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REINSURANCE UNDERWRITING ISSUES

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- o Regulatory -- Unisex, Privacy, Antidiscrimination
- o Lifestyle -- AIDS, substance abuse, smoking habits, violent death
- o Reinsurance environment -- Where do we go from here?

MR. LAVERNE W. CAIN: Underwriting or risk classification is a process where we identify risks that meet specific criteria. Risks that meet these criteria qualify on a standard basis or perhaps on a "preferred" basis. Risks that don't meet these criteria are classified with an extra premium, or, in some cases, result in a declination. This could be because of the hazards of the individual's occupation, because of an aviation or avocation hazard, or for a variety of medical reasons. Underwriting is a process of discrimination. The word "discrimination" often has a negative flavor associated with it; however, the dictionary definition of discriminate is "to constitute a difference between or to differentiate." Discrimination can show partiality towards someone or can be prejudiced against someone. Thus, the word really shouldn't have a negative flavor.

I prefer to describe discrimination as either fair discrimination or unfair discrimination. I would argue that, for the most part, our risk classification has been and is currently a fair discrimination process. Fair discrimination

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takes into account that as individuals we are subject to different hazards and thus our life expectancies differ. Most companies vary the price of their products by age, sex, and smoking status. Other factors are taken into account during the risk classification process.

Risk classification is, thus, the process of separating into groups (or classifying) potential insureds. In this classification process, risks are placed in relatively homogeneous groups -- that is, groups which have similar probabilities of loss. If the classification process is accurate, insureds are treated equitably since similar insureds pay similar premiums, and these premiums are related to expected loss.

Risk classification is not widely understood by the general public, and objections have been raised concerning some aspects of the process. Some objections focus on equal treatment or equality. I would agree that it is unfair to treat unequals as equals just as it is unfair to treat equals unequally. This is the focus of the unisex debate where some will argue that males and females should be treated the same for life and health insurance even though equity would indicate otherwise.

Some other objections are made on emotional grounds and may reflect the fact that an individual has little or no control over most classification factors.

Unisex

Unisex has been an issue since 1980. Bills have been introduced at the federal level that would prohibit discrimination in insurance on the basis of sex, color, race, religion or national origin. The only controversy relates to inclusion of sex in this bill. The insurance industry did an excellent job voicing its objections to the consequences of unisex pricing. Currently, there is no activity in unisex pricing at the federal level.

At the state level, thus far Montana is the only state that has mandated unisex pricing. For life insurance coverage, many companies are using their male rate structure for both males and females in Montana. For disability coverages, some companies have introduced unisex pricing. If male rates are used,

morbidity experience may deteriorate and financial losses will occur. If a blended rate is used, this may attract more female business and the assumption made on the male/female mix of business may not occur. Currently, the unisex issue is relatively quiet but it could surface again at any time.

Privacy

I would like to briefly discuss privacy and regulation in that area. The Fair Credit Reporting Act of 1972 was probably the first privacy legislation. Insurance companies and the inspection companies had to make some changes to comply with this legislation. This legislation required companies to tell their customers what they were doing regarding investigating customers and their background. Some underwriters thought this would greatly hamper the underwriting process, but they were proven wrong. Then, in the mid 1970s, we had the recommendations of the Presidential Privacy Commission and, particularly, its recommendation to unveil the entire underwriting process to public scrutiny. The industry developed a Model Privacy Law which was adopted by the NAIC. At least 16 states have adopted privacy legislation incorporating some of the principles of the model privacy legislation. Most companies have modified their practices to conform with the principles of the model legislation in all states in which the companies do business, regardless of the state laws. Twelve states have regulations requiring special notice to the applicant when an adverse underwriting decision is made. These regulations generally require disclosing the reasons for a declination or an extra premium.

In summary, privacy legislation has not hampered the underwriting process. In fact, it has made the underwriting process simpler and less secretive. It has helped us explain the whole process and why we need to classify risks. It has resulted in a greater understanding of the risk classification system by the general public.

Anti-Discrimination Regulations

As mentioned earlier, our society often associates unfairness to the word "discrimination." Advocates of special interest groups have argued that our

risk classification system treats a particular group unfairly. Their efforts have been successful in passing anti-discrimination statutes in most states.

Forty-two states have some kind of anti-discrimination regulation impacting risk classification. Thus, only eight states have no special restrictions of this type.

These regulations generally prohibit unfair discrimination and list a number of factors or specific conditions. Often, they include factors such as sex and marital status, and, in California and Illinois, they add sexual preference. Some regulations refer to mental disability and/or physical disability; some specific conditions often listed are blindness or partial blindness and deafness. Many use phrases like "physical disability," "physical impairment," "severe disability," or "physical handicap" which are not clearly defined. Does an individual with a serious heart condition qualify under these regulations? Most companies would say no, but some states might disagree. Some of these regulations provide exceptions where "there is supporting actuarial experience" to justify the treatment. Supporting actuarial data are often not available since some of these groups have not been insured in great numbers. More recently, AIDS testing has been introduced in these regulations.

These anti-discrimination regulations do greatly limit our ability to fairly classify risks in some jurisdictions. They cause distortions in the marketplace and lead to more rules and regulations for other special groups. In effect, they provide subsidies for certain groups. These subsidies could be better provided through broad government programs.

Summary

I believe that most of the state and federal regulations restrict and hamper the risk classification system. They tend to complicate the process and slow it down unnecessarily. The primary exception would be privacy legislation which has helped clarify and improve the process. The end result is that we have less equity than would otherwise be the case. The real concern is that this process of regulation could be extended further in the future. Adoption of unisex pricing could lead to consideration of eliminating age as a primary

factor, and that would destroy our pricing system. Expansion of the anti-discrimination regulations into the major medical impairments such as heart disease and cancer would also destroy the risk classification system currently being used. We need to educate our legislatures and communicate the goals of risk classification.

Our risk classification system isn't perfect and never will be. We should recognize that there are some well-founded concerns about the reliability and social acceptability of our classification process. We should constantly seek to improve our methods. As changes occur in our society, our classification standards should be refined to reflect these changes. Without the ability to classify risks, our insurance mechanism based on equity will disappear. The private voluntary system will no longer survive; thus, maintaining a risk classification system is essential to all of us in the insurance industry.

MR. HENRY C. GEORGE: For many reasons, including rising acquisition costs, changing patterns of mortality, and newly available test modalities accessible to insurers, the direction of life insurance risk appraisal is changing. I propose to call the sum of these changes "lifestyle underwriting." By "lifestyle" I refer primarily to choices freely made by an individual which clearly impact mortality. I am going to focus on three facets of lifestyle underwriting: tobacco smoking, alcohol abuse, and drug abuse. I will also review the underwriting of AIDS.

I want to disclaim any association between "lifestyle" and AIDS at least as far as my perspective is concerned. I recognize that among high risk groups for AIDS, there's been some concern about insurance industry underwriting of "lifestyle." However, I do not consider the thrust of AIDS underwriting aimed at lifestyle, and I do not consider one's sexual orientation, per se, as a basis for risk selection.

With those caveats, I will be talking about what I call the armamentarium of the lifestyle underwriter. My comments will be directed toward the tools that we have to look at the problems of tobacco smoking, alcohol, and drugs.

On the subject of smoking, let me begin by reviewing the historical perspective on tobacco smoking in North America. It was introduced in Europe in the 16th century and, 400 years later, gift cigarettes were distributed to soldiers during the Second World War. Predictably, with the latency period for carcinogenesis among tobacco smokers, 30 years later, Veterans Administration hospitals have large populations made up of people with lung cancer and chronic obstructive lung diseases!

In 1964, the Surgeon General published an epistle on the subject of smoking, warning the public of the health consequences of this habit. In 1980, State Mutual published a landmark paper on smoking, comparing the mortality of cigarette smokers to nonsmokers in their own insured population. Within a few years, most companies came out with nonsmoking pricing. Today, I think it's rare for a company not to make some pricing distinction between cigarette smokers and all other individuals. Included in this "all other" category are non-cigarette-tobacco consumers who are treated, perhaps regrettably, the same as abstainers. I would like to predict it will not be too long before non-cigarette-tobacco consumers are underwritten differently than abstainers. There is certainly emerging evidence to support such an approach, particularly for pipe and cigar smokers.

Turning to a review of smoking surveillance techniques, I would like to quote Bill Lyons of Cologne Reinsurance. He has said that "although progress has been made in identifying the problem [smoking], firm underwriting and claims practices are essential." Since a discussion of claims practices is beyond my expertise, I will confine my remarks to underwriting.

We have a number of tools to identify smokers among our applicants. Both telephone-initiated and traditional inspection reports give us the capacity to ask about smoking. Also, we can put a smoking question on our attending physician statement (APS), and, if we get a thorough APS, we might be able to obtain information as to whether or not the applicant is a current tobacco user. But, for most companies, the basic screening mechanism is the testing of urine.

I would point out quickly that there is no cigarette-specific test. Any of the test modalities we access will test for tobacco use, not cigarette smoking. We

can't differentiate pipe smokers, cigar smokers, or even oral tobacco users from cigarette smokers by virtue of any of the tests currently available to us. That's important because it has direct implications about the design of the application smoking question. You can't use nicotine testing if you do not ask about the use of tobacco in other forms on the application.

The two tests available to us are: a saliva test for thiocyanate and a urine test for nicotine/cotinine.

I believe there are several laboratories in North America marketing the thiocyanate test. This test measures thiocyanate, an end product of the detoxification of hydrogen cyanide, one of the ingredients in tobacco smoke. Thiocyanate would be an ideal substance to use because of its long half life -- much longer than nicotine/cotinine. It is also a very sensitive test. The only problem is false positives; a variety of common foods cause a false positive, as does aspirin. It is my view, having researched the literature and published a paper in the *Journal of Insurance Medicine*, that thiocyanate is not a suitable testing modality because of these false positives. I do not believe we can effectively ask people what they've eaten or if they've taken aspirin.

Most companies who test for "occult" smoking use a urine test for nicotine and cotinine. Cotinine is a metabolite of nicotine which lasts longer in the body and, hence, is more valuable for screening. This test is cheap and sensitive. In fact, if you set the positivity threshold high enough, it is impossible to get false positives from non-tobacco related substances or, most importantly, from ambient or sidestream smoke (the tobacco smoke exhaled by smokers that a person breathes as a consequence of being in proximity to them, particularly in enclosed spaces). The only drawback to this test is that it normalizes after six to eight days. When it normalizes is contingent on the volume of tobacco consumption and the state of hydration. People who are well hydrated flush out nicotine and cotinine sooner than people who are dehydrated. But, in my opinion, this is the only acceptable test at the present time.

I would like to make one final comment on smoking. I am not going to repeat my thoughts about how pipe and cigar smokers should be rated -- that will come, in time, in our industry, I think. I just want to share with you an American

Heart Association statement from 1983. Cigarette smokers who switch to pipes and cigars will continue to inhale and, therefore, fail to lower their risk of cancer and heart disease. The fact is that, in the literature, we designate people who used to smoke cigarettes and who now smoke pipes and cigars as "secondary" pipe and cigar smokers. We distinguish them from primary pipe and cigar smokers, who do not use and have never used cigarettes. Secondary pipe and cigar smokers (so-called reformed cigarette smokers) still inhale. I believe one of the most foolish things we do is to allow those individuals, after a year of *cigarette* abstinence, to qualify as nonsmokers. This makes absolutely no sense and yet, in my informal discussions with colleagues, I find just about everybody does it!

Alcohol Abuse

Turning to alcohol abuse, there are a variety of tools we can use to identify the abuser. I would like to make a distinction here. I'm not talking just about persons who satisfy the clinical criteria for alcoholism. I'm also talking about the heavy social drinker -- a person who thinks six to eight drinks a day (80 to 100 mgs. of pure ethanol) falls within the spectrum of affability!

I'm not going to review all available alcohol tests. I will concentrate on gamma-glutamyl transpeptidase, or GGT. But, let me first cite some data on alcohol abuse.

Trauma-related death, according to the 1984 Edition of *Accident Facts*, is the leading cause of death in the United States under age 45. Only recently, among males, has AIDS supplanted trauma as the major cause of death in certain large metropolitan areas. Violent deaths have a close relationship with alcohol abuse. It's been well stated in the literature that, in at least half of all fatal motor vehicle accidents, at least one of the participants if not both, is/are intoxicated. Also, probably 50% of those who are not "legally" intoxicated have some alcohol "on board" at the time of the event. In suicides and homicides, anywhere from a third to a half of the people are intoxicated and have an alcohol problem as the root of their behavior or suicidal desires. Please note these statistics ignore entirely deaths from drownings, fires and

falls, which are intimately connected, in a great proportion, to alcohol. Alcohol is clearly the single most important etiologic factor in violent death.

I would like to cite a study done by Klatsky and his co-workers, published in the *Annals of Internal Medicine* in 1981. This paper showed a clear relationship between heavy alcohol intake and an increased risk of dying prematurely.

I will also cite a study presented for the first time in the industry several years ago by my friend and colleague, Mel McFall. Mel talked about Lincoln National's alcohol criticism mortality study. By alcohol criticism, we mean cases where there was some criticism of alcohol use. It might be on the basis of driving while intoxicated; it might be something on the APS which alluded to cutting back on alcohol; it may be a statement that someone was in Alcoholics Anonymous or an equivalent program. The first thing Mel told us was that there wasn't any improvement after three decades, as far as comparing the earlier Lincoln National study to the recent one. For persons with alcohol criticism during underwriting, who were issued standard, actual-to-expected mortality, was 250%. For substandard business, where expected mortality was calculated at 207%, the study's showed actual mortality was 303%. This is four tables too much! It's interesting to note that the worst results were on cases where alcohol criticism was more than five years prior to the application date. This suggests that one traditional assumption (that the further we are removed from a criticism event, the better the mortality) may not be true with alcohol. Indeed, if you look at data provided by companies or organizations in alcohol therapy, you can see that the relapse rate, sometimes called "falling off the wagon," is very high. Mel's study also showed that the worst mortality results were under age 40, which is where we do little real underwriting. Finally, the leading cause of death in the study was trauma, which bears witness to what I had mentioned previously.

Another article I cite, by Veshima and his co-workers, was published in the *Journal of Chronic Disease* in 1984. In the conclusion it was stated that significant public health attention must be given to trauma and cirrhosis to prevent continuation of the unfavorable mortality trends for young adult men during the 1980s.

Fortunately, we have the technology to identify chronic heavy alcohol users. This test is GGT (sometimes referred to as GGTP), a liver enzyme test, mentioned earlier. Studies have shown that as alcohol intake accelerates on the horizontal axis, your GGT rises on the vertical axis. This means if you consume, on a daily basis, 80 or more grams of pure alcohol (which is about a six pack of U.S. beer, or six mixed drinks, or a liter and a half of wine), you will likely have an elevated GGT. Such a person is at risk mainly for the traumatic consequences of alcohol, since most people who abuse alcohol never do develop cirrhosis of the liver.

The only study I'm going to show you relative to this is the Malmo Preventive Program. I call this the "Framingham of alcohol abuse." Some researchers in Sweden looked at middle aged men in the city of Malmo to determine what were the prognostic factors for premature death. They looked at all the traditional Framingham-type data: blood pressure, smoking, and so forth. They also looked at alcohol and used GGT assays on all patients. The final conclusion was that GGT was the *single screening variable most strongly correlated with premature mortality.* Thus, if someone had an elevated GGT, it meant more to their mortality risk than whether they were smokers, or whether they were hypertensive, or whether they had high cholesterols, or anything else. And from a morbidity point of view, GGT had a direct correlation with the number of sick days per year. As GGT rose among the cohorts of patients, the number of sick days accelerated. So, there is a direct correlation between morbidity and high GGT, which bespeaks the insidious morbidity implications of alcohol abuse.

The Home Office Reference Laboratory was kind enough to give me data from blood profiles it has run over the last three years. The data covered a quarter of a million profiles, so I think the data are statistically significant! Overall, 8.2% had a GGT over 65 units. There were certain significant subsets, accounting for about 5.7% of all blood profiles. One subset was where one of the other liver enzymes (SGOT or SGPT) and GGT were elevated; the others were where GGT was higher than 90, which is more significant than a borderline elevation. I believe adverse underwriting action is indicated on a substantial number of these subsets. And I think your "hit" rate on GGT will directly correlate with your marketplace. I find, from talking to other companies who

use this test, that as you move up the economic ladder, the "hit" rate drops as compared to a "blue collar" mix.

Drug Abuse

I am going to talk about certain aspects of drug abuse and then discuss the urinary toxicology screen. There are two illicit drugs most often abused by the insurance-buying public: marijuana and cocaine. I don't consider marijuana to be any where near as significant from an underwriting point of view, as cocaine. I would however, consider marijuana users as smokers, not non-smokers, for risk classification purposes.

The subject of cocaine is very serious. I make a big distinction between cocaine and other drugs of abuse, like opiates and hallucinogens, which include marijuana. The reason for my distinction is that cocaine abuse is widespread and growing among upscale professional and executive individuals -- exactly the market we compete for. Cocaine, more than any drug of abuse, is the one that plagues us in underwriting.

One statistic cited in a monograph published by the Federal Drug Administration (FDA) says that 16% of persons in families with upscale incomes have at least sampled cocaine -- a significant number. If you do a lot of business in the executive professional circles, particularly on the two coasts, and doubly so if you deal with "high tech" engineers in Silicon Valley, or floor traders and stock brokers in New York or professional athletes anywhere, you doubtlessly have a fair number of cocaine users in your *standard* risk subset!

To review historical perspectives on cocaine, coca has been chewed for almost a millennium by the Andean Indians in South America. It was introduced in Europe in the 16th century and quickly banned by the Church. Nonetheless, 300 years later, Sigmund Freud wrote a monograph praising cocaine. We find at the same time that cocaine was actually marketed by pharmaceutical companies in the United States. Thereafter, there began a series of state and local laws, eventually federal laws, prohibiting and restricting cocaine and making its possession a misdemeanor or felony, and sale to minors potentially a capital crime. Nonetheless, in the last two decades, particularly since 1980, we have

had an epidemic of cocaine use. Amphetamine or "speed," which was the stimulant used in the 1930s through the 1960s in lieu of cocaine, fell out of favor, particularly because of its toxicities. Cocaine took over.

Cocaine is a deceptive stimulant. It activates a reward system in the brain, the same reward system which is activated by nicotine, and it is quite capable of overriding normal impulses toward life sustaining activity. When scientists give cocaine to laboratory rats, and then give them a choice between food and cocaine, the rats take the coke, abstain from the food, and die of malnutrition. Cocaine addiction has profound implications not only physically, but also socially, psychologically and economically.

Cocaine is administered in a variety of ways. About 60% of users snort; hence, the name "nose candy" is one of the generic terms used for cocaine. 30% "freebase" cocaine, which is a euphemism for smoking it, and at least 20% use it intravenously, "shooting it." There is some overlap here because many snorters also occasionally freebase.

The facts about cocaine and its impact on our society are startling. There has been a fourfold increase in cocaine related deaths since 1976, and a threefold increase in cocaine E.R. admissions. 70% of abuse cases treated clinically involve multiple drugs and the number one *second* drug is alcohol (marijuana and the opiates are also involved). 60% of hospital admissions related to cocaine were for snorting, and so the argument that snorting is innocuous, compared to smoking or "shooting," just is not true. Some people do not believe there are withdrawal consequences from cocaine use, but that's also not true. Dr. Reese Jones, whose paper "Pharmacology of Cocaine" appears in the National Institute of Drug Abuse monograph, says the distinction between physical and psychological dependence is more semantics than neurochemistry! There is significant dependence, with a full spectrum of severe withdrawal symptoms experienced by those who repeatedly use cocaine.

The list of cocaine consequences is very broad. There are acute medical problems such as seizures, arrhythmias, and heart attacks. There are also chronic problems including paranoia, hallucinations, suicidal ideation, and nasal septal damage. Then, there is a host of other consequences, such as

criminal activity, undesirable associates, and a strong liaison between cocaine use and other types of drug abuse, most notably alcohol and other illicit drugs.

There is a test marketed by laboratories vendoring in our industry which allows us to screen for cocaine in urine; it's a rather sophisticated "fail-safe" procedure involving both an enzyme immunoassay and thin-layer chromatography. This involves checking the sample in two different media, which assures virtually no false positives. The lab I talked to regarding this material says it can detect cocaine metabolites up to three days after use, particularly if use involved "shooting" or smoking, since those involve more potent doses than snorting (intranasal ingestion). The fact that heavy users tend to stay positive longer means that when we get a "hit" (positive test) on routine screening, we probably have someone who's not just recreationally snorting on the weekend! I'm aware of several companies using the cocaine screen routinely. I talked to the medical director of one company, a large eastern mutual. He told me of the users they detected, and about the uniform response to being detected: to withdraw the application (quietly).

If you are interested in a bibliography on cocaine, I suggest, first and foremost a National Institute of Drug Abuse monograph, #50, edited by Grabowski, called "Cocaine Pharmacology, Effects and Treatment of Abuse." This is an excellent paper, probably free or minimally-priced from the Federal Drug Administration in suburban Washington. There are also several books you can buy at local stores, such as *The Coke Book* by Chilnik, *Cocaine, The Mystique and the Reality* by Phillips & Wynne, and *Cocaine: A Drug and Its Social Evolution* by Grinspoon and Bakalar. All three are excellent, describing the non-technical data base for cocaine toxicity. Al Rodriguez, Vice President at BMA, wrote a short synopsis of cocaine toxicity published in the BMA *Reinsurance Monitor* called: "Cocaine: The Good, The Bad, and The Ugly." If you are interested, you could probably get a copy from BMA. Finally, a little known but highly desirable compendium of papers called *Cocaine, a Symposium*, published by the Wisconsin Institute on Drug Abuse, was presented last year at a cocaine seminar in Milwaukee. You can get a copy of this for $10.00; I recommend it highly, particularly for your medical staff.

AIDS

My final subject is AIDS (Acquired Immune Deficiency Syndrome). I will review various aspects of the disease. Speakers on the subject of AIDS today are using the image of an iceberg to discuss the extent of the AIDS dilemma. There are supposedly 23,000 cases as of April 1986, and given the lag time in reporting from the Center For Disease Control (CDC), the estimated number of cases in the United States today is greater. But underneath the tip of the iceberg, we have hundreds of thousands of patients who have either AIDS Related Complex (ARC) or multiple enlarged lymph nodes, a phenomenon now dubbed GLS (Generalized Lymphadenophathy Syndrome). Finally, potentially one and a half to two million Americans are positive for the antibodies to the HTLV-III virus, which is the causative virus in AIDS. This is a very significant population -- particularly the antibody positive people who are otherwise healthy. These people, based on our knowledge of the potential latency period of AIDS and of the other diseases linked to this virus, will remain in this state for several times the mean duration of the contestable period of a life insurance policy! This suggests a tremendous opportunity for anti-selection.

Dr. James Curran, the head of the CDC AIDS program, said AIDS will pass diabetes and chronic obstructive pulmonary disease in terms of the number of years of life loss in 1986; that is very significant and we already know that AIDS is now the leading cause of death in young males in New York and San Francisco.

Dr. Robert Gallo, with the National Cancer Institute and one of the great experts on retroviruses, has said we cannot predict who will and who will not develop AIDS in a population which is positive for HTLV-III antibodies. That's important. Formerly, it was thought 5% of antibody positives would get AIDS; then, it became 10%, then 20%, and now, no one is sure. I urge you not to be distracted by just these numbers because the potential consequences of HTLV-III infection are broader than AIDS alone. Dr. Gallo, in fact, said that the long range effects of this virus cannot be predicted. We know, for example, that the AIDS virus is neurotrophic -- it crosses the blood/brain barrier and can find sanctuary in the central nervous system. If it's like other potentially neurodegenerative viruses, it may remain latent a long time before proving fatal. We also know that the HTLV-III virus is a sister virus to HTLV-I and

II, both of which are thought to be oncogenic viruses. In fact, a speaker at a recent AIDS program showed a model describing how HTLV-III infection could be a precursor to an oncogenic process which could result in a long latency period followed by lymphoma-leukemia in some people who are antibody-positive.

In a paper published two months ago in the *Annals of Internal Medicine,* a team of researchers, Melbye and his co-workers, looked at a population of people who were positive for HTLV-III but who did not have AIDS at the time they were studied. In this population, of those who were positive for roughly three years but had not developed AIDS, 91% had inverted helper/suppressor T-cell ratios. This means they were immune-impaired to a degree, because their cell-mediated immunity was compromised. We all know from treatment of kidney transplant patients, who are given large doses of immunosupressive drugs, there is a high cancer incidence associated with such diminished immunity. Thus, antibody-positive people are at high risk even if they don't develop AIDS.

As far as AIDS underwriting is concerned, there are three things we are doing. First, we are being very attentive in working up cases that have characteristics suggesting a high risk, particularly where there are multiple sexually-transmitted disease episodes, and also protracted and unexplained infections and non-specific symptoms like weight loss, fevers, etc. Second, we are adding AIDS questions to applications in jurisdictions where they are allowed.

Third, many companies are beginning to do AIDS tests, again in those jurisdictions where tests are permitted. There are two AIDS antibody tests, the ELISA test and the Western Blot test. The ELISA test is the one we read about all the time; it's a cheaper, faster test than the Western Blot, and it's being performed through both major laboratories vendoring to our industry. Western Blot is a different technique for antibody analysis; it's a companion to ELISA and by the protocol of the Home Office Reference Laboratory, is run when two ELISA tests are positive on the same blood sample. These, I remind you, are tests for antibodies produced by immune system stimulation caused by exposure to the virus.

Some critics have chastised us for using an "unreliable test." To those critics, we respond with a quote from Dr. Gallo, who says "Confirming positive

ELISA tests with Western Blot tests assures us virtually no false positives." There is no longer any legitimacy to the argument that the tests we use are unreliable. The ELISA/Western Blot sequence is more reliable, in terms of not producing false positives, than almost any test used in our industry that I'm aware of. Hence, it is highly appropriate for screening of life insurance risks.

MR. MELVIN C. MCFALL: According to the program, my assignment is to discuss the current reinsurance environment and possible future trends. Since the panel itself is on Reinsurance Underwriting Issues, I will try to focus most of my attention on *underwriting* matters and relate those to the reinsurance environment whenever possible.

Let me begin with an assertion that I think is fundamental to the future of underwriting and to the future of the reinsurance business: accurate pricing assumptions will become more critical than ever before. How do I reach that conclusion? I think the majority would agree that profit margins on most life insurance and life reinsurance products are decreasing, principally because of competition. Decreasing profit margins mean that there is less margin for error in pricing. Less margin for error in pricing means that accurate pricing assumptions are more critical than ever before.

In the life reinsurance business, the mortality assumption is *by far* our most important assumption. Reinsurers assume other risks, obviously, but our financial results depend to a very great degree on mortality. If the reinsurer has a good year, it's probably because their claims were favorable; if the opposite is the case, it's probably because claims were unfavorable. The need to predict mortality more accurately was a key factor that motivated Lincoln National to develop a new underwriting manual. The need to *stabilize* mortality was a key factor behind some of our actions in the facultative market. Predicting mortality and stabilizing mortality both relate to a general need to underwrite for sound financial results.

Direct writing companies may not have quite the pressure on mortality assumptions that reinsurance companies have, but discussions with some of our clients suggest that their margins are almost as thin as ours. In this era of

universal life, it seems to me that the competitive pressures are on interest rates, mortality charges and expense loadings. It appears that interest rates are already about as competitive as they are going to be; in fact, some people probably would say that interest rates are now too competitive. So competitive pressures, if they haven't already, are bound to shift from the interest rate environment to the mortality charges in universal life.

If indeed, we are going to face increasing pressure to achieve mortality objectives and to improve our ability to predict mortality, then I think it's reasonable to expect a number of developments in the future.

1. Less facultative shopping and higher facultative rates.

2. Further refinement of the underwriting process.

3. More judicious use of various risk selection tools.

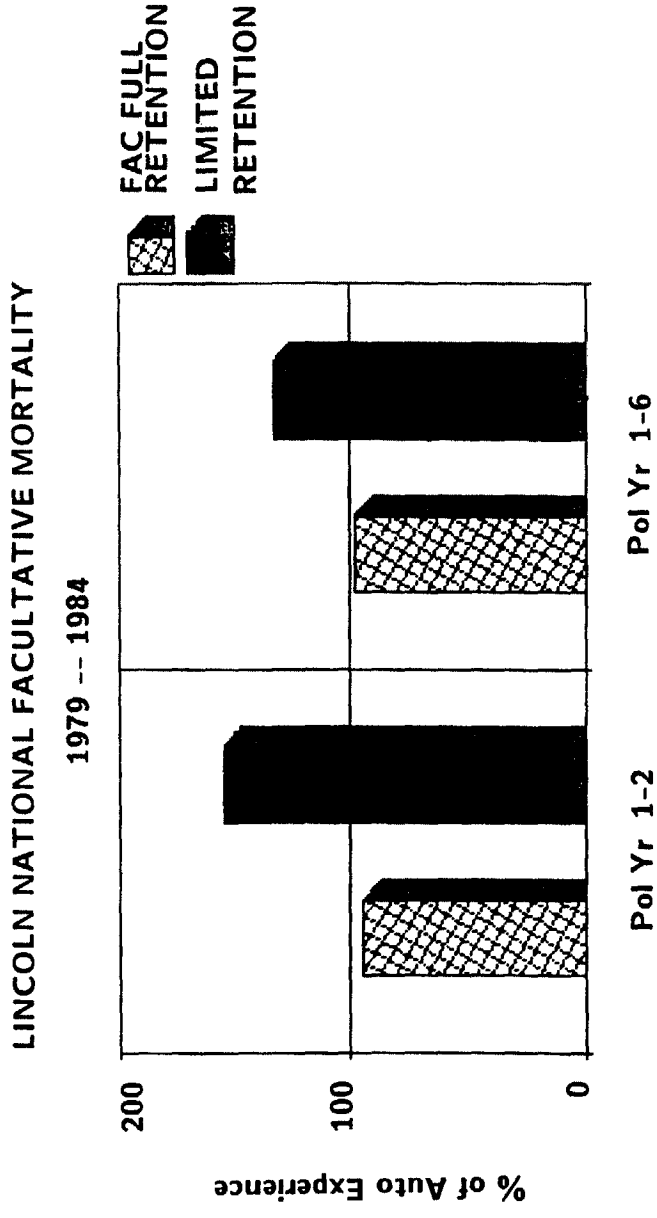
4. Increased coordination of pricing and underwriting.

Let's begin by looking at some recent history in the area of facultative reinsurance. The facultative market has been a key battleground for reinsurers fighting to regain or hold market share. Pricing and underwriting were the key weapons in that battle, and select and ultimate term plans provided all the ammunition needed.

At Lincoln National, we monitor our mortality experience in two categories of facultative business: full retention, and partial or zero retention business. The latter category includes the business from the now controversial shopping programs. Much of the growth in the facultative market has come from shopping programs.

Illustration A compares our mortality on limited retention business to our mortality on full retention business. The horizontal line that cuts through the chart represents mortality on automatic reinsurance business. The limited retention experience is made up primarily of business that is typically shopped.

ILLUSTRATION A



As you might expect, mortality on full retention business corresponded closely to mortality on automatic business; in fact, it was a little better and we anticipated that.

Shopped business was a different story, as evidenced by the mortality experience of our limited retention business. Mortality on this business was 35% higher than on our full retention facultative business. In fact, during the first two policy years, it was 64% higher.

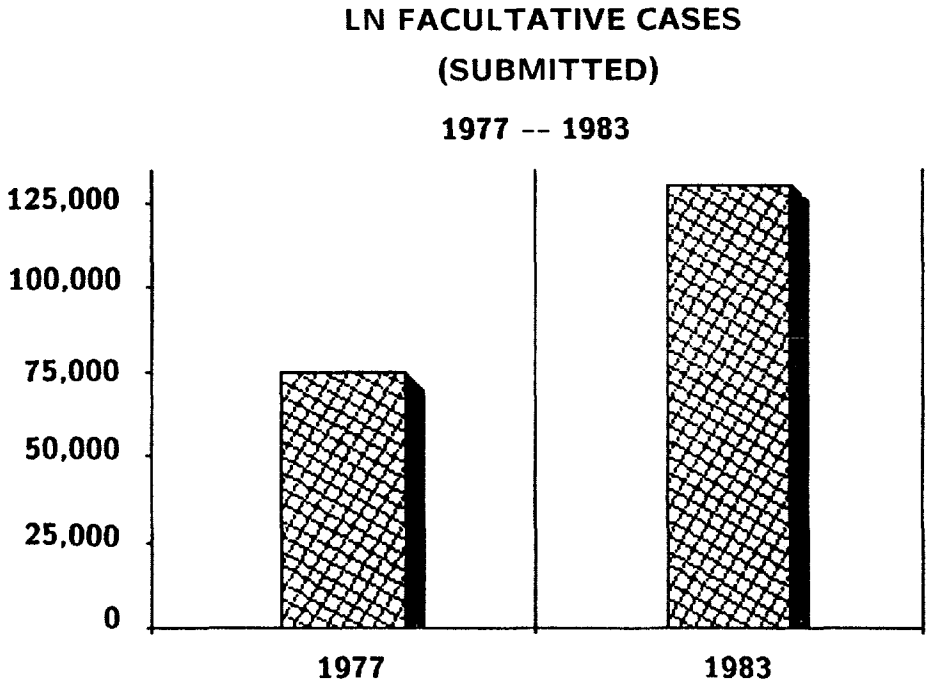
It appears that Lincoln National's experience is not isolated. A recent intercompany reinsurance mortality study indicated that our experience was fairly representative of that of our competitors. One of the findings from that study was that mortality on shopped cases exceeded mortality on full retention cases by 50% in most of the age groups studied.

In retrospect, this mortality experience should have been predictable. There were two key factors operating. First there are few, if any, clean standard cases in a block of shopped facultative business. By contrast, direct business is comprised primarily of clean, standard risks. So the mix of business in a facultative program is far different -- far less favorable -- from that typically encountered by a direct writer. Because of the less favorable mix of business, mortality on shopped facultative business will be higher no matter how the business is underwritten by the reinsurer. In fact, I think that's one of the reasons that this kind of business is excluded from the Society's annual mortality studies.

Second, shopping is a form of anti-selection, intentional or unintentional, by the direct writer against the reinsurer. Because of bidding pressures, the reinsurer with the lowest bid gets the case. These cases thus stand a better-than-average chance of being under appraised. Illustration B shows how we were affected by the explosion of reinsurance shopping.

From 1977 to 1983, the facultative business at Lincoln National sky rocketed. Our case load grew by a factor of 73%, reaching a peak in 1983 of over 130,000 life reinsurance cases. Unfortunately, it took very aggressive underwriting to compete in this kind of environment. This, plus the anti-selection inherent in

ILLUSTRATION B



shopping programs, led to the mortality experience for Lincoln National and other reinsurers that was mentioned earlier. We obviously could not afford to continue in these programs without making some changes.

There's is an old proverb that says that there are two fools in every market; one asks too little, and one asks too much. Shopped facultative business was starting to make us all look a little bit foolish. So, in late 1982, Lincoln National began to take some corrective actions.

The first thing we did was to reconfirm our underwriting objective, which is to underwrite for sound financial results. We acknowledged that plan design is critical to the quality of business. This led us to make some fairly significant changes in our pricing assumptions for certain types of products, particularly select and ultimate term. We also began declining to accept most zero retention business. We hoped that this action would foster more of a partnership environment between ourselves and our clients, a partnership I think is crucial to the long term success of the direct writer/reinsurance relationship. We even withdrew from shopping programs where our placement rates were clearly unacceptable. Further, we increased facultative prices in many cases to reflect the kind of mortality that we expected given our past experience and the changes that we were making. A number of our competitors seem to have taken similar actions.

Now what do higher prices and tighter facultative requirements mean for direct writing companies? For one thing, more of the complex cases will be underwritten by the direct writer in-house, and this will be good for the industry as a whole. Shopping tended to shift the decision making on the complex cases to the reinsurer, and too many underwriters became simply bid takers. Underwriting, in my opinion, is one of the foundations of our business, and the industry just can't afford to lose that talent. The more experts we have practicing the art of underwriting, the more the underwriting process can be improved. This will mean better mortality and more competitive products for all of us.

Let's move on to another development that I think will occur. As competitive pressures intensify, a natural tendency will be for insurance companies to look

for ways to refine the risk classification process. By doing so, companies will improve their chances of attracting the more favorable risks. In recent years, we've seen this phenomenon in the development of smoking-distinct rates. I think Mr. George referred to this today. Today it is difficult to name an insurance company that doesn't offer lower rates to nonsmokers. Why? Probably the most important reason is that we have compelling evidence the mortality of smokers is substantially higher than the mortality of nonsmokers. The differences are illustrated in Illustration C, which shows Lincoln National's mortality experience by smoking habits for direct standard cases.

An actual to expected ratio for smokers equal to twice that of nonsmokers has emerged fairly consistently in both Lincoln National's studies and in industry studies. I would submit that there is a second important reason for differentiating rates by smoking habits: companies who do not differentiate are likely to attract a disproportionate share of smokers. That, in turn, would lead to higher mortality than anticipated along with an impaired competitive position on nonsmokers.

A logical next step in the risk classification evolution would be preferred risk classes. I think it is fair to say that we are seeing an increase in the popularity of preferred risk classifications already. And a properly designed preferred risk program may enable a company to attract more of the most favorable risks. Lincoln National has offered preferred risk discounts to nonsmokers with favorable coronary risk profiles since 1979. Illustration D shows the mortality results that have emerged from that preferred risk program.

Specifically, Illustration D displays our experience relative to the 1965-70 basic tables on direct standard business. We show results for four ranges of coronary risk profile scores. Those with the most favorable total profile scores, our preferred risk group, experienced very favorable mortality, only 46% of the 1965-70 select rates. Our mortality on those with medium or average profiles was higher, but still fairly favorable, 86% of the 1965-70 basic tables. The vast majority of the risks in that category are nonsmokers. The Illustration shows vividly that those with poor profiles had dramatically high mortality -- over three times as high as those with the best profiles, and almost twice as high as those with average profiles. Finally, the experience

ILLUSTRATION C

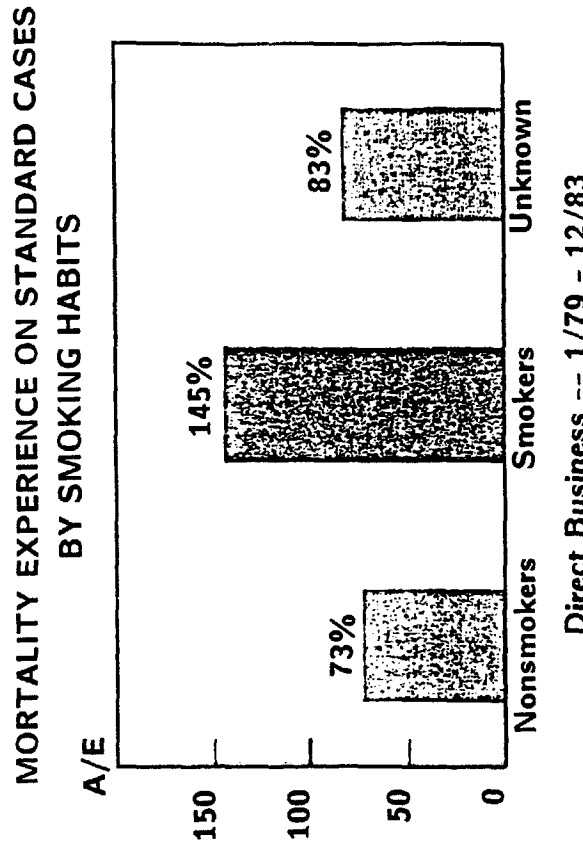
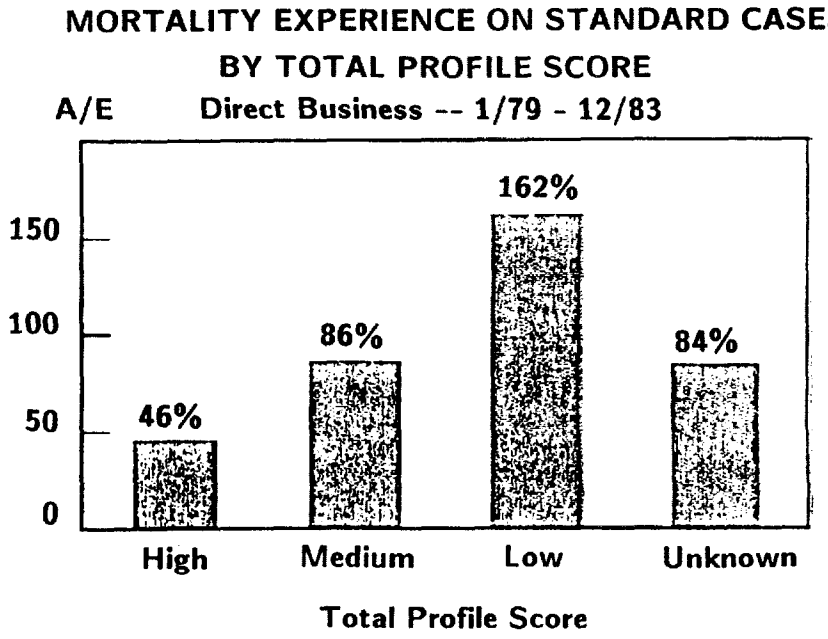


ILLUSTRATION D



on those with unknown profile scores was more favorable than we might have expected. Virtually all of this business is nonmedical where we simply don't have enough information to evaluate the coronary risk profile. This limited evidence does suggest that you can successfully attract, or at least segment, the preferred risks. While preferred risk programs do have some marketing advantages, they also have some disadvantages that must be recognized. One disadvantage of our program is that it has increased field pressure on our underwriters. Other companies with preferred risk programs have shared similar experiences with us. Pricing of the nonpreferred risks also must be considered. When you in effect skim off the best risks from a class -- in Lincoln National's case, it was the nonsmoker class -- the mortality on the remaining, nonpreferred risks is obviously not going to be as favorable as the mortality on the entire block before the better risks were separated. This has to be recognized in pricing. Lincoln National's experience illustrates this principle very well. Our mortality on all nonsmokers is about 73% of the 1965-70 basic tables. Our mortality on preferred nonsmokers is only 46% of the 1965-70 basic tables and our mortality ratio on nonpreferred nonsmokers is 86%. Yet another consideration is that policy change rules must be designed to minimize anti-selection. If it is too easy for existing policyholders to obtain lower rates, then the result is to permit rate reductions on a significant portion of your business without any way to obtain offsetting rate increases on the remaining block.

In my first two predictions, I was essentially anticipating, I believe, that trends already under way would continue. My next prediction may be more controversial because it anticipates a reversal of a recent trend.

In any event, I think that competitive pressures may very well dictate increased use of various risk selection tools to control mortality. I believe this despite the fact that the trend in recent years has been distinctly in the opposite direction. For example, we have seen dramatic increases in nonmedical limits in the last several years; in many cases, I believe those increases were greater than could be justified by protective value studies. We have seen similar increases in limits for other underwriting requirements -- paramedicals, inspection reports, attending physician statements, electrocardiograms, blood tests, etc. Clearly, expense control has been a key factor in motivating

most of these liberalizations; and the pressure for expense control will be at least as intense in the future as it has been in the past. Marketing pressure has probably been a factor in explaining more liberal underwriting requirements as well.

Why would I predict a possible reversal of this trend? There are three reasons. First, the concern over AIDS has accelerated interest in laboratory testing and rekindled enthusiasm for inspection reports, attending physician statements, and physician exams. Second, I think the trend has slowed down considerably in the last two to three years. We just haven't seen, for example, recent increases in nonmedical limits of the magnitude that we saw fairly regularly in the late 1970s and the early 1980s. In fact, at the AIDS seminar, held in conjunction with this meeting, the attendees at the seminar were asked how many of their companies had reduced nonmedical limits or were seriously considering doing so, and five or six actuaries raised their hands. In my opinion, two or three years ago, it was unimaginable that a company would consider reducing its nonmedical limits -- but it is happening today. Third, I think the pressure to improve mortality, since it is an important ingredient in our over-all pricing, will force us to take a harder look at the protective value of various risk selection tools. At the annual meeting in 1985 and again at this session, Mr. George presented convincing evidence of the protective value of blood tests, particularly the GGTP component. I'm convinced that motor vehicle reports will save several dollars in claims for every dollar invested, especially at the younger issue ages. Also, Lincoln's National's protective value studies have consistently shown that the value of attending physician statements is considerable. Further, with the difference in mortality between smokers and nonsmokers, it seems rather clear that a nicotine screen will pay for itself several times over, even when fairly modest amounts of insurance are involved.

Mr. George discussed the nicotine screen in some detail, so I will not spend much time on it. But, I do think that in addition to AIDS, the misrepresentation of smoking habits is one of the most serious underwriting and pricing issues in the industry today. How many of you know at least one smoker who has a nonsmoker policy? Lincoln National has taken the position that

misrepresentation of smoking habits is a material misrepresentation that is grounds for rescission of the policy.

What would increased use of key underwriting requirements mean for reinsurers? The obvious consequences is that reinsurers would benefit from the improved mortality just like the direct writer. This benefit would presumably be reflected in lower reinsurance rates.

My original assertion that competition will lead to the need for more accurate pricing assumptions leads me to my final prediction: there will need to be better coordination between pricing and underwriting than there generally has been in the past. I believe that the actuary and the underwriter are simply going to have to communicate better and understand each other's jobs better than they have before in many cases.

Smoker/nonsmoker distinctions have significantly increased the need for the pricing actuary and the underwriter to communicate. Perhaps a simplistic example will illustrate what I mean. We'll begin with a few simple, but I think fairly representative assumptions, and show how the underwriter's action depends to a significant degree on the assumptions used in pricing.

First let's assume that aggregate mortality (mortality on smokers and non-smokers combined) on standard lives is 100% of some experience table, such as the 1975-80 basic table. Second, we'll assume that smoker mortality is twice that of nonsmokers for both standard and substandard lives. This has been a consistent finding in Lincoln National's studies. Third, we'll assume that about 2/3 of the individuals in each risk classification are nonsmokers. Finally, we'll assume that the underwriter ignores the smoking factor in assessing the risk. In other words, the underwriter does not increase or reduce the risk classification because of smoking habits.

Generally speaking, a company can choose one of three mortality bases for its premium rates. It can base its rates on aggregate mortality (smoker/nonsmoker combined), nonsmoker mortality, or smoker mortality. Using our simple assumptions, we can develop a table (Illustration E) that shows relative mortality rates -- that is, expected mortality rates compared to 100% aggregate mortality

for standard business -- for several table ratings and for all three possible pricing bases.

Most underwriting manuals still express ratings as multiples of aggregate mortality -- smoker mortality and nonsmoker mortality combined. Although Illustration E is a bit simplified, it can be used to convert a mortality rating expressed on an aggregate basis to a more appropriate rating that recognizes the mortality basis used in pricing and the smoking habits of the proposed insured.

For example, we would expect a group of nonsmokers with a table D impairment to exhibit mortality of about 150% of aggregate standard mortality. If aggregate mortality is used in calculating substandard premiums, then a table D nonsmoker risk could be given 50 credits for nonsmoking, thereby lowering his or her risk classification to Table B. Alternatively, the Table D nonsmoker could be given a standard smoker rate, which also has, under our assumptions, a 150% mortality expectation. The reverse would be true in the case of a smoker. You would have to assign debits for smoking to arrive at an appropriate rating.

It is not unusual, especially on universal life plans and many renewable term plans, for companies to calculate substandard premiums as multiples of the standard rates. But in most cases today, what we call standard rates are really smoker rates, and Illustration E shows how conservative this practice is when the proposed insured is a nonsmoker. If substandard extras are based on smoker mortality, a nonsmoker with a table H impairment could be given up to six tables of credit to bring the mortality underlying his or her classification from 450% to a more appropriate level of 225%. Instead of a Table H rating, you could offer Table B. If your company is having some difficulty in placing substandard cases on nonsmokers, you might want to check the basis for your substandard extras. There may be an opportunity to improve ratings for nonsmokers on an equitable and financially sound basis.

I've stressed that Illustration E is simplistic, but I do think it demonstrates fairly well that the underwriter's assessment of a risk depends significantly on the mortality basis used in pricing.

ILLUSTRATION E

Illustrative Relative Mortality Rates
(Standard Smokers and Nonsmokers Combined = 100%)

Risk Classification	Mortality Basis Used in Pricing		
	Aggregate Mortality	Nonsmoker Mortality	Smoker Mortality
Standard	100%	75%	150%
Table D	200	150	300
Table H	300	225	450

I've covered a lot of ground here, so permit me to summarize briefly. Starting with the assertion that pricing actuaries will be virtually forced by competition to improve the accuracy of their pricing assumptions, I developed four predictions for the future.

1. We will see less facultative shopping and higher facultative rates.

2. We can expect further refinements in the risk selection process designed to attract more of the favorable risks.

3. We may see increased use of cost-effective underwriting requirements.

4. We'll need better coordination of pricing and underwriting than has generally been the case in the past.

I thought it would be difficult to speculate about future trends and it was, but I also found out that it was a lot of fun. And, after all, no one can tell me for sure today that I'm wrong about these predictions. Hopefully, in a few years, you'll be considerate enough not to remind me how incorrect they were.

MR. JAMES W. PILGRIM: I have a comment on the actuarial/underwriting team and then a question for Mr. McFall.

About 20 years ago Roland Dorman wrote a paper that was published in a publication that was put out by a firm now known as Equifax. I felt that this paper was very good. In it he demonstrated that if an underwriter undercut each risk by just one table, that the point at which the business makes a profit is deferred by about 7 or 8 years, and that if an underwriter undercut by two tables there would never be a profit.

My question for Mr. McFall is: when you looked at your limited retention facultative business relative to your automatic business, did you analyze the claims by cause of death?

MR. MCFALL: To my knowledge, we didn't do that extensively. I know from having seen a number of these claims, though, that you tend to see many early

duration claims and many accidental deaths in the facultative market. In fact, our mortality experience has improved somewhat in the last few years, and I attribute most of the improvement to the fact that we're seeing fewer large accidental claims. I don't have any numbers that I can give you. But, from my experience in reviewing these claims, I would predict that, if we had looked at the mortality on limited retention facultative business by cause of death, we would have seen some large amount early duration claims, many of which were related to accidents.

MR. PILGRIM: That's been our experience -- we've also had excess traumatic deaths in the early durations. In a prior panel that Mr. George and the medical director from Federal Kemper were on, they demonstrated that subsequent to their use of the GGT test, they had much better early duration mortality experience by reducing the deaths from traumatic causes. There is another experiment I see coming in the future. We see the need for this type of testing in our own experience. I am referring to the way we selected risks who subsequently died of cancer. I don't think our selection criteria for sorting out those risks are as good as they should be. In the last few years, we've seen some early duration cancer deaths. Looking at all the underwriting evidence we would probably say that it was impossible to have predicted that force. However, I think that's the next area that we really must look at. I would like to ask Mr. George if he had any comments on how we might improve the selection process to identify cancer risks.

MR. GEORGE: The technology for screening for certain proteins, referred to as tumor markers, is being researched extensively in clinical medicine, because such markers have been identified for several decades; now, in insurance medicine, the laboratories that serve our industry are doing similar research in this area. I believe we are still some distance from having reliable, cost-efficient technology available. But certainly in the next three or five years, we could have the capacity to screen for tumors. If you look at the select period cancer deaths we get, on ostensibly healthy individuals, you'll find a clustering of certain neoplasms: lung cancer, pancreatic cancer, leukemia and lymphoma. Those four subsets of cancer I think are within the spectrum of cancers we may one day screen for with tumor markers. All we need now is

the technology, which is not fraught with false positives from nonmalignant diseases. The research is ongoing.

MR. FRANKLIN C. CLAPPER, JR.: Is there a difference in the nonsmoker/smoker mortality relationship for standard versus substandard lives?

MR. MCFALL: Our experience shows that the mortality of smokers is about twice that of nonsmokers, and that's for substandard as well as standard. That's somewhat of a surprise because for the last several years we have used smoking to some degree in our risk classification process. We give credits for nonsmoking and debits for smoking, and, despite that, the mortality on a rating adjusted basis is still 2 to 1. Thus, evidently, cigarette smoking in conjunction with most of the rated medical impairments has a synergistic effect that causes the mortality to go up.

MR. CLAPPER: Doesn't it differ by impairment, though?

MR. MCFALL: Yes it does. We try to recognize that by giving more or less credit for nonsmoking depending on what the impairment is. With epilepsy, for example, I believe most of the excess mortality is due to accidents, so we don't give much credit or debit for smoking in rating those. Coronary disease is a different story.

MR. WILLIAM G. BOYD: I'd like to ask a broad question. One of my least favorite chores is to price a product which has a preferred class because every preferred class is defined somewhat differently. Also, underwriting practices and field pressure vary somewhat among companies. Following up on what was just discussed -- that smoker mortality, even for substandard cases, is about twice what it is for nonsmoker mortality -- and given that most preferred classes are preferred nonsmoker classes, wouldn't it really make as much or more sense to have a preferred smoker class rather than a preferred nonsmoker class?

MR. MCFALL: I think it does make sense. The problem is finding fairly objective criteria to evaluate the preferred smoker. One of the most obvious ones would be number of cigarettes smoked or type of tobacco usage, and those

questions are difficult to evaluate other than by just taking the word of the applicant. Other coronary risk factors could be considered, but that somewhat precludes the use of non-medical underwriting to make the distinction. So, I think companies that have considered preferred smoker classes have had difficulty identifying reasonable criteria to use to separate the preferred smokers from the non-preferred smokers.

MR. GEORGE: I agree. There is no acceptable criteria for separating "preferred" from "nonpreferred" smokers in terms of their smoking habits per se. This is because everything depends entirely on the honesty of the applicant, which is highly suspect considering the motive for downplaying the quantity, the type, etc., of smoking.

MR. PADDON: One of the most far reaching things mentioned at the AIDS seminar had to do with the regulatory situation. In California and Wisconsin, there has been no change in the last year or so. Also, there has been no charge in Wisconsin's certifying the validity of the HTLV-III test for underwriting purposes. Further, there was discussion of the Washington D.C. regulation. Vern, would you summarize the regulatory situation there and the implications that it might have?

MR. CAIN: You mentioned that the California and Wisconsin laws prohibit use of the HTLV-III test. The California law applies to determination of insurability or employment. Some companies are using the T-cell test in California. This test, rather than testing for the HTLV-III antibodies, checks to see if the immune system has been impaired. The only additional point I would make about the Wisconsin law is that it does have a provision that allows the Commissioner at some point in time to decide that, if the HTLV-III testing proves valid, it can be permitted. That hasn't happened, of course, at this point in time.

The proposed law in Washington, D.C. was approved last week on a preliminary vote, 12 to nothing. Most people feel that it probably will pass, within four weeks or so when it comes up for the second vote. It is tougher then the California or Wisconsin Laws since it not only prohibits the HTLV-III test, but also the T-cell test and all other tests. It goes beyond even the testing. It prohibits the use of surrogate factors -- such as age, marital status,

residence, occupation, sex or sexual orientation -- for the purpose of predicting whether an individual may in the future develop AIDS. It does, however, have a provision that, after five years from the date the bill is passed, an insurer could apply to the Superintendent of Insurance for permission to rate individuals who test positive for exposure to the AIDS virus. It would not allow you to outright decline -- this provision would allow you to file for permission to the Superintendent who would have to rule on that. The Superintendent would be somewhat influenced, I think, by what kind of rating schedule you supplied and his views at that time with regard to the validity of AIDS testing.

The Washington D.C. bill is a particularly difficult one for the insurance industry. The gay community considers it somewhat of a model bill, and as soon as gays are successful, and I believe most people assume they will be, they will then try to use the D.C. bill as a model in getting other states to consider similar legislation. Thus that bill is a major concern despite the fact that it is only in the District of Columbia.

MR. PADDON: We've been talking at some length about the regulations, the underwriting trends, the reinsurers, and only more or less in passing about another very key element in this whole process, and that's the marketing/agent role in the process. Hank, could you offer some thoughts on this?

MR. GEORGE: I spend a lot of my time dealing with agents and brokers. It is my experience that they have a very difficult time relating to the changing world Mel detailed so graphically and accurately. In fact, several days ago, at the Boston branch of Manufacturer's Life, I discussed requirement changes that are in evolution in our organization. My presentation was very forthright, and there was perceived "good and bad news." I think our agents and brokers want very much to understand why the good news of ever-accelerating non-medical limits, ever-diminishing requirements, and perhaps even most important, unfettered access to miraculous offers on clearly impaired lives cannot continue! I think those of us who deal with the sales side have a real public relations challenge, to communicate these changes. I wish that people from your profession and mine would have access to the programs of the CLU Society, etc., so that we could go and articulate to the agents and brokers

some of the things that are evolving in our industry. They have a great interest in this. The problem is that we do not have access to these forums to share our thoughts.

MR. PADDON: Mel, if you had your choice of an illustration that you could give to agents or regulators, which one would you choose? In all honesty, it is my belief that one of the problems we face in making our case in the regulatory arena is that some regulators don't want to be confused with facts -- the question of availability of coverage is becoming in many people's minds one of entitlement.

MR. MCFALL: That's a difficult question. I believe I would refer to Illustration A, which compared our mortality on full retention facultative business to our mortality on partial retention or no retention facultative business. There we saw that the partial retention business had mortality about 35% higher than the full retention business. The partial retention business is a kind of "classic" substandard business, fairly aggressively underwritten, and that illustration shows the difference in mortality that emerges. I doubt that there are any companies today that have the luxury of a 35% mortality cushion in their pricing. In our case, in the reinsurance business, the cushion is more like 1/3 of that, and that's not very much. Illustration A, then, is one that I would use to illustrate what can happen when your underwriting gets too aggressive, too competitive. Then, by extension, you might conclude that a similar thing could happen if you're forced by legislation to accept risks on a financially unsound basis.

MR. JOHN HOWARD GREENHALGH: When analyzing your limited retention facultative business, did you analyze that mortality by issue amount?

MR. MCFALL: If we did, I don't remember the trends. Historically, our mortality on large facultative cases has been good. I suspect that it hasn't been very good in the last few years because of some of the large early duration claims that I mentioned earlier. The historical pattern has been the larger the size, the better the mortality; and one of the things that we've been doing in the last five years or so since I've been involved in underwriting research and development is stressing the importance of good financial

underwriting on our facultative business. That hasn't always been popular with some of our clients, but we have tightened up somewhat in that area in order to make sure that our mortality on the largest cases, the ones that we eventually retrocede, is satisfactory. I think in general, it has been.

MR. MARVIN D. FINEMAN: Is there a lack of capacity for large facultative cases, similar to the liability insurance crisis in the property/casualty insurance industry?

MR. MCFALL: Our perception is that there has been some tightening up in the capacity of the life reinsurance market, but that there's still a great deal of capacity available. We still see situations where companies are able to get arrangements that don't make sense from our standpoint, and so I think there's still plenty of capacity out there. Perhaps someone from a direct operation could comment better than I.

MR. CAIN: I'm not sure I agree that there's a capacity crunch, but there are limits to capacity, and the real jumbo size cases, for example a 50 million dollar policy, can be difficult to accommodate. You might be able to place it in today's environment using virtually all of the U.S. and Canadian reinsurance facilities. However, as Mel indicated, some companies have tightened up their underwriting of large risk cases, and some of them do not want to participate in those jumbo cases. One of the places where I've noticed capacity problems are certain kinds of policies. For example, with survivorship whole life policies, some companies perhaps because of the product design and the added complication of dealing with two lives, don't choose to participate. Sometimes, even with universal life policies, you may have a harder time completing a real jumbo line of insurance. But I don't think there's really a capacity crunch currently.

MR. PADDON: The problem I think is much more acute on term coverage. A number of reinsurers are not accepting select and ultimate term products, for example. If there is a crunch at all, it would tend to be more in those lines than permanent or perhaps universal life products.

MR. MCFALL: Along these lines I would mention that we've seen a dramatic reduction in the number of really large cases submitted to us. We attribute that to the decreasing popularity of products like select and ultimate term where we have seen so many of the really big cases in the past. We don't see so many of them anymore.

MR. PADDON: A less inflationary economic environment has a good deal to do with that. Thus, financially, there isn't quite the expectation that there will be a need for larger and larger amounts of future coverage. Would the panelists care to make a summary statement about what we hope we have communicated today?

MR. GEORGE: I believe we've highlighted the areas that are affecting our industry. It remains for us to take action. I find it amusing so many people disclaim any interest in reducing non-medical limits or view AIDS antibody testing as dubious. I ask those individuals who take those positions to tell me how they're going to defend against the greatest potential for antiselection in the history of individual insurance. With AIDS you have perhaps two million asymptomatic, antibody-positive individuals whose average age is certainly not much more than 35. These individuals are distributed among all economic classes and they have unfettered access to jumbo amounts of insurance because of high non-medical limits. Furthermore, even if non-medical limits are moderate, they can simply buy from two or three carriers. The vast majority of these applicants would be beyond any traditional detection that could be imposed -- even if we did rigorous physical examinations -- because they are asymptomatic. I think we have no choice but to use AIDS antibody tests because that is our only vehicle in identifying these individuals and staving off the mortality consequences.

MR. MCFALL: I basically second what Hank just said. I am particularly concerned about the potential mortality due to AIDS. As I mentioned earlier, in connection with the facultative market, we don't have extremely large mortality margins in our pricing, and yet they may be needed in connection with AIDS. I don't think many other companies do either, and so I believe this is a key issue. I think there are similar but less urgent issues connected with some of the other items we've discussed today, including alcohol and smoking.

MR. CAIN: I have just a few comments. With regard to AIDS, I believe there's a lot of misunderstanding on the part of the public and a lot of education that needs to take place, particularly in the gay community. It is a very emotional issue, and we have to be alert to these emotional issues. On the other hand, in terms of communicating our point about misclassification and the need to discriminate fairly, perhaps there's no better issue than AIDS because mortality results are so dramatic.

The other point I would make is to second Mel's point about how critical it is today that underwriters and pricing actuaries work together and know what's involved in each other's work and assumptions.

MR. PADDON: I believe too, that we need to communicate our concerns not only to the public regulators but also to our marketing people and our top management as well.