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Alternative/Simplified Underwriting for Life and Health Products

Track: Life and Health

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Summary: Many carriers use simplified underwriting techniques or alternative underwriting approaches to streamline the underwriting/policy issue process. Identification of such processes is becoming increasingly important as insurers move into e-commerce and marketing through financial institutions.

MR. CRAIG M. BALDWIN: Just to give you a little background on alternative underwriting and what it really implies, we're going to present some ideas and possible methods that will hopefully help you simplify and update the underwriting practice to make it more efficient. The overall intent of these methods is to still arrive at the expected mortality and/or morbidity that you're pricing into the products in the current environment.

DR. LOREN KANE: I'm the assistant medical director of Transamerica Reinsurance. I'll be speaking about alternative underwriting, looking at the aspects of it from a life

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insurance point of view, as well as a medical and reinsurance perspective.

The Academy Award Factor

In preparing for this panel discussion, I came across an interesting study that was published in the *Annals of Internal Medicine*. It caught my eye because it looked at the mortality characteristics of people who have won Academy Awards. It looked retrospectively at the entire spectrum of individuals impacted by being nominated for Academy Awards and studied the winners' mortality. They matched actors and actresses of similar age and sex, because they wanted to select people who had the same educational background, occupation, and possibly the same environmental factors influencing them to see if winning an Academy Award actually conferred some survival benefits. What they found is that if you won an Academy Award, on average, you lived 3.9 years longer than if you didn't. When they looked at people who have won multiple Academy Awards, they had a further increase in longevity of 2.7 years.

The investigators hypothesized that because they had matched these results with similar controls, there was potentially a better mortality expectancy conferred by success. This evidence debunks the old adage in which people were known to say, I it's not whether you win or lose... Well, this study seems to say, it *is* whether you win or lose. You need to win and you'll live longer.

The study elicited some speculation as to why successful people live longer. Do they have a better diet, environment, lifestyle, improved access to needed resources, or perhaps better health care? Success itself seems to provide certain privileges within society that others may not have available. So perhaps rather than looking at extensive medical records to decide about somebody's insurability in terms of life products, we should be asking how many Academy Awards they've won. This is clearly ridiculous, but it gives us an introduction to the concepts of alternative underwriting. It's a way of examining whether there are things out there that allow us to predict mortality that are not strictly in the traditional realm of medical underwriting.

Traditional Underwriting

When we talk about the transition from traditional to alternative underwriting, the one thing that we cannot forget is what traditional underwriting provides us. There will likely be some discussion on the relative value of the traditional approach. These are the staples that we use to assess an individual's mortality, and they certainly have some value in predicting mortality. The question will become, can we compensate for that with alternative means?

The number one issue is antiselection. The applicant(s) know more about their mortality risks than we do, seek life insurance, and shift the risks to their benefit. A number of the tests we do are primarily done to combat antiselection.

Costs

When we look at the cost of traditional underwriting, there's a great range within the individual tests, but they do add up. The attending physician's statements, or APSs, can range anywhere from \$50 to \$125 per applicant. These costs are simply the hard costs, the cost of doing the tests, not the cost of paying an underwriter, a medical director, and an administrator to evaluate those costs. The so-called soft costs obviously impact those costs significantly.

Moreover, when you look at costs relative to the face amount of a policy or the age of the applicant, these costs can vary tremendously. If you were to look at the 20- to 40-year-olds versus 60- to 80-year-olds, you have a \$500,000 case versus a \$100 million case. In general, the greater the face amount, the greater the requirements and cost of traditional underwriting. For cases less than \$1 million, traditional underwriting requirement costs average \$100; greater than \$5 million, \$800. As you would expect, at older ages there are additional costs. Over the age of 60, the average cost of a life applicant is \$700.

Benefits

So we have to ask the question, do these traditional underwriting requirements provide us a significant benefit for the costs that we incur? This also takes into account the time that we spend in underwriting with these requirements in-hand, in researching the medical implications, and the administration of fulfilling these requirements.

How much potential business do we lose due to the time and inconvenience of obtaining traditional underwriting requirements, and is the protected value of traditional underwriting worth the cost(s) we incur? Is it the same? Is it helpful for all individuals—young individuals, older individuals? Is it helpful in all life insurance products, term versus permanent?

Protected Value

I just mentioned protected value, because I do think it plays a role. I think there will be some discussion about that, but there are actuarial models, certainly, to come up with an assessment, from a financial standpoint, of whether or not a traditional medical underwriting tool provides a protected value that increases the potential earnings for a company.

Medical Take On Alternative Underwriting

Looking now at alternative underwriting from a medical perspective, what can we look at rather than the traditional approach—the labs, the EKG, the attending physician statements- which we know are time consuming and expensive? Can we look at where somebody lives, how much money they make, their education, their employment, and job positioning?

There was a recent study that looked at employees in the federal government, which is nicely tiered by its job positioning, and it was found once again that higher-

paid individuals with a higher position in the organization lived longer. Look at their credit rating, the type of car they drive, their grocery store purchases, their magazine subscriptions, pets that they have. That will tell us a good deal about somebody's diet and potentially their lifestyle.

Not that we're suggesting that this would be a way to rate life insurance policies, but you can imagine that if somebody had a subscription to *Cigar Aficionado* and we didn't know anything about that person, we would at least be suspicious that he's a smoker. Somebody who subscribes to *Men's Health* might be in better health. A subscription to *American Brewer* magazine would at least raise your suspicion as to there being some evidence of moderate alcohol use; *Cooking Right*, probably a healthier diet; *Prevention*, somebody that's focused on a healthy lifestyle. *Drag Racing* may suggest a risk-taker. If we look at *Skin and Ink*, there certainly is concern for Hepatitis C, or possibly blood borne diseases. *Sky Diving*—well, I guess we would wonder about extreme sports.

Anything and everything *could* be a source for alternative underwriting if we could find that it provided data to help stratify mortality risks. I think that information is out there. There's certainly a need to partner with data analysts to see what relationships potentially exist.

We already have incorporated some of these alternative sources into traditional underwriting, but we now think of them as traditional. Motor vehicle records—something certainly that, coming from a clinician's standpoint, was not something that we would look at in terms of mortality risks; But it has now become a traditional aspect of a life insurance application.

What's to Gain?

What can we gain by using alternative underwriting methods? For one, we gain potentially greater ease for the applicants applying. They can avoid labs, possibly avoid EKG or treadmill testing, and avoid extensive waiting for the application to be processed.

We gain a potentially greater volume of business and hopefully less reliance on poorly predictive or protected tests. We gain the potential for Internet-based applications with so-called intelligent analysis of alternative data, and this, I think, would also improve the rapidity with which mortality risk assessment is done.

Furthermore, there is, at least hypothetically, an opportunity to reincorporate and broaden the market for small face amount, younger-age business because of a potentially larger volume of business that utilizes a simplified application process. This business is currently not attractive because of the traditional issue expenses associated with small volume cases.

Lots of Questions

There are a lot of unanswered questions, I think mostly about the underwriting

costs involved and the prospective protected value. What happens to anti-selection? If somebody knows that they're not going to go through traditional underwriting requirements, will they abuse the system? What happens to product pricing if the protected value and anti-selection deterrents of alternative underwriting are less than that of traditional underwriting?

Are there aspects of both that we can combine? In other words, do we have to have all of one or all of the other? I think the answer to that is no. We can combine some traditional elements and add some elements of alternative underwriting to improve the process. Give a little, but gain a lot more. Prescription drug database research certainly is in the field for consideration, as are oral fluid testing and dry blood spot testing.

Potential Pitfalls

With regard to potential pitfalls, first of all, can we really obtain this data? Can it be correlated with the insured population? Will it violate privacy issues? I think that last item is a big one. We have to understand that the public may be not overjoyed that we're looking into these things in assessing risks. Can we justify underwriting decisions and claims decisions based on alternative underwriting research? I want to say one quick word about my perspective, looking at this from a reinsurance standpoint.

Over the past 10 years, it appears that reinsurance has moved primarily from an excess nature to a first-dollar quota-share. What that means is that the reinsurer(s) certainly will share disproportionately in the risk if this trend continues. With that understanding, we have to ask the question, if we embark on this new way of underwriting life products, who will be accepting that risk? Will it be the direct side, or will it be the reinsurer? And who will profit from the approach? Will it be the direct side or the reinsurers? I think the question there is, does it make sense for both to share equally? Certainly there are many unanswered questions, and for that, we need research. That also brings up the issue of who will pay for all of this?

MR. HANK GEORGE: What I really want to talk about today is a concept that actually was birthed by an actuary. Robin Lechy of a company that used to call itself Manufacturer's Life, speaking to an audience of Canadian medical directors in Vancouver, B.C., circa 1980, coined a term, *lifestyle underwriting*, and spoke on a visionary basis of how, in the years to come—and we're there now—health habit factors might come to bear in the underwriting process in the years ahead.

He argued that those factors were more consumer-friendly than how we've done underwriting traditionally and that with coming modification, such as the tele-underwriting concept—which is emerging as a dominant reality in the risk management process—we would have the wherewithal to incorporate health habits into how we determine insurability.

A Risk Factor Story

Let me tell you a little story. Two years ago there was a paper published in a medical journal called *The Archives of Internal Medicine*. The authors of this paper had looked at a cohort of patients who had an innocent form of breast cancer. That sounds like an oxymoron, but it's what we called carcinoma incitu. It's a form of clinically benign, but microscopically malignant, breast change that lies dormant, but may be a marker for invasive breast cancer later in life. So these researchers were determined to tell whether or not a large cohort of patients who had been diagnosed with this relatively harmless lesion over a span of a decade would develop invasive breast cancer. They did a study, followed the patients to the end of the study, and were pleased to announce at their little meeting that there was an acceptable incidence of new invasive breast cancer and that their inventions to cure this more innocent lesion had been successful.

Just as they were getting up to leave, someone in the room, likely someone with a combination MD and FSA, got up and said, "Wait a minute guys, you're not going to believe this, but the patients who were treated for noninvasive breast cancer have a 30 percent lower cardiovascular mortality and a 20 percent lower all-cause mortality than the patients in the control group who did not have breast cancer." So the logical extrapolation was that it's desirable to acquire noninvasive breast cancer if you're a middle-aged female, as it will protect against suicide, cerebral vascular disease, and being hit by a truck. Now, does that make any sense? No.

The User Effect

So the investigators went back and asked, "What could be the predictor of this favorable outcome?" You know what it came down to? More than 90 percent of women diagnosed with noninvasive breast cancer in this cohort were diagnosed on the basis of mammography. The experts asked, "Is the choice that a 40-year-old woman makes when confronted by her doctor who says, 'Lola, you've got to have a mammogram every year' a marker for a healthy lifestyle?" In fact, it does denote what epidemiologists now call a user effect in the sense that people who say yes to mammography might say yes to hormone replacement therapy. If they were men, they might take an aspirin a day to ward off a heart attack. That they might engage in other healthy pursuits.

Do we have in our midst measurable markers that will identify individuals who lead a voluntarily healthier lifestyle, markers that could be incorporated into the risk management process? The answer is yes.

The Three-Step Process

Think about this. In the late '70s and early '80s, an enterprising group of life insurance companies—primarily in Massachusetts, Connecticut, and Canada—introduced a novel concept into risk management. They said, "If you don't smoke cigarettes, we will give you a more attractive price for insurance than if you are addicted to cigarette tobacco use." Within years, that became the industry's categorization of tobacco-users versus tobacco-abstainers.

In fact, I'm going to argue that smoker/nonsmoker was the first step in what will be a three-step process. What was the second step? It became preferred risk. We developed the concept of preferred risk underwriting, which, simply stated, says, "You take care of you, we take care of you. You live a healthier life as we measure it by conventional medical factors such as cholesterol, blood pressure, build, etc., and we will reward you with a lower premium than somebody with a goiter and hypertension who eats pork rinds and watches television."

OK, that concept came into place. Then we developed super-preferred. Some companies have implemented fantasy 10-level categories of preferred. No carbon-based life form can qualify for the highest category of preferred. The bottom line is, we embrace preferred.

When I spoke to the Hong Kong Association of Insurers last year about how we do business in North America, the only questions that I got at the end of my lecture were about the concept of preferred.

Seven Japanese companies now have embraced the first step of the preferred risk process. They're doing smoker/nonsmoker in a country where the nonsmokers are the minority. So this process is disseminating, and it's being embraced as we speak.

How about moving to the third level? How about taking measurable health habits? I'm talking about leisure time, physical activities. I'm talking about dietary choices. I'm talking about the temperate use of alcohol—those who are on the other slope of the u-shaped curve, and give them recognition as favorable risks because the epidemiological data supporting this conclusion is enormous and consistent.

How about doing things as novel as recognizing geriatric applicants who own a large pet as conferring better mortality than those who do not? We've got data to support that conclusion, and it goes on and on and on.

All of these things are epidemiologically sound. The data for them are piling up in my office at an alarming rate. We were stymied, were we not? We knew it was faster. We knew it was much more consumer-friendly, that customers would hardly mind the alternative of answering lifestyle questions in lieu of having one of my peers tweezer through their medical records looking for a mystical blood pressure elevation and using that as an argument for charging them more for insurance.

We knew that from every aspect imaginable, this approach fit the paradigm of the 21st century, except for one grievous concern: We had a vision of the producer. Instead of saying to the customer, "You don't smoke, do you?" saying, "You eat broccoli, right?"

I can imagine what preconditioning would go into the process in the 21st century if we used health habits, and a lot of people in this room are thinking, "Wait, we can't

do this." Just suppose we have someone, between the insurance company and the consumer who might be an unwitting ally in the propagation of mythical healthiness.

What if, for example, the tele-underwriting concept, which is emerging triumphantly across North America, were to take the information gathering out of the hands of the producer, liberating him or her to do the one thing they were intended to do on day one, which is to be more productive? They need to be more productive, lest they be cast aside in large numbers by alternative distribution modes.

So as they become more productive by not gathering information, and home-office insourcing or outsourcing gathers the information using a pleasant female voice over the telephone, imagine now that we can ask the questions that we were not able to ask in the 1990s.

Let me end with this concept. At the Mayo Clinic a few years ago, they had a burning desire to identify patients who came in to the outpatient services department and were engaging in various activities such as taking high doses of vitamin C or who believed that if you press here, your prostate will shrink, something called reflexology. They wanted to know who was engaging in all these various and sundry activities that were derived from Indian, Native American, Chinese, or South American medicine, known collectively as alternative and complementary medicine. They wanted to see if they could predict whether or not there might be some adverse synergy between, an herb and a medication. They wanted a marker for the prevalence of this in Olmstead County, Minnesota.

So they had all the doctors stand over patients with a stethoscope and the white outfits and say, "OK, are you taking herbs?" And 30 percent of the people who came in, being honest people by their nature, said, "OK, I confess, I'm engaging in some chiropractic or some other version—of complementary medicine. Then they got the data back and they said, "Wait a minute, the data from the literature says that the prevalence of use of this in an upscale population is closer to 50 or 60 percent. Could it be that some of these people are not telling the truth when confronted by the white coat, the authority figure?"

So then they had a pleasant female voice that didn't care what the answer was call the patient and ask the questions over the telephone. And guess what? Sixty percent of individuals in Olmstead County confessed to engaging in alternative remedies. Does that give you any clue as to the potential of that same pleasant female voice concept being introduced as an information-gathering tool in life and health insurance risk management?

For example, one prominent company that shall remain forever nameless, had a question on its telephone interview asking applicants whether or not they indulged in the use of a prominent plant product known to improve ocular hypertension, grown commonly in Northern California, where the sound of the helicopter is terrifying to local residents. So many people confessed to indulging in cannabis

sativa that they removed the question from their telephone drill. Primarily because they didn't want to have to deal with a large population of people who said yes to occasional marijuana use. It created an obstacle. That's how good this methodology is. I recommend you consider it.

MR. JERRY CONRAD: My job is to quantify the types of things that Dr. Kane and Hank have alluded to and try to develop statistics in a usable form. The challenge generally falls into three categories. The first is changing information to data, and data to knowledge. The second is using outside data to complement traditional processes. The third is to underwrite to achieve profits through policy retention and mortality management.

I'd like to point to a quote from Mark Van Doren that I think is very appropriate to this discussion subject: "Any piece of knowledge I acquire today has a value at this moment exactly proportional to my skill to deal with it. Tomorrow, when I know more, I recall that piece of knowledge and use it better." If our data isn't available to us, our ability to recall it and make better decisions is absent.

Changing Information to Data

We spent the past two years looking at information provided in term life operations, and we found out that most of the information available for the underwriting of the policy issuance is available at the time that the policy is underwritten. But it's not available for further analysis at later dates, because that information is generally stored in an image form.

To change the way that the data is entered and stored so that the information can be accessed and analyzed in an effort to understand the relationship between cause and effect, you've got to eliminate free-form data entry. You've got to establish a finite set of attribute sets so that you're not only analyzing numbers, but you're actually analyzing information. Did the policy lapse because the insured found a better rate, or because of a divorce? You won't know if you haven't gathered the information.

What does credit data mean to term life insurance? It can mean the insurance coverage is in line with need. My understanding is that in term life, you look at credit only in relationship to that coverage. Does credit data mean anything to auto insurance or the insured's ability to pay premium? Both may be true, but there may be other implications as well.

In term life, what we're looking at is how long policies stay in force. Roughly 40 percent of the premium is affected by attrition characteristics. In auto insurance, the policyholder has predicted value when you're trying to determine who's at fault in the accident. Why? Because there's very little that's capricious in human behavior.

Using Data to Complement Traditional Processes

What follows are some examples of the work that we did in the property and casualty business. We asked, "Is there a correlation between the color and the size of a car and a fraudulent claim in auto insurance?" We found out that when that type of information was gathered, it became very predictive in that yes, there was a correlation between the color of the vehicle and the probability of it being involved in fraudulent claim activity.

We found that the perpetrators of the fraud preferred full-size cars, and they preferred cars that had colors that blended into traffic. After we gathered the information and had it available to us, we were able to predict that if an accident occurred during normal working hours involving a brown, full-size car, with six passengers, the probability for fraud was extraordinarily high.

The reason I introduce this information into this discussion is that had this information not been gathered in the first place, it would not have been available for analysis, and they wouldn't have been able to do anything to deter the fraud. Today, 16 cents out of every insurance dollar goes into loss adjustment expense for litigation and trying to deal with soft-tissue types of injuries.

What our group has been working on is taking information contained in credit files, mortgage applications, and different property records, and appending it to insurance application data to establish the correlations.

Underwriting To Achieve Profits From Retention and Mortality

One of the things that you see clearly in term life policies is a tendency for the healthy to drop coverage if there's a better rate available to them and for the sick people to stay with the existing policy. We thought we'd try to see if there were any correlations between the people who bought the term policy, stayed, and were healthy versus those who lapsed. We found that there were definite correlations. You had a certain population that changed every time somebody offered a lower rate of interest on a credit card, and they churned through the credit card issuers. We also found that there were people who churned every time a lower mortgage was offered to them. We also found that there were correlations between the length of time that people were married and their probability of keeping the policy in force.

We are now gathering those pieces of information and using them in a preunderwriting process so that before you do an insurance solicitation for a policy in the first place, you're better defining who the group is and what your ultimate outcomes will be.

We are currently working with LabOne in establishing pharmaceutical benefit management companies and pulling data in from them. This is an example of what we're collecting: If an applicant is taking Lopressor (Metoprolol), is the applicant taking it because he has a headache or because he's had a heart attack?

If you look at the information on a standalone basis, you wouldn't know. You have to look at the information in correlation with his application and other appended data. We build an indication engine that looks at all the information that's available and helps us in the probability analysis.

MR. RYAN LANCE LEVIN: I'm going to talk about all the elements of risk management that make up underwriting. To start off, let's talk about defining underwriting.

My view is that underwriting has a very broad definition. It's the management of risk selection. The underwriters are the gatekeepers to the carrier's risk, to the risk that a carrier accepts. There is a lot more to the management of risk selection than the initial underwriting process.

The two aspects that my colleagues have already talked about are those that are most commonly associated with underwriting—in other words, the initial assessments of risk and the pricing of the policy appropriate to that risk. Another that typically is considered in the policy underwriting process, especially in health insurance, is claim stage underwriting—in other words, assessing risk at claim stage to identify whether there's been nondisclosure up front. Those are two fairly traditional elements of underwriting. There are quite a few more.

Relative Pricing and Rating Factors

First let's consider relative pricing and rating factors—in other words, how is the base plan priced? How are standard risks priced relative to standard risks elsewhere in the market?

Before you begin the underwriting process for a standard risk for life insurance or health plans, or whatever it is that you're selling, how do those prices compare to other plans in the market? Second, what rating factors do you use? There's been a lot of discussion on that—smoker/ nonsmoker, age, and gender. What are the rating factors that go into determining the initial standard price that you're offering in the marketplace?

Product Design

The next area is something that is seldom associated with underwriting at all, and that's product design. I believe that product design plays a very big role in underwriting and in the management of selection in two respects.

First, how does the product look to new applicants? How does it look compared to other products, and what types of people does the product attract? Second, from an existing member's, or an existing policyholder's perspective, how does the product affect their decision to keep it or let it lapse? Those, I believe, are very important factors in the management of selection.

Successful Management of Risk Selection

There have got to be other factors in risk selection. I don't know what they all are, but there must be some such as the choice of target markets, distribution channels, that kind of thing. When you wrap all these up in the design process, and if you do them all right, you will have a much better chance in the successful management of risk selection.

Relative Pricing

I'll start off by focusing on relative pricing and underwriting factors. I'm going to make an assumption, i.e. we have a commodity environment. In other words, we're selling a product that looks the same as every other product out there in the marketplace. So if it's term life insurance, our term life insurance product is the same as everyone else's term life insurance product, or health insurance—same benefits, nothing really unique or different about the product design.

In a commodity environment, if we have higher pricing than the other products available out there, then from a plan perspective, there is really nothing that differentiates you.

You're very likely to find that you get higher risks or sicker people applying for the life insurance product, the reason being, those who are healthy are going to lean toward the lower-priced products initially. Those who are sick can expect that they're going to have trouble getting through underwriting; they are going to pay less attention to the initial price on the quote. Relative pricing in terms of standard risks is an important factor in risk selection.

Rating Factors

Now we will focus on the rating factors that you use. If everyone else in the marketplace has access to smoker and nonsmoker rates, and we have an aggregate rate, we'll naturally find most smokers buying our plan. So one basic tenet in product design and setting underwriting practices is to have at least as many rating factors as your competitors do.

Any rating factors that they have and you don't puts you at an immediate and distinct disadvantage. These two are really integral elements in selection management and in assuring that the people who are applying for your plan are the kinds of people that you want for the price you have set.

Product Design

The next two elements, I submit, are the most "alternative"—the things that people tend to think very little about when they talk about underwriting. These have to do with product design.

I'm going to talk about it from two perspectives first, the new applicant, the person deciding whether to buy this product, or buy something else; and secondly the person who has already purchased and is deciding whether or not to keep the

coverage.

New Applicant

From a new applicant's perspective, what I'm talking about is attempting to break the commodity mold. Remember, there are a few rules that we have to follow if we're in a commodity environment—relative pricing and rating factor issues, those kinds of things.

If you are successful in breaking the commodity mold, that allows you to do a lot of things differently from everyone else because all of a sudden your distribution and prospects, the insurance brokers or applicants for policies, are comparing apples with oranges. It allows you to do pricing and rating factors differently from anyone else out there, because the benefits that you're selling are different.

What I'm talking about here is understanding what drives the buying decision, what makes people decide to buy the insurance plan that you're selling and, very specifically, designing a product that appeals more to good risks and less to poor risks. If you can come up with a life insurance policy that sounds like a much better deal to someone who is healthier than to someone who is sick, at least relative to what's available in the marketplace, you're going to get better selection immediately. You're going to corner a section of the market that is healthier, and that's going to allow you to keep your rates down and be more profitable.

The same applies to health insurance. If you can come up with a product design that sounds attractive to healthy people, and not just to sick people, then you have a better chance of getting the healthy people into your health plan. If you have a smaller proportion of sick people, obviously that means lower rates and more profitability.

That, by the way, has been the focus of my company's product strategy—come up with a unique benefit design for health insurance. Our focus has been to come up with a benefit design that is not only attractive to sick people but gives real value to those people in the plan who are healthy. Product design from the new applicant's perspective is really a powerful driver in the initial selection process.

Existing Members.

Let's talk about something even more diverse than an existing member's perspective. What I'm talking about here is, once you've managed to sell your plan to someone, how do you control selective lapsation? Everyone anticipates that an initial sale is not always going to result in a lifetime member in a health plan or a lifetime policyholder for a life insurance policy.

The initial sale gets whittled down by lapses, and those lapses are typically selective. So the people who feel less value in the product tend to leave. Those who are healthy tend to leave. Those who are sick have more need for it and tend to stay. I'll surmise that if we challenge ourselves to come up with ways of keeping the

healthy people in, making it attractive to the healthy people on an ongoing basis, then we have a better risk pool and, again, lower premiums and higher profitability.

Lock-in Mechanisms

What I'm talking about here is lock-in mechanisms. How can we keep value in the plan? What ways can we come up with to build value in the product for people who are healthy? On the life insurance side, one of those ways—and there's actually a trend away from that—is to build cash values; so the longer you're in the plan, the more cash value you have in the plan. Now that's not necessarily more attractive to healthy people than to sick, but what it does mean is, if you leave the plan, you will often get cash out. So it's not necessarily a lock-in mechanism, but what I'm talking about is something that grows in time, something that makes it more attractive to stay with the health plan or the life insurance product than to leave.

Risk Reduction

Second, if we focus on our existing members and educate them to improve their lifestyles, to improve their health, to reduce their risks, then our risks are reduced.

These two areas are a focus of my health insurance company. We focus on not only making a plan more attractive to healthy people up front than a traditional health plan; but once they're in, we have mechanisms to keep healthy people in and to improve the health and wellness of our overall membership base.

Reducing Lapsation

What every plan desires is a method to reduce the effect of selective lapsation—method for retaining healthy people in the plan I submit that underwriting is a lot more than the initial assessment of risk and claim stage underwriting, and that we as actuaries, the people responsible for the management of risks for insurance carriers, should consider every aspect of our business as a potential tool in pricing selection and selection control.

We certainly have proved in my company—that doing things differently, breaking that commodity mold, getting out of the commodity market, really does make a difference. It really does allow you to differentiate yourselves from a risk selection point of view.

MR. BALDWIN: As far as data development and data quality in the business, how far along is the data gathering and use of that information for things such as underwriting processes today?

MR. CONRAD: I would say that for the information we've looked at to date, and we've looked at literally millions of policies and applications—the existing format that the data's stored in is not conducive to analysis. And that's one of the major reasons that we embrace using outside data.

If you look at the credit industry and the information that's kept in credit files, it's

very comprehensive, very complete, and it lends itself to analysis. It only stands to reason, because the information in the credit files is very dynamic, it's updated on a daily basis and there's a huge network of people that support and feed into that data source.

If you're trying to predict human behavior, which is one of the fundamental elements of this enterprise, you have to begin by understanding the environment, the person that you're trying to predict behavior for, and what type of behavior you're trying to understand. So one of the things that we're very focused on is changing the way that data is gathered in the existing term life and health underwriting process. And when I say that, right now the only data that lends itself to analysis is data that has a numeric representation.

By establishing a set of attributes for each characteristic that has a finite attribute set and a consistent and constant representation, so that there's no freeform data, it lends itself to sophisticated tools and networks for pattern recognition. Plus you're able to establish linear and nonlinear relationships between the characteristics and its attributes so that you then begin to understand its predictive value in the process.

MR. BALDWIN: Hank, a question for you. Earlier today you talked about what's happening in the health field as far as using nonsmoker/smoker data. Do you have a comment?

MR. GEORGE: It's disconcerting to me as an underwriter and as somebody who has pretty much admired the medical side of risk management, that with all the evidence that we have with such abundance, that tobacco use and particularly cigarette smoking is the number one preventable cause of excess morbidity and clearly drives a substantial portion of the adverse claims experience, that companies in the major medical and allied markets would not differentiate on the basis of voluntary tobacco use for individual and small group products.

I've heard all sorts of arguments—none of which I consider really credible—that say, "This is not something that fits in the paradigm." I could not disagree more. We owe it to the consumer to not charge individuals who are tobacco-abstinent the same premiums we charge to those who, of their own free will, bring on much of the adversity that they experience in terms of excess and premature morbidity. I just do not understand and never heard an argument for not making tobacco use versus nonuse a driving factor in the management of individual and small group health insurance risks.

FROM THE FLOOR: As we move to help underwriting, we may not have the predictive blood test, the specific information. How long is it going to take for consumer groups to come out and ask, "Why bother answering the questions correctly? All you have to do is make it through two years and they can't contest our policy. You might have to pay for age misstatement, but it's certainly less clear

for smoking and nonsmoking, and it's certainly not clear for preferred and standard. How do we deal with that risk?

MR. GEORGE: Clearly there is a potential for anti-selection. I don't imagine we're going to see large groups of consumer advocates out there telling people to materially misrepresent or commit fraud.

I rather suspect that would be an uncommon scenario, but certainly it will occur to people that if they answer these questions in a delightful manner that serves their interest, they will gain some advantage. That's why we don't let health habit underwriting operate in a vacuum. We take the best elements of what we already have that meet the challenges that we impose upon them.

Dr. Kane referred to a number of those elements in his excellent presentation. We meld them with the health habit profile that we take on the telephone. We match that against the MIB information, which becomes an intrinsic part of our process. We do pharmaceutical database analysis, which is going to be warmly received by consumers as an alternative to nitpicking our way through physician's records. And by correlating the pharmaceutical records, you'd be surprised how many times, by putting two and two together, you can identify individuals who are misrepresenting their health habits, because they stand in stark contrast to clinical interventions of a pharmaceutical nature that speak to a very different style of life.

When you synergize all the pieces, you come up with a very acceptable profile. But to operate in a vacuum and ask people only questions that they can gerrymander without using the other components would, in fact, be very risky.

Let me also add that all of the companies that have been out there in the industry, engaging in the telephone-mediated, drilldown acquisition of information have testified to me privately that *the results they get from telephone-mediated interviews, based on the review of the application with the drill-down on positive answers, produce more protected value and more consistent reliability than any other instrument in the history of life insurance risk management.*

MR. DAVID BAHN: We recently widened our smoker differential from about five percent to 25 percent. Don't ask me which way the percentages go, I never can remember. We have found that the percentage of smokers stayed the same between the two products, roughly 17 percent when we had five percent smoker differential and 17 percent when we had the nonsmoker differential. I know that's less than the national average, which I think is around 25 percent, but I still had expected a significant drop-off in the number of smokers, and we didn't get it. So that could be some evidence to go along with people who may say you're just going to have a liar's club, and that you're going to exhibit low volume.

I was intrigued to hear the two different approaches by Hank and then Jerry Conrad. One, I guess, is the pragmatic approach to underwriting versus a more

statistical approach to the data. How do you merge that? How do you get that data from that pleasant female voice into some computer profile to build your giant database? Do you have any thoughts in terms of linking the two processes? It's very practical, effective underwriting approach with the pleasant female voice versus the giant computer database for overall underwriting.

MR. GEORGE: I know your company very well, Blue Cross/Blue Shield of Florida. I have the privilege of teaching there every year, and let me say, I'm not at all surprised at your 17 percent smoker ratio. That seems to be right on with what I would expect from the target market that you have, and I'm elated to know that the numbers remain constant.

I think that decreasingly, as we go directly to the consumer and take interested parties out of the information gathering loop, we will find that the results and the answers that we get to these and other questions will be more and more accurate, not less so. So hats off to Blue Cross/Blue Shield of Florida.

MR. CONRAD: I think you're going to see a change in the way that life insurance and health insurance are sold. I'd like to underline the word "sold."

I think you're going to see a big change in the way products are distributed, and the change is going to be that products will be sold to people on a preunderwritten, prequalified basis. People that own the data that have predictive value in the underwriting process will make solicitations based on the knowledge and information they have on that customer base, because they'll have a competitive advantage.

When you ask somebody to respond to a question after they've expressed an interest in buying a product, you're exposed to their response and your ability to verify the accuracy of that response. Conversely, if you have access to the data, you know certain things about that human being's behavior that indicate their education level, their ability to afford health care, and things such as the type of cars that they drive. A Volvo driver bought that particular brand of car because of the safety characteristics, so that tells you something about their personality and conservative nature. That person is the same type of person that's going in for an annual physical whether he has an ailment or not.

MR. LEONARD KOLOMS: Just an observation: My background is in health insurance with 40 years in that business and there is a lot more target marketing done in that market today.

What concerns me with what has been said is that if companies are planning to market specifically to people with better risk profiles, and they can adequately segregate the cream of the crop, watch out for what's left over! If you don't apply prudent underwriting rules to what's "left over," you're going to get some very bad results from the residual. We have seen that continuously in the health care

industry as companies did target— marketing for association business.

As an example, take a look at targeted medical products and the evidence of antiselection that developed by deductible on major medical and on the length of elimination period for disability. Both approaches had initially been developed to attract better risks. They did that, but the residual ended up being underpriced.

Going back to what you were saying about smoker/nonsmoker underwriting, my old company adopted the approach for small group cases immediately after the concept became acceptable to the market. However, I think adopting this categorization of risks in individual health insurance is a different and more difficult matter.

MR. LEVIN: I think my talk perhaps came across as espousing the idea of selecting only the good risks and hanging the bad risks out to dry." That's not really what I'm getting at. If you look at studies of an insured population, what you'll typically find, and I talk specifically about health insurance, is that the uninsured population is in better health than the insured population. This implies that certain companies are not depleting the insured population of good risks, but rather bringing in the uninsured good risk into the insured population. That makes the entire risk pool more sustainable.

MR. CONRAD: I agree. On the life side of the business we have a large uninsured population. Most of the people in that uninsured group are making honest decisions. They feel that they can be between coverages or between groups for a short period of time. Forget about the very high amounts of life insurance since that population of insureds is well served. It's the population of lives who now are unlikely to see or talk to an agent. If we can use these new techniques to make insurance more affordable and available, I believe that all of us will be better off.

It's not necessarily the uninsurables that are not getting coverage. I think we all recognize that the one thing that drives the market is commission dollars. And as more and more companies concentrate their efforts on the high end of the market, the people buying the \$250,000 life policy and below—are not seeing a life insurance agent.

MR. BAHN: A couple of things I would like to comment on. First, I think you need to subsegment the uninsured population in order to make comments about their being healthier than average. I know there are several public policy organizations that have produced recent papers and monographs indicating that the medically uninsured are less healthy than those who are insured. That's my first comment.

My second comment is an attempt to illustrate your point of what you do to improve the retention of the healthy risks. Obviously, if someone has a life insurance claim, he or she is not going to be with you next year. However, if somebody has a major medical claim, they more than likely will be with you next

year. We did studies two years in a row on our individual block of health insurance. This was an underwritten block, a mix of brand new and existing customers. Fifty percent of the policyholders in each of those two years did not have any claims at all. Those are the ones we need to keep around for next year. The ones that had the \$500, \$1,000-plus claims are the ones who are going to be with us no matter what we do.

What can we do to keep that 50 percent without claims staying with us next year and the year after?

MR. LEVIN: I think you hit the nail on the head. The key problem is that those 50 percent who have had no claims have seen no value in their health plan. So what are you doing to keep those people? As you point out, those are exactly the people you need to keep.

I challenge you to think in the development of your product, in the design of how your company works, about what kinds of things you can do to keep those healthy people interested in retaining your coverage. You need to demonstrate value to the people who are not planning to file a claim. That's a difficult thing to do.

If you look at my company, Destiny Health, what we've done in health insurance is separate the elements/characteristics of claims into two areas—those that are more discretionary and those that are less discretionary. For those that are less discretionary, less within the members' control, we've provided insurance in a fairly traditional way. For those that are more discretionary, the day-to-day routine-type plans, we use what we call personal medical funds. This does exactly what I was talking about. It allows us to use less to see real value in their health plan, because they keep whatever is left in their personal medical plans. We've seen substantially higher persistency exhibited by the healthy lives than the sick.

MR. CONRAD: I'd add a comment that the problems you're discussing this morning are not unique to the life or health insurance fields. These same problems are faced every day, and have been for the last 20 years in finance. Credit card issuers have acquisition costs of \$150 per customer, a customer whose average life span with the carrier is 18 months. Part of what they have to do for profitability is look at those customers and determine which of them are going to pay as agreed versus those that are more likely to become an attrition statistic. Other industries can give you a preview of what to expect because they've been through these problems and have learned how to adjust to them. Our company's experience has been in financial services and property/casualty, and we're now working in life and health. We're finding ourselves with a tremendous advantage since we are looking at the challenges from a fresh perspective.

MR. LEVIN: I think the credit card industry is a very interesting one, because it understand the value in keeping customers. So what have they done? They've all added frequent flyer programs or incentive programs to what they're offering their

clients. And what does that do? It retains those who are spending more on the credit card, which is exactly the business they want to keep. American Express' reward program is a great example. If you've accumulated points in their program, you have a strong incentive to accumulate more, because the more points you accumulate, the more value you're getting out of the credit card. You need to think a lot more carefully about how to do that in the life and health insurance arena. I think the insurance industry has been far less innovative than many others.