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GROUP PRICING, PRODUCT, AND MARKETING ADAPTATIONS TO AN INFLATIONARY ECONOMY

A discussion of the actuarial techniques required to combat the impact of inflation on Group Life and Health, including communication of premium increases to clients and impact of new national or local health plans.

MR. HARPER L. GARRETT, JR.: Our discussion this morning deals with pricing, product and marketing adaptations to an inflationary economy. In discussing these topics as they pertain to medical care coverages, I have divided my remarks into the following 4 broad areas:

- I. The elements of pricing and how they are impacted by inflation and by other influences in the environment.
- II. Pricing practices to deal with inflation.
- III. Marketing, or more specifically, successfully dealing with the public and the policyholder during inflation.
- IV. The responsibility of the health insurance industry in a time of spiraling medical care costs.

I. Elements of Pricing

There are five primary components of cost which affect the medical care premium an insurer will charge:

1. The rate of morbidity-- this is influenced by the degree of utilization of services, the quality of care, and the advancing technology of medical science, as well as by habits and socioeconomic conditions.
2. The charges of providers of medical care-- these are influenced by inflation, as well as by advances in medical technology and by utilization of services. In addition, the efficiency of the medical care provider will influence this component.
3. Plan design-- this will affect the rate of change of claim payments, i.e., benefit limitations such as an inside dollar limit on room and board benefits or a fixed dollar deductible will affect the rate of change of claim payments.
4. Expenses-- the insurer's cost of doing business will be influenced by the costs of wages and goods and by the carrier's efficiency.
5. Investment income-- this will be influenced by inflation to the extent that the rate of return obtained by the investment department is so affected. For purposes of our discussion, I intend to ignore this component.

I have omitted a number of peripheral items such as underwriting and claim

practices, as well as contractual provisions, which might be considered cost components by some actuaries. I will assume uniformity of practice and ignore these items, although they are very important determinants to the financial success of a company's medical care insurance portfolio. In review, inflation influences many of the pricing elements.

The Consumer Price Index (CPI) is one of the most widely recognized barometers of inflation in our economy. As such, it behooves us to understand it, and more importantly, to be aware of its limitations as they pertain to reporting inflation in medical care costs. Although the actuary who is pricing medical care is concerned with the future, and the CPI shows what has happened in the past, it nevertheless can be of some assistance to the actuary. However, he must be aware of the potential error involved in using this index without adjustment to reflect the difference between rates of inflation of the consumer's cost of medical care and those for the insurance industry.

The CPI is a statistical measure of changes in costs and is intended to reflect the consumer's cost. A component of the CPI is the Medical Care Index which is intended to show the effect of inflation in the medical care area on the consumer. The effect of inflation on the consumer is quite different than it is on insurance companies, and this can be illustrated by looking at the weights assigned to the Medical Care Index components.

Hospital Charges	10%
Professional Services	45%
Drugs and Prescriptions	13%
Health Insurance	<u>32%</u>
Total	100%

Note particularly that Health Insurance is a very large element in the resulting index, while hospital charges are only assumed to result in 10% of the consumer's expenditure. This is so because the bulk of hospital charges are already covered through health insurance plans.

If the intent is to use the Medical Care Index to measure the effect of price changes on medical care premiums, excluding dental and vision care, then a more appropriate weighting system might be as follows:

Hospital Charges	55%
Surgical-Physician	31%
Diagnostic Lab & X-ray	6%
Prescriptions	3%
Other Medical	5%
Dentist	0%
Eyeglasses	0%
Health Insurance	<u>0%</u>
Total	100%

These weightings would be subject to individual actuarial interpretation, of course, but this is what one insurance company has found the weightings on its own company plan to be.

This represents a significant deviation, by type of expense, from that used in the medical care CPI. So that we might refer easily to the results pro-

duced by the two different sets of weightings, I will call the answers produced by the second set of weightings the Insurance Price Index (IPI), defined as the sum of weights times the rates of change in the individual components of the medical care CPI ($IPI = \sum (W \times R)$).

Obviously, then, there can be significant differences between the IPI and the rate of change in the medical care CPI depending on the relationship between the rates of inflation for the various components. In fact, this has been the case in the past where differences of up to 40-45% have existed between the two.

To better illustrate the relationship of the IPI to the rate of change in the medical care CPI, the patterns in both since 1969 are presented in Exhibit I. The rates of inflation shown are from January to January of each year except for the last points which relate October to January of 1974. The IPI represents price changes for full payment plans in order to be compatible with the medical care CPI. For plans with fixed room and board benefits and/or other internal limits, appropriate adjustments would have to be made.

Incidentally, no adjustment has been made to reflect the effect of a deductible or other benefit design element on the rate of inflation of claim costs. This multiplier, or 'iceberg' effect would further tend to increase the impact of inflation. The classic example would be a supplementary major medical plan where a modest change in the cost of medical care services could have a dramatic effect on claim costs. For example, a 10% increase in the cost of a given \$2,000 service would raise costs \$200, but if the value of the underlying base plan remained at \$1,500, then the supplementary major medical claim costs would go from \$500 to \$700-- a 40% increase! Thus, the IPI rates we have just examined might well be increased significantly depending on the benefit provisions of the particular medical care plan. In fact, most actuaries would derive a different set of inflation projection factors for each major type of plan design, i.e., Base + SMM with inside limits, without inside limits, etc.

These figures indicate the need for an awareness on our part of what the medical care CPI represents and what adjustments need to be made to these figures to adapt them to the types of benefit plans we insure.

II. Pricing Practices to Deal with Inflation

Now that we have a better insight on inflation as it impacts medical care premiums, I would like to discuss the following pricing practices for dealing with inflation:

Plan date adjustment factor (or trend factor).

Contractual right to change rates.

Retrospective rate agreements.

Review of cost of doing business and periodic updating of expense factors for pricing and dividends.

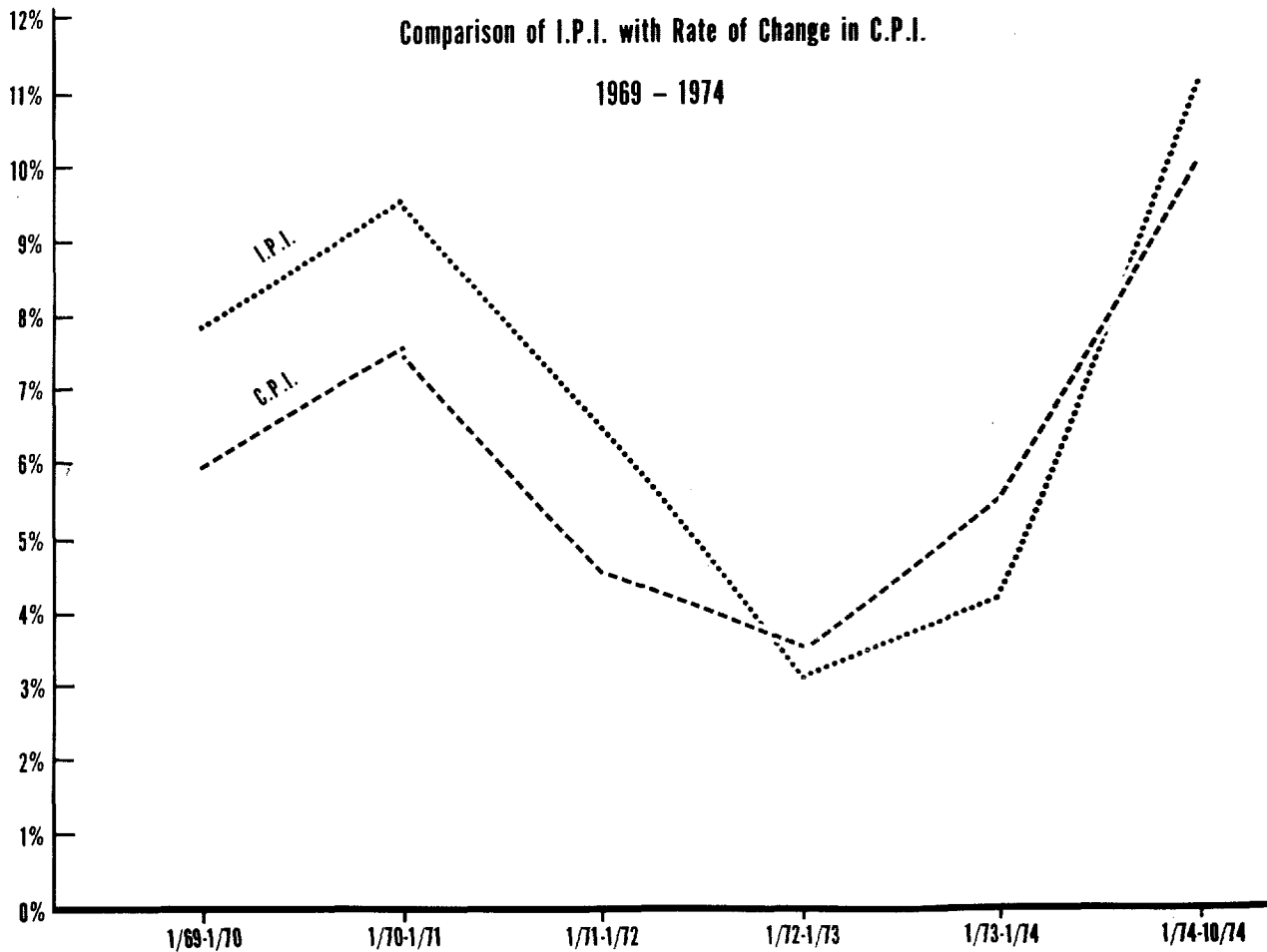
My company's portfolio of cases may be broadly grouped into cases that are manually rated in the traditional manner and those which are experience rated.

In the experience rated class of business, we price both our new business

EXHIBIT I

Comparison of I.P.I. with Rate of Change in C.P.I.

1969 - 1974



rates and our renewal rates utilizing current experience as the best indicator of probable future experience. Since our objective is to develop premiums that will be appropriate for future periods, we then apply certain trend factors to the observed experience and project it forward for a rate period of 12 months. Since the observed experience is typically several months old, this means that we normally project over a period of 15 to 18 months. The trend factors include our best prognostication for inflation, for utilization, and also include a contingency factor or margin for error.

It is clear that, since we are using actual experience at a recent point in time and then projecting this forward to another specific point in time, we are doing a reasonable job of trying to take account of the impact of inflation, as well as increased utilization. The method that I have just described is essentially the method used by most insurers on those cases which are fully experience rated, and my reason for mentioning it is to establish that the pricing procedure, at least theoretically, does take account of expected inflation.

With manually rated blocks of business, the traditional method of pricing has generally been along the following lines. In starting such a block of business, a company generally would utilize intercompany and other studies of past experience, tempering that experience with its own judgment with respect to future claims costs, to derive the so-called manual rate. The traditional approach to manual rates has been to develop a 'static' rate--one which would apply to all plans sold during the period the manual rate was in effect, typically a year; in other words, the manual rate would be applicable at whatever point in time a group policy was purchased until the time of the next manual rate change. At the time the block of business was being re-rated, the actual experience of the pool would be utilized. Obviously, in setting this renewal rate, certain projection factors would be applied to the observed body of experience data to develop a new static manual rate. This static rate has the following undesirable characteristics in an inflationary economy:

1. Since the rate developed is an 'average' rate for the period it will be in force, with the theoretical rate at the beginning of the period lower than the theoretical rate at the end of the period, rates are apt to be overadequate during the first half of the period and underadequate during the second half. This tends to mean that your field force screams loudest when the new rates are announced, often turning their attention to other pursuits for the first few traumatic months, while waiting for other companies to change their manual rates and 'catch up'. Then, toward the second half of the period your field force discovers that your manual rates have become competitive and proceed to sell in great quantities. The net effect of this, aside from periods of depression and euphoria among the field force, is the development of a block of business that, on balance, has inadequate rates, since few cases are sold early at the overadequate rates and many cases are sold later at the inadequate rates.
2. The second undesirable feature in this static rating process is more subtle. Simply put, you might have felt reluctant to revise manual rates between scheduled revision dates because of the amount of work and expenses involved - not to mention the potential trauma to the field force - even if it became evident that higher rates were appropriate.

About two years ago on our manually rated business of 50 lives or more, we

decided to adopt a "plan date adjustment factor" approach. This approach incorporates a changing factor which is applied to our manual rates and which effectively increases the purchase price of the medical care coverage each month. This means, assuming a 12% annual rate of increase in cost, that, if an agent sells a case with a plan date of February 1, it will cost 1% more than if it had been sold January 1. Each new case sold, of course, keeps its rate until it comes up for renewal rerating, generally a year hence. The moving trend factor approach does away with several disadvantages of the static method. First, it does not create a feast or famine period of sales. It has the advantage of providing a rather smooth transition from one year to the next so that any other required adjustments in the rate basis should not create a significant discontinuity between rate bases, as is generally the case under the static rate basis. Thus, sales efforts can be distributed evenly throughout the year. Second, should you discover that the projection factor and/or the general rate level needs adjustment, you can adjust it at any time for future sales without having to effect a major revision in manual rates. For example, assume that you have been using a 1% a month increase in your starting rates and you discover that inflation is moving at 18% a year. Then you can implement a change in the monthly factor to $1\frac{1}{2}\%$ for future sales. If you now feel that inflation has been increasing at this higher rate for, say, the last 4 months, you can also increase the level of rates by 2%, i.e., 4 months times the $\frac{1}{2}\%$ deficiency, again simply by changing the plan date adjustment factor. Incidentally, this factor is applied as the last step in calculating the manual rate so you can simply multiply the final rate by this factor without creating administrative or calculation problems.

Obviously, however, something this good must have some disadvantages. Most of them are psychological ones, but it should be noted that, if a field underwriter proposes on a case in one month and makes the sale based on that rate and for some reason the plan date turns out to be a month or two later, there is a potential problem because the final rate used is the rate applicable to the month in which the actual plan date falls. There are two things that will ease this problem. One is that you can educate your field force and group men as to how the system works so that they are more careful in choosing a proposal date; encourage them not to propose on January 31 using the January plan date adjustment factor because the case is not going to be effective until February or even March. The second thing which will help is that normally the closed case census data differs somewhat from the proposal census data, so that the closed case rate would normally differ from the proposed rate even under a static rate approach. In other words, if there is only a 1% or 2% difference caused by the plan date adjustment factor, it may well be lost in the rounding due to the changes in the census data, and the apparent problem vanishes.

We first started using this procedure on those group cases which were manually rated and on which proposals were made by our group field force, i.e., on those cases which were large, but not large enough to be experience rated. We have had literally no administrative problems whatsoever on this block of cases since we adopted this method.

We also issue a manually rated block of business, our package plan portfolio, for cases of 5 to 49 lives on which our field underwriters can freely calculate proposals. Because of the success which we have had on our other manually rated cases, last year, when we revised our package plan rates, we routinely installed the plan date adjustment factor concept. Thus far, although still early, we have experienced no administrative difficulties on

this package plan block of business. We took special pains in our field underwriter manual to stress the plan date adjustment factor concept, and we feel this has been helpful in minimizing the problems.

There is a significant advantage to this plan date adjustment factor for renewal rate actions on manually rated business. Our practice on these cases is to raise the in-force plans in the pool to some percentage of the manual rate for new business, taking account of any benefit differentials, expenses, etc. Under a static rate basis, if manual rates are not revised at least every 12 months, some cases will go longer than a year before we would have an opportunity to raise their rate-- a serious problem in times of rapid inflation. Under the moving trend factor approach, cases are guaranteed a relatively modest rate increase of 12 to 18% each year just to keep pace with whatever inflation assumption you are using, even if you choose not to undertake a major rate revision. The use of this approach has vastly improved our performance in managing our in-force manually rated portfolio.

We now have our entire new business and renewal medical care portfolio being priced on a basis which takes account of inflation, and we have found virtually no problems associated with this procedure. We are hopeful that the problems which were created by the older static procedures will be completely eliminated with this new method. Some companies have utilized this moving trend factor approach to rating on a basis other than monthly. One company has a trend factor which changes every 2 months. Another large company simply changes all of its rates quarterly. The principle of adjusting manual rates to take account of inflation is central to each of these methods.

Although my previous comments have dealt with the pricing of both new business and renewal business, the real key to maintaining a health insurance portfolio in an environment of increasing costs is the renewal management. This is obviously so since the in-force of most health insurance carriers far outweighs their new business. In view of the rapidly changing cost of medical care, the flexibility of the contract provision which specifies the insurer's right to make rate changes can be very important. Most carriers guarantee their rates during the first year; however, beyond that, there is a variety of practices. Some contracts state that rates may not be increased more than once during any 12 month period; others simply state that rates in the contract may be changed from time to time; some contracts have 2 or 3 year rate guarantees. While several carriers continue to offer 3 year rate guarantees, most carriers stop offering them during periods of rapidly increasing inflation because of the difficulty of predicting future claim costs over such an extended period. Although none of us relishes the idea of going back to a policyholder more than once a year for an increase in rates, there are times when it might be advantageous to do so and, unless the insurer has this contractual right, it may find itself falling further behind than is prudent.

Even on those contracts that guarantee rates during the first 12 months, there is a variety of rating practices among insurers. For example, during the first policy year on experience rated cases, some carriers wait until they have a full 12 months of experience on the case before setting the rate for a second year. This means that the new rate does not become effective until 14 or 15 months after the date of issue, due to the lag involved in gathering the experience data and providing sufficient notice to the policyholder. Other companies use 9 or 10 months of actual experience, applying factors based on their overall experience to estimate a 12 month incurred figure, and thereby effect a rate increase exactly 12 months after the issue

date. If experience has been steadily worsening for 9 months and the need for a rate increase appears clear, then the company which has established its procedures to permit a first anniversary rate increase is in a better position to manage the financial results it wishes to achieve on such cases. On the other hand, some companies feel that 12 months worth of data is more credible and is necessary to convince the client or his consultant of the soundness of a renewal increase.

Before leaving the subject of rate increases on experience rated cases, I want to examine the practice of retrospective rate agreements. The retrospective rate agreement is a device whereby the insurer sets a rate, usually less than it thinks it needs for the coming year, in return for an agreement from the policyholder that, should the insurer need more, the policyholder will pay such amount up to some predetermined limit. This type of agreement originated in an attempt to solve the problem which was created when the actuary felt a certain trend for inflation/utilization was needed in the rate projection, but the client failed to agree with the magnitude of the increase and often would find another carrier willing to provide lower estimates. It also resolved the problem, from the client's viewpoint, of having premium dollars flow through the insurer's hands and back as dividends in the event the carrier was indeed overly pessimistic. Such a procedure naturally saved the client some commissions and some premium tax, as well as some administrative expenses. In order to use such an agreement successfully, it is necessary that the client understand the arrangement clearly, since the client is apt to feel somewhat at the mercy of the insurer whose "usual reserve practices" generally determine how much money will be due under the retrospective agreement. In addition, retrospective rate agreements are generally not appropriate in situations in which a deficit balance exists in the policyholder's experience account, since it is difficult to reach an agreement which would permit the insurer to recover any existing deficits. Some companies use this type of agreement only with clients with whom they have had a long-standing relationship, while others are using it routinely not only on renewal, but often in new business situations as well. While starting off charging less than you think you need is not the most desirable way of commencing an insurance relationship, some companies apparently believe its advantages outweigh its drawbacks.

Turning now to the effect of inflation on an insurance company's cost of doing business, this is one area which can easily be overlooked when pricing medical care during a period of inflation. Even in today's circumstances, where many companies are stressing productivity as never before, and zero staff growth is the watchword, careful review must be given to that portion of the premium which is to provide for expenses, and in the case of experience rated cases, to the expense charges in the dividend formula, as well. Failure to do so can result in pricing which adequately provides for morbidity, but inadequately for expenses.

III. Dealing with the Public and the Policyholder

Now let us assume that we have adequately priced our product, whether it be a new business risk or a renewal risk. Since it is the actuary who calculates the rate increases which are generated in large measure by inflationary forces in the economy, it is only natural that it also becomes his lot to explain why these rate increases are necessary. The actuary can be of considerable assistance to the sales force in presenting and selling the rates which he has calculated. If the case is large enough and warrants individual attention, the actuary can often sit down with a client to go over

recent trends and to explain the various projection techniques which he is utilizing in establishing the premium level for the coming year. More often, the actuary's contribution will be in helping to prepare rate increase letters or separate brochures, premium stuffers, or the like, which discuss in more general terms the rising cost of medical care. For example, much of the material which I discussed at the outset concerning the Insurance Price Index vs. the Consumer Price Index can be very useful to the salesman in explaining to the client why a rate increase of 20% is needed when the total CPI has only shown a 12% increase. Several years ago my company prepared a booklet which went into some detail on the inflationary forces, the increased utilization, and the advances in technology in the medical care marketplace, and we made this available to our group managers and our field underwriters. A number of sales personnel have commented on how helpful this proved to be in selling rate increases.

IV. Responsibility of the Health Insurance Industry

What has the health insurance industry done in an effort to hold down the cost of medical care insurance during a period of increasing inflation? It seems to me that there are 2 general ways in which the industry has responded:

- A. With product modifications, both voluntary and legislatively mandated, and,
- B. By working with the providers of medical care services who are attempting to improve their efficacy.

In the area of product modifications, most insurers have taken a much more positive view than in the past toward preventive care and ambulatory care, in an effort to hold down the higher costs involved when hospitalization is required for relatively minor conditions. Included in these product modifications are such benefit offerings as outpatient diagnostic, X-ray and laboratory tests, convalescent nursing home coverage, home health care, annual physical examinations, immunizations, and well baby care. In addition, most companies will pay for pre-admission testing and recognize treatment at outpatient surgical centers. These so-called surgi-centers handle such conditions as D&C, hernia repair, tonsillectomy, etc., and the patient is in and out in one day. It is vital to us, as individual companies and as an industry, to continue to search for new approaches and new coverages that will continue to improve the effectiveness of our policyholders' medical care premium dollars.

In addition to these benefit liberalizations in the area of preventive maintenance and ambulatory care, many insurers have attempted to control hospital and other medical care claim costs that are particularly susceptible to inflationary pressures through the use of inside limits, coinsurance, and deductibles. However, while the public has come to accept modest deductibles and some coinsurance as sensible cost control devices, there seems to be a reluctance in the marketplace to purchase insurance in which any meaningful portion of the ultimate claim costs must be shared by the insured. An excellent example is to be found in the lack of demand for hospital room and board benefits with inside dollar limits. Although most carriers will gladly offer such a benefit, the demand is almost universally for room and board benefits set at the prevailing semi-private room level, even though this level might increase 3 or 4 times a year at a particular hospital. There are many actuaries who have come to believe that passing the cost of medical care on to

the insured through inside limits is not a satisfactory answer, since the basic purpose of the insurance program is to relieve the insured of the major burden of the costs of medical care. Unless there are external factors affecting the availability of funds for the program, there appears to be a clear preference among policyholders for reasonably liberal benefits and higher costs compared with more limited plans and lower costs.

At this point, a logical question for us to consider might be "What more should the industry be doing than it already is in terms of adapting to an inflationary economy?" One idea which, while theoretically sound, does not seem to have been utilized by any companies yet, is that of an increasing deductible; e.g., a plan sold in 1975 with a \$100 deductible might have the deductible automatically increased to \$125 in 1976, \$150 in 1977, etc. Another adaptation during a period of rising costs in medical care is to increase the major medical maximum in order to keep pace with these rising costs. Here, the industry already has outdone itself. Starting about 2 years ago when the first \$250,000 maximum appeared on the scene, the industry has by and large pulled out all stops. It is not uncommon to find \$1,000,000 major medical maximums, and many companies offer so-called unlimited major medical maximums. The ultimate may have been achieved by one company which recently offered a \$1,000,000 each illness maximum.

In addition, a number of insurers have been experimenting with new and different health care delivery systems. For example, some insurers have been involved in the Health Maintenance Organization movement, either in organizing and sponsoring HMO's or in providing some investment and/or management and consulting assistance. As you know, proposed regulations on Section 1310, the Dual Choice provision of the HMO Law, have recently been released and, as a result, the entire HMO movement will probably become much more active than it has been in the past year. This, in turn, will create a number of new administrative and underwriting problems for insurance companies.

A number of insurers have also been working with medical care foundations which utilize CHAP, the Certified Hospital Admission Program, and other peer review concepts, in an effort to hold down costs. Briefly, under these arrangements the basic idea is to hold down needless surgical procedures and to shorten the length of stay in the hospital, all under the medical peer review system. Some companies have spoken of savings ranging up to 20% as a result of CHAP and peer review, and, while other companies have felt that anticipated savings were greatly overstated, as long as administrative costs can be kept within bounds, such approaches do help to assure that appropriate services are being supplied at appropriate costs. In a similar vein, several companies have developed physician profiles and the HIAA has developed a cooperative data bank to assist carriers in the administration of "reasonable and customary" physicians' fees.

Clearly, the cost and quality of medical care are matters of vital concern to the insurance industry and to the nation. For many years, the insurance industry has worked with providers of medical care and with leaders in the government to develop programs which would provide satisfactory care to everyone in America as efficiently and inexpensively as possible. Much has been accomplished in what is really a very short period of time. Many believe that it is now appropriate for the government to play a greater role in the solution of problems related to the delivery of quality medical care. The industry continues to advocate, through the Burleson-McIntyre Bill, a creative partnership between government and private insurers. As the costs of medical care continue to rise, it appears that a national program, embodying

the principles espoused in this Bill and combining the reach of the government with the demonstrated capabilities of private insurers, offers an important opportunity for a continuation of improved access to quality care for each citizen at a reasonable cost to the nation.

MR. SIMONE MATTEODO: I have been asked to take this morning's agenda for group short-term and long-term disability benefits. My talk covers several broad categories as follows:

- A. Rating in an inflationary environment.
- B. The effect of recession on rates because of increased utilization.
- C. The effect of liberal disability benefits on utilization.
- D. Indexing and Social Security offset.

A. Rating in an inflationary environment

With regard to rating, generally group disability coverages are relatively immune from the effects of inflation because of the basis which is used. The most common basis for short-term disability is a rate per \$10 of weekly benefit exposed to risk. The most common basis for long-term disability is a rate per \$100 of covered earnings. Obviously, in an inflationary environment, as the liability increases on disability benefits because of an increase in \$10 weekly benefits exposed to risk in the case of short-term disability, or in covered earnings in the case of long-term disability benefits, the appropriate premium income, reflecting inflation, is obtained.

In a few instances, however, there may be rates for benefits which are subject to inflation that are expressed on a per-employee per-month basis. In these situations there is a problem because the liability will increase without a corresponding increase in the premium income. A factor not unlike the creep factor which is commonly used for other health insurance coverages may be appropriate for prospective rating. This creep factor will enable the group underwriter to fix the prospective rate according to some pre-determined trend line for inflation.

Under long-term disability, however, inflation does have some effect on rates even if the rate is expressed as a percentage of earnings. Since the benefit formula is generally a percentage of covered earnings offset by Social Security benefits, inflationary increases in earnings, without a corresponding increase in Social Security benefit, will produce an increase in the rate expressed as a percentage of covered earnings. For example, take the case of an employee earning \$1000 per month under a plan which provides 50% of earnings less primary social security. If we assume a \$300 Social Security Primary Insurance Amount, then the net LTD benefit expressed as a percentage of monthly earnings is

$$\frac{.50 (1000) - 300}{1000} = 20\%$$

If the employee receives a 5% pay increase this percentage increases to 21.4%. This implies a needed rate increase of 7%.

This factor is of particular importance if the LTD rate is to be guaranteed for more than one year or if data for renewal rate calculations are provided less frequently than annually. Of course, this factor is offset by any inflationary increases in Social Security.

Another factor which is important to proper rating in a recession is the change in the group's profile as a result of lay-offs. If the older employees

who can opt for early retirement do so, the risk remaining is more favorable since disability rates are lower for the resultant younger group. On the other hand, if it is the shorter-service, younger employees who are laid off, an adverse situation may result for obvious reasons.

There is another important consideration in an inflationary environment that has marketing implications. If one believes that disability income benefits are for important needs, and to the extent that benefits are not provided through insurance programs, including, importantly, salary continuance programs, then disability income needs are met from other assets of the claimant. In that savings may represent an important component of these assets available for disability income, and further in an inflationary environment the value of savings is diminished, then it is important that disability income programs be updated and expanded to cover these important needs. This may be a dangerous course when there is a recession, since the experience that develops could be highly unfavorable.

B. The effect of recession on rates because of increased utilization

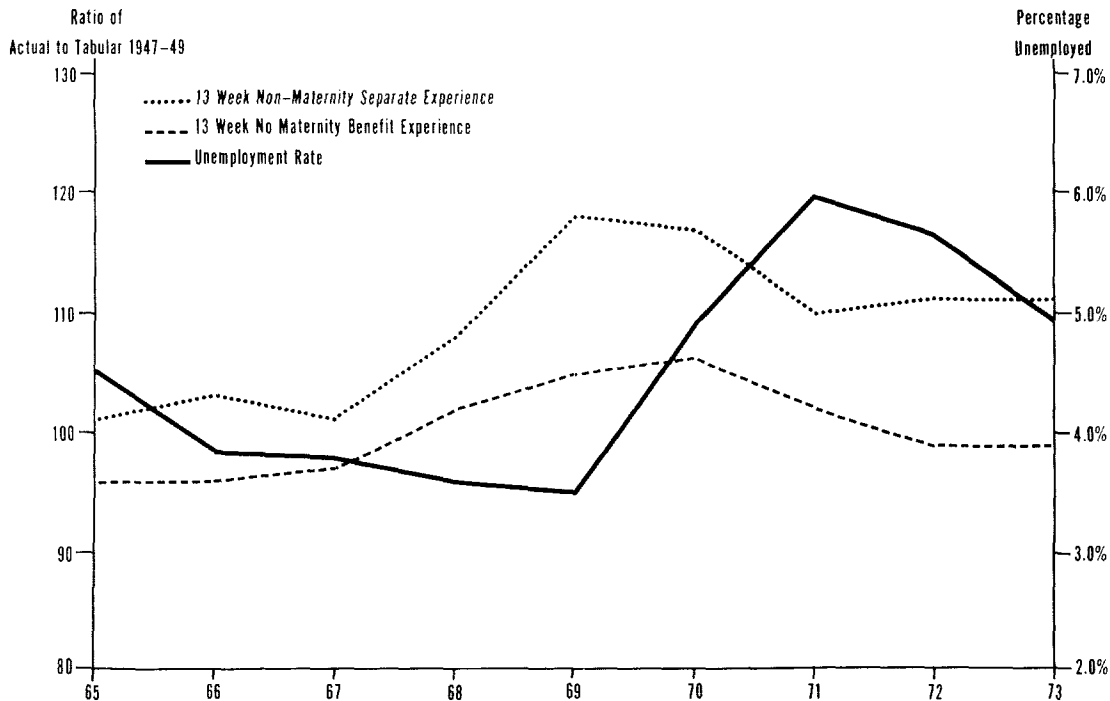
In a paper on disability presented to the Society of Actuaries, "Some Observations on the Nature of the Risk of Disability, its Measurement and Control" by John H. Miller and Simon Courant, (TSA XXIV, P. 349), the effect of recession on experience is examined. On page 359, under the topic "The Economic Cycle", the authors find the following: "The data ... indicate the tremendous effect on claim rates of economic conditions and the considerably lesser effect on termination rates. Moreover, the decrease in termination rates proved to be temporary, so that much of the indicated cost increase in the depression was compensated by higher recovery rates thereafter." Also, "If we can conclude from the ... data that over 4/5 of the increase in costs from an economic recession is reflected in the claim rate, we need not wait for the development of a mature loss ratio or of the termination experience to judge the cost of disability underwriting results."

Exhibits II and III show the unemployment rate graphed against both the non-maternity separate experience and the no maternity benefit experience under 13 and 26 week short-term disability plans. Exhibit IV presents 6 month elimination period group LTD experience matched against the unemployment rate. The Group Mortality and Morbidity Reports of intercompany experience were used to develop the appropriate actual to tabular ratios. These graphs show a very good correlation between unemployment rate and experience changes in disability except for 13 week plans. Increases in unemployment rates are reflected in increases in claim experience and vice versa.

C. Effect of liberal benefits on utilization

From intercompany reports on group LTD experience for the most common plan, six months elimination period, interesting data is emerging. For a large block of experience, intercompany, 1968-1972, total salary, non-executive, non-jumbo experience units, the following experience is shown; this experience will be published in the 1974 Reports Number of the Society's Transactions. For those plans where the ratio of gross benefits to gross pay is always less than 50%, the ratio of actual to tabular is 56%. For those plans where it is exactly or approximately 50%, the ratio of actual to tabular is 71%. For those plans which are more than 50%, but less than or equal to 60%, the ratio is 88%. For those plans more than 60%, but less than 70%, the ratio is 108%. For those plans more than 70%, the ratio is 137%. The overall ratio of actual to tabular is 83%. It is obvious that as benefits

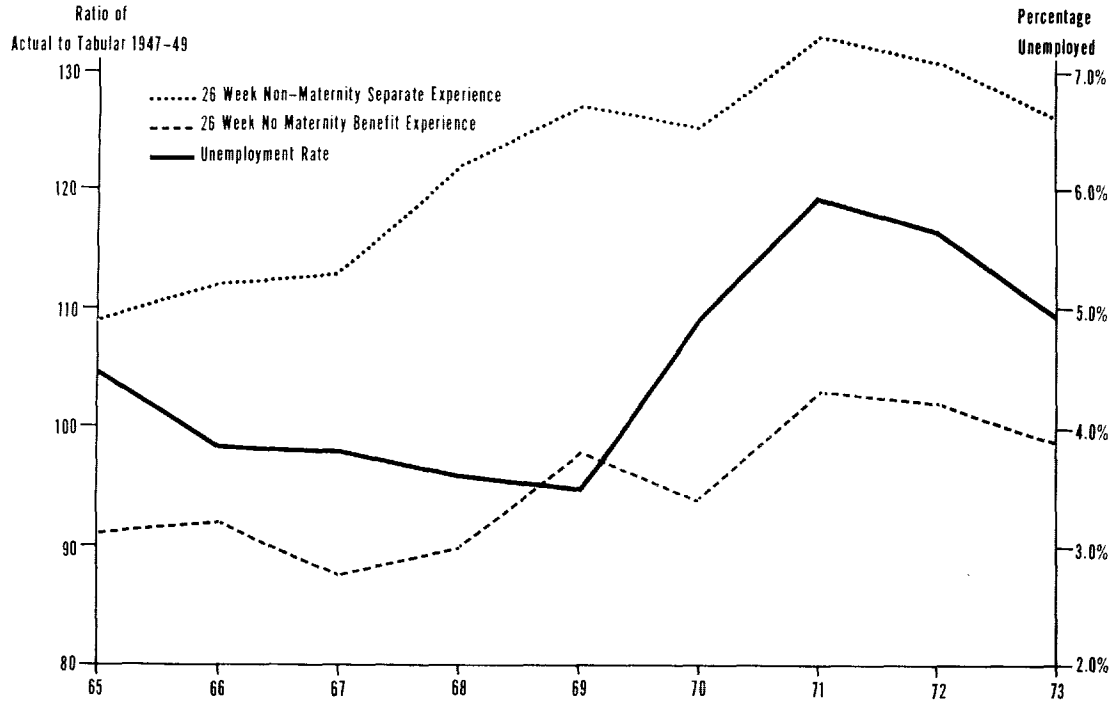
EXHIBIT II
UNEMPLOYMENT RATES¹ & GROUP WEEKLY INDEMNITY EXPERIENCE² UNDER 13 WEEK PLANS (GROUPS WITH LESS THAN 1,000 EMPLOYEES EXPOSED) 1965-73 YEARS EXPERIENCE



SOURCES:

- 1 - Handbook of Labor Statistics (1973)
- 2 - Transactions, Society of Actuaries Reports Number (1973 Figures are Preliminary)

EXHIBIT III
UNEMPLOYMENT RATES¹ & GROUP WEEKLY INDEMNITY EXPERIENCE² UNDER 26 WEEK PLANS (GROUPS WITH LESS THAN 1,000 EMPLOYEES EXPOSED) 1965-1973 YEARS EXPERIENCE

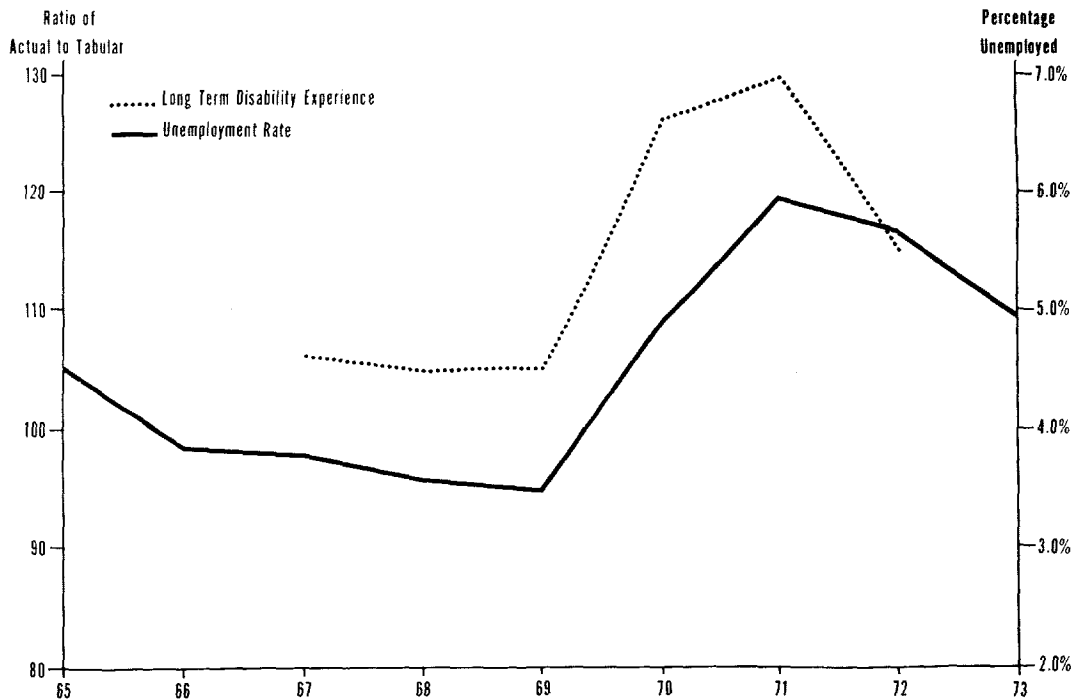


SOURCES:

1 - Handbook of Labor Statistics (1973)

2 - Transactions, Society of Actuaries Reports Number (1973 Figures are Preliminary)

EXHIBIT IV
UNEMPLOYMENT RATES¹ & GROUP LONG-TERM DISABILITY INSURANCE EXPERIENCE² (SIX-MONTH ELIMINATION
PERIOD; CALENDAR YEAR OF ISSUE EXCLUDED; ALL AGES; MALES, FEMALES, and SEX UNKNOWN COMBINED; ALL
EXPERIENCE UNITS COMBINED)



SOURCES:

1 - Handbook of Labor Statistics (1973)

2 - Transactions, Society of Actuaries Reports Number (1972 Figures are Preliminary)

get more liberal, the experience rate increases. This indicates strongly that plans with liberal benefits must be underwritten carefully, and further, special care should be taken in pricing these plans.

D. Indexing and Social Security offset

The next topic concerns indexing and an associated consideration of freezing the Social Security offset. The offset is a common feature in group LTD plans. Increasing attention is being given to the factor of indexing because it is a natural consequence of an attempt to preserve the real value of the benefit upon disability. In time, inflation will erode income benefits substantially. It is logical to modify this benefit through the introduction of an indexing factor. It is an important marketing consideration and probably should be reflected in today's environment. However, it is a costly feature and to provide even a token indexing of 3% may increase costs 20% for a typical LTD plan. A more realistic level of indexing in today's inflationary environment such as 6% could boost costs 35% to 40%.

Sometimes, in lieu of indexing, a Social Security freeze is used. This provision dictates that increases in Social Security benefits that occur after the onset of disability will not be used to reduce the LTD benefit. Three states (New York, Massachusetts, Illinois) have adopted regulations which forbid the general practice of increasing the offset value for Social Security benefits when there is an increase. In our private interest as insurers, it would appear beneficial to freeze Social Security offsets. Otherwise, our real value share of disability income benefits will decrease. Our other alternative is to index the disability income benefit so that increases in Social Security benefits, attributable to inflation, leaves us with a real value share which is constant.

There are two methods of indexing an LTD benefit. One technique indexes the gross benefit without freezing Social Security benefits; the other freezes the Social Security offset and indexes the net benefit.

One of the most serious problems we have under Group Disability Income Benefits flows from the rapid strides being made under the Social Security program. That program is ever-expanding in several directions. More and more coverage is coming under this huge federal program. That program reflects the needs not only of disabled workers but also of wives and children of disabled workers. Waiting periods have been reduced, and benefits have been liberalized substantially.

The private sector, meaning us as insurers, must do more in the way of aggressive marketing of up-to-date plans, being careful that such plans reflect current conditions, if it is to avoid a take-over of group disability income by the federal government. The manner in which inflation causes many plans to become out of date, with respect to benefit levels (for those plans with fixed benefit levels) and to maximum benefits, would afford the federal government a good excuse to take over more of these benefits. We must be alert to federal government encroachment into our market.

The January 1974 Social Security Bulletin contains revealing figures for disability income benefits provided for short-term sickness. Table 8 in the article shows income loss for short-term sickness was \$4.5 billion in 1948, \$4.8 billion in 1950, \$6.5 billion in 1955, \$8.6 billion in 1960, \$11.3 billion in 1965, \$16.7 billion in 1970, and \$19.4 billion in 1972. Figures are not shown for later years. These increases, in a growing economy, are

to be expected.

A more precise measurement is protection as a percent of loss. This forms an interesting time series against the figures for income loss; the percentage starts low at 16.6% in 1948, rises to 25% in 1955, 28% in 1960, 30% in 1965 and is at 34% in 1972. Since not all income loss represents needs during disability, this is a fairly respectable showing, but it indicates we have quite a way to go to provide adequate coverage for disability income.

Summarizing briefly:

1. Disability income benefits are important in an inflationary environment because sources of income from savings have less value.
2. It is appropriate to index disability income benefits.
3. The industry must be concerned over Social Security expansion.
4. Recessions produce higher experience, as do liberal disability benefits.

MR. JAY RIPPS: The basic group life insurance product is term insurance; and, if benefits are related to salary, the benefits hold up fairly well under inflationary pressures. There is, therefore, little to report in the way of significant modifications which are particularly adapted to inflation, perhaps because the problems inflation causes in other group lines are more obvious and more demanding of immediate attention.

There are, however, some changes in our current products which may be useful and ultimately may be required by continuing inflation. There are also some fundamental problems with regard to fixed dollar permanent insurance which the industry has not yet dealt with very well. As with so many other problems, they can also be considered as opportunities.

What, then, are the product modifications which inflation suggests? First and most obviously, dollar limits on amounts issued should rise as the purchasing power of the dollar shrinks. An adequate nonmedical limit of \$10,000 in 1965 must be raised to \$16,000 in 1975 to maintain its purchasing power. Similarly, as the costs of medical underwriting and the average policy size increase, the level at which nonmedical issuance is financially justified will also increase. Accordingly, our company has recently increased its limits on nonmedical insurance to members of small groups from \$20,000 to generally \$50,000, a change we have found to be widespread.

There are, however, other more pronounced changes which need to be explored and which may develop into trends if rapid inflation continues. Two such changes are the indexing of periodic payments or of fixed schedules of life insurance and the linkage of group insurance amounts directly to changes in individual circumstances which affect the individual's need for insurance.

As to the first item, there are at least two areas where an index-linked product will be needed if current rates of inflation continue. Survivor income plans typically provide fixed annuity payments to the dependents of an employee who dies. The indexing of related benefits has already begun:

1. Dependents eligible for QASDI benefits receive benefits which vary with the Consumer Price Index.

2. CPI and other index linked pensions, including spouses' pensions. are becoming more prevalent.

Thus, there are precedents and there is certainly a need. Consequently, despite the cost, I expect that indexing of survivor income benefits is in the offing. Also potentially significant is the problem of prefunded pensioner group life insurance. These benefits typically are fixed and reflect neither current salary nor current cost-of-living patterns. Increasing attention will be focused on the plight of the retired population, including the fact that death benefits which were paid for and were fixed at the time of retirement become totally inadequate several years later. There are equity-linked products which attempt to meet this problem, but the past few years have shown quite clearly that, at least in the short run, changes in stock market values may not correlate well with changes in the cost of living. A more reliable link is required.

Continuing inflation influences us and our customers to search for more efficient uses of fringe benefit dollars as other cost pressures mount. Index-linked products and salary-related products, desirable as they may be from the insured's point of view, cause significant automatic escalation of fringe benefit costs during inflationary times. One possibility we need to explore is the variation of insurance amounts to reflect not only salary or job category, as is now typically the case, but also life contingencies which generally affect the need for insurance. Perhaps group life insurance amounts could reflect more directly the need for insurance by varying not only with salary but also with dependency status. And perhaps such an arrangement could be designed to redistribute group insurance costs more effectively, without increasing them significantly. A case may be made that the typical survivor income plan is an attempt to achieve just this kind of variation. As eminently logical and desirable as survivor income insurance appears, however, we have been disappointed in the market response to our survivor income product, and I sense that our disappointment is shared by other group insurers. Thus far, employers have been reluctant to assume the expense of providing such coverage. Moreover, when offered as an option to employees on a largely or fully contributory basis, employee participation has been sparse.

Some basic longer-range issues merit attention before closing. Prolonged inflation significantly diminishes the appeal of most forms of permanent life insurance, since fixed dollar benefits prefunded today with "whole" dollars are worth less at some future payoff point, when they are paid in "diluted" dollars. In general, individually underwritten products which successfully solve this problem have not yet emerged. Further, according to a recent survey published in the Life Association News, there is no "great stampede by companies to switch their sales emphasis to term or 'modified' insurance products." Even if the gap between wages and prices continues to widen, 52% of executives interviewed say they have no plans to step up marketing of either type of insurance. "Neither do their sales plans for 1975 indicate more than a minimal interest in equity-linked products...and interest in index-linked variable insurance is completely lacking."

Surely, uncertainty regarding SEC regulation and the disappointing recent performance of the stock market have contributed to the apparent lack of interest in equity-linked products. The lack of a suitable investment medium for a product linked more closely to the cost of living makes it very difficult and perhaps totally impractical to develop such a product. But the problem--the erosion of fixed dollar benefits by inflation--will not go away.

Perhaps the group insurance industry can find a way to turn this problem into an opportunity by developing an inflation-proof form of permanent insurance. While keeping the basic term insurance type products up-to-date, this is the larger challenge to the actuary working with group life insurance, and it must ultimately be addressed.

