RECORD OF SOCIETY OF ACTUARIES
1988 VOL. 14 NO. 1

HEALTH CARE INFLATION

Moderator: CHARLES C. DEWEESE
Panelists: JOHN D. BOHON
RONALD R. KOVENER*
ALICE ROSENBLATT
Recorder: JANET MARIE CARSTENS

o This session will focus on the components of health care inflation and their impact on health insurance products. These components include:
  -- New technology
  -- Utilization trends
  -- Consumer price index changes
  -- Regional variation
  -- Other

MR. CHARLES C. DEWEESE: I would like to tell you about a couple of Tillinghast surveys I have been involved in. One is a quarterly telephone survey of major insurers discussing inflationary trends in medical care. The results of the most recent survey are that current trend assumptions for typical $100 comprehensive plans range from about 16% to 22% with a median in the range of 19% to 20%. This is about 2% higher than it was a quarter ago. Most companies, if they are changing at all, are still increasing trends. Companies are, however, trying to get away from $100 plans because of the effects of inflation.

Another survey which Tillinghast performs is a small group competitive rate survey. This survey was previously performed by Alan Thaler Associates. Two items of interest from the most recent survey are:

1. The trend assumptions inherent in the rates are comparable to the results of the other survey, ranging from about 16% to 22%. The median so far in that sample of companies is about 18%.

2. The average manual rate increase over the past year for these companies is about 25% to 30%. The range is somewhat wider, probably 15% to 50%, and varies considerably by area.

We have observed significant rate increases over the last year. Although the increase in manual rates has averaged 25% to 30%, the increase in actual rates is probably even greater because many companies were applying discounts to their manual rates a year or so ago. In general, group insurers are much more cautious now both with underwriting and with adhering to manual rates.

* Mr. Kovener, not a member of the Society, is Vice President of the Healthcare Financial Management Association in Washington, District of Columbia.

In summary, the current environment is a very difficult one. Most group carriers lost money in 1987. The companies I have talked to believe rate levels are now where they should be, and believe it will be a while before profits are produced and the underwriting cycle turns. There is not much optimism that medical costs will be easy to control in the future. I do not think anybody expects we will return to the pattern of 1983 to 1985 when cost inflation was quite low, and there was downward pressure on medical care inflation. The trend, particularly in outpatient utilization, is very steep. No one has a good plan to control this trend.

MR. JOHN D. BOHON: I am going to share the results of my company's experience. I will indicate how we look at trends and what we consider when we try to project a trend.

For our indemnity plan book of business (about $8 billion of annual covered expenses), we have seen increases in covered expenses move from roughly 7% per employee in 1986 to over 15% per employee in 1987. The change was abrupt. In early 1987, expenses increased at an unexpected pace. When we examined what was occurring, we tried to determine potential causes.

First and maybe foremost, the outpatient expense trend had been high. A shift in services because of utilization review, and as a by-product of Medicare restraints on hospital expenses, probably caused this category to start moving in 1986.

Another noticeable item was psychiatric and substance abuse expenses. This claim category has seen increases well in excess of average throughout the 1980s. We went back to 1980 and found that from 1980 through 1987, annual increases for psychiatric and substance abuse have averaged over 20%. In some years, the trend has been over 30%. This category has grown from about 4% of our total medical claims to 8.5%. This means that $1.00 out of every $11.00 or $12.00 paid is for psychiatric and substance abuse treatment. For children, over 20% of the dollars involving a hospital confinement are from psychiatric and substance abuse claims.

After two or three relatively good years, we saw inpatient hospital expenses increase more rapidly in 1987. Significant declines in admissions in 1985 and 1986 became small declines, only about 1% or 2% in 1987. The average length of stay increased about 2%. Covered expenses per admission increased about 11% in 1986, and nearly 15% in 1987. Therefore, if any abrupt turnaround was to be seen, it was in inpatient hospital expenses.

Covered charges for other medical expenses, most notably x-ray and lab, were 20% higher in 1987 than those in 1986. We have not documented the extent to which it is occurring, but we have seen some shifting of expense from hospitals to outside radiology and pathology groups. This results in x-rays charged as a separate bill, instead of on the hospital bill. Therefore, some of the rise in the x-ray and lab charges actually stems from hospitals unbundling their billing, which amounts to a hidden hospital bill.

Surgical expenses are another large item. Because of our surgical fee profiles, we were able to examine surgical expenses in more detail than some of the other expenses. By comparing average charges for a fixed set of procedures from one period to another, we can get a statistic similar to the physician services component of the CPI. From total charges, we can develop per procedure numbers,

back out the fixed market basket number, and obtain a figure which represents the intensity of services. Presumably this tells us how the mix of procedures is changed, and whether more or less expensive procedures are becoming more common.

We also track the number of procedures, so we have a utilization figure. We have found the average price has been represented reasonably well by the CPI physician services component. Our fixed market basket showed price increases of 6.5% in 1987 (closer to 7% in the second half of the year). The CPI component increased at about a 7.5% rate in 1987. Our surgical intensity averaged about 1.5% throughout the year; it was a little lower towards the end of the year, and utilization was up about 6%.

Added all together, total surgical charges exhibited a 12% to 13% increase. It is especially notable, however, that inpatient and outpatient surgical charges were changing at very different rates. The outpatient utilization was up about 9%, while inpatient procedures actually dropped 2%.

Beyond the straight figures, we have tried to look for other factors that might have affected our results. One of the items we have looked into especially over the past several years is HMO penetration. We have noticed decidedly different results from cases which have had significant numbers of their employees join HMOs. There has now been quite a bit written about adverse selection stemming from these open enrollments. We found only a few documented studies, so we did several ourselves in two different ways.

First, we examined the claims of a number of large policyholders where we could obtain the identification numbers of employees who switched from an indemnity plan to an HMO. One case moved from 8% penetration to about 16%, another from 13% to 38%, and yet another from 33% to 66%. Others were in between. One notable but exceptional case had 47% of its employees sign up for HMOs the first time they were offered. For the groups we studied, the employees moving to HMOs had significantly lower claims costs than those staying in the indemnity plan, confirming the published reports we had seen. The people moving to HMOs had average claims of roughly 60% of those before the HMO was offered. Age differences between the movers and the stayers may explain 14 of the 40 point difference. The rest we presume represents lower morbidity within each age group.

The second method involved collecting claims data from a sample of our book of business which had both life and medical coverage. We identified all such cases with over 200 employees in 1985 and 1986. Where the medical coverage declined relative to the life coverage exposure, we assumed that the HMO enrollment had increased. Our total sample had over 2 million lives; the subset with increased HMO enrollment had over 1 million lives, and the residual group was a little under a million. When comparing the two groups, we saw per capita claims increase 13 points more for the groups with HMO enrollment increases. That works out to a change of .7 of a point for each 1% change in enrollment. This type of study is increasingly difficult to perform due to problems getting a sizable control group of people that did not have increases in HMO enrollment. Lately, we have seen HMO enrollment increasing less rapidly, and perhaps we can do another study.

In conclusion, I will review a few other things that affect total per capita cost but do not come through quite as clearly in studies. We have noticed a slight decrease (maybe half of a point) in coordination of benefits (COB).

With good but limited data, we think that implementation of the COBRA requirements for continuation of coverage has added about half of a point to the trend.

Our most interesting observation has to do with hospital expenses and the overall problem itself. It seems that we are still at the mercy of the biggest health care payor -- governmental programs. The government determines what Medicare and Medicaid pay hospitals. We have seen analyses that suggest Medicare patients were profitable for hospitals in 1984 and 1985, but by this year, the hospitals will be lucky to break even. Hospitals have 10% to 11.5% projected expense increases, but revenue from Medicare is not going up nearly that fast. Estimates show 2.5% increases from Medicare revenue per admission and perhaps about 6% from Medicaid. The other half of the hospital patients are going to pay 17% revenue increases in order to get the hospitals to cover the 10% to 11.5% expense increase, if expenses cannot otherwise be restrained. It is doubtful that can be done quickly.

MR. RONALD R. KOVENER: I am pleased to have this opportunity to be with you. I will report on three recent studies that include good information about inflation in hospital operations. I will also briefly describe some of the major influences on inflation in the health care field.

I am a representative of the Health Care Financial Management Association (HFMA). We are a professional society with over 26,000 individuals engaged in the financial management of hospitals and other health care organizations. These individuals are employed by hospitals, long-term care facilities, HMOs, and other health care provider organizations of all types. Our members are also employed by accounting firms and consulting organizations and are lawyers, professors, students, employees of government agencies, and others with an interest in health care financial management issues.

Two of the recent studies I am going to describe have been conducted by HFMA. The third study was conducted by the federal government.

This year, HFMA issued its 8th annual "Hospital Industry Financial Report: 1982-1986." This report is a compilation of information collected from HFMA's financial analysis service.

Subscribers to this service submit their annual audited financial statements. The statements are then compiled and analyzed by Dr. William Cleverly at Ohio State University. We collect information from 2,500 hospitals and have approximately 10,000 years of data included in the five-year trend line comparisons which are shown in the report. The data are not necessarily representative of the industry because they are from a subscription service. In fact, we believe that better managed hospitals are more likely to be subscribers. Accordingly, the financial results reported are somewhat better than the industry average.

The financial analysis service provides each subscriber hospital with a report of 29 ratios, comparing the individual hospital's performance to other hospitals in the same geographic area, with the same bed size, and with other similar characteristics. Liquidity, profitability, activity, and capital structure ratios are calculated. The annual report includes five-year trend line information for all of

these ratios with data broken down by regions and with extensive tables of information by hospital bed size and other classification criteria. Hospital data are compared to financial results of other industries as well.

The "Hospital Industry Financial Report" for 1986 showed some significant deterioration in financial performance. Profits from operations dropped to only 3% from 3.6% in the prior year. The long-term debt to equity ratio increased, which is an adverse trend. It now takes hospitals longer to collect their accounts receivable. They now wait an average of 69 days from the date of discharge until collection. The hospitals' physical plants are also getting older. In 1986, the average age of our plant and equipment was 7.3 years.

While the 1986 data do not portray an industry on the brink of disaster, they do provide early warning signs of serious financial difficulty. There are real questions about the industry's ability to maintain and replace its plant and equipment, and there is concern that it will be necessary to delay bringing people the benefits of new technological developments.

The second report I would like to tell you about is the HFMA's second annual survey of current financial information. The HFMA requested its chief financial officer members to provide a substantial amount of financial information for a four-year period. We received 532 usable responses, and the data were compiled and analyzed with the assistance of the national public accounting firm of Ernst & Whinney.

The audited financial reports do not isolate the cost of serving Medicare beneficiaries, so we asked for these costs. We asked the chief financial officer members to provide this information based upon their hospital's cost accounting data. We asked for data from two completed fiscal years, coinciding with the third and fourth years of the Medicare prospective price setting (PPS) system. We also asked for data from the current year, that is, actual experience plus an estimate for the balance of the year. Finally, we asked for budget data for the hospital's next fiscal year. One of the very special features of the survey is this look into the future. Since hospitals provided their own projections of the future, they reflect hospital management's plan for coping with current fiscal pressures. These estimates of the future are not just computerized projections of past trends. We also asked respondents to comment on the trends which they reported.

The survey results underscore the deteriorating financial condition identified in the "Hospital Industry Financial Report." Over the four-year period, profit, including nonoperating income, is projected to drop from 6% to 3.3%. Very importantly, hospitals expect to lose money from serving Medicare beneficiaries. Hospitals expect their small profit of 3.2% on Medicare of two years ago to shrink to a 9% loss next year. In PPS year three, Medicare accounted for 41% of hospital business in terms of both expense and revenue. In PPS year six, hospitals anticipate that Medicare will make up a little over 42% of expenses, but only 37% of revenue.

The cost per case is also up significantly. For all cases in the four-year period costs are up from $3,700 to $4,700, with Medicare cases increasing from $4,000 up to about $5,000. Uncompensated care is a significant problem for hospitals, increasing from 5.2% to 5.7% in the four-year period. As hospitals curtail variable costs, the share of costs devoted to capital is increasing from 7.8% to 8.1%. This study demonstrates the deficiency in Medicare payments and serious flaws

in government cost data. Comments from member hospitals reveal some of the serious frustrations of people in the field.

The last study is the third annual analysis of Medicare profitability conducted by the Office of the Inspector General of the U.S. Department of Health and Human Services. This report is drawn from Medicare Cost Reports. This report includes information from 246 hospitals which the Inspector General determines to be statistically representative of the industry.

This analysis also shows that hospital profits are down significantly. However, it puts the profit percentage from serving Medicare beneficiaries at an astronomical level, reporting hospital profits decreasing from 14% in PPS year one to 9.5% in year three. The survey reports that teaching hospitals make substantially more profit than nonteaching hospitals, and urban hospitals make profits while rural hospitals operate at about breakeven.

The HFMA is concerned about this study because we believe it influences congressional decisions and is interpreted by others as authoritative information. We have a number of concerns about the results of this analysis.

First, the Medicare Cost Report is not an accurate measure of the cost of serving Medicare beneficiaries. The Medicare Cost Report was designed to measure the amount that Medicare would pay. The government has designed a formula that minimizes its payment by distorting the allocation of costs identified with serving Medicare beneficiaries. On many of these disputed issues, hospitals have taken the Medicare program to court.

One of the issues that has been outstanding since the very origin of the Medicare program has been a distortion in cost allocation involving the labor room. After consistently losing on this issue in court over many years, the Medicare program agreed to change the formula and make retroactive restitution for a portion of the amount that hospitals have been shortchanged over many years. Nevertheless, the distorted and understated costs were included in the data compiled by the Inspector General.

A preliminary settlement on a similar issue is in the final stages of negotiation. This involves malpractice insurance. Other issues where hospitals are expecting to eventually prevail but where the cost report continues to seriously distort costs involve: telephone and television, the cost of indigent care, the cost of bad debts, the cost of home office operations, return on invested capital, and the higher cost of serving Medicare beneficiaries.

The second way in which the Inspector General's calculations are distorted is that certain costs known as "pass through costs" are ignored. Ignoring these costs and revenues can substantially overstate the percentage reported. Furthermore, the Inspector General's data are significantly out of sync with other analyses, and the data on which the calculations were made are not available for verification.

Finally, the HFMA is concerned about this report because it is based on old information that is not relevant to future decisions. The report emphasizes distortions among teaching hospitals and urban hospitals. However, there have been significant rule changes made by Congress subsequently in both of these areas which would reduce any distortions that may have been present.

I would now like to discuss reasons for the recent significant increase in hospital charges. First, the market basket of goods and services purchased by hospitals has an inflation rate that is substantially higher than inflation in the economy in general.

One reason for this is that about 60% of hospital costs are made up of labor. There are a number of special influences on labor costs. Nurses are one of our very important labor groups, and they have traditionally earned rather low wages. Most nurses are women, and women are finding other better paid employment opportunities. To keep women in nursing, hospitals must offer more competitive wages. Hospitals also need many specialized technical skills which are costly. AIDS is introducing a new level of risk for hospital employees, which adds to both labor costs and the cost of supplies such as gowns and gloves. As a major employer of entry level positions (e.g., aides, cleaners and kitchen help), the labor rates in hospitals are affected by minimum wage legislation and by the general level of unemployment.

Another major influence on hospital costs is malpractice insurance. Persons involved with insurance may focus on the other side of these malpractice equations, but it is a big problem for hospitals and physicians. There are both the direct cost of the malpractice insurance and a need for increased tests and other expenditures to reduce the risk of malpractice claims.

While labor is our single largest cost, hospitals are also significantly influenced by the cost of capital. In addition to the general influence of inflation, significant technological changes in the kinds of equipment used by hospitals must be considered. Further, in recent years hospitals have relied to a much greater extent on debt, and accordingly, hospitals are influenced by the swings in interest rates.

In addition to the impact of rising costs, hospital prices are affected by shifts in volume. In recent years, there has been significant pressure to shift patients to less costly service sites. This has resulted in the introduction of a proliferation of new health care programs resulting in duplication of personnel, facilities, and administration. These unique and presumably lower cost services are offered in small volumes and are therefore less amenable to managing for efficiency. As volume in the more traditional acute care services has decreased, the fixed and semi-variable cost involved in those services has been spread over fewer cases, thereby raising the average cost per case. This shift in volume has caused hospitals to incur new costs to capture and protect their market share, including the cost of marketing and offering discounts.

There is an inequitable sharing of cost among payors. Over many years, Medicare paid less than the cost of serving Medicare beneficiaries and the shortfall was made up by other payors. When Medicare shifted to its PPS system, the initial formula was realistic, and hospitals took prompt and effective action to curtail costs in response to these new incentives. As a result, Medicare paid its full share of costs in the early days of PPS. This removed pressure on other payors to compensate for the shortfall. Medicare has now reverted to the pattern of deficient payments, however, necessitating an upward spiral in charges to other payors. If a larger proportion of patient services is paid at a deficient rate, even though the deficiency may remain at the same level, charges for the remaining services must rise a tremendous amount to offset the deficiency.

Another influence on hospital charges results from the slowdown in payment for services. Days of revenue in receivables measure how promptly hospitals are paid. The increase in this ratio shows hospitals are experiencing additional delay. Congress is causing much of this delay through the Medicare program. The federal government is on a cash basis, so a delay in payments by Medicare to hospitals appears in the federal budget as a savings. This problem occurs with other payors as well. Payment delays must be offset through higher charges.

Some of the other influences on hospital costs and charges include an aging population, our ever growing capability to provide new technology, and the greater risk that the industry faces in its regular operations.

The data in all three of these studies show a serious deterioration in the financial condition of hospitals. All indications are that this financial deterioration and inflation in health care costs and charges will continue. There are no simple answers for eliminating these circumstances, and I recommend you consider them in rate calculations.

MS. ALICE ROSENBLATT: I believe actuaries should watch health care inflation very carefully to ensure adequate pricing. I think that the interest in inflation will peak every couple of years as we continue to experience the effects of the cyclic nature of the health insurance business. Maybe someday some of us will become smart enough not to be surprised by health care inflation.

I am going to be presenting several different types of data. I will start off with data for the State of California. This information on California hospitals is obtained from the California Office of Statewide Health Planning and Development. I will also be presenting some national data from the American Hospital Association and from the BC/BS Association. The latter combines data from all BC/BS plans to give a national picture. I will also be discussing some external pressures that are currently influencing costs and utilization. I think these data will help explain the earnings results many insurers experienced during 1987, and it may lead to questions about 1988 earnings.

The California data run through the second quarter of 1987 and reflect all payors and all hospitals. About 40% of the data is Medicare, and about 15% is MediCal data.

1. Discharges -- Total discharges, which you may think of as total admissions, show a decreasing pattern since 1982. Starting with the fourth quarter of 1986 and continuing into the second quarter of 1987, there has been an increase in the number of discharges. One of the theories to explain this is that all of the cost containment efforts went too far in attempting to keep people out of the hospital, so this is not a reversal of a trend or a true increase. Instead, it represents a leveling off pattern of discharge rates.

2. Days -- Total patient days show a similar pattern to total discharges: decreases since 1982 with increases starting in the fourth quarter of 1986 and continuing into the second quarter of 1987. When analyzing these data, seasonal differences must be taken into consideration. Typically, first quarter experience shows a high pattern and fourth quarter experience shows a low pattern because people defer medical treatment due to the Christmas and Thanksgiving holidays. The increases in total patient days are running about 3% to 4% if a quarter in 1987 is compared to the same

quarter in 1986. We believe there are several reasons for these increases, such as aging of the population, new uses of technology, California's share of growth in the population, and an increase in hospital marketing.

3. Average Length of Stay -- The average length of stay repeats the pattern mentioned above. An adjustment for the seasonal impact of a low average length of stay in the fourth quarter and a high average length of stay in the first quarter should be made. For the second quarter of 1986 through the first quarter of 1987, the average length of stay increased approximately 3% versus the same quarter of the prior year. This percentage change dropped to 2% in the second quarter of 1987. We believe that the explanation for this is partly a backlash against cost containment. With all of the preadmission review and other cost containment devices, we went a bit too far and forced physicians to manage lengths of stay that were lower than they were comfortable with. Therefore, what we are seeing right now is not a real change in patterns but a rebound effect to get the average back to where it should be.

   The other explanation is that cost containment has caused a shift to outpatient services, so the hospitals are now treating more severe cases on an inpatient basis. Thus, hospitals are shifting to a more severe case mix with a longer average length of stay.

4. Outpatient Visits -- Outpatient visits have been increasing since the second quarter of 1985 at 6% to 9% over the same period a year before. These increases are in utilization only. Combining the increase in costs for each of these outpatient visits with the utilization trend produces a steep trend in total outpatient costs. We did a quick study at BC/BS of California of certain segments of our insured population and saw an increase in the total cost (pure cost plus utilization) of over 30% from 1986 to 1987.

5. Cost Per Visit -- Gross revenue and expense per visit increased in a similar manner from 1982 until the first quarter of 1986. Beginning with the second quarter of 1986, the gap between revenue and expense widens; the revenue per visit has been increasing at a rate of 11-13% over the same period a year ago. Gross revenue referred to here is billed charges, so it is revenue prior to bad debt, charity, and what is called contractual allowances (discounts). As more and more negotiations take place and everyone gets into discounting arrangements, the portion of the population paying at billed charges is paying at higher and higher levels. I think that is why the gap between revenue and expense has widened.

6. Occupancy Rate -- The occupancy rate in California hospitals once again shows an increasing trend, beginning in the second quarter of 1986. These data are based on licensed beds which are not necessarily the total number of beds in the hospital. General statistics are showing the occupancy rate in California hospitals is running at about 60%.

The national data from the American Hospital Association (AHA) confirm a lot of the California hospital data, although California exhibits slightly earlier patterns than the national data.

1. Cost Per Case -- The cost per case has shown a steadily increasing pattern since 1984.

2. Admissions -- Total admissions have been decreasing since 1984, although there was a slight increase from the third quarter of 1986 to the fourth quarter of 1986, and then a decrease in the first quarter of 1987. The annual rate of decline was .7% through the third quarter of 1987, compared to a declining rate of 2.3% in the same period of the previous year. Admissions among the under-age-65 population have been decreasing faster than admissions among the over-age-65 population.

3. Outpatient Visits -- Outpatient visits have been increasing rapidly.

4. AHA Market Basket -- The AHA market basket shows a level to decreasing pattern of percent change from the previous quarter for the period 1984 through the second quarter of 1986. Starting with the third quarter of 1986, the percent change from the previous quarter has been in the range of 2-2.5%. The annual rate for the quarter ending September 1987 was 8.1%, whereas the annual rate year to date through September of 1987 was 6.8%.

5. Labor Costs -- The labor cost per full-time equivalent (FTE) employee shows a sharp increase in the percentage change from the previous quarter, beginning with the fourth quarter of 1986. The annual rate was 9.6% for the quarter ending September of 1987 versus the same period of the previous year.

   The number of FTE employees decreased through mid-1985, and has since been increasing. The annual rate of increase was almost 1% comparing the third quarter of 1987 with the third quarter of 1986. This is probably caused by a shift in the case mix severity. The decreasing pattern from 1984 to 1985 is evidence of the shift from the inpatient environment to the outpatient environment. Recent increases may be a result of more personnel needed to handle the more severe inpatient case.

The national data from the BC/BS Association once again supports these trends.

1. Inpatient Admissions -- Inpatient admissions have decreased from 117 per thousand members a year in 1977 to 101 per thousand in 1984, to 88 per thousand in 1987.

2. Average Length of Stay -- The average length of stay has decreased from 6.5 days in 1977 to 5.9 days in 1987. The length of stay has been steady at 5.9 since 1985. This leveling of decreases has affected our trend rate.

3. Outpatient Visits -- Outpatient visits have increased steadily. The number of visits per thousand members a year increased from 277 in 1977 to 453 in 1987. In the last three years, there has been a 21% increase, from 374 in 1984 to 453 in 1987.

External pressures influencing health care costs and utilization include the following:

1. Federal government cutbacks.

2. Nurse Shortage -- The nurse shortage resulting in nurses demanding and obtaining higher wages and better working conditions, thus increasing labor costs of hospitals.

3. AIDS -- AIDS is a big problem for the life and health insurance industry. In certain areas of the country (California and New York), AIDS is a bigger problem than elsewhere. I did some calculations recently and estimated that the trend rate in California could be influenced by AIDS by up to 2% per year.

4. Medicare -- Medicare has caused a decrease in hospital profits, which could result in heavy cost shifting.

5. Prescription Drugs -- The cost of prescription drugs has increased rapidly. The pharmaceutical market is projected to almost double in the period 1985 to 1995, from $21.1 billion to $41.8 billion. Data from the medical care component of the CPI show that annualized increases for prescription drugs for the third quarter of 1987 have been running at a rate of 10.1%. This increase can be compared to annualized increases of roughly 6% to 7% for other medical care components. Using the past 12 month rate of increase, prescription drugs were 7.9% versus rates ranging from 4% to 7% for other aspects of medical care.

   National averages for prescription costs can be distinguished between major medical plans and card plans. Typically, the difference is that a major medical plan would have a deductible like $100, but the card plan might have a $2, $3 or $5 per prescription copayment. The annual cost for major medical plans for active employees is $144 and $188 for the card plan. The retiree cost is more than double the active life cost. For the major medical plan, it is $345, and for the card plan it is $460. We believe these differences are due to what we call the shoebox effect. Because of the higher deductible in the major medical plan, not all of the prescription drug claims are filed.

   Data published recently by the Health Care Financing Administration, The Office of the Actuary, projected annual prescriptions per capita for the aged population for calendar years 1967 to 1991. These data show annual prescriptions per capita skyrocketing as we approach 1991. Drugs are being used today to treat conditions that people used to tolerate. People who used to suffer from stomach aches and pains are now taking drugs at a cost of $2 a day. That $2 a day can be expected to go on forever, but inflationary pressures will increase it.

   There are also new drugs. TPA now stands for something more than third party administrator; it is a new drug called tissue plasminogen activator. It costs $2,200 per dose and dissolves blood clots to help heart attack victims. There are also very expensive drugs being used for the treatment of AIDS. BC/BS of California is attempting to take action to control these increasing drug costs. We are in the process of setting up a network of pharmacies; we include incentives for the use of generic drugs, and we include risk/reward-sharing incentives in the pharmacy contracts.

In summary, I think the data presented showed that changes occurred in late 1986. These changes affected our 1987 results. Since the data end in either the second or third quarter of 1987, I am not going to use them to make any predictions about 1988. All of the data show we need to monitor these influences very carefully.

MR. JAMES A. JASKOLSKI: One of the things we have seen in looking at our trend data is a big increase in obstetrical costs. The trend on these costs has been very high for the last year or two. Has anyone on the panel seen something similar?

MS. ROSENBLATT: We have not tracked that directly for our plan. However, I have seen data that show a lot of the increase is due to the tremendous shift toward use of cesarean sections as opposed to normal delivery.

MR. JASKOLSKI: I think malpractice may have something to do with that, too.

MR. KOVENER: Malpractice insurance increases have hit the obstetricians worse than any other group. Many of them are discontinuing their obstetrical practice and moving only to gynecological work.

MR. HARRY L. SUTTON, JR.: During the last ten years, the Minneapolis area has gone from 40 hospitals to four hospital systems plus a few governmental hospitals. We average a 45% licensed bed occupancy rate, compared to your national average of close to 60%. To me, it makes sense to close whole hospitals. We are in the process of closing at least five hospitals. Health planning was not able to close a single hospital, and nothing has a longer life than a not-for-profit hospital.

Wouldn't you think that at least in metropolitan areas where occupancies are low, closing hospitals by forcing them into bankruptcy and increasing their occupancy to 80% or 85% could produce efficiencies of scale that could lower some of the observed inflation rates?

MR. KOVENER: If you are going to save money in the health care field, you have to close hospitals. Minneapolis has been particularly good in getting that done. There has been a great deal of restructuring in the industry. There have been many hospital closings, and I think this is something the industry recognizes as a desirable trend. We are not really anxious to preserve something that is not an economically viable unit.

MR. DEWEESE: Does anyone in the audience or on the panel have any remarks about what might be causing the slowdown in reimbursement or how great it is? Certainly it would have an effect on the reserves that insurance companies should be holding.

MR. KOVENER: I think it is very important to recognize the slowdown in reimbursement as a cost influence. The recent Medicare legislation has included a number of provisions. Medicare intermediaries are now required to hold every bill they receive for ten days before they do anything with it, a device that Medicare is using to slow down payment. Many hospitals previously participated in a program known as periodic interim payment (PIP) under Medicare.

Similar payment schemes are used by some other payors, particularly large HMOs that have major agreements with hospitals. If there was a final settlement as has been true with Medicare, the hospital incurred costs and then went through the formula to determine how much they were really going to get paid at the end of the year. Since the amount of payment during the year did not really depend a great deal upon the charges or the services rendered, Medicare would estimate the amount the hospital would receive and make periodic payments. They would settle up at the end of the year for the hospital's actual costs. It was a very

cost efficient system and the Medicare program was paying reasonably promptly. This method was suspended by Congress within the past year, and the system of holding bills for ten days before they are processed was instituted. Congress ignored the fact that delays in payment have a real economic impact on the enterprise.

MR. GEORGE G. MORRISON, III: I work in the reinsurance area and deal with large medical claims. In talking about payment patterns, we have noticed some hospitals holding the bill and submitting it all at once. For example, instead of submitting the first $20,000 of a $200,000 claim, they will hold the claim until they get the entire amount. We feel the reason they do this is because they want to prevent us from getting a large claim management system which would allow us to negotiate some discounts. Do you have any comments on this?

MR. KOVENER: I cannot imagine a hospital holding a bill if they had an opportunity to get an interim payment. As a matter of fact, we just recently wrote to Medicare because the customary practice is to bill for the entire case. Our understanding is that this is what everybody wanted. We have been criticizing Medicare for insisting on that pattern because it puts hospitals at a significant cash flow disadvantage when a case is in the hospital for a long time. I think insurance companies customarily have tracking systems for admissions and length of stay in any event. Even though the bill has not been received, the insurance company would be well aware of the length of stay and the probable economic impact the length of stay represents. I do not think there is a devious motive, and we would love the chance to send interim bills.

Ms. Rosenblatt challenged me to talk about a chart she put up which showed the trend line in gross revenue as contrasted to expenses.

Gross revenue is something that has been recorded and reported in hospitals, and in many respects is a meaningless measure. Gross revenue in a hospital is analogous to an airline taking the customary coach price for a ticket on the plane, multiplying it times the number of seats sold, declaring that figure to be their gross revenue, deducting all of the specials and other payment arrangements that have been negotiated and agreed to, and reporting that difference as being a meaningful number. At one time it may have been a meaningful number; it may have represented some form of discount. It has not had that significance in many years.

The Principles and Practices Board of the HFMA concluded about two years ago that hospitals should discontinue their practice of reporting gross revenue. We should be reporting revenue in the same way that any other business would and that is the amount that someone has an obligation to pay. The trend to make that change is slow in the industry, although there is a definite trend. The American Institute of Certified Public Accountants has just issued a new proposed audit guide for health care that agrees with that position. I think the audit guide will go a long way toward encouraging hospitals to report revenue in a more meaningful manner. The net revenue number should be as available as the gross revenue number and is a much more meaningful number.

MR. GARY F. MCHOLLAND: Medicare is paying on a diagnostic related group (DRG) basis; and if length of stay is going up with Medicare, then the net revenue is going to be dropping. Also, the net revenue in California should be lowered, because Medicaid is subject to a hospital contract. Therefore, I agree with the comments that the gap is probably narrowing rather than widening.

Mr. Bohon, regarding your study of selection for the effects of HMOs, how did the HMO competition's premiums compare to Aetna's indemnity premiums?

MR. BOHON: They varied widely. Those were generally large customers that dealt with a number of HMOs in many different locations. The general pattern was for employee contributions to be slightly higher for the HMOs than for the indemnity plan. The HMO benefits were usually quite complete. The indemnity benefits varied, but were less rich and less generous than the HMO benefits.

MR. MCHOLLAND: Would you say the HMO premiums were higher?

MR. BOHON: They were usually about the same, perhaps a little higher. In our studies, they are lower in California and a little bit higher in many other places. One case I mentioned that had a big penetration increase was in Texas. There were 11 HMOs involved in that case, some with lower premiums and some with higher.

MR. MCHOLLAND: I want to suggest that a typical underwriting actuarial response to HMOs coming in as competition is to raise premiums to somehow compensate. I think this is a typical response regardless of the difference between the HMOs premiums and the indemnity carrier's premiums. I believe this will lead to a spiral of anti-selection against the indemnity carrier. As the premium gap widens, the indemnity carrier raises premiums. That means non-users or low users will then be biased toward the HMO, even if they were not before. This will be reflected in the experience and, again, the typical underwriting actuarial response is to raise premiums. A spiral results. I also want to suggest that just raising the premiums may not be a good reaction in and of itself for indemnity carriers.

MR. BOHON: That is absolutely right. There are a lot of things to consider when trying to deal with the selections made by employees at open enrollments, and price is certainly one of them.

MR. MICHAEL R. MCLEAN: I would like to ask John Bohon a question on two of his figures. Was the 60% the ratio of the claims cost of those people that joined an HMO to those people that joined an indemnity plan? If so, did you obtain the figure by looking at the claim cost the year before they enrolled in an HMO?

MR. BOHON: Yes, it was for the costs under the indemnity plan for the year before they enrolled in the HMO. It was the ratio of those who joined to the average of the whole group.

MR. MCLEAN: The 14% -- was that the difference you could attribute to the demographic characteristics? Age and sex?

MR. BOHON: Yes.

MR. MCLEAN: The remainder is selection. Do you think that selection will wear off through time?

MR. BOHON: We expect that undoubtedly it will wear off. Some of the selection should drop very rapidly because people join HMOs in order to use the benefits. We have seen instances where mental and nervous benefits are restricted in an HMO, and usage is increasing in the indemnity plan. This is an

example of selection against the indemnity plan caused directly by the HMOs' benefits.

MR. MCLEAN: Mr. Bohon, do you have any comments on age rating employer contributions to combat HMO penetration?

MR. BOHON: It is better than nothing.

MR. MCLEAN: Have you seen it work in the industry?

MR. BOHON: We have one case that age rated employer contributions, and it seems to have kept the HMO penetration stable at about 12%. They say they went through a lot of pain in trying to explain what was going on, but they are very satisfied with their results. I am not sure everyone wants to do that sort of thing. We deal with this case by case. Some employers feel HMOs ought to manage the most severe cases, and we have seen them actually try to steer people the other way. It is going to vary, especially in the large cases I deal with, certainly case by case and probably location by location within case.

MS. JOYCE A. WEISBECKER: I am interested in the cost shifting between indemnity carriers and HMOs, as well as with Medicare.

MR. BOHON: We analyzed the State of Illinois data by payor type: commercial, HMO, and government. There are different trends among different types of payors. There does seem to be some cost shifting going on.

MS. NEELA RANADE: We do the contribution determination for AT&T for the HMOs. We have been doing age adjustments with 300,000 employees. About 6% of them are in HMOs. The younger employees are joining the HMOs. The age adjustment as a means of reducing costs has been more equitable. We know of other large employers who have been much more aggressive; however, it seems in violation of the HMO law. Do you have any observations as to how companies are doing it and how they are getting away with it?

MR. BOHON: The HMO law is difficult to interpret, and I think the general wisdom is that it applies only in mandating situations where an HMO officially requests inclusion in the benefits plan of the employer, which does not happen often. Most situations are dealing with the specific contribution requirements under the regulations which support the Act, which do not apply unless the HMO requests that they do.

MS. RANADE: Specifically, if an employer has healthier employees joining the HMOs, has this entered into negotiations with the HMO?

MR. BOHON: There have been more negotiations with HMOs than ever before. That has generally been the way employers have dealt with any of the legal problems at least currently, because under the regulations and negotiated agreement, a retrospectively experience rated plan is excluded from the more stringent requirement. We have seen HMOs in competitive situations believe it, and the same HMO in a noncompetitive location say it is nonsense. So it really depends on whether you have the option of a second local HMO.

MS. RANADE: Do you mean how much leverage you have in the marketplace?

MR. BOHON: Yes. With companies like AT&T, there is a lot of leverage. We have seen regular reports from the other large telephone companies with leverage in particular locations. They have been very successful in accomplishing whatever their purposes are.

MR. SUTTON: Aetna is a very large provider of indemnity services around the United States. You are also one of the largest HMOs around the United States. With your marketing force talking about selection, antiselection and problems, how do you integrate your own HMO products?

MR. BOHON: We are trying to develop a multiple option approach to integrate those things. The idea we are using is to keep the benefit differential within reason, and to try to get the employee contribution to be about the same for a small benefit differential. Our HMOs' reactions to what we say about what happens are not always favorable. They are trying to be in the forefront by providing policyholder data to support their arguments that people do utilize their services more heavily.

MR. SUTTON: I might add that we adjust employer contributions on occasion for some of our employer clients and do not believe that is out of the realm. First of all, under the federal statutes, even if you were mandated, the equal dollar is being related to any subset of employees. If you provide equal dollars for age 20, that is considered okay as far as matching contributions. I really also think employers have kind of missed the boat and maybe they cannot help it with the unions. We have a large employer client who has never had any selection with well over 50% in HMOs. They just kept reducing their regular indemnity benefit plans so that the HMOs have always been much more expensive than their own benefit plan. As nearly as we can tell, at least measuring age/sex, there is no selection and their indemnity plan costs have not gone out of control at all. My advice to employers is to pick the highest priced HMO you can find and charge the employees a lot of money to join it. If they join it and spend a lot of money, they are going to be high utilizers of those services.

MR. DAVID S. HELWIG: I have a question for Mr. Kovener regarding the declining profit margins for hospitals. I would contend in the past few years with implementation of the DRGs and Medicare that hospitals have spent their time figuring out how to increase net revenues. This is evidenced by the increase in outpatient utilization. Do you see hospitals shifting towards outpatient utilization as opposed to attempting to control costs?

MR. KOVENER: I think hospitals have paid a great deal of attention to controlling costs. I think the new incentives under PPS really encourage that and hospitals were very prompt and effective in doing it. I do not think you can say that the increase in outpatient services is a hospital engineered response to the decrease in inpatient services. While the outpatient trend line is going up very sharply and is an important rate of change for insurance companies, outpatient services continue to be a relatively minor part of revenues of hospitals, and in no way have offset the decrease in inpatient revenue because of the decrease in occupancy.

Regarding an earlier question about the relationship between length of stay and DRGs, I think there may have been an assumption that the DRG payment remains constant and length of stay goes up. The increase in length of stay has been accompanied by an increase in what we would call the case mix index. Each DRG has an index which defines the resources required to treat patients in that

DRG. So as you tend to treat more difficult cases, the case mix index increases. You would expect that as you treat more severely ill patients, your length of stay would also increase. I know the two have moved in the same direction. I am not sure the trend line is necessarily related, but in addition to the factors that the case mix index measures, there is also a very important measure of severity. We believe hospitals are treating substantially more severely ill patients which also would be reflected by an increase in length of stay, and the increase in severity is not measured by the case mix index.

It is important to recognize that the case mix index was designed on the basis of Medicare data. Of course Medicare patients are not typical patients, so it would be very important that you not attempt to use the Medicare case mix index as any form of measurement of change in severity or resource utilization for non-Medicare patients.

I am a little surprised there has not been some effort to develop a broad base case mix index for nonMedicare patients. In our survey of current financial information this year, we did ask hospitals to tell us if they were using a broad base severity of illness index. Almost none reported that they were. It is one of those bits of information that would be very nice to have but is not there yet.

MR. NORMAN E. CROCKER: Does anyone see the seeds being sown for a course correction similar to the step down in hospital length of stay and admissions that happened in the 1984-1985 period?

MS. ROSENBLATT: No. I guess I will say I am not seeing it yet, but I am sure praying for it.

MR. BOHON: My guess is that with what Medicare is doing, we will not see it. I think the big change in 1984 and 1985 stemmed from the imposition of prospective payment from Medicare. The full-time equivalents you see on the charts dropped because the hospital administrator said we cannot afford to have all those people. They probably overreached a little which is why we also had the profits that we showed on the charts. Because it was an overaction, we have had to rehire some of the nurses and other hospital personnel. From what I read in Health Care Financing Administration (HCFA), the people are especially concerned about the great increase in Part B premium. They are also concerned about the catastrophic provisions that are coming up. I think we are going to see the Part B side looked at closely, rather than the hospital side for a while.

MR. KOVENER: I think hospitals have been very willing to have the necessity for hospitalization challenged. We have created HMOs and have done a variety of things. Of course HMOs are supposed to keep people out of hospitals. Hospitals are attuned to the general desirability of reducing occupancy and even closing -- we are doing the consolidations and so forth to facilitate that. We are really trying to work through the system, but the demand is there. If the demand is there, hospitals are going to respond and provide the service. I do not see any decrease in demand. The HMOs were supposed to keep people out of the hospital, and I am not sure the trend line in HMOs is demonstrating that it was anything more than a temporary phenomenon.

MR. CROCKER: I was thinking there were some studies going on within HCFA somewhere as far as a DRG-type system for outpatient services. Is this possibly an alternative way of Medicare paying?

MR. KOVENER: Yes, there is such a study.

MR. BOHON: One of the methods they are looking into is also ambulatory visit groups. There are other ways proposed to categorize the outpatient side of things. I do not believe they are at a point to make up their minds yet. This is something they have been mandated to do for a couple of years now. Their report is supposed to be out, but there is just a lot of study to do. It is not an easy thing to get your hands around. DRG was not either, but it is here and has been now for five years.

MR. ROBERT F. HEMRICH:* I would like to ask a very naive question. Why can't hospitals refuse Medicare patients?

MR. KOVENER: I am not sure that a hospital would want to refuse a Medicare patient, although I must admit sometimes we think it might be desirable. I assume you are asking why, if we are not getting paid enough for the patient, are we treating them? As in any business, a full bed even though not fully paid for is probably better than an absolutely empty bed with no revenue whatsoever. From a purely economic standpoint, it continues to be good business to serve Medicare. It is also the law. Most hospitals are absolutely prohibited from refusing or in any way avoiding service to Medicare beneficiaries. Even if we wanted to, which for the most part we would not be motivated in that direction, we could not refuse a Medicare patient.

MR. SUTTON: Several of you commented on California. My recollection is that the nurses' union negotiated something like a 14% wage increase in California. The trend lines that you showed on the various exhibits exclude that. In Minneapolis the nurses are all going to get 14% or something similar when they come up for bargaining. Depending on how it is spread out, hospital prices may be a couple of percent. When you look at it, nurses make up about half the hospital employment base. I can only see acceleration in the labor component in the hospital market basket in the next couple of years. Could you comment on how much you think that aspect might add to the hospital inflation rate?

MR. KOVENER: You are absolutely correct. The HFMA's survey of current financial information asked for data into the future. To the extent that hospitals are anticipating those increases, it would have been built into the figures that were included in that particular survey. There is another side of this. Hospitals have, over fairly recent years, gone to a fairly heavy mix of registered nurses (RNs) as contrasted to aides and licensed practical nurses (LPNs). There is some reassessment, as the wages that RNs are able to command are increasing very rapidly, as to whether we can have a mix of skills to provide nursing services that would be more cost effective. Certainly hospitals will be looking at those alternatives in the future, so I am not sure the wage rate that RNs have achieved will translate directly into the increase in labor cost.

* Mr. Hemrich, not a member of the Society, is President of Hemrich and Associates in Houston, Texas.