NBER WORKING PAPER SERIES

THE FINANCIAL PROBLEMS OF THE ELDERLY: A HOLISTIC APPROACH

Victor R. Fuchs

Working Paper 8236
http://www.nber.org/papers/w8236

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
April 2001

This paper was prepared for the Policies For An Aging Society: Confronting the Economic and Political Challenges Conference, sponsored by the Council on the Economic Impact of Health System Change, Schneider Institute for Health Policy, Brandeis University, October 1999. I am indebted to the Robert Wood Johnson Foundation and the Kaiser Family Foundation for financial support. The research assistance of Sarah Rosen is also gratefully acknowledged. The views expressed herein are those of the author and not necessarily those of the National Bureau of Economic Research.

The Financial Problems of the Elderly: A Holistic Approach
Victor R. Fuchs
NBER Working Paper No. 8236
April 2001
JEL No. J14, I10

ABSTRACT

A holistic approach to the financial problems of the elderly focuses simultaneously on their expenditures that are self financed as well as those that are financed by transfers from the young (under age65). It also focuses simultaneously on paying for health care and paying for other goods and services. The "full income" of the elderly, defined as the sum of personal income and health care expenditures not paid from personal income, provides a useful framework for empirical application of the holistic approach . In 1997, approximately 35 percent of the elderly's full income was devoted to health care; 65 percent to other goods and services. Approximately 56 percent of full income was provided by transfers from the young and 44 percent by the elderly themselves. The paper shows how these percentages might change under alternative assumptions about the growth of health care relative to other goods and services and the effect of these changes on the need for more saving and more work prior to retirement.

Victor R. Fuchs
NBER
30 Alta Road
Stanford, CA 94305
fuchs@newage3.stanford.edu

Financial Problems of the Elderly:

A Holistic Approach"

"Grow old along with me! The best is yet to be," wrote Robert Browning in his poem, *Rabbi Ben Ezra*. A century later Robert Butler, a former Director of the National Institute of Aging, took a more dismal view of aging, epitomized in the title of his book, *Why Survive? Being Old in America*.[1] Why the change in perspective? One possible reason is that an elderly person was a rarity in Browning's time, but as the 20th century drew to a close, mortality tables showed that three out of four Americans would reach the biblical "three score and ten". Just being old no longer carries any special distinction.

A Japanese statesman-scholar, Wataru Hiraizumi, has recently provided a provocative insight into the effect of an increase in the proportion of the elderly in a society. Recalling his first few weeks in France in the 1950s, he says, "I suddenly saw the reason for a singular uneasiness...it was the presence of a seemingly inordinate number of old people...they looked

vigilant, severe, and vaguely ill-tempered."[2] He attributed this to the fact that in France, at that time, more than 11 percent of the population was over 65, whereas in the Japan he had recently left, the elderly were barely 5 percent of the population.

Probably an even more important reason for the change from Browning to Butler is that improvements in the material condition of America's elderly have been surpassed by rapidly rising expectations. Although today's elderly are on average healthier and wealthier than any previous generation in the nation's history, their desires and expectations regarding life in retirement are outpacing the ability of society to fulfill them. Nowhere is this more evident than with respect to health and medical care.

Recent decades have witnessed an unprecedented number of advances in medical technology that, albeit costly, have contributed to longer, better quality lives for many older Americans. Ten of the most important are shown in Table 17.1.[3] Thanks in part to such innovations, (and in part to declines in cigarette smoking), the overall age-adjusted death rate has fallen by 20 percent since 1980. But some major causes of death, such as cancer

and diabetes, show little or no decline in mortality. When medical care could do little to extend life for anyone, not much was expected of it. In an era of great progress, however, expectations of further gains accelerate. The more medical care does to keep people alive and healthier, the more is demanded of it.

Moreover, despite the gains in health and wealth, many Americans still experience a troubled old age. In addition to the inevitable loss of family and friends, diminution of status, and existential concerns, many elderly face two potentially serious financial problems: lower income and greater expenditures for medical care. Physiological changes are the primary cause of both lower earnings and poorer health. Earnings are also affected adversely by obsolescence of skills and knowledge, and by public and private policies that reduce the incentives of older persons to continue working and increase the cost to employers of employing older workers.

These financial problems have been widely discussed in recent years; the papers in this volume provide additional food for thought. Unfortunately, most policy discussions of the financial problems of the elderly tend to focus

on only one program at a time. Thus, there is a plethora of papers on Social Security, Medicare, Medicaid, employment-based pensions, Medigap insurance, and so on. Sometimes these sharply focused studies are required by legislative or administrative exigencies, but I believe a holistic view is a necessary complement to such fragmented analyses.

A Holistic View

A holistic view focuses simultaneously on the financing of health care and the financing of other goods and services. It also focuses on the expenditures of the elderly that are self-financed as well as on those that are financed by transfers from the young. A holistic view cautions against policy proposals that claim we can patch existing public programs for the elderly without major changes in policies and behavior. These limited proposals usually include means testing benefits, subsidies, modest increases in taxes, and various administrative maneuvers. When they are examined one program at a time, they may seem reasonable and feasible. The entire package, however, applied to all programs for the elderly, is likely to create large disincentives for work and saving prior to retirement and require huge

transfers that will ultimately be rejected by taxpayers. This is what happened with welfare. Each additional program and subsidy seemed desirable by itself, but the cumulative effect was a bipartisan revolt against "welfare as we know it."

At one time it was reasonable to treat the problem of earnings replacement separate from the problem of paying for health care. Health care expenditures of the elderly were small relative to expenditures on other goods and services and a holistic approach was not essential. Now, however, health care expenditures equal or exceed expenditures for all other goods and services for many elderly, and given the trends of recent decades, this may be true for the elderly as a whole within 20 years.

Artificial separation of the problem of earnings replacement from that of health care payment ignores the fact that there are often trade-offs between the two. Money is money, and for most of the elderly there is never enough to go around. This is self-evident where private funds are concerned. Low-income elderly, for example, frequently must choose between prescription drugs and an adequate diet. For middle-income elderly

the choice may be between more expensive medigap insurance and an airplane trip to a grandchild's wedding. Difficult choices are also apparent with respect to public funds. The same tax receipts that could be used to maintain or increase retirement benefits could be used to fund additional health care, and vice versa. Policy analysts who fail to understand that a large increase in Medicare spending will jeopardize the government's ability to fulfill its Social Security commitments ignore the realities of economics and politics.

A holistic approach not only requires analyses that encompass different government programs but also must involve examination of the two-way interactions between changes in the private sector and public programs. For instance, from 1993 to 2000 the share of employers providing health insurance for retirees declined from 40 to less than 25 percent.[4] This change may suggest that government provision of health insurance for retirees should expand, but such expansion could result in further decreases in private coverage.

Another significant trend in the private sector that has major

implications for the future financial problems of the elderly is the shift in private pensions from defined benefits to defined contributions. This change works well for retirees when the stock market is rising briskly, but looks less attractive when the stock market flattens or goes into decline. Moreover, the 401-K plans and IRAs that have supplanted the traditional retirement plans typically do not call for automatic annuitization upon retirement. This can be advantageous to retirees who would like access to their money, but can be problematic for them and for taxpayers if they lose their retirement savings in bad investments or spend them at too rapid a rate. Furthermore, if annuitization is voluntary, the terms available are likely to suffer from the problem of adverse selection. Hurd and McCarry have shown that the ability of individuals to predict their longevity is significantly greater than could be expected from chance.[5] For this reason, some compulsory annuitization is probably as necessary as some compulsory enrollment in health insurance.

"Full Income"

To provide a holistic framework for addressing the financial problems

of the elderly, it is useful to think of the "full income" (or its equivalent, "full consumption") of the elderly. I define "full income" as the sum of personal income and health care expenditures not paid from personal income. Two critical questions can be addressed within this framework: 1) How much of the elderly's full income is devoted to health care and how much to other goods and services? 2) How much of the elderly's full income is provided by transfers from the population under age 65 (social security retirement payments, Medicare, and similar programs) and how much is provided by the elderly themselves (earnings, pensions, income from savings, and the like)?

Using data from the Current Population Survey, the Medicare Current Beneficiary Survey and other sources, with adjustments for under reporting, I estimate that 35 percent of the elderly's full income in 1997 was devoted to health care and 65 percent to other goods and services (see the right-hand column of Table 17.2). I also estimate that 56 percent of full income was provided by transfers from the "young" and 44 percent by the elderly themselves (see the bottom row of Table 17.2).

Probably the most important information in Table 17.2 is the disaggregation of full income by use and source found in the interior of Table 17.2. We see that the elderly are much more dependent on transfers for health care expenditures than for other goods and services. Of the 35 percent of full income that goes for health care, more than three-fourths (27 divided by 35) is provided by the young, as opposed to less than half (29 divided by 65) for other goods and services. This fact combined with the tendency for spending on health care to grow more rapidly than for other goods and services will pose major problems for policy makers and the elderly within two decades.

Table 17.3 shows what the uses and sources of full income would be in 2020 if the generations under 65 continue to bear the same share of health care and "other" as in 1997. If health care spending does not grow more rapidly than "other" (the first column of Table 17.3), the shares of uses and sources will be identical to those shown in Table 17.2. On the other hand, if health grows 3 percent per annum more rapidly than "other" (the last column in Table 17.3), we see that the health share of full income would

jump from 35 to 52 percent and the young would provide 62 percent of full income instead of the 56 percent provided in 1997. These calculations are all per capita; that is, they do not take into account the fact that the ratio of elderly to those under age 65 will be higher in 2020 than it was in 1997. Thus, the figures in Table 3 underestimate the potential increased dependency of the elderly on transfers from the young.

Will spending on health for the elderly grow faster than spending on other goods and services? This question cannot be answered with certainty, but it would be prudent to assume that it will. Over the period 1970-2000, Medicare expenditures per elderly enrollee grew approximately 2.8 percent per annum faster than GDP per capita (excluding health care expenditures). The growth of the non-health economy is an indicator of the rate at which expenditures on "other" could grow. The "gap" of 2.8 percent per annum is attributable primarily to technological advances such as those listed in Table 17.1. Will the pace of technological advance in medicine slow down in the next two decades? Not likely. There are currently 700 new drugs in development for the diseases of aging, and, as the elderly's share of the

health care market increases, the share of medical R&D focused on the elderly is likely to grow.

In theory, advances in medical technology do not necessarily lead to higher expenditures, but in practice that is usually the way it works. The last major exception to this rule occurred a half century ago with the introduction and rapid diffusion of antibiotics. But antibiotics were a very special kind of medical advance. They were given to patients who had life threatening infections, most of whom who were in otherwise good health. Many beneficiaries were children and young adults who, once the infection was cured, went on to live many years without requiring major medical intervention. By contrast, advances in medical technology that extend life or improve quality of life for older Americans do not offer that same prospect of reducing overall utilization of medical care. Indeed, many expensive interventions such as open-heart surgery will only be undertaken on patients who are otherwise in reasonably good health. Moreover, antibiotics were very inexpensive to produce and dispense. By contrast, many of the products currently under development in the biotech and bioengineering

laboratories are likely to be expensive to produce and implement.

Implications For Policy

The coming increase in the absolute and relative number of elderly will unquestionably increase the burden on the working population and require an increase in taxes. But if the scenario sketched out in Table 17.3 materializes, that is, if health care expenditures for the elderly grow 2 to 3 percent per annum more rapidly than expenditures on other goods and services, the burden on the young is likely to be unbearable. There seems to be only two possible escapes from this bleak scenario: Slow the rate of growth of health care expenditures or require the elderly to assume more of the responsibility for paying for their health care.

Slowing the growth of health care expenditures may not be feasible, and even if it is feasible, it may not be desirable. Although advances in technology are the driving force behind the growth of medical expenditures, many of these advances contribute significantly to longer, better quality lives. Politicians in both parties strongly support increased spending for medical research, and private decision makers in the drug and biotech

industries are betting tens of billions of dollars each year that the money to pay for advances in medical technology will be forthcoming. Many economists now assert that the advances of recent decades, albeit expensive, are "good buys" and see no reason why that will not be true of future advances as well.

If health care expenditures for the elderly continue to grow rapidly, however, and if the ability to finance these expenditures by transfers from the young reaches its limit, the only alternative is for the elderly to pick up a larger share of the bill. If these payments must come from incomes that grow at only a modest pace, the elderly will become increasingly "health care poor." Indeed, many are already in that unhappy condition. While eligible for MRIs, angiograms, bypass surgery, and other high tech diagnostic and surgical interventions, they do not have the resources to purchase a new mattress, to heat their house to a comfortable temperature in winter, to take a taxi to the doctor, or to access other goods and services that would make life more bearable.

To prevent more and more elderly becoming "health care poor," they

must have additional personal income. They need more income from savings (including pensions and investments) and from earnings, which means they will have to work more both before and after age 65. Why do millions of Americans reach age 65 so heavily dependent on transfers from the young? One possibility is that their income over the life cycle was so low that they could barely meet everyday expenses let alone save for retirement. This explanation is undoubtedly correct for some low income elderly, but analyses of longitudinal data by Venti and Wise[6] show that inequality in savings for retirement varies greatly even among those with the same earnings prior to retirement. This conclusion holds after adjustments for special factors that affect the ability to save and for differences in investment returns.

An examination of CPS data on sources of income provides additional evidence concerning the question of the relation between saving and income. To obtain the statistics shown in Figure 17.1, everyone 65 and over was sorted into deciles based on their Social Security income, an ordering which is probably similar to one based on lifetime earnings.[7] Within each decile

individuals were sorted by savings income (pensions, interest, dividends, and rent) and the 25th, 50th, and 75th percentiles were indentified. The results reveal that while savings income tends to be positively correlated with Social Security income, there is great variation within each decile. Many elderly in the lower deciles have substantial savings income while many in the higher deciles have very little. Consider the striking differences among workers in the middle range of income, that is, Social Security deciles 5 and 6. Those are the quintessential "average workers." At least one-fourth of them have virtually no savings income; on the other hand one-fourth have savings income of over $8000 per year. It is clear from these data that when saving is voluntary, many individuals do not save. To provide higher income for future elderly, and to reduce inequality among them, it will be necessary to introduce some form of compulsory saving.

The other major potential source of increase in income for the elderly is more paid work. In the late 1990s, mean hours of work per man age 60 was only 1495 per year, at age 65 only 701 hours, and at age 70, only 338 hours.[8] The comparable figures for women were 926, 423, and 150 hours

per year respectively. Given that most Americans at these ages are in reasonably good health and suffer from fewer physical limitations than earlier cohorts, there seems to be ample potential for more work.

Since 1975, life expectancy at age 65 has risen appreciably, especially for men. This change, unfortunately, has not been accompanied by any increase in paid work by older men and only a small increase for women. Thus, the number of years when income must come from sources other than employment has grown, and employment's share of total income was less in 1995 than in 1975. Table 4 provides a useful summary of how work has failed to keep pace with increases in life expectancy.

The first row of Table 17.4 presents life expectancy at age 65, a familiar statistic calculated from age-specific mortality rates in the year indicated. It is the mean years of life remaining for the cohort that reached age 65 (in, say, 1995) if it experienced the age-specific mortality that prevailed in 1995. Expected years of work is conceptually similar; it is obtained by combining age-specific rates of work with age-specific survival rates. It shows the years of work that the cohort that reached age 65 (in,

say, 1995) would experience if the age-specific work rate and the mortality that prevailed in 1995 continued through the lifetime of that cohort. The expected years of work are not forecast, anymore than the life expectancies are forecast. The values could be used for forecasting purposes, however, by making assumptions about future trends in age-specific mortality and in age-specific work rates.

Inspection of Table 17.4 reveals that years of life expected at age 65 increased at a rapid pace from 1975 to 1995, more rapidly for men than for women, although the latter still enjoyed a 4.3 year advantage over men in 1995. In contrast to life expectancy, expected years of work remained relatively constant, at about 2 years for men and 1 year for women (full time equivalents). The number of years *not* at work (row 1 minus row 2) rose appreciably for men from 11.7 in 1975 to 13.7 in 1995. Women also show an increase in years *not* at work, from 17.3 to 17.8 years. Health care and consumption of other goods and services in these years not at work must be financed by the accumulated savings of the elderly or by transfers from the young.

In order to make paid work for older Americans more attractive there must be a reexamination of all policies that create high implicit marginal tax rates on earnings and employment as well as a review of employment laws that often make it more costly for employers to hire or retain older workers. In addition to providing more income, there could be additional benefits to the elderly from making work more feasible and desirable. Work often provides satisfaction, identity, and an opportunity to maintain or develop relationships. Moreover, staying active usually contributes to better health. We should recall the words of another English poet, Alfred Tennyson, who in contemplating Ulysses in retirement has the aging hero say, "How dull it is to pause, to make an end, to rust unburnished, not to shine in use! As though to breathe were life."

"The Financial Problems of the Elderly: A Holistic Approach"

Endnotes

1. Butler, R. N. 1975. *Why Survive? Being Old in America*, New York: Harper and Row.

2. Hiraizumi, W. 2000. Mass Longevity Transforms Our Society. *Proceedings of the American Philosophical Society* 144(4):361-383.

3. Fuchs, V. R. and Sox, Jr., H.C. 2001. Physicians' Views of The Relative Importance to Patients of Medical Innovations: A Survey of Leading General Internists, NBER, in progress.

4. Freudenheim, M. 2000. *New York Times*, December 31:38.

5. Hurd, M.D. and McCarry, K.. 1997. The Predictive Validity of Subjective Probabilities of Survival. Mimeo.

6. Venti, S.F. and David A. Wise. 1998. The Cause of Wealth Dispersion at Retirement: Choice or Chance? *American Economic Review* 88(2):185-91.

7. All household income was assumed to be shared equally among the members of the household.

8. These figures were calculated from the 1996-98 Current Population Surveys. They reflect the total annual hours worked for each age-sex group divided by the total number in the group regardless of labor force status.

References

Butler, R.N. 1975. *Why Survive? Being Old in America*. New York: Harper and Row.

Freudenheim, M. 2000. *New York Time*, December 31: 38.

Fuchs, V.R. and Sox, Jr., H.C. 2001. Physicians' Views of the Relative Importance to Patients of Medical Innovations: A Survey of Leading General Internists. NBER, in progress.

Hiraizumi, W. 2000. Mass Longevity Transforms Our Society. *Proceedings of the American Philosophical Society* 144(4): 361-383.

Hurd, M.D., and McCarry, K. 1997. The Predictive Validity of Subjective Probabilities of Survival. Mimeo.

Venti, S.F., and Wise, D.A. 1998. The Cause of Wealth Dispersion at Retirement: Choice or Chance? *American Economic Review* 88(2): 185-91.

Table 1

Ten Major Advances in Medical Technology During Past 30 Years

Balloon angioplasty with stents
Blood pressure lowering drugs
Cataract extraction with lens implant
Cholesterol lowering drugs
Coronary artery bypass graft
Hip and knee replacement
MRI and CT scanning
Mammography
New drugs for depression
New drugs for ulcers and acid reflux

Table 2
Americans 65 and Over, Sources and Uses of "Full Income" in 1997 (percent distribution)

Uses	Sources		Total
	Under age 65	Age 65 and over	
Health care	27	8	35
Other	29	36	65
Total	56	44	100

Table 3
Projected Uses and Sources of "Full Income" in 2020
Under Alternate Assumptions about Gap between
Growth of Health and Other

	Percent per annum gap			
	0	**1**	**2**	**3**
Uses				
Health	35	40	46	52
Other	65	60	54	48
Sources				
< 65	56	58	60	62
≥ 65	44	42	40	38

Note: Assuming that the share of Health and the share of Other provided by < 65 remain constant.

Table 4
Expected at Age 65 [a]

	Men			Women		
Expected	1975	1985	1995	1975	1985	1995
Years of life	13.7	14.6	15.6	18.0	18.6	18.9
Years of work (f-t-e) [b]	2.0	1.7	1.9	0.7	0.7	1.1
Years not at work	11.7	12.9	13.7	17.3	17.9	17.8

a. Based on age-specific mortality and employment rates in the year indicated.
b. Assuming a fulltime work year of 2000 hours.

Figure 1
Savings Income by Social Security Income Decile, Americans Ages 65 and Over, 1997