THE PRICING OF MEDI GAP COVERAGE

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Abstract

This paper presents an abbreviated history of the events leading up to Medicare and the impact of Medicare since its inception upon the health care system and health care costs. Because of the social pressures brought about by ever increasing health care costs, especially to the elderly, Medi Gap policies, their benefits and pricing, have come under close scrutiny of the regulator.

The main body of the text deals with those benefits which not only present particular pricing considerations, but which also are closely evaluated by the regulator. In many instances, the historic data collected and produced by the insurer to develop utilization and pricing trends must be supported by data from external sources.

Hopefully, this presentation provides the reader with not only some new insights into the techniques of pricing programs of this type, but also of the social pressures which influence the regulator in assuring the availability of insurance at reasonable rates. In some states, this has led to subsidization of the Medi Gap policies by those people under age 65. One can see the pressure expanding to use insurance as a means to address the problem of economic and social inequities not only in the area of personal property and casualty coverage, but also in the area of health insurance.

I. BACKGROUND

To set the stage for the current interest of the regulatory authorities in the pricing and benefit content of Medi Gap policies, some analysis of the advent of Medicare and its subsequent impact on the economy might be helpful.

The seeds for providing health care to the aged were planted in 1935 in some of the initial versions of the Social Security Act. Under the study provisions of the Act, the Social Security Board was empowered to conduct research and investigations relative to national health insurance. From 1935 to 1965, when Medicare was enacted, a series of bills dealing with national health insurance were presented to the Congress: 1939, the Wagner Bill; 1943, the Wagner, Murray, Dingell Bill; and, 1946, the Taft Bill. In the 1951 to 1964 era, most of the bills dealt with social insurance proposals for persons aged 65 and over. In 1960, the Kerr-Mills Act was passed establishing a program of medical assistance for the aged. Beginning in 1960, efforts to enact a social insurance program for hospital benefits were stepped up with a series of attempts to enact a sound insurance program known as the King-Anderson Bills. Sufficient momentum was gained so that in 1964 the Senate passed an amendment providing hospital insurance benefits for people aged 65 and over. The House, however, would not agree on a compromise position and the legislation died in conference. In 1965, in addition to a King-Anderson Bill, other proposals were presented such as the Byrnes Bill (named after its author Representative Byrnes), and the Eldicare Bill (sponsored by the American Medical Association and introduced by Representatives Herlong and Curtis). Early in 1965, under the leadership of Chairman Mills, the House Ways & Means Committee put together the Medicare program which was to become effective on July 1, 1966.

The social pressures brought about by the cost to the aged for medical care were a major factor influencing the passage of Medicare. The aged were caught in the bind of fixed incomes, with rising medical care costs continually consuming more of their available income. An examination of Medicare benefits is in order to assess their impact on the covered individual as well as their impact upon the health care system and the group benefit package for people under 65.

II. SUMMARY OF MEDICARE BENEFITS

The Medicare program provides a most comprehensive package of benefits. Regarding hospital benefits, inpatient room and board for a semiprivate accommodation (and where medically necessary, private room) and all special services (general nursing, drugs, operating room, diagnostic services, etc.) were paid in

full for the first 60 days, after payment of a deductible. From the 61st to the 90th day, the same benefit provisions prevailed but with a daily copayment equal to 25% of the initial deductible. In addition, there was coverage for care provided in a skilled nursing facility (SNF), plus home health services. Full outpatient diagnostic benefits were also provided to minimize use of inpatient facilities for such services. Benefits in a skilled nursing facility were covered in full for the first 20 days, with the next 80 days of benefits having a daily copayment equal to ⅛th of the initial inpatient deductible. All of these benefits were provided under the hospital insurance portion of Medicare, commonly referred to as Part A.

Physicians benefits, in addition to home health services, were provided under the Supplementary Medical Insurance (SMI) portion of Medicare, generally referred to as Part B. The SMI portion has an annual deductible (as contrasted to spell of illness deductible under Part A), plus a copayment feature with the patient paying 20%. Physicians were reimbursed on a reasonable charge basis.

With the passage of Medicare, persons aged 65 and over had comprehensive benefits available to them which equalled and in many cases exceeded those held by the under age 65 population. Removal of the financial need caused the Medicare population to make full use of the program. Medicare's impact upon the medical care system for the entire population has been well documented by health economists and is summarized in Tables 1–4 which follow.

TABLE 1

PORTION OF HEALTH CARE COSTS PAID BY INDIVIDUALS VERSUS THIRD PARTY PAYORS

Fiscal Years Ending June 30	Under 65			65 And Over		
	Total	Out of Pocket	Third Party	Total	Out of Pocket	Third Party
1966	100%	51%	49%	100%	53%	47%
1967	100%	48%	52%	100%	37%	63%
1970	100%	43%	57%	100%	33%	67%
1973	100%	38%	62%	100%	33%	67%
1976	100%	35%	65%	100%	27%	73%
1977 (Sept)	100%	32%	68%	100%	27%	73%

TABLE 2

HEALTH CARE EXPENDITURES
AS % OF GROSS NATIONAL PRODUCT

Fiscal Years Ending	Percentage
1966	5.8%
1967	6.2%
1970	7.2%
1973	7.7%
1976	8.7%
1977 (Sept)	8.8%

TABLE 3

RATIO OF PERSONAL EXPENDITURES FOR
MEDICAL CARE TO DISPOSABLE PERSONAL INCOME

Calendar Year	Ratio
1966	6.2%
1967	6.3%
1970	7.1%
1973	7.4%
1976	8.6%
1977	9.1%

TABLE 4

ANNUAL CHANGES IN CONSUMER PRICE INDEX AND IN MEDICAL
COMPONENTS OF THE INDEX

Calendar Year	All Items	All Medical Care Items	Physician Fees	Hospital Room	Prescriptions & Drugs
1966	2.9%	4.4%	5.8%	10.0%	1.3%
1967	2.9%	7.1%	7.1%	19.8%	−0.5%
1970	5.9%	6.3%	7.5%	12.9%	2.3%
1973	6.2%	3.9%	3.3%	4.7%	0.3%
1976	5.8%	9.5%	11.3%	13.8%	6.1%
1977	6.5%	9.6%	9.3%	11.5%	6.4%

The results speak for themselves as to the rapid rise in medical care costs. Considering the limited and relatively fixed income of the age 65 and over population, one can see how the social pressures to provide relief in the form of medical care arose in the early 1960's.

A history of the movement of the Medicare deductibles and the cost to purchase Part B (medical) benefits (Table 5) will also show how the increase in these elements has further affected the standard of living of the aged.

It should be noted that in 1972 Medicare benefits were extended to the disabled under Social Security and those receiving treatment for chronic kidney disease. As was mentioned earlier in this paper, deductibles were introduced to keep down the cost of the program to the government. The initial hospital deductible was set equal to the daily cost of care in a semiprivate room. The Part B deductible was set at $50 per calendar year with 20% of the remaining balance coinsured by the recipient, with the first period limited to 6 months to minimize the cost of the program to the government.

III. THE PRICING OF MEDI GAP BENEFITS

To meet the insurance needs of the age 65 and over population for the uncovered portions of the Medicare program, policies were designed which tended to duplicate, when combined with Medicare, comprehensive programs offered by the insurance industry.

TABLE 5

MEDICARE DEDUCTIBLES, COPAYS & COINSURANCE AND PREMIUM

	Part A		
	Benefit Period Deductible	Daily Copay 61st to 90th Hospital Days	21st to 100th SNF Days
7/66	$ 40	$10	$ 5.00
1/69	$ 44	$11	$ 5.50
1/70	$ 52	$13	$ 6.50
1/71	$ 60	$15	$ 7.50
1/72	$ 68	$17	$ 8.50
1/73	$ 72	$18	$ 9.00
1/74	$ 84	$21	$10.50
1/75	$ 92	$23	$11.00
1/76	$104	$26	$13.00
1/77	$124	$31	$15.50
1/78	$144	$36	$18.00
1/79	$160	$40	$20.00

	Part B		
	Premium	Annual Deductible	Coinsurance
7/66	$3.00	$50	20%
4/68	$4.00	$50	20%
7/70	$5.30	$50	20%
7/71	$5.60	$50	20%
7/73	$5.80	$60	20%
7/74	$6.30	$60	20%
7/76	$7.20	$60	20%
7/77	$7.70	$60	20%
7/78	$8.20	$60	20%
7/79	$8.70	$60	20%

The major elements of cost to be met were:

(1) The initial Part A inpatient hospital deductible for each spell of illness.
(2) The Part A inhospital copayment days from the 61st to the 90th day.
(3) Full inhospital coverage from the 91st day on.
(4) The Part A copayment days in a skilled nursing facility from the 21st to the 100th day.
(5) The Part B deductible (currently $60) and coinsurance (20%) for services provided by physicians and the outpatient department of a hospital which were routinely provided under a typical health insurance policy.
(6) Prescription drugs not provided by the hospital.

More than a decade has passed since the Medi Gap program began and there is now ample cost and utilization data particular to the insured Medicare population. Data pertaining to the complementary Part A deductible and copayments are relatively clean as the benefits are for a spell of illness or benefit period. On the other hand, the Part B data present some problems due to the status of the deductible being maintained by Social Security and not by the carrier, plus the difficulty (if not the inability) to maintain appropriate service counts and distribution of losses by size. This constrains the ability to properly measure the impact of inflation upon the deductible and the truncation of service counts under the deductible.

For analytical purposes, we have shown the calculation underlying the rate determination for policies renewed and issued April 1 thru June 30, 1979, for a duration of 12 months. It should be noted that rates are evaluated for each calendar quarter of the year. Rates are calculated to be adequate for all policies with inception dates within that quarter. After the program was introduced in July of 1966, rates were generally changed annually, primarily to reflect the change in the Part A deductible. After an analysis of the distribution of business by effective dates, coupled with the ever increasing unpredictability of Medicare changes, it was decided to evaluate and implement changes in rates on a quarterly basis.

At the outset it should be stated that the methodology employed to produce pure premium generally follows the traditional method of multiplying projected incidence and cost.

As one reviews the various techniques used to develop the underlying data to produce rates, he will note similarities in the methodology used with other lines of insurance. The use of time series regression analysis is found in the

development of private passenger automobile rates for both claim incidence and claim cost projections. The time series approach is also used in many property and physical damage lines, as well as for bodily injury coverages and workers compensation to estimate future claim costs.

The adjustment to compensate for the deductible in the calculation of the full claim cost component of drugs is not too dissimilar to that used in collision and property damage coverages where the use of deductibles is common. The one missing element is the loss elimination ratio calculation to adjust for claims below the deductible level. This variance in approach was and is due to the lack of any distribution of losses by size on a full coverage basis.

With the exception of the Part A deductible and copayments (61st to the 90th day and SNF) and Part B Physicians coinsurance, the use of time series regression analysis was for the most part employed in the development of the projected values.

For ease of reference the exhibits and their content are summarized below:

Exhibit	Content
1	Part A Inpatient Hospital Deductible Annual Claims Incidence.
2	Estimate of 1980 Medicare Part A Inpatient Hospital Deductible and Copayment Amounts.
3	Part A Inpatient Hospital Copayment Annual Day Incidence 61st to 90th Day.
4	Part A Skilled Nursing Facility Copayment Annual Day Incidence 21st to 100th Day.
5	Inpatient Hospital Benefits from the 91st Day on-Monthly Pure Premiums.
6	Part B Physicians and Outpatient Services Annual Deductible Monthly Pure Premium.
7	Part B Physicians Coinsurance Annual Service Incidence.
8	Physicians Coinsurance Average Cost Per Service.
9	Part B Outpatient Hospital Service Coinsurance Annual Incidence.
10	Part B Outpatient Hospital Service Coinsurance Average Cost Per Service.
11	Prescription Drugs Annual Claim Incidence.
12	Prescription Drugs Average Number of Prescriptions Per Prescription Drug Claim.
13	Prescription Drugs Calculation of the Average Charge per Prescription Drug Claim.

Exhibit	Content
14	Prescription Drugs Average Charge Per Prescription.
15	Calculation of Expected Monthly Pure Premium By Benefit Category.

We will only address those calculations which presented some particular problems or modifications before being introduced into the pure premium calculations.

To develop the cost elements of the Part A deductible and copayments we made use of data issued by Medicare. To estimate the value to be introduced into the Medicare formula the technique used was to raise the incomplete data from the base period (that would be used to calculate the deductible) to its ultimate value, much as one would do in developing the average claim cost for claim reserve calculations. In this case calendar year 1978 serves as the base year for the 1980 deductible calculation. The development of the value is shown in Exhibit 2. Once having developed the deductible, the calculation of the copayment values becomes an arithmetic exercise, as they are a proportion of the deductible amount.

For two benefit categories, inhospital coverage from the 91st day on, and Part B physician and outpatient service deductible, the results were projected by using pure premiums rather than incidence and cost.

The development of expected pure premiums for in hospital benefits beyond the 90th day is contained in Exhibit 5. Benefits for days beyond 90 days are paid in full by the insurance carrier. As previously noted, one would normally calculate this value by estimating the day utilization and the average daily costs. An analysis of these elements indicated erratic behavior in terms of utilization, length of stay, and per diem costs, whereas the pure premiums produced stable as well as reasonable results.

The most difficult element of pure premium to calculate is that related to the Part B annual deductible, in whole or in part, for physician and outpatient hospital services. As was previously mentioned, there are no available statistics by size of loss to determine the impact of inflation and utilization upon the deductible value because the status of the Part B deductible and the benefits applicable to satisfy the deductible are maintained by Medicare.

To solve the problem, the choice of the regression curve was paramount. It not only had to show a high degree of correlation to historical data, but also demonstrate a pattern of future development that was logical. With an increasing

unit cost one would expect that in successive years the average deductible would increase at a decreasing rate and become asymptotic as it approached the deductible limit.

The most recent observation would indicate that the values have become asymptotic; therefore, the last observed value was chosen as the expected pure premium for the rating period. The historic values and the projected pure premiums are shown in Exhibit 6.

For the coinsurance benefits that complement the Part B 80% coinsurance payments, a return to the more traditional technique of using utilization (frequency) and average cost per service for calculating pure premiums was adopted. The physicians and hospital elements are handled separately as each is influenced by the inflation factors particular to each of the segments. The increase in physicians' prevailing fees is controlled by the Department of Health, Education and Welfare. For 1979, this value was calculated to be 5.08% above 1978 values and the same rate of increase was assumed to continue in 1980. The increase in hospital charges reflects the inflationary pressures of the local hospital area.

Exhibit 7 develops the expected service utilization for physicians coinsurance benefits. The average service cost associated with this benefit is developed in Exhibit 8. Projections are based upon values as issued by Health, Education and Welfare to Part B intermediaries. The companion piece to the physicians coinsurance is the outpatient hospital coinsurance benefit. The utilization and cost considerations are displayed in Exhibits 9 and 10.

To assess the reasonableness of the cost trends for physicians and outpatient hospital services, a comparison is made of the estimates for these services made by the Medicare actuaries in developing Part B rates. These values can be found in the Part B rate promulgation as published in the Federal Register.

The next and final benefit to be analyzed is prescription drugs. Prescription drugs, outside of those provided in a hospital setting, are not covered by Medicare. The benefit to be priced provides payment for prescription drugs subject to a $25 quarterly deductible and 20% coinsurance payment by the insured. Pure premiums are developed by estimating the number of claims, the average number of prescriptions per claim, and the average cost per prescription. The estimations of the number of claims and the average number of prescriptions present no unusual or unique considerations. Generally, the number of claimants has increased over time with the number of prescriptions showing a continuing decline. The underlying data and projections for these two elements are shown

in Exhibits 11 and 12. In order to develop the full prescription charge, the average prescription claim payment has to be adjusted to reflect the removal of the 20% coinsurance and the $25 deductible. Projecting the average prescription charge without modification would obviously produce erroneous results. The conversion of the average prescription cost from a partial to a full basis is developed in Exhibit 13. The resultant values are then transferred to Exhibit 14 where the projected value is developed. To evaluate the reasonableness of this value, the inherent annual trend from the last observed value to the projected value is compared to the trends observed for the most recent annual values in the Consumer Price Index for drugs and for those shown in the Lilly Drug Digest. At the time of preparation of the filing, the Consumer Price Index trend, as of October 1978, was 7.5%, while the Lilly Digest (1977) showed 9.4%. The 5.5% trend used in the pure premium projections was therefore considered to be reasonable. The estimated pure premium for the benefit was calculated by developing the estimated full charge per claim and then reducing this value by the deductible amount and 20% coinsurance.

The pure premium for each of the benefit categories previously described and its detailed calculations are contained in Exhibit 15.

In reviewing the data contained in the calculation of the expected incidence and costs for the various benefits shown, the reader should be aware of the characteristics of the population, health care providers, and the manner in which the business is underwritten.

In terms of the population, it is for all practical purposes totally resident in one state. By being essentially a single state program, the health care practices of the providers have a definite impact and influence upon the cost of the covered services.

The physicians serving this population have almost universally accepted payment on an assignment basis from Medicare. This means that the physician accepts the level of fees established by Medicare as being payment in full, thereby limiting the patient's liability to the coinsurance amount after satisfaction of the Part B deductible. This removes the problem of the patient being assessed an additional charge which could, depending upon the policy design, impact the pricing process.

Hospital benefits, with the exception of those which are fill-ins of Part A deductibles or copayments, are subject to local inflationary pressures rather than that being experienced on a countrywide basis. Local statistics are therefore

more appropriate for determining this movement of hospital costs than those developed from regional or national data.

As regards the manner in which this program is underwitten, there are two major considerations. The first is that the rate is uniform regardless of the age or sex of the member. The morbidity characteristics of this population are that the utilization and cost, and therefore the pure premium, increase by age. Additionally, the pure premiums by sex would require a higher rate for males versus females.

The second and probably most liberal consideration is the provision of benefits for any pre-existing condition, no requirement of any symptom-free period before benefits become effective, and no waiting period before benefits are available. Because of the general health condition of the aged, the introduction of any of the previously mentioned limitations into the policy would require a reduction in rate.

EXHIBIT 1

PART A INPATIENT HOSPITAL DEDUCTIBLE ANNUAL CLAIMS INCIDENCE

Per 100 Contracts For Fiscal Years Ending

Actual												Projected
3/31/75	6/30/75	9/30/75	12/31/75	3/31/76	6/30/76	9/30/76	12/31/76	3/31/77	6/30/77	9/30/77	12/31/77	5/14/80
24.932	24.966	25.001	25.025	25.346	25.513	25.750	25.910	25.771	25.917	25.889	26.215	26.968*

* The projected values resulting from the three projection methods indicated below were initially considered. Despite the significantly high indexes of determination and the reasonability of the values, it was determined to be appropriate to calculate the projected claim incidence value using the most recently observed annual rate of increase (1.2%) which is somewhat lower than the annual trends underlying the aforementioned projected values. $[(26.215)(1.012^{**}(28.5/12)) = 26.968]$.

Projection Method	Form of Equation	Index of Determination	Projected Value
Linear	$Y = A + BX$	.928	27.329
Hyperbolic	$Y = 1/(A + BX)$	.927	27.462
Exponential	$Y = A(\text{Exp}(BX))$	.926	27.392

The remaining projection methods employed produce values and/or indexes of determination that were judged to be inappropriate for consideration.

EXHIBIT 1 (CONT.)

Form of Equation	Type of Function	Equation Number	Index of Determination	A	B	Proj. Value	Ann. Trend
1. $Y = A + (B * X)$	Linear	1	.928	24.735696	.120598	27.329	1.8%
2. $Y = 1/(A + B * X)$	Hyperbolic	5	.927	.040403	−.000186	27.462	2.0%
3. $Y = A * Exp(B * X)$	Exponential	2	.926	24.743391	.004730	27.392	1.9%
4. $Y = A * (X ** (B))$	Power	3	.827	24.625612	.021323	26.290	.1%
5. $Y = A + B * Log(X)$	Logarithmic	7	.826	24.615411	.542850	26.281	.1%
6. $Y = X/(A + B * X)$	Hyperbolic	6	.540	.001940	.038695	25.783	−.7%
7. $Y = A * Exp(B/X)$	Exponential	8	.537	25.843334	−.049305	25.784	−.7%
8. $Y = A + (B/X)$	Hyperbolic	4	.534	25.843736	−1.253488	25.785	−.7%

EXHIBIT 2

ESTIMATE OF 1980 MEDICARE INPATIENT HOSPITAL DEDUCTIBLE AND COPAYMENT AMOUNTS*

Item	Amount	Source
A. Average hospital charge per day for the period January 1, 1977 to December 31, 1977	$197.07	Appendix B
B. Average per diem rate for the period January 1, 1977 to December 31, 1977	$160.69	Page 44891, Federal Register, Vol. 43 No. 190, dated 9/29/78. Appendix A
C. Ratio of per diem rate to average hospital charge per day for the period January 1, 1977 to December 31, 1977	.815	Item B ÷ Item A
D. Average hospital charge per day for the period January 1, 1977 to June 30, 1977	$190.77	Appendix B
E. Average hospital charges per day for the period January 1, 1978 to June 30, 1978	$217.21	Appendix B
F. Estimated average hospital charge per day for the period January 1, 1978 to December 31, 1978	$224.38	(Item E ÷ Item D) (Item A)

* The law provides that for spells of illness beginning in calendar years after 1968 the inpatient hospital deductible shall be equal to $40 multiplied by the ratio of (1) the current average per diem rate for inpatient hospital services for the calendar year preceding the year in which the promulgation is made to (2) the current average per diem rate for such services for 1966. Changes in the amount of the inpatient hospital deductible also affect certain other cost-sharing provisions under the Medicare hospital insurance program, the patient co-payment for the 61st to 90th inpatient day which equals 25 percent of the inpatient hospital deductible, and the skilled nursing home daily co-payment which is equal to 12.5 percent of the inpatient hospital deductible.

EXHIBIT 2 (CONT.)

ESTIMATE OF 1980 MEDICARE INPATIENT HOSPITAL DEDUCTIBLE AND COPAYMENT AMOUNTS

Item	Amount	Source
G. Estimated ratio of per diem rate to average hospital charge per day for the period January 1, 1978 to December 31, 1978	.815	Based on 1977 experience. Item C.
H. Estimated average per diem rate for the period January 1, 1978 to December 31, 1978	$183.68	(Item F) (Item G)
I. Average per diem rate for the period January 1, 1966 to December 31, 1966	$ 40.01	Page 44891, Federal Register, Vol. 43 No. 190, dated 9/29/78. Attachment I
J. Estimated 1980 inpatient hospital deductible	$184.00	(Item H/Item I) ($40) rounded to the nearest multiple of $4.00
K. 1979 Medicare inpatient hospital deductible	$160.00	Page 44891, Federal Register, Vol. 43 No. 190, dated 9/29/78. Attachment I
L. Estimated 1980 Medicare inpatient hospital deductible	$184.00	Item J
M. Medicare inpatient hospital deductible for the period 5/15/79 to 5/14/80	$169.00	[(7.5/12) (Item J) + (4.5/12) (Item J)]
N. Co-payment for the 61st to the 90th inpatient hospital day for the period 5/15/79 to 5/14/80	$ 42.25	(Item M) (.250)
O. Skilled nursing facility daily co-payment for the period 5/15/79 to 5/14/80	$ 21.13	(Item M) (.125)

EXHIBIT 3

PART A INPATIENT HOSPITAL COPAYMENT ANNUAL DAY INCIDENCE
61ST TO 90TH DAY

Per 100 Contracts For Fiscal Years Ending

Actual												Projected
3/31/75	6/30/75	9/30/75	12/31/75	3/31/76	6/30/76	9/30/76	12/31/76	3/31/77	6/30/77	9/30/77	12/31/77	5/14/80
15.732	16.504	16.633	17.384	17.995	18.137	18.420	18.407	18.453	18.484	18.443	18.644	19.225*

* The projected values resulting from the two projection methods indicated below were initially considered. Despite the significantly high indexes of determination and the reasonability of the values, it was determined to be appropriate to calculate the projected day incidence value using the most recently observed annual rate of increase (1.3%) which is somewhat lower than the annual trends underlying the aforementioned projected values [(18.644)(1.013**(28.5/12)) = 19.225].

Projection Method	Form of Equation	Index of Determination	Projected Value
Logarithmic	$Y = A + B(\ln X)$	.951	19.529
Power	$Y = AX^B$	.951	19.648

The remaining projection methods employed produce values and/or indexes of determination that were judged to be inappropriate for consideration.

EXHIBIT 3 (CONT.)

Form of Equation	Type of Function	Equation Number	Index of Determination	A	B	Proj. Value	Ann. Trend
1. $Y = A + B * \text{Log}(X)$	Logarithmic	7	.951	15.679929	1.254644	19.529	2.0%
2. $Y = A * (X ** (B))$	Power	3	.951	15.721701	.072661	19.648	2.2%
3. $Y = X/(A + B * X)$	Hyperbolic	6	.867	.011565	.053449	18.523	−.3%
4. $Y = A * \text{Exp}(B/X)$	Exponential	8	.855	18.675771	−.197837	18.505	−.3%
5. $Y = A + (B/X)$	Hyperbolic	4	.843	18.646558	−3.390909	18.489	−.4%
6. $Y = A + (B * X)$	Linear	1	.807	16.194574	.242322	21.404	6.0%
7. $Y = A * \text{Exp}(B * X)$	Exponential	2	.797	16.206697	.013945	21.873	7.0%
8. $Y = 1/(A + B * X)$	Hyperbolic	5	.786	.061665	−.000804	22.532	8.3%

EXHIBIT 4

PART A SKILLED NURSING FACILITY COPAYMENT ANNUAL DAY INCIDENCE
21ST TO 100TH DAY

Per 100 Contracts For Fiscal Years Ending

Actual												Projected
3/31/75	6/30/75	9/30/75	12/31/75	3/31/76	6/30/76	9/30/76	12/31/76	3/31/77	6/30/77	9/30/77	12/31/77	5/14/80
38.222	37.110	36.874	36.101	34.642	34.094	32.028	29.945	27.113	23.493	20.563	18.111	11.257*

* The projected value is the result of an exponential projection $[Y = A(Exp(BX))]$ which has an index of determination of .879. This value is considered to be appropriate for inclusion in the rate calculation in view of the acceptable index of determination as well as the fact that the annual trend underlying the projected value is consistent with the expectation that day incidence for Skilled Nursing Facilities will continue to decrease, but at a somewhat lesser rate than has been historically observed. A linear projection $[Y = A + BX]$ has a higher index of determination (i.e., .926); however the resulting projected value of 3.161 was considered to be clearly inadequate and therefore rejected. The remaining projection methods employed produce values and/or indexes of determination that were judged to be inappropriate for consideration.

Form of Equation	Type of Function	Equation Number	Index of Determination	A	B	Proj. Value	Ann. Trend
1. $Y = A + (B * X)$	Linear	1	.926	42.621060	−1.835343	3.161	−52.0%
2. $Y = A * Exp(B * X)$	Exponential	2	.879	45.623749	−.065091	11.257	−18.1%
3. $Y = 1/(A + B * X)$	Hyperbolic	5	.821	.018952	.002392	14.207	−9.7%
4. $Y = A + B * Log(X)$	Logarithmic	7	.697	43.344607	−7.596821	20.037	4.3%
5. $Y = A * (X ** (B))$	Power	3	.631	46.313503	−.263028	20.665	5.7%
6. $Y = A + (B/X)$	Hyperbolic	4	.395	26.444535	16.422209	27.208	18.7%
7. $Y = A * Exp(B/X)$	Exponential	8	.340	25.892833	.554400	26.569	17.5%
8. $Y = X/(A + B * X)$	Hyperbolic	6	.288	−.019405	.039521	25.894	16.2%

EXHIBIT 5

INPATIENT HOSPITAL BENEFITS FROM THE 91ST DAY ON-MONTHLY PURE PREMIUM

Per Contract For Fiscal Years Ending

Actual												Projected
3/31/75	6/30/75	9/30/75	12/31/75	3/31/76	6/30/76	9/30/76	12/31/76	3/31/77	6/30/77	9/30/77	12/31/77	5/14/80
$1.210	$1.324	$1.433	$1.525	$1.606	$1.601	$1.631	$1.643	$1.653	$1.643	$1.661	$1.650	$1.678*

* The projected value is the result of a hyperbolic projection $[Y = X/(A + BX)]$ which has an index of determination of .944, the highest index of determination of the projection methods employed. A logarithmic projection $[Y = A + B(\ln X)]$ has virtually the same index of determination (i.e., .943); however the resulting projected value of $1.816 was considered to be excessive in view of the relative stability of the recent actual experience. The remaining projection methods employed produce values and/or indexes of determination that were judged to be inappropriate for consideration.

Form of Equation	Type of Function	Equation Number	Index of Determination	A	B	Proj. Value	Ann. Trend
1. $Y = X/(A + B * X)$	Hyperbolic	6	.944	.265492	.583515	1.670	.7%
2. $Y = A + B * \mathrm{Log}(X)$	Logarithmic	7	.943	1.229987	.191130	1.816	4.1%
3. $Y = A * (X ** (B))$	Power	3	.936	1.237339	.131828	1.854	5.0%
4. $Y = A * \mathrm{Exp}(B/X)$	Exponential	8	.928	1.698944	−.376911	1.669	.5%
5. $Y = A + (B/X)$	Hyperbolic	4	.910	1.687731	−.539045	1.663	.3%
6. $Y = A + (B * X)$	Linear	1	.736	1.318242	.035399	2.079	10.2%
7. $Y = A * \mathrm{Exp}(B * X)$	Exponential	2	.713	1.317486	.024125	2.213	13.2%
8. $Y = 1/(A + B * X)$	Hyperbolic	5	.689	.759790	−.016557	2.476	18.6%

EXHIBIT 6

PART B PHYSICIANS AND OUTPATIENT SERVICES ANNUAL DEDUCTIBLE MONTHLY PURE PREMIUM

Per Contract For Fiscal Years Ending

					Actual							Projected
3/31/75	6/30/75	9/30/75	12/31/75	3/31/76	6/30/76	9/30/76	12/31/76	3/31/77	6/30/77	9/30/77	12/31/77	5/14/80
$1.822	$1.851	$1.852	$1.837	$1.975	$2.065	$2.109	$2.134	$2.238	$2.235	$2.242	$2.234	$2.234*

* The most recent observation (i.e., the year ending 12/31/77) has been carried forward to the period of the rates. The three projection methods indicated below have significantly high indexes of determination; however due to the relative stability of the four most recent observations, the projected values were judged to be excessive and therefore rejected.

Projection Method	Form of Equation	Index of Determination	Projected Value
Linear	$Y = A + BX$	.923	$2.745
Exponential	$Y = A(\text{Exp}(BX))$	.919	$2.876
Hyperbolic	$Y = 1/(A + BX)$	.914	$3.102

The remaining projection methods employed produce values and/or indexes of determination that were judged to be inappropriate for consideration.

EXHIBIT 6 (CONT.)

Form of Equation	Type of Function	Equation Number	Index of Determination	A	B	Proj. Value	Ann. Trend
1. $Y = A + (B * X)$	Linear	1	.923	1.748182	.046357	2.745	9.1%
2. $Y = A * Exp(B * X)$	Exponential	2	.919	1.761175	.022810	2.876	11.2%
3. $Y = 1/(A + B * X)$	Hyperbolic	5	.914	.564407	−.011259	3.102	14.8%
4. $Y = A * (X ** (B))$	Power	3	.828	1.719763	.103302	2.361	2.4%
5. $Y = A + B * Log(X)$	Logarithmic	7	.822	1.701871	.208711	2.342	2.0%
6. $Y = X/(A + B * X)$	Hyperbolic	6	.550	.119619	.460290	2.147	−1.7%
7. $Y = A * Exp(B/X)$	Exponential	8	.540	2.173125	−.239441	2.149	−1.6%
8. $Y = A + (B/X)$	Hyperbolic	4	.530	2.173832	−.480788	2.151	−1.6%

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EXHIBIT 7

PART B PHYSICIANS COINSURANCE
ANNUAL SERVICE INCIDENCE

Per 100 Contracts For Fiscal Years Ending

						Actual						Projected
3/31/75	6/30/75	9/30/75	12/31/75	3/31/76	6/30/76	9/30/76	12/31/76	3/31/77	6/30/77	9/30/77	12/31/77	5/14/80
349.034	361.880	379.235	397.626	405.828	419.269	434.288	447.282	448.633	451.196	445.098	444.293	444.293*

* The most recent observation (i.e., the year ending 12/31/77) has been carried forward to the period of the rates. The two projection methods indicated below have significantly high indexes of determination; however, due to the relative stability of the five most recent observations, the projected values, which represent upward trends, were judged to be inappropriate and therefore rejected.

Projection Method	Form of Equation	Index of Determination	Projected Value
Power	$Y = AX^B$	.955	487.301
Logarithmic	$Y = A + B(\ln X)$	.947	480.797

The remaining projection methods employed produce values and/or indexes of determination that were judged to be inappropriate for consideration.

EXHIBIT 7 (CONT.)

Form of Equation	Type of Function	Equation Number	Index of Determination	A	B	Proj. Value	Ann. Trend
1. $Y = A * (X ** (B))$	Power	3	.955	340.755047	.116595	487.301	4.0%
2. $Y = A + B * Log(X)$	Logarithmic	7	.947	337.525093	46.697891	480.797	3.4%
3. $Y = A + (B * X)$	Linear	1	.877	354.056190	9.422917	556.649	10.0%
4. $Y = A * Exp(B * X)$	Exponential	2	.868	355.636978	.023301	586.911	12.4%
5. $Y = 1/(A + B * X)$	Hyperbolic	5	.856	.002802	−.000058	641.861	16.8%
6. $Y = X/(A + B * X)$	Hyperbolic	6	.806	.000769	.002227	441.929	−.2%
7. $Y = A * Exp(B/X)$	Exponential	8	.783	447.533321	−.303118	441.268	−.3%
8. $Y = A + (B/X)$	Hyperbolic	4	.759	446.350307	−120.050450	440.767	−.3%

EXHIBIT 8

PHYSICIANS COINSURANCE AVERAGE COST PER SERVICE

Item	Amount	Source
A. Calculation of the cost trend factor to project the average cost per service for physicians' coinsurance benefit category from the year ending 12/31/77 to the year ending 5/14/80.		
1. The economic index applicable to physicians' services announced by the Social Security Administration for the period July 1, 1976 through June 30, 1977.	1.276	Part B Intermediary Letter No. 76-34 from Department of Health, Education and Welfare, dated August 1976. Appendix D1
2. The economic index applicable to physicians' services announced by the Social Security Administration for the period July 1, 1977 through June 30, 1978.	1.357	Part B Intermediary Letter No. 77-24 from Department of Health, Education and Welfare, dated June 1977. Appendix D2
3. Percent of increase for fiscal year 1978 over fiscal year 1977	6.35%	Item A.2. ÷ Item A.1.
4. The economic index applicable to physicians' services announced by the Social Security Administration for the period July 1, 1978 through June 30, 1979	1.426	Part B Intermediary Letter No. 78-23 from Department of Health, Education and Welfare, dated June 1978. Appendix D3
5. Percent of increase for fiscal year 1979 over fiscal year 1978	5.08%	Item A.4. ÷ Item A.2.
6. Expected percent of increase for fiscal year 1980 over fiscal year 1979	5.08%	Judgment

EXHIBIT 8 (CONT.)

PHYSICIANS COINSURANCE AVERAGE COST PER SERVICE

Item	Amount	Source
B. Cost trend factor to project the year ending 12/31/77 to the year ending 5/14/80.	1.132	$(1.0635)^{6/12}(1.0508)$ $(1.0508)^{10.5/12}$
C. Cost per service for the physicians' coinsurance benefit category for the year ending 12/31/77.	$7.85	Corporate Statistics
D. Expected average cost per service for physicians' coinsurance benefit category for the year ending 5/14/80	$8.89	(Item B)(Item C)

EXHIBIT 9

PART B OUTPATIENT HOSPITAL SERVICE COINSURANCE
ANNUAL INCIDENCE

Per 100 Contracts For Fiscal Years Ending

					Actual							Projected
3/31/75	6/30/75	9/30/75	12/31/75	3/31/76	6/30/76	9/30/76	12/31/76	3/31/77	6/30/77	9/30/77	12/31/77	5/14/80
70.307	74.164	78.924	83.151	85.813	90.751	95.921	99.602	102.056	105.553	108.745	113.426	150.742*

* The projected value is the result of a linear projection $[Y = A + BX]$ which has an index of determination of .996, the highest index of determination of the projection methods employed. This value is considered to be appropriate for inclusion in the rate calculation in view of the extremely high index of determination as well as the fact that the annual trend underlying the projected value is consistent with the decelerating annual rates of increase observed in the recent historical experience. An exponential projection $[Y = A(\text{Exp}(BX))]$ and a hyperbolic projection $[Y = 1/(A + BX)]$ also have extremely high indexes of determination (i.e., .987 and .970, respectively); however the resulting projected values (i.e., 173.859 and 257.553, respectively) were considered to be excessive and therefore rejected. The remaining projection methods employed produce values and/or indexes of determination that were judged to be inappropriate for consideration.

Form of Equation	Type of Function	Equation Number	Index of Determination	A	B	Proj. Value	Ann. Trend
1. $Y = A + (B * X)$	Linear	1	.996	67.072222	3.891619	150.742	12.7%
2. $Y = A * \text{Exp}(B * X)$	Exponential	2	.987	69.133700	.042893	173.859	19.7%
3. $Y = 1/(A + B * X)$	Hyperbolic	5	.970	.014183	−.000479	257.553	41.2%
4. $Y = A * (X ** (B))$	Power	3	.942	65.492350	.199877	120.924	2.7%
5. $Y = A + B * \text{Log}(X)$	Logarithmic	7	.912	62.790400	17.757761	117.272	1.4%
6. $Y = X/(A + B * X)$	Hyperbolic	6	.739	.005724	.009589	101.474	−4.6%
7. $Y = A * \text{Exp}(B/X)$	Exponential	8	.608	103.716866	−.490394	101.378	−4.6%
8. $Y = A + (B/X)$	Hyperbolic	4	.636	103.382814	−42.594857	101.402	−4.6%

EXHIBIT 10

PART B OUTPATIENT HOSPITAL SERVICE COINSURANCE
AVERAGE COST PER SERVICE

For Fiscal Years Ending

					Actual							Projected
3/31/75	6/30/75	9/30/75	12/31/75	3/31/76	6/30/76	9/30/76	12/31/76	3/31/77	6/30/77	9/30/77	12/31/77	5/14/80
$6.66	$6.98	$7.23	$7.36	$7.56	$7.72	$7.92	$8.16	$8.32	$8.47	$8.68	$8.89	$11.03*

* The three projection methods indicated below result in extremely high and nearly equal indexes of determination. The projected value produced by the hyperbolic projection was rejected as being clearly excessive. It was determined to be appropriate to use the mean of the linear projection and the exponential projection [($10.73 + $11.33)/2 = $11.03] in the rate calculation in consideration of the nearly equal validity of the linear and exponential projection methods, as well as the fact that the annual trend underlying the mean value is consistent with both recent historical experience and reasonable expectations of future hospital cost increases for outpatient services.

Projection Method	Form of Equation	Index of Determination	Projected Value
Linear	$Y = A + BX$	.996	$10.73
Exponential	$Y = A\ (Exp(BX))$	.991	$11.33
Hyperbolic	$Y = 1/(A + BX)$	.983	$12.43

The remaining projection methods employed produce values and/or indexes of determination that were judged to be inappropriate for consideration.

EXHIBIT 10 (CONT.)

Form of Equation	Type of Function	Equation Number	Index of Determination	A	B	Proj. Value	Ann. Trend
1. $Y = A + (B * X)$	Linear	1	.996	6.572121	.193392	10.730	8.2%
2. $Y = A * \text{Exp}(B * X)$	Exponential	2	.991	6.635739	.024875	11.328	10.7%
3. $Y = 1/(A + B * X)$	Hyperbolic	5	.983	.149577	−.003215	12.429	15.2%
4. $Y = A * (X ** (B))$	Power	3	.940	6.434750	.115542	9.172	1.3%
5. $Y = A + B * \text{Log}(X)$	Logarithmic	7	.919	6.353128	.886190	9.072	.9%
6. $Y = X/(A + B * X)$	Hyperbolic	6	.730	.037955	.118866	8.290	−2.9%
7. $Y = A * \text{Exp}(B/X)$	Exponential	8	.695	8.397684	−.285364	8.287	−2.9%
8. $Y = A + (B/X)$	Hyperbolic	4	.660	8.386769	−2.156228	8.286	−2.9%

EXHIBIT 11

PRESCRIPTION DRUGS
ANNUAL CLAIM INCIDENCE

Per 100 Contracts For Fiscal Years Ending

					Actual							Projected
3/31/75	6/30/75	9/30/75	12/31/75	3/31/76	6/30/76	9/30/76	12/31/76	3/31/77	6/30/77	9/30/77	12/31/77	5/14/80
45.596	46.638	47.320	48.467	49.514	51.017	53.018	54.695	56.173	57.436	58.618	59.663	72.772*

* The projected value is the result of a linear projection [$Y = A + BX$] which has an index of determination of .991. This value is considered to be appropriate for inclusion in the rate calculation in view of the extremely high index of determination as well as the fact that the annual trend underlying the projected value is consistent with the decelerating annual rates of increase observed in the recent historical experience. An exponential projection [$Y = A(\text{Exp}(BX))$] and a hyperbolic projection [$Y = 1/(A + BX)$] have slightly higher indexes of determination (i.e., .992), however the resulting projected values (i.e., 77.042 and 85.039, respectively) were considered to be excessive and therefore rejected. The remaining projection methods employed produce values and/or indexes of determination that were judged to be inappropriate for consideration.

Form of Equation	Type of Function	Equation Number	Index of Determination	A	B	Proj. Value	Ann. Trend
1. $Y = A * \text{Exp}(B * X)$	Exponential	2	.992	44.016928	.026036	77.042	11.4%
2. $Y = 1/(A + B * X)$	Hyperbolic	5	.992	.022510	−.000500	85.039	16.1%
3. $Y = A + (B * X)$	Linear	1	.991	43.495270	1.361689	72.772	8.7%
4. $Y = A * (X ** (B))$	Power	3	.866	42.970726	.116049	61.348	1.2%
5. $Y = A + B * \text{Log}(X)$	Logarithmic	7	.847	42.342538	6.006066	60.769	.8%
6. $Y = X/(A + B * X)$	Hyperbolic	6	.595	.005300	.017889	55.141	−3.3%
7. $Y = A * \text{Exp}(B/X)$	Exponential	8	.569	55.903593	−.269983	55.206	−3.2%
8. $Y = A + (B/X)$	Hyperbolic	4	.544	55.918910	−13.815348	55.276	−3.2%

EXHIBIT 12

PRESCRIPTION DRUGS
AVERAGE NUMBER OF PRESCRIPTIONS PER PRESCRIPTION DRUG CLAIM

For Fiscal Years Ending

					Actual							Projected
3/31/75	6/30/75	9/30/75	12/31/75	3/31/76	6/30/76	9/30/76	12/31/76	3/31/77	6/30/77	9/30/77	12/31/77	5/14/80
9.875	9.750	9.542	9.402	9.277	9.149	9.081	9.011	8.925	8.866	8.788	8.712	8.054*

* The three projection methods indicated below result in extremely high and nearly equal indexes of determination. It was determined to be appropriate to use a mean of the logarithmic, exponential, and hyperbolic projections [(7.877 + 7.778 + 8.058)/3 = 8.054] in the rate calculation in consideration of nearly equal validity of these three projection methods as well as the fact that the annual trend underlying the mean value is equal to the most recently observed annual rate of decrease (−3.3%).

Projection Method	Form of Equation	Index of Determination	Projected Value
Hyperbolic	$Y = 1/(A + BX)$	.976	7.877
Exponential	$Y = A(\mathrm{Exp}(BX))$	.971	7.778
Logarithmic	$Y = A + B(\ln N)$	.970	8.508

The remaining projection methods employed produce values and/or indexes of determination that were judged to be inappropriate for consideration.

EXHIBIT 12 (CONT.)

Form of Equation	Type of Function	Equation Number	Index of Determination	A	B	Proj. Value	Ann. Trend
1. $Y = 1/(A + B * X)$	Hyperbolic	5	.976	.101054	.001204	7.877	−4.2%
2. $Y = A * Exp(B * X)$	Exponential	2	.971	9.880607	−.011128	7.778	−4.7%
3. $Y = A + B * Log(X)$	Logarithmic	7	.970	10.017760	−.492071	8.508	−1.0%
4. $Y = A + (B * X)$	Linear	1	.965	9.867120	−.102916	7.654	−5.3%
5. $Y = A * (X ** (B))$	Power	3	.964	10.037782	−.052904	8.534	−.9%
6. $Y = A + (B/X)$	Hyperbolic	4	.745	8.877872	1.238568	8.935	1.1%
7. $Y = A * Exp(B/X)$	Exponential	8	.733	8.881842	.132370	8.937	1.1%
8. $Y = X/(A + B * X)$	Hyperbolic	6	.720	−.014160	.112545	8.938	1.1%

EXHIBIT 13

PRESCRIPTION DRUGS

CALCULATION OF THE AVERAGE CHARGE PER PRESCRIPTION DRUG CLAIM

For Fiscal Years Ending

	3/31/75	6/30/75	9/30/75	12/31/75	3/31/76	6/30/76	9/30/76	12/31/76	3/31/77	6/30/77	9/30/77	12/31/77
1. Average cost per claim	$32.00	$32.47	$32.71	$32.97	$32.93	$32.86	$32.86	$33.16	$33.35	$33.68	$33.92	$34.37
2. Average charge per claim	$65.00	$65.59	$65.89	$66.21	$66.16	$66.08	$66.08	$66.45	$66.69	$67.10	$67.40	$67.96
3. Average number of prescriptions per claim	9.875	9.750	9.542	9.402	9.277	9.149	9.081	9.011	8.925	8.866	8.788	8.712
4. Average charge per prescription (Item 2 ÷ Item 3)	$ 6.58	$ 6.73	$ 6.91	$ 7.04	$ 7.13	$ 7.22	$ 7.28	$ 7.37	$ 7.47	$ 7.57	$ 7.67	$ 7.80

* Drug benefit covers 80% of cost after the satisfaction of a $25 deductible.

EXHIBIT 14

PRESCRIPTION DRUGS AVERAGE CHARGE PER PRESCRIPTION

For Fiscal Years Ending

						Actual						Projected
3/31/75	6/30/75	9/30/75	12/31/75	3/31/76	6/30/76	9/30/76	12/31/76	3/31/77	6/30/77	9/30/77	12/31/77	5/14/80
$6.58	$6.73	$6.91	$7.04	$7.13	$7.22	$7.28	$7.37	$7.47	$7.57	$7.67	$7.80	$8.86*

* The three projection methods indicated below have extremely high and nearly equal indexes of determination. The value produced by the hyperbolic projection was rejected as being excessive in view of the historical rates of increase. It was determined to be appropriate to use the mean of the linear projection and the exponential projection {($8.77 + $8.95)/2 = $8.86] in the rate calculation in consideration of the nearly equal validity of the linear and exponential projection methods, as well as the fact that the annual trend underlying the mean value is consistent with recent historical experience.

Projection Method	Form of Equation	Index of Determination	Projected Value
Linear	$Y = A + BX$	.987	$8.77
Exponential	$Y = A(\text{Exp}(BX))$	.982	$8.95
Hyperbolic	$Y = 1/(A + BX)$	.976	$9.19

The remaining projection methods employed produce values and/or indexes of determination that were judged to be inappropriate for consideration.

EXHIBIT 14 (CONT.)

Form of Equation	Type of Function	Equation Number	Index of Determination	A	B	Proj. Value	Ann. Trend
1. $Y = A + (B * X)$	Linear	1	.987	6.561969	.102902	8.774	5.1%
2. $Y = A * Exp(B * X)$	Exponential	2	.982	6.580818	.014302	8.950	6.0%
3. $Y = 1/(A + B * X)$	Hyperbolic	5	.976	.151582	−.001991	9.193	7.2%
4. $Y = A * (X ** (B))$	Power	3	.952	6.457253	.067192	7.936	.7%
5. $Y = A + B * Log(X)$	Logarithmic	7	.941	6.432230	.479468	7.903	.6%
6. $Y = X/(A + B * X)$	Hyperbolic	6	.742	.023777	.132492	7.485	−1.7%
7. $Y = A * Exp(B/X)$	Exponential	8	.722	7.542393	−.167905	7.484	−1.7%
8. $Y = A + (B/X)$	Hyperbolic	4	.701	7.537976	−1.187710	7.483	−1.7%

EXHIBIT 15

CALCULATION OF EXPECTED MONTHLY PURE PREMIUM
BY BENEFIT CATEGORY FOR THE PERIOD 5/15/79 TO 5/14/80

Item	Amount	Source
A. Inpatient hospital deductible per admission		
1. Annual claim incidence per 100 contracts	26.968	Exhibit 1
2. Average payment per inpatient hospital deductible	$169.00	Exhibit 2, Item M
3. Expected monthly pure premium	$ 3.798	[(Item A1) (Item A2) ÷ 1200]
B. Co-payment for the 61st to the 90th inpatient hospital day		
1. Annual day incidence per 100 contracts	19.225	Exhibit 3
2. Average payment per day	$ 42.25	Schedule 2, Item M
3. Expected monthly pure premium	$ .677	[(Item B1) (Item B2) ÷ 1200]
C. Expected monthly pure premium for the 91st to the 120th inpatient hospital day	$ 1.678	Exhibit 5
D. Expected monthly pure premium for the joint physicians' services and outpatient services annual deductible	$ 2.234	Exhibit 6
E. Physicians' services coinsurance		
1. Annual services incidence per 100 contracts	444.293	Exhibit 7
2. Average payment per service	$ 8.89	Exhibit 8, Item D
3. Expected monthly pure premium	$ 3.291	[(Item E1) (Item E2) ÷ 1200]

EXHIBIT 15 (CONT.)

CALCULATION OF EXPECTED MONTHLY PURE PREMIUM
BY BENEFIT CATEGORY FOR THE PERIOD 5/15/79 TO 5/14/80

Item	Amount	Source
F. Outpatient hospital service coinsurance		
1. Annual service incidence per 100 contracts	150.742	Exhibit 9
2. Average payment per service	$ 11.03	Exhibit 10
3. Expected monthly pure premium	$ 1.386	[(Item F1) (Item F2) ÷ 1200]
G. Skilled Nursing Facility		
1. Annual day incidence per 100 contracts	11.257	Exhibit 4
2. Average payment per day	$ 21.13	Exhibit 2, Item 0
3. Expected monthly pure premium	$ .198	[(Item G1) (Item G2) ÷ 1200)]
H. Prescription Drugs		
1. Average number of prescriptions per claim	8.054	Exhibit 12
2. Average charge per prescription	$ 8.86	Exhibit 14
3. Average charge per claim	$ 71.36	(Item H1) (Item H2)
4. Expected average payment per claim	$ 37.09	[$71.36 − $25.00][.80] = $37.09
5. Annual claim incidence per 100 contracts	72.772	Exhibit 11
6. Expected monthly pure premium	$ 2.249	[(Item H4) (Item H5) ÷ 1200]