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Critical Illness Insurance: A New Product Gaining Momentum

Track: Health

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Summary: Critical illness policies pay a large lump sum based upon diagnosis of conditions such as heart attack, stroke, life-threatening cancer, kidney failure, etc. This coverage has been gaining momentum in other parts of the world and has only recently been introduced to the U.S.

Panelists discuss the rewards and pitfalls involved with this product and the techniques for deriving claim costs from public databases.

Mr. Willard C. Rinehimer, Jr.: I'm with Tillinghast in the Hartford office, and I'm the moderator for this session. Today's panelists are Mike Rasmussen from Tillinghast in St. Louis, Sandy Meltzer from Sandra Meltzer and Associates in Atlanta, and Johan Lotter from Lotter Actuarial Partners, Inc. in New York.

Generally, critical illness insurance policies pay a lump-sum benefit upon diagnosis or incidence of specified conditions. This product has been available in other parts of the world and is now being introduced into the U.S. marketplace. The introduction of critical illness insurance products into the U.S. market presents some challenges, which include the education of agents and consumers, credible experience data, and a difficult regulatory environment.

The panel will discuss these issues in more detail. First up will be Mike Rasmussen. He's been with Tillinghast for five years and previously was with Blue Cross Blue Shield of Missouri and General American. He specializes in health care products, including critical illness insurance, long-term care, and group products.

Mr. Michael L. Rasmussen: I'd like to go over a number of topics regarding critical illness (CI). I would first like to talk about just what CI is, followed by why anyone would want to buy a CI policy. We're going to briefly touch on the markets for CI, the pricing, some of the risk management techniques, and some of the

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regulatory environment issues. Johan and Sandy will elaborate more on the pricing and the regulatory environment. Then we will wrap up with a few keys for the success of launching a CI policy.

What is CI? Well, as Will pointed out, it's normally a lump-sum cash benefit that's payable upon a certain diagnosis or occurrence of one of a number of specified diseases. I like to break the diseases or events into two main or broad categories. Typically, there are five conditions that are covered by almost all policies: heart attack, cancer, stroke, kidney failure, and major organ transplant. After that, there are a number of other conditions that are covered. This list is, by no means, exhaustive. I've seen up to 30 different items covered under some policies.

The types of plans that we see would basically be two groups, the stand-alone and the accelerated benefit plans. The stand-alone plan is a lump sum payable upon the diagnosis of the CI, and generally there's a survival period associated with this, which can range from 15 to 30 days. The policy terminates once the CI event occurs, or when 100% of the benefit is paid.

The other type of benefit plan that we see is the accelerated plan. Here the CI riders generally attach to a life insurance policy. When the CI occurs, 25% of the face amount is paid. The remaining amount is generally payable upon death. In some of the benefit variations that we've seen, such as the buy-back option, there are a number of riders that you can get. Wellness is a rider that we've seen a number of times.

Essentially, there are a number of different benefit patterns. One is just a straight-level benefit for life. The next benefit that we've seen is a reduced benefit, either at some age such as 65 or 70, or it is triggered by the duration of the policy. Often, the original amount is reduced to 50%. The reason behind this is mostly to keep the premiums at a reasonable level. Often, partial benefits are paid for some conditions, bypass being one of them.

Now I'd like to get into why anyone would buy a CI policy. Well, the events covered by a CI policy are very real. One in four people will contract heart disease. One in three actually gets some kind of life-threatening cancer during their life. Obviously, in addition to being life-threatening, the CI events create some economic insecurities. There's loss of income, and the additional expenses associated with the illness. The benefits themselves can be used for a number of different things. They can pay for medical treatment that may not be covered by insurance, lifestyle adjustments, and income replacement.

The appeal of CI to the insured is that it is not expense reimbursement coverage. It's not based on the inability to work. It's also not based on pending death. You don't have to necessarily be dying to get it. It is a living benefit, and it is paid to the insured. The markets are out there. Since the 1980s it's been available in South Africa, the U.K., Australia, and Japan. Forms of it in the U.S. have been primarily for cancer insurance in the past. Early attempts of a broader U.S. market haven't been overly successful.

Why are we seeing a resurgence in the product? I think that insurers are looking to differentiate themselves. It's perceived that this product may be more attractive to middle-aged people and near seniors, and it seems to be a fairly easy product to describe to folks. They can understand it.

The markets in which we're seeing the product being offered are direct response, worksite, individual sales, and group sales. There are a number of companies that already offer this product, and this list is continually growing.

I'm going to just hit some highlights on pricing. Johan is going to go into a little more depth. I will just talk briefly about the methodology, the claim cost, some of the other important assumptions, and a little sensitivity analysis. For stand-alone products, the pricing is basically similar to health insurance, using an incidence/severity model. For the accelerated benefit products, normally we look at a single pool of money for both the life insurance and the CI insurance, using a multiple decrement model. Notice that it's cheaper to offer the life insurance and the CI in a combined policy than it is with two separate policies. That's one of the attractions to it.

How do you come up with claim cost for your CI pricing? Population data is one source. Naturally, this needs to be adjusted to reflect the insured population. There is some experience from other countries. There are a number of very good claim cost data sources out there, and they've been out there for a while. The other items that are covered in a CI policy are a little spottier, but if you dig hard, you can find them. I've listed a few sources for you.
- Cancer: "Cancer Statistics Review" and the "National Cancer Institute Monograph 57."
- Heart attack, stroke: "Heart and Stroke Facts" and the "Framingham Heart Study" with 36 years of follow-up.
- Major organ transplant: "The United Network for Organ Sharing Scientific Registry."
- Renal failure: "The United States Renal Data System Annual Data Report."
- Alzheimer's: Industry experience in the U.K. and Australia and data from the Alzheimer Organization.
- Blindness, deafness: "The Demography of Blindness Throughout the World", and the National Institute of Health.
- Disability (Social Security definition): "Social Security Administration Study", for incidence rates and the "SOA Basic Disability Study", for the termination rates.
- Multiple Sclerosis: "The Handbook of Multiple Sclerosis."
- Paralysis: Data consistent with industry assumptions.
- Wellness: Limited industry experience and professional judgment.

The population claim costs need to be adjusted to reflect the insured population. Essentially, you get at this by assuming that the morbidity experienced by the population is going to parallel the mortality that's experienced by the insured population. We're talking about morbidity for the CI event. With that, you're able to come up with some of your selection factors, which you can use to help price this.

If we produced a chart showing representative incidence rates for the big five CI events I mentioned earlier, it would have a very high tail curve from age 65 to 75, showing an increasing number of incidences.

Table 1 lists some representative premiums for various agents. There is quite a variance in the premiums out there. The premiums in the table are not adjusted for differences in benefits, however.

TABLE 1
REPRESENTATIVE PREMIUM RATES FOR CURRENT PRODUCTS

Male Nonsmoker Issue Age	Annual Premium per $1,000 of Initial Benefit
35	$ 7.30 to $10.60
45	$11.30 to $22.70
55	$16.90 to $33.50

Your claim costs are not the only thing you need to take into account. Other assumptions would include interest rates, lapse rates, expenses, and a number of other things. The lapse rate has a significant effect. This does make sense when you think back to the incidence curve, and the steepness of that curve in the later years. Interest rates do have some effect as well.

For the risk management techniques, underwriting, policy provisions, and claims administration are obviously important. If there's a prior history of the illness, the policy is generally declined. Family history can be important for cancers and heart conditions. The risk factors that are examined typically are similar to the risk factors for life insurance. Also, pre-cancerous conditions are much more important for a CI policy.

One of the things that can be a problem with CI policies is the actual definition of a CI. You want to make sure that your definition is tight enough so that you don't permit events that would be considered CI to come into play that you didn't necessarily reflect in your pricing. Consequently, you need to work very closely with your medical department when you're coming up with these definitions. Naturally, these distinctions need to be communicated properly to your marketing folks and your customers.

Some of the common policy provisions that we do see out there are survival and waiting periods. The waiting period helps for anti-selection. Claims adjustment is easier for CI than for disability, and is a little more difficult than life insurance. Some of the CI claims are not as clear-cut as you may think, end-stage renal disease being one of the conditions.

A number of model regulations come into play. Typically, there's a loss-ratio requirement. Some of the gatekeeper provisions can be troublesome in some states; they don't permit survival or waiting periods. There are a couple of specifics for the different states, and Sandy will go into that in a little more detail.

As with any new product, there are a number of things that need to be considered when you're rolling it out. You want to have an entrance strategy. You want to make sure your distribution system is set up correctly. You want to have the right product design for the way that you're going to market or distribute it. The keys to success that we see for this product are you have to make sure you have the appropriate distribution outlets. There needs to be a need-selling approach. You need effective promotional material, and there definitely needs to be a commitment to the line of business.

Mr. Rinehimer: Our next speaker is Johan Lotter. He's the president of Lotter Actuarial Partners, a New York City consulting firm. He formerly worked for Arthur Andersen, William Mercer, Cologne Re, Munich Re, and Metropolitan. He specializes in CI research and development, merger and acquisition, product development, and insurance company rehabilitation. Johan will expand on the pricing and how we get some of the assumptions necessary for pricing a product where no real experience is available.

Mr. Johan L. Lotter: I am here to do a presentation that I like to call the "Ratemaking Secrets of CI." It's a presentation that I hope will help you to achieve a number of things. If you are an actuary embarking on pricing and product development for CI, I will hopefully help you to understand the pitfalls of CI pricing. Of course, there are mistakes that can be made. You can be using approaches that aren't sound, and you can be using mathematics that are not sound, and you won't find anything about CI actuarial practice in any of the societies studying out of textbooks. I'm afraid you're going to have to pay attention.

The next thing that I'm going to try and help you with is to cope with the lack of portfolio statistic experience. You're going to insure some portfolio and that portfolio is one that is near and dear to you, but you don't have any experience with CI in that portfolio because you've never sold it there. For that matter, no one else in the U.S. has sold it here. You need to cope with that; it's a problem. There are ways of doing that.

Third, we need to help you make realistic estimates of CI incidence rates. These secrets will help you to do that. It's very important that you get realistic estimates, because if you use unrealistic estimates, you're going to react to your agent in the following way. He's going to come to you and say, "I've seen this great product next door. I want it. How much is it going to cost?" And if you say to him, "A lot," he's going to go away. And if you actually get him to say, "All right. How much will it cost? Give me the product," you won't be able to sell it, because people have a sense of what things should cost, what they're worth. You don't want to overprice your CI product, and we've seen some overpricing in the U.S. market. You really need to be realistic about what you're going to charge consumers.

The fourth thing that these secrets will help you to understand is that there is foreign experience. It is being measured and monitored and is published. You should look at it before you do your pricing.

These secrets will help you to develop a methodology for dealing with selection. Since some of your products that you're going to be selling are going to involve some initial selection, you're going to want to give your policyholders some credit for it. Since you've never selected these products before, how are you going to do that? I'm hoping to give you some tips on how to do that.

We also hope that this presentation of the CI secrets will help you to develop a methodology of your own for dealing with substandard lives, because you're going to have applications from substandard lives, and you're going to have to make decisions. You're going to have to guide your underwriters who are going to say,. "Health insurance for a substandard person? No!" Well, it doesn't work that way.

Finally, we'd like to teach you these secrets because we want to enhance your company's competitiveness and to show some big growth numbers for all of your companies. Because we make our living off this product, we want to share our knowledge of the product so that you can make it an important product. What you weren't told when I was introduced is that I'm originally from South Africa, where the product was developed, so I have an unnatural enthusiasm for it.

Stepping straight onto product design issues, the first big secret of CI is that even though it's health insurance, it should be looked at and priced like a life insurance product. This is an enormous realization to come to. The probability of getting a CI in the year of age X to X+1, which we shall call i_x, is a binomial probability, just like our familiar old q_x. Any mathematics that applies to q_x should at least, somehow, apply to i_x, so that you can form a model thinking about CI along the lines that you always thought about pricing life insurance products.

What this really says is you can take your typical life insurance product, take the q_x out and imbed the i_x, and now you have a one-to-one correspondence of product design. Since there are so many life insurance products, and so many different kinds, clearly just going through that sort of experiment you can conjure up thousands of different CI insurance products. You don't really have to be very creative, you just think about it, and it happens. Then, you have another one-to-one correspondence between every life insurance rider ever invented and CI. You have these huge correspondencies. It gives you this unlimited invention and design ability.

There are only two ratemaking issues. The first one is, what is the cost of the raw material? In other words, in any insurance pricing job that you do, you need to know the cost of your raw material. The other one is, once I have the cost of this raw material, what product am I going to embed it in? Well, as you know, the cost of the raw material is the thing that we spoke about. It's the old i_x. The contract term is a fancy term for saying that if you embed it in a term CI policy, you're going to come up with a different price, too. If you embed it in a whole life policy, universal life policy, a rider to a life policy, or anything you would care to invent, you need to think about the length of your guarantees. They are important additions to the cost of your raw material.

The sad thing about CI pricing is that you do need a multi-stage model. People get CIs and they die. Our job, as actuaries, is to gather statistics and to work with the interaction of illness and death in portfolios. The statistics that we gather are seldom in the form that we want them for CI. I'll give you an example. The surveillance of epidemiology end result (SEER) program statistics on cancer are voluminous. They're huge, they're smooth, and they're everything you could possibly want. They show you 40 different cancer sites, and they are age-specific and are expressed in terms of incidences per unit of population.

Now inside that unit of population are people who already have cancer. You're not going to insure those folks, so the rate can't be right. You need to take your SEER statistics and you need to clean them up. You need to watch out for the folks in the denominator who already have cancers. We refer to that process in our practice as a pollardization process. Think about pollardization as a huge old washing machine. You throw the statistics in the one side, the washing machine twirls, it cleans them up, and they come out clean on the other side. We named it the pollardization process after a famous Australian demographer who pioneered this kind of work. You can't really do good thinking about CI unless you think about the model of people getting critically ill and dying.

If you were a very clever genie sitting in the middle of this thing, you could dispense with all this theory with pollardization. You could sit outside the hospital door with a stopwatch, you could count the number of people going in the hospital door for a small time and derive your rates that way. But you're not sitting there. You're sitting on the outside, and all you can see of this population is how many people there are, how many died, and how many died of a CI. And the other thing you know is the incidence rates expressed over a denominator of both healthy and sick, because that's how SEER measures this stuff. That's how many of the other studies measure this stuff.

The pollardization process is a byproduct of this type of thinking. We have figured out a differential equation to represent the passage from the healthy to the sick. It's based on one good assumption, and it's based on the number of deaths due to CI and raw incidences in the population that you're actually able to count. That differential equation you can work out for yourself; it's not rocket science. But, you can't price without this multi-stage model and you can't analyze your statistics without recognizing that that's what you're doing.

Pricing with the multi-stage model is essential. I don't need to sell that to you; the multi-stage model mimics what happens. The person is healthy, the person gets a CI, and the person dies. Any other pricing mechanism that you use isn't going to do the trick. It isn't going to be accurate.

Another pitfall, and I've seen this in the early days of CI, is that people simply adopt foreign statistics as their U.S. basis. You don't want to do that. You need U.S. statistics for U.S. CI. There are reasons why U.S. CI incidences are different. The reason why adopting the foreign statistics as your U.S. base is a bad idea is the climate and environment of the foreign statistics and experience is different. Diagnostic practice is different. The integrity of the statistical research is suspect.

For example, cancer statistics used in pricing CI in the U.K. were later found to be wrong and understating cancer rates. You want to be careful about adopting what foreigners are doing into your products here. You need to back it up with U.S. experience. Finally, the availability of treatments is very different in the U.S. It's easy to get heart surgery or a bypass here; its not easy to get it in the U.K. In the U.S. we're better skilled at producing volumes of organ transplants. Overseas, organ transplants are rare.

People also often reserve incorrectly for residual benefits. I'm talking about cases where you've paid out 25% of the face amount on a heart attack. You know that the residual benefit is very substandard. The residual benefit is when you've paid out the CI rider and the life insurance is bigger than the CI. The residual life insurance that's left over is heavily substandard.

Thinking as a life insurance actuary, not as a health insurance actuary, if you're going to give any sort of long-term guarantee on the CI, you need to think about how you're going to reserve for it. Your reserving really should be consistent with CSO-type life reserving. If it's not, you're doing something different from what a life actuary would do in reserving for long-term guarantees. The other issue that you have to think of is what sort of required surplus you're going to put in your pricing model. You could use something based on health insurance, but you should also think there about the guarantees.

I want to return to the lack of portfolio-specific experience. We have only population-based CI experience incidence rates, as you already know, in the U.S., such as the SEER study. We also have Framingham, a very old but very good study. Information about Framingham isn't really available; you really have to dig for it. Much of what I've seen published in the accepted references is just not good enough to make a set of CI rates, but you can do it. Then there's the United Network for Organ Sharing. They give pretty good statistics, and you can look at transplants, and you can cut out kidney transplants or bring them in, whichever way your product is designed.

Having to deal with lack of portfolio-specific experience, we need to think about what we do have in the U.S. We have very good death-by-cause information. It's published not only by official sources, but also published by the Society. In addition, you have, of course, population CI incidence rates.

After you've pollardized population rates, you've got the incidence rate for population, i_x^P, and the proportion of deaths due to CI in the population, k_x^P. You also have mortality rates for both the population, q_x^P, and for the portfolio that you're going to insure, q_x^G. You want to calculate the incidence rate for the portfolio, i_x^G. The equation for this incidence rate is given by this Portfolio Calibration Formula:

$$i_x^G = i_x^P \; \frac{w_x^G k_x^G q_x^G}{w_x^P k_x^P q_x^P}$$

Here w_x^P and w_x^G are what I call "graduation factors" for the population and portfolio, respectively. They can be derived from a differential equation approach. You can get the w_x's from knowledge of the difference between deaths at age *x* of people who've just contracted CI and deaths at age *x* of people who contracted CI before age *x*. You need to estimate those differences in order to get the w_x's. However, the good news is that in most of the practical work I've either seen or done, the ratio of w_x^G to w_x^P is pretty close to 1. If you go and work on you differential equations, I hope that you wouldn't get a ratio of, say, 3. I'd be surprised if you did.

The next problem that I'd like to talk about is making those realistic estimates. We already know that CI is a multi-component risk; up to 30 benefits can be insured. I like the basic benefits best of all: heart attacks, stroke, cancer, organ transplant, heart surgery, and end-stage renal disease.

Now if you are one of those actuaries who say, "Well, I've got to be safe on all these things. I've got to overestimate everything by 20%," then eventually your rates are going to be too high by 20%. You really need to be careful about adding those huge safety margins. I've seen this happen. Don't do it; you won't sell any policies except to people who shouldn't be getting a CI policy and are cheating their way into the system.

As promised, here are the tips for enhancing your company's competitiveness. You've got to make realistic estimates. You shouldn't double-count things. For example, if you are giving a cancer benefit, and you probably would be, what should you be charging for bone marrow transplants, if anything? Since most bone marrow transplants follow a cancer diagnosis, you should be thinking about not taking the full rate of bone marrow transplant.

Think carefully about rate guarantees. People like rate guarantees in life insurance and they like them in their CI insurance. It really requires a lot of thinking.

Gender difference is another one. I've seen CI rates designed with women getting a seven- or five-year discount on age. It doesn't work that way, because cancer rates for women are quite different than those for men. Non-smoker age you should think about. Think about your underwriting requirements, always realizing that this is a life-insurance-like product.

If you're going to price a rider, here's another beautiful formula:

$$(aq)_x = i_x + (1 - k_x)q_x$$

That is, the cost of offering a life insurance benefit that's fully accelerated upon CI is equal to the CI incidence rate, plus q_x multiplied by the proportion of deaths not due to CI. It's intuitive, it's beautiful, and you can derive it from the same model that we looked at earlier.

If you want to do select rates, there's a version of the Portfolio Calibration Formula for select rates. If you know your select rates for your deaths and you know your proportions in the select period due to CIs, this is the recipe:

$$i'_{[x]+t} = i_{x+t} \frac{w'_{[x]+t} k'_{[x]+t} q'_{[x]+t}}{w_{x+t} k_{x+t} q_{x+t}}$$

Finally, the top three companies in South Africa recently contributed exposure data for 1991-94, and they found some astonishing things. This is the largest exposure worldwide to date, 1.2 million years of exposure. However they could not give us the cause of claim. In other words, they couldn't tell you whether it was for a heart attack or cancer. They just had them lumped together.

One of the things they discovered was that the female experience was better than the male experience. We would think that with cancer rates for females following a different curve, maybe it wouldn't be so pronounced, but it is. Some of the interesting things in the South African study were the confirmed select period rates are much lower. It also brought out that large policy claims are worse than smaller policies. Also non-medical experience was marginally better than medical. Go figure.

In Table 2, "Foreign CI Experience (South Africa)," shows duration 0 versus all higher durations from this 1991-94 study. What it shows is that the ratio of the duration 0 to all higher durations is significantly lower than 1 everywhere, except for perhaps at the very highest ages.

TABLE 2
FOREIGN CRITICAL ILLNESS EXPERIENCE (SOUTH AFRICA)

Males							
Ages	Duration 0			Duration 1+			Dur 0/
	Claims	Exposure	Obs Rate	Claims	Exposure	Obs Rate	Dur 1+
20-24	6	49,367	0.12	15	55,676	0.27	45%
25-29	13	56,397	0.23	37	108,560	0.34	68%
30-34	16	45,222	0.35	76	117,433	0.65	55%
35-39	29	30,510	0.95	122	96,027	1.27	75%
40-44	39	18,466	2.11	168	67,498	2.49	85%
45-49	25	9,272	2.70	143	39,716	3.60	75%
50-54	14	3,493	4.01	115	18,267	6.30	64%
55+	6	682	8.80	56	6,188	9.05	97%
All	148	231,409	0.69	732	509,365	1.44	48%

But if you think about this as being duration select, over duration select plus ultimate, then you can imagine what these figures are going to look like if the South Africans were actually able to tell you what duration 1 expressed as a percentage of the ultimate rate would be, what duration 0 as a percentage would be, and duration 1 as a percentage of duration 2-. You can bet your boots that the percentages in the right-hand column would be much lower if they were transformed to that. Do pay attention to what can be done with selection.

Ms. Sandra K. Meltzer: I'm going to speak about state objections to CI individual insurance stand-alone policies. We have experience with the stand-alone CI policy, the rider attached to a health policy and the accelerated benefits. Suppose you've gotten to a point where you've figured out what your market is and who you're going to sell it to. You've figured out your product design and what serious illnesses you're going to include. You've done your pricing; you have your rates. Now comes the fun part: You have to get this through 51 jurisdictions if you plan to sell it across the U.S.

Well, sad to say, in five states you just can't do it. Instead of expanding their view of what a product that's offered to their citizens can be, these states look at their law and they say, "We don't include this, so we can't accommodate it. Your product has to be either expense-incurred or based on indemnity." Therefore, they will not accept it. Hopefully, in the future, we can convince them otherwise, but that's the situation as it is now.

I should also mention that I view the whole issue of compliance and filing as aiming at a moving target. What you file and get approved today may not be approvable tomorrow. What you got disapproved today, you may find you can get approved tomorrow, because all of the issues that new products encounter are really issues that insurance departments may not have encountered before, and therefore they don't know how to respond to it. We feel that negotiation skills are primary in

getting these products approved. There are, however, 18 states where you should have no problem at all going with these products and getting them approved.

Six other states object to waiting periods. They feel that you should have done your underwriting in such a way that there is no anti-selection and therefore you don't need a waiting period. However, some recognize that this is not quite the case and will allow a waiting period if you pay a benefit for a CI diagnosed during those first 30 days.

Some states, say, "We'll allow a waiting period, but you can only have one waiting period, and we view the survival period as another waiting period." We try to explain that the survival period is necessary because this is not a life product; this is a health product. We're not paying on death; we're paying on illness. Fifteen states don't accept this argument it. But some states will let you have a survival period if you pay a reduced benefit, such as 25% of the face amount, or $1,000 return of premium. It varies state by state.

Let's say you price your product with a 50% loss ratio. Well, you're going to have to change your pricing in a number of states if you want to get it approved. Florida requires a 60% loss ratio, Kentucky 55%, Maryland 60%, Michigan 55%, New York 60%, South Dakota 60%, and Washington 60%. You're going to have to change your pricing for those states.

Like all other health insurance, the states are not consistent in what they consider acceptable definitions of cancer, physician, or a pathological diagnosis. You will have to change your definitions, but that should not affect your pricing.

A disclosure item is that a number of the states insist that specified disease policies must be supplemental to health insurance. I believe that only California requires that you put in your application the question as to whether other health insurance is applicable to the person applying for the CI. In other words, the state wants to make sure that no agent goes out there and says, "This CI policy is all the health insurance you need." That's kind of ridiculous from my point of view because I don't think anybody would believe it.

There are some products that will return the premium to you in certain circumstances. For instance, if they have a survival period and the person dies before the survival period, they return the premium. There are some states that object to returning the premium, period, for no particular reason.

Some of the other concerns are disclosure issues, Health Insurance Portability and Accountability Act (HIPAA) issues (whether or not HIPAA applies), and pre-existing conditions (whether you can have them or what they should be). In Massachusetts, there's an interesting situation that some of you may have come across before. Massachusetts law defines non-group health insurance in a very strange way, which I really don't understand, except that CI does not fall within that definition, even though they have a law that defines specified disease. You are blocked from having that product in Massachusetts. By the way, the insurance

department doesn't like that law. It was against it, but the legislature passed it anyway, which is not an unusual circumstance.

In New Hampshire you can have the CI product in the franchise market only. Why that is, I really have no idea. Again, it doesn't seem logical. In New Jersey, you cannot have specified disease at all. New Jersey did have a hearing scheduled on allowing specified disease, but just before I came, I looked on their Web site, and I could see no proposed rule, nothing on specified disease, so I have no idea what happened at the hearing. It has been so opposed to specified disease that if they do adopt something I imagine it will be quite some time from now.

Altogether, there would probably need to be about 28 state variations on your contract. Some of them would require repricing; some of them would not. That's the stand-alone product. A rider to a health product is probably not very much better.

Another option is to use accelerated benefits to life insurance. That's a much easier way and a much safer passage. The only state that will not accept an accelerated benefit on life insurance is New Jersey. New York has adopted a law that will allow you to have an accelerated benefit for CI. I can't speak in too much depth as to what's happening in New York, because we're currently in negotiation on behalf of one of our clients with New York. All I can tell you is, like everything else, New York is very, very difficult. We're not sure how this is going to come out.

On the accelerated benefit side, the objection to lump-sum issues goes away. They usually expect to see a lump-sum distribution on the occurrence of a first diagnosis. The only issue that you need to consider with the accelerated benefit for CI is Section 7702 of the Internal Revenue Code, which defines life insurance for U.S. tax purposes. Section 7702 has qualifications for long-term care and for terminal illness. Its definition of chronically ill is not what we would think of in a CI product, but it is the definition that you see in long-term care products with activities of daily living. Thus, CI does not fall in one of the categories that Section 7702 describes. That would be something that you would have to take into consideration. Of course, you'd need all the disclosures about tax qualification, and you'd need to consult your tax attorney on the product itself when you file it. Basically, those are the waters that you have to negotiate.

As you know, health insurance is difficult to begin with. You have to have all the health provisions on the CI product that you would have in a health policy, and it's something that you should be very grateful to your compliance people for, that they could negotiate this for you.

From the Floor: Mike, you mentioned an awful lot of CI products, not all of which I'm familiar with. Are any of them non-cancelable?   Johan, you mentioned increasing the reserve on impaired risks. Do you then decrease the reserve on your remaining pool of lives, since you know none of them have had a CI?

Mr. Lotter: I think the answer to your question is to be found in the multi-stage model. You have to run the impaired lives that were created during the horizon

term of your modeling. You have to run them in a separate compartment. You have to decide what your reserves have to be there. I'm not sure that enough thought has been given to this, but I would think that the unimpaired lives should logically have a better mortality than a cohort of people, all insured under life insurance policies; some of whom now have cancers.

I think what I've seen in practice is that the reserve allowances for the unimpaired remaining inforce are just maintained at levels consistent with CSO reserving. What you also see in practice in reserving for CI term products is simply the half c_x reserves, and even companies that are giving some years of guarantee of the premium will use the half c_x reserve in the pricing model.

Mr. Rasmussen: As far as any of the products being non-can, in a quick discussion between Will and me we couldn't come up with any one that is. There probably are some out there. I think most of them are probably guaranteed renewable.

Mr. Hobson D. Carroll: I understand in the last two or three months there's been a rather massive production out of the U.K. on CI. It was from a working committee on CI morbidity or something to that effect. I have a colleague who was on that committee and got a copy of it for me, and it's chock-full of statistics. I've had a glance at it. I don't know exactly what they all mean, but there might be something there that's at least useful in terms of pattern or some of their experiences. Maybe you have some comments about that.

Mr. Lotter: Yes, I got that in the mail just a couple of days ago. It will be the subject of my next dissertation. Don't miss it.

Mr. William P. MacLafferty: Sandy, did your comments primarily deal with individual filing requirements? If so, do you have any information on group filing requirements?

Ms. Meltzer: My comments basically dealt with individual filing requirements. However the information is really not much different for discretionary group products. There are some states where it might be a little bit easier because you don't have to file. Or some states have the three-pronged test for group insurance as to whether or not they will review it. Our experience with that is changing daily.

Really, discretionary group insurance on any product is a very difficult subject. It's not clear-cut at all. To give you an example, in Missouri, we got a base product approved because they finally accepted Illinois law as the same as their law. When we followed it up with a rider for the same group product, they objected. Now they're questioning whether they should have given us the approval in the first place because now they no longer believe that Illinois law is the same as theirs. Although when I put the two side by side, I can't see any difference. To answer your question, this is primarily for individual, but it's not too far from discretionary group.

Mr. MacLafferty: Michael, do you have any comment on true group and guaranteed issue amounts for anybody that's in that market?

Mr. Rasmussen: At this point I don't have any information on guaranteed issue amounts.

Mr. Lotter: Perhaps I can help a little bit. That's an interesting question and a good one. If you are going to offer guaranteed issue under worksite marketing, for example, and I think a lot of you are looking at that, I think your guiding intellectual model should be, what are you doing with guaranteed issue on your life business? Because whatever you are doing with your life business could be, in some proportion, mapped into what you are going to do with your CI business. CI quacks and walks like life insurance.

There are reasons to be cautious. For one thing, CI benefits the person who actually gets the cancer. It's his ticket to Sloan Kettering. He's going to try harder to get this coverage if he really wants it. There should be an excess of anti-selective pressure over, say, just the life insurance policy that you are paying premiums on for the benefit of your relatives. But taking all that into account, the mechanics of what you're going to do are intellectually similar to the mechanics you're going to use for determining your guaranteed issue limits for your life insurance.

Mr. Michael B. Yarmish: Sandy, do you know any of the states that have extraterritorial concerns in terms of discretionary groups?

Ms. Meltzer: It depends. As an example, Pennsylvania won't accept the lump-sum product. But if you're filing a discretionary group, they allow you to file exempt, which means you can use whatever you use in the state that has the trust where you issue the master group contract. You can issue a certificate in Pennsylvania if you have the master group contract elsewhere. However, when it comes to a state like New Jersey, I would not suggest that you do that, because New Jersey has a specific prohibition against specified disease.

Ms. Donna R. Jarvis: We've been talking about CI now for a number of years, and there are companies that are supposedly marketing the policies, but I haven't really seen a lot of sales. I was wondering if anyone has some statistics on what the sales have been. What are the characteristics of the people who have purchased these types of policies in other countries, such as age and gender? What amounts of coverage have you seen?

Mr. Rasmussen: The sales statistics have been pretty sparse to date. We have seen some companies, specifically Mutual of Omaha, that has been very happy with its sales in the worksite and in the individual marketplace. I don't really have any specific sales statistics, but I think it has exceeded its expectations.

I think each country is a little bit different with respect to why CI has been successful there. In the U.K. it seems to be very predominant in the mortgage marketplace, as mortgage insurance, so the amounts there are more comparable to

what the outstanding mortgage is on a house. In Canada, what I've heard is that the average size is somewhere above $100,000, and the marketplace there seems to be high-worth, affluent individuals. The reason why they're buying this is so they can bypass the Canadian medical system and come to the U.S. for heart surgery or something that they would have to wait in queue for in Canada. I think it's an interesting question because it's up in the air as to the U.S. marketplace niche that this product will be successful under. Maybe it's a combination of markets.

Mr. Lotter: As I said, there are just huge opportunities for morphing a life insurance product into a CI product. Wherever somebody needs life insurance, they're going to be only that much happier when they're able to collect it early because they have CI insurance.

The way I see this going in this market is, first of all, it's going to take off in the worksite marketing area. One of the reasons is, you're getting the people with real jobs and not very high salaries. They need this kind of protection more than the multimillionaires in New York City, because if you have a couple million dollars, you really don't need a CI policy, certainly not as a private individual. You can pay for these horrendous expenses that are going to arise, whether it's a cancer, heart attack, or stroke. It's the ordinary working people who need this type of coverage. In this country I think that's going to be the worksite marketing. I think one of the other speakers referred to being able to sell it on a needs basis. I can't think of a better way of approaching people on a needs basis than in the worksite marketing/payroll deduction milieu, where you actually meet with an enroller who explains the benefit to you and gets you to actually want the benefit. I think that's a great place for this benefit.

In the South African market, it was sold mostly to professional people—doctors, dentists, and lawyers, as an acceleration benefit on their life insurance policies. In the Australian market I'm told you just cannot sell a life insurance policy today unless it has a CI rider. I guess that just adds to what the other speaker has said.

Mr. Randall S. Edwards: I have two questions. One is on the additional benefits you had listed, like blindness and deafness. Do you deal with that on an accident versus an illness basis? The second question is on tax treatment, for Sandy. Regarding the accelerated benefits on life policies, I understood the reason the IRS allowed them was because it was just a short-term advance in the death benefit which was to be received tax-free. How does it deal with things like blindness, deafness, and things that don't necessarily have an immediate impact on mortality?

Mr. Rasmussen: The way I understood that question was, how do you differentiate blindness or deafness from an illness or from an accident? I can see where it would depend on actually how it was spelled out in the policy, so I'm not sure there is any one way that it would be handled.

Mr. Lotter: One of my most recent product design efforts covered, loss of speech, loss of hearing, loss of sight, and even loss of limb. The answer for that one, at least, is you don't differentiate. Whichever way it happens, the policy would pay for

it. And this seemed to be a very popular addition to the basic five diseases, and so there are also some good ways of getting at good risk rates for those.

Ms. Meltzer: In regards to Section 7702, I don't believe that CI is one of the qualified riders. Terminal illness is a qualified rider, and so is long-term care, but they don't include CI.

Mr. Lotter: You may want to look at Section 104 of the Internal Revenue Code where you may come to the conclusion that the CI component of your benefits that you're giving, be it the only component or not, qualifies simply as a health benefit under that section, and that it is therefore tax-free. However, you should consult your own tax counsel.

Ms. Lori A. Nelson: I'd like to try to help answer one of the previous questions and then I have another question. In our individual market, our average base amount is around $50,000, and the average age is in the lower 40s. In the worksite market the face amount average is about $30,000, and it's a little bit younger, mid-30s.

My question has to do with the importance of underwriting for family history. Maryland and Louisiana haven't let us ask family history questions. Do you feel that we can sell in states that don't let us get that information?

Mr. Lotter: Can I answer your question with a question? Are you using family history in doing your life insurance underwriting?

Ms. Nelson: I don't know. I'm not in life insurance.

Mr. Lotter: To find the amount of additional risk that you can unearth with family history questions, at first blush you'd think, "Well, gee, you can learn a lot from family history." But we found that in a substandard underwriting study we did for CI, family history as indicators of extra risk of CI was rather weak. If I recall correctly, the statistics showed that a family history of cancer wasn't really a major predictor of future cancer. We found that rather odd, because I thought it would be exactly the other way around. Similarly, a family history of heart disease wasn't a major predictor either. I like to take family history if I can get it, but perhaps you should see if you could find some way of getting around that.

Ms. Meltzer: I'm not familiar with what Massachusetts has adopted, but the Louisiana regulation that will not allow you to take family history does not apply to life insurance or disability income, and that may be a way out.

Mr. Robert M. Sackel: If you are developing this product in a group environment, say, worksite selling, now you have group people administering this. What type of organizational structure do you think needs to be implemented to effectively produce this product? I would think you need something outside the normal disciplines that are currently available within the normal group environment.

Ms. Meltzer: Well, it's a hard question. I do know that insurance companies have a department that's true group and the people that do individual life usually handle discretionary group. It depends on how you are going to sell it. Is it going to be an employee-pay-all voluntary program? Is it going to be part of a package where an employer pays all or something, so it's not a voluntary program? It all depends, and it depends on how flexible the people in your group department are in terms of can they think out of the box and into something new.

Mr. Sackel: The other question that I have is in terms of geography. Johan, being from New York, you've probably seen the different pockets of areas of cancer rates in New York. With respect to a group environment, if you're selling this in a worksite area, do you have some additional anti-selection that you might not have anticipated in the product? Are these issues something that the carrier should be worried about also?

Mr. Lotter: If I may, I'll try and answer that. First of all, I think for those people who are living in those black pockets, you may get some additional participation. That will be good. The actual existence of these "black pockets" and their scientific validity is not established at this time, and one is a little skeptical about it. I guess you could hope to do some more sales in those areas.

I have not seen anything I can use on a geographic basis in the U.S. to make the risk rates for CI. Now that's not to say that things aren't different for different population groups. For example, there's a very voluminous breast cancer study that was done at least 10 years ago. It's out of print now. This study showed that Hispanic women are far less susceptible to breast cancer. The age-specific breast cancer rates for Hispanic women are much lower than age-specific breast cancer rates for Anglo women, as I think this study refers to them. There is some reason to think that there may be ethnic differences in breast cancer, but you can't discriminate against people on that. Some of it may be just due to diet. On the other hand, the Hispanic women in this study were mostly in California, and the Anglo women were all in Connecticut.

Ms. Meltzer: On a regulatory basis, regulators, especially in those states where they've instituted community rating, are telling you that group insurance is sharing of risk, so you can't really differentiate like that based on just the individuals. The only thing they let you differentiate on is the cost of medical care. On those states that have community rating, which I believe is most of them now, you really couldn't do that anyway on a group basis.

Mr. David R. Beard: I have a question about the taxation of these products. If I have a policy that is a life policy with, say, a 50% acceleration rider, and I incur one of these CIs, can I expect to get a 1099 long-term care from the company?

Ms. Meltzer: I believe that you'll find that the situation is exactly like it was before they adopted the changes to Section 7702. They'll probably be silent. I think if you ask the Feds whether or not it was taxable, they couldn't tell you or probably wouldn't want to tell you. This is something you'd have to depend upon your tax people to tell you what to do, but no, I don't think you're going to get a 1099.