afford medical care.

Third party payment also is a perverse incentive to those who deliver health care on the

supply. If the government or other third party payer is providing reimbursement to the hospital, for example, there is little incentive to provide the service at the lowest cost possible. Indeed, the demand for health care has become very inelastic, allowing increased costs to be passed on to the third party payer. Hospitals can now compete based on services offered instead of price. With this form of competition, hospitals will be concerned with having the most up-to-date equipment so they can provide a better quality of health care. After all, the costs will be passed on to an insurance company or the government. The same holds true for physicians. To protect themselves from ever-increasing malpractice suits, they are likely to require more tests to verify a diagnosis. In general, the equipment added by hospitals and the additional tests required by physicians use the latest technology and, of course, the most expensive.

BENEFITS FROM HEALTH CARE EXPENDITURES

We should not judge the increased expenditures on health care too harshly until we look at the benefits. Benefits from health care expenditure are many, but can usually be captured by looking at life expectancy, causes of death and age-adjusted death rates.

Life expectancy in the United States has been increasing since the turn of the century. In 1900, life expectancy was 47.6 years for whites and 33.0 for other races. By 1965 the rates were 71.0 and 64.8 respectively. This resulted in an increase of 23.4 years for the life span of whites and 31.1 for others. Between 1965 and 1981, the gain for whites has been 3.7 years compared to 6.2 for other groups.

Not only did life expectancy increase be-

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Health Care

(Continued from page 2)

tween 1965 and 1981, but the percentage of deaths attributed to cardiovascular diseases also decreased. In 1965, 54 percent of all deaths were the result of cardiovascular-renal disease. By 1981 the figure had decreased to 47.7 percent. Mixed results are present when all diseases are included. Natural causes accounted for 91.1 percent of the deaths in 1965 but 92.3 percent of the deaths in 1981 with cancer showing the greatest increase, from 19.2 percent of the deaths in 1965 to 23.5 percent of the deaths in 1981.

A final measure of the status of health in the United States is age-adjusted death rates. Age-adjusted death rates take into consideration the changing age proportion of population. Between 1915 and 1965, the age-adjusted death rate in the U.S. decreased from 14.4 per 1,000 population to 7.4 per 1,000 population. Between 1965 and 1981, we were able to reduce the rate to 5.7 deaths per 1,000 population.

QUESTIONS FOR THE FUTURE — The conclusion of whether the gain in life expectancy and other advances made in health care over the past 20 years are worth the cost is a value judgment. One thing is certain, however: society has made sacrifices in other areas to increase expenditures in medical care. In 1981, the federal government spent twice as much on health care as it did on education, training, employment, and social services combined.

The question which must be addressed in the future is how much are we willing to give up for additional health care and is the marginal benefit worth the increased cost. The question becomes more difficult because the underlying issue is who shall live and who shall we let die. Any reduction in the rate of increase in health care costs must result from reducing the demand for health care and/or increasing the supply. On the demand side there may be hope. Two researchers at the University of California-Berkeley have been doing longitudinal studies on how behavior patterns affect health. Their research has resulted in seven rules which correlate with good health and longevity.

Those seven rules are:

1. Eat three meals a day with special emphasis on breakfast;
2. Don't eat between meals;
3. Don't smoke cigarettes;
4. Get seven or eight hours of sleep per night;
5. Use alcohol moderately;
6. Keep weight down;
7. Get moderate daily exercise.

A 45-year-old male who practices three of fewer of these rules can expect to live to be 67. A male who practices six or seven has a life expectancy of 78. With society's increased emphasis on exercise, sensible weight, and wholesome food, there may be a reduction in the demand for health care which would result in moderating health care costs.



HEALTH CARE ISSUES: A LESSON PLAN

by Joanne R. Dempsey

measures could reduce health costs which are:

- a) Increase the deductible per person to \$1,500.00 for governmental program (i.e. individual would pay first \$1,500.00; government as third-party payee would pick up amount above \$1,500.00.)
- b) Lower the standards for entrance to various occupations in medical profession.

- receive the transplant? Why?
 - b) Which criteria did you weigh most heavily in making your choice? Why?
 - c) If you were to choose on a strictly cost/benefit analysis (criteria 3 and 4), would you choose the same recipient? Why or why not?
 - d) Do values and moral issues complicate medical decisions? If so, how might this affect efforts to contain health care costs?
7. Give a "Future" card to each group; let them discuss how this further information would affect their original decision (Round 2.)
 8. Debriefing questions, Round 2:
 - a) Would the new information you gained from your "Future" card change your choice of transplant recipient? Why or why not?
 - b) If you had the information from all six "Future" cards (display on overhead), how would it affect your decision?
 - c) What do these situations suggest about the problems of cost/benefit analysis as well as moral/value judgements in medical decisions?

Recommended Grade Level: 11-12
Time Required: Two 45-50 minute class periods

Major Concepts: Opportunity Costs, Trade-Offs, Decision-making

Rationale: Potential solutions for containing rapidly rising health care costs are complicated by the moral issues and values involved. This lesson applies the rational decision-making process to an analysis of health care cost reduction alternatives and also discusses moral issues involved in health care decisions.

Instructional Objectives:

Students will be able to:

- 1) Apply the decision-making model to health care issues.
- 2) Explain how moral issues (values) often override cost/benefit analysis of health care decisions.
- 3) Analyze the opportunity costs and trade-offs involved in potential solutions to high health care costs.

Materials: Exhibit "A" may be done on the chalkboard, transparency, or prepared as a handout. Handout B; six "Future" cards; overhead transparency of all information on "Future" cards.

Procedure:

1. Using the GUEST FORUM article in this issue of CON-EC-TIONS as background reading, emphasize the following points:
 - a) Health care costs have risen at a substantially higher rate than other goods and services over the past 15 years.
 - b) Some major factors contributing to health care costs are increased demand to third party payment; restricted supply of doctors; demographic changes in population, especially an increase in the aged population; the high cost of technology; a prolong life at any cost value system.
2. Have students explain why preventative health measures mentioned in the article could reduce demand which would, in turn, reduce costs.
3. Have students explore how two other

4. Discuss the ratings that the students gave to the two alternatives and reasons for their ratings. Ask class which of the two alternatives they would prefer. Does the presence of more pluses for an alternative mean that it should automatically be selected? (No, the weighting of the criteria is important.) If, for example, one believes that it is important to decrease demand for medical services because people are using them needlessly, you might choose option #1 even though it has more minuses than pluses.) Ask students what criteria they considered most important and how that influenced the choice that they made.

5. Give students Handout B. In small groups, analyze the case studies and reach a decision as to who shall receive the kidney transplant (round 1.) Remind the students to keep in mind that lifetime earnings is one indication of the value that the society places on the contribution that the individual can make to the society.

6. Debriefing questions, Round 1:
 - a) Who did your group choose to

Have the class evaluate each alternative according to at least these five criteria which are:

1. Accessibility of Medical Services to Americans
2. Decrease Demand for Medical Services
3. Lower Health Costs
4. Increase Supply of Medical Services
5. Overall Quality of Care

To do the evaluation, use the grid which is shown (without the markings within each cell.)

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EXHIBIT A

ALTERNATIVES	CRITERIA	ACCESSIBILITY TO MEDICAL SERVICES	DECREASED DEMAND FOR MEDICAL SERVICES	LOWER HEALTH COSTS	INCREASE IN SUPPLY OF MEDICAL SERVICES	QUALITY OF CARE
INCREASE DEDUCTIBLE TO \$1,500.00 FOR GOVT. PROGRAM						
LOWER THE STANDARDS FOR ENTRANCE TO VARIOUS MEDICAL OCCUPATIONS						

Lesson Plan

(Continued from page 3)

Probably a handout showing the grid would be best. Have each student mark in the cell a plus (+) if the alternative contributes or improves the attainment of the criteria; a minus (-) if the alternative impedes the attainment of the criteria; or a question mark (?) if no rating can be given because of insufficient data.

The explanations for the markings placed in the matrix are as follows:

Accessibility of Medical Services to People - Increasing the deductible will encourage less accessibility because people will not seek as much medical attention due to having to pay more of the costs out of their pockets. Lowering the standards will increase the supply of medical practitioners which will lower prices of medical services because of increased competition.

Decrease demand for Medical Services - By increasing the deductible, demand will be decreased because people will have to pay more from their own pockets. Increasing the supply through the lowering standards will eventually increase demand because of the lower costs to the consumer.

Lower Health Cost - Both have pluses for this criteria.

Increase in Supply of Medical Services - The first option would not be too severe on high-income families but would be a strain on those at the lower income brackets. Large families would certainly suffer more than smaller families. Increasing the supply of medical practitioners would increase the financial security of the populace since health care costs would be held down, thus letting them maintain more of their disposable income for saving or on spending for other goods and services.

Quality of Care - Basically, this cannot be rated according to data provided. Less demand for available supply does not necessarily mean that the quality of care will increase. It may or it may not. Similarly, increasing the supply of practitioners with lesser credentials does not mean medical services will automatically decrease in quality. For example, these new entrants to the profession may be assigned functions which do not require as much training and do a good job in providing those services. Putting more or less resources into an area does not necessarily always affect quality.

Extension Activity:

Governor Lamb of Colorado has recently suggested that the elderly and terminally ill should not have life prolonged through technological life support systems. He points out that such care is extremely expensive, that most of the patients die within 6 months to one year, and that the quality of life during that time is of questionable value. Do the elderly and terminally ill have, as Governor Lamb suggests, a "moral obligation to die" and save these great costs?

DISCUSS:

1. If you were a doctor in this case, what criteria would you use to determine who should receive treatment?
2. How would you feel if this rationale was used to deny care to a member of your family?
3. What can be done, overall to provide health care for those who need it, under these conditions, i.e. limited resources—unlimited demand. Is it fair to deprive "younger" patients or patients who have a better chance of recovery from their illness to prolong a life of someone else who may not have the same odds of survival?
4. What are the moral and ethical questions raised by this situation?

About the Authors:

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HANDOUT B

Kidney Transplant Case Study

Using the criteria listed, you are to select one patient for a kidney transplant. You are to assume that all suffer from equally urgent cases of kidney failure and that those who do not receive a transplant will die within the year.

CRITERIA: 1) the person's merit 2) their contribution to society (past or potential) 3) their ability to pay 4) their need 5) their age

Patient #1: Dr. M.

Forty-five year old physician with large inner-city practice. Had mild heart attack three years ago, but made good recovery and heart seems sound. No wife or children. Present yearly income: \$70,000. Potential lifetime earnings: \$994,095. Health Insurance? Yes.

Patient #2: Bonnie T.

Twenty-four year old mother of two children. Active in community work, Red Cross, church. Plans to resume nursing career when children reach school age (4 Years). Yearly income now: (Husband's \$32,000). Her potential lifetime earnings: \$327,003. Health Insurance? Yes.

Patient #3: Fred S.

Third year medical student, doing well and considered "of great promise" by his advisors. Plans to specialize in neurology. Father of one child, another on the way. Yearly income

now: \$10,000. Potential life earnings: \$1,149,812. Health Insurance? Yes.

Patient #4: Agnes M.

Twenty-six year old mother of two children, abandoned by husband. Unable to work because of lack of day-care facilities in area; presently on welfare. Activities: church, Tenant's Organization in her building, welfare rights organization. Present yearly income: (public aid + food stamps) \$6996. Potential lifetime earnings: \$121,425. Health Insurance? Medicare.

Patient #5: Ellen R.

College Junior, 20, suffering from hereditary condition. Doing excellent work in school, has been accepted already for law school. Family fears her twin sister has the same disease. Yearly income now: (Parent's) \$47,000. Potential lifetime earnings: \$928,753. Health Insurance? Yes.

FUTURE CARDS

(Teacher: After the groups have reached their decisions and discussed them using debriefing questions in Procedure #5, hand out one Future card to each group. Have a transparency prepared with all Future card information. If groups have picked varying recipients, give each group the card for their choice; if all or most picked the same recipient, hand out card randomly.)

Dr. M.'s Future

If Dr. M. received the transplant, he died of a massive coronary two years after receiving the kidney.

Bonnie T.'s Future

If Bonnie T. received the transplant, she went on to medical school and became an obstetrician.

Fred S.'s Future

If Fred S. received the transplant, he quit medical school and divorced his wife.

Agnes M.'s Future

If Agnes M. received the transplant, she won the state lottery and became an instant millionaire.

Ellen R.'s Future

If Ellen R. received the transplant, she became a lawyer, working to defend the poor.

Note: The data on potential life earnings has been calculated from statistical studies indicating worklife expectancies according to age and sex. Present salary levels were based on information from local area (Peoria) sources. The potential lifetime earnings figure is shown in present value (1984 dollars) using a real growth rate of 2.2% and real discount rate of 4%.