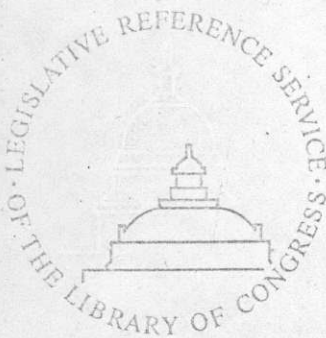


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HOSPITAL INSURANCE UNDER MEDICARE--
COST EXPERIENCE AND FUTURE PROJECTIONS

Glenn Markus
Education and Public Welfare Division

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HOSPITAL INSURANCE UNDER MEDICARE--COST EXPERIENCE
AND FUTURE PROJECTIONS

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HOSPITAL INSURANCE UNDER MEDICARE--COST
EXPERIENCE AND FUTURE PROJECTIONS

Introduction

In 1965, Congress enacted legislation creating two separate but related programs of health insurance for older people in the United States. The two programs, taken together, are generally known by the popular name of "medicare." One of the programs is a hospital insurance plan which provides basic insurance protection against the costs of inpatient hospital care, post-hospital extended care, and home health services. The second program is referred to as the supplementary medical insurance plan, and is designed to provide insurance protection against the costs of physicians' and related medical services.

This report examines only the hospital insurance program, its past and current cost estimates and experience together with projections about future costs. Like the social security cash benefit programs (but unlike the supplementary medical insurance program), hospital insurance is largely financed by means of taxation on the earnings of employees and the self-employed, and on employers. What tax rates will be necessary to pay for benefits and administration will depend upon the actuarial estimates of the costs of hospital insurance into future years. This report, therefore, also looks at the way in which these estimates are made and discusses how actual program

experience has brought about several revisions in the original estimates of the future costs of hospital insurance.

To date, hospital insurance experience has not been favorable, in that each of the estimates of cost has fallen short of the actual costs of hospital insurance. As a result, Congress has had to revise the tax schedules used to finance the program upward in order to assure the financial integrity of the program. In 1970, Congress will again revise the financing mechanism for hospital insurance, and this report discusses these probable changes and the actuarial condition of the system which makes them necessary.

In May, the Committee on Ways and Means reported out a bill which would eliminate the present projected financial deficit in the hospital insurance program by adjusting the maximum taxable earnings base, by revising the Hospital Insurance tax rate, and by changing certain assumptions about future increases in the earnings base. The changes with respect to the assumption about future increases in the earnings base have an especially important role in reducing the deficit condition of the present HI program. The House amended the Committee bill by incorporating the assumption about a rising earnings base into an explicit statutory feature of the financing provisions of the hospital insurance program.

HOSPITAL INSURANCE UNDER MEDICARE--COST
EXPERIENCE AND FUTURE PROJECTIONS

1. How Hospital Insurance is Financed

Benefits to which insured persons are entitled under the hospital insurance program are financed out of a special, separate account established in the United States Treasury known as the Hospital Insurance Trust Fund. Into this special account are deposited the receipts from a number of different sources from which benefit payments and the costs of program administration are paid.

The major source of revenue for the Fund comes from an appropriation equal to the amount of payroll taxes collected for hospital insurance purposes which are levied against the earnings of workers, including the self-employed, and on employers involving employment covered by the Social Security Act. Under present law, earnings in covered employment up to \$7,800 annually are subject to the hospital insurance tax rate authorized by law. ^{1/} Earnings above \$7,800 are not taxed for social security purposes. This ceiling on taxable earnings is known as the maximum taxable earnings base and is, at present, identical for the cash benefit and hospital insurance programs under social security.

^{1/} Congress is now considering increasing the earnings base to \$9,000 annually beginning January 1, 1971. See Section #7 of this report for a discussion of this probable change.

Applied against the earnings base is the hospital insurance tax rate, which under present law, is set at 0.6% of the base for both the employee (including the self-employed) and his employer. In other words, a worker with \$7,800 or more in annual earnings in employment subject to social security taxes will pay \$46.80 this year into the Fund for hospital insurance and a similar amount would be paid by the employer. The HI tax rate is gradually increased in future years, instead of being level over the entire period for which tax rates are established.^{2/} Below are given the tax schedules for the hospital insurance program which were part of the original (1965) legislation and the rates currently in effect (as the result of amendment in 1967):

HI Tax Rates under 1965 Law and 1967 Amendments^{3/}
 % Taxable Earnings on Employers and Employees,
 (including the Self-Employed) Each

<u>Calendar Year</u>	<u>1965</u>	<u>1967</u>
1966	0.35%	----
1967 .....	.50	0.50%
1968 .....	.50	.60
1969-1972 .....	.50	.60
1973-1975 .....	.55	.65
1976-1979 .....	.60	.70
1980-1986 .....	.70	.80
1987 and after .....	.80	.90

^{2/} For a discussion of the graded tax schedule, see Section #4 of this report.

^{3/} The earnings base for 1966 and 1967 was \$6,600, rather than the present \$7,800.

In addition to the revenue generated by means of the payroll taxing mechanism, other, though much smaller, sources of income are available to help finance hospital insurance benefits. General revenue appropriations are authorized for the Fund as the result of coverage for certain groups of persons under hospital insurance under special provisions in the Social Security Act. For example, reimbursements to the Fund from the general revenues of the Treasury are authorized to pay for benefits for certain groups of "transitionally insured" older people not otherwise covered by the Social Security Act's provisions relating to insured status under the law. Other sources of income for the Hospital Insurance Trust Fund include payments from accounts held by the Railroad Retirement system for benefits paid to beneficiaries of that program, reimbursements from the Treasury for certain non-contributory credits for military service, and interest generated from investments held by the HI Trust Fund itself. Appendix A to this report shows the various sources of income for the Fund during fiscal year 1969.

2. What is an Actuarial Cost Estimate

A look at the statement of financial operations of the Fund, found in Appendix A, shows the extent to which most of the revenue for the Fund comes from payroll taxes levied on the earnings of workers and employers. The hospital insurance program is, in this

regard, similar to the other self-supporting cash benefit programs financed through a social insurance mechanism. However, to assure that the program does pay for itself, it is necessary to have some idea of what kind of tax structure will be needed to pay not only current benefits, but future expenses as well. For this reason, Congress obtains the advice of actuaries in designing a tax schedule which will produce sufficient income to meet disbursements and maintain adequate balances in the Trust Fund.

Actuarial cost estimates are expressed in terms of "level costs" for the program over the period for which the estimates are made. In the case of hospital insurance, estimates are made for a 25-year term; cost estimates for cash benefit programs are for a period of 75 years. The level cost of a program is calculated by taking the present value of future disbursements, at a prescribed interest rate, for the period of the estimate, plus the present value at the end of this period equal to one year's additional disbursements, divided by the present value of future taxable payrolls.^{4/} The level cost of

^{4/} The term "present value" means discounting at interest. For example, the present value of \$1000 due in ten years at 3% interest is \$744. The present value of a series of amounts at various future years is the sum of the present values of each amount.

the program is, therefore, expressed as a percentage of taxable payroll. Having arrived at a level cost, actuaries can then advise Congress which tax schedule, or combination of schedules, will equal the level costs of benefits and administration. Where the income and disbursements over the long-run are equalized, the program is considered to be in "actuarial balance."

The most important part of any actuarial estimate, of course, is the set of assumptions used in making the calculations described above. Assumptions must be made about those factors which, in future years, will influence the amount of income and outgo the program will experience. Hence, assumptions about economic conditions in future years are especially important. Also very critical are the data gathered from actual experience used to make assumptions about the number of persons who will use benefits, how frequently such benefits are used, and what costs are associated with benefit payments.

In the cash benefit programs financed through social security, level economic assumptions have always been used. This means that the actuaries assume, for purposes of the estimate, that the general earnings level of workers covered under social security will not rise in future years, even though experience has shown to the contrary.

The purpose of making this assumption is to provide for a margin of safety in making the estimates of what the cash programs will cost:^{5/}

The conservativeness of this approach under OASDI results from the fact that the benefit formula is weighted (i.e., the benefits for those with low earnings are larger relative to earnings than is the case for persons with higher earnings). Thus, if earnings rise, contribution income increases more rapidly than benefit outgo. In other words, under these circumstances, the cost of the program relative to taxable payroll becomes lower, and this savings can be used first to offset any unfavorable experience in the other actuarial factors. If there is no such unfavorable experience in the other actuarial factors. If there is no such unfavorable experience, these savings can be used to increase benefits--or, perhaps more accurately, to keep benefits up to date with changes in price levels and earnings levels (or, even possibly, the savings could be used to reduce future contribution rates).

Unlike the cash programs, however, hospital insurance pays "service" benefits and has no weighted benefit structure. Rising earnings, therefore, have an unfavorable cost effect on the program, unless the provisions of the program are kept up to date--that is, unless adjustments are also made in the maximum taxable earnings base. A fixed earnings base has a dampening effect where general earnings are increasing. For example, in 1968, the \$7,800 earnings base covered

^{5/} Robert J. Meyers, Medicare; published for the McCahan Foundation by Richard D. Irwin, Inc. Mr. Meyers is the Chief Actuary for the Social Security Administration and is responsible for hospital insurance cost estimates.

approximately 82% of total earnings in covered employment. If an increase in the general level of earnings had risen one percent, an increase of less than one percent would have been available as a basis for providing additional income for the program. If, as they have, hospital costs rise at the same or higher rate than increases in earnings, increases in the costs of the program would be greater than increases in additional revenue.

For this reason, a "level" earnings assumption like that used in the cash programs is not considered a conservative assumption, unless it is also assumed that the earnings base would be adjusted in line with changes in the general level of earnings. The issue of the nature of the assumption to be used in this area has been an important one throughout the entire history of Medicare legislation. The relationship between earnings and the earnings base is discussed in greater detail in the next section where pre-medicare estimates for hospital insurance are discussed.

To estimate the extent of benefit payments, various assumptions are also made about those cost components in the hospital insurance program contained in the legislation. In the case of the current program, these components are hospital benefits, extended care

benefits, home health services and the costs of administration. Benefit costs are determined by adding the costs for various age-sex groups insured under the program. ^{6/} For any particular age-sex group, the benefit cost is the product of three things-- (1) the number of individuals in the group, (2) the utilization rate for each of the services provided for the group, and (3) the average daily reimbursement rate for the particular service provided. Estimates of benefit costs and the assumptions about administrative expenses are discussed later on in this report.

3. Brief History of Pre-Medicare Hospital Insurance Estimates

For several years before Congress passed the medicare program in 1965, Congressional Committees considered various proposals to include a program of hospital insurance as part of the Social Security Act. In connection with these proposals, both the Committee on Ways and Means, and the Committee on Finance, carefully examined not only the costs for specific programs, but also the various assumptions which

^{6/} The "transitionally insured" groups protected by hospital insurance are not considered in making cost estimates, since their costs are paid for out of general revenues from the Treasury. The financing for these groups is discussed later on in this report.

had been used in arriving at specific estimates. ^{7/} Many of the assumptions used later in making the final estimate for the program enacted into law in 1965 were among those revised as the result of Committee review. Therefore, it may be helpful to consider some of the pre-medicare costs estimates for hospital insurance.

The early long-range cost estimates for hospital insurance were very much influenced by the approaches and procedures used in making estimates for the cash benefit programs. The level earnings assumptions, which were used in these cash program estimates were also used initially in hospital insurance estimates--in other words, it was assumed that earnings would not increase in future years. In making those early hospital insurance estimates, the actuaries felt it was only necessary to analyze the future relationship between earnings and hospital costs for purposes of arriving at a level cost for hospital insurance: ^{8/}

In considering the hospitalization-benefit costs in conjunction with a level-earnings assumption for the future, it is sufficient for purposes of long-range cost estimates merely to analyze possible future trends in hospitalization costs relative to earnings. Accordingly, any study of past experience of hospitalization costs should be made on this relative basis.

^{7/} See, for example, "History of Cost Estimates for Hospital Insurance," Actuarial Study No. 61; Office of the Actuary, Social Security Administration; December 1966.

^{8/} "Actuarial Cost Estimates for Health Insurance Benefits Bill," Actuarial Study No. 52; Office of the Actuary, Social Security Administration; July 1961; p. 21.

Early estimates were also made on a so-called "static" basis. In other words, it was assumed that in the future there would be no changes in either earnings or in hospital costs. This is the same as saying that, if there are increases in one factor, the other factor will increase at the same rate. Such assumptions were used, for example, in the preparation of estimates for the first King-Anderson (administration) proposal introduced into Congress in 1961.

The introduction of a level-earnings assumption, however, created problems in the estimates with which neither the actuaries, nor the Congress seemed fully aware in the beginning. What effect would there be on the cost estimates, if in fact earnings did rise in the future, either in a "static" way (i.e., at the same rate as hospital costs) or on a dynamic basis where differentials between increases in hospital costs and earnings were recognized in making the estimates? Under a "static" assumption about the future relationship between costs and earnings, each factor could rise at the same rate, but if this did occur what happens to the income side of the program? Rising earnings introduce the dampening effect of the earnings base on the additional income available to the program (see previous section). Where costs are projected to rise at the same rate as earnings, program liability rises at the same rate, but program revenue increases less rapidly.

For these reasons, the actuaries believed it necessary to add the assumptions that, if level-earnings projections are to be valid, it must also be assumed that where earnings do rise that the earnings base is adjusted at the same rate as well: 9/

Perhaps the major difficulty in making, and in presenting, these actuarial cost estimates for hospitalization benefit is that--unlike for the OASDI monthly benefits--an unfavorable cost result is shown when total earnings levels rise unless the provisions of the system are kept up-to-date (insofar as the maximum taxable earnings base and the dollar amounts of the deductibles are concerned). The reason for this is that there is the fundamental actuarial assumption that the hospitalization costs will rise at the same rate over the long run as total earnings level, whereas the contribution income rises less rapidly than the total earnings level since it depends on the covered earnings level, which is dampened because of the effect of the earnings base. Accordingly, it is necessary in the actuarial cost estimates for hospitalization benefits to assume either that earnings levels will be unchanged in the future or that, if wages continue to rise (as they have done in the past), then from a given point of time, the system will be kept up-to-date insofar as the earnings base and the deductibles are concerned. In this respect, it may be noted that in H.R. 3920 the "2 1/2 times the average daily hospital cost" deductible associated with the 180-day maximum hospitalization alternative is on a "dynamic" basis and so is automatically kept up-to-date, while the deductible of "\$10 per day" is not on a "dynamic" basis.

The formal use of the adjusted earnings-base assumption, however, was not clear until estimates were developed for the second King-Anderson

9/ "Actuarial Cost Estimates for Health Insurance Benefits Bill," Actuarial Study No. 57, pp. 30-31, Office of the Actuary, Social Security Administration, July 1963.

proposal introduced in 1963. If it is assumed that the earnings base were not adjusted in line with increases in earnings (i.e., level-earnings base assumption), the level cost of the program rises considerably and necessitates higher tax rates. These effects were examined by the Committee on Ways and Means in 1963, and are discussed later in this section.

Data used in preparing earliest cost estimates were derived from a number of sources. For example, information on hospitalization utilization among the elderly was obtained from a 1957 Survey of Beneficiaries conducted by the Social Security Administration. Adjusted for various factors, the survey indicated that a range of utilization rates, from 2.4 to 3.0 days per person per year, could be expected in a hospital insurance program.^{10/} On the basis of this range, the actuaries prepared both high and low cost estimates for various hospital insurance proposals.

Data on the average daily hospital cost were computed from adjustments to the American Hospital Association's average expense per inpatient hospital day index. Since the costs of outpatient services,

^{10/} See p. 186 of source cited in Footnote # 5.

research, restaurant maintenance, and other costs were part of this index, the actuaries reduced the AHA figures by 7% to arrive at average daily inpatient hospital costs. This figure was further adjusted by about another 7% to arrive at the costs for persons aged 65 and over, since the AHA index applied to all hospitalized patients. ^{11/} Various adjustments to this cost figure were made to reflect increases in hospital costs over increases in wages before beginning computations for initial years of the estimate. From that point on, of course, it would be assumed that wages and hospital costs would rise at the same rates.

Other estimates of cost were given for skilled nursing home benefits, for home health service benefits, and for outpatient hospital diagnostic benefits also provided for in the King-Anderson proposal.^{12/} For the most part, however, these estimates were based on very limited data and experience gathered from private plans which provided somewhat comparable benefits in their programs. The actuaries also estimated that administrative costs would represent about 5% of benefit disbursements, a figure roughly comparable to the most efficiently-run Blue Cross programs.

^{11/} See p. 186 of source cited in Footnote #5

^{12/} See p. 17 of source cited in Footnote #7

In 1963, a second King-Anderson (Administration) proposal was introduced and considered by the House Committee on Ways and Means. Like the previous proposal, the estimates of the costs of the program over the long run were made on a static basis.^{13/} No differential for hospital costs rising more rapidly than earnings was recognized. The adjusted earnings base assumption, however, was made explicit:^{14/}

It should be pointed out that the foregoing figure for the average hospital-per-diem cost for persons covered by the proposal did not include an allowance for a "catching-up" factor, as was previously done. In other words, the assumption was made that, following 1961, hospital costs would, on the average, increase no more rapidly than the general earnings level (as indicated previously, if such changes do occur, then it was further hypothesized that the system would be kept up-to-date insofar as the maximum earnings base and the deductibles are concerned). Although it seemed likely that hospital costs would increase somewhat more rapidly than the general earnings level in the next few years, it was presumed that any such differential will, over the long run, be counter-balanced by hospital costs rising less rapidly than will the general earnings level (thus reflecting, as in most other types of economic activity, the productivity gains of the workforce involved).

The Committee on Ways and Means, however, raised a number of questions about the use of static assumptions about the relationship of hospital costs to earnings in making estimates. The Committee sought

^{13/} See p. 25 of source cited in Footnote #7.

^{14/} See p. 26 of source cited in Footnote #7.

to learn what effects on level cost there would be by adopting "dynamic" assumptions about future increases in hospital costs and earnings levels. For example, the Committee wanted to know what would happen, if hospital costs and covered earnings would rise in the future at the same rate of increase that each had risen in recent years. Also what effect on the required financing would there be by assuming an unchanging earnings base?^{15/}

If, on the basis of past experience, such assumptions were applied indefinitely into the future, hospital costs would eventually exceed all taxable payroll, which the actuary, of course, maintained was unrealistic:^{16/}

Such an assumption was not used in the cost estimates because it is considered to be completely unrealistic--and could be considered an "impossible" one. It is inconceivable that hospital prices would rise indefinitely at a rate faster than earnings because eventually individuals--even currently employed workers, let alone older persons--could not afford to go to a hospital under such cost circumstances.

However, other estimates were made, in which it was assumed that hospital costs would increase more rapidly than increases in earnings for a

^{15/} See p. 27 of source cited in Footnote #7.

^{16/} "Actuarial Cost Estimates and Summary of Provisions of the Old-Age, Survivors, and Disability Insurance System as Modified by the Social Security Amendments of 1965 and Actuarial Cost Estimates and Summary of Provisions of the Hospital Insurance and Supplementary Medical Insurance Systems Established by Such Act," Committee Print of the House Committee on Ways and Means; July 30, 1965; p. 26.

definite period of time and then advance at roughly the same level as that for earnings. Nevertheless, the Committee made the point that the use of dynamic assumptions would result in higher estimates of cost and were, therefore, more conservative than those made on a static basis.

The use of a level earnings-base assumption, of course, resulted in a much greater cost for the hospital insurance program (Section 7 and Appendix B of this report show, in detail, the consequences of removing the level earnings-base assumption from cost estimates). The impact of the estimates of cost of using dynamic assumptions coupled with the assumption that the earnings base would remain constant in the future, rather than the use of static assumptions together with an up-to-date earnings base can be illustrated by looking at the revisions in the 1963 King-Anderson proposal made by the Social Security actuaries:^{17/}

ALTERNATIVE ASSUMPTIONS FOR ESTIMATES OF THE
KING-ANDERSON PROPOSAL OF 1963

<u>Earnings Base</u>	<u>Relative Trends in Hospital Costs in the Level of Earnings</u>	<u>Estimated Level Cost*</u>
1. Keeps up to date with what \$5200 was in 1961	Over the long run, hospital costs and earnings increase at the same rate from 1961 on	.68

^{17/} See p. 29 of source cited in Footnote # 7.

* As a percentage of taxable payroll.

ALTERNATIVE ASSUMPTIONS FOR ESTIMATES OF THE
KING-ANDERSON PROPOSAL OF 1963

<u>Earnings Base</u>	<u>Relative Trends in Hospital Costs and in the Level of Earnings</u>	<u>Estimated Level Cost</u>
2. Keeps up to date with what \$5400 will be in 1965	Past experience projected to 1965; in next 5 or 6 years, hospital costs rise more rapidly than earnings by a total differential of 10% over this period; thereafter, hospital costs rise at the same rate as earnings.	.85
3. Keeps up to date with what \$5400 will be in 1965	Past experience projected to 1965; in next 10 years, hospital costs rise more rapidly than earnings by a differential of 3% per year; thereafter, hospital costs rise at the same rate as earnings	1.04
4. Remains at \$5400	Past experience projected to 1965; in next 10 years, hospital costs rise more rapidly than earnings by a differential of 3% per year; thereafter, hospital costs rise at the same rate as earnings.	1.35

In 1964, the Advisory Council on Social Security recommended a program of hospital insurance for the aged, and also recommended which assumptions should be adopted in assessing the costs of the program. First, the period of the estimate would be 75 years, rather than in perpetuity which had been used before. Long-range estimates would continue to be made on a static basis, but in the short-run dynamic assumptions about the relationship of increases in costs and earnings would be made. It was also assumed that the earnings

base would be kept up to date with the general level of earnings.^{18/}

Based upon a study of the relationship between hospital cost increases and changes in earnings, the actuaries now predicted, for purposes of the estimate, that hospital costs would increase each year for the first five years by a differential of 2.7% annually. For the next five years, the differential would be 1.35%. Finally, for the subsequent years, hospital costs would increase at a rate 0.50% less than the rate of increase in earnings. The negative differential was again introduced to take into account possible improved hospital productivity.

Utilization rates remained the same as in the past, although by averaging an intermediate cost estimate was prepared. The average daily hospital cost figure was revised upward to take into account the greater increase in hospital costs over earnings which had occurred and would probably occur before the initial year of the estimate was considered (1965). The interest rate on the Trust Fund was projected at 3 1/2% for purposes of computing level cost, while administrative expenses were pegged at about 3% of benefit payments. Short-range cost estimates assumed an annual increase in earnings of about 3%

^{18/} See pp. 31-34 of source cited in Footnote # 7.

(in other words, hospital costs during the first five years of the period would rise at 5.7%). For the uninsured population who were to be included in the program, costs were estimated on a cohort basis by using appropriate survival rates and by assuming that the utilization rates by age and sex applicable to the insured also applied to the uninsured (transitionally insured).

4. Cost Estimates for the Original (1965) Program

In January 1965, the third King-Anderson (Administration) proposal for a program of hospital insurance for the aged under social security was introduced into Congress. The estimates of cost for this proposal were based on the same assumptions which had been laid down by the Advisory Council during the previous year. The Committee on Ways and Means, however, as is often their custom, began to write its own hospital insurance legislation. Cost estimates for the Committee's version of hospital insurance included a number of changes in assumptions designed to make estimates even more conservative (i.e., higher) than those used by the Advisory Council.

First, the Committee changed the period of the estimates from 75 to 25 years, because of the seeming impossibility of predicting the trend of medical costs and of hospital utilization, along with medical practice trends, into the distant future. The Committee

retained the dynamic basic upon which to consider the future trends in costs and earnings, but eliminated the negative differential which was projected to occur after ten years of experience. Instead, it was assumed that costs and earnings would increase at the same rate after the differential in favor of hospital costs had been eliminated.^{19/}

The Committee rejected the assumption that the earnings base would be kept up-to-date with changes in the general level of earnings. The Committee adopted the view that such an assumption did not provide as conservative an estimate as it desired to make:^{20/}

With regard to the assumption that the earnings base would be kept up to date in the future, the Congress believes that this is not a conservative assumption, since it seems to bind future Congresses into taking action in order to maintain the actuarial soundness of the hospital insurance system. It should be emphasized that the actuarial soundness of the cash benefits program under the old-age, survivors, and disability insurance system does not at all depend upon an assumption of the earnings base being adjusted upward when wages rise (but rather, on the contrary, the actuarial status of the system is improved under such circumstances). Accordingly, although the committee believes that, under the likely conditions of rising wages over the next 25 years, the earnings base will be adjusted upward beyond the increase contained in the act (from the previous \$4,800 to \$6,600), the conservative assumption should be made for the purposes of the actuarial cost estimates that no further increases will occur after 1966.

^{19/} See p. 28 of source cited in Footnote #16.

^{20/} See p. 29 of source cited in Footnote #16.

The Committee also made revisions in the assumptions about hospital utilization rates, in part because of testimony from Blue Cross and insurance industry spokesmen who felt that the Social Security estimate was too low:^{21/}

In view of the fact that testimony of the insurance business and the Blue Cross states their belief that higher utilization would develop (actually, by as much as 40 percent higher in the early years of operation), higher utilization rates have been adopted than those used previously by the Social Security Administration. The increase in the early-year utilization rates is about 20 percent. Half of this can be attributed to changing the previous assumption of low-cost utilization rates in the early years to the assumption of the intermediate-cost rates then...The other half of the increase in the utilization rates can be said to represent a basic adjustment upward for all future years, which can be viewed as a safety factor. In other words, the current estimates can be considered to be high-cost ones, as compared with intermediate-cost ones formerly used by the Social Security Administration.

Changes were also made on estimates about per diem hospital costs. Social Security estimates were very close to those put forth by Blue Cross, although they were about 13% less than those suggested by the insurance industry which had not adjusted them as much to arrive at the lower daily cost for older people.

^{21/} See pp. 28-29 of source cited in Footnote #16.

On the basis of these changes, it would appear that Congress explicitly desired to assure a wide margin of safety in arriving at the estimates of cost for the new hospital insurance program. Some even felt that perhaps the estimates were much too conservative, although experience would soon show that even the Committee's approach could not sustain the financial security of the program.

The estimated level cost of the original program was placed at 1.23% of taxable payroll, divided in the following manner:^{22/}

Actuarial Balance of Original Program

<u>Item</u>	<u>Level Cost in Percent</u>
Hospital and extended care facility benefits.....	1.19
Outpatient diagnostic benefits.....	.01
Home health service benefits.....	.03
TOTAL BENEFITS.....	<u>1.23</u>
Level-equivalent of tax schedule.....	1.23
Actuarial balance of system.....	.00

The tax schedule (see Section 1 of this report) was a graded, rather than level tax schedule. The low rate for 1966 reflected the fact that benefits would only be paid for six months of that year (hospital insurance benefits were paid beginning on July 1, 1966), while the first major increase in the tax rate would occur after 1972 when

^{22/} See p. 31 of source cited in Footnote #16.

significant increases in costs could be expected under the assumptions set forth by the Committee.

No attempt was made in the estimate to separate extended care benefit costs from hospital costs. According to the actuary, "In early years, virtually all of such costs will be for hospital benefits. Perhaps only about \$25 to \$50 million will be expended in 1967 for extended care benefits... From a cost standpoint, then, it seems desirable to consider hospital benefits and extended care facility benefits in combination..."^{23/} Actual experience would show this estimate to be substantially under stated, and a discussion of this occurrence is found in the next section of this report.

The actuaries were convinced that the assumption about a level earnings base would provide a wide margin of safety for the estimates. The Committee Print containing the statement of assumption notes:^{24/}

As indicated previously, one of the most important basic assumptions in the cost estimates presented here is that the earnings base is assumed to remain unchanged after it increases to \$6,600 in 1966, even though for the period considered (up to 1990) the general earnings level is assumed to rise at a rate of 3 percent annually. If the earnings base does rise in the future to keep up to date with the general

^{23/} See p. 31 of source cited in Footnote #16.

^{24/} See p. 32 of source cited in Footnote #16.

earnings level, then the contribution rates required would be lower than those scheduled in the act. In fact, if this were to occur, the steps in the contribution schedule beyond the combined employer-employee rate of 1.1 percent would not be needed.

In other words, if the earnings base rose (very likely because of pressures to do so for the cash benefits program), the financing of the HI program would be strengthened. This would occur because, although program income would be increased, no change in benefit liability would result.

Progress of the hospital insurance trust fund was projected as shown in the table below. Note that the figures do not show transactions relating to benefits for the transitionally insured groups mentioned earlier in this report: ^{25/}

ESTIMATED PROGRESS OF HOSPITAL INSURANCE TRUST FUND,^{1/}
INTERMEDIATE-COST ESTIMATE AT 3.50 PERCENT INTEREST ^{1/}

[In millions]

Calendar Year	Contributions	Benefit Payments	Admin- istrative expenses	Interest on Fund	Balance fund at end of year
1966	\$1,637	\$ 987	^{2/} \$50	\$18	^{3/} \$618
1967	2,756	2,210	66	25	1,123
1968	3,018	2,406	72	46	1,709

continued on following page

^{25/} See p. 33 of source cited in Footnote #16.

LRS-25

Calendar	Contributions	Benefit Payments	Admin-istrative expenses	Interest on Fund	Balance fund at end of year
1969	\$3,123	\$2,623	\$79	\$66	\$2,196
1970	3,229	2,860	86	82	2,561
1971	3,329	3,077	92	91	2,812
1972	3,433	3,303	99	95	2,938
1973	3,891	3,540	106	100	3,282
1974	4,096	3,788	114	108	3,585
1975	4,260	4,047	121	112	3,789
1980	6,113	5,307	159	166	5,790
1985	7,026	6,860	206	259	8,341
1990	9,015	8,797	264	323	10,426

1/ An interest rate of 3.50 percent is used in determining the level-costs, but in developing the progress of the trust fund, a higher rate is used in the 1st 10 years (4.0 percent for 1966-70, and then a gradually decreasing rate).

2/ Includes administrative expenses incurred in 1965.

3/ Balance as of June 30, 1965 (before payment of benefits begins), is \$715,000,000.

NOTE.--The transactions relating to the noninsured persons who would be covered for the benefits of this program, the cost for whom is borne out of the general funds of the Treasury, are not shown in the above figures.

Estimates for the costs of the benefits provided to transitionally insured persons for the first five calendar years of operation are shown below. Note that as early as calendar year 1967, it was assumed

that the amount of liability borne by general revenues was expected to diminish:^{26/}

[In millions]

<u>Calendar year</u>	<u>Cost to General Treasury</u>
1966 (last 6 months).....	\$140
1967.....	278
1968.....	272
1969.....	264
1970.....	256

5. Early Benefit Experience and Revised Estimates

Hospital insurance program operations began on July 1, 1966, with extended care benefits authorized for January 1, 1970. Only fragmentary data were available for review in 1967 when Congress again began to consider new social security legislation. However, the data which did exist and the testimony from experts showed clearly that hospital costs were increasing much more rapidly than anyone had expected them to:^{27/}

The present cost estimates are based on considerably higher assumptions as to hospital costs than were the original estimates, which were prepared in 1965 at the time the system was established. At that time, the sharp increases that have occurred in such costs in 1966-67 were not generally predicted by experts in the field.

^{26/} See p. 35 of source cited in Footnote #16.

^{27/} "Social Security Amendments of 1967," House Report No. 544, from the Committee on Ways and Means; 90th Congress, 1st Session; August 7, 1967; p. 64.

It may be recalled that over the period 1954-63, average annual increases in hospital costs amounted to about 6.7%, while increases in earnings rose at an average annual rate of about 4.0%. As a result, actuaries had assumed a differential of 2.7% between costs and earnings in projecting short-range experience under the hospital insurance program. In 1966, however, hospital costs began rising very rapidly, and the differential rose to 6.6%, in contrast to the anticipated 2.7%. Early information about hospital costs in 1967 seemed to suggest that costs would increase even more rapidly than had occurred in the previous year. Obviously, the impact of such increases would affect the original cost estimates for hospital insurance. Witnesses told the Committee on Ways and Means to expect annual increases in hospital costs nearly three times as great as the 5.7% rate which the actuaries had assumed would occur until 1970:^{28/}

Several estimates of the short-term future trend of hospital costs have been made by experts in this field. All of these are well above the rate of 5.7 percent per year until 1970 that was assumed in the initial cost estimates for the program made when it was enacted in 1965. The American Hospital Association has estimated an annual rate of increase as much as 15 percent for the next three to five years. The Blue Cross Association has made a corresponding estimate of 9 percent per year in the period up to 1970.

^{28/} See p. 68 of source cited in Footnote #27.

As a result of the sharply rising increases in hospital costs, the actuaries adopted new assumptions with respect to the short-term changes in such costs. The intermediate estimate was based upon a compromise between the projections of the American Hospital Association (high estimate) and the Blue Cross Association (low estimate):^{29/}

<u>FUTURE RATES OF INCREASE IN HOSPITAL COSTS</u>			
<u>Calendar Year</u>	<u>Low Cost</u>	<u>Intermediate Cost</u>	<u>High Cost</u>
1967	12.0%	15.0%	15.0%
1968	10.0	15.0	15.0
1969	8.0	10.0	15.0
1970	6.0	6.0	15.0
1971	5.2	5.2	15.0
1972	4.6	4.6	10.0
1973	4.1	4.1	4.1
1974	3.6	3.6	3.6
1975 and after	3.0	3.0	3.0

Based on these new projections about short-run increases in hospital costs, the actuaries predicted that the level cost for the hospital insurance program would increase to 1.47% of taxable payroll under the intermediate projections shown above. If the projections of the American Hospital Association were accurate, level cost would reach 2.27% of payroll. Since the original program estimates had placed the level cost of hospital insurance at

^{29/} See p. 69 of source cited in Footnote #27.

1.23% of taxable payroll, additional financing was needed to keep the program in actuarial balance. Unless Congress acted, the actuaries noted, the Trust Fund would be exhausted sometime in 1972.^{30/}

The House Committee on Ways and Means made a number of changes in both the benefit structure and the financing mechanism of the hospital insurance program, which are outlined in the Committee's report on the legislation considered in 1967.^{31/} From a cost standpoint, benefit changes were minor. To strengthen the financing of the program, the Committee recommended increasing the earnings base from \$6,600 to \$7,600, together with 0.1% HI higher tax rate to begin in 1969 and applied thereafter to the graduated tax schedule originally provided for in the hospital insurance program.

By the time the legislation reached the Senate, data had become available indicating that the projections about extended care benefit costs had been off considerably. The original estimate had estimated extended care benefits for calendar year 1967 to be about \$25 to \$50 million. The data, however, suggested that benefit costs would be in the neighborhood of \$250 to \$300 million instead. The Senate

^{30/} See p. 69 of source cited in Footnote #27.

^{31/} Other minor changes in assumptions which affected the cost estimates and the specific House-passed revisions should be studied in detail. These are omitted here, since this report deals only with the legislation finally agreed upon. The House Report is cited in Footnote #27.

Committee on Finance Report noted:^{32/}

The limited experience that is available to date in regard to the extended care facility benefits indicates that their cost will be considerably in excess of the initial estimates. It now appears that these benefits will amount to about \$250 to \$300 million in the first year of operation (calendar year 1967) as against the estimate of \$25 to \$50 million. The apparent major reason for this difference is the much larger number of facilities that qualified than had been expected according to the estimate. It should also be recognized that the original estimate was made on the basis of relatively little data, since this type of benefit had not been widely provided previously.

With the revision in the estimate of the costs of extended care benefits, the actuaries revised their level cost estimate for hospital insurance to 1.54% of taxable payroll under intermediate cost assumptions. The deficit in the Trust Fund would then rise to -0.31% of payroll. The Senate proposed to raise the earnings base to \$8,000 in 1968, \$8,800 in 1969, and \$10,800 in 1972 and thereafter. In addition, the combined employer-employee tax rate would be 0.2% higher in 1968-75, 0.1% higher in 1976-86, and 0.1% lower than the House-passed bill beginning in 1987.

As finally agreed upon, the Social Security Amendments of 1967 included an increase in the earnings base to \$7,800 for 1968 and

^{32/} "Social Security Amendments of 1967," Senate Report No. 744; 90th Congress, 1st Session; November 14, 1967; pp. 115-16.

thereafter, along with a 0.1% increase in the HI tax schedule for employers and for employee (including the self-employed) each for all years after 1967 (see tax schedule in Section 1 of the report).^{33/} The level cost of the program, as amended by the 1967 Amendments, was 1.38% of taxable payroll, while the level equivalent of the tax schedule was placed at 1.41% of payroll, for an actuarial balance of +0.03%.

Rising health costs also seriously affected the earlier estimates of the cost for benefits for those transitionally insured under hospital insurance. The original estimate, for 1967, of \$278 million was revised to \$439 million. Later year figure were also adjusted by about 60%. According to the Chief Actuary, the increases in the burden on the general revenues of the Treasury was the result of three things--the assumed increase in extended care costs, and a larger number of persons eligible for benefits than had been expected.^{34/}

By the middle of 1968, more complete and sufficient data had finally been developed, and it pointed to the need to revise the 1967 cost estimates once again:^{35/}

^{33/} "Actuarial Cost Estimates for the Old-Age, Survivors, Disability, and Health Insurance System as Modified by the Social Security Amendments of 1967," Committee Print of the Committee on Ways and Means; December 11, 1967.

^{34/} See p. 207 of source cited in Footnote #5.

^{35/} "1969 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund," House Document No. 91-45; 91st Congress, 1st Session; January 16, 1969; p. 15.

The estimated level cost of the benefits and administrative expenses under the hospital insurance program is 1.79 percent of taxable payroll. The level equivalent of the contribution schedule is estimated at 1.50 percent of taxable payroll. Therefore, the new actuarial cost estimate indicates that the program has an actuarial imbalance, -0.29 percent of taxable payroll on a level cost basis. As shown in Table 5, by 1971, the disbursements will exceed the income, and the trust fund would decrease thereafter and would be exhausted in 1977.

The actuaries pointed out that if the earnings base were kept current with changes in the level of earnings, the hospital insurance program would have a small, but positive actuarial balance of 0.07% of taxable payroll. They also noted, however, if the assumption about the changing earnings base were not made, then new legislation would be needed to finance the system on a sound actuarial basis. Once again, the assumptions about the earnings base play such an important part in estimating the costs of the hospital insurance program.

Among the changes in the assumptions made in arriving at the estimate of a 0.29 deficit in the HI program were:^{36/}

1. slightly higher assumptions as to future increases in earnings in covered employment (3 1/2% per year instead of the previous 3%).
2. slightly higher assumptions in the 1969-74 period regarding the differential in the annual increases of hospital costs over annual increases in earnings; in 1975, both were again assumed to increase at the same rate.
3. slightly higher cost due to the more distant future period involved in the estimate (1969-1993).

^{36/} See p. 211 of source cited in Footnote #5.

4. 20% higher inpatient-hospital utilization rates.
5. higher extended care benefit utilization rates--roughly double.
6. higher interest rate (4 1/2% instead of 3 3/4% used in 1967).
7. lower administrative expenses.

The 1967 revised estimates had assumed increases in hospital costs shown in the intermediate estimate between projections by the American Hospital Association and the Blue Cross Association.^{37/} The mid-1968 projections of increases in hospital costs were higher than that intermediate estimate, yet still less than that suggested by AHA spokesmen.^{38/}

Year	Increase over Previous Year in Hospital Costs			1968 Est. Increase in Earnings
	1967 Inter. Est.	1967 AHA Est.	1968 Est.	
1968	15.0%	15.0%	13.0%	5.9%
1969	10.0%	15.0%	12.0%	5.0%
1970	6.0%	15.0%	9.0%	4.5%
1971	5.2%	15.0%	7.5%	4.1%
1972	4.6%	10.0%	6.5%	3.8%
1973	4.1%	4.1%	5.5%	3.7%
1974	3.6%	3.6%	4.5%	3.6%
1975 and after	3.0%	3.0%	3.5%	3.5%

On the basis of actual program experience, the aggregate hospital utilization rate was found to be 3.8 days per person per year, considerably higher than provided for in the 1965 and 1967 estimates. Utilization experience in

^{37/} See table in text at Footnote #29.

^{38/} See p. 18 of source cited in Footnote #35.

extended care facilities resulted in utilization experience of about one day per person per year. Like hospital costs, per diem costs in extended care facilities rose sharply during the first full year this benefit was available--by about some 12%. The actuaries projected future extended care costs much along the line of increases projected for hospitals, though not quite as steep in the case of extended care:^{39/}

Assumptions about Future Rates in Extended Care Facilities

<u>Year</u>	<u>% Increase in Per Diem</u>	<u>Year</u>	<u>% Increase in Per Diem</u>
1968	12.0%	1972	6.5%
1969	10.0%	1973	5.5%
1970	8.7%	1974	4.5%
1971	7.5%	1975	3.5%

Home health services costs are measured in terms of dollars per capita per year. Actual experience for 1967 showed a cost of \$1.30 per capita. Preliminary 1968 data showed increased utilization of about 15% above that experienced in 1967, while costs were rising at about 12%. Utilization and cost experience for home health benefits were therefore, assumed to parallel that for extended care benefits.

In the fall of 1969, cost estimates for the hospital insurance program were again revised on the basis of more recent program experience. The

^{39/} See pp. 18-19 of source cited in Footnote #35.

actuaries reported to the Committee on Ways and Means that, on the basis of preliminary estimates, the level cost of the program had increased to 2.27% of taxable payroll.^{40/} Since the tax schedule provided for in existing law produced a level equivalent of only 1.50% of payroll, the hospital insurance program still faced a deficit situation, but this time equal to -0.77% of taxable payroll.

The principal changes in assumptions used in making the new estimate included the following:^{41/}

1. higher hospital utilization rates used in the initial 1969 base year for the projection and the assumption of a gradual annual increase of about 1%.
2. higher assumed increases in hospital daily costs, from 15% grading down to 4% per year after 1977, instead of the mid-1968 estimate of 12% in 1969 grading down to 3.5% after 1974.
3. recognition of the elimination of the 2% factor used in reimbursing providers for certain unidentifiable costs.
4. interest rate of 5%, instead of 4 1/2% used in 1968.
5. slower extended care facility utilization rates.
6. higher taxable payrolls and a higher assumed rate of increase in earnings levels; from 3 1/2% in 1968 to 4%.

6. Latest Cost Estimates

The revised estimates mentioned above were finalized early in 1970, but not until revised still further. These new estimates now serve as the

^{40/} "Summary Results of New Cost Estimates for Present OASDI and HI Systems and for the President's Proposal," Hearings before the Committee on Ways and Means on Social Security and Welfare Proposals, Part 1; pp. 45-48; September 25, 1969.

^{41/} See Footnote #40.

basis for estimating the present and future costs of the hospital insurance program.^{42/} The completed estimates now showed the hospital insurance program to have a level cost of 2.76% of taxable payroll, under a maximum taxable earnings base of \$7,800 annually. The differences, in terms of level cost, between the 1968 and final 1969 estimates are shown below:^{43/}

<u>Item</u>	<u>Level Cost</u>
1. 1968 level cost of hospital insurance.....	1.79%
2. assuming more rapid increase in hospital costs.....	.55%
3. long-term increasing trend in hospital utilization.....	.31%
4. change in hospital reimbursement formula (2% factor)...	-.03%
5. net effect, higher ECF costs, lower utilization.....	.00%
6. assumed higher utilization of home health services.....	.04%
7. assumed higher administrative costs.....	.02%
8. effect of later valuation date.....	.11%
9. increasing discount rate in calculating present values..	-.03%
Level-cost of program, 1969 cost estimate.....	2.76%
Level equivalent of tax schedule.....	1.52%
Actuarial balance.....	-1.24%

The reasons for the deficit were very similar to those given in previous changes in cost estimates. First, hospital costs continued to rise at unprecedented rates. The actual experience for 1968 was 5% higher than

^{42/} "Actuarial Cost Estimates for Hospital Insurance Program," Actuarial Study No. 71, Office of the Actuary, Social Security Administration; February 1970.

^{43/} See p. 20 of source cited in Footnote #42.

was assumed in 1968 estimates. The 1969 estimates use the assumption that the annual rate of increase peaks in 1969 and that it will decline gradually, rather than sharply as previously assumed. The cumulative effect of the actual 1968 experience, together with the gradual rather than rapid decline in rates of increase raised the projected level cost of inpatient hospital benefits by 39%.

Previously, it had been assumed that age-sex-specific utilization rates would remain constant in the future, and the actuaries had assumed what they believed to be a conservative rate for such projections. New data suggested, however, that there would be a long-term increased trend in hospital benefits by 17%.

Extended care costs continued to rise sharply, and at rates higher than that assumed in 1968. For example, the 1968 estimate had assumed an increase in ECF per diem costs of 12% for 1968. Actual experience showed an increase of 20% instead. On the other hand (due in part to administrative action by the Social Security Administration), ECF utilization dropped lower than projected in 1968. The net effect from a level cost standpoint was zero. Later data on utilization rates applicable to home health services also showed the 1968 estimates to be erroneous. In 1968, the actuaries had assumed an increase in utilization of about 10-15% in initial years. Experience, however, showed an increase of 33% per year for insured persons.

The current cost estimates may be summarized in the following manner. Hospital and extended care facility costs are assumed to have reached their highest annual rates in 1969. Such increases in cost will eventually diminish until they reach an average annual increase of 4% in 1978, and are then assumed to continue at this rate into the future. A 4% earnings rate at that time is also assumed. A similar gradual decline in the annual increases in the costs of home health services is expected until the 4% level is reached in 1978. The table below shows the projected relationship between the costs of hospital care, extended care, and home health services on the one hand and earnings level changes on the other:^{44/}

Assumptions about Future Increases in Costs and Earnings*

<u>Year</u>	<u>Hospital Costs</u>	<u>ECF Costs</u>	<u>Home Health Costs</u>	<u>Earnings</u>
1969	15%	17%	10%	6.6%
1970	14%	16%	10%	5.9%
1971	13%	14%	9%	5.4%
1972	11.5%	12%	8%	5.0%
1973	10%	10%	8%	4.6%
1974	8.5%	8.5%	7%	4.3%
1975	7%	7%	7%	4.1%
1976	6%	6%	6%	4.0%
1977	5%	5%	5%	4.0%
1978	4%	4%	4%	4.0%
1979	4%	4%	4%	4.0%
1980	4%	4%	4%	4.0%

*percentages represent increases over previous year

^{44/} See pp. 31-38 of source cited in Footnote #42.

Utilization projections were also made for the decade, 1970-80. The projected rates for all three of the benefit areas in the hospital insurance program are expected to decrease over this ten-year period and become unchanged after 1978:^{45/}

Assumptions about Future Utilization Rates *

<u>Year</u>	<u>Inpatient Hospital</u>	<u>Extended Care</u>	<u>Home Health Care **</u>
1969	2%	0%	33%
1970	2	8	30
1971	2	10	26
1972	1 1/2	10	22
1973	1 1/2	8	18
1974	1 1/2	6	14
1975	1	4	10
1976	1	3	6
1977	1/2	2	4
1978	1/2	0	2
1979	0	0	0
1980	0	0	0

* percentages represent increases over previous year

** utilization for insured only; rate for uninsured slightly higher in all years except 1969.

Administrative expenses per capita for the program are now projected to increase in the future at the same rate of increase in the general level of earnings (see table at Footnote #43). The interest rate used in determining the level cost of benefits and administrative expenses is 5%. For purposes of establishing the progress of trust

^{45/} See pp. 31-38 of source cited in Footnote # 42.

fund, however, slightly higher interest rates were used until 1983 when 5% is also used for the remaining period of the projection.

7. Probable 1970 Revisions in the Financing of Hospital Insurance

The size of the most recently estimated deficit in the hospital insurance program raised again the issue of whether an assumption about a unchanging earnings base should be used in making HI projections. The actuaries pointed out that the 1.24% of payroll deficit would be substantially reduced, if Congress either adopted an automatic-adjustment of the wage (earnings) base as part of the Social Security Act, or accepted the assumption that, in the future, the earnings base would be increase in line with increases in the general level of earnings:^{46/}

In the past two decades, such increases in the earnings base have closely paralleled the rise in the general earnings level, and it seems reasonable to assume that this will continue in the future. Accordingly, the second way of considering the actuarial status of the HI program is to assume that the earnings base will be adjusted in the future (beginning in 1971 and every second year thereafter) in accordance with the changes in general earnings after 1968-- actual changes in 1969 and assumed changes thereafter, with the result being rounded to the nearest multiple of \$600.

^{46/} See p. 3 of source cited in Footnote #42.

Using a rising earnings base assumption (which Congress had not endorsed in previous years), the cost of the program would be reduced from 2.76% of taxable payroll to 2.04%. Since, under such an assumption, the present tax schedule would produce 1.56% of taxable payroll (as opposed to 1.52% under a level \$7,800 base), the deficit of the hospital insurance program is reduced from -1.24% of payroll to -0.48% of payroll:^{47/}

Level Cost Projection under Level and Rising Earnings Base *

	<u>E.B. Remains at \$7,800</u>	<u>E.B. Keeps Up To Date</u>
Net level cost	2.76%	2.04%
Level equivalent of present schedule	<u>1.52</u>	<u>1.56</u>
Balance of program	-1.24%	-0.48%

* under existing tax schedule provided for by law.

Several alternatives were suggested by the Administration as a means of restoring the financial balance of the hospital insurance program. On the basis of the preliminary 1969 estimates (discussed in the preceding section), the President proposed an automatic-adjustment of the earnings base provided for by law together with a level contribution rate of 1.8% employer-employee combined. On the basis of the revised final estimates, the level rate proposed was

^{47/} See p. 9 of source cited in Footnote #42.

increased to 2.0%--1.0% on employers and employees (including the self-employed).^{48/} The automatic-adjustment of the earnings base was proposed largely for the purpose of establishing a "cost-of-living" benefit mechanism in the social security cash programs. However, the actuaries also noted the effects such a statutory provision would have on the estimates for the hospital insurance program. The automatic-adjustment feature would closely approximate, from a cost standpoint, the same results which might be expected from using the assumption that, in the future, the earnings base would be adjusted in line with changes in the general level of earnings.^{49/}

Naturally, any differences between the automatic-adjustment procedure and the assumptions as to how the earnings base would be kept up to date would produce slightly different results.

In May 1970, the House Committee on Ways and Means completed work on legislation which would revise the basis for financing the hospital insurance program. Under the bill reported by the Committee, the earnings base would be raised to \$9,000 beginning in 1971 remaining level from then on.^{50/} In addition, the previously-enacted graduated HI tax schedule would be replaced by a level contribution rate for

^{48/} See p. 5 of source cited in Footnote #42.

^{49/} See p. 5 of source cited in Footnote #42.

^{50/} "Social Security Amendments of 1970," House Report No. 91-1096; 91st Congress, 2d Session; Report of the Committee on Ways and Means on H.R. 17550; May 14, 1970.

the entire period of the estimate of 1.0% on employers and on employees each (including the self-employed). While the Committee did not incorporate by law a provision which would automatically-adjust the earnings base in line with changes in the general earnings level, the Committee did agree to permit the actuaries to assume a rising earnings base for purposes of making their cost estimates for hospital insurance:^{51/}

...the cost estimates were previously based on the assumption that both hospital costs and the general level of earnings will increase in the future for the entire 25-year period considered, while at the same time the earnings base will not change. The present cost estimates no longer assume that the maximum taxable earnings base will not change, but rather that it will be kept up to date, by periodic legislative revisions, with changes in the general level of earnings; such situation has been the case for last two decades, and it seems reasonable that it will continue in the future.

In light of the unfavorable experience with the hospital insurance program since its enactment, it is rather interesting to note that the Committee on Ways and Means would change this assumption. In 1965, the Committee observed that it did not want "to bind future Congresses into taking action in order to maintain the actuarial soundness of the hospital insurance program."^{52/} Without a rising

^{51/} See p. 88 of source cited in Footnote #50.

^{52/} See full quote at Footnote #20.

earnings base assumption, of course, hospital insurance would have a higher level cost and require an even greater tax rate than a combined employer-employee rate of 2.0% for the 25-year period of the estimate. Tax rates needed to restore the financial condition of the HI program under the \$7,800 now provided by law, are shown in Appendix B to this report. Apparently, however, the Committee believed that a less conservative assumption is possible, since operating experience is actually available on which to make projections:^{53/}

Your committee believes that such a less conservative assumption, resulting in a reduced safety margin, is now justifiable and proper. Initially, such a safety factor was needed when there was no firm indication of what the actual near-future experience would be. Now, good data are available as to the actual current experience, and so such a margin is no longer necessary if adequately reasonable assumptions are adopted as to future trends of unit costs of services and of utilization of services. Quite obviously, if the earnings base is not changed in the future to keep it up to date in this manner, and if the actual experience develops in line with the assumptions made in the actuarial cost estimates, then higher contribution rates than now provided under your committee's bill would be necessary.

Under the Committee bill, the new level cost of benefits and administrative expenses is estimated to be 2.06% of taxable payroll under assumptions used by the Committee. The value of the existing fund is 0.02%, which reduces the level cost to 2.04% of payroll. The level equivalent of the new tax schedule, new earnings base, and rising assumption with regard to such base is 1.98% of taxable payroll.

^{53/} See p.89 of source cited in Footnote #49.

As a result, there remains only a slight actuarial deficit in the projections under the Committee-approved bill:^{54/}

Level Cost or Level Equivalent

<u>Item</u>	<u>Tax Schedule</u>	<u>Benefits*</u>	<u>Existing Fund</u>	<u>Balance</u>
Present law, level \$7800 base	1.52	2.79	0.03	-1.24
Present law, increasing base	1.56	2.06	0.02	- .48
Committee bill	1.98	2.06	0.02	- .06

* includes administrative expenses

The assumption about the rising earnings base included in the second and third projection shown above involves adjusting the maximum taxable earnings base after 1970 so that the same proportion of the total payroll in covered employment will be taxable in the future as was the case in 1968 with the \$7,800 earnings base. Projected into the future, such earnings bases would be as follows:^{55/}

<u>Year</u>	<u>E.B. Required to Keep Current with \$7800 in 1968</u>
1970	\$7,800
1971-72	9,000
1973-74	10,200
1975-76	10,800
1977-78	12,000
rising in 1993 to	22,200

^{54/} See p. 91 of source cited in Footnote #50.

^{55/} See pp. 16-17 of source cited in Footnote #42.

Appendix C of this report shows the projected future operations of the hospital insurance trust fund under provisions contained in the Ways and Means Committee and the House-passed bill.

On May 21, 1970, the Committee-approved bill came before the House of Representatives for that body's consideration under a closed rule.^{56/} During the course of the debate, a motion was made to recommit the bill to amend the pending legislation in order to provide for an automatic cost of living mechanism as part of the cash benefits program. As part of this amendment, the Secretary of Health, Education and Welfare would be authorized to adjust the earnings base in future years in order to retain the same ratio of maximum taxable earnings to all earnings in covered employment as \$9,000 would be covered earnings in the first quarter of 1971:^{57/}

The wage base computation will only be made every other year-- in each even numbered year beginning in 1972. This will avoid constant change in the wage base subject to tax with the readjustments of payrolls that would be necessary. The average wages paid covered workers in the first calendar quarter of the computation year will be compared with those paid covered workers in the first quarter of 1971. The taxable wage base will be adjusted, effective the following January 1, by a corresponding amount.

In other words, the Secretary would be authorized to keep the earnings base up to date with changes in the general level of earnings. Based

^{56/} Congressional Record--House; Vol. 116, No. 82; pp. H4646-75.

^{57/} The specific method of computing the earnings base involves a rounding to the nearest multiple of \$600; see Congressional Record--House; Vol. 116, No. 82; p. H4673.

on current estimates by the actuaries, the earnings bases required are the same as those projected under the assumption of an adjusted earnings base which the Committee had authorized the actuaries to use in making their hospital insurance cost estimates. However, the House amendment (which passed by a vote of 233 to 144) resolves, so far as the House is concerned, the question of whether a rising earnings base assumption should or should not be employed in making HI cost estimates. Nowhere in the debate on the floor of the House, however, was any attention given to what effect on HI cost estimates might such a statutory automatic revision of the earnings base have in the future. Whether or not this will be a major issue in the Senate, remains to be seen.

APPENDIX A

Statement of operations of the hospital insurance
trust fund during the fiscal year 1969

Total assets of the trust fund, June 30, 1968.....	\$1,430,636,435.86
Receipts, fiscal year 1969:	
Contributions:	
Appropriations.....	\$4,072,833,997.28
Deposits arising from State agreements.....	425,901,886.96
Gross contributions.....	4,498,735,884.24
Less payment into the Treasury for contribu- tions subject to refund....	<u>75,500,000.00</u>
Net contributions	\$4,423,235,884.24
Transfers from railroad retirement account.....	54,168,000.00
Reimbursements from general fund of the Treasury for costs of:	
Noncontributory credits for military service...	22,000,000.00
Benefits for uninsured persons:	
Benefit payments.....	707,067,593.00
Administrative expenses..	23,145,854.42
Interest.....	<u>18,754,877.00</u>
Total reimbursement for benefits for uninsured persons.....	748,968,324.42
Interest:	
Interest on investments.....	95,843,005.13
Less interest on amounts of interfund transfers for re- imbursement of administrative expenses and construction costs..	172,290.00
Net interest.....	<u>95,670,715.13</u>
Total receipts.....	5,344,042,923.79

Disbursements, fiscal year 1969:

Benefit payments.....\$4,653,976,096.46

Administrative expenses:

Department of Health, Education
and Welfare.....\$95,234,386.00

Treasury Department..... 5,875,779.09

Reimbursement to old-age
and survivors insurance trust
fund due to adjustment in al-
location of administrative ex-
penses for fiscal year 1968... 2,508,484.00Reimbursement to old-age and
survivors insurance and dis-
ability insurance trust funds
for costs of construction for
fiscal year 1968..... 577,000.00Gross administrative ex-
penses 104,195,649.09Less receipts from sale of
surplus supplies, materials,
etc. 13,768.43Net administrative expenses..... \$104,181,880.66

Total disbursements.....4,758,157,977.12

Net addition to the trust fund.....

\$585,884,946.67

Total assets of the trust fund,

June, 30, 1969.....2,016,521,382.53

APPENDIX B

Alternative Ways of Financing the Current HI Deficit

In Section 6 of this report, it was noted that the present hospital insurance program is estimated to have an actuarial deficit of 1.24% of taxable payroll. This deficit is projected on the basis of provisions applicable in existing law and on the basis of assumptions previously used in arriving at the level cost of the program. Any change in the present HI tax schedules, in the earnings base currently applicable under law (\$7,800), or in the various assumptions used in making earlier estimates could substantially alter the actuarial projections for the hospital insurance program. Section 7 of this report outlines those changes proposed by the Administration for restoring the actuarial balance to the program. Also discussed were the changes proposed by the House Committee on Ways and Means and the full House for purposes of reducing the deficit to a manageable level.

The changes made by the Ways and Means Committee-approved bill, however, are but one way of eliminating the financing difficulties of the hospital insurance program. The discussion in Section 7 of this report notes the three principal steps taken--(1) increase the present

earnings base from \$7,800 to \$9,000 beginning in 1971, (2) replace the graduated tax schedule in current law with a level tax rate of 1.0% on employers and employees each (including the self-employed), and (3) acceptance of the assumption that, in the future, Congress will adjust the maximum taxable earnings base in line with increases in the level of earnings. The House amendments established a statutory procedure for adjusting the earnings base in line with increases in the general level of earnings.

If no changes are made in the present financing picture of the hospital insurance program, the HI trust fund will be exhausted late in 1972. This would seem to imply that Congress must take steps, and soon, to revise the financing of hospital insurance if the program is to continue. There are, however, numerous ways of restoring the financial integrity of the program in addition to the way proposed by the Administration, or adopted by the Committee on Ways and Means.

For example, if the current actuarial assumption that the earnings base now authorized will remain unchanged for the next 25 years is continued, a major increase in the tax schedule would be required to finance hospital insurance. Assuming that it was desirable to avoid building up an unnecessarily large fund during the early years of

the program, the following graduated rate schedule might constitute one alternative:^{58/}

Rate Schedule under Level Earnings Base Assumption*

<u>Years</u>	<u>Present Law</u>	<u>Required to Meet Deficit</u>
1971	.60%	.90%
1972	.60	.90
1973	.65	.90
1974	.65	1.10
1975	.65	1.10
1976	.70	1.10
1977	.70	1.10
1978	.70	1.30
1979	.70	1.30
1980	.80	1.30
1981	.80	1.30
1982	.80	1.50
1983	.80	1.50
1984	.80	1.50
1985	.80	1.50
1986	.80	1.70
1987	.90	1.70
1988	.90	1.70
1989	.90	1.70
1990 and after	.90	1.90

* Earnings base remains at \$7,800. Rates apply to employers and employees each (including self-employed).

This schedule produces a level equivalent of 2.73% of taxable payroll leaving an acceptable actuarial deficit of only -0.03% of payroll.

^{58/} See p. 4 of source cited at Footnote #42.

Another alternative, assuming no change in the earnings base or in the assumption that it remains unchanged for the next 25 years, would be to increase the existing rates by 5/8% of payroll for employers and employees each (including the self-employed). Again, the earnings base would be \$7,800:^{59/}

Rate Schedule under Level Earnings Base Assumption *

<u>Years</u>	<u>Present Law</u>	<u>Required to Meet Deficit</u>
1971-72	.60%	1.225%
1973-75	.65	1.275
1976-79	.70	1.325
1980-86	.80	1.425
1987 and after	.90	1.525

* Earnings base remains at \$7,800. Rates apply to employer and employees each (including self-employed).

This alternative, however, builds up the balance in the trust fund much more rapidly than the previous alternative.

The Committee bill utilizes a level tax rate (1.0% on employers and employees each) together with a rising earnings assumption. By assuming that the earnings base is adjusted in line with increases in the general earnings level, a graduated tax rate using the existing schedule could also be devised. The House-passed bill establishes

^{59/} See p. 9 of source cited in Footnote #42.

by law a procedure to make such adjustments. As noted previously, under such an assumption, the net level cost of the program is reduced from 2.76% of payroll to 2.04%. The level equivalent of the schedule shown below results in 2.05% of payroll, leaving the program with a positive balance of 0.01% of taxable payroll:^{60/}

Rate Schedule under Rising Earnings Base Assumption *

<u>Years</u>	<u>Present Law</u>	<u>Required to Meet Deficit</u>
1971-72	.60%	.85%
1973-75	.65	.90
1976-79	.70	.95
1980-86	.80	1.05
1987 and after	.90	1.15

* Earnings base would be \$7,800 in 1970, \$9,000 in 1971-72, \$10,200 in 1973-74, \$10,800 in 1975-76, \$12,000 in 1977-78, increasing ultimately to \$22,200 in 1993-93. Rates apply to employer and employees each (including the self-employed).

^{60/} See p. 10 of source cited in Footnote #42.

Estimated Future Progress of HI Fund under Proposed 1970 Revisions in Financing

Calendar Year	Contributions <u>2/</u>	Government payment for uninsured <u>3/</u>	Benefit payments	Administrative expenses	Interest on fund <u>4/</u>	Net income	Fund at end of year
1970	\$4,973	\$618	\$5,820	\$140	\$139	-\$230	\$2,183
1971	9,252	656	6,894	150	226	3,090	5,273
1972	9,728	685	8,031	161	389	2,610	7,883
1973	10,721	701	9,204	172	534	2,580	10,463
1974	11,224	701	10,383	183	657	2,016	12,479
1975	11,997	688	11,477	195	753	1,766	14,245
1980	15,978	490	16,138	260	1,024	1,094	20,371
1985	20,860	282	21,462	345	1,109	444	22,955
1990	26,812	116	28,586	457	1,029	-1,086	20,552
1994	32,249	45	35,500	560	749	-3,017	13,842

1/ Maximum taxable earnings base would be \$7,800 in 1970, \$9,000 in 1971-72, 10,200 in 1973-74, \$10,800 in 1975-76, \$12,000 in 1977-78, increasing ultimately to \$22,200 in 1993-94. Combined employer-employee contribution schedule would be 1.2 percent for 1970, and 2.0 percent for 1971 and after.

2/ Includes payment from general fund for military service wage credits.

3/ Cost for benefit payments and accompanying administrative expenses for uninsured persons for each fiscal year is assumed to be paid to the trust fund in the middle of the fiscal year (i.e., at the end of the corresponding calendar year).

4/ Over the long range, a 5 percent rate is assumed, with a somewhat higher rate in the early years.