



ED 327 738

Final Report  
of the 1981  
White House  
Conference  
on

# Aging

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# HOMEWORK

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# INTRODUCTION

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# PREPARING THE ECONOMY FOR A GLOBAL FUTURE

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The first part of the report discusses the general situation of the country and the progress made in the various fields of activity. It is followed by a detailed account of the work done in the different departments during the year. The report concludes with a summary of the results achieved and a statement of the plans for the future.

### REPORT ON THE WORK OF THE DEPARTMENT OF AGRICULTURE AND FORESTRY

The Department of Agriculture and Forestry has during the year been engaged in a wide range of activities. The main work has been done in the various branches of agriculture, forestry, and fisheries. The Department has also been concerned with the improvement of the rural population and the development of the country.

#### THE AGRICULTURE

The agriculture of the country has during the year been characterized by a steady increase in production. This is due to the improved methods of cultivation and the use of modern machinery. The Department has also been engaged in the improvement of the rural population and the development of the country.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the integrity of the financial system and for the ability to track and audit activities. The text outlines the various types of records that should be maintained, including receipts, invoices, and bank statements, and provides guidelines for how these records should be organized and stored.

The second part of the document focuses on the role of the auditor in ensuring the accuracy of the financial statements. It describes the various procedures that auditors use to verify the information provided by the company, such as reviewing documents, conducting interviews, and performing analytical procedures. The text also discusses the importance of maintaining independence and objectivity throughout the audit process.

The third part of the document discusses the importance of internal controls in preventing and detecting errors and fraud. It outlines the various types of internal controls that can be implemented, such as segregation of duties, authorization requirements, and physical controls. The text also provides guidelines for how internal controls should be designed and implemented to ensure their effectiveness.

### Internal Control System

The internal control system is a set of policies and procedures designed to ensure the reliability of financial reporting, the efficiency of operations, and the compliance with applicable laws and regulations. It is a critical component of any organization's risk management framework and is essential for the success of the organization. The text discusses the various elements of an internal control system, including the control environment, risk assessment, control activities, information and communication, and monitoring.

The control environment is the foundation of the internal control system and is influenced by the organization's culture, values, and attitudes. It is essential for the organization to have a strong control environment in place to ensure the effectiveness of its internal controls. The text discusses the various factors that can influence the control environment, such as the tone at the top, the organization's structure, and the quality of its personnel.

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Year	1960	1970	1980	1990	2000	2010	2020	2030	2040	2050
Population	178	203	227	251	275	300	325	350	375	400
GDP	540	1000	1600	2400	3400	4800	6500	8500	11000	14000
Federal Revenue	100	180	280	400	550	750	1000	1300	1700	2200
Federal Expenditure	120	220	350	500	700	950	1300	1700	2200	2800
Surplus/Deficit	-20	40	130	-100	-150	-200	-300	-400	-500	-600
Debt	0	0	0	0	0	0	0	0	0	0
Interest on Debt	0	0	0	0	0	0	0	0	0	0
Net Debt	0	0	0	0	0	0	0	0	0	0
Debt/GDP	0	0	0	0	0	0	0	0	0	0
Debt/Population	0	0	0	0	0	0	0	0	0	0
Debt/Working-Age	0	0	0	0	0	0	0	0	0	0
Debt/Retiree	0	0	0	0	0	0	0	0	0	0
Debt/Child	0	0	0	0	0	0	0	0	0	0
Debt/Young Adult	0	0	0	0	0	0	0	0	0	0
Debt/Adult	0	0	0	0	0	0	0	0	0	0
Debt/Total	0	0	0	0	0	0	0	0	0	0

The data in this table shows that the federal government is projected to have a surplus in the 1960s and 1970s, but to become a deficit in the 1980s and 1990s. The deficit is projected to increase significantly in the 2000s and 2010s, reaching a peak of \$600 billion in 2010. The deficit is projected to remain at this level through 2050. The total debt is projected to reach \$14,000 billion by 2050, which is 40% of GDP. The debt-to-population ratio is projected to reach 140% by 2050, and the debt-to-working-age ratio is projected to reach 140% by 2050. The debt-to-retiree ratio is projected to reach 140% by 2050, and the debt-to-child ratio is projected to reach 140% by 2050. The debt-to-young adult ratio is projected to reach 140% by 2050, and the debt-to-adult ratio is projected to reach 140% by 2050. The debt-to-total ratio is projected to reach 140% by 2050.

The large increase in the federal deficit in the 1980s and 1990s is projected to be the result of a number of factors. First, the Social Security program is projected to become a net liability starting in 1983. Second, the Medicare program is projected to become a net liability starting in 1983. Third, the federal government is projected to increase its spending on defense and other programs. Fourth, the federal government is projected to increase its spending on interest on the national debt. Fifth, the federal government is projected to increase its spending on other programs. Sixth, the federal government is projected to increase its spending on other programs. Seventh, the federal government is projected to increase its spending on other programs. Eighth, the federal government is projected to increase its spending on other programs. Ninth, the federal government is projected to increase its spending on other programs. Tenth, the federal government is projected to increase its spending on other programs.

The large increase in the federal deficit in the 1980s and 1990s is projected to have a number of effects. First, it is projected to lead to a significant increase in the federal debt. Second, it is projected to lead to a significant increase in the federal interest payments. Third, it is projected to lead to a significant increase in the federal deficit. Fourth, it is projected to lead to a significant increase in the federal deficit. Fifth, it is projected to lead to a significant increase in the federal deficit. Sixth, it is projected to lead to a significant increase in the federal deficit. Seventh, it is projected to lead to a significant increase in the federal deficit. Eighth, it is projected to lead to a significant increase in the federal deficit. Ninth, it is projected to lead to a significant increase in the federal deficit. Tenth, it is projected to lead to a significant increase in the federal deficit.

Policy options to reduce the deficit in the 1980s and 1990s would be to increase federal revenue and to decrease federal expenditure. One option would be to increase the federal income tax rate. Another option would be to increase the federal corporate tax rate. A third option would be to increase the federal excise tax rate. A fourth option would be to increase the federal estate tax rate. A fifth option would be to increase the federal gift tax rate. A sixth option would be to increase the federal capital gains tax rate. A seventh option would be to increase the federal dividend tax rate. An eighth option would be to increase the federal interest tax rate. A ninth option would be to increase the federal inheritance tax rate. A tenth option would be to increase the federal gift tax rate.



of April 1982. The major reasons for the present uncertainty of the benefit situation of the elderly are, first, the fact that the Social Security trust fund is not expected to be sufficient to pay the benefits of the elderly for the next 5 years, and second, the fact that the Social Security trust fund is not expected to be sufficient to pay the benefits of the elderly for the next 5 years.

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### Taxation of the Elderly

Under the present law, about two-thirds of the elderly pay no Federal income tax, although they are subject to excise and sales tax and estate tax. One reason why elderly pay no income tax is that they have low incomes. Another reason is that tax exempt income levels for the elderly are substantially higher than those for the nonelderly. For example, the tax exempt level is \$3,400 for a nonelderly couple and \$7,200 for an aged couple. For an aged couple, the tax exempt level is commensurate about twice the level for the nonelderly couple. If maximum Social Security benefits are paid to both spouses, the tax exempt level amounts to \$70,000.

These tax provisions are substantial enough to cause a controversy of their own. What other factors are relevant in determining how much benefit of tax treatment the elderly should receive? If so, for what reasons should old recipients such as a criterion for benefit of tax treatment? A second question is the tax treatment of Social Security.

### The Tax Treatment of Social Security

Whether Social Security benefits should continue to be exempt from personal income taxes is a very controversial question. The tax exempt status of Social Security benefits is a large drain on Federal tax revenues and allows high income recipients to pay lower taxes than persons who do not receive Social Security benefits but have the same total income. Taxing all or a portion of these benefits would not affect lower income recipients who rely on them for all or most of their income (over half of all recipients), but would reduce net benefits of higher income recipients in proportion to their marginal tax rates. For example, a couple over 65 receiving \$7,200 in Social Security benefits with no other income would be protected by the \$3,400 zero bracket amount and the \$4,000 in personal exemptions, and so would not have taxable income.

Taxing Social Security benefits that exceed employee contributions, analogous to the tax treatment of private pensions, would increase Federal taxes by an estimated \$3 billion in fiscal year 1982 and by an estimated \$72 billion for the combined years 1982-1986.<sup>53</sup> If these additional revenues were transferred back into the Social Security trust fund, the financial shortfall for those funds over the next 5 years probably would be eliminated. Such tax treatments would also help defray some of the longer-run cost increases.

One argument against taxing Social Security benefits is that aggregate benefits to the elderly should not be reduced. However, for reasons already mentioned, removing the tax exclusion would not reduce benefits for the majority of recipients who are poor and rely heavily on those benefits as their primary source of income. Reducing benefits through taxation therefore would not be inconsistent with the general concept of providing financial security to the needy retired.

A second argument for excluding Social Security benefits is that they are transfer payments, which traditionally have not been taxed. The justification for their tax exempt status was weakened substantially by the Revenue Act of 1978, which included a provision to tax a portion of an employment compensation received by persons with high incomes.

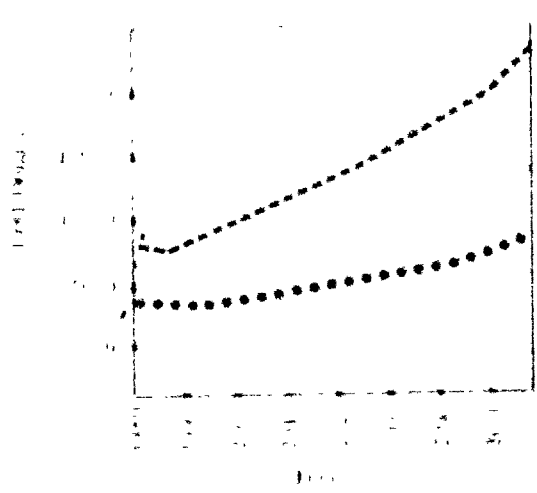
Value of any assets that would be available to the person in the event of his death would be subject to estate tax. He would have to pay the estate tax on the value of any assets that would be subject to estate tax. He would have to pay the estate tax on the value of any assets that would be subject to estate tax.

### Social Security Contracted Population Aging

Individuals who belong to the group of people who are now in the prime of their lives are the primary source of retirement funds. The Social Security program is based on the concept of replacing some proportion of a person's pre-retirement pay with a pension. Looking at it in this way, the current system will not be able to pay the pension to all who are now in the prime of their lives. The program will probably be able to pay the pension to only a portion of those who are now in the prime of their lives. A worker earning \$10,000 in 1970 would receive \$5,962 in 1990. A worker earning \$10,000 in 1970 would receive \$7,100 in 1990. A worker earning \$10,000 in 1970 would receive \$8,100 in 1990.

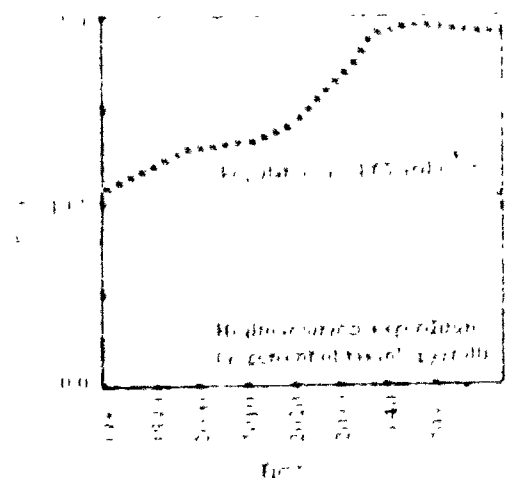
Figure 2 shows the path of benefit and a three percent assumption is explained in the 1962 (1953) Figure 2 part. Figure 3 shows the path of benefit in the future. In addition to the benefit payments, the large amount of retirement will put great financial pressure on the Social Security system in the long run, and the consequences of that policy.

FIGURE 2  
Social Security Retirement Benefit  
1970-1990



1970-1990  
1970-1990  
1970-1990

FIGURE 3  
Social Security Retirement Benefit  
1970-1990



The first part of the report deals with the general situation of the country and the position of the various groups. It is a very general and somewhat superficial treatment of the subject. The second part is a more detailed study of the various groups and their activities. It is a very interesting and valuable contribution to the knowledge of the situation in the country. The third part is a summary of the findings of the study and a list of recommendations. It is a very concise and clear summary of the findings and a very useful list of recommendations.

### CONCLUSIONS

The study has shown that the situation in the country is very serious and that the various groups are engaged in a struggle for power. The study has also shown that the various groups are engaged in a struggle for power and that the situation is very serious. The study has also shown that the various groups are engaged in a struggle for power and that the situation is very serious.

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# INCOME IN OLD AGE

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TABLE 1. Federal programs benefiting the elderly, fiscal year 1981

	Expenditures (millions)	Percent Expenditures of total	Percent of total 1981
OASDI	5,870.86	23	43
Other retired, disabled and survivors benefits <sup>a</sup>	22,847	13.2	33
SSI	2,898	1.5	4.4
Housing	3,562	2.1	5.5
Food stamps	9.6	0.05	0.1
Medicare	35,752	20.8	54
Medicaid	5,967	3.4	9.5
Other Federal health care	2,229	1.3	3.3
Older Americans Act programs <sup>b</sup>	1,037	0.6	1.2
Social services <sup>c</sup>	597	0.3	0.9
Miscellaneous	786	0.5	1.1
Total <sup>d</sup>	\$173,345	100.0	26.4

<sup>a</sup> Includes Veterans Compensation and Pensions.

<sup>b</sup> Includes National Institute on Aging and the White House Conference on Aging.

<sup>c</sup> Includes Energy Assistance.

<sup>d</sup> Totals may not add due to rounding.

Source: Office of Management and Budget.

## THE RETIREMENT INCOME SYSTEM: Past and Present

### Employment

Although we tend to think of the senior years as a time of withdrawal from work, earnings from employment are still an important source of income for older Americans. Before this century the employment rate of older people was very high, despite lower life expectancy. This was due to the largely rural and agricultural character of society, which made gradual withdrawal from employment easy for many workers. As society has become more urban, less agricultural, and richer, labor force participation among older age groups has gradually declined. In 1900, nearly two of every three men age 65 and older worked, but by 1980 only one in five did so. Employment of men age 55-64 has also declined, falling by 10 percent in the last decade; by 1980 only 7 of 10 men in this age group were in the labor force.<sup>1</sup>

This trend has been gradual but steady, and it parallels the experience of other developed countries. Although a variety of possible causes can be identified—rising wealth, changes in industrial and social structure, introduction of public and private transfer programs—the exact role each of these factors has played is still in dispute.

Among women over age 65, the rate of labor force participation has remained fairly constant in this century at about 10 percent. The percent of working women in the 55-65 age group climbed during the 1950s and 1960s as part of the general increase in women's labor force involvement; the rate then leveled off in the 1970s at about 40 percent.<sup>1</sup>



The first part of the report deals with the general situation of the country and the progress of the work of the Commission. It is followed by a detailed account of the work of the Commission in the various fields of its activity. The report then concludes with a summary of the work of the Commission and a list of the members of the Commission.

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Old Age Benefits and Disability Insurance

The Social Security Act was amended in 1950 to provide a wide-based economic benefit program of Old Age Insurance. The program started covering all workers in 1951 and has since covered all 48. The program provides a \$37.00 monthly retirement benefit and a \$20.00 monthly disability benefit. The total monthly benefit for a worker with 35 years of covered employment would be \$57.00. The Social Security Administration estimates that the Old Age Insurance program will be expected to cost \$1.2 billion in 1960.

Amendments to the Social Security Act in 1950 extended to private and nonprofit organizations the same benefits provided to public employees. Disability Insurance was added to the program in 1950. The maximum benefit and the number of months of reduced benefits in 1960 for workers and their families.

The Social Security Administration estimates that in 1960 the \$37.00 monthly benefit will be increased to \$42.00. The program also provides for adding the earnings of a worker's family to the worker's earnings. Because of inflation, the maximum benefit for a worker with 35 years of covered employment was increased to \$57.00. The program was modified by the 1950 Amendments which provided for a wide-based economic benefit program for all workers in the economy. However, the program is not expected to be expanded and the program is expected to be expanded to cover all workers in the economy.

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Table 4. Social Security OASDI, 1960-61

	1960	1961	1960-61	1960-61	1960-61
			1960	1961	1960-61
Retirement benefits	1.0	1.0	1.0	1.0	1.0
Disability benefits	1.0	1.0	1.0	1.0	1.0
Family benefits	1.0	1.0	1.0	1.0	1.0
Spouse's benefits	1.0	1.0	1.0	1.0	1.0
Dependent's benefits	1.0	1.0	1.0	1.0	1.0
Other benefits	1.0	1.0	1.0	1.0	1.0
Total	4.0	4.0	4.0	4.0	4.0

Source: Social Security Administration, 1960.

U.S. Social Security Administration  
 Office of Research and Statistics  
 Washington, D.C. 20540

Monthly Report of the President, 1960

Supplemental Report, 1960-61

OASDI benefits are based on earnings in covered employment over the working life of a retiree. The benefit formula is progressive, which means that it awards low-wage workers a higher fraction of their average earnings than high-wage workers. Benefits are reduced if first accepted before age 65 (actuarial reduction) and increased if first accepted after age 65 (delayed retirement credit). A dependent spouse receives benefits of 50 percent of the basic benefit for the worker, and other dependents may receive benefits as well. A surviving spouse is entitled to a basic benefit equaling the deceased spouse's benefit.



appropriate measures of inflation, though recently announced revisions in the Consumer Price Index are expected to alleviate the problem in the future. The financing of OASDI is in contrast to most employer pensions, which generally accumulate a large reserve fund to meet future obligations.

### Supplemental Security Income

The principal means-tested program providing benefits for the elderly is the Supplemental Security Income (SSI) program. This program was initiated in 1974 to replace the federally-reimbursed programs of Aid to the Aged, Blind, and Disabled administered by the States.

SSI is a federally funded and administered program to provide a nationally uniform minimum income to aged, blind, and disabled persons. The major purpose of the program is to ensure a basic level of maintenance income to aged, blind, and disabled persons who were not covered by Social Security as wage earners or dependents of wage earners, or whose income from Social Security and other sources is not sufficient to provide basic maintenance needs. A State may supplement the Federal benefit to provide a higher income level for its residents or to pay the costs of certain living arrangements (boarding homes, residential institutions) when individuals are not able to live independently.

To be eligible for SSI, an individual or couple must be 65 or over or blind or otherwise disabled. Assets other than a home and certain other excluded items must be below \$1,500 for an individual and \$2,250 for a couple. Federal SSI benefits for an individual with no other income are \$3,180 a year; couples receive \$4,764. Twenty-eight States pay supplements to recipients living independently, ranging from \$120 in Utah to \$2,088 in California for individuals and from \$180 in South Dakota to \$5,016 in California for couples. Thus combined annual benefit levels in States that supplement the Federal benefit range from \$3,300 to \$5,268 for individuals and from \$4,955 to \$9,780 for couples.

Benefits are reduced by a third when a recipient lives in another person's household and does not pay a proportional share of common household expenses. This reduction applies to about 7 percent of recipients. Benefits are also reduced by \$1 for each \$2 of earnings, disregarding the first \$65 per month. Only about 3 percent of recipients have their benefits reduced for this reason. Finally, benefits are reduced by the amount of income available to the recipients other than earnings, including Social Security, veterans pensions, and interest and dividends, after disregarding \$20. This reduction affects about 60 percent of recipients.

In 1981, approximately 4 million people were receiving SSI benefits, a decrease from 4.3 million when the rolls peaked in 1976. About 35 percent of new awards are for aged persons and 65 percent are for the blind and disabled. More than half of SSI recipients are 65 years or older, the median age for this group is 76 years. Thirty-three percent of those over 65 are over 80. Sixty-six percent of the adult recipients are women.<sup>12</sup>

Total Federal benefit outlays for SSI were \$6.3 billion in 1981, and state supplements administered by the Federal Government added another \$1.8 billion. The average monthly caseload for Federal benefits was approximately 3.6 million persons, 1.2 million of whom also received federally-administered State supplements.<sup>12</sup>

Estimates suggest that only 55 percent of the aged persons potentially eligible for SSI participate in the program. According to a recent study by Urban Systems Research and Engineering<sup>13</sup>, participation rates are low for several reasons. First, some of the eligible nonparticipant population is ignorant of the SSI program and its benefits, they have less experience with government programs and are skeptical of them. As the survey indicated, even those who receive Social Security checks may never have heard of SSI. Second, if eligible participants were turned down at some time in the past they are less likely to reapply when changed circumstances make them eligible for benefits. Third, people who have never received "welfare" in their working lives

may be reluctant to apply for SSI, the stigma of receiving SSI benefits may be a real concern of the elderly.

## THE FUTURE OF THE SYSTEM

The future of the retirement income system cannot be predicted with certainty, of course, but enough is known to give reason for concern. The system will face major challenges, mostly revolving around how to pay for retirement benefits as the proportion of the elderly in the population rises.

That the Social Security system faces future financial difficulties should be obvious to any newspaper reader. What is less obvious is that the system faces two distinct future financial problems. One is immediate—unless economic conditions are very favorable the OASDI reserve funds may very well be inadequate to pay benefits sometime in the next few years. The problem, simply put, is a result of economic performance over the past five years or so that was worse than anticipated when current benefit schedules and tax rates were established.

The other problem is long-range, because of demographic shifts, of which the most dramatic is the aging of the baby boom generation, the proportion of aged persons in the population will climb substantially early in the next century. According to projections of the Bureau of the Census, the ratio of those 65 years of age and over to those aged 20 to 64 will rise from 20.22 percent in the 1980-2005 period to about 37-39 percent in 2030 and thereafter.<sup>14</sup>

Over the next 25 years, there will be approximately 3.2 covered workers (i.e., workers paying Social Security taxes) per Social Security beneficiary (retired and disabled workers, their spouses and children, and survivors of deceased workers). But by 2010, the post-World War II baby boom will have begun to retire. With fertility projected to remain at or near present levels, and with projected improvements in mortality, the number of workers per beneficiary is expected to decline to about 2.4 for the period 2006 to 2030, and to about 2.0 for the period 2031 to 2055, with the exact pattern depending on assumptions about fertility, mortality, and disability.

The 1982 OASDI Trustees' Report projects the path of the surplus or deficit in the OASDI trust fund. Rather than show this in absolute dollar amounts it is more informative to show the estimated inflow of taxes and outflow of benefits relative to the total payroll available as a tax base to support the system. Thus the estimated "cost rate" is the annual cost—or outflow of benefit payments—expressed as a percent of taxable payroll. Similarly, the tax rate shows the inflow of Social Security tax as a percentage of the tax base. The difference between inflow and outflow is the surplus or deficit, again shown as a percentage of taxable payroll.

The following table shows estimates for the cost rate, the tax rate, and the surplus or deficit based on the less optimistic of the two intermediate alternatives that appear in the 1982 OASDI Trustees' Report. Reflecting the decline in covered workers per beneficiary that occurs after 2005, the estimated cost rate will rise more rapidly than the taxes to pay for them, with deficits occurring after 2010. As the table shows, to adequately finance the programs, total payroll tax rates either would have to be increased by 1.68 percent over the years 2007-2031 and by an additional 2.73 percent beginning in 2032, or by 1.82 percent beginning immediately.

The long-run problems—stemming from an increasing proportion of the population that is aged and collecting benefits supported by a workforce whose growth does not keep pace—extend to Medicare, the Health Insurance (HI) portion of Social Security. As the proportion of the population age 65 and over increases after the turn of the century, health care expenditures as a percentage of taxable payroll also are expected to increase. While cost rates for the HI program usually are not estimated over a 75-year period, the following table presents special estimates done by the Health Care Financing Administration on the basis of the 1981 Trustees' Report.

**TABLE 2a Estimated OASDI cost rates as percentage of taxable payroll compared with tax rates\***

Period	Estimated average OASDI cost rate	Average OASDI tax rate	Surplus or deficit (%)
1982-2005	11.37	12.01	-0.64
2007-2031	14.05	12.40	1.65
2012-2036	16.81	12.40	4.41
75 Year average			
1987-2036	14.69	12.27	1.87

Figure 1 illustrates this situation by the vertical difference between the curve labeled OASDI expenditures and the dotted line labeled OASDI tax rate

**TABLE 2b Estimated HI cost rates as percentage of taxable payroll compared with tax rates**

Period	HI cost rate	Tax rate	Deficit
1981-2005	7.47	2.84	4.63
2006-2030	7.83	2.90	4.93
2031-2055	10.05	2.90	7.15

The HI portion of Social Security is even worse off than OASDI as the program is projected to run a continually increasing deficit from 1987 to 2035. The long-term situation in HI is illustrated in Figure 2.

To summarize, although it is difficult to forecast the future, it is currently projected that demographic changes occurring after the turn of the century will give rise to sharply increasing OASDI and HI cost rates. Given currently legislated taxes, both OASDI and HI costs will exceed the revenue raised to pay them after about 2010. Under intermediate assumptions, OASDI and Medicare outlays will exceed 25 percent of taxable payroll in 2030 and in each year beyond. Under less optimistic assumptions, total Social Security outlays could exceed 40 percent of taxable payroll.

While the exact magnitude of these projections is uncertain, we know enough about the general situation to recognize that the problem is both large and unavoidable. All who will reach age 65 between 1982 and 2046 have already been born. Furthermore, we would face this long-run problem even if the short-run problem had never arisen, though the solutions adopted to address the short-run problem will obviously have some bearing on the specific nature of the long-run problem.

Three broad approaches exist for closing the deficits in Social Security that will begin to appear after 2010.

1. Maintain the present benefit structure and increase the system's financing. This might be done by (a) increasing future taxes as needed after 2010, (b) attempting to advance fund the system between now and 2010.

\*Costs are extremely sensitive to the underlying assumptions such as fertility, mortality, disability incidence, real wage growth, and inflation. There is a high degree of uncertainty associated with these estimates, and the uncertainty increases as the period of projection increases. For the results of alternative estimates see the 1982 Annual

Report of the Federal Old Age and Survivors Insurance and Disability Insurance Trust Funds

The HI portion of Social Security is even worse off than OASDI as the program is projected to run a continually increasing deficit from 1987 to 2035. The long-term situation in HI is illustrated in Figure 2.



FIGURE 1 - CASUALTY AND UNEMPLOYMENT TAX RATES (1970-2030)

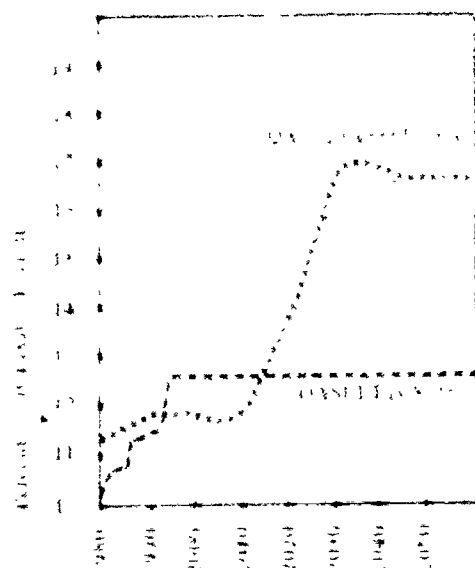
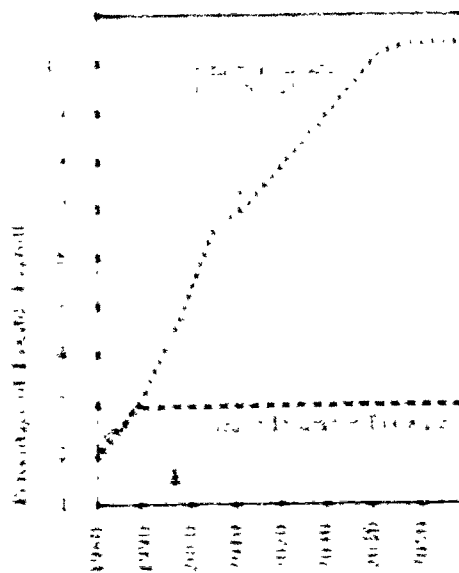


FIGURE 2 - Health Insurance Expense as Percent of Tax Rates (1970-2030)



2. Reduce the level of benefits now promised (relative to pre-retirement incomes) while leaving unchanged the age of first entitlement (age 62). This might be done by changing aspects of the basic benefit calculation formula, or by changing the age of "normal" retirement from age 65 (or say, age 68).
3. Change the age of first entitlement from age 62 to anywhere from age 63 to 67 (typically age 65 is suggested). This step might be undertaken alone or in conjunction with changing the benefit calculation formula or the age of normal retirement.

Of course, the various alternatives within these approaches can be combined in a variety of ways to address the deficit.

The first approach maintains the present benefit structure while increasing present and/or future taxes to meet future costs. Future beneficiaries (today's young workers) would be approximately as well off as present beneficiaries. Future wage-earners, who would pay higher taxes, would fully absorb the consequences of the demographic baby boom/baby bust cycle. The work and saving incentives of workers facing higher tax burdens under this approach could be adversely affected.

In addition, extensive advance funding would imply—after the Federal debt held by the investor public had been retired—that the government would hold substantial equity or debt in the private sector, which might be problematic. If so, realistic alternatives under this approach reduce to ones that raise most of the necessary revenues at the time benefits are paid.

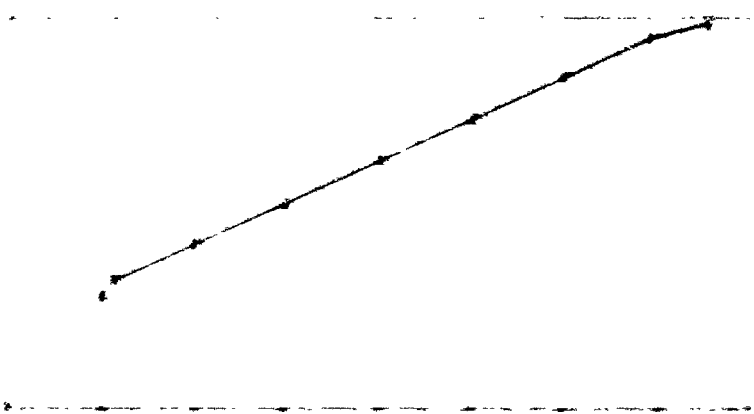
While other countries have accommodated themselves to higher dependency ratios in their publicly-financed retirement programs, that experience may not be transferable to the United States. Though the question of whether future generations will accept large increases in taxes to finance Social Security is ultimately a political one, the potential consequences for the Nation's economic growth of the combined burden of income and payroll taxes in the future will have to be weighed heavily in that calculus.

The second approach maintains the present schedule of future payroll taxes but would scale down the growth of future benefits to meet the scheduled revenues. Several means are available to do this: ad hoc adjustments to the basic formula, price indexing elements of the formula, or raising the age of normal retirement.



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The following table shows the results of the experiment. The data indicates that the rate of reaction increases as the concentration of the reactants increases.



The graph shows a clear upward trend, indicating that as the concentration of the reactants increases, the rate of the reaction also increases. This is consistent with the collision theory, which states that a higher concentration of reactants leads to a higher frequency of effective collisions.

In the experiment, the rate of reaction was measured by the time taken for a certain amount of product to be formed. The results show that the rate of reaction is directly proportional to the concentration of the reactants. This relationship can be expressed as a linear equation, where the slope of the line represents the rate constant of the reaction.

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\$8,355 based on her own earnings record, while Mrs. B is eligible for the survivor's benefit, which equals her deceased husband's benefit of \$12,761. While Mrs. A is theoretically eligible for survivor's benefits, those benefits are reduced dollar-for-dollar by the benefits she collects on her own account. Although the two families pay identical taxes for 37 years, family B receives substantially more benefits than family A.

Not only can two families pay identical taxes and receive different benefits under Social Security, but two families can pay different amounts in taxes and receive identical benefits. For example, Mr. P and Mr. Q both earn \$24,000 annually, and Mrs. P earns \$7,500. When she is 62 years old, Mrs. P is eligible for \$6,361 as a dependent, which is almost completely offset by the \$6,232 she can collect on her own account. The Ps and Qs will receive identical benefits, although Mrs. P and her employer have paid 13 percent or more of her earnings each year to Social Security for 37 years.<sup>18</sup>

The disparity between the benefits of one- and two-earner couples in retirement must be considered in light of the better coverage the two-earner couple enjoys while in the labor force. The coverage comprises disability protection for both husband and wife and survivor protection for children in the event of the death of either parent.

In contrast, the SSI program has an explicit means test to help ensure that the apparent need of potential beneficiaries corresponds to actual need.

Because this difference between presumed and actual need, the two programs differ in the length of the accounting period over which resources are evaluated to determine need. The tit in the Social Security benefit formula redistributes benefits on the basis of lifetime earnings, while the SSI program uses current income to make this evaluation. The distinction in the period over which need is measured reflects differences in the intent and function of the two programs.

Another point should be considered in evaluating the degree of redistribution under Social Security. Because the total value of Social Security benefit payments to an individual is not a single period benefit but the accumulated value of benefits from retirement until death, a proportional benefit-structure would not guarantee equality of benefit-contribution ratios. Women, who happen to live longer will receive a higher benefit-contribution ratio than those who die early. Thus, for equal contributions and equal annual benefit payments, women, who as a group have longer life expectancies, can expect to receive higher benefit-contribution ratios than men. Moreover, because both lifetime earnings and longevity are correlated with longevity, an adjustment in the benefit formula actually may be necessary if equalizing the benefit-contribution ratios is desirable.

### Indexing

Another important feature of retirement income benefits is how well they maintain their value over the retirement period. Some major foreign systems maintain the value of retirement income through periodic legislative adjustment, but advocates of indexing argue that "allow-retirees and current workers to more easily predict future income from the system." The SSI and Social Security programs both have explicit provisions for indexing. Indexing was introduced into the Social Security system in 1975, enters into the computation of the Social Security benefit in two separate ways: indexing of wage histories, indexing of benefit amounts, the primary insurance amount (PIA) formula, and post-retirement indexing of benefits.

*Indexing of Wage Histories.* An individual's Social Security benefit is based on average monthly earnings from years in which the person worked in employment covered by the Social Security system. Earnings are indexed to their constant dollar equivalent. Under current law, the earnings are indexed to reflect the growth in the average wage. To make the effect of constant earnings in a prior year to an amount comparable to the amount the worker would have today if he or she were in the same position as when he or she worked. The average indexed monthly earnings (AIME) is the measure of

earnings used in the benefit formula

An alternative way of adjusting earnings would be to index them by the growth in consumer prices, which would have the effect of converting all earnings to an amount that corresponds in current dollars to the purchasing power of these wages when they were earned. For a given benefit formula, wage-indexed earnings histories produce higher benefits than price-indexed earnings, but either method results in constant earnings replacement rates over time.

*Indexing of Bend-Points* — Social Security benefits are computed by applying a three-bracket formula, much like an income tax formula, to average indexed monthly earnings (AIME). In any one year, the formula produces benefits that are proportionally smaller for higher values of AIME. The boundaries of the brackets or intervals in the formula are referred to as bend points (see points a and b in Figure 3). Under current law the bend-points are indexed to reflect the growth in average wages to ensure that earnings replacement rates remain constant over time.

If bend-points were indexed to reflect the growth in prices instead of wages, each succeeding cohort of retirees would receive a lower earnings replacement rate, as long as real earnings were growing over time. This would occur because benefits for new retirees would not increase as fast as average indexed monthly earnings. The real dollar amount of benefits would still grow over time, but the increase would be small.

*Postentitlement Indexing of Benefits* — Before 1975, benefits paid by Social Security were not formally indexed and increases in benefits were made ad hoc by Congress. Beginning in 1975, benefits were indexed to keep pace with the rate of growth in consumer prices. Benefits from the SSI program are also indexed to prices.

There are alternatives to indexing benefits by the rate of growth in consumer prices. One alternative would be to index them by the growth in wages. With price indexing the real level of benefits remains constant over time, but with growth in real wages the relative standard of living of beneficiaries falls. Wage indexing would allow beneficiaries to share in general economic growth, which would be particularly helpful to very aged beneficiaries who have been on the rolls for a long time. Wage indexing has also been suggested for another reason. During 1974-1975 and again in the past two years, prices have been growing faster than nominal wages. Because benefits are price-indexed, Social Security and SSI recipients have fared much better than the working population during these years. Many argue that because all society should share the costs of a depressed economy, the indexing factor for benefits should not exceed the rate of growth in nominal wages.

Some have argued that because consumption needs are different for the elderly, benefits should be indexed by a separate price index that reflects the kinds of goods consumed by retirees. For example, the price of new homes and home mortgage rates have a relatively large weight in the consumer price index (CPI), but current prices do not reflect the costs of housing or mortgages for elder persons who typically made their home purchases years ago when prices and mortgage rates were much lower.

Separate price indexes for the elderly have been constructed on an experimental basis, but the results indicate little change in these indexes over time compared to the change in overall consumer prices.<sup>19</sup> An additional technical problem in trying to specify the appropriate consumption pattern for a separate index arises from the fact that a substantial portion of Social Security beneficiaries are not elderly.

Private pension plans generally have no explicit indexing of either wage histories or benefit payments. Indexing of bend points is not an issue for pensions because with proportional benefits there is only one bracket in the benefit formulas. Since wage histories are not indexed, the earnings upon which benefits are based at retirement do not necessarily reflect current price levels. This is overcome to some extent because pension plans use a much shorter averaging period than Social Security, typically using earnings from the three or five highest earnings years. With nominal



earnings growth, these will most likely be the years just before retirement. However, the problem is acute for workers who leave a particular pension plan before retirement. Once vested, such workers are still able to receive benefits from a plan, but because these benefits will often be based on earnings from years long before, their value at retirement will be very low.

Most private pension plans do not index retirement benefits. Some plans adjust benefits on an annual basis, but typically these increases have been far less than increases in the consumer price index. With moderate to high inflation rates, even benefits that provided adequate income at the time of retirement rapidly fall in real value to the point where they no longer provide sufficient retirement income.

### **Tax Treatment of Benefits**

A final important aspect of benefits is the way they are treated with respect to income taxes. Social Security and SSI benefits are not subject to the personal income tax, but benefits under private and public employer plans become taxable after workers have recovered benefits equaling their contributions to the system.

Many have argued that the double personal exemption in the income tax for people over age 65 makes the nontaxability of OASDI benefits unnecessary, and that the tax system should treat these benefits the same as or at least similar to the way private and public employer pensions are treated. On the other hand, taxing OASDI benefits would substantially lower benefit/contribution ratios for workers with high earnings. Because these workers are already treated unfavorably by the benefit formula, taxation of benefits could conflict with vertical equity. (The taxation issue is considered at greater length in a later section of this chapter.)<sup>20</sup>

### **Financing**

#### *Contribution Base*

An important consideration in financing retirement benefits is the base from which contributions come. Both Social Security and pension contributions can be thought of as being financed out of a proportional tax on earnings. SSI benefits, on the other hand, are financed from income taxes. There are two rationales for financing Social Security benefits from earnings. The first is to maintain a link between contributions and benefits, both the amount of payroll tax paid and the amount of Social Security cash benefits received are based on a worker's earnings under the program. This relationship has been an important factor in achieving public support for the program. Social Security benefits are thus thought of as an earned right rather than a transfer payment, although this link has been historically tenuous; in the case of current and past generations of retirees, contributions have accounted for only a small percentage of total benefit payments. However, under current law, for young workers on average, lifetime benefits will generally reflect lifetime contributions to the system.

The second rationale is that the payroll tax is designated specifically for Social Security. A separate tax imposes a degree of fiscal discipline on the system. The cost of the Social Security program is reflected in the payroll tax rate, and any overall liberalization of benefits must be accompanied by a corresponding increase in the taxes that workers and their employers pay. Earmarked taxes made abundantly clear what any proposed benefit increases might cost current and future taxpayers.

The payroll tax has been criticized as a source of financing for Social Security. The tax is thought to be regressive because it is leveled only on earnings up to a certain amount and does not include income other than earnings in its base. Other arguments weaken this position, however. First, less than 10 percent of all earnings are excluded because of the ceiling. Second, the earned income tax credit, introduced in 1975, was intended to help compensate for the regressivity of the tax. Finally, a regressive or proportional tax may be appropriate in a program whose overall effect is progressive.

Revenues for Social Security could be generated through other taxes besides the payroll tax. The two major alternatives are (1) moving some or all of the system's revenue requirements to general revenues, thus relying on personal income and corporate profits taxes, or (2) imposing a new tax, a value added tax being the most frequently discussed. Arguments favoring a particular approach concern the appropriateness of the financing mechanism to the benefits conveyed, the different economic impact of the taxes, and the absolute magnitude of the base on which a given tax is levied.

The introduction of general revenues into the Social Security program would require an increase in general taxes or result in a future increase in the general fund deficit. Among those who would contribute under general revenue financing would be the retired population itself through taxes on income from pensions, investments, and other assets.

Two aspects of present Social Security financing are frequently considered candidates for nonpayroll tax financing. hospital insurance and the redistributive portion of retirement benefits, including both the tilt in the benefit formula and ancillary benefits to dependents. In both cases, the natural link that proportional payroll taxes make between the level of earnings and benefits is absent, so one major rationale for payroll tax financing does not hold.

### *Pay-As-You-Go versus Advance Funding*

A critical difference between the Social Security program and pension plans is the reliance on pay as you go financing rather than advance funding. Since the 1939 Amendments, Social Security has been financed on a pay-as-you go basis. The revenue collected from the payroll tax each year is intended to equal total expenditures for that year plus a small amount to maintain a contingency fund. The effectiveness of the pay-as-you-go financing principle, in use almost since the beginning of Social Security, is grounded in the growth of the economy and the population. Taxes paid in any period by a certain generation could, in the aggregate, be matched or exceeded by the benefits received in the future by that same generation, as long as the population and real earnings were growing. With a decline in population growth and a slow or no-growth economy, however, individuals in the working population would face tax increases that could not be met by equivalent increases in future benefits.

Private pension plans are funded in a different way. while there are many variations, the basic approach is to advance fund the retirement benefits of workers over their working lifetime. A reserve fund is accumulated, which is then drawn down when a worker retires.

It was recognized at the inception of the Social Security program that there would be a large windfall to the initial generation of retirees. While this is necessarily the case under pay-as-you-go financing, it should be noted that some retirees also have received large windfalls as the result of grandfathering at the inception of many pension plans.

A significant financial liability arises during the period between the inception of a pension plan and its maturity, because there are not accumulated funds to make payments to workers at or near retirement age. Retirement benefits based on employment before the plan's starting date must be met through increased contributions to the pension fund during the transition period. Under the rules established by the Employee Retirement Income Security Act of 1974 (ERISA), the maximum period for amortizing this past liability is 30 years.

The reason for the large windfalls in Social Security lies in the program's historical origins. The system was conceived during the Depression of the 1930s, and the economic environment of the times brought elements of social welfare and redistribution into its structure. Benefits were paid immediately to individuals who paid very little into the system.

The Depression was an event that no one could have reasonably prepared for. It severely reduced the economic well-being of several generations and thus it may have made sense to transfer income from generations yet unborn to generations hurt by the event. One way to do this was to start an unfunded Social Security program. Because the Depression imposed an economic

loss of some magnitude on the entire working and retired population, the payment of income transfers to people who have reached retirement even as late as current times can be justified. However, by now most of the people affected by the Depression have reached retirement age and this argument does not hold for continuing intergenerational transfers.

The problems of pay-as-you-go financing will become acute as members of the large baby boom generation reach retirement age early in the next century. To meet the program's revenue requirements at that time, the generation succeeding the baby boom generation would face sharply increased payroll taxes. Some have argued that Social Security should distribute this burden more evenly by engaging in a considerable degree of advance funding. For this to happen payroll taxes would have to be increased in the very near future. This would enable the system to accumulate a very large reserve fund that could then be spent down as the baby boom generation retires. Under this option, members of that generation would bear a large share of the burden for their own retirement support.

It is important to recognize that because of extremely unfavorable dependency ratios, even the financing of advance-funded pension plans will be affected. As the baby boom retires, pension funds will have to pay benefits out of accumulated reserves. The generation succeeding the baby boom cohort will be asked to purchase a large stock of accumulated capital. The tradeoff for reduced consumption will be a higher level of savings. The one major difference is that capital accumulation under advance funding leads to more investment and hence a greater total national output; both consumption and savings will then come out of a larger total pie, so the absolute levels of both will be higher.

An increase in the relative degree of advance funding in the retirement income system, either through greater reliance on private pensions or modification of Social Security financing, does not necessarily lead to greater aggregate savings, other government policies are critical. For example, if it were deemed desirable to partially advance fund the Social Security program, significant technical and political issues would have to be resolved to ensure that taxes collected in advance of payment requirements would be used effectively to increase society's productive resources. At a minimum, using the funds to finance other Federal spending and/or retirement benefit increases would have to be avoided. The accumulated funds could be used to retire government debt, driving down market interest rates for government bonds and leading to a shift in private investments to productive capital. However, even after all outstanding government debt was retired, there would still have to be a very large reserve buildup if the system were to be advance-funded to any significant degree. There appears to be few options for investing these funds short of buying State or municipal debt or buying large amounts of private assets, which would imply Federal Government involvement in the ownership of private companies.

Similarly, if increases in private retirement income claims—for example, larger employer-based pensions, greater use of IRA tax shelters—were offset by increases in overall Federal borrowing for current operating expenses, then these increases in private sector retirement provisions also might not translate into increased aggregate savings.

### *Tax Treatment of Contributions*

The final aspect of financing to consider is the tax treatment of contributions. The Social Security payroll tax is levied equally on employers and employees, and in the long term at least part of the employer share of the tax is most probably shifted back to employees. Pension contributions are most often paid entirely by the employer, but they are usually considered as deferred wages by both employers and employees.

Workers' contributions to the Social Security program are taxed as income when earned. Employer contributions are treated as compensation to employees, hence as ordinary and necessary non-taxable business expenses. Employer contributions to private pension plans are treated the same way but are taxable income to the employee when received in retirement. Also, in

private pension plans the interest earned on employer contributions (and, if any, on employee contributions) is not taxed until received as retirement income. The decision not to tax employers' contributions and interest in private pension plans reflects the explicit intent to encourage the deferment of wages until retirement, when individual tax rates tend to be lower.

In contrast, the nontaxability of Social Security benefits in excess of employee contributions constitutes a tax exclusion rather than a deferment. If Social Security were treated exactly like private pensions, approximately 85 percent of benefits would be included in the adjusted gross income of beneficiaries. A less analytically rigorous, but often suggested, treatment would include just one-half of Social Security benefits in the tax base.

## INTERACTIONS

### Interprogram Interactions

Public and private pension plans, Social Security, and the Supplemental Security Income program interact in a number of ways. The most obvious is through offsets. Because SSI counts both Social Security and pension benefits as income, benefits from these programs offset SSI benefits dollar-for-dollar. The same is true for the many pension plans that are integrated with Social Security. Under integration rules established by the Internal Revenue Service, private plans can reduce benefits by up to 83 cents for each dollar of Social Security benefits received. Most plans that offset benefits for Social Security use a reduction rate substantially less than the maximum, typically 50 percent.<sup>21</sup> Under defined contribution plans, employers can contribute a higher percentage amount for earnings above the Social Security taxable maximum.

Programs interact in other ways as well. Pension plans typically set a total target earnings replacement rate for retirees that takes account of expected Social Security benefits. Thus, in plans that allow retirement before age 62, the first age of eligibility for Social Security, benefits are often adjusted so the total annual retirement income remains constant before and after the worker begins to receive Social Security benefits.

### Effects on Savings

A potentially important interaction of retirement income programs is their effect on individual savings. The idea behind this is fairly straightforward. If people save because of anticipated income needs at retirement, then the creation of a retirement income program that meets this need will cause them to save less. Assuming for the moment that private pensions are close to fully funded, as long as there is less than dollar-for-dollar reduction in private savings in response to pensions, total capital for investment is increased. However, Social Security is an unfunded program, so to the extent that individual savings are discouraged there is less capital available for investment.

In order for the effect of an unfunded system to be a concern for reasons of economic growth, at least three conditions are necessary. (1) the level of capital accumulation is too low; (2) aggregate savings would be higher in the absence of the system, and (3) changes in other government policies would not be more effective for inducing greater savings and investment.

The effect of Social Security on savings is ambiguous. There are at least three theoretical considerations. (1) benefits in excess of contributions should be expected to increase lifetime income and thus decrease savings, (2) the introduction of Social Security may have encouraged earlier retirement and thereby may have led individuals to save more over a shorter working life in order to provide for longer retirement, (3) individuals may act to offset the effect of the Social Security program either by reducing support for elderly parents or by increasing bequests (in which case the system should have no impact on savings). Empirical evidence of the effect of Social Security on savings is mixed and inconclusive.<sup>22</sup>

## Effects on earnings

A second potential effect of retirement income programs is on the labor supply of older workers. In the past 25 years, labor force participation rates for older men have steadily declined. For men aged 65 and over, the rates have fallen from 36.5 percent in 1955 to 19.1 percent in 1981. The participation rate for men age 60-64 has fallen by 21.5 percentage points, from 82.5 percent in 1955 to 61.0 percent in 1980. The trend in labor force participation rates for women has been less clear. Over the same 25-year period the rate for women 65 and over has fluctuated around 10 percent, while the rate for women 60-64 has actually increased slightly, reflecting the general increase in labor force participation by women.<sup>23</sup>

While other factors, such as rising real incomes, have been important, private pensions and Social Security may have contributed to the decline in participation rates in two ways. First, if benefits from pensions and Social Security increase total lifetime income, workers can be expected to respond by working less, in particular by retiring earlier. Second, private pensions and the Social Security program may create disincentives for continued work once benefits are taken.

In most cases up through the present, the value of the total Social Security benefits a worker could expect to receive in retirement has greatly exceeded the value of the same individual's contributions to the system. This has also been true of many pension plans. An excess of benefits relative to contributions represents a net addition to an individual's wealth, which makes retirement from the labor force more attractive. While this incentive for retirement may have influenced past labor force participation decisions, retirement income, at least from Social Security, will no longer represent an increase in wealth once the system reaches maturity in the near future. At that point the value of benefits will more nearly equal, on average, the value of past contributions.

However, because the wealth represented by future Social Security or pension benefits is not liquid, much like housing assets, the availability of a retirement income stream as an alternative to income from working may be more important for workers in choosing when to retire. To the extent this is true, the age of first availability of benefits may be a key factor influencing labor force participation.

Both public and private employer pensions and the Social Security program restrict the potential earnings of retirees once retirement benefits are taken. Employer pension plans universally require workers to leave their present jobs once they begin to draw their pensions, and in some cases place restrictions on the type of employment workers can accept after retirement. Because workers give up job-specific experience and accumulated seniority when they retire, wages will be lower in any postretirement job.

Despite this potential loss of earnings, there still are strong financial incentives for workers to accept pension benefits. Most employer plans do not credit years of service of additional earnings beyond a certain age, usually age 65, for purposes of computing a worker's retirement benefit. Thus the total value of pension benefits falls as retirement is delayed.

Social Security imposes a slightly different constraint on postretirement earnings. Under the earnings test, a person's Social Security benefits are reduced by 50 cents for each dollar of earnings above a specified exempt amount. In effect, the earnings test imposes a 50 percent tax on earnings above the exempt amount. By comparison, under the personal income tax a married couple would have to earn at least \$85,000 in 1982 before they would face a 50 percent marginal tax rate. When added to already existing payroll and income taxes, the total marginal tax rate on a Social Security recipient can be quite high. For example, a beneficiary with a median level of income can expect to net only about 25 cents for every dollar of earnings above the exempt amount. A tax that reduces financial gain from work should be expected to cause people to work less.

The earnings test has also been criticized on equity grounds. Older workers argue that they have contributed to Social Security throughout their working careers and that to deny them benefits just because they choose to continue working is unfair. Whether or not it is equitable to withhold

benefits from those over retirement age who work depends on whether Social Security is viewed as an old age annuity or a retirement program. The traditional view is that the purpose of the program is to replace lost earnings when a person becomes disabled, dies, or retires. The earnings test is used as a measure of whether retirement has occurred. With this view of the system, it is equitable to withhold benefits, just as in any insurance program payment is not made unless the insured against event occurs. On the other hand, if the system is viewed as an old age annuity, the only requirement for commencing benefit payments should be the attainment of the specified pensionable age. As noted earlier, however, in the private sector even employer pensions do not operate as old age annuities and they restrict earnings, once benefits are taken, by requiring workers to leave the firm.

Recent analysis of the Social Security system suggests that there are substantial offsetting factors to the tax on wages from the earnings test. Because of adjustments for early retirement and the effect of additional earnings on future benefits, the Social Security system may actually create work incentives that are larger than the disincentive effect of the earnings test for workers between the ages of 62 and 65. It seems clear, however, that substantial disincentives do exist for continued work beyond age 65 because the adjustment for delayed retirement does not fully compensate workers for foregone benefits.<sup>24</sup>

## CONCLUSION

Over the next 50 years the Nation will have to accommodate a very large increase in the proportion of the population that is aged. The growth in the aged population was over 10 percent in the 1970s and will be almost 10 percent in the 1980s. At present, the population 65 or older constitutes about 11 percent of the total. Over the next 50 years it will increase to approximately 18 percent of the total — an increase of more than 60 percent. Because of a long-term trend toward zero population growth in birthrates and a leveling off in immigration, the Nation eventually would have reached this higher percentage of the population that is aged without a sharp cyclical upswing in the birthrate during the 1950s and early 1960s. The baby boom-baby bust cycle, however, requires the Nation to make this substantial adjustment in a short period of time.

Such changes and accommodations are not unprecedented. In the post-World War II period, society accommodated a large bulge (and now a decline) in the dependent population under age 20. However, per person costs are lower with respect to children, and societal transfers to the aged are nominally more "public" than those made to the under 20 population. The shift to a more elderly population over the next 50 years demands more forethought, planning, and understanding than the Nation has ever tended to give such demographic transitions. The problems are especially acute at the Federal level, for increased public transfers to the aged show almost exclusively in the Federal budget.

Basically, the debate about retirement income over the next 50 years will be about how to reallocate a commensurate share of the national product to the growing percentage of elderly in the population. The elderly on average currently enjoy a certain standard of living in relation to the younger, working population. Depending on the yardstick used, the current living standard of the aged is considered to be anywhere from 60 percent to nearly 100 percent of the living standard enjoyed by most middle-aged citizens. If this relative living standard of the aged is to be maintained — neither improved nor diminished — the percentage of the national product that goes to the elderly approximately must double over the next 50 years as the elderly population increases at the same rate. This can occur by means of Social Security, employer pensions, private asset accumulation, and earnings. Is that possible? Or will the relative income position of the elderly have to decline?

Equally important, how do we want the allocation between cash income and medical services to evolve over this intervening period? Current extrapolations show Social Security declining relative

to preretirement total compensation (wages and fringes), occupational pensions probably increasing, and medical care provision—especially publicly financed medical care—increasing very considerably. As the Nation shifts resources, to whatever degree, toward the elderly, is this the distribution of cash versus in-kind income that we think necessary or sensible?

Further, are we comfortable with the mix between our public and private modes of reallocation? Employer pensions and other forms of deferred compensation are growing. Some have argued that it would be desirable to encourage that growth, for then more of the upcoming aggregate shift in national income could take place in the private sector, placing less strain on the political process (especially at the Federal level) and possibly leading to greater capital formation. Can that be accomplished without possibly counterproductive public regulation of employer pensions? As discussed more fully below, will the growth of employer pensions be such that the historical emphasis of Social Security on low-wage and intermittent employment can be phased out or at least diminished? Can we substitute other income transfer mechanisms, more directly or indirectly income-conditioned, that also might ease this traditional emphasis in Social Security? For example, proposals have long been made to substitute some or all of the redistributive elements of Social Security with an enhanced Supplemental Security Income program, the so-called special minimum in Social Security for long-term workers, or for an aged demogrant (an equal payment to all aged individuals) that is subject to taxation.

Any detailed reexamination of the retirement income system must concentrate on the publicly financed component and begin with the recognition that this component is structured around two broad objectives: (1) reallocation of an individual's income from the working years to the retirement years in order to support one's own retirement and that of a spouse; (2) reallocation within Social Security (and within national income) from certain groups, especially those with relatively high lifetime earnings, in favor of other groups in the elderly population.

The current system attempts to meet these objectives largely through the Social Security program and secondarily through the Supplemental Security Income program and tax policy. The current structure consists of the historical accretion of incremental and ad hoc decisions, and it is not evident that it achieves its results in ways that are coherent, readily understood, or even always intended.

One often-used guide for reexamining these divergent goals in the system is the measure of actuarial fairness. Can an individual expect to receive from the system what he paid into it? Such calculations involve comparing lifetime taxes and foregone interest with scheduled lifetime benefits, adjusted for risk and insurance protection. When this benchmark is used to measure the current system's reallocations, some possible anomalies emerge. The competing objective of social adequacy prevents Social Security from providing actuarial fairness in all cases. In some areas, the social consensus around the departure is probably relatively strong. For example, the system's reallocation from benefits paid to couples when both spouses are alive (and from those who leave no survivor at all) in favor of benefits paid to surviving spouses is probably greater than in private occupational pensions with actuarial survivorship rules. Nevertheless, that reallocation has been relatively unquestioned in debates about the system over the years.

On the other hand, aspects of ancillary spouse benefits (paid while both the worker and dependent spouse are alive) and the nontaxability of all program benefits operate in ways that defeat the tilt in the basic benefit formula. These seeming conflicts in the system have been debated persistently and across a broad political spectrum, thus calling into question exactly what the program's purposes are and whether some explicit rearrangements might more accurately reflect a changing economic reality and social consensus.

It may be appropriate and even necessary to smooth out some of the benefit redistributions in Social Security and to reassess the treatment of Social Security under the income tax—especially if occupational pension coverage grows among lower-wage workers. Further, now that the SSI program has become a fixed feature of the Social Security Administration, greater reliance might

be placed on that program, particularly with respect to those who have not yet reached the age of intermitter employment. Changes in the need for governmentally provided health care and for noncovered public employment, would have the potential to demand additional facilities and eliminate subsidies that are counterproductive to the program's purposes and become counterproductive themselves.

The possible social, economic, and political implications of a steady increase in the aged population and the accompanying shift in national resources can be anticipated only by making some careful reexamination of the purposes behind our public retirement programs. We have the analytic means behind one or another normative view of the system. Social Security programs must rest on a broad public consensus. A large part of that responsibility to reexamining basic program purposes and reevaluate public support for the system has been placed with the National Commission on Social Security Reform. Just as crucial is the need for economic growth to be consistently robust over the next 50 years. Real conditions in the economy and real needs — whether privately made or publicly made — are more easily assessed if the Nation's production system, healthy goods and services are readily available and abundant. The Commission's report of 1975



RESEARCH DESIGN

The research design for this study was a quasi-experimental design. The study was conducted in a classroom setting with 30 students. The students were divided into two groups: an experimental group and a control group. The experimental group received a specific intervention, while the control group did not. Data was collected at three different time points: pre-test, post-test, and follow-up. The data was analyzed using statistical methods to determine the effectiveness of the intervention.

RESULTS AND DISCUSSION

- The results of the study showed that the experimental group performed significantly better than the control group on the post-test and follow-up assessments.
- The findings suggest that the intervention had a positive impact on the students' learning outcomes.
- The study also identified some limitations, such as the small sample size and the lack of random assignment.

CONCLUSION

- In conclusion, the study demonstrated that the intervention was effective in improving student performance.
- The results provide valuable insights into the effectiveness of the intervention and its potential application in other educational settings.
- Further research is needed to explore the long-term effects of the intervention and to identify the underlying mechanisms of its effectiveness.

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# HEALTH CARE FOR THE ELDERLY

H

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... For some of the more notable hospital care...  
 ... 42 percent out of pocket. As Table I shows, the share of the...  
 ... paid out of pocket of course declined from 40 percent in...  
 ... 1950.

TABLE I  
 Hospital Care, 1940-1950

Year	Total Hospital Care (Millions of Dollars)	Out of Pocket (Millions of Dollars)	Out of Pocket (%)
1940	1,100	440	40
1945	1,400	580	41
1950	1,800	760	42

... the hospital increased from \$12 in 1940...  
 ... percent increase of the amount the average patient pay out of pocket...  
 ... 29 percent increase. That while the amount of economic...  
 ... the price even by patients supported to...

**Reasons for the Growth of Private Insurance**

Health insurance and medical preparation began to grow rapidly in the 1920's as people were...  
 ... the financial protection offered and the sense of security that came from...  
 ... with at having to worry about the cost of each physical...  
 ... hospital and physician groups all supported the growth...  
 ... their own Blue Cross (the private) and Blue...  
 ... 1930's and 1940's. Among other things, provider...  
 ... ability of patient to pay for medical...  
 ... had increased dramatically during the...

... the production...  
 ... Since World War II, an...  
 ... taxable income...  
 ... for that worker...  
 ...

... employment...  
 ... State income...  
 ... 40 percent...  
 ... employer paid health insurance...  
 ... more than...  
 ... Budget Office...  
 ... would...  
 ...

possibly about 25 percent.<sup>4</sup>

With this stimulus from the tax law, employment based insurance has become one of the most popular fringe benefits. Between 1950 and 1980, private insurance payments for health care increased from \$1 billion to \$58 billion, while the percentage of all health care expenditures paid through private insurance increased from 9.1 percent to 26.6 percent.<sup>5</sup> In 1979, about 171 million Americans (about 76 percent of the population) were covered by private insurance plans,<sup>6</sup> mostly employment based. Furthermore, there is a trend toward more extensive employment based plans, with coverage for dental care, prescription drugs, vision care, and outpatient mental health care becoming increasingly popular. Some employers now also continue health insurance coverage for retirees where it serves as a "medicap" plan supplementing the retirees' Medicare benefits. A 1980 survey of large employers found that 66 percent of the responding firms had such coverage for their retirees.

### The Evolution of the Public Financing Programs

Complementing the growth of private health insurance, Congress enacted a series of public financing programs that led ultimately to Medicare and Medicaid.<sup>8</sup> Public health insurance had its roots in the Social Security Act of 1935, under which the Federal Government began to share with the States the cost of extending cash assistance to the needy, the aged, the blind, single women with children, and later, to the disabled. The Act did not provide for direct assistance for medical expenses, but medical expenses were taken into account in determining the level of cash assistance going to an individual. In short, medical assistance was provided indirectly through the welfare system rather than through direct payment to providers. Participation by the States was optional.

The Social Security Amendments of 1950 marked another important watershed in the debate over public health insurance. That act provided for Federal matching funds to States that offered public assistance including medical payments to hospitals, physicians, and other providers of medical care. For the first time the Federal Government contributed to direct payments to providers of medical care. By 1960 about 40 States were participating in the program, spending about \$500 million. During the 1950s, however, concern continued to grow about the increasing number of aged who did not receive public assistance and lacked adequate private insurance. Almost three-fourths of all health bills for the elderly had to be paid by the aged themselves or by their relatives. Moreover, the over 65 age group had average health expenses that were twice those for the rest of the population.

Concern about the health and welfare of the elderly supplied much of the political impetus behind the next major increase in Federal support of health care, the Social Security Amendments of 1960, also known as the Kerr-Mills Act. Under Kerr-Mills, the Federal share of medical assistance was increased, and the government made an open ended commitment to pay for an established list of medical services. States were given the option of extending coverage (with Federal matching payments) to the elderly who did not require cash assistance but who were in need of assistance for medical care. By the end of 1965, all States were participating in the basic program, and 47 had coverage for the elderly who need medical care.

## MEDICARE AND MEDICAID

### Medicare

Enacted in 1965, Medicare is a Federal program providing hospital and medical insurance coverage to persons who are entitled to Social Security cash benefits and their families. Nineteen million elderly persons gained eligibility for Medicare at its inception in 1966. Medicare beneficiaries now number 25 million persons who are over 65 and 3 million who are permanently disabled, including 73,000 who are suffering from end-stage renal disease. Almost all the Nation's elderly population is covered by Medicare. Roughly three and one-half million Medicare beneficiaries also have Medicaid coverage.

Medicare covers the following acute and extended care services: hospital care, physician services, post-hospital skilled nursing facility (SNF) care, home health care, laboratory and x-ray services, physical and speech therapy, rural health clinic services, and durable medical equipment and supplies. Medicare covers neither outpatient prescription drugs nor long term nursing home care, two services of considerable importance for the elderly.

Medicare consists of two parts: Part A, Hospital Insurance, and Part B, Supplementary Medical Insurance. All persons receiving Social Security retirement or disability benefits are automatically entitled to Part A without premium payments while anyone who is over age 65 or otherwise entitled to Part A benefits may elect Part B. Part A is financed primarily (97 percent) with payroll taxes and Part B is financed by a combination of general revenues (three-fourths of expenditures) and beneficiary premium payments (one-fourth of expenditures). Ninety-six percent of all Part A beneficiaries also enroll in Part B. Conversely, about 40,000 persons not eligible for Part A enroll in Part B. The monthly premium for Part B coverage is now \$11.00 and will become \$12.20 July 1, 1982.

Under Medicare Part A, most benefits are available on a spell-of-illness basis. A spell of illness is defined as the period that begins at the time a beneficiary enters a hospital and ends when he has been out of a health care facility for 60 days. During each spell of illness, beneficiaries are covered for 90 days of hospital care and 100 days of skilled nursing care. They are entitled to receive an additional 60 days of hospital care during their lifetime (called lifetime reserve days) and unlimited home health visits if they require a skilled home health service.

Medicare requires beneficiaries to pay part of the cost of services covered by Part A, although most of the cost-sharing is imposed toward the end of the benefit period. During each spell of illness, beneficiaries must pay a deductible amount (\$260 for 1982) that approximates the national average cost of one day of hospital care. There is no cost-sharing for days 2 through 60. Coinsurance is charged for days 61 through 90 of each spell of illness (an amount equal to 25 percent of the deductible or \$65 a day in 1982), and for lifetime reserve days (50 percent of the deductible). Coinsurance equal to one-eighth of the hospital deductible per day is charged for days 21 through 100 of skilled nursing facility care.

Cost-sharing is also required of beneficiaries under Part B of Medicare. Each year a beneficiary must meet a Part B deductible, set at \$75 for 1982. Thereafter, Medicare reimburses the beneficiary for 80 percent of what it determines to be reasonable charges of physicians and other suppliers of services. The beneficiary pays the remaining 20 percent of the reasonable charges and, about half of the time, must pay the additional amounts charged by physicians that Medicare does not consider to be reasonable. Benefits paid under both Parts A and B of Medicare represent 44 percent of total personal health care expenditures for the elderly.<sup>9</sup>

Almost 70 percent of Medicare spending for the elderly is for inpatient hospital care, 25 percent for physician services, 2.5 percent for home health care, and 1.5 percent for SNF care.

Medicare program costs have risen at an average annual rate of 18.8 percent since 1972. By comparison, medical care prices in general rose 8.5 percent a year over the same period. In fiscal year 1982, Medicare costs will increase to more than \$47 billion, double what they were in 1978. This dramatic rise in costs is due to both price and utilization increases, along with growth in the beneficiary population. In fiscal year 1982, Medicare will pay part of the health care bills of more than 17 million elderly beneficiaries, at an overall average cost of \$1,696 per beneficiary.

Table 2 presents trends in Medicare total disbursements and expenditures per enrollee for selected years since 1967. In light of these trends, it is not surprising that public officials have expressed concern about the continued financial viability of the trust funds that pay the Hospital Insurance and Supplemental Medical Insurance expenses for Medicare beneficiaries. In March, 1982, the trustees of the Federal Hospital Insurance Trust Fund reported to Congress that expenditures from the trust fund could exceed revenues as early as 1986, and that even under the most optimistic assumptions the fund would be depleted in 1991.

TABLE 2. Total disbursements from the Medicare trust funds and disbursements per beneficiary for selected years, 1967-1982

Year	Total disbursements (billions)	Mean disbursement per beneficiary*
1967	\$ 4.46	\$ 251
1972	\$ 8.61	\$ 429
1977	\$21.62	\$ 869
1982 (projected)	\$47.75	\$1,696

Source: 1981 Annual Reports of the Boards of Trustees of the Federal Hospital Insurance and Supplementary Medical Insurance Trust Funds, U.S. Government Printing Office, July 8, 1981.

\*Pertains only to enrollees in the Supplemental Medical Insurance Program — slightly less than the number enrolled in the Health Insurance program.

## Medicaid

Medicaid is a joint Federal and State program, administered by the States, that finances health services primarily for individuals who are eligible to participate in the Federally-supported welfare programs. Aid to Families with Dependent Children and Supplemental Security Income (SSI) for the aged, blind, and disabled. In addition, States may provide Medicaid to medically needy persons whose incomes are too high for the cash assistance programs but who would otherwise be eligible, and whose incomes are not high enough to pay for their medical care. Thirty States and four territories have programs for the medically needy.

Medicaid was enacted along with Medicare in 1965, and States first began to participate the following year. It was not until 1970, though, that the vast majority of States had joined the program. All States except Arizona now have Medicaid programs.

Certain basic services must be provided under any State Medicaid program: hospital services, physician services, laboratory and x-ray services, SNF services for persons at least



age 21, home health services, family planning, rural health clinic services, and health assessment services for children. States also may provide any of a variety of additional services that qualify for Federal matching funds. All States have chosen to cover intermediate care facility (ICF) services. There is great variation in State income eligibility standards, provider reimbursement levels and methods, and in the amount, duration, and scope of benefits.

Medicaid operates as a vendor payment program. Payments are made directly to providers, who must accept the Medicaid payment as payment in full. For nursing home care, individuals are required to contribute any income they have above the eligibility standard to help pay for the care. States may require medically needy beneficiaries to share in the cost of services provided to them. Forty-six State Medicaid programs have agreements with Medicare to pay the Part B premium on behalf of beneficiaries eligible for both programs.

Medicaid is financed jointly with State and Federal funds. Federal contributions vary with the States' per capita income levels and currently range from 50 percent to 78 percent of program expenditures. The distribution of Medicaid expenditures across services is very different from that for Medicare: just 31 percent for inpatient hospital care; 13 percent for physician, clinic, and outpatient department services; 42 percent for nursing home care; less than 1.5 percent for home health care; and almost 6 percent for prescription drugs. Medicaid payments account for 14 percent of the health expenditures of the elderly.

An estimated 23 million persons will receive Medicaid benefits in fiscal year 1982 at a Federal and State cost of more than \$32 billion (the Federal share will be \$17.8 billion). Medicaid expenditures have risen rapidly over the past 7 years at an average annual rate of almost 15 percent (1975-1982). Elderly beneficiaries, who represent only 15 percent of Medicaid recipients, account for over 37 percent of Medicaid spending.

### Private Coverage and Out-of-Pocket Payments

Private insurance covers just 7 percent of health care expenses of the elderly, proportionately less than half of what it covered 16 years ago. More than half (about 55 percent) of the elderly purchase private insurance to supplement Medicare coverage. In 1977, approximately 12.2 million elderly Medicare beneficiaries purchased an average of 1.7 health insurance policies each, paying premiums that averaged \$318 per year per beneficiary. For that year, the elderly spent a total of \$3.8 billion on coverage supplemental to Medicare.

The private health insurance coverage the elderly have purchased to supplement Medicare has frequently been duplicative, expensive, and has not provided adequate protection against extraordinary expenses. Congress recently amended the Medicare statute to encourage States to adopt minimum standards for private health insurance policies specifically designed to supplement or fill in Medicare coverage (these are sometimes called "Medigap" policies). The standards for coverage, marketing, and premium-payout ratios for such policies are based upon those developed by the National Association of Insurance Commissioners. The law also provides for a voluntary Federal certification program to be implemented in States that fail to adopt adequate standards; the program is to begin on July 1, 1982. At the present time it is expected that the voluntary certification program will not apply in 45 States and jurisdictions because their Medigap programs meet Federal standards. Thus the Federal voluntary certification program will operate in only 10 States and jurisdictions.

The Medigap statute also provides new protections for Medicare beneficiaries by establishing Federal criminal penalties for certain fraudulent and abusive practices in

the marketing and sale of supplemental insurance policies. In addition, the Department of Health and Human Services and each of the States will continue their information and education efforts to teach Medicare beneficiaries about private supplemental health insurance.

Despite the availability of Medicare, Medicaid, and private insurance, the elderly still pay about 29 percent of their health care expenses directly out of pocket.<sup>10</sup> This is, however, a substantial reduction from the mid-1960s, when, as described in the next section, the elderly paid for more than half of their health care in this way.

## IMPROVEMENTS IN ACCESS AND HEALTH STATUS

The Medicare and Medicaid programs have had a significant impact on the availability and affordability of health care services for the elderly. Before 1965, substantial segments of the population faced serious financial barriers to obtaining medical care. Only 50 percent of the elderly had any form of health insurance.<sup>11</sup> Under Medicare, almost all of the elderly are covered for hospital and physician services. In addition, Medicaid provides insurance coverage to over 20 million of the Nation's low-income population, including 3.4 million of the poorest elderly citizens. As Table 3 indicates, public health care programs finance almost two-thirds of the costs of medical care incurred by the elderly. This is in sharp contrast to 1965, when public programs financed only 30 percent of the elderly's health care expenses.

TABLE 3. Personal health expenditures of the elderly population (age 65 and over)

Year	Aggregate amount (in billions)	Per capita amount	Percent public programs
1965	\$ 8.9	\$ 472	30
1970	\$17.3	\$ 854	61
1976	\$37.7	\$1,624	65
1980*	\$68.4	\$2,640	64

\*Preliminary 1980 data. Provided by the Health Care Financing Administration

Source: Charles R. Fisher, "Differences by Age Groups in Health Care Spending," Health Care Financing Review, Vol. 1, No. 4, Spring 1980.

### Access to Medical Care

Public health care financing programs have led to marked improvement in the availability and accessibility of quality medical care.<sup>12</sup> Since 1964, access to and utilization of medical care services have increased most significantly among the low-income elderly population.<sup>13</sup> For example, hospitalization rates among the elderly have risen dramatically. The average number of days of hospitalization per year for persons over age 65 increased more than 20 percent between 1965 and 1975. This increase in hospitalization was also significantly higher for the poor elderly (47 percent) than for the nonpoor elderly (18 percent).

Also, there is greater equity in access to ambulatory medical care. In 1964, only 72 percent of the low-income elderly, in contrast with 82 percent of the higher-income elderly, had visited a physician within the prior 2 years. By 1979, parity was achieved with 86 percent of both groups having visited a physician. Similarly, the differential in annual rates of physician visits for low-income and higher-income elderly persons has been almost eliminated.

These notable achievements in facilitating access to medical care and promoting equity are dramatically reflected in the fivefold rise in per capita expenditures for health care services to the elderly, increasing from \$472 per elderly person in 1965 to \$2,640 in 1980. As utilization, medical care costs, and per capita spending escalate, there is growing debate about the value of these increases.

Certainly, medical care is important when one is ill and valuable even if it only alleviates pain. However, medical treatment does not always provide a cure. Table 4 illustrates the limits of medical intervention. Almost 21 percent of Medicare dollars in 1976 were spent for less than 8 percent of the elderly during their last year of life. In some instances, medical care can only provide temporary relief from suffering and does not offer a cure or prolong life, despite vast expenditures for the most sophisticated therapies.

TABLE 4. Distribution of Medicare expenditures for persons who died in 1976

Age group	Percent of Medicare recipients who died in 1976	Percent of total Medicare dollars for each age group spent for recipients who died
All ages 65 and over	7.9	20.7
65-69	4.0	15.3
70-74	5.8	18.5
75-79	8.0	20.3
80-84	11.8	24.9
85 and over	19.8	32.1

Source: Charles R. Fisher, "Differences by Age Groups in Health Care Spending," Health Care Financing Review, Vol. 1, No. 4, Spring 1980.

### Improvements in Health Status

The precise relationship between the use of medical care services—sophisticated technology, drugs, radiologic treatments—and health status is very complex and somewhat uncertain. A variety of factors influence health status—not only timely and appropriate use of the medical care system, but also greater acceptance of individual responsibility for lifestyle behaviors affecting health status. Recently, we have begun to recognize the critical role that lifestyle plays in promoting health and preventing disease. (For a more extensive discussion of the role of prevention see the last section of this chapter.)

## The Challenge for the '80s

The demographic shift toward an older and relatively healthier population requires a reevaluation of health care delivery requirements. We must carefully target health and social welfare resources to meet the varied needs of an aging population. The realization of improved health status, as signaled by longer life expectancy for adults, has significant implications for the health care financing and delivery systems. Improvements in science's ability to identify health problems and develop solutions, whether therapeutic or behavioral, present a challenge for the Nation to apply medical care resources efficiently and to promote healthful lifestyles more effectively.

## The Rapid Rise of Health Care Costs and the Reasons Behind It

The advent of the 1980s has witnessed no relief from the inflation in health care expenditures that has troubled health policy makers since the late 1960s. Although the health system has made many gains, inflation continues to be a serious problem and is now threatening to force major reductions that could reverse some of those gains. As discussed later, it is ironic that many of the successes of our health system are also contributors to the inflation problem.

The terms cost and inflation carry special meanings in the health system. In the broadest sense, cost refers to amounts that are spent, either by public or private health insurers or individuals out-of-pocket, for a health care "market basket" whose contents change over time. Thus inflation refers not only to increases in prices for a constant set of services, but also to increases in the complexity of services and the frequency with which they are used by consumers. In part, because use and complexity have increased as well as prices, inflation in health care costs has substantially exceeded that of most other sectors of the economy for decades.

TABLE 5. National health expenditures and share of Gross National Product for selected years, 1965 to 1990

Year	Total expenditures (billions)	Percent public *	Percent of GNP
1965	\$ 42.0	26.1	6.2
1970	\$ 74.9	37.1	7.6
1975	\$132.1	42.6	8.6
1979	\$212.2	43.1	9.3
1985 +	\$462.2	44.7	10.5
1990 +	\$821.0	46.4	

\* Includes Federal, State, and local government expenditures.  
+ Projected

Sources: Mark S. Ireland and Carol Ellen Schendler, "National Health Expenditures: Short-Term Outlook and Long-Term Projections," Health Care Financing Review, Vol. 2, No. 3 (Winter 1981), Table 4, p. 105; and National Indicators System, Report No. 7: Economics of Health Care. National Center for Health Statistics, October 1981.

The trend in national health expenditures, and future projections if effective remedial measures are not undertaken, is truly alarming. As illustrated in Table 5, national health expenditures were \$42.0 billion in 1965, had reached \$212.2 billion by 1979, and are projected to increase to \$821.0 billion by 1990.<sup>14</sup> The share of Gross National Product devoted to health care was 6.2 percent in 1965 and had exceeded 9 percent by 1979. Projections indicate that this share will increase continuously throughout the 1980s.<sup>15</sup>

Table 6 presents distributions of the major components of health service expenditures and their trends since 1965. Hospital services have consistently consumed the largest share of the health care dollar, and this share has been growing in recent years — from 30 percent of the total in 1950 to 40 percent in 1980. Much smaller in size, but growing even faster, are expenditures for nursing home care (a service primarily used by the elderly) from 2 percent of the total in 1950 to 8 percent in 1980.<sup>16</sup>

TABLE 6 National health expenditures by type of expenditure, 1950-1980, in percent

	Health care expenditures			
	1950	1960	1970	1980
All expenditures (in billions)	\$13	\$27	\$75	\$247
Type of expenditure (as percent of total)				
Hospital care	30	34	37	40
Professional services	32	32	28	28
Nursing home care	2	2	6	8
Drugs	14	14	11	8
Eyeglasses and appliances	4	3	3	2
Research and construction	8	6	7	5
Other services	10	9	8	9
Total	100	100	100	100

Source: National Indicators System, Report Number 7  
Health Economics, National Center for Health  
Statistics, October 1981.

National health care expenditures are affected by a number of different trends and forces. The health care system is first affected by general inflation in the economy. The Congressional Budget Office, for example, reported that when hospital costs rose by an annual average of 15.0 percent from 1968 to 1978, roughly half of that increase, or 7.7 percent, was due to increases in the prices of the goods and services that hospitals buy.<sup>17</sup> The Department of Health and Human Services estimates that about 55 percent of the increase in per capita hospital expenditures between 1970 and 1980 was due to general inflation and that just over half of the rate of increase in total health care costs is due to the rate of increase in the Consumer Price Index. There remains, however, the question of the rest of the increase and why health care expenditures should be inflating nearly twice as fast as the rest of the economy.

Part of the answer is that the population is growing by about 0.9 percent per year. Even more important, the average age of the population is rising. Because health care costs are much higher for older people, on the order of two and one-half times as high for adults over age 65 than for those under age 65, this trend affects total expenditures.

One economist estimated, however, that only about 7 percent of the increase in per capita spending on health care between 1965 and 1978 could be attributed to aging alone.<sup>18</sup> While a growing and aging population is important, it does not account for a great deal of the increase.

One important factor is that health care services are not the same today as they were 20 or even 10 years ago. Some services didn't exist until relatively recent scientific breakthroughs made them possible. Total hip replacements were introduced in the last decade, cardiac pacemakers are now used by more than 250,000 people, complex open heart surgery requiring highly sophisticated equipment has become increasingly common. Over 70,000 people with kidney disease are able to receive dialysis services. Even routine hospital services have changed, there were 3.34 hospital employees per patient day in 1980 compared to only 2.65 in 1970 and 2.24 in 1965.<sup>19</sup> And an increasing percentage of hospital beds are equipped for intensive care.

Between 1970 and 1980, expenditures on hospital care per person increased three and a half times, and about 30 percent of that rise has been attributed to increases in service intensity.<sup>20</sup> Few would argue that these advances have not yielded benefits, for lives have been saved and the quality of life has been improved for many people. But they have added new products and services to the system and have increased the cost and nature of existing services.

There are a growing number of doctors in the country, the result of decisions in the 1960s to expand medical schools. The number of physicians per 100,000 population was 140 in 1960, grew to 174 by 1975, and has been projected to reach over 240 by 1990. A greater number of physicians is accompanied by higher expenditures.

Some economists claim that, unlike other markets where lower prices follow an increase in supply, when the supply of doctors, or at least of certain specialists, is greater, average fees are higher. Other economists find the evidence inconclusive. The dynamics behind all of this are not clearly understood and are actively debated. Nevertheless, as long as our current payment system remains unchanged, there is certainly little evidence to suggest that having more doctors will lower costs.

Finally, an important factor contributing to the rise in costs is the growth of third party financing for health care services with its two primary payment mechanisms — fee for service for doctors and retrospective cost-reimbursement for hospitals. Each of these elements has had an important effect on how costs are perceived in the course of medical decisionmaking.

Third-party payers are organizations or programs that pay medical bills (patients and doctors are the first and second parties). The payers are commonly insurance companies or service plans such as Blue Cross or Blue Shield, but are also government programs such as Medicare or Medicaid, and can be employers who pay directly for services rendered to their employees. Recall the example described earlier, while the average cost of a hospital day rose from \$15 to \$245 between 1950 and 1980, the amount that the patient paid increased very little. After adjusting for inflation, the cost rose from \$22 to \$99 per day (in 1967 constant dollars), but the inflation adjusted patient share rose only from \$7 to \$9 per day.

In part, this was deliberate. The Medicare and Medicaid programs and preferential tax treatment for employee health benefits were promoted largely to protect more patients from more costs. The figures above show that the strategy worked. But in protecting patients, third party financing also conceals costs. It allows decisions to be made as if cost were no object, as if a hospital day really cost only 29 percent more in 1980 than in 1950 instead of over 450 percent more.

The first of the third-party payment mechanisms, retrospective cost-reimbursement for

to change, we have to create incentives to find the better ways of doing it. As the industry receives more experience, it probably will make use of less of making the capital expenditures. Hospitals have given a case to offer incentives, equipment, and facilities to attract doctors and the patients. The costs will generally be reduced, but the incentives are not paid to the patients.

Key to the success of the industry is necessary to involve many complex issues and risks. The Hospitals will be motivated to maximize their revenues subject to these risks, and to devote resources to change to have the risks changed. But a hospital will not be motivated to improve efficiency, avoid additional new services that are already available elsewhere in the community, or discourage excessive use of its laboratory or other services. Cost shifting is not a fundamentally encourages the growth of costs and is a major contributor to the increase in service intensity cited above.

Similarly, fee-for-service paying to physicians means physicians get more when they refer to more services or choose the more costly alternative when a cheaper one is readily available. There are of course other considerations equally important to a good patient care: a physician's concern for the patient and a sincere wish to do the best thing, respect for professional standards, a desire for professional excellence, and the esteem of peers. Physicians do not render services solely for fees. The weight of the economic incentives of fee-for-service financing, however, is inevitably on the side of generating more costs.

In summary, health care costs have grown for many reasons: general inflation, the growth of an aging population, technological advances, increasing intensity of routine services, a greater number of physicians, rising expectations, and growing incomes have all contributed. At the same time, we have seen rapid expansion of the financing system that conceals the growth of costs while concealing those costs from doctors and patients. Developed originally to protect patients and remove financial barriers to needed care, the financing system and its incentives or creates has itself become part of the cost problem.

### Why Incentives Are Important

The idea that economic incentives play an important role in medical decisions is one that many people at first reject. If the point of extending insurance coverage was to remove economic considerations from medical care decisions and permit those decisions to be made on the basis of medical needs in each case, how can problems be worse now than insurance coverage has expanded?

Underlying this view are some basic misconceptions about medical care and the nature of economic incentives. First, there are always economic incentives whenever there are economic transactions. They may not be the only factors or even the most important factors in decisions, but a provider of services always knows what will produce more revenue and what will produce less. Any individual or organization that consistently acts against its own interests and loses money will not survive.

If there were always clear-cut "right" or "best" services to be rendered to patients as important as saving lives and restoring health, it would not be inappropriate to think simply of making sure resources were available to pay for those services. We would not worry about economic incentives because humanitarian concerns would dominate. Furthermore, there are many instances when medical care is like that, when there is agreement on what to do for a patient and consensus that good results can be expected. There is nothing economically wrong with assuring everyone access to this kind of care.

But there are also many examples of cases when medical care does not fit this model. As medical science has evolved, some procedures and practices that were once viewed as vital have, after systematic evaluation, been rejected as not effective or replaced by new alternatives. Even more important, medicine is characterized by a great deal of uncertainty. A doctor often faces a great deal of uncertainty about what is wrong with a patient. There is uncertainty











1980, the following are suggested:

If the Federal Government were to withdraw from cost containment regulation, each State would be free to experiment with certificate-of-need regulation and hospital rate-setting. At the same time, the Federal Government could act to neutralize the inappropriate incentives built into the tax code and open up the public program to competition among private health plans. If it is strongly believed in competition would withdraw entirely from certificate-of-need and rate setting. Yet State that favor regulation would not be adversely affected by the pro-competitive tax change and voucher programs; on the contrary, these steps would complement the State regulatory programs. Rather than having to battle to make provider controls effective in the face of burgeoning demand, these steps would mean that regulators could expect a decline in the demand for hospital care.

Although it is not essential that the Nation choose one or for all between competition and regulation, it is essential that it begin the long process of winding down health care inflation. Whether one favors regulation or competition, it is economically clear that the status quo is unsustainable.

## LONG TERM CARE

Long term care refers to the support services needed by persons who have functional limitations resulting from old age, congenital or acquired chronic illness, or other conditions that make them frail and dependent. It is an area of particular concern to the elderly.

There is widespread agreement that a long term care system should promote the independence of the person in making decisions and in performing everyday activities. It should encourage support services in the least restrictive environment, preferably at home or in the community setting. It should try to make available appropriate, cost-effective, accessible, and financially care to all persons who need it while supporting the care provided by family and friends. For chronically impaired individual who must receive care in nursing homes and institutional settings, it should ensure the quality of their care and seek to maximize their quality of life. Finally, public policy for long term care should make maximum use of family, community, and other private sector initiatives to achieve these objectives.

There is also growing awareness among family members, the general public, government officials, and professional service providers that there are problems in achieving these goals.

### The People

Approximately 6 million people are in the long term care population because they need help in mobility or personal care. This is approximately 2.6 percent of the Nation's population. Fifty percent of people who require assistance in eating or going to the bathroom are in their own homes, but only 5.3 percent of the disabled population need this kind of help. Only 2 percent of those dependent in mobility are in nursing homes.

The overwhelming majority of the elderly are healthy. While it is true that approximately 15 percent may need some form of assistance in personal care or mobility, outside or inside the home, in many cases the level or extent of help needed is minor. Of the approximately 15 percent of the elderly who need some help, 7.1 percent need help outside the house or neighborhood, 0.8 percent need help inside the house, and 6.2 percent need help bathing and/or dressing. Of the total population of elderly and disabled persons, a full 75.9 percent can be cared for within the community. Only 24.1 percent are institutionalized in nursing homes at any point in their lives. Of those persons who do not need assistance for personal care or mobility, less than one percent (0.6 percent) are institutionalized in nursing homes.

It is also true that the elderly population will continue to expand. Furthermore, projected growth rates are greatest among those over 85 who are most likely to become frail. According to the Series II Census projections, the population aged 65 and over is expected to increase by 26 percent between 1980 and 1999. The rate of increase among those 85 and over, however,

will be twice that in 1979, there will be 1.4 million more very old people than there are today.

Those needing long-term care tend to have lower incomes. In 1977, 41 percent of all the noninstitutionalized functionally disabled had incomes less than \$6,000; 46 percent of the noninstitutionalized functionally disabled age 65 and older had incomes less than \$6,000. By comparison, only 16 percent of all individuals and 39 percent of all elderly were this poor. People who have insufficient financial resources to purchase adequate services, and whose family and friends are unable to help, find it difficult to maintain an independent existence in the community. Although most of the disabled live with others who can help them, some 20 percent live alone and therefore must make arrangements to secure services, which may only be available in institutional settings.

### The Programs

Long-term care needs are financed by a variety of Federal, State, local, and private programs and expenditures. The principal Federal programs that provide resources for long-term care need are Medicaid, Medicare, the Social Services Block Grant, Supplemental

TABLE 1 Expenditures for selected Federal programs, fiscal year 1978 (in millions of dollars)

	Medicaid <sup>1</sup>	Old Age Security <sup>2</sup>	Disability Insurance <sup>2</sup>	Supplemental Security Income <sup>2</sup>	Social Services Block Grant <sup>3</sup>	Older Americans Act <sup>4</sup>	Veterans Administration <sup>5</sup>
Total	\$24,767	\$16,314	\$16,015	\$6,552	\$734	\$298	\$4,479
Medicare							
Federal					\$ 71	\$ 19	
State					\$ 28	\$ 3	
Local					\$ 29	\$247	
Total					\$461	\$ 17	
Other							
Federal					\$ 34	\$ 2	
State					\$ 98		
Total							\$ 281
Federal							\$ 57
State							\$4,141

<sup>1</sup> U.S. Department of Health, Expenditures, 1978, *Health Care Finance Review*, Summer, 1979, (I-36)

<sup>2</sup> U.S. Department of the Social Security, *Bulletin - Annual Statistical Supplement, 1977-79*. Figures shown are for calendar year 1977.

<sup>3</sup> Figures for Title XX of the Older Americans Act and Disability Insurance programs shown are for retired and disabled workers only. Figures for Title XX programs and Insurance have not been included.

<sup>4</sup> Figures for Title XX are rather than a total spending of funds from State Title XX plans.

<sup>5</sup> *Technical Note - Summary on Characteristics of State Title XX Social Services Plans for Fiscal Year 1979*, Gloria Kilgore and Gloria Solomon, Washington, DHEW ASPF, June 15, 1979.

<sup>6</sup> AOA program statistics.

Security Income, Title III of the Older Americans Act, Veterans Administration programs for disabled veterans and their families, and HUD housing construction and assistance programs. Table 7 summarizes Federal spending in fiscal year 1978 in the major programs that support individuals who need long-term care.

According to Table 7, the bulk of Federal dollars in these programs were spent on basic income support and acute care health needs (hospitals and physicians). Of the dollars spent specifically on long-term care services, the lion's share is spent in Medicaid on nursing home care. In 1978, Medicaid alone financed approximately 50 percent of the total national nursing home bill. Private financing accounted for 42 percent of the remainder. Medicare pays a relatively small amount of the Nation's nursing home bill, primarily for posthospital recuperative care. Both Medicare and Medicaid fund a relatively small number of home health care and in-home services. The social services block grant and Title III of the Older Americans Act give States flexibility to spend appropriated funds on a wide variety of support services ranging from chore services to day care to respite care to "meals on wheels" and nutritional services.

The relative amounts available for these services are small, however. Most recently, Section 2176 of the Omnibus Reconciliation Act of 1981 gives States the flexibility to apply for waivers to fund a wide variety of home and community care services under Medicaid. States can supplement Federal Supplemental Security Income payments to provide medical care to individuals. Several but not all States do so. The Veterans Administration provides a wide variety of benefits to veterans and their families ranging from home and attendant care allowances to nursing home services.

In addition to these major programs, there are a variety of State, local, county, and private activities in long-term care. The relative share of total long-term care expenditures financed by each is difficult to estimate, and cost figures are available only for nursing home care. However, it is estimated that 60-80 percent of all long-term care needs, other than nursing home care, are met informally by family and friends.

Federal reimbursement for State vendor payments to skilled nursing homes began under Kerr-Mills in 1960, continued under Medicaid which superseded Kerr-Mills in 1965 and was then expanded to Intermediate Care Facilities in 1972. On the other hand, Medicare (also enacted in 1965) has never expanded nursing home coverage beyond skilled nursing facilities. The nursing home and home health benefits in that program have remained primarily posthospital acute care benefits.

Expenditures under the Social Services provisions of the Social Security Act (Title IV(a)) were authorized in 1962 but grew slowly until the late 1960s and early 70s when their rapid growth forced Congress to cap them at a level of approximately \$2.5 billion a year. Title IV (a) became Title II in 1975 and the long-term care share of the program has run around \$600 to \$700 million in recent years. In 1981, it was converted to the Social Services Block Grant. The Older Americans Act, passed in 1965, gave State and area agencies broad discretion in making expenditures. Like the Social Services Block Grant, only a relatively small proportion is spent on the long-term care needs of elderly citizens.

## THE PROBLEMS

### Fragmentation of the Long-Term Care Delivery System

Long-term care requires a wide range of services by the family, community, private organizations, and government. The service delivery system is highly diversified in both sources of financing and delivery of services. Diversity at the local level can be beneficial, for it permits local communities to tailor the services to their particular needs. However,

diversity at the Federal and State levels may lead to unnecessary duplication, administrative burden, and expense. The Department of Health and Human Services alone has 27 programs that provide resources for people with long-term needs. This multiplicity of Federal programs and agencies is mirrored at the State and local level. These various government programs have different eligibility requirements, benefit coverage regulations, administrative structures, and methods of providing services.

The result is a complicated and confusing system in which individuals and their families may experience difficulty in locating and using the most appropriate services. Moreover, incentives are created for a doctor or social worker to institutionalize a person rather than try to piece together the complex array of services from different programs necessary to permit someone to remain in the community. The 1981 White House Conference delegates clearly favored greater efforts to decrease institutionalization.

### **Insufficient Alternative Settings and the Mismatch Between Needs and Available Services**

Evidence from some national surveys suggests that there is a substantial group of people with a wide spectrum of functional limitations who receive appropriate care in a variety of settings. Rather extensive evidence, however, also indicates that some people are getting services in settings that foster dependency when they might be able to receive them in less restrictive settings, were there not financial and systematic barriers. Estimates of inappropriate placement based on various criteria range between 10 percent and 40 percent.<sup>34</sup> For example, a significant proportion of nursing home clients are functionally dependent in relatively few areas and do not require the full range of services available on a 24-hour basis in nursing homes. Some could be cared for outside of nursing homes if there were more services available in a greater variety of settings. Services provided within nursing homes could be better matched to patient needs if reimbursement systems under Medicare and Medicaid were appropriately reformed.

The choice is not simply between institutional care and in-home services provided in widely scattered living sites. While providing some services in alternative settings may be more costly than the same services provided in nursing homes, it is likely that some services can be provided cost-effectively to people living in other group settings: apartment complexes for the elderly, congregate housing, and the like. Further, some services may be provided in collective settings on an intermittent basis to people who usually live in independent households (e.g., respite care, adult day care).

### **Inadequate Support for Informal Support Mechanisms and Community Care**

Most long-term care services are provided by families and friends. Research increasingly points to the important role informal support networks play in preventing premature institutionalization or reliance on costly formal service systems. Also, recent studies suggest that the success of formal home-based services depends on the availability and willingness of friends and family to provide additional services.

Current Federal policies do not explicitly acknowledge the contribution of the informal support system and often work against it. Assets and income policies in Medicaid and SSI do not reflect a consistent view of the role that spouse and family can and should play.

In part, the reluctance to expand Federal support of community based services is due to a fear that such formal programs will substitute for informal programs and hence add immeasurably to the public burden. However, far too little attention has been given to the current incentives for substituting formal institutional care for informal care. Public programs will pay for all living and personal care services in a nursing home, but there is little public subsidy of services in private homes that might enhance the ability of family and friends to meet the bulk of care needs.

Medicaid encourages institutional care for several reasons. First, until the recent enactment of home and community care waivers, Medicaid permitted States to allow individuals with higher incomes to become eligible in the institutional setting but not at home. Second, States often fail to cover optional in-home services in their programs while nursing homes are covered in all States. Third, the high cost of nursing home care exhausts individual assets more rapidly and makes individuals eligible for Medicaid coverage sooner under the provisions of State medically needy programs. Fourth, Medicaid will pay for basic living expenses such as room and board only in nursing homes, giving low-income individuals financial incentives to be in nursing homes where these costs are covered.

### The Costs of Long-Term Care

The costs of long-term care services have been increasing more rapidly than health care costs in general. For example, the costs for nursing home care are estimated at \$17.8 billion in 1979, an increase of 76.2 percent over 1976 compared to a general medical inflation rate of 42.2 percent over the same period. Costs for personal care services and related long-term care services are also increasing rapidly.

Rapid inflation in the long-term care sector creates several specific problems, the most obvious of which is that rapidly increasing costs increase the rates at which individuals exhaust private resources. This hastens the day they must seek public assistance.

Because of rapidly escalating costs it is difficult for people to plan for a secure retirement given the possibility of large potential costs for nursing home care or for personal care services. Available data indicate that although nursing home care costs per resident were approximately \$8,000 in 1975, average per capita income for those over 65 was only \$5,349. While the majority of nursing home patients initially use private funds, a substantial proportion convert to public sources of payment after exhausting personal resources. Private resources are, on average, depleted within the first year of entering a nursing home.

The long-term care component of Medicaid spending is a particularly important policy consideration. In 1980, across all the States some 9 percent of beneficiaries using long-term care accounted for a full 47 percent of total Medicaid expenditures.

### The Agenda For The '80s

In order to deal with the above problems, a cooperative effort between the Federal Departments, the Congress, all levels of government, and the private sector is necessary. A wide variety of private sector activities are already underway. These include the development of continuing care communities, reverse annuity mortgages, private long-term care insurance, and increased employer provision of disability benefits. There are also proposals for the construction of alternative housing, increased community use of volunteers, and the expansion of hospitals and nursing homes outward along the care continuum into community-based services.

Government can act through a variety of tax incentives, loan guarantees, and other mechanisms to support private activities that will ensure adequate alternatives to institutional placement and increase the range of choices available to individuals. A variety of mechanisms, including tax credits for the care of dependent family members, vouchers, and direct payments to family members deserve exploration. If private sector provision and individual savings for long-term care needs are maximized, the residual public sector burden can be minimized and scarce public resources can be concentrated on those who are poor or who have no family left to help provide care.

Public policy needs first to identify and then target limited resources to those who, without additional help, would enter institutions largely at public expense. In addition, emphasis needs to be placed on biomedical research and preventive approaches that



can help ameliorate the projections of future long-term care needs. It has been estimated, for example, that a cure for senile dementia could reduce the future need for nursing home beds by as much as 50 percent.<sup>35</sup> However, increased emphasis on upgrading physicians' knowledge of geriatrics and increasing the access of the elderly to skilled professionals trained in gerontology can help reduce rates of decline among the elderly and raise the average age of institutionalization. Finally, the delivery system for long-term care services needs to be rationalized so it can operate in a manner that ensures maximum continuity of care and maximum efficiency in the provision of services, and encourages providers, consumers, and government to play their appropriate roles.

## PREVENTIVE MEDICINE AND HEALTH PROMOTION

Investments in disease prevention and health promotion are among the most effective and efficient that could be made to improve the Nation's health. Indeed, the concept has been a cornerstone of classic public health activities, and the success of these traditional forms of public health has been dramatic.

At the turn of the century, diseases such as tuberculosis, rheumatic fever, smallpox, diphtheria, and tetanus were among the primary causes of death. Eight decades later, none of these infectious diseases is any longer a major cause of death and disability in the United States.<sup>36</sup> Examples of public health efforts that were instrumental in virtually eliminating infectious diseases as the major source of death and disability in this Nation include pasteurization of milk to interrupt the spread of tuberculosis, infrastructure development, including public water and sewer facilities; and more recently, fluoridation of many public water supplies and immunization against preventable diseases.

As a result of the success of interventions to halt infectious diseases, the health problem currently faced by the Nation is chronic disease.

Arteriosclerosis . . . arthritis, adult-onset diabetes, chronic obstructive pulmonary disease (including emphysema), cancer, and cirrhosis represent the overwhelming majority of our health problems. They are widespread conditions that originate in early life and develop insidiously; the probability of their occurrence increases with age . . . Generally, they develop slowly and asymptotically below a clinical threshold, at which [point] the process becomes clinically evident, progresses, and often culminates in death or disability.<sup>37</sup>

As much as 80 percent of deaths currently are the result of chronic illness and disease; the effect on disability may be even more substantial.<sup>38</sup> Public health practices that have worked for control of infectious disease too often may be inappropriate for or irrelevant to the problem of chronic disease.

In analyzing current disease prevention and health promotion alternatives it is useful to separate alternatives within the so-called medical model from those that are essentially within the individual's control, having to do with lifestyle.

### Disease Prevention

Prevention activities are a long-term investment. One way to value disease prevention and health promotion is the willingness of people to pay for it. When an individual chooses to make an investment in his own health future, and pays the costs himself, the decision regarding cost-effectiveness is the purchaser's alone. When others are asked to pay, they are entitled to ask whether the benefits to them outweigh the costs. One reason why so few

third party insurers pay for preventive services is that many of the benefits — primarily cost savings — that may eventually accrue are long-term, while the costs are immediate or short-run. Because there are likely to be changes in the beneficiary's employment, carrier, or coverage over time, the results of today's prevention expenditure do not often benefit today's private third party payer.

The Surgeon General defines disease prevention as beginning with a threat to health.<sup>39</sup> It seeks to protect as many people as possible from the harmful consequences of that threat. Disease prevention, then, consists of a minimum set of activities within the medical model, differentiated primarily by age and sex, whose efficacy is generally accepted within the medical profession.<sup>40</sup>

That there is substantial popular interest in and desire for medically oriented prevention is demonstrated by the 1975 National Ambulatory Care Survey. The survey found that the most frequent reason for patient visits to internists — accounting for 3.5 million visits that year — was for well-patient physical exams. However, there may be a substantial gap between that popular interest and the demonstrated efficacy of certain medical prevention-oriented screening services, especially for the elderly. For example:

An in depth review of the medical evidence for seeking 78 different medical conditions during a periodic health examination . . . concluded the evidence was so poor for 36% of the conditions that decisions could not be made scientifically. For only 21% of conditions (mostly infectious diseases) was the treatment or prevention supported by evidence from well-conducted, randomized, controlled trials.<sup>41</sup>

Another example examined not only efficacy but also cost-effectiveness. In the now classic Kaiser Permanente study — one of few methodologically excellent cost-benefit examinations of prevention — only for men aged 45-54 did the preventive Multiphasic Health Checkup show a net cost savings.<sup>42</sup> The study showed no savings for women or other age groups of men.

Clearly, childhood and many adult immunizations have a significant positive benefit-to-cost ratio. Death from influenza is 10 times more likely for those over 75 than for the population aged 55 to 64. Those suffering from various chronic illnesses and diseases are at an even higher risk from influenza. Similarly, the death rate from pneumococcal pneumonia is 10 times higher for those over 75 than for the general population; it is more than twice as high for those aged 65 to 74. The medical efficacy of vaccinations for these diseases is established, continuing research can be expected to improve their cost-effectiveness.

Recent work by the Congressional Office of Technology Assessment indicates positive benefit-cost ratios for Pap smears. Mammography and other forms of breast examination are medically efficacious for women in mid to late life. Carefully targeted hypertension screening and control also seem to be cost-effective, as is fluoridation.<sup>43</sup>

Scientifically acceptable documentation of the efficacy, let alone cost-effectiveness, for many other medical prevention interventions, however, is still not available. Rather, evidence is accumulating that actions outside of the medical model of prevention but within the individual's control may determine whether or when various chronic diseases occur.

. . . Chronic diseases are approached most effectively with a strategy of 'postponement' rather than cure. If the rate of progression [of chronic diseases] is . . . sufficiently postponed, the symptomatic threshold may not be crossed during a lifetime, and the disease is 'prevented'.

Some chronic illnesses definitely can be postponed, elimination of cigarette smoking greatly delays the date of onset of emphysema and reduces the probability of lung cancer . . . In other illnesses, circumstantial evidence of similar effects of postponement is strong but proof is difficult. That arteriosclerosis is retarded by weight reduction or exercise is suggested by associative data but has not yet been proved.<sup>44</sup>

## Health Promotion

The Surgeon General's Report defines health promotion as beginning with persons who are basically healthy and seeking to develop measures that can help them initiate and support behaviors that maintain and enhance their well-being.<sup>45</sup> The goal of health promotion, then, is to induce individuals (and society) to do what is in their own illness-preventing best interest.

The focus here is lifestyle modification. Study has indicated that making appropriate changes in personal behavior or lifestyle with regard to drinking and smoking, diet, sleep and exercise, wearing automobile seat belts, and observing speed laws can extend life by as much as 11 years over those who practice undesirable behaviors in these areas.<sup>46</sup>

As with prevention, so too in too many promotion areas, our knowledge of what works, for whom, and why, is woefully inadequate. This is particularly true with regard to how to induce appropriate individual behavior, such as smoking cessation. However, there is substantial suggestive evidence that people, on average, will act to change their behavior as the evidence of ill effects becomes increasingly better known. Some examples:

- Between 1964 and 1975, there was a 26 percent reduction in the number of males who smoke, and an 8 percent reduction among women; the result has been a 22 percent reduction in per capita consumption of tobacco.
- For the period 1963-1975, per capita consumption of fluid milk and cream fell 20 percent, butter 32 percent, and eggs 13 percent. The percentage of the population with high cholesterol was also significantly reduced: for males aged 45-54 down 6 percent, aged 55-64 down 14 percent; for females aged 45-54 down 13 percent, aged 55-64 down 29 percent.
- Untreated hypertensives in the Nation fell 10 percent over the 1962-1974 period.

These factors have all been components in the decline in U.S. deaths due to heart disease, which fell by 22 percent between 1968 and 1977. On the other hand, some 80 percent of Americans do not use seatbelts despite their simplicity, constant availability, and proven effectiveness in reducing morbidity and mortality.<sup>47</sup>

These observations collectively indicate three things. First, individuals have a broad interest in maintaining health. Second, and closely related, at least some forms of disease prevention and health promotion efforts apparently have the power to change behavior. Third, they indicate that additional research needs to be done, not only to determine what disease prevention and health promotion activities work and are cost-effective, but also how to bring that knowledge in an effective way to the public as well as providers of health care.

The Surgeon General's Report quotes a 1976 analysis of the 10 leading causes of death that indicated that at least 50 percent of mortality was likely due to unhealthy behavior or lifestyle. Twenty percent was due to environmental factors, 20 percent to human biological factors such as genetics, and only 10 percent was due to inadequacies in medical care.<sup>48</sup> Even when taken only as indicating orders of magnitude, these figures suggest that major future improvements in the health status of the population are most likely to be made through prevention of disease and promotion of good health, not through acute care and treatment.

### What Is Possible For The Elderly?

As the prior examples and discussion indicate, health promotion's usual messages need to be understood, accepted, and acted upon as early as possible during an individual's life. On

average, most chronic diseases can only be successfully avoided or, at least, maximally delayed if preventive practices and lifestyle modifications are followed over the long term. Nevertheless, while good data on health consequences are lacking, such behavioral changes as smoking cessation, proper exercise and nutrition, weight control, proper rest, and use of seat belts can still prove useful to health whenever they are adopted.

Beyond these activities, however, several other measures seem particularly useful with regard to quality of life for the elderly. An increasing literature, derived from the realms of both health and social services, suggests the need and desirability of support against social isolation and loneliness. Prevention includes mechanisms as diverse as the extended family and the availability of appropriate recreational and congregate meeting facilities for the elderly,<sup>49</sup> the latter within the provenance of voluntary or service organizations, local governmental bodies, and even home health or nursing facilities that serve the aged.

Because the elderly receive frequent medications to meet their chronic and acute medical needs, providers should know what other drugs are being used, should consider the adverse effects of drug-drug interactions, and should examine the necessity for each additional prescription being contemplated and the desirability of making the patient a more involved and understanding drug consumer.

Finally, the goal of improving quality of life particularly increases the importance of those health care detection and screening efforts designed to uncover

... still minor disabilities which, if left undiagnosed and untreated, can lead to severe handicap. Such conditions which are very much amenable to early detection and treatment include glaucoma, hypertension, some types of anemia, depression, hearing disorders, diabetes, some cancers, and over-medication.<sup>50</sup>

## RECOMMENDATIONS

In light of these analyses, we make the following recommendations on acute medical care financing and organization, long term care, and preventive medicine and health promotion.

### Financing and Organization for Acute Medical Care

- A continued examination of health care and social service delivery systems is desirable to produce a better organized and integrated approach to meeting the needs of the elderly more efficiently.
- Traditional health and mental health agencies should be encouraged to collocate their services within a senior center, thereby maximizing the access of that service to older persons and fulfilling the mandate to reach older persons. Also, senior citizens are thereby enabled to share as volunteers in planning, promoting and carrying out such health programs and goals as health check-ups, maintenance of wellness, and helping other senior citizens with Meals on Wheels, fellowship, and friendship.
- The Department of Health and Human Services should investigate methods of modifying provider reimbursement under Medicare in order to alleviate inflationary pressures on the Medicare trust funds. The Department should determine the effects of departing from retrospective cost-based reimbursement and should identify substitute methods that may produce incentives for greater efficiency.
- Public programs should be reformed to give beneficiaries and providers incentives to use lower cost settings where feasible and consistent with preserving the quality of care.

- The elderly should be permitted to use their Medicare benefits to enroll in private health plans meeting certain minimum standards for coverage and financial stability. Through such a voucher system, beneficiaries would be free to buy coverage tailored to their individual needs and to benefit from their willingness to enroll in efficient plans. Beneficiaries wishing to remain in Medicare should be free to do so.
- To facilitate the development of a voluntary voucher program, the Medicare and Medicaid programs should undertake further experimentation with innovative service delivery and financing arrangements such as the ongoing demonstration involving prepayment to HMOs.

#### Long-Term Care

- States are encouraged to use their existing authority to provide a broader spectrum of long-term care services.
- A full range of setting and services should exist so that individuals have maximum choice in living arrangements and services.
- Limited public resources should, to the extent feasible, be targeted on those functionally disabled individuals who, without aid, would enter expensive nursing homes. Those most at risk include frail elderly individuals who have no immediate family and are also poor.
- The delivery system for long-term care services should be rationalized to ensure continuity of care and encourage efficiency in the delivery of services.

#### Preventive Medicine and Health Promotion

- Emphasis should be placed on developing and disseminating educational materials for the elderly, as a component of health promotion efforts by Federal, State and local governments, as well as private entities.
- The health policy of the Nation should be to
  - a. Improve the health of all Americans, especially the elderly
  - b. Contain health care cost, and
  - c. Focus attention on health promotion and disease prevention
- Additional consideration needs to be given to the benefits the elderly can derive from behavioral and lifestyle modifications within individual control. Information regarding appropriate patterns and probable benefits need to be made a part of health education for the elderly and for those who serve them.
- Restructure the health care delivery system so that preventive medicine and wellness are primary objectives and take immediate action to place temporary limits on the rate of increase in hospital costs.
- Emphasis should be given to a comprehensive review of prevention-oriented screening procedures for the elderly to determine their medical efficacy. In addition, attention should be given to the cost-effectiveness of such procedures. Results of that review need to be widely disseminated to the elderly and to health professionals, to better target prevention efforts and to provide the basis for considering what services are cost-effective from the viewpoint of the individual, the health service delivery system, and third-party payers.









expansion of government programs over the past 20 years, problems developed as well.

- Hundreds of individual categorical programs were developed, each with a different laudible goal and each with its own rules, deadlines, and priorities. Because of the confusion, local administrators and State governors alike have called for simplifying the rules and collapsing the categories.
- Because of the rigidity of national categorical programs, their size and complexity, and their failure to target resources to those who really need them, waste and inefficiency are chronic problems: ineligible people are served, services are duplicated, and some percentage of funds is siphoned off at every level to support bureaucracy.

## THE ROLE OF GOVERNMENT

American tradition supports the idea that the primary responsibility for an individual's welfare rests with the individual and his family. When the family is unavailable or incapable of meeting the problem adequately it is appropriate to turn to the neighborhood, community, church, private sector, or government for help.

Government arises from the need to band together to do some tasks collectively that cannot be done by individuals or families. It has always been appropriate for government to play a role when the scope of a problem is such that individuals, families, neighborhoods, communities, or private organizations cannot cope with it. But it is inappropriate for government to arrogate roles that would be more efficiently and sensitively handled without its intervention.

Four questions should always be asked when trying to determine whether a problem requires a government program for its solution: Is it an appropriate area for government? Can government do the job most efficiently? Can we afford the government program? What are the possible adverse side effects of the program?

- *Appropriateness.* — Most Americans probably would agree that government should not do anything that people can do for themselves. When it comes to particular cases, however, much disagreement arises about whether people are managing by themselves, or whether the existence or continuation of a problem means that people cannot handle it and government intervention is needed. This is a philosophical argument that stubbornly refuses settlement. It is sufficient for our purposes to recognize that all agree that government solutions are appropriate when there is evidence that people can't handle a problem themselves, though they may disagree on what and how much evidence is needed to know when this threshold has been reached.
- *Efficiency.* — Although large industries and organizations often can provide economies of operations because of their size, this is usually not true of government programs with their legions of administrators, planners, evaluators, and auditors. When it comes to providing for the unique needs of a frail elderly person or the transportation needs of an elderly couple, a dedicated family or caring neighbor, if available, is more flexible, sensitive, and efficient than even the best-designed government program.

- *Affordability.* — Just as individuals, families, business, and organizations make daily decisions on what activities are affordable, so must taxpayers and their elected representatives at all levels of government. But funding high priority programs often requires reducing funding for those that are of lower priority. The best way to reduce the number of programs that are competing for limited resources is to use nongovernmental solutions whenever possible.
- *Unanticipated or unwanted side effects.* — Just as overreliance on a cane or crutch can slow the healing of an injured limb, the existence of a government program can encourage dependence and overreliance on that program. Some have argued that the existence of Social Security has discouraged saving by making people less concerned about their retirement needs.<sup>1</sup> It has also been argued that extending Medicare and Medicaid to pay families who care for elderly parents at home may result in a tremendous fiscal outflow to pay those families for what they are doing anyway, without substantially increasing the number of families who care for their elderly at home or reducing the number of persons in institutions.<sup>2</sup>

## THE ROLE OF THE INDIVIDUAL

The choices individuals make are the most important factors in determining what kind of old age they will have. Most elderly persons who are independent took steps to prepare themselves for old age and preserved their health when they were younger, although it is true that not all old people who need help failed to take such steps, since chance, discrimination, the economy, or simple bad luck can wreck any carefully prepared plan. Nevertheless, it would take an inordinate amount of good luck to override the effects of a lifetime of poor health habits or financial imprudence.

Old age is a payoff stage of life, when decisions made and patterns adopted earlier begin to produce dividends or exact their price. Poor health habits that for many years seemed to be without cost can now show their cost in the form of earlier disability and earlier death, while good health habits can add years to life. Love given to children throughout their growing years is, in most cases, amply repaid. Savings set aside year after year now will have accumulated to a significant sum that can be used to supplement pensions and health insurance to make the retirement years more comfortable and the saver more independent.

It is always difficult for people in their twenties and thirties to pattern their lives on the basis of a future 30 or 40 years away. Still, young people, and anyone else who can, should consider saving a larger fraction of income as the best possible way to prepare for old age. As pointed out in Chapter 2, this will have the added benefit of improving the Nation's future economy — and the Social Security System too — by helping to expand our national productive capacity.

Even actions taken in late middle age or in old age can significantly improve life and life expectancy. For example, some studies indicate that stopping cigarette smoking can lower the chance of heart attack in as little as two months.

Individual actions as simple as marking possessions, installing proper locks on doors and windows, and being careful when on the street can reduce, if not eliminate, a person's chances of becoming a victim of crime. Educational programs can open pathways to second careers or help elderly persons keep current with a rapidly changing world.

A number of new or developing techniques allow older persons to improve their economic position through maximum use of assets, tax advantages, and saving opportunities. The assets represented by a mortgage-free house can often spell the difference between a precarious and a comfortable retirement. In the past, the aged were faced with the unhappy choice of remaining in the residence and foregoing use of these assets, or selling the house and facing capital gains

taxes and higher living costs elsewhere. Changes in the tax law have alleviated the capital gains tax problem, and increased experimentation with reverse mortgages and guaranteed annuity transfers indicates their promise as techniques to unlock another source of regular income in old age. These programs have developed in a number of different forms, but the underlying idea is that people remortgage their homes and receive an annuity from investment of the assets. When the homeowner dies, the mortgagor takes title to the house.

Other changes in the tax code have encouraged savings or have facilitated retention of income by providing an opportunity for the elderly to take steps to benefit themselves:

- *Tax-free saving certificates.* — After October 1, 1981, \$1,000 in earned interest (\$2,000 on a joint return) from a variety of savings certificates can be excluded from income taxes.
- *Individual retirement accounts.* — All employees, including those participating in pension plans, are now allowed to contribute to an IRA. The new maximum amount that can be deducted by an individual is \$2,000 (up from \$1,500) plus an additional \$250 for a nonworking spouse. If the taxpayer is already in a pension plan, the IRA contribution can be made to the pension plan to increase the taxpayer's equity.
- *Estate tax relief for married couples.* — Before January 1, 1982, surviving spouses had to pay estate taxes on 50 percent of the joint estate of the couple. The tax rates were the same as those for any other estate on the taxable 50 percent. After January 1, no estate tax will be owed by a surviving spouse on any portion of a joint estate.
- *Exclusion of gain on the sale of a residence.* — Taxpayers 55 or over can sell or exchange their home and get a once-in-a-lifetime \$125,000 exemption of the gain on that home.
- *Indexing.* — Beginning in 1985, tax brackets will be adjusted for inflation so taxpayers can realize gains in personal income based on cost-of-living increases.
- *Reduced individual income tax rates.* — Several across the board reductions in tax rates have recently been legislated, the first being the 1.25 percent reduction in 1981. A 10 percent reduction is scheduled for 1982, a 19 percent reduction in 1983, and 23 percent in 1984. The maximum tax rate on any income was reduced from 70 percent to 50 percent effective October 1, 1981.
- *Credit for the elderly.* — Under certain conditions, individuals over 65 and those under 65 and retired under a public retirement system may be able to claim a credit and reduce their tax liability by as much as \$375 (single) or \$562.50 (married filing jointly).
- *Additional exemption for age and blindness.* — Individuals can always take one exemption for themselves. If they are over 65 they can take a second exemption, and if they are also blind they may take a third exemption. The same exemption rules apply for spouses if filing a joint return.
- *New Exclusion for interest and dividend income.* — At this time, \$200 (\$400 if married and filing jointly) of qualifying interest and dividend income can be excluded from the adjusted gross income calculation.
- *Nonreporting of income.* — Under current Federal Tax laws certain income sources need not be reported. They include Social Security benefits, disability retirement payments and other benefits paid by the Veterans Administration, dividends on veterans' life insurance, and life insurance proceeds received because of a person's death.

An important feature of all these tax changes is that government action has provided the opportunity, but individual initiative is required if the potential benefit is to be realized.

States, localities, and private organizations are also providing potential benefits to older Americans as the following examples show.

*Tax freezes.* — The State Legislature in Connecticut, in cooperation with various city councils, has changed its tax policy to relieve older homeowners of increased property tax burdens after age 65.

*Property tax deferrals.* — Six States have instituted tax policy changes that allow older persons to defer tax payments until property is sold and more resources are available.

*Homestead exemptions.* — Forty-one States have changed their tax codes to relieve older persons of some tax burden by reducing assessments.

*Circuit-breaker taxes.* — Thirty-five States have relieved older persons of some property tax burden by reducing payments according to income.

*House sharing.* — Many cities have directed their housing departments to institute programs enabling two or more individuals to share house expenses.

*Group living.* — Non profit organizations in many cities have promoted self-help among the elderly by enabling groups of them to live together and share expenses as well as find companionship.

From these examples it is clear that individuals have numerous opportunities to prepare for a comfortable and secure old age, if they are able to use them.

An additional aid that will develop during the next few years is the increasing value of older workers to the economy. As discussed earlier in this report, the reduced birth rates of the 1960s and 1970s will produce a labor shortage that will make older workers more attractive to employers. Incentives for older workers to remain in the workforce will increase, and this will have the double advantage of taking some pressure off the Social Security system and keeping more people fully integrated in society longer.

Most people in their sixties have no problems of health or competence that require retirement. And there is no reason to believe, for most people, that passing 65 or 70 brings infirmity or dependence or need for extra services. These services should be available for those who need them, and they should be delivered fully, promptly, and efficiently.

## THE ROLE OF THE FAMILY

The role of the family is complex and embodies numerous components — economic, social, psychological, philosophical, biological, and spiritual — none of which alone can fully describe its functions. In describing the role of the family with regard to the aged, it is possible to catalog roles and responsibilities using the categories of government programs: provide economic security, serve as caregiver, provide transportation services and so forth. But this categorization of the help that families can and usually do provide to their older members is unnecessary. Simply put, families, to the extent that they can, will provide the support their older members need, including financial advice and assistance, transportation, help with chores or decisionmaking, or whatever other aid a parent or older relative needs.

But the family role becomes even more important when older persons grow less independent because of insufficient savings or income, illness, or increasing frailty. Families have always provided this kind of help to their older members. Before the growth of government programs, families were the major — in many cases the only — source of help and support. In earlier societies, older members stayed with their children, gradually changing their status from leader to advisor until eventually their health failed and they needed care and assistance. People

without families often had no one to care for them, at least until the development of poor farms and charitably supported private institutions.

Federal programs to aid and support the elderly developed after the depression of the 1930s, a period of physical and economic dislocation that overwhelmed many families' ability to provide the kind of assistance to their older members that had been taken for granted 10 years earlier. During the next 40 years, a range of government programs was developed covering the same kinds of services that a family would have provided, virtually alone, in earlier years.

These programs are needed. They provide services for people who do not have families to help them. And they provide support when the family's economic and emotional resources are overwhelmed by serious problems. But government programs should be designed and scaled to reinforce, not replace, family efforts. Caregivers paid by government funds simply cannot provide the personal service that a loving family can. And government programs can never be flexible enough in their rules and regulations to provide the exact service that older persons need at different times.

Most important, we as a Nation can not afford to replace family care with government-funded care. It has been estimated that over 80 percent of the care provided to the elderly is provided by informal caregivers, usually families, without pay or reimbursement. Public policies that would reimburse family members for service to their older members, or would discourage families from providing such care in favor of more publicly-funded, publicly-provided care, would add untold billions to the budget.

When the ratio of producers to dependent aged is high, it may make sense to tax everyone to provide services centrally to the small number of elderly who need them. But as the ratio decreases, the "insurance" aspect of the programs decreases as well; instead of taxing a large number of producers a small amount each to provide benefits for a small number of recipients, a smaller number of producers must be taxed at a high rate to provide government services for a relatively large dependent population.

A better alternative is to count on families to provide a larger share of the help and support for the elderly, and to reserve governmental assistance for those who have no family or whose families lack the necessary resources.

## FRIENDS, VOLUNTEERS, AND PRIVATE NONPROFIT ORGANIZATIONS

If the growth of government programs has threatened to replace family responsibility, it has had an even greater effect on the role of the community, neighborhood, and private voluntary and charitable organizations. The perception has grown that these are no longer needed, that government programs are providing everything necessary. Government programs decidedly are not providing everything necessary. Private efforts not only can provide the same services at lower cost and without red tape, they are better at providing some services than the government.

Transportation is an area where the private sector, State and local governments, and the Federal government all have roles. Due to economic necessity, privately-owned transportation systems are increasingly concentrating on their most profitable routes and dropping or decreasing service on the less profitable ones. The rural elderly in particular are adversely affected, since rural transportation routes are usually the least profitable.

Public ownership of mass transit has expanded over the past 30 years in both municipal and regional systems. The public systems have tried to restore the services dropped by the private companies, but economic problems at these levels of government have prevented them from doing all they would like. In many urban areas governments have provided excellent dial-a-ride

services, and these should be continued and expanded where possible. The Federal Government has subsidized the development and operation of transit systems, but its aid has been focused mainly on high-use systems and routes.

For occasional travel, particularly in rural areas, the best solution will probably continue to be a friend or neighbor. Churches and community groups can help organize this approach by using sign-up sheets and recruiting volunteers to drive one day a week.

Social services is another area in which the role of the nongovernment sector is strong. Government recognizes that these organizations have flexibility that even well-run and well-intentioned government bureaucracies do not. Much of the government-funded social service activity is in fact performed by the staffs of private social service organizations operating under contract with the government.

These agencies should be supported not just with tax dollars but by direct contributions of money and time, for the more they are forced to rely on government funds the more like government bureaucracies they will eventually become. Conversely, if they can rely more on an independent source of income they will be better able to retain their traditional flexibility.

Nongovernmental efforts can also have a large payoff in the area of crime protection. Programs like Neighborhood Watch extend the capabilities of local police and provide a feeling of security for older people.

Education, recreation, and cultural activities are important for maintaining physical condition, mental alertness, and social contact. Education helps older people keep up with a rapidly changing world. While advances in cable and satellite television systems promise a broad range of new educational experiences at home, the value of person-to-person discussion and the need to focus some educational activities on local issues means that community discussion groups and other informal education will remain important.

Recreation and cultural activities are best managed on a local, nongovernmental basis because personal preference plays such a large role in determining individual participation. A variety of different activities run by different organizations or informal groups is likely to please more people than a large program run by government.

Churches serve the elderly in many ways. In addition to their primary role of providing organized worship, they sponsor many activities that bring elderly together with their peers as well as with younger people. Clergymen are often excellent counselors, and other members of the congregation are often willing to help older members in time of trouble.

Voluntary organizations tend to be extremely sensitive to real needs precisely because they are voluntary. The decision to volunteer time and money is personal, and the voluntary agencies or groups have complete discretion in choosing their issues and targets with no political constraints or bureaucratic regulations. If a voluntary or charitable organization wastes time or money, or if it focuses on marginal problems, its funds will soon dry up and its volunteers will drift away. The voluntary sector, whether represented by a national organization or a single concerned neighbor, can be counted on to operate efficiently and responsively and to resolve problems that "fall through the cracks" of clumsier, more constrained government programs.

## THE ROLE OF THE BUSINESS SECTOR

Although it provides by far the most goods and services Americans receive, our private, for-profit sector receives surprisingly little attention in considering ways to meet people's needs, including those of the elderly. We tend to focus on government, though the free enterprise system in most instances is best capable of performing this function.

The business sector of our system has the advantage of being able to respond automatically to our changing demands and preferences. It operates without all the difficulties inherent in public programs, such as appropriating the "correct" level of funds, proper targeting, excessive administrative expense, and conformance to a particular political ideology. Unlike our public programs, the for-profit sector does not waste funds by providing people with services they neither want nor need. And for the most part it operates efficiently, effectively, and with minimal oversight.

It is essential that we do not unnecessarily inhibit the free enterprise system's ability to provide needed goods and services.

The private sector often has much to offer in areas we generally regard as a purely public responsibility. An example is crime prevention, a major concern of Americans, especially the elderly. In response to this concern, housing projects are now being designed to make it difficult for a criminal to enter a residence without being seen by a neighbor. Improved window and door locks are another way the market has responded to the crime problem. Fire protection has also been vastly improved through the production of easily installed and inexpensive smoke alarms, which have already saved hundreds of lives.

The free market system provides the best mechanism to meet many of the needs of the elderly. As the absolute number of elderly Americans increases and their proportion of the population grows, the private sector can be counted on to pay increased attention to their needs and interests.

## STATE AND LOCAL GOVERNMENT

State and local governments are responsible for more than managing and accounting for Federal funds they receive. They also have the responsibility to make themselves aware of conditions affecting their older citizens and to exercise leadership so old problems can be resolved and new opportunities can be created.

School districts should think creatively about ways to serve the middle-aged and the elderly. The rate of technological change has accelerated to the point that many would benefit from refresher courses that explain new technology or prepare people for new careers. At a time when school enrollments are falling and pressures are building to close schools and eliminate programs, increased attention to career development and continuing education would bring together a growing need and a resource in good supply.

Transit authorities should be aware that the travel needs and schedules of the elderly often differ from those of commuters. In some cases, routes, schedules, and fares can be adjusted in the middle of the day to accommodate elderly riders without substantially raising costs or affecting the quality of morning and evening commuter service.

Police forces are hard pressed and there is little that can be suggested here to improve their effectiveness, but we hope they will continue to remind people of the steps they can take as individuals to deter crime and the steps that communities can take to make their neighborhoods safer. Judges and juries should become more aware of the terrible effect of crime on the elderly—that it not only takes their savings and threatens their lives and health,

but that fear of crime makes them more isolated, less able to trust others, less willing to travel the streets alone, less independent. They should consider these additional factors when setting bail or deciding on a sentence. Some States have passed Victim Impact laws, which require judges or juries before imposing a sentence to read a statement detailing the effect of the crime on the victim: financial losses, hospital or medical expenses, lingering health problems resulting from the crime, and psychological effects.

There are many opportunities in the housing area for State and local government leadership. Laws authorizing and governing reverse mortgage plans, zoning ordinances permitting group housing or construction of "granny flats," real estate tax reductions or deferrals, all represent areas in which some States and communities have taken action; changing demographic patterns and changes in the economy are making certain policies desirable that only a few years ago were rejected by most people and most communities. Likewise, some housing and development goals encouraged by ordinances passed 20 years ago are now seen as inappropriate because of energy cost increases, inflation, and changing demographics. States and communities should seriously consider changing some laws that are no longer needed, but they should do so carefully so as not to throw out needed protections in their search for new flexibility.

## THE FEDERAL GOVERNMENT

Federal support for the elderly is and will continue to be strong. While the elderly comprise about 12 percent of the total population, they receive approximately 28 percent of Federal budget outlays. Federal support for the elderly will average over \$7,500 per individual in fiscal year 1983. This more than doubles Federal spending on elderly programs in fiscal year 1978. Over the next five years, Federal spending for the elderly will increase 125 percent as fast as overall Federal spending.

The Federal Government will continue to exercise its responsibilities. Several of these — including preserving the Social Security system, encouraging good health habits and reducing health care costs, and supporting research on issues related to the aging — are discussed in other chapters. The Federal Government will also provide services and protections to those who truly need help: those who cannot care for themselves, and for whom family, community, or State assistance is not enough. It will continue to support the activities sponsored under the Older Americans Act. These programs provide a range of services often not provided by other programs. And it will support expansion of the protections afforded in the Age Discrimination in Employment Act through the elimination of mandatory retirement.

Retirement should be a bilateral agreement between an employee and an employer. Amendment of the law in this way may be the most significant step of all in achieving our avowed goal: to give older Americans maximum freedom of choice and encourage their continued integration in society, in the workforce, in the business of America, for as long as possible.



## RECOMMENDATIONS

### *Services*

- Efforts to target Federal resources on older persons most in need should be expanded.
- States and localities should be encouraged to improve access to existing services for older persons, rather than create separate service delivery mechanisms for the elderly.
- The Department of Health and Human Services should continue to work with Federal Departments, organizations and voluntary groups to assure that appropriate services are available to elderly persons in need.
- States and localities should be encouraged to promote and maintain intergenerational activities and to integrate the elderly into existing service programs.
- Public and private agencies serving the aging should be cognizant of the particular needs of minority populations, including blacks, Hispanics, Asian Pacific Americans, and Native Americans.

### *Housing*

- The Federal Government should work with private sector, State, and local governments to explore housing options for older persons. This exploration should include analysis of innovative financing, construction, and living arrangements.

### *Transportation*

- Transit authorities should explore ways in which the needs of the elderly can be met — such as mid-day route and fare adjustments — without increasing the costs or decreasing the quality of rush hour service.

### *Voluntary*

- Programs to encourage voluntary service by the elderly should be encouraged by both the public and private sectors.

### *Education*

- Educational programs, under a variety of auspices, should be available to older men and women and should provide skilled training, job counseling, and job placement, all of which will enhance their ability to stay in or rejoin the workforce or to enhance second careers.

### *Crime*

- Older persons should be encouraged to play an active role in crime prevention and should be made aware of the steps they can take to minimize the risk of being victimized.

## REFERENCES AND NOTES

- 1 See Martin Feldman, "Social Security, Induced Retirement, and Aggregate Capital Accumulation" *Journal of Political Economy*, Vol 82 (1974) 905-926
- 2 For a discussion of this issue, see Long Term Care: Background and Future Directions Health Care Financing Administration Publication No 81-20047.

## RESEARCH

## INTRODUCTION

**W**e Americans have a deep conviction that research will bring us continuing benefits — longer lives, healthier lives, better lives, and better and less expensive services. Our national commitment to research has brought remarkable success in all of these areas, except in the control of the costs of medical care services.

It is often said that the growth of longevity in the United States is due to medical achievements that have reduced the toll of childhood diseases. New developments make that explanation only a partial one. Statistical studies have made it clear that in recent years longevity improvements for adults have exceeded those for children.<sup>1</sup> In the 50 years from 1900 to 1950 life expectancy at birth increased by 38.4 percent while life expectancy at age 45 increased by only 14.9 percent.<sup>2</sup> In the 30 years between 1950 and 1980, however, life expectancy at birth increased by only 8.1 percent compared with an increase of 12.6 percent for life expectancy at age 45. Between 1970 and 1980 the age-adjusted death rate declined 37.4 percent for stroke and 19.0 percent for heart disease, our third and first leading causes of death respectively.<sup>3</sup>

The changing statistics reflect medical advances. Each year, for example 65,000 Americans find new freedom of mobility as well as freedom from pain by receiving artificial hip joints. Pacemakers, coronary bypasses, organ replacement, insulin pumps, and a long list of other recent medical breakthroughs have given new life to tens of thousands of adults. Each of these improvements can be traced directly to research. There is every reason to expect research benefits in the future to be as great as those we have reaped in the past.

That we can and must continue to progress was assuredly the viewpoint of both the 1981 and the 1971 White House Conference on Aging. Yet there were important differences in emphasis between the two Conferences.

A review of the recommendations for research on aging made by the 1971 Conference provides a useful perspective. That Conference met when inflation was little more than a word in the dictionary (except in the area of medical care where it was already quite noticeable), the "energy crisis" was not even dreamed of, and President Johnson's Great Society programs were well underway. Our confidence in our government's ability to improve our lives through research was perhaps at its zenith. The 1971 Conference recommended:

1. A *National Institute of Gerontology* to support and conduct research and training in the biomedical and social-behavioral aspects of aging.
2. An *Executive Office on Aging* with authority to develop and coordinate programs for the aged at all levels of government, including research and demonstration programs, and to oversee their translation into action.

3. A *major increase in Federal funds* for research, research training, and demonstration projects in the field of aging, the projects to be funded by no less than 3.5 percent of general revenues appropriated for programs in the interest of older persons.
4. *Funding of research, research training, and demonstration projects* on aging to be allocated to racial and ethnic minority groups in proportion to their numbers in the total population, with attention to recruitment and training of minority group students to become competent researchers in gerontology.
5. *Recruitment and training of women* and representation of women on bodies with responsibility for allocating training and research funds.
6. A *clearinghouse* to collect and disseminate current research findings in the field of aging to practitioners in the field and to the general public.
7. *Prompt allocation* of appropriated Federal research, demonstration and training funds and prompt implementation of intramural and extramural programs supported those funds.
8. *Assured continuation and funding* of Federally-funded demonstration projects that have proved successful.

These recommendations of the 1971 Conference focused mainly on the resources necessary for research and the organization of research. Several of the recommendations have been met. The National Institute on Aging was established in 1974, its budget has increased each year, and its 1983 budget will reach \$84 million. The problems suggested by Recommendations 7 and 8 are largely resolved. Recommendations 2 and 3 were not met, and marginal improvements have been made on 4, 5, and 6.

It is interesting to note the lack of specific reference to several subjects that were important to the 1981 delegates: disease prevention, work opportunity for the elderly, the need for a continuum of long-term care including in-home care, and medical care costs. Perhaps these issues were discussed in 1971 but were not incorporated into the recommendations. Or perhaps the issues so important to the 1981 delegates were not considered significant in 1971.

It could also be hypothesized that in 1971 there was little sense of fiscal constraint, so no attention was given to priorities for research or acknowledgement of the choices that might be necessary. In 1981 there was definite indication that resources for research were of concern to the delegates. The recommendations on specific types of research and training to be funded far outnumbered those concerned with research resource development and organization of research. And while the 1981 Conference recommended that the government match the private sector's commitment to research, the 1971 recommendation that 3.5 percent of revenues for programs in the interests of older persons be allocated for research and training had, in 1981, been reduced to 2 percent.

The 1981 delegates further recommended that, "Funds for research should not be allocated at the expense of funds to beneficiaries in those programs that are being studied." Thus the delegates exhibited a very high sense of responsibility to the needs of the elderly, as well as awareness of the fiscal problems now facing the country and the likelihood that choices among the recommendations might be required.

Choice among research and training options is a continual issue in the development of government budgets. Choices may be based on cost-benefit criteria or on very subjective impressions or on a combination of both. In considering how to divide funds between competing research needs, the issues can become extremely complex. It is not easy to decide how to allocate between competing research needs: resource development versus execution of research; basic versus applied research; research that extends life versus research that improves its quality; research to reduce government program expenditures versus research to improve

services to the rural or minority elderly, research with short-term payoffs versus longer-range research; prevention research versus research on cures versus rehabilitation research. Although cost-benefit analysis might be the preferred approach, we lack the knowledge to resolve all the questions that might be raised concerning choices and priorities. Ultimately, consensus about the allocation of research resources must be achieved through interaction between the Executive and Legislative branches of government during the budget development process.

## TOWARD A RESEARCH POLICY ON AGING

This national policy for research on aging is based on the following premises:

- *Federal budgetary restraints will not significantly retard the rate of research progress.* Federal research dollars for aging have increased rapidly in recent years but have slowed for the past two. However, we can expect continued research productivity. We have the resources: trained researchers have never been more plentiful; our data bases are more complete than ever; and rapid advances in computer technology have given us better information processing capabilities than we had in the 1970s. Better use of resources and better coordination will make our research efforts more effective in the years immediately ahead. Nevertheless, dollars remain an important requirement for research on aging. Severe underfunding of any element — manpower training, information bases, data processing capability, and new basic and applied research — could be very damaging.
- *Distinct boundaries cannot be drawn between research on aging and other kinds of research.* The sharp decline in death rates from several diseases of adult life is due to research progress on many fronts, not just in the field of aging. The National Center for Health Statistics estimates that the total eradication of cancer would increase average lifespan in the United States by 2.4 years, yet the billion dollars budgeted annually to the National Cancer Institute is not classified as aging research. Similarly, research on housing for the poor and on the other social programs usually benefits the aged along with other groups. Our perspective on the kinds of research that will benefit the elderly should not be too narrow.
- *Laboratory and clinical research demonstrations, and evaluations, as well as studies designed to reduce program costs are all relevant to our older population.* For the purposes of this discussion, no distinction is drawn between these activities.
- *Other institutions besides the Federal Government are involved in research related to aging.* Although most biological and social research related to aging is supported by Federal funds, other levels of government and the private sector make significant contributions and are important resources.

## MAJOR FUNDING SOURCES FOR AGING RESEARCH

Although a very substantial amount of age-related research is done by the pharmaceutical industry, most of it is funded by the Federal Government, principally the Department of Health and Human Services.

Within HHS, the National Institute on Aging leads both in dollar amount and in variety of age-related research activities, but other agencies of the Department are also involved. The National Institute of Mental Health, for example, funds intramural and extramural research on mental processes. The Health Care Financing Administration funds research and demonstration projects relating to Medicare and Medicaid. The Social Security Administration, the Office of the Assistant Secretary for Planning and Evaluation, the Center for Health Services Research, the National Center for Health Statistics, and all the Institutes of the National Institutes of Health also fund and conduct research that is relevant to the aged.

Numerous other Federal agencies and departments, including the Veterans Administration, have active research programs that study age-related problems. Most of these programs are relatively small and are often quite specialized, depending on the agency's mission.

## NEEDED RESEARCH IN SOCIAL AND ECONOMIC AREAS RELATED TO AGING

Designing a sensible and effective National Policy on Aging requires a great deal of information. We need to study retirement, the retired population, and the institutions that support that population. We need to find the best ways to design programs to serve the diverse and changing needs of this group. We need information on the number and nature of the elderly, now and in the future. We need to know how the institutions that support the elderly — particularly those that provide retirement income — affect the well-being of the elderly and the economy as a whole. Specific areas needing research are discussed in this section.

### Research on Work Opportunities for the Elderly

The right to work in old age was a major theme of the 1981 Conference. A Conference Committee recommendation to abolish mandatory retirement and allow the elderly to continue working if they want to received the strongest support of any recommendation in the post-Conference survey of delegates. This recommendation is also supported by the President. The age at retirement was also identified as a critical issue earlier in this report. Chapter 1, dealing with the economic implications of an aging population, showed that retirement age affects national productivity and the strength of the Social Security system.

Developing effective policy in this area requires research. Before we can design programs and policies to structure workplaces and jobs to accommodate older workers, many questions have to be answered. For example: What factors produce social competence and personal satisfaction in later life? What can government and private organizations do to promote employment for the elderly who want to work? What are the best ways to increase the use of part-time jobs and flexible or phased retirement for older workers? How do various aspects of health, impairment, and disability relate to employment?

To promote work opportunities for the elderly we need better information on the future size and characteristics of the older population as well as better understanding of the economic and social factors that influence the decision to retire or continue working, the factors that affect employers' demand for the labor of older workers, and the effect on worker productivity of advancing age. All of this behavior may be substantially influenced by government regulation,

tax and transfer policies, and the practices of employers. The cumulative impact of these influences during individuals' working lives could have major effects on the character of the retired population, the rest of society, and the economy.

Finally, we need better information on how retirement income programs affect the economy through their effects on aggregate labor supply. Do the savings effects of these programs influence capital formation and productivity? How will the financial markets and the economy be affected when the baby boom generation retires and begins to draw down the reserves of pension funds?

### Research on Competition in the Medical Care Delivery System

Chapter 3 discussed some of the problems in our health care delivery system and how these problems are increasing medical care costs. Clearly, changes must be made if the aged are to be assured affordable medical care.

One way that has been recommended is to stimulate competition in the health system. Past research has laid a solid foundation of information on how the health system functions and has suggested the role that competition could play, but greater depth of knowledge may be needed about how consumers, providers, and insurers would respond to the incentives of a more competitive health care market.

Research is also needed to generate information in the public domain to help the private sector improve efficiency in health care financing and delivery. Current policy relies heavily on the private sector for innovations that enhance efficiency. Rather than attempt to control the private sector through regulation, current policy is to remove impediments to allow private sector activities to move freely in desired directions. Information provided by research can help the private sector make informed decisions.

A 1982 report prepared for the National Center for Health Services Research identified five specific research topics relating to competition in the health care system: the effects of (1) greater out-of-pocket payments by consumers, (2) changes in taxation of employer-provided health benefits, (3) the spread of health maintenance organizations and other alternative delivery systems, (4) changes in insurance programs, and (5) changes in the nature and extent of regulation in the health system.

Discussion of each of these topics is beyond the scope of this report, but some general remarks can be made about the current state and direction of research in these areas. In some cases, very little is known about how certain reforms would change behavior in the market. For example, little information exists on how novel developments such as business-health coalitions, preferred provider plans, and company administered "stay well" plans are affecting health care expenditures. In many cases we know the direction of the effect that would be produced by a certain reform but not its magnitude. An example is the extent to which less preferential tax treatment of employer-paid health benefits would deflect the trend to ever more expensive "first-dollar" health insurance.

Despite these uncertainties, it would be incorrect to assume that nothing or very little is known about the health care market's likely response to new incentives. In fact, much of past health services research is entirely relevant to current health policy deliberations, and part of the task of current research is to synthesize those past findings so they can serve as a foundation for new research.

Both the private and public sectors have roles to play in producing new information on the prospects for the consequences of a more competitive health system. Even now, some of the research budget of the Department of Health and Human Services is devoted to investigating competition-related issues, and part of this activity is to discover information being produced in the private sector and determine its implications for developing competitive reform in health care financing and delivery. There is much more to be learned in this rapidly changing area.

## Research on Long-Term Care

Long-term care for the elderly involves principally the fast-growing population age 75 and over. Although the rate of increase in this population is diminishing (see Table 1), it is nevertheless sufficiently high to alert us to the increasing need for long term care services.

The costs of long-term care have been the fastest growing of any in the health sector and are projected to have the fastest growth for the remainder of this century.<sup>4</sup> This growth is due not only to the increasing size of the aged population but also to the Kerr-Mills and Medicaid programs of the 1960s. Because of the growth of these programs and occasional scandals in the care provided to elderly nursing home patients, a strong call has been raised for alternatives to the institutionalization of the disabled elderly.

The institutionalized elderly person today tends to be a woman who has outlived her husband. Prior to institutionalization she was poor and lived alone. She was unable to purchase the services she needed and had no one at home to provide for her. She was admitted to a nursing home from a hospital. Another person with the same medical condition, but with money or a caregiver, might never require a nursing home. The first patient would require considerably more assistance to avoid institutionalization than the second.

It is widely believed that many nursing home patients could be cared for in their own homes if services could be provided to them there. This belief was reflected in the post-Conference survey of delegates; the second and third most favored recommendations that emerged from the 1981 Conference were expanded home health care and in-home services, and tax incentives for family care of elderly relatives at home.

Over the past several years the Department of Health and Human Services has funded a number of projects throughout the country to allow States to study and develop systems for home and community care. The Department and several States (using their own funds) have also conducted experiments to see if sufficient care can be provided to the impaired elderly in their homes. A number of home or community care demonstration studies have also been carried out, and many are currently underway. Although few results are yet available, there is high interest in the home-care alternative. Congress, in Section 2176 of the 1981 Budget Reconciliation Act, permitted the States, under certain conditions, to establish home and community care programs as substitutes for skilled nursing and intermediate care facilities. A number of States are making use of this opportunity.

The final results of these efforts are not yet in, but preliminary analysis by Stassen and Holahan<sup>5</sup> shows mixed results: the quality of life for patients is probably improved but costs are probably higher. The authors state:

From the review of community-wide coordinated care demonstrations, day-care programs, and in-home service programs, we have concluded that there is only a limited amount of evidence that community-based services substitute for institutional care... [T]here is little direct evidence of overall cost reductions resulting from the use of community-based services. In sum, community-based services appear to have a generally better impact on outcome than institutional care. Whether these improved outcomes are worth the costs is a political or social judgment well beyond the scope of this report.

These studies are designed to demonstrate that patients who would otherwise require institutionalization can be effectively treated in their own homes at less cost if they are provided services available in their communities. The most difficult aspect of these programs is the screening of candidate patients to accept for home and community care treatment only those who would otherwise require placement in an institution. Too often in these studies patients selected for home care, though impaired, would never have sought nursing home care, so the identified savings are illusory. If the patients actually requiring institutionalization could be

precisely identified and successfully treated at home, this would presumably result in lower nursing home occupancy rates. This has not occurred, and since most advocates for home and community care do not anticipate that it will, it appears quite possible that the home and community care movement will result in an additional set of services without counterbalancing savings in nursing home services. Society may well be willing to pay this price. This would create a new community health care and social services delivery system that could grow to a very substantial size.

Additional research findings are rapidly becoming available, and some of them will provide at least provisional answers to many of these questions. The area deserves and must receive thorough attention by researchers, policymakers, and legislators. It is critical that we learn more about these new home and community care systems to ensure that they provide the needed services at acceptable costs. Otherwise, in today's tight fiscal environment, they will be unable to survive.

## **NEEDED RESEARCH ON THE BIOMEDICAL ASPECTS OF AGING**

### **Disease Prevention and Health Promotion**

Research is needed on appropriate measures to retard the rate of biological decline associated with aging, to prevent or delay the onset of chronic disease processes, and to evaluate biological and psychological factors that contribute to the maintenance of health and well being of the elderly. Many of the health problems that result in loss of independence among the elderly could be avoided by heightened health awareness during the middle years as well as during old age. Examples include improved nutrition, physical fitness and exercise, control of stress, and the effects of social networks on health. Research opportunities, as well as efforts to increase public awareness and transfer existing knowledge to health professionals, must be pursued.

Improved biological markers are needed to measure physiological age for comparison with chronological age to permit better studies of aging and the effects of more healthful lifestyles

### **Dementias of Aging**

Approximately 3 to 4 million elderly Americans suffer from dementia, often of the Alzheimer's type. This disease of unknown etiology is characterized by intellectual deterioration and inability to carry out the tasks of daily living. It is the consensus of the biomedical community that dementias of aging are not an inevitable consequence of growing old but are disease states that can be understood and remedied. The human and health care costs of senile dementias call for a major research initiative aimed at prevention, specific diagnosis, and treatment.

### **Understanding the Aging Process**

Research is needed to understand the physiological decline that accompanies aging and renders biological systems increasingly less efficient and more susceptible to disease. The goal of this research is to retard the aging process.

### **Bring Geriatrics into the Mainstream of Academic Medicine**

New knowledge must be developed to diagnose and treat the diseases and disabilities of old age, with emphasis on the major sources of morbidity and mortality among the elderly, including dementia, incontinence, musculoskeletal disorders, pneumonia, fall injuries, nosocomial infections, and decubitus ulcers (bed sores). Integral elements of this research



emphasis are the development of a cadre of health care professionals competent in geriatrics and movement of geriatrics into the mainstream of U.S. academic medicine.

## RESEARCH RESOURCES

The Research Committee of the 1981 White House Conference on Aging emphasized the importance of resources for research on aging, the need for long-term Federal commitment to their support, and flexibility to develop new resources to respond to advances in the field and the changing needs of investigators.

A program for research on aging should address three kinds of resources for research capability: institutional, human, and physical.

- *Investigators and their institutions* are the heart of scientific inquiry. Research activity at academic and other institutions must be fostered and research support provided in a stable manner.
- *Training of new researchers* is essential to sustain a healthy research capability into the future. As stated earlier in this chapter, current fiscal constraints are temporary and will improve with the economy, and thus will not significantly retard the rate of research. Like research money, funds for training will also feel the squeeze, but we must not neglect this key to our future research potential.
- *Critical tools* for aging research include such specialized resources as libraries, census statistics, a variety of data bases and equipment to process them, genetic and cell culture resources, and animal models, as well as human populations for clinical, sociological, and epidemiological studies on aging. It should be recognized that these types of resources must be maintained over time.

## HEALTH CARE PROFESSIONALS IN AGING

The increase in the aged population will require more trained geriatricians as well as other professionals and paraprofessionals for service in hospitals and long-term care facilities, including teaching nursing homes. Teaching nursing homes, affiliated with established medical centers, are an important new concept that responds to an acute need in our society. Careful study should be given in the implementation of this concept, however, in order to avoid a narrow concentration on the medical model to the exclusion of a broader sociomedical model that also incorporates in-home and community services.

## CONCLUSION

It has been said that more than death itself we fear a long period of suffering and debility before death. Above all, we wish to avoid the lingering terminal illness. The ideal life would be years of interested active involvement with our community, job, friends, family, and spouse, ending in no more than a very brief illness. Although it has not been thoroughly documented,

there is good evidence that over the past several decades we have been moving toward this ideal.<sup>6</sup>

Thanks in part to epidemiological and biomedical research, more and more of us in recent decades are approaching what may be our maximum, genetically programmed life span, when, having survived childhood and not succumbed to some chronic disease as adults, we reach the point when a number of our body systems simply wear out and quit working.

Research will aid the continuation of this favorable trend, of course, but improvement of our own individual health habits will do far more to give full and healthy lives than any amount of research. Life expectancy for 40-year-olds increased less than 5 years between 1940 and 1980, despite spectacular research and medical advances in that period. In contrast, epidemiologic studies have shown that our patterns of daily living have a very powerful effect on our health and longevity. Belloc and Breslow<sup>7</sup> found that the best practices to promote health and longevity were 7-8 hours of sleep each night, eating breakfast daily with only occasional snacks between meals, being neither excessively underweight nor overweight, frequent physical activity, avoidance of excessive alcohol, and the less smoking the better.

Belloc<sup>8</sup> found that these relationships held for the elderly as well as the young and that the improvement of even a single habit can be beneficial. Forty-five-year-old men who follow six or more of these good practices will average 11 more years of life than men who follow three or fewer. For women, the difference is 7 years. These added years of life exceed the overall improvement in longevity between 1940 and 1980.

The message from these studies is clear. Those of us with poor habits have the opportunity to live longer if we choose, we have a great deal of ability to determine how long and how well we shall live. The major chronic diseases—heart disease, cancer, stroke—are more easily prevented than cured. Though we as a society continue to give biomedical research a high priority, our highest priority as individuals must be our responsibilities to ourselves.

## RECOMMENDATIONS

- The Department of Health and Human Services should improve its coordination of overall strategy for its research on aging to ensure that priority areas are adequately funded and that duplicative research activities are avoided.
- Research in disease prevention and health promotion should receive the highest priority. The knowledge we already possess must be exploited. New studies are needed to establish improved biological markers of physiological age. Study of the personal motivators for improved health habits is also essential.
- Research on work and retirement, program cost containment initiatives, and long term care must also receive high priority. The strong rationale for such studies is developed in the chapters of this National Policy on Aging.
- Increased study of senile dementias, including those of the Alzheimer's type, is urgently needed.
- The necessary supports for aging research must be protected to ensure a continuing capacity to advance geriatric knowledge.
- Research knowledge must continue to be disseminated with maximum effectiveness.
- The Department of Health and Human Services should meet with private foundations and corporations to coordinate aging research activities and to encourage their increased participation in aging research.
- Cooperation and coordination of aging research among American scientists should be fostered, and liaison with the scientists of other countries should be continued.

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