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Session 97 PD
Actuarial Techniques Surrounding Innovative LTC Benefits

Track: Long-Term Care

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Summary: Today's LTC products offer several new benefit designs and optional benefits compared to the recent past. This session discusses techniques that can be used for the designing, pricing and reserving of these new benefits. Benefits to be discussed are spousal benefits, including joint survivor, joint premium waiver and pooled benefit designs; additional purchase options; and international coverage. Attendees gain insights in addressing benefits beyond the basic nursing home, assisted living and home care benefits.

MR. ROBERT YEE: Product development is one of my favorite topics. As you know, in long-term care (LTC) it takes forever to figure out experience. There's always this balance you have to find between the right premium amount and the amount the market is going to charge. Today we have three distinguished speakers. We're going to speak on a variety of topics.

Andrew Herman is from Wakely Actuarial Services. He is going to talk about premium and benefit patterns in LTC. It's a nice review, and he'll have some interesting illustrations at the end on some of the perceptions on premium patterns and benefits.

After Andrew will be Deborah Grant from Milliman in Chicago. She's going to talk about a benefit that we're probably going to see some variation of more in the future, but we've seen a limited offering of it right now. She is going to talk about wellness benefits.

After that will be Tim Hale. He's going to do a review of all the past innovations and see what we have learned from them.

MR. ANDREW HERMAN: As Bob mentioned, I'm going to talk about premium structures. It was an interesting exercise for me because it got me thinking about different ways to fund LTC in terms of premium pattern and total amount of premium outlay. I may be in the market for an LTC policy myself.

In any event, let's get started and talk about the premium design types. The design that's typically used in traditional LTC policies sold today is issue-age-level premium payable for life. Absent any rate increases, the customer buys in a premium, and that stays level for as long as the customer owns the policy. Variations on that to front-end the premium are types of limited pay. Five-pay and 10-pay are fairly common. Some carriers do offer a single-pay option, but we're not seeing too many of those in the market today. Maybe a more interesting one is the later of age 65 or 10 years. The idea there is that people could purchase LTC and have the premiums done when they're 65. But if they buy it at age 62, you want to make sure they pay a minimum of 10 years of premiums, and it's priced that way.

There are a couple of other variations on premium design types. Some carriers have tried to say that if you pay a little more money in the first year, then you can get lower renewals. That may be interesting if you have some cash available and don't want to pay a high premium, but it's fairly similar to the level-premium design. One of the more recent innovations of a couple of carriers is that the premium drops. It's maybe double and then is cut in half when you get to age 65.

The guaranteed purchase option (GPO) is increasingly used to get more benefits. When you purchase these policies, there's the obvious choice of whether or not to prefund inflation. As an alternative to prefunding inflation, most companies offer GPOs. Every year, or every three years, you can upgrade your coverage and buy additional slices. Typically these are done on the attained age. It's issue-age premiums at the attained age at time of purchase. We're seeing some new innovations in the market where the GPOs are based on issue-age premiums. This is interesting because they don't become as prohibitively expensive, but there are additional pricing considerations upfront. Increasing premiums are another issue. To get a lower going-in rate, you could have an increasing premium to age 65 and then level off, or just increase forever. There are some regulatory issues regarding the use of increasing premium pattern for LTC. We'll talk more about it.

What are some of the pricing and reserving issues that come out of these premium design types? An obvious one for limited pay is lower lapse rates. At our firm when we price limited pays (maybe not the 20-pay, but probably the 10-pay), we would use zero voluntary lapse and assume that if somebody is going to purchase, that person is not planning on lapsing. You might use a little bit of lapse in the first couple of years, but basically you have to take out your voluntary lapse assumption. If you don't, you could seriously underprice the product, particularly

when there are compound inflation benefits because the benefits are so back-ended and you didn't assume that anyone would lapse.

You might possibly get better morbidity on limited pay. I think an argument in the case of single pay is that if somebody has a lot of money around and can put it into an LTC policy, that person is probably not planning on claiming next year. If I were to claim next year, I think I'd buy monthly mode.

The other issue is should you build in higher margins for limited pay? Typically you can't get a rate increase after the limited pay period the way the contracts are designed. Should there be a margin in there? I don't typically do that because I think there is some argument for better morbidity, and if you take all the lapses out of your product, you've generated a higher premium that way, too. That's a debate among actuaries. You might want to restrict commissions for limited pay, particularly in the case of single-pay. You couldn't pay a first-year commission rate, but when you're doing a 10-pay product, the issue that comes up is should you pay your standard commission scale or should you pay reduced commission rates for field compensation?

I'll talk a little about the reserving method. I have a note here to "consider net level reserves." The one-year full preliminary term pattern has no reserve at the end of the first year. Because of the fronting of the premium and the way the profits emerge, it's probably a little more conservative and perhaps appropriate to reserve these on a net level basis. It's not clear that that's required by regulation. You could probably do a one-year preliminary term, but you may want to think about it and consider any special nonforfeiture requirements. Additionally, I want to mention the profit release reserve under GAAP. GAAP reserves are supposed to be set so that profits emerge as a level percentage of premium over the course of the contract. Here where you have 10 premiums, there's an issue of how to levelize once the premium goes away.

Let's talk about the GPO and antiselection risk. Are people who take the options and increase their coverage more likely to claim? I would argue maybe not when they're annual. If a company is offering annual upgrades, in general when people buy at a younger age, the decision about whether to upgrade their coverage is based on whether they can afford it, whether there has been inflation, or whether they need the coverage. On the other hand, you get into situations where maybe you have a 15 percent GPO offered every three years, and one of the important issues is if you don't take one of these, can you still get them in the future? That may impact people's decision to buy them. In any event, there is a concern that you could have some antiselection, and you might want to load your base premium rates for that.

A more common option, and what we typically recommend for our clients, is not to pay any commissions and that they just have a zero commission rate on GPO increases. It is likely the company does the work, and the agent may not have to do anything at all. By paying lower or no commissions on these options, you can

return more in the loss ratio. In a sense, it's a better consumer product because you can pay more out in benefits. It helps protect profitability a little bit. If there is some antiselection risk, you didn't charge anything for these options, and you have a little higher claims, you're okay because you paid lower commissions.

The other issue is that you probably have lower acquisition expenses. These aren't underwritten; these are guaranteed when you buy the policy. You have fewer costs, and it may turn out that your GPOs are more profitable than your base policy. I think that for most actuaries that's an afterthought. I'm not sure actuaries have the GPOs in their pricing models, but they probably should.

Let's talk about the net level reserving for the GPO. This is a case where if you don't have those first-year expenses and don't have commissions, it doesn't make sense to do one-year preliminary term. We typically reserve GPO-increase additions on a net level basis. The other reserving issue is the selection. Should what you assume in your pricing for underwriting selection be in the claim cost basis when you set up a policy or contract reserves on these GPO options?

In conclusion, the reserve bases for these options may turn out to be somewhat different from how you're setting up the base policy.

I'll talk a little about increasing premiums. I find this to be one of the most interesting parts of my presentation today. You may get higher lapses. It's the opposite of the situation where you have a premium that steps down or a limited premium. In this case, if you know you're getting a rate increase every year, you're more likely to lapse. I wouldn't suggest assuming that in the pricing if you did design one of these plans. There should be relatively low commissions. You charge a first-year commission rate on a small premium. When you look at the present value of commissions over the projection period, you'll find that commissions come out a little bit less.

There's a question about how to increase the premiums. Should it be step-rated or banded? You could increase them annually. It probably makes some sense to relate the increase in the premium to the amount of the benefits if people have compound inflation protection. Bob suggested that I bring up the consistency between the level rate at age 65 and the issue–age-65 rate. If you have a lot of these different premium options, people are going to look at where their rates are at different ages. They have to make sense relative to each other. From a reserving standpoint for the increasing premium, gross premium may produce increasing valuation net premiums and also relatively higher reserves in early durations, as are relative to the premium.

We've covered premium patterns fairly well. We'll have some illustrations at the end that when you see the numbers will give you a feel for how different they are in terms of a going-in rate. You can also see cumulative premium. Before we get into that, it's useful to talk about the benefit pattern because we all know that these

policy benefits may not be used for 10, 20, 30 or more years, subsequent to purchase of the initial policy. It makes some sense to buy either GPOs or the compound inflation protection.

We have a couple of comments about the other options, like a weekly or monthly maximum. These are additional policy options for payment of benefits. You may want to get your home care on a weekly basis. That gives you more flexibility. You could have more than the daily amount on a particular day.

I'm going to get back to the increasing benefit pattern. The 5 percent compound increases in the daily maximum, and the policy is a required offering. That's in the NAIC model regulation. Those are benefits where if you buy $100 a day to start with, it goes up to $105, to $110.25 and then it keeps going up forever. There is a nuance here about what the increases apply to when it comes to the maximum benefits payable under the policy. Say somebody buys a pool plan, $100,000 of benefits. Does that $100,000 go up by a 5 percent compound every year, or do you consider that you've paid out claims and inflate the remaining amount? Is it the remaining amount that goes up or the whole amount? When you have salvage on these policies and when people are claiming less than the full daily benefit, that can turn out to be pretty profound. It's a pricing issue. There's no difference for unlimited benefit plans because in that case the tail would never cut off.

One obvious alternative to 5 percent compound inflation is a lower interest rate or a lower inflation rate. In the past three to five years, especially in the past couple of years, interest rates have come down to historic lows. People may not think inflation is going to be 5 percent and may be buying too much protection. A variety of companies offer 3 percent compound or maybe other options. When I started out in this industry, there was interest in offering more than 5 percent, like a 7 percent compound, and I think now 3 percent is more popular.

A pricing result that may not be obvious is that for the cost of the rider, a 3 percent compound inflation rider doesn't cost 60 percent of a 5 percent compound inflation rider, though it might seem that way. On simple inflation I think that's the case. On compound inflation, because of the leveraging and the compounding effect, you get a lower price tag. It's a nice way to bring the price down for somebody who wants inflation protection but can't afford the full 5 percent.

One innovation that I've noticed in the market recently is not increasing the benefit maximum by the same amount as the daily maximum. Your daily benefit could go up by 5 percent a year, and your pool would go up by only 3 percent a year. On a two- or a three-year plan, that might save you 25 percent of premium. As the benefit period increases, you're going to have that savings go away, and it's zero for unlimited benefits because you've got no cap.

Simple interest of 5 percent is another interesting argument. I debated this once at a producer conference. I think there are a lot of issues between simple and

compound. Agents tend to like simple inflation. Historically, as the industry grew, many of the big carriers sold more simple inflation than they sold compound inflation. It's easier to understand and easier to explain. The $100 a day goes up by $5 every year and not some number with a lot of decimals, so I think agents do better with it. This option can be criticized because if you're trying to protect the risk, and the real life costs are going up by 5 percent per year, a simple inflation option would not fully protect you, and you would have only about 70 percent of what it cost when you're finally claiming. That could be a little bit of an issue.

Further innovations on the benefit pattern for inflation increases are limiting the benefit increase period to, say, 10 years, or to age 85, or until the benefit doubles. The "until the benefit doubles" one is easy to understand. You buy $100, you buy a rider that increases it, and when it gets to $200, it stops. Maybe that's a little misleading. People may not realize that their increases are going to stop. Again, there are more ways to lower the cost, and I always like options. Somebody may want to buy one that goes to age 85. There are some regulatory issues. These options don't comply with the NAIC mandatory offering, so some states consider them less favorable and will prohibit them. Most jurisdictions will allow you to offer them as long as you have the required offer.

Earlier I talked quite a bit about the GPOs and whether they're offered annually, every two years or every three years. When I went through this before, I did not talk about whether the increases might be based on a fixed percentage. One common provision is to say the GPO increase will be the greater of 5 percent or the CPI. That assures people that they can buy enough protection to match actual inflation.

Typically, the GPO options might stop at age 85. You might not be able to purchase them, so you buy it at age 65. Every year the company sends you a letter, and, assuming you're healthy, you took them all. You get to age 85, and they're costing an arm and a leg, but you still want to buy them. Many contracts cut the age off at 85. That's a risk issue. Their issue-age premiums may only go to 85, and they don't want to have any coverage added after that time. If that's in the contract, then you may get into issues with a state that says, "You can't stop it. You have to have the GPO offered even if somebody is 120 years old." There are a handful of states. I have that list somewhere.

Some states—Missouri comes to mind—will tell you that you can offer limited pay plans, but you have to track the experience separately. This is a fairly interesting regulatory consideration, and it may have implications if you need a rate increase on your block. There can't be any subsidies back and forth. State regulators are probably concerned that the limited pay was underpriced. If you underprice that, then are you going to get it from the other people who had the level pay plans? I suppose it could go the other way. It could go either way. If you've separated the experience, then you would ask for a rate increase based on the specific experience of the plan design type.

I want to mention a few more regulatory considerations. On attained-age rating, it's in the current NAIC model regulations that attained-age rating is prohibited after age 65. There is a proposal to prohibit attained-age rating at all ages. I think that takes away from innovations and takes away from marketing in the worksite where people might have a hard time paying a level premium when they're 45. They know their salaries are going to be going up, and they'd rather have something that increases to 65. It's reasonable to say that it has to stop at 65 because a lot of people retire then, would be on a fixed income and don't want it going up forever. The regulators have a valid concern that seniors are on a fixed income and can ill-afford increasing premiums. With all that said, regulators tend to approve the GPOs. Those are by and large approvable everywhere. It's a proxy to attained-age rating. We're going to see in the upcoming illustration that the GPOs look a lot like attained-age rating forever, and those are legal.

We've already talked about some of the other regulatory considerations, and I apologize if I got a little bit ahead of myself. Again, some states disallow plans that are different from compound inflation 5 percent forever. Indiana comes to mind. The argument is that it's less favorable and that it's not as good as what's required. Some states put restrictions on the GPOs that you couldn't, for example, stop for age 85. The other aspect is what happens when somebody goes on claim? Typically, in today's GPO options, you can't get them. You can't buy them. If you're a claimant, or you've claimed in the past, the contract says, "Sorry. You've got all you can." That to me seems to be the biggest difference from prefunding. If you buy a 5 percent compound inflation, that's always going to go up. If you're on claim, you need the increase. That's good news for compound inflation protection but bad news for GPOs that say they stop in claim status. It may be Indiana, Pennsylvania or a couple of others that don't allow that and say that you have to continue to offer the GPOs even if you're in claim status.

I'm going to present an illustration for issue age 52 (see Chart 1). This is something that I did, and I took my pricing model from a recent product. It was a typical comprehensive LTC insurance policy that had facility and assisted-living facility benefits and home care benefits. I just priced one at $100 a day, but it was a $3,000 home care monthly maximum. This carrier felt that home care ought to be offered on a monthly basis, so this was the product I took. I looked at the five-year plan. People asked me what I would buy.

As you know, I'm thinking about buying one of these. I always recommend the five-year plan. I think lifetime is kind of expensive, and two or three years may not be enough. I personally like the $182,500 maximum with inflation protection. You know that's going to go up. Your daily is going to go up, and your pool is going to go up. What I did in the illustration was compare all these things we've talked about: level premium prefunded inflation protection versus not prefunding inflation versus doing GPOs. You can also compare the level premiums to some of these other patterns, like the increasing premiums at 5 percent a year or limited pay. If

you have money upfront, you might front-end it. If you don't have the desire to pay the full, you might increase the premiums.

I'll give you a little more detail on the assumptions. I assumed a 5.5 percent level earned rate. These are just some typical assumptions. That earned rate may be a little high. You may want to use 5 percent for these. It's sensitive, especially in the inflation pricing. I assumed voluntary lapses of 10 percent, 6 percent, 4 percent, 3 percent and a 2 percent ultimate voluntary lapse rate. I cut that to 6 percent, 4 percent, 3 percent, 2 percent, 1 percent and zero for years five to 10 on a 10-pay plan. I have a model behind this, and if anybody is interested in detailed results, those could be provided.

I assumed commissions of 75 percent in year one, and 15 percent in years two to 10, and 5 percent in years 11 and beyond. I assumed no commissions paid on waived premiums. I assumed no reduction on limited pay plans, I assumed full commissions. I don't know why I did that, but I did.

I did assume the GPO increases would pay zero commissions. That was in the model. I didn't load up morbidity for the noncan risk. When you think about the increasing premium scenario, the premium could increase by whatever percentage you wanted. The more you increase it, the lower the going-in rate. I assumed the premium rates would increase by 5 percent, the same amount as benefit increases. How did I price these plans? I priced these for fairly healthy margin. Today, when there are fewer loss ratio requirements and none in about half the states on an initial basis, I used a pretty high margin. Make sure that these produce profits. All of these options came in somewhere in the 15 percent to 20 percent pretax profit range. However, after taxes and after the effect of surplus, a lot of that margin goes away, especially for some of the more leveraged plans with increasing benefits.

Chart 1 shows, for issue age 52, the annual premium outlay. It really gets you thinking. Say somebody is working and is 10 or 15 years away from retirement. This person's agent is talking about selling LTC to him or her, and the person may know other people who are buying it. The person wants to buy this compound inflation protection, but he or she looks at the level premium and it's $1,800. Maybe this person has a spouse. Adding the spouse to the policy may not double your premium; you may get spousal discounts. But say you're single and don't want to pay $1,800 a year. The agent may not explain this in detail, but if you go to the GPO options, you still get to have the same $100-a-day coverage when you get in.

Say you're thinking you have a need; You may claim in the next few years. For $600, a third of the premium, you can get your $100 a day right now. Unfortunately, you're going to have to buy GPO increases that are rated issue age at your attained age. A few years later, in the fifth year when you are age 56, the GPO has gone from $600 to $752. When somebody is around retirement age,

around age 66 the annual premium outlay around retirement age was still less. It's still $1,645. For about 13 years, every year you're paying substantially less than you would have paid. If you claim, you've just saved yourself or your estate bundles of money. Eventually, as people get older, the premium scales go up. By the time you're out at the higher age of 91, the annual premium would be $29,000 if you had taken all of your GPO increases. I'm not sure anybody could come up with that kind of money, so people probably stop taking their GPOs.

We've seen that you can get the premium down from $1,800 to $600 on your going-in rate, which I found amazing. Attained–age-to-65 came in right between the two. This is the one where we said the premiums were going to go up by 5 percent, but then they were going to stop. I'm having a hard time interpreting attained-age-*to*-65, or *through*-65, so I did attained-age-*through*-65. I think that's right. In any event, this attained-age rating mechanism produced a $1,200 premium, and it goes up. By the time you get to retirement age, it stops at $2,263. It's more than the $1,800 you would have paid if you prefunded inflation entirely, but $2,263 versus $1,800 is not too bad. You were able to get in cheaper, and it was probably easier for the agent to make that sale.

If you do attained-age-forever, the increases don't stop at 65. This is the one that's currently prohibited under model regulations. You'd get down to $972. That's not as good as the GPO, but it's still about half of what you would have paid if you had prefunded inflation. Just as a comparison, if you're interested in front-ending the premiums, the 10-pay came out to be $5,250. That's nearly triple the level premium. The pay to 65 came out to 4,250. Why is that one less? It's less because you paid 13 years, not 10 years.

The cumulative premium outlay gives you an idea of where it breaks even. It's a bit of a gamble if you're trying to say, "I'm going to claim at this age or that age." Before retirement age, the GPO is clearly the winner. If the GPO customer claims after 15 policy years, the customer would have paid $15,000. The customer would have paid $27,000 had he done the one that's commonly sold, the level premium. The customer saved $12,000. Attained-age-to-65, with a cumulative premium of about $26,000, comes out a lot closer to the level premium. With the attained-age-forever, there's a cumulative premium of $20,974, so you're still saving a fair amount there.

Let's take a look at age 81, maybe a common claim age. At age 81, the level cumulative premium outlay is $54,000, and the GPO cumulative premium outlay is about $80,000. At that time, you've paid a lot; you didn't win on that gamble. The attained-to-65 was pretty close at approximately $60,000; the attained-age-forever is $65,000. In the case of 10-pay and the pay-to-65, you pay a tremendous amount more in premiums in the early years. If you're an early claimant, you paid much more money than you would have, but if you're a late claimant, particularly out at age 86, 89 or 91, you paid a lot less premium.

MS. DEBORAH GRANT: This is something that's of special interest to me. I think an innovative LTC benefit is our wellness benefits. My message today is that the actuarial technique is to do a three-step thing. The first one is to use clinical data to estimate your potential morbidity improvement. The second step is to measure that against established expectations. Our third step is to ask some hard questions at the end on what to do for pricing on this.

One nice thing about speaking at the next-to-the-last session and on Friday is that you can build on some of the themes that we've developed on the LTC track in this meeting. We've been exposed to actuarial techniques. We've looked at stochastic modeling to test the variance of our expectations. We had a session on credibility theory that gave us methods to establish expectations in a more rigorous manner. Ed Mohoric saved me yesterday from some of those mathematical presentations when he said that we had to update our expectations yearly as these changes come through, especially if regulators are saying that we can't project morbidity experience into our models.

Mark Newton gave a good summary when he said that we can think of LTC insurance as a swap of a fixed quantity to a variable quantity. We're swapping a fixed premium with our policyholders for their variable claims. A wellness benefit, then, is a way to try to decrease that variation in claims. I was lucky this year because our keynote speaker, Dr. Hughes, set the stage for wellness benefit if we think back to his excellent presentation on Wednesday morning on what's happening clinically.

Our goal on wellness—and this ties right into what Dr. Hughes said on Wednesday—is morbidity compression. I have a graph of what morbidity compression looks like. Functionality along the y-axis is the time since the diagnosis of the disease until death. You have a decline of an untreated disease state from the time of diagnosis until you die. Our goal in morbidity compression is to keep the high level of functionality and then decompress quickly to death.

Somewhere along this line in your mind, draw a horizontal line. That's where you trigger on your LTC policy. Two activities of daily living (ADLs) or wherever your trigger is might change that up and down on the y-axis. whatever it is, if you've experienced morbidity compression, if you've experienced wellness, you've stayed out of the claims status for a longer time. You move into claim status and quickly go to death. It's what we want as insurers. It's what we want for ourselves. We want to enjoy retirement and old age. For wellness models in LTC policy, the definition of wellness is anything that contributes to that morbidity compression. That's my definition.

I've got four examples of wellness benefits. The first example is a wellness benefit in a policy of up to $50 for a routine physical examination once per calendar year if you have not received any other policy benefits within the 12 months immediately preceding the date of your physical examination. This is called a wellness benefit.

It's in a policy that was written and sold in the early 1990s. It has that ring to me of wellness from major medical-type models. It's not necessarily something that jumps out at you as being able to save you a lot of money in LTC insurance. However, it's in a large block of policies, and people are claiming on that wellness benefit. They're using it.

I don't have policy language for the next example because this is an administrative decision on the part of the company when it was pricing the policy. It would contact the policyholders annually or biannually, and the goal was to identify policyholders in a state of instrumental activities of daily living (IADL) deficiency and begin to work with the care manager at that time. That's pretriggered; this is a policy that triggers under ADL or cognitive-impaired status. You're not triggering your LTC benefit if you're an IADL, but if we identify you in your preclaim status, we can hook you up with a care manager at that time. It's not in the policy language. The company has the choice whether to continue this expenditure or not.

The company elected not to put it explicitly in policy language. This policy does have explicit care manager language with which you're familiar. It's a good lesson that you don't have to have explicit wellness benefits in your policy language to develop a wellness program for your company. In this case, the philosophy is that if things change and medical delivery changes and if our emphasis on LTC insurance changes, we're not contractually obligated to continue.

A third example is a company that did make the contractual obligation to wellness benefit. Here's what it says: "The purpose of the wellness benefit is to enhance your ongoing ability to live independently. If you call us or write us, a care advisor will periodically visit you to update your initial underwriting assessment. This is a very important advantage to you in having a reassessment. A reassessment can help you maintain your wellness." It continues, "You may schedule a wellness reassessment with a care advisor up to once every three policy years." The important part is, "if you call us or write us." In this particular case, the initiation is coming from the policyholder. It's in the contract, but this company has taken a more passive approach to initiating people into the wellness program.

In the prior example, it was the opposite case. There was no contractual obligation, but the company was going to proactively call the people, identify them and set a schedule of when they were going to be contacted next. The first contact is at underwriting. I make a decision at the time of underwriting of when I'm going to contact this person if the person hasn't called me already. That's developing a protocol by age and whatever potential problems that might have made people think that they needed a follow-up. Hopefully that's just age if you're underwriting correctly.

The fourth example is a limited health benefit policy, where you're explicitly pricing a premium to have wellness-type benefits added as either a rider or a companion policy to explicitly pay for diagnostic testing, cognitive screens and different kinds

of intervention. This may also be offered as a companion. For example, you've underwritten a couple and decide you cannot underwrite one of a pair. Maybe you can offer a limited health benefit to the less healthy spouse to give them some benefits of your expertise in LTC. Also, they would purchase it for the spouse that you are underwriting and can gain some benefit on their claim costs.

The medication management-type wellness benefit is interesting to me. I heard a presentation several years ago that stated that 26 percent of nursing home admissions were due to improper medication use in the elderly. I couldn't find verification for that statistic and am not sure of the source. I was in the audience that day and had the typical actuarial response: "I don't believe that. That's a high number." Then it dawned on me. Who cares if that number is wrong? I believe qualitatively that there are admissions to nursing homes or there are people on LTC claims who could be independent and could be in great functional status except for improper medication use. I don't care if that number is 26 percent or 10 percent—that number is too high. That's a preventable utilization. The cost of a nursing home compared to the cost of counseling, medication boxes or medication reminders to aid the elderly in taking their medication properly is such a win-win proposition that I didn't care that I couldn't verify that statistic or find it.

I want to give a quick background on what wellness benefits are. My feeling right now is that there's not a successful wellness benefit out there where people are doing a good demonstrable job of implementing these kinds of academic pie-in the-sky, great idea, wellness-type benefits. I don't think we're doing a good job with care management as an industry, much less wellness benefit. I've worked more in the care management side with wellness as a postclaim, and we're having trouble getting that off the ground and moving in the industry so that it's a successful program. I see people in the room nodding that they share my frustration in that.

We need to make it a little easier to get the claims departments, the actuarial departments, underwriting and our vendors working in concert with what our expectations are and the actuarial technique we measure against our expectations and get more specific about what we mean in wellness and care management so that the people who are doing it can implement it precisely. I think that it's time because we have a real disease that can be treated now. These techniques can be specifically honed in to developing morbidity compression in Alzheimer's disease.

What is happening in Alzheimer's treatment is a revolution. There are two definitions that are important when you start thinking about Alzheimer's disease and how it relates to your policyholders' claims. That's mild cognitive impairment, the term given to patients with cognitive impairment that's detectable by clinical criteria but does not produce impairments in daily functioning. Those are the people who you are screening out in underwriting. Everybody is doing cognitive screens now. We weren't before, but we are now. Dementia is when the daily functioning is impaired as a result of the cognitive decline.

Cognitive deterioration is slow during the early and late stages of Alzheimer's and more rapid in the middle stages. That's a fact you should know when you're thinking about your LTC cognitive claims. A staging in cognitive impairment used in Alzheimer's is the functional assessment staging test (FAST) by Dr. Berry Reisberg. There are excellent articles on his development of these stages. FAST stage 1 is no difficulties or symptoms. Some of us in this room, unfortunately, may be in that stage right now. We are pre-Alzheimer's patients. That can be as long as 30 years.

In stage 2, you start to get detectable mild cognitive impairment that may last about seven years. In stages 4 and 5 you start to lose your IADLs. You may then be declared cognitively impaired and can claim under a tax-qualified (TQ) policy in this stage. It's about two or three years. In stage 6 you start to lose your ADLs. You move from just cognitive problems to physical problems. That's another two years. In FAST stage 7 you lose your ability to speak, to ambulate and to sit up. You have to be institutionalized at this stage. These are the people who can't be cared for at home; middle-class people can't deal with it. Nancy Reagan took care of Ronald Reagan in that stage because she has more resources than your average claimant.

There's treatment now for Alzheimer's that wasn't there when we were doing some of the pricing and design. Treatment with cholinesterase inhibitors delays nursing home placement for two to three years. Your goal is to identify your policyholders who are in a state of mild cognitive impairment—the FAST stage 2 or 3—and get them into a treatment program with the medication to delay that decline to home health care claim and then institutionalization.

Galantamine (Reminyl) is one of the second-stage drugs. A study shows that with a high dose, you're staying at this cognitive state; you're delaying it for 12 months. From the start of the study, these people stayed in a place that was not in the claim. In the middle was a lower dose, and at the bottom was the placebo. This was an academic study that was talking about the dosage. They changed from a double-blind study to an open extension study. At one point, they took the people who were on the placebo and let them know that they were now to get the drug. They see the pop back up to the low-dose place and then the further decline. It was a nice result for them to get those numbers. It's a classic study that was published in *Neurology* in '00.

I went on the Web to find out the cost of the cholinesterase inhibitors. I got prices off of mail-order pharmacies. Aricept is the first drug that was approved by the FDA. It was approved in December '96. December '96 was an interesting date for us. HIPAA legislation comes through and Aricept is approved by the FDA. In '04, the drug of choice for this is Exelon. It acts on not just one enzyme, but two enzymes. It is more effective. It shows in being more expensive; it's about $3,000 per year. A doctor told me that the cost is about $10 a day for this drug, or $3,650. I found $3,000 on the Internet, so that seems reasonable. The cost of the drug looks like annual premiums to me.

For pricing of a wellness benefit, what is the impact on my claim costs? If we could identify our policyholders who are now in a mild cognitive impairment state who weren't at the time of underwriting and get them into a program where they are offered this medication and are educated about their disease, I know that this treatment is not in my claim costs. These drugs were not approved until '96. I know that the penetration of the clinical use of these drugs has been low. I know my own claim costs that I'm using now, the underlying of my expectation, were developed in '02 through incur dates through the end of '00.

Right now my data are clean from the use of these medications. I know that if I could identify these people, I could extend my elimination period by these drugs. I can go look at my claim cost development, look at my continuance tables and find the impact of increasing time to claim. Maybe I'll be conservative and assume the 12 months, even though I had the paper that I could show to my peer review or my regulators that said it's up to two years. It varies by attained age, sex and benefit period. This is easy for us as actuaries. We can test the effect of with and without this extra elimination period.

To do this effectively I probably need an Alzheimer's-only continuance, which some of you in this room probably don't have available to you. You probably haven't made that from your own data, but it can be separated relatively easily. I'm testing our separation of our basic continuance tables right now. Bob was telling me that his company is big and it definitely had different continuance tables for cognitive versus noncognitive. I can lower my claim costs from about zero to 14 percent. However, I don't want to put a definitive number on it. This is the kind of information that varies significantly from company to company, depending on the level of underwriting you did. If I were working with you on setting this assumption, that's some of the background and detail I would want to go into. I think this is a relatively easy exercise. This is not credibility theory; this is easier.

The major point on this is that this is not that hard. I've been thinking about wellness benefits. I've been thinking about care management in my policies. I've got to admit that the second example I talked about with the wellness benefit was at the behest of the company. I priced that policy and think it was a failure. The company's not effectively doing that as a wellness benefit. It was too much all at once for a company getting into LTC insurance.

What I'm saying today is that this is something specific and something for which you can set up a protocol neatly. There are exciting medical advancements. Dr. Hughes told us that neurological advancements are going to continue in Alzheimer's, Parkinson's and Huntington's that can keep on top of this. You could right now, and right now is the time to do it, go back to your company and set up a specific wellness protocol that will get you down the path of wellness and implementing that, not these pie-in-the-sky academic presentations that I know I've been involved in for the past two or three years at the intercompany

conference with some of the underwriters, nurses and claims people. This is specific.

Patients are being taught now to self-diagnosis themselves in that premild cognitive state that we can't detect in our underwriting protocols. I'm concerned that we're going to be self-selected against and that if we don't take action, our morbidity improvement won't continue to go down, but would have a reason to go up because of the antiselection.

There is an opposing view on wellness benefits. Morbidity compression means mortality expands. I heard Dr. Hughes say that 800,000 more people are alive today in '04 than we expected. I wondered how many of those 800,000 people are in nursing homes. I worried about that.

Regarding underwriting problems, there's the antiselection I just mentioned. As we get more information about Alzheimer's, you will be selected against. Believe me, there will be Alzheimer's-awareness campaigns. Watch for it in the popular press in the next 12 months to 24 months. We are trying to get underwriting detection of some of those early problems.

There's the woodwork claims theory. If I put a wellness benefit in, I'm making people aware that they have a policy. I'm going to increase the level of claims I have, and I'm sure that that will happen. To a certain level, there are going to be more claims that wouldn't have happened otherwise. There is a little bit of controversy that I've started to hear about on the efficacy of these cholinesterase inhibitors. It has been pointed out to me that some of these early studies were sponsored by the drug companies. We will have to watch the academic and the medical literature and talk to our medical directors about that.

I'll end on competitive actuarial balance. These are the hard questions I was going to ask you. How comfortable am I incorporating claim cost cuts in policy pricing because of wellness? My answer is zero. I don't want to put any in there. I don't want to assume that. I want to take it as profit as it comes in. Does that put my company in a good competitive position? What are the other guys going to do? I'm just keeping our morbidity expectations. Can I use wellness to justify morbidity improvements? Can I keep this session in mind as I go to the next session and learn more about morbidity improvements? The point is to keep ahead of that curve.

Another interesting question is should I pay for anticholinesterase drugs as an alternate plan of care? Say I did an assessment, and the vendor came back and said, "I did the phone interview, I went and did the site visit, and the senior citizen told me about taking his medication every other day because he couldn't afford it." As soon as the senior citizen is on waiver of premium, it's affordable. I just showed you that the cost of the drug sure looked like an annual premium to me. That's an interesting question. I don't know that we want to be adding pharmacy benefits

that we didn't price for to policies. I'll leave you with those tough questions and turn it over to Tim.

MR. TIMOTHY HALE: As actuarial techniques, I think looking into the history and the past is helpful, as far as helping us avoid some of the mistakes that might have been made or some of the benefits that came out that didn't address the core risk for which LTC is intended. I think today's product is an accident of history. We were a mirror image of Medicare policies and the shortcomings that arose from Medicare. Some of the innovations I would call just an evolution of the product. While innovation can lead to evolution, evolution doesn't necessarily lead to innovations. Also, in my opinion, more policy options available to the consumer definitely will not lead to more sales. In fact, having more choices can lead to fewer sales. The more choices you have, the higher the probability is that you won't buy anything.

Let me talk a little about that. There was an article in *The New York Times* called "A Nation of Second Guesses." I think it had more of a political bent on President Bush and his options and choices for Social Security and how to save it, but some of the scientists that they were talking to were looking at mutual funds that are offered to employees. They found that for every 10 funds added to an array of options, the rate of participation dropped by 2 percent. Also, adding the funds increased the chance that the employees will invest in ultraconservative money market funds.

They also did a study on the flavors of jams and the varieties of chocolates that you can find at your grocery store. They said again, according to their data, that the likelihood that you would leave the store without buying either jam or chocolate goes up and that you were 10 times more likely to buy jam when there were only six varieties on display as when there were 24 on display. I think that's interesting because I was just looking at a policy form recently from a company, and I swear it had 40 options, and the policy form was about 58 pages long. I know the goal was to allow the brokers and the distribution source to have many options. They would, in fact, select few of those options to then offer to their customers. I agree with this idea that the more options you have, the harder a decision it is to make and the less likely you'll make that decision.

Looking at some of our past innovations, some of these seem like natural, normal evolution of the product. You can't call the elimination of the three-day prior hospital stay an innovation. It seemed like a natural evolution. Here's a list of some of the benefits I consider good innovations. Inflating benefits was obviously something that needed to be addressed. I worked with the LTC person back at Fireman's Fund. I can remember him giving me one of the early policy forms and asking him, "What are the triggers here? Explain what our claim cost is going to be on? This prior three-day hospital stay?" He just said, "Well, that's what Medicare does, so that's what this one does."

There's home health care. I remember looking at that same policy. It would pay 50 percent of the benefits equal to the same number of days you were in a facility,

after you got out of the facility. You had the option of saying, "I just spent 90 days in a nursing home. Now I can get a 90-day benefit for half the amount. Nah, I think I'll save the money, in case I have to go back into a nursing home." It was a phantom benefit. Today, with more comprehensive products, we are seeing that home care is obviously the desired choice of location where benefits will be delivered. We're seeing a lot more claims in the home health care and the home care arena.

Some of these benefits don't address the core issue of what LTC is. I think the brokers and the distribution systems are driving a lot of the choices that we're seeing. They want to be able to have a policy in a form that can be compared to the competition and can be measured against the competition. Looking back on some of these, there's the equipment benefit. Bob, you might be able to help on some of these because most of our claims are in the early stages. Some of these I question. Which ones can break your company? Which ones will never be used? There is usually a cap on the equipment benefit. It might be five times or 10 times a monthly benefit; it might be a stated dollar amount. I put equipment and alternate care benefits together because I continue to look at some of the technological innovations that we're seeing.

I know that there's a company, Kodak, which has come out with these home health monitors at least a couple of years ago. It's for people aimed at living at home. It has a telephone, a fax machine and a computer monitor attached to it. They can dial directly up to a nurse's station or a doctor's office. It can read their blood pressure, remind them to take their medications and make sure that they're up and awake. It can be accessed from the individual to the health provider or vice-versa. They can call back in. This might be something you could call an equipment benefit, but if it was over the maximum limit as an alternate plan of care, is this something that could fall into that?

I constantly have these debates. Part of my background is coming out of a continuing care retirement community. Deborah's discussion on wellness benefits was interesting to me because continuing care retirement communities have been doing these wellness-type benefits for about 10 or 15 years, but they are local and regional. They have ulterior motives because they're trying to attract individuals to buying independent living units in their communities. They control both the health center and the assisted living, so they have outreach programs where social services, bridge games and medical services come to the community. They'll provide these for you either for a monthly fee or individually for free with the expectation that you would want to move into their communities.

In Baltimore, Md., Hopkins Health Care System and a group called Broadmead, which is a Quaker Community, were looking at the Baltimore area. A lot of brownstones and townhomes in Baltimore don't have bathrooms on the first floor. They were seeing an aging population where the use of the Medicaid services was increasing because people could not stay in their homes. Once they got downstairs,

mobility issues were such that they could not get back upstairs if they needed to use the bathroom. The question was raised, "What if we built them a bathroom on the first floor?" They went out and looked at the cost of this. Was this considered a home improvement? It was a Medicaid-waiver program they were trying to get sponsored. The real challenge was trying to convince a Medicaid group that if you spend a little money now, you can save a lot of money later. They were curious because they're spending nothing now. What's a little and what's a lot? That was hard to come up with.

We tend to price benefits today for care that's being provided today. I think we're going to be seeing, as the average age has dropped, that the types of care that are going to be provided in 20 and 30 years are not necessarily being addressed today. That can certainly be seen in assisted living and other benefits because those were not even around 15 years ago.

A couple of these other innovations are shortened benefit periods and continuation of coverage. These are all new innovations that have happened over the past seven to 10 years. As Deborah stated, we're not being as proactive in the management and identification of the risk and the probability of using the benefits, so care coordination is becoming a more attractive benefit. I think people are slowly realizing that care coordination is not the same in LTC as it is with HMOs, where they viewed it as a way to prohibit you from getting benefits. I think today we are trying to assist most people in trying to go through the path of the myriad services that are available and how to best access them. The pool of money is obviously a great idea. I remember looking at those old policies, and if they paid $80 a day, and the charge was $50, we said, "Thank you very much," and kept the difference.

Shared care is interesting. One benefit that's going on is discounts. Was this an innovation or is this an evolution as we started to refine our markets? The marital discount that everybody is constantly telling and showing that it is an incredible savings between a single person and a married couple will, at some point, wear off, and "they" will become a single individual. ADLs are obviously a great innovation and a great measure for the benefit eligibility. I think return of premium is driven by the broker system. Elimination periods is one I never went for, but I can learn to live with it. Is it 90 consecutive days? Is it single lifetime? Do you have to meet it for home care and then meet it for nursing home separately?

Premium waiver for home care is another good one. As far as going to a zero-day elimination period for home care, I first heard about this through Bob and GE. By becoming interactive with the claimant as early as possible, they found that the claim cost savings was substantial. Some of these are the benefits that we've been seeing.

Some of the newer ones we're seeing are international coverage, ambulance benefits and limited pay/accelerated pay, which obviously are becoming a lot more popular today. I don't see any of these causing financial hardship on most

companies. I still question the alternate plans of care, which are trying to attract the "pay for any care, anywhere" theory.

One of the challenges of our industry is that we have a product that is perceived as too expensive by both the public and the distribution system, yet seems to be chronically underpriced. That means something is wrong with the overall approach that we've had to this business. We're slowly seeing the change from this medical-type model into more of a social service-type model. Some of the discussions today are aiming us for that as well. We do see a long period between the point of purchase and the use of the benefit. I'd certainly love to have a conversation with anybody who can tell me what long-term health care benefit facilities are going to look like in 20 or 30 years. The benefits do remain static from the time of sale. That's another issue that's slowly being addressed. We are trying to match all of our service choices that might be available in the future and we're doing that today.

Thank you very much, and my advice is, don't make the same mistake twice.

MR. MEL STEIN: Deborah, I'd like to give some information on the drug Galantamine. I've seen it. It first became available, like many things, as a supplement. I've seen the advertisement on it. Alternative health and supplements are an avocation of mine. You can get it on the Internet from a supplement company for a fraction of the cost that was in your handout. These things are usually discovered or first used in Europe or wherever. Then they are made available as supplements. After a while, they've got a lot of credibility. Suddenly, the drug companies offer it. They give it a different name and increase their price by a factor of five, 10 or whatever. I've seen this particular one for a few years.

MS. GRANT: I can comment on that. Galantamine is a natural substance that is used as a supplement in much lower doses than the Reminyl. Also, the Reminyl is not the drug of choice for the treating of Alzheimer's disease. Aricept is a different product first approved by the FDA. The drug Exelon has another component that is a butyl compound that has a double-enzymatic action. But you are exactly right. Galantamine is a natural-occurring product that is out there in the supplement market and can be purchased at lower doses. There's nothing to prevent people from going to health food stores and taking some of these supplements at higher cost. It's true.

MR. JIM GLICKMAN: I certainly enjoyed all the different presentations. In particular, I like some of the interesting thoughts that are coming out about trying to control or reduce claim costs through the processes of doing prescreenings or annual screenings. However, I want to put up an interesting caution for people to think about. I'm interested in the comments back as well. Our products are loss ratio-driven. I don't think anybody here feels comfortable in going with a noncan approach where anything you save is something that you get to pocket. Certainly we wants our products to be in a position where if, because of trends or any other

situations, we have to do rate increases, perhaps across the whole industry, the product will still be profitable in the mode of having to do those types of increases.

The screening processes themselves can be very expensive, as measured against the claim costs. Let's say you measured 15 percent as your claim cost savings on some screening mechanism, and let's say it cost you only 12 percent of that 15 percent to do the screening process. The 12 percent is just pure expense. The claim cost savings, while maybe making it less likely you go over that threshold, if you ever do, makes your pricing mechanism all the more difficult to achieve because you still have to pay out that 58 percent of your original premium and the 85 percent of your increased premium, and yet your expenses went up 12 percent on the other side of the equation, which cuts directly into the profits.

MS. GRANT: I've always interpreted from the under-65 training that these costs can be included in the loss ratio. Does someone concur or strongly disagree with that point?

MR. HERMAN: This issue came up when care coordination was first introduced in the industry. I think actuaries tried to put the care coordination expenses in the loss ratio and put in the actuarial memo. There are a couple of states like Florida that prohibit that. Generally I would concur that you'd put it in the loss ratio.

MS. GRANT: I don't think we've been successful so far in getting some of this care coordination off the ground and active and being able to demonstrate savings. These presentations and this particular disease state that's evolving on us is getting some focus on that. I think it's something that you can hone in and try as a pilot program in your company and compare. I'm interested in doing this because I think it's specific.

MR. YEE: I do agree with you, Jim, that you have to be a little careful. Some of Deborah's example of these costs, especially not in the contract and so forth, are more like expenses then claims. I'm more in favor of charging for it. You're really going to do it.

MR. MAX KLICKER: I have a comment about some discussion Andrew had about reserving the GPOs. You made a comment about net level versus one-year preliminary term. I want to cast a vote for the net level. I believe that you have your first-year expense allowance one time, it's in the first year, and you make your election of options via a contract provision on this policy. Unless it's an option to get a free-floating other policy, it's still a part of that same policy, that same contract. You've already had your first-year expense allowance. That's just my personal opinion.

MR. HERMAN: Thank you. I think that's the right way to do it.

MR. BARRY EAGLE: I wanted to comment on Tim's presentation, in particular the part where he talked about how the public and the distribution see it as expensive and yet we have trouble making money. At the end, you challenged us not to make the same mistakes. If we went back through your list of all of those "innovations," how many did you actuaries price for in the evolution of that product? For instance, when you look back, assisted living was grandfathered into a lot of programs. Yet now we know there's a specific cost associated with that. I think that we as an industry tend to, in the competitive pressures of the marketplace, give away some of these benefit innovations that are worth something on existing products before we start trying to price for them in the new ones. Those are the kinds of mistakes that we have to avoid.

MR. HALE: I agree, Barry. We are somewhat of a reactive industry instead of a proactive industry. Typically, an insurance product is a financing vehicle. All it offered was financial payment for some occurrence. The attitude used to be that you hoped they bought a policy, never read it, put in a box, never used it and forgot they ever had it. Now we're seeing that trend of getting more proactive. We need to be involved. We need to anticipate what care will look like, how services will be delivered and participate in the choices.

Chart 1

Illustration for Issue Age 52

ANNUAL PREMIUM OUTLAY

pol year	age	level	GPO	att-to-65	att-age	10-pay	pay-to-65
1	52	1,800	600	1,200	972	5,250	4,250
5	56	1,800	752	1,459	1,181	5,250	4,250
10	61	1,800	1,069	1,862	1,508	5,250	4,250
15	66	1,800	1,645	2,263	1,924	-	-
20	71	1,800	2,728	2,263	2,456	-	-
25	76	1,800	4,775	2,263	3,135	-	-
30	81	1,800	8,591	2,263	4,001	-	-
35	86	1,800	15,882	2,263	5,106	-	-
40	91	1,800	29,034	2,263	6,517	-	-