APPENDIXES

APPENDIX A.—STATEMENT OF ACTUARIAL ASSUMPTIONS AND BASES EMPLOYED IN DETERMINING THE ADEQUATE ACTUARIAL RATES AND THE STANDARD PREMIUM RATE FOR THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM BEGINNING JULY 1975

This is a statement of actuarial assumptions and bases employed in determining the adequate actuarial rates and the standard monthly premium rate for the Supplementary Medical Insurance Program for the period July 1975 through June 1976. The adequate actuarial rate for enrollees age 65 and over is $7.50. The adequate actuarial rate for disabled enrollees is $18.50. The standard premium rate for both types of enrollees is $6.70.

I. ANALYSIS OF SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

The balance of the SMI Trust Fund at the end of each of the last three fiscal years, the liability outstanding for benefits and related administrative costs for services performed prior to the end of that fiscal year but not yet paid for at the end of that fiscal year ("liability for incurred but unpaid services"), and the monthly premium rate in effect for each of these fiscal years are as follows:

Year ending June 30	Monthly premium rate	Fund at end of period (millions)	Liability for incurred but unpaid services (millions)
1972	$5.60	$481	$917
1973	5.80	746	988
1974	6.30	1,272	1,315

Due to past deficiencies in the premium rate, the fund on June 30, 1974, was about 97% of the liability outstanding. The liabilities outstanding on June 30, 1974, for incurred but unpaid services, are estimated to have been $1,315 million, while the balance in the trust fund on the same date amounted to $1,272 million.

It is expected that the trust fund balance will increase during fiscal year 1975. By the end of June 1975 the trust fund balance is estimated to be about $1,587 million, about 105% of the liability for incurred but unpaid services then outstanding. This slight surplus ($76 million) in the trust fund, if it materializes as projected, diminishes the size of required margins in the adequate rates for 1976. Approximately $75 million of this excess was generated by payments for the disabled and $1 million by payments for the aged.

II. ADEQUATE ACTUARIAL RATE FOR ENROLLEES AGE 65 AND OLDER

The determination of an adequate actuarial rate for the aged has been made on the basis of the actual operating experience under the program, projected through the year beginning July 1975. Virtually complete operating experience figures through June 30, 1974, are now available as to the cash income and disbursements under the program, and some data are available for the early months of fiscal 1975. The adequate actuarial rate, however, must be sufficient to cover benefits and related administrative costs for all services performed during the period from July 1975 through June 1976 (fiscal 1976). Experience on such a basis (hereafter called an "incurred" basis) is available for most components of the program through fiscal 1973; that for the other components must be estimated.

Analysis of past experience

Estimates of the basic premium necessary to finance both benefit payments and administrative expenses are shown below, on both a cash and an incurred basis. Cash figures must be adjusted for the estimated increase in liability for incurred but unpaid services. Monthly premium rates on both cash and incurred basis are compared below for the three most recent fiscal years with the premium rate actually charged.

Fiscal year ending June 30	Premium rate charged	Premium rate required for benefits and administrative expenses	
		Cash basis	Incurred basis
1972	$5.60	$5.29	$5.43
1973	5.80	5.38	5.52
1974	6.30	5.85	6.06

Basic estimates for future experience on an incurred basis

In estimating the cost of the program for July 1975 through June 1976, it is necessary to project incurred results from fiscal year 1973. The actuarial assumptions used for the purpose of these projections are shown below:

AVERAGE INCREASE ASSUMED OVER PREVIOUS YEAR

[In percent]

Fiscal year	Physicians' services		Outpatient hospital	All other
	Fees [1]	Number and mix [2]		
1974	3.2	1.7	18	10
1975	7.2	1.7	18	10
1976	8.5	1.7	18	10

[1] As paid by the program.
[2] Increase in the number of services received per capita and greater relative use of more expensive services.

The increase in physician fees for fiscal year 1975 over 1974 of 7.2% results from an updating of customary and prevailing fees for fiscal 1975 to the calendar 1973 level of charges as provided in the law. This increase is larger than would normally have occurred because the fiscal year 1974 fees recognized by the program were held down by price controls. An increase in recognized fees of 8.5% is anticipated for fiscal year 1976 based on the progress in the consumer price index for physician fees through October 1974 and projected through December. Calendar year 1974 fees will form the basis for 1976 reimbursement as specified in the law.

Both of these increase rates have been reduced to reflect the estimated impact of applying an economic index to prevailing fees as required by section 224 of P.L. 92-603. The estimated reduction in 1975 is 0.5% and in 1976, 1.0%.

Administrative expenses incurred for the aged and disabled in fiscal 1976 will be 12.8% of incurred benefits paid under both programs, based on the amounts in the fiscal 1976 budget.

On the basis of the foregoing assumptions it is now estimated that the rate necessary so that income would cover both benefit payments and administrative expenses for aged enrollees on an incurred basis is $7.62 for fiscal 1976. The projection of the adequate actuarial rate is summarized as follows.

DERIVATION OF SMI RATE REQUIRED IN FISCAL YEARS 1973–76

	1973	1974	1975	1976
Covered services (at level recognized):				
Physicians' reasonable charges	$6.50	$6.82	$7.44	$8.21
Radiology and pathology	.29	.30	.33	.37
Group practice plans	.12	.13	.15	.16
Independent laboratory	.05	.06	.07	.07
Home health agencies	.08	.09	.10	.10
Outpatient hospital and other institutions	.67	.79	.93	1.10
Total services	7.71	8.19	9.02	10.01
Cost sharing:				
Deductible	−1.53	−1.66	−1.67	−1.68
Coinsurance	−1.17	−1.23	−1.38	−1.57
Total benefits	5.01	5.30	5.97	6.76
Administrative expenses	.51	.76	.79	.86
Incurred expenditures	5.52	6.06	6.76	7.62
Value of interest on fund	−.09	−.13	−.16	−.18
Margin for contingencies and to amortize unfunded liabilities	.37	.37	.10	.06
Promulgated rate	5.80	6.30	6.70	7.50

Calculation of actuarially adequate rate

The $7.62 rate for fiscal year 1976 is decreased by $.18 to allow for interest earnings on the trust fund. Therefore the adequate rate before allowance for contingencies is $7.44. The margin of $.06 in the adequate actuarial rate of $7.50 will result in a surplus attributable to the aged of $32 million at the end of 1976 if all assumptions are exactly realized.

III. ADEQUATE ACTUARIAL RATE FOR THE DISABLED

An adequate actuarial rate for disabled enrollees must take into account (i) enrollees eligible because they have been entitled to Disability Insurance for not less than 24 months, and (ii) enrollees meeting the chronic kidney disease provision. Only data on total cash flow of the SMI program is available on which to estimate the probable cost of these beneficiaries. This data is very incomplete because of the delay between the time expenses are incurred and the time bills are paid. As accrual data become available the error of the estimate should be substantially reduced.

Based on the data available, the rate required to pay benefits and administrative expenses for the disabled in FY 1976 less an allowance for interest is $19.33. In view of the anticipated surplus in the trust fund at the end of 1975 it is appropriate to decrease the adequate actuarial rate below that actually required to cover services rendered in fiscal year 1976. The adequate actuarial rate of $18.50 would result in a total surplus in funds contributed on behalf of the disabled of $38 million at the end of FY 1976, a decrease of $37 million during the fiscal year. Thus the total surplus for both the aged and disabled would be $70 million at the end of 1976 if all assumptions were realized exactly. This is about 1½ percent of anticipated outlays in fiscal year 1976.

IV. STANDARD PREMIUM RATE

Public Law 92–603, enacted October 30, 1972, provided that the standard premium rate to be paid by all enrollees is to be the smaller of:

A. The monthly adequate actuarial rate for enrollees age 65 and over, or

B. The premium rate most recently promulgated increased in proportion to any increases in the OASDI benefit table between June 1 immediately preceding the promulgation date and the June 1 immediately following the promulgation date.

At the time P.L. 92–603 was enacted, the law also provided that any automatic increase in OASDI benefits based on increases in the consumer price index would be announced before November 1 and would be effective the following January 1. Thus under the law in effect at that time, the table of benefits which would be in effect for the following June was provided in the law at the time the part B premium was to be promulgated—December of each year.

Public Law 93–233, enacted December 31, 1973, however, changed the effective date of any automatic OASDI increases to June 1 of a year and provided that the announcement of the increase would be made after the end of the first calendar quarter and prior to May 15 of that year. Since there can be no announcement of any automatic cash benefit increase until after the end of the first calendar quarter of 1975, the benefit rate now scheduled in the law for June 1975 is the same as that scheduled for June 1974 when the last benefit increase occurred.

Thus the $6.70 premium rate for fiscal year 1975 cannot be increased and must be promulgated as the premium rate for the twelve month period beginning July 1975. Because of the structure of current law, this situation will reoccur each year, and the $6.70 premium rate will remain in effect permanently unless remedial legislation is enacted.

APPENDIX B.—ACTUARIAL METHODOLOGY AND PRINCIPAL ASSUMPTIONS FOR COST ESTIMATES FOR THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM

1. ACTUARIAL ESTIMATES REQUIRED

Actuarial cost estimates of the SMI program are required for two purposes. First, the cost estimates form the base for the determination of the adequate actuarial rates and for the promulgation of the premium rates to be charged enrollees—on which the financing of the program is based. Second, they are needed for projecting the transactions of the trust fund and the accrued surplus (or deficit) of the program.

The estimates needed, although for the same program, take different forms. In order to determine adequate actuarial rates, cost estimates are needed on an incurred basis, and expressed per enrollee. The transactions related to the trust fund relate to the aggregate cash flow of the program. The accumulated surplus of the program is found by comparing the balance in the trust fund on any date with the assets and liabilities then outstanding, which form the difference between the cash and incurred status of the program.

The important difference between cash and incurred estimates is that in the former a transaction is assigned to the fiscal year in which an entry therefor is made to the trust fund account by the Secretary of the Treasury as Managing Trustee, and in the latter a benefit or premium payment is assigned to the fiscal year in which the service is performed or the premium falls due. Because there is a considerable time lag between the date a covered service is performed and the date that the corresponding cash transaction is charged against the trust fund, cash and incurred disbursement estimates can differ widely for any fiscal year. The principal reasons for this delay are the time taken by enrollees and providers to submit correctly documented claims, by carriers in processing and paying the amounts due, and by delays between payments and Treasury entries to the trust fund. In addition, the full payment for institutional services is not decided until the final cost settlement, which may be several years after the services were performed.

2. ESTABLISHING A SUITABLE BASE FOR PROJECTIONS

a. Primary reliance on program data

The actuarial cost estimates are based to the extent possible on accounting data from the program, and on such statistical information as can be derived from or reconciled with accounting. data Unconfirmed statistical data from the program is useful also, although less reliable.

Data from outside the program is less useful. There are many important but poorly understood factors that affect the level of services that will be sought and performed for a particular group of persons under a specific insurance program. Only in the absence of any program data, as in the case of new groups of beneficiaries or new types of benefits—is data from outside of the program relied upon to any significant extent.

b. Establishing an incurred base

Establishing an incurred base from which to project the future cost of the program requires reconstructing the incurred experience by adjusting the data for a number of sources of serious bias. A substantial part of the data for recent years is missing, due both to delays in receiving data and because statistical data are not tied to accounting procedures to insure accuracy. In addition, processing and classification errors are inevitable in any large scale data processing operation and overall corrections must be made. Finally, where reliance is made on sample data, corrections must be made for any sample bias present.

This reconstruction must be made separately for each payment route (through carriers*, through intermediaries, through combined billing, etc.)—each of which

*The intermediaries who assist the Social Security Administration in paying claims are referred to as "intermediaries" if reimbursement is to be made on the basis of "reasonable costs" (i.e., to institutions) and "carriers" if reimbursement is made on the basis of "reasonable charges."

involves a different set of lags in payment and receipt of data, other biases, and other peculiarities. Each requires a different set of adjustments to obtain reliable estimates of the actual incurred cost. Also, administrative policy, which may affect both the amount paid and the promptness of payment, is normally directed to a particular payment route (e.g. the reasonable charge screens apply only to benefits processed by carriers). Finally, the currency and quality of the basic data—and consequently the accuracy of estimates made from it—vary substantially by source of data.

The reconstruction of incurred experience has been done by fiscal years for this report since the fee screens are updated each fiscal year. The incurred experience is reconstructed for each payment route through the most recent fiscal year for which the data are sufficiently complete to permit a reasonable estimate of the total. Due to the delays in receiving data, projections must be made of the incurred experience for the most recent periods, as well as for future experience.

Payments are considered to be incurred when the service which makes payment due is performed. The increased reimbursements made in any year due to carryover of deductible from the prior year are thus assumed to be incurred in the year in which payable and not the year the service was performed, since if no further services had been performed or if enrollment had been terminated no payment would have been made.

The reconstruction of the incurred experience is accomplished principally by tying the incurred data to an accounting base by reconciling incurred data with cash flow by payment route. The total cash experience is complete by definition for any past fiscal year, but must be broken down by payment route (and whether interim or final).

It should be noted that the lag in the collection of data as well as the fact that only a sample is available on an incurred basis limit the accuracy with which the base year can be estimated. Any inadequacies in the base year data are compounded as the experience is projected to future years.

c. Analysis of data by payment route

(1) Benefits paid through carriers (on payment records).—All services reimbursed on the basis of reasonable charges are paid by carriers (Blue Shield plans and commercial insurance companies chosen to act as agents for the program). Approximately 87 percent of benefits are paid by carriers; and carriers are required to submit payment records covering all payments made. An actuarial sample of 0.1 percent of these payment records is tabulated by date of service rendered, which permits analysis of the program on an incurred basis. A number of corrections must be made to this data to eliminate biases resulting from the processing system and sampling procedure.

There is a substantial lag between the date on which services are performed, and the date on which payment records are posted to the samples. Payments lag from several months to a year or more behind services performed. There may be a further delay before payment records are submitted and a few are never submitted.[1] Finally, editing and processing of payment records by the Social Security Administration are required before tabulation, and if the editing produces any inconsistencies, a very long delay may result from returning the payment records to the carriers for correction.[2] Errors are often detected in the tabulations and delays of several months may be required to obtain corrections.

Thus, in order to estimate the level of benefits incurred for any period, adjustments must be made for payment records covering services that have been performed but for which payment records have not been tabulated by the Social Security Administration. These "incurred but unreported" payment records must be added to those received for the period in question.

Further correction must be made to the sample data for the difference between the mean cost of enrollees in the sample and the average cost for all enrollees. This difference is due to statistical fluctuations from year to year, and to selection of a sample whose members are not fully representative of all enrollees by health and geographical distribution.

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[1] Beginning with 1972 nearly all payment records submitted are reconciled with cash payments, so that incomplete data is no longer a problem.

[2] In the first years of the program, many payment records that were returned to carriers were never resubmitted, probably because some carriers did not maintain adequate documentation with which to meet Social Security Administration specifications. Actuarial samples were maintained for all records processed as well as for those approved by the edit checks to overcome this problem. Currently, the proportion never returned is very small, as determined by actuarial controls.

The appropriate corrections are made through controls to accounting data. Table B1 shows the cash paid and reconstructed reimbursement incurred for services for which payment records are submitted by fiscal year—both in total and per capita.

(2) *Institutional services reimbursed by intermediaries.*—Payments by intermediaries to hospitals for outpatient hospital services, to hospitals for covered services for beneficiaries who have exhausted their HI program benefits, to skilled nursing facilities for outpatient services, and to home health agencies for services not covered by the HI program are on an interim basis and adjusted by a subsequent settlement with the institution on the basis of an audited cost report. As in the case of benefits under the HI program, interim bills are submitted to support claims for interim payments. A 0.1 percent sample of these bills is tabulated by date of service, adjustments made for the lags in receiving bills, and an estimate made of the interim payments incurred. These data are compared with accounting reports of cash payments to determine their reliability.

Finally, allowance must be made for the final cost settlements made with the institutions to bring interim payments up to full reimbursable costs. Table B2 summarizes the cash and reconstructed incurred experience for the institutional services by fiscal year.

(3) *Inpatient radiology and pathology paid initially through the hospital insurance program.*—As a result of the 1967 Amendments, hospital-based radiologists and pathologists have the option of making agreements with a hospital under which the hospital bills for their services. Where these agreements are in effect, payment is made initially from the hospital insurance trust fund by the hospital insurance intermediary. The HI trust fund is subsequently reimbursed from the SMI trust fund. Interim payments to hospitals are made on the basis of intermediary estimates, in theory based on the estimated average cost for all inpatient professional radiology and pathology services reimbursed by the HI program for that hospital. The actual liability, however, depends on subsequent cost settlements with the hospitals. No data as to the current cost of these services is available. Consequently, estimates of the liability of the program for these services must be based on cost settlement data. Presently there is little information on which to judge the completeness of this data. This inadequacy in the data available from the program gives rise to the possibility of substantial errors in estimating this component of the cost of the program.

(4) *Institutions reimbursed directly by the Social Security Administration.*—The same basic procedures used by the intermediaries are also followed by the Social Security Administration to reimburse institutions that have elected to be paid directly by the Social Security Administration for SMI services rather than through intermediaries. Although data from this source might be analyzed separately, the amount involved has been too small to merit separate attention. Consequently, direct institutional reimbursements are analyzed jointly with other institutional benefits.

(5) *Group practice plans dealing directly with the Social Security Administration.*—Group practice plans that deal directly with the Social Security Administration are reimbursed on a cost basis. They are financed on an interim payment basis designed to keep current the reimbursements for services performed. Final settlements are made after the close of the provider's fiscal year to reflect actual allowable cost during the period. Table B3 shows the reconstructed incurred per capita payments.

TABLE B1.—BENEFITS PAID FOR SERVICES ON PAYMENT RECORDS

Fiscal year	Average enrollment (millions)	Incurred		Cash	
		Total (millions)	Per capita	Total (millions)	Per capita
1967	17.750	$1,109	$62.47	$632	$35.61
1968	18,038	1,375	76.24	1,312	72.74
1969	18.833	1,546	82.08	1,523	80.87
1970	19.312	1,671	86.53	1,652	85.54
1971	19.664	1,827	92.89	1,780	90.52
1972	20.043	2,008	100.20	1,959	97.74
1973	20.428	2,129	104.24	2,075	101.58

TABLE B2.—BENEFITS PAID FOR INSTITUTIONAL SERVICES

Fiscal year	Services—Average enrollment (millions)	Incurred		Cash			
		Total (millions)	Per capita	Interim	Final	Total	Per capita
1967	17.750	$40	$2.25	$18.1	$0.1	$18.2	$1.03
1968	18.038	70	3.88	55.4	1.0	56.4	3.13
1969	18.833	105	5.58	91.5	4.7	96.2	5.11
1970	19.312	120	6.21	102.3	26.2	128.5	6.65
1971	19.664	150	7.63	111.9	50.4	162.3	8.25
1972	20.043	200	9.98	140.4	71.8	212.2	10.59
1973	20.428	234	11.45	160.3	71.2	231.5	11.33

TABLE B3.—SUMMARY OF INCURRED BENEFITS PER CAPITA

Fiscal year	All services	Physician services [1]	Inpatient radiology and pathology [2]	Outpatient hospital	Home health agencies	Group practice plan
1967	$65.53	$62.47	----------	$1.37	$0.88	$0.81
1968	82.61	75.60	$1.89	2.48	1.40	1.24
1969	92.82	79.26	6.57	3.81	1.77	1.41
1970	98.17	83.39	7.14	5.12	1.09	1.43
1971	105.35	89.16	7.21	6.61	1.02	1.35
1972	114.70	96.32	6.77	8.78	1.20	1.63
1973	120.14	99.85	6.99	10.25	1.20	1.85

[1] Includes all services on payment records (other than for inpatient radiology and pathology after 1967).
[2] Includes services on payment records and those using combined billing; amounts shown are for April 1968 and later when combined billings are authorized and inpatient radiology and pathology charges are reimbursed at 100 percent (see text).

3. PROJECTION OF COSTS FOR AGED ENROLLEES

a. Basis of projection

Projection of future costs requires ascertaining stable relationships among the payments for services in past periods and projecting these into the future. The pattern of services rendered changes relatively slowly and in similar ways from year to year. Abrupt changes in payments under the program are caused primarily by administrative policy. The most important among other influences on costs are price increases, especially the average increase in physician fees (as affected by administrative policy) and in the average reasonable cost for the institutional services. Most other relationships are stable, or apply only to a small portion of covered services. To obtain these relationships, the reasonable charges (or costs) of services rendered must be reconstructed from the reimbursements incurred and the effect of administrative policy and price changes on the increases in the per capita amounts must be eliminated. Projections can then be made with specific assumptions as to price increases and administrative policy judged most likely to occur, assuming that most other relationships remain stable.

b. Trends in reasonable charges and costs incurred.—(1) Reasonable charges and costs incurred per capita through 1973:

After allowing for the effect of the coinsurance and deductible (including the tendency not to submit claims for all services for which reimbursement would be paid), the reasonable charges and costs incurred per capita for periods for which adequate data are available are as shown in Table B4. In allowing for the effect of the deductible and coinsurance, inpatient radiology and pathology on payment records are separated from other services on payment records. To facilitate projections, institutional services are divided into those for home health agencies and those for outpatient hospital services and group practice plans. Projections are made separately for each of these broad categories of services.

(2) Past effects of administrative policy:

Administrative policy has had a substantial impact on amounts paid by carriers—especially as to payment for services not covered by the program (e.g. custodial care, routine physicals, etc.) and the reasonable charge screens. Establishing the trends that have been experienced in recognized charges requires allowances for the effect of any changes in policy that have occurred in the past. Similarly, projections require assumptions as to the policies most likely to be followed in the future.

TABLE B4.—INCURRED REASONABLE CHARGES OR COSTS PER CAPITA FOR THE AGED: PAST EXPERIENCE

Fiscal year	All services	Physician services [1]	Inpatient radiology and pathology [2]	Outpatient hospital	Home health agencies	Group practice plan
1967	$114.45	$109.11	----------	$2.39	$1.54	$1.41
1968	133.59	123.35	$1.89	4.05	2.28	2.02
1969	147.05	129.09	6.57	6.21	2.88	2.30
1970	154.62	135.10	7.14	8.30	1.77	2.32
1971	163.90	142.35	7.21	10.55	1.63	2.16
1972	176.24	151.24	6.77	13.79	1.88	2.56
1973	185.15	157.24	6.99	16.16	1.89	2.91

[1] Includes all services paid on the basis of reasonable charges (except those for inpatient radiology and pathology after 1967).
[2] Includes services on payment records and those using combined billing; amounts shown are for April 1968 and later when combined billings are authorized and inpatient radiology and pathology charges are reimbursed at 100%.

(*a*) *Payment for noncovered services*

Currently, 11½ percent of the amounts claimed are denied by carriers as services not covered by the program. The level of denied claims has risen gradually from around 2–3 percent in the first year of the program, and reached the present level in 1971. Thus if the pattern of claims submitted has not changed, around 9 percent of payments during the early years of the program were made for noncovered services, and such payments have been gradually reduced. Such payments were probably somewhat in excess of 9 percent initially, however, since many claimants have learned through denials not to submit certain types of claims, and are not currently contributing to the 11½ percent that are denied. The effect has been to inflate payments in the early years by around 10 percent and reduce the rate of increase experienced in the cost per capita of physicians and miscellaneous service.

(*b*) *Reasonable charge screens*

The "reasonable charge" for any service covered by the program is the lower of the "customary charge" by the particular physician for the type of service in question and the "prevailing charge" by physicians in the geographical area for that type of service. Reimbursement under the program is based on the lower of the reasonable and actual charge.

The policy of the Social Security Administration in implementing the requirement for paying at most reasonable charges has consisted of the following components:

(i) A reasonable charge is determined for *each* service reimbursed by carriers.[1]

(ii) The "customary charge" for a physician for any type of service is defined to be the median charge used by that physician for that type of service for enrollees in the program during the calendar year preceding the fiscal year in which the claim is processed. Thus there is on the average a delay of 1½ years in recognizing any increase in customary charges and such charges are determined solely from services performed for enrollees in the program.[2]

(iii) The "prevailing charge" for any type of service in a geographical area is defined to be the 75th percentile of the customary fees for that service by the physicians in that area.*

(iv) Decisions as to how to group services rendered in combination or to patients with complications (a large proportion of services for persons over age 65) and as to the number of observations required to form a distribution for purposes of determining a customary or a prevailing charge—are left to the individual carriers.

(v) Payment is made on the basis of the bill submitted by the physician or enrollee. The burden of proof is placed on physicians or patients in appealing any disagreement over the classification of services for reasonable charge determinations.

Due to the large number of services that are infrequently performed, there are many covered services for which there is no customary or prevailing charge.

[1] This policy contrasts with that followed by insurance companies operating under similar contractual language, who in general examined only unusually large bills or bills from particular physicians.
[2] The delay in recognition of customary charges was explicitly authorized by the 1972 Amendments.
*Use of the 75th percentile for defining prevailing fees was mandated by the 1972 Amendments.

Use of relative value scales permits use of estimates for many of these, but there are many that can not be established in this way. Further, many physicians charge less than the customary charge for some patients. For both these reasons, about 35 percent of charges are not affected by the screens.

The increases that have taken place in reimbursements per capita under the program can only be understood after an analysis of the effect of changes in fee screen policy. In the early years of the program, each carrier was allowed to determine much of its own policy with regard to reasonable charges, following very general guidelines. The policies that followed ranged from use of Blue Shield fee schedules to reducing payment only when a joint insurance company—medical society review committee agreed that a charge was out of line.

In 1969, the Social Security Administration instructed the carriers to adopt policies similar to those now followed but with the prevailing fee set at the 83rd percentile of customary charges. Data from the program indicate that these policies were introduced gradually over three years. The level of prevailing fees was reduced to the 75th percentile of customary charge distributions in early 1971 (conforming with pending legislation). Also, introduction of fee screens based on 1969 data was delayed until early 1971. The data, however, indicate delays between policy changes and actual implementation that most likely varied substantially by carrier.

(3) Price increases:

Data concerning the trends in the average price of health care are available for some of the types of services covered by the program and estimates of the trends of the others can be based on data for similar types of services.

(4) Residual factors:

In addition to administrative policy and price increases, the cost per capita for each type of covered service is affected by a number of other factors. For example, total physician charges for covered services increase due to (a) changes in the mix of services rendered (reflecting trends to use new, more complex, and more expensive techniques) and pattern of specialists (reflecting increased specialization); (b) changes in the level of use of physician services, including chance fluctuations in health (e.g. epidemics); (c) changes in the manner in which physicians bill for their services; (d) any change in the composition of the enrollment by age, sex, geographical distribution—other significant actuarial variables, and (e) any difference between the actual and estimated increase in reasonable charges (i.e. any error in actuarial estimates of price increases and of the effect of the fee screens). No data bearing directly on any of these components is available. The overall effect appears to be relatively stable from year to year, however, and can be estimated as a residual through examination of historical data.

(5) Analysis of increases in reasonable charges and costs per capita.

Table B5 summarizes the effects of the principal factors which have produced increases in reasonable charges per capita for services paid by carriers, which comprise 87% of benefits paid. Price increases are estimated from the physicians services component of the CPI. The effect of a price increase is reduced by any increase in fee screen reductions. Similarly, the residual increases are reduced by the effect of reductions in payments for noncovered services. The compound increase due to the recognized fee increase and the residual increase net of the effect of increased denials is the increase in reasonable charges per capita. A similar analysis (not shown) is required for the other types of covered services. The increases that have been experienced in the recognized charges and costs per capita are summarized in Table B6.

TABLE B5.—COMPONENTS OF INCREASES IN REASONABLE CHARGES PER CAPITA FOR PHYSICIAN AND MISCELLANEOUS SERVICES [1]

[In percent]

Fiscal year	Actual fees	Effect of screens [2]	Recognized fees	Residual causes	Effect of denials [3]	Net residual	Recognized charge
1968	5.9	−0.7	5.2	9.3	−1.4	7.9	13.1
1969	6.2	−1.5	4.7	.4	−.4	.0	4.7
1970	6.7	−2.8	3.9	3.9	−3.1	.8	4.7
1971	7.5	−3.0	4.5	4.1	−3.2	.9	5.4
1972	5.2	−1.2	4.0	1.8	+.4	2.2	6.2
1973	2.6	−.6	2.0	2.6	−.6	2.0	4.0

[1] Increase over prior year.
[2] Change in reduction due to screen from previous to current year.
[3] Change in denials from previous to current year.

TABLE B6.—INCREASES IN REASONABLE CHARGES AND COSTS INCURRED PER CAPITA FOR THE AGED (AS RECOGNIZED BY THE PROGRAM)[1]

[In percent]

Year ending June 30	Physician services[2]	Inpatient radiology and pathology	Outpatient hospital	Home health agencies	Group practice plan
1968	13.1		69.5	48.1	43.3
1969	4.7	−13.2	53.3	26.3	13.9
1970	4.7	8.7	33.7	−38.5	.9
1971	5.4	1.0	27.1	−7.9	−6.9
1972	6.2	−6.1	30.7	15.4	18.5
1973	4.0	3.2	17.2	.5	13.7

[1] Increase over prior year.
[2] Includes all services paid for on the basis of reasonable charges except those for inpatient professional radiology and pathology.

c. Projection of future increases in reasonable charges and costs per capita

The rates of increase assumed in projecting the incurred costs of the program are summarized by broad category of service in Table B7, and the resulting reasonable charges and costs per capita in Table B8. More detail concerning the assumptions used in projecting physicians' and miscellaneous services, which account for most of the increase in costs, is provided in Table B9.

TABLE B7.—PROJECTED INCREASES IN RECOGNIZED CHARGES AND COSTS INCURRED PER CAPITA FOR THE AGED [1]

[In percent]

Year ending June 30	Physician services[2]	Inpatient radiology and pathology	Outpatient hospital	Home health agencies	Group practice plans
1974	5.9	4.1	18	10	10
1975	11.7	10.0	18	10	10
1976	10.0	10.0	18	10	10
1977	11.6	10.0	18	10	10
1978	9.4	10.0	18	10	10

[1] Increase over prior year.
[2] Includes all services paid on the basis of reasonable charges except those for inpatient professional radiology and pathology.

TABLE B8.—INCURRED RECOGNIZED CHARGES AND COSTS PER CAPITA FOR THE AGED: PROJECTION

Year ending June 30	All services	Physician services[1]	Inpatient radiology and pathology	Outpatient hospital	Home health agencies	Group practice plans
1974	$198.07	$166.49	$7.28	$19.02	$2.08	$3.20
1975	222.29	186.03	8.01	22.44	2.29	3.52
1976	246.39	204.71	8.81	26.48	2.52	3.87
1977	276.53	228.56	9.69	31.25	2.77	4.26
1978	305.40	250.12	10.66	36.88	3.05	4.69

[1] Includes all services paid on the basis of reasonable charges except those for inpatient radiology and pathology.

TABLE B9.—COMPONENTS OF INCREASES IN REASONABLE CHARGES PER CAPITA FOR PHYSICIAN AND MISCELLANEOUS SERVICES [1]

[In percent]

Year ending June 30	Actual fees with fee screens	Effect of economic index[2]	Recognized fees	Net residual	Recognized charges
1974	3.2	0	3.2	2.7	5.9
1975	8.5	0	8.5	3.2	11.7
1976	9.2	−1.0	8.2	1.8	10.0
1977	11.0	−1.2	9.8	1.8	11.6
1978	9.0	−1.4	7.6	1.8	9.4

[1] Increase over prior year.
[2] Percentage by which the economic index reduces the average rate of increase in recognized fees in the year.

The fiscal year 1975 screens were updated to the calendar 1973 level resulting in an increase of approximately 8.5 percent in average recognized fees over the fiscal 1974 level. This increase is larger than would have normally occurred because the fee screens for 1973 and 1974 were held down in compliance with price stabilization policy. The fiscal year 1976 screens are to be updated in the usual manner to the calendar 1974 level of fees which is estimated to produce a 9.2 percent increase in reasonable charges. P.L. 92–603 requires that increases in prevailing fees be restricted to increases in a suitable economic index reflecting increases in general wages and the physician's cost of doing business. The application of such an index in fiscal year 1976 is assumed to reduce the average increase in fees from 9.2 percent to 8.2 percent.

Increases in charges per capita for physicians and miscellaneous services from causes other than price increases are projected at approximately the same rate as occurred during recent years. Denied claims are assumed to have no further impact, i.e. it is assumed that no significant payments are now made for non-covered services which will not be paid during the period projected.

Use of physicians' and miscellaneous services is affected by the amount of cost sharing. Reductions in payment due to the fee screens become in effect additional cost sharing, borne by the provider or the patient—either financially or through reduced services. In the case of assigned claims, the differential between reasonable and actual charges is borne entirely by the physician. The proportion of claims on which physicians accept assignments is to some extent an index of the willingness of physicians to accept enrollees as patients who provide adequate compensation.

The rate of acceptance of assignments has decreased slightly recently from around 58 percent of all bills submitted for payment in fiscal 1973 to around 56 percent in fiscal 1974.

d. Benefit payments per capita

The benefits incurred per capita are obtained from the recognized charges and costs by allowing for the effect of the $60 deductible and 20 percent coinsurance rate. The resulting benefits incurred per capita for aged beneficiaries appear in Table B10.

e. Aggregate incurred estimates for fiscal years 1975–77

Aggregate benefits incurred by the aged in years ending June 30, 1975 through 1977 are estimated by multiplying the incurred rates per capita for these years by the estimated enrollment during the year. The aged enrollment is projected to be 95 percent of the population over age 65. The projected aggregate incurred benefits are summarized in Table B11.

TABLE B10.—PROJECTED BENEFITS INCURRED PER CAPITA [1]

Year ending June 30	Benefits	Administration	Total
1974	$128.48	$18.24	$146.72
1975	147.85	17.04	164.89
1976	167.07	20.16	187.23
1977	191.12	20.88	212.00
1978	214.19	21.60	235.79

[1] For aged beneficiaries only.

TABLE B11.—PROJECTION OF AGGREGATE INCURRED BENEFITS AND CASH BENEFITS PAID FOR THE AGED

Year ending June 30	Average enrollment (millions)	Benefits incurred		Fiscal year	Aggregate benefits paid (millions)
		Per capita	Aggregate (millions)		
1974	20.988	128.48	2,697	1974	2,569
1975	21.408	147.85	3,165	1975	3,064
1976	21.793	167.07	3,641	1976	3,486
1977	22.142	191.12	4,232	Interim	1,010
1978	22.496	214.19	4,818	1977	4,187

f. Aggregate cash estimates for fiscal years 1975–77.

The estimates of aggregate cash benefits paid in fiscal years 1975 through 1977 are obtained by projecting the lag structure between the dates on which services are performed and the dates on which corresponding entries are made to the SMI trust fund account. Separate estimates are prepared for each payment route, which requires that benefits incurred be broken down accordingly. The projected aggregate cash benefits are summarized in Table B11.

Estimates of the cash disbursements for benefits by payment route are also prepared by projecting the cash disbursements in the most recent fiscal year, 1973. The two sets of projected estimates of cash expenditures are compared and adjustments made until the projections agree. These adjustments depend on the relative strength and weaknesses of incurred and cash projections. The projected aggregate cash benefits paid are summarized in Table B11.

The principal advantage of a cash projection is the currency of the data base. At the time the projections are made, the final results for the preceding fiscal year are known precisely. Data on an incurred basis, however, are only partially available at that time for the preceding calendar year. Consequently, projections on an incurred basis must be adjusted for incomplete data and projected over a longer period of time, in some cases as much as several years. All incurred items must be controlled to corresponding cash items to insure completeness and currency of the data base.

On the other hand, projections of the cash expenditures can only be made under the assumption that all of the set of complex relationships between cash and incurred expenditures do not change during the projection period or under the assumption that any changes have offsetting impact. In the absence of significant changes in program policy, such changes tend to take place very slowly, so that very accurate projections of the short run cash outlays can be made, using actuarial assumptions appropriate to the periods in which the services were performed. Administrative policy of the SMI program has been frequently changed, making reliable cash projections difficult. Major adjustments must be made in the estimating process to offset the effect of such changes. An additional problem posed for cash projections is the leverage of a fixed deductible.

4. COST ESTIMATES FOR THE DISABLED AND PERSONS SUFFERING FROM CHRONIC KIDNEY DISEASE

Persons who have been entitled to Disability Insurance Benefits for at least two years and certain persons suffering from chronic kidney disease have been eligible for part B coverage since July 1973. Because of the time required for bills to clear the payment and data collection systems, it is not yet possible to establish their benefit costs on an accrual basis.

Aggregate cash expenditures for all beneficiaries are available and it is possible to make a reasonable estimate of what portion of that was spent for the aged as described above. The remainder is allocated between disabled and chronic renal disease beneficiaries using data from those carriers and intermediaries who have reported their benefit payments segregated by type of beneficiary.

Unfortunately this cash data does not provide as reliable a base for projection as does the accrual base used for the aged. This is true because cash flows tend to be especially erratic in the first year of a program and because there is no historical series in which to observe trends in utilization. Also, the first year cash outlays are probably only about ⅔ the incurred costs in that year.

However, errors in allocating benefits by type of beneficiary are not expected to have a major impact on the estimate of overall program expenditures since understatement of the cost of the disabled, for example, would result in a somewhat offsetting overstatement of the cost of the aged.

It appears at this time that the per capita costs for the disabled (and thus the adequate rates upon which general revenue financing are based) were slightly over estimated in the preceding two reports. Thus only a modest increase in the adequate rate for the disabled will be necessary for fiscal year 1976, drawing down the surplus that is believed to have been accumulated in the first two years of coverage. As more reliable data become available on an accrual basis, more accurate determinations of the required financing and benefit outlays should be possible. The projected aggregate incurred and cash expenditures for new groups of enrollees appear in Table B12.

TABLE B12.—PROJECTION OF AGGREGATE INCURRED BENEFITS AND CASH BENEFITS PAID FOR DISABLED ENROLLEES AND THOSE WITH CHRONIC KIDNEY DISEASE

Year ending June 30	Average enrollment (thousands)	Benefits incurred		Fiscal year	Aggregate benefits paid (millions)
		Per capita	Aggregate (millions)		
A. Disabled enrollees:					
1974	1,642	229.10	376	1974	251
1975	1,815	263.61	478	1975	445
1976	1,985	299.70	595	1976	557
1977	2,149	343.95	739	Interim	173
1978	2,290	389.20	891	1977	730
B. Enrollees with chronic kidney disease:					
1974	9	12,333.33	111	1974	54
1975	13	13,307.69	173	1975	152
1976	16	14,875.00	238	1976	217
1977	18	16,555.56	298	Interim	70
1978	20	18,300.00	366	1977	294

5. ADMINISTRATIVE EXPENSES

In developing incurred administrative expenses, it is assumed that the expense required to settle incurred but unpaid claims would be approximately the same on a percentage basis as required to settle paid claims. The projected administrative expenses are shown in Table B13. A comparison of projected administrative expenses and benefits on a cash basis is provided in Table B14 together with historical data.

TABLE B13.—PROJECTED ADMINISTRATIVE EXPENSES PAID IN FISCAL YEARS 1974–77

Fiscal year:	
1974	$409
1975	420
1976	515
Interim	126
1977	546

TABLE B14.—RATIO OF ADMINISTRATIVE EXPENSES TO BENEFIT PAYMENTS

Fiscal year:	Cash basis
Actual experience:	
1967	0.202
1968	.103
1969	.119
1970	.110
1971	.122
1972	.128
1973	.103
1974	.142
Projected (for all enrollees):	
1975	.115
1976	.121
Interim	.101
1977	.105

Appendix C.—Summary of Principal Provisions

Public Law 89-97, enacted July 30, 1965, amended the Social Security Act by establishing the Supplementary Medical Insurance Program. A summary of its principal provisions, as amended by subsequent legislation up to and including the date of this report, is as follows:

1. ELIGIBLE INDIVIDUALS

Almost all persons age 65 and over are eligible to enroll.

Beginning July 1, 1973 eligibility is extended to disabled persons under 65, who have been entitled to disability insurance benefits for 24 months or more, and to persons who have been receiving hemodialysis for three months or more and persons receiving kidney transplants (coverage terminated one year after a successful kidney transplant).

2. ENROLLMENT PROVISIONS

(a) Persons aged 65 and over on December 31, 1965—voluntary individual election of coverage during period through May 31, 1966, effective July 1, 1966.

(b) Persons attaining age 65 after 1965 whose initial enrollment period begins on or before March 31, 1973—similar election in the 7-month period centering around the month of attainment of age 65 (or first subsequent month when eligibility requirements are met), to be effective for month of attaining age 65 if elected in advance (otherwise, effective for first to third month following election).

(c) Persons whose initial enrollment period begins after March 31, 1973—automatic enrollment (unless coverage is specifically declined) for those individuals entitled to hospital insurance benefits with coverage beginning in month first eligible (month of attaining age 65, 25th month of eligibility for disability insurance benefits, three months after the beginning of hemodialysis or upon receiving a kidney transplant). In the case of an individual who would otherwise be entitled to hospital insurance benefits but does not establish his entitlement until after the last day of his initial enrollment period, his enrollment shall be deemed to have occurred on the first day of the earlier of the then current or immediately succeeding general enrollment period.

(d) Termination of enrollment—either by failure to pay premiums (for premiums not deducted from retirement benefits) or by election to terminate enrollment at any time (to be effective at the end of the following calendar quarter). An individual who terminated coverage or who failed to enroll in an initial period may reenroll in a general enrollment period (January to March of each year). However, reenrollment is permitted only once.

3. BENEFITS PROVIDED

a. Types of benefits—(1) physicians (including surgeons and the professional component of anesthesiology, pathology, radiology, and physical medicine in a hospital), (2) services and supplies normally furnished in a physician's office incident to his professional services (including drugs which can not be self-administered), (3) outpatient hospital services, (4) services of independent clinics, (5) home health services, (6) diagnostic x-ray and laboratory tests, (7) x-ray, radium, and radioactive isotope therapy, (8) surgical dressings and splints and other devices used for reduction of fractures and dislocations, (9) rental of durable medical equipment (or purchase thereof if not more expensive), (10) ambulance services in certain circumstances, (11) prosthetic devices, (12) braces and artificial limbs where required due to a change in the patient's physical condition, and (13) manual manipulation of the spine to correct a subluxation (demonstrated by x-rays to exist) by a chiropractor.

b. Amount of reimbursement—program pays:

(i) In the case of the professional component of inpatient radiology and pathology, 100% of reasonable costs for those electing to have the hospital reimbursed for their services and 100% of reasonable charges; otherwise, (ii) in the case of

home health services, 100% of reasonable costs after the $60 deductible has been met; (iii) in the case of services received from a group practice prepayment plan electing reimbursement based on costs, 80% of the excess of the reasonable costs of furnishing services to enrollees over the average value of the deductible; (Iv) for all other services, 80% of the excess of reasonable charges (or in the case of institutional services, 80% of reasonable costs) over a deductible of $60 in each calendar year (reduced by any amount applied to meet the deductible during the last quarter of the preceding year). Special limits apply to outpatient care for mental illness (50% coinsurance and $250 maximum on annual reimbursement), and on home health services (100 visits per calendar year).

c. Basis of payment—reimbursement on a "reasonable charge" basis to the enrollee or to individual suppliers of services on the basis of an assignment from the enrollee, or on a "reasonable cost" basis to the particular institution for institutional suppliers of services.

The reasonable charge for any service is the lower of the "customary charge" of the provider of the service for the type of service rendered and the "prevailing charge" of all providers of the same type in a geographical area. The customary charge is the median rate charged for a particular type of service by a particular supplier to enrollees during the calendar year prior to the fiscal year in which the claim is processed. The prevailing charge for any type of service is the 75th percentile of the distribution of customary charges for that service in an area. Payment is made on the basis of the lowest of the customary, the prevailing, and the actual charge. When payment is made on a reasonable charge basis directly to individual suppliers (by assignment), the reasonable charge determination by the carrier must be accepted as the full charge for the services, and the supplier cannot bill the patient for amounts in excess of the reasonable charge; otherwise, payment is made to the enrollee on the basis of an itemized bill.

d. Services not covered—any service not certified by a physician (and approved upon carrier review) to be necessary for the diagnosis or treatment of an illness, routine procedures followed in eye examinations, routine foot care (including the removal of corns, warts, calluses), elective cosmetic surgery, glasses and hearing aids, services performed by a relative or household member, services performed by a governmental agency (except when it provides services to the public generally as a community institution or agency), cases eligible under workmen's compensation, prescription drugs, and services of providers not covered (e.g. private duty nursing, and dental services).

e. Administration—by Department of Health, Education, and Welfare, through carriers (such as Blue Shield and insurance companies) who are selected by the Department, according to regulations promulgated by the Secretary of Health, Education, and Welfare. Carriers are paid their reasonable costs of administration.

4. FINANCING

The Supplementary Medical Insurance system is self-supporting through combined income to the trust fund from premiums paid by enrollees and general revenue payments intended to be equal to the incurred cost of benefits and administration, with such margin for contingencies as the Secretary deems appropriate. The incurred cost of the program in any period is the sum of all payments that will be made for services performed in that period, including the administrative cost of making such payments, regardless of when payments are actually made.

a. The rate of income to the trust fund per month of coveragefor which a beneficiary is enrolled is determined by two "adequate actuarial rates," one for the aged and one for the disabled. The trust fund receives twice the applicable adequate actuarial rate for each monthly premium collected, the excess over the premiums coming from general revenues.

b. The adequate actuarial rates are promulgated by the Secretary of Health, Education, and Welfare before the January 1st preceding each fiscal year—separately for (i) enrollees over age 65 and (ii) enrollees eligible as a result of disability or chronic kidney disease. Each of these rates is the sum of (i) half of the estimated monthly incurred cost per capita for benefits and administration of the applicable enrollees and (ii) a margin for contingencies.

c. Premiums from enrollees—A standard premium rate for each fiscal year is also promulgated by the Secretary of Health, Education, and Welfare before the preceding January 1st. The standard premium rate is the lessor of (i) the adequate actuarial rate for the aged for that fiscal year and (ii) the standard premium rate for the prior fiscal year increased by the rate at which benefits under the OASDI program have increased (or will increase by law) during such prior fiscal year.

Persons who elected not to enroll until more than 3 months after the date of eligibility must pay premiums that are 10 percent higher for each year not enrolled while eligible.

d. Government contributions—For each premium payment deposited in the Supplementary Medical Insurance Trust Fund, the excess of (i) twice the appropriate adequate actuarial rate (adjusted if higher than standard premiums are paid) over (ii) the amount of the premium, is transferred to the Trust Fund from General Revenues. If transfers are not made on a timely basis, interest is accrued and paid.

e. Payment of premiums—by automatic deduction from old-age, survivors, and disability insurance, railroad retirement, or civil service retirement benefits when possible (except for such persons who are public assistance recipients receiving money payments and whose premiums are paid by State agencies). Otherwise, by direct payment, with a grace period determined by the Secretary of Health, Education, and Welfare of up to 90 days. State public assistance agencies may enroll and pay premiums for other persons who are not recipients of money payments but who are eligible under the medical assistance program; at the option of the State, such recipients and other persons who are beneficiaries under the old-age, survivors, and disability insurance program or the railroad retirement program may be included in this group.

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