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Session 55PD
Long-Term-Care Underwriting

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Summary: Panelists discuss the various styles of underwriting being used in both the individual and the group long-term-care markets, including full underwriting, "yes/no" style, modified guaranteed issue and guaranteed issue. Topics include:

- *The tools being used*
- *Methods used for classifying risks (preferred, standard, etc.)*
- *The estimated impacts of underwriting on emerging durational experience.*

Ms. Dawn E. Helwig: I think we have a great panel. Our first speaker will be Margaret Hottinger. She is senior vice president with the Long Term Care Group (LTCG) in Minneapolis. LTCG is an organization that focuses on long-term-care (LTC) program development and administration. It currently administers programs for over 130,000 policyholders in both the individual and the group market. Margaret has been with LTCG for seven years, and she's going to be speaking about underwriting principles, in general, the difference between group and individual, and the types of tool used.

Our second speaker will be Mike Mayer, the director of business development for Nation's CareLink, also in Minneapolis. Nation's CareLink provides underwriting and claim support services, including health and functional assessments, medical record summaries, and care-coordination services. Prior to joining Nation's CareLink, Mike worked for several years in managed care underwriting and PPO development. Nation's CareLink has been very actively involved in developing new tools for trying to assess cognitive impairments, which is one of the very big elements in underwriting and assessing risk. He's going to be speaking about the different tools

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that are used for assessing cognitive impairments and the effectiveness of those tools.

As the wrap-up speaker, I'm going to provide a general summary of the actuarial implications of underwriting, the different styles of underwriting, and the effect that those styles will have on the premiums and loss-ratio results. I'm going to follow that by discussing an unrelated topic, but one that has of a lot of current interest-risk classification in LTC, meaning what companies are doing to differentiate standard, preferred, substandard, etc.

Ms. Margaret Hottinger: I presented at this meeting a couple of years ago and, at that time, there were maybe two or three sessions that touched on LTC issues. Now there's almost a session for every time slot available. There is even a specialty interest section in LTC being developed. This industry is here and that's really exciting. Both the product and the underwriting has evolved and developed.

I'm going to talk about the philosophy of LTC and then Mike and Dawn will talk about some more advanced topics relating to cognitive impairment and the risk classification issues that actuaries are very concerned about. I'm going to talk generically about the tools and techniques for LTC underwriting and about styles, because there's quite a bit of variation, since the industry is still developing.

In general, the concept of insurance is one of pooling risks for a community. Whenever you have a product that has voluntary participation, the first people to raise their hands are going to be those who need it most. That is always going to be a challenge for this industry because, for the most part, most employers have not yet stepped up to making contributions for LTC insurance and haven't put the program forth as a product offered to all of their employees.

The goal of underwriting is to maintain the community-based LTC risk pool, because all of the pricing and all of the assumptions that are used in pricing the risks down the road are based on community-type data, at least at this point in time. In underwriting LTC, we emphasize functioning independence. We don't look completely at medical, although we don't ignore medical issues. The tools that you use need to be focused in that same direction.

An important element of being able to achieve that is the clinical expertise of underwriters. They need to have some clinical knowledge but also need to look beyond just the clinical issues. Another important element that helps maintain where you go with your programs, because this is a new industry, is making sure that you evaluate and use the information you're getting as you get claims initially and always keep looking forward.

Many people already realize that adverse selection is extensive. Fifteen to 25% of the elderly may be uninsurable, and the next tier (5–10%) have costs that are 250% higher than the general population. In some situations this tier is insurable via substandard rates. Dawn is going to talk about different rate classifications in more detail.

But underwriting acceptance rates do vary quite a bit by carrier, typically ranging from 65% to 85%. A lot of the time what makes it vary the most is your marketing. The more effective your marketing and distribution, the better acceptance rate you will probably have.

There has been quite a bit of discussion about the cost of entry into the LTC business and what you need to do to bring products into the marketplace. I encourage you to think about your underwriting approach, your distribution approach, and how the underwriting and the distribution work together at the front end of your product development. This a key factor in terms of setting pricing and understanding how you're going to take risks and how much you're going to let the distribution drive those issues for you. That's an important part of any product development cycle.

The other part of it that I already mentioned is always keep looking. With LTC underwriting, the data are not as rich as we all would like. The data sources aren't there yet. It's important to invest in collecting the information on the front end, and also in evaluating the information and the data on the back end, to determine what causes claims and what you can do as you're going along to modify your approaches and enhance your underwriting.

This is a great balancing act. How do you balance keeping your risk pool valid and good with working with your distribution system and keeping the cost and the ease of the sale in tandem? This is an issue that a lot of carriers have become snagged on by not thinking about it enough on the front end. Some initially let in more people than they should have and later find that they have to tighten. In other instances, carriers may be too tight because they're worried about the risk. Achieving the right balance is an important element of being successful with any new LTC product.

The philosophy of LTC underwriting really should focus on the risk issues for LTC, which is a combination of factors. Even though this is a new industry, there is now enough history out there that the protocols should be consistent with that industry experience. This needs to be factored in, in terms of pricing products and being able to have a consistency between the pricing assumptions and the actual execution of the underwriting on a day-to-day basis.

The challenge for the underwriter is to maintain a community-based risk pool to keep the rejection rates minimal while keeping the underwriting costs under control and operating under the same assumptions that you use in pricing your product and expense assumptions. No one wants to be in a situation of doing post-claims underwriting, even though you will do an evaluation for a rescission on all of your early claims.

The underwriting criteria do reflect the insurable event; and typically this is assistance with activities of daily living (ADL) and cognitive impairment. We look beyond the medical issues and try to assess functional and cognitive status both currently and for a certain period of time going forward, e.g., four to five years. This is typically part of the assumptions in the actuarial filing and in the approach

that you're using from a pricing perspective. I think some carriers actually run it out a little longer, so that can vary, depending on your pricing and your approach. We believe that if we are able to get more information, we actually can generate higher acceptance rates. But there is the cost of the time element to that, so you have to balance that at all times.

Age is a huge factor in underwriting for LTC since disability definitely increases with age, with certain conditions having high prevalence. As people age, they have a lot of chronic conditions and those conditions become more known to those people. One of the key issues in underwriting LTC insurance is the risk of cognitive impairment. This is probably the largest risk in LTC underwriting and we're going to get into that in a lot more detail, so I'm not going to touch on it much now.

Medical conditions, even though they aren't the only thing to consider, are very, very important in LTC underwriting. Co-morbidity conditions need to be looked at particularly. A typical 70-year-old does have multiple chronic conditions, so you have to assume, with an older population, that you're going to see a lot of combinations of things. Your underwriters are going to have to have the knowledge base to assess that and look beyond just the medical condition to determine how a person functions with that particular condition or set of conditions.

There are some conditions, however, that typically in the industry are auto-declined because they have a very strong prevalence of potential functional disability, such as Parkinson's disease, multiple sclerosis, and Alzheimer's disease.

In terms of underwriting tools, comprehensive, detailed guidelines and manuals are very important, but at this stage of the industry you need more than that. I don't think we have too many carriers yet that are ready to do point systems or any sort of automated underwriting with LTC; and we're not yet at that stage as an industry. The data are not rich enough, although a few carriers having higher volume may be building a database on their own. Most people still have to use other risk-management sources. The basic risk-management source is your application form which has become more standardized and very much based on eligibility. The other risk management tools include things like telephone interviews, face-to-face assessments, and, medical records, or attending physician's statements (APSs).

Let's talk about application forms. In the group market, there is a lot of pressure from employers to make enrolling in an LTC program as easy and simple as possible. There's a lot of need for an insurer to consider automated forms of enrollment, such as Web-based enrollment or phone enrollment systems. Employers love to use those for a lot of their group products.

Guaranteed issue is important, particularly for the large employers who want to make it easy for people to sign up. In some situations, however, an employer doesn't have a nice tight definition of an active employee. This could happen if you have umbrella organizations with multiple employers who may have different definitions, or if you can't get eligibility data to check. In these situations, the industry has tended to use some modified form of guaranteed issue, where the application form has two or three questions to try to get at whether somebody has

used services in the past year, since such persons are higher risk. This allows us to be able to try to make it easier for the person to enroll and still maintain the risk pool.

The short-form application is typically used with spouses in the group marketplace. However, for the vast majority of people in the individual market, a long form is fairly common and indeed the form has gotten longer and longer with all the state regulations that are coming into play. It has gotten to the point where, as an industry, we'd like the application form to be a little easier and streamlined. It takes quite a bit of paperwork right now. But the concept on the long form is to collect enough information so you can expedite the underwriting without putting people through a long process if they're going to get declined.

The phone history interview can vary in length from 15 to 45 minutes. They're typically used more with longer applicants in the industry. Sometimes they're done by underwriting staff people, and sometimes they're done by clinicians. At LTCG, we use registered nurses for the telephone interviews, because we feel they pick up nuances when they're asking questions about medical information. There are some cognitive tests that you can administer on the phone. Of course, you need to factor in some cost in the underwriting assumption for the phone history cost, which can be anywhere from $25 to $45, depending on the level of the person who is doing it.

The in-person assessment has become common in the industry for applicants in the older ages. Generally, it's automatically done beginning somewhere in ages 72–75.. The biggest reason for in-person assessments is the cognition issues and the functional needs. When you are in somebody's house, you can pick up a lot of different things about his or her abilities, and we're going to talk a little bit more about that. The costs for face-to-face interviews are variable as well if you use a vendor, and most people do, particularly when covering a national scope of people.

Medical records generally come in two different formats. In general, some organizations will get an APS, which is a summary of the actual medical records. In other situations, you might order a full medical record going back three or five years. Checking medical records is probably the longest step of all the risk management information gathering. That's why it has the most sensitivity and the most industry scrutiny focused on how can we avoid needing medical records. But it is an important tool that can tell you a lot of things you won't necessarily get from a phone history interview. But you'll probably see the most variations across the industry in how medical records are used in the underwriting cycle than any other technique.

An important element of an individual product, and even some group products, is the field underwriting structure. If your sales force, your distribution force, or even your marketing materials (if you're a group product) address what will cause people to be declined up front, then you will not have the public relations issues on the back end when you decline them. It's important to train the field force, to have a field underwriting guide, and to teach them how to work in this business, so you don't get the bad risks coming in.

Some of the things that you should look for are recent use of services, evidence of ADL or deficits, and any use of an adaptive device, like a cane. You should notice if someone is using a cane, needs oxygen, or any of those kinds of things. Often it doesn't result in a decline per se, but just a postponement of the application. In situations where someone has surgery planned, is in active treatment for certain types of conditions like cancer, or is having diagnostic workups, you don't know what's wrong with them, and it may turn out to be completely benign, but you want to see the results of those workups before you can accept them into your program.

The main question about LTC underwriting is, it really science yet or is it still art? I would say it's becoming a combination of both. Our industry is still young. It's evolving and changing. We are gathering more and more data as we get more and more experience, but, at the same time, we've been changing both our product and our pricing approaches. We're trying to coordinate those two things and collect enough information so you will continue to learn, evolve, and adapt both your underwriting process and your front-end product development process. An important key in this industry is getting to the point where we can do automated underwriting, set up point systems, and expedite the underwriting process through a system. At this point, clinical judgment, in combination with good criteria, guidelines, and protocols, is the best way to push forth the program. What we've learned is that you don't learn a lot if you do it right to begin with, but you learn a lot very quickly if you do it wrong

Mr. Mike Mayer: It's exciting to see so many people interested in LTC. I'm going to talk about LTC underwriting and cognitive risk. No issue in LTC is more important for maintaining a profit margin or more perplexing for underwriters than making sure they get the right answer on cognitive status. I'm going to try to do three things in this presentation. I'm going to give some background on cognition, go through some of the tools that are being used in LTC underwriting, and provide some information on a new cognitive screen that's just been developed.

I'm going to talk specifically about Alzheimer's disease, although I don't want to limit the presentation to Alzheimer's. It's just that the information on Alzheimer's is much more prevalent than the information on cognition as a whole. Alzheimer's disease makes up between 50 and 75% of all cognitive impairment.

The prevalence of Alzheimer's disease goes up with age, being extremely significant over age 84 (47.2%) and still being significant (3%) for those between 65 and 74 years old. Why is it important? The average survival period after onset of symptoms for Alzheimer's disease is 8–10 years. Often it will last up to 15 years and rarely will it last less than five years. If you do get a cognitive claim, it's generally going to last until either the claimant dies or the policy runs out of benefits.

I did an informal claim survey of five of our customers and found that, for each of them, cognition was the leading cause for LTC claims. Generally, cognition caused only 25–40% of claims volume, but these claims represented 40–60% of their claims cost. I studied a wide variety of companies: small, large, those that have been in LTC for 20 some years, to those that have been in it for four or five years.

I don't know what the variations are, but I thought it was interesting. Also, one of the things I thought was a little interesting is that we always think of Alzheimer's disease as something that causes people to go into the nursing home. Universally, Alzheimer's disease or cognition was the leading cause not only for nursing home claims, but for home health care claims as well.

Why is it difficult to assess cognition? First of all, it's rarely mentioned in the medical records. I came across a study very recently, a 1995 study of about 4,000 people over age 60 in a primary-care setting. This study found that, of the people who had moderate to severe cognitive impairment, only 23.5% had a diagnosis of cognition in the medical records. When it went down to mild cognitive impairment, it was only 3.2%. If you're going to rely solely on the medical records, you may have some trouble.

Also, it's very difficult to identify cognitive impairment in general conversation. Often if somebody's declined, an agent will say, "I play golf with him. He's my friend's father, we talk all the time, and he seems normal." Often family members don't realize what's happening. People develop very good coping mechanisms. You can do a very good, detailed assessment of cognition with diagnostic tests that last anywhere from three hours to two days. These tests cost anywhere from $300 to $2,000, and that would quickly put all of us out of business.

The challenge is find a way to assess cognition that's objective, accurate, simple, and affordable. The answer, we think, is brief cognitive screens. There are several standardized, validated cognitive screens currently used by clinicians and in the LTC underwriting industry. Some of the advantages are:

- They're quick, generally taking from 10–15 minutes.
- They do not have to be administered by a psychologist. They can be done by a clinician or anyone with some training. Generally, folks in the industry use registered nurses to conduct these screens, both telephonically and face-to-face.
- They can be completed in the applicants' environment. We don't have to send them to a clinician's office to complete these screens.
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There are two limitations, however. First, each of these screens is a snapshot in time. Unfortunately, cognition is not static. People have good days and bad days, or good mornings and bad afternoons; here you're just looking at their status at that one particular 15-minute point in time. The other issue is that the screens are not diagnostic. Basically, in underwriting, what we want to know is, are they impaired or not? None of these tests will be able to tell you they're impaired because of a certain reason. Also, there are certain times when people score poorly on these cognitive exams due to drug interactions and other types of issues that are reversible.

Before we get into the various tests, there are a couple terms that I want to go through. Sensitivity for a cognitive exam is the ability of the test to correctly identify who's impaired. Obviously, this is very important. Specificity is equally important, and that's the ability of the test to correctly identify who's not impaired. The last time I checked, we're all in the business of selling insurance. If you get a

test that's very sensitive but not very specific, you're not going to sell as much insurance. Reliability, the probability that you're going to get similar results if you test somebody three times, is also important.

A couple of the older tests are still being used for cognitive screening. The Short Portable Mental Status Questionnaire was developed in 1975. It is extremely quick to administer when testing orientation and long-term memory, and it has a subtraction section, so it does some math skills as well. Because it relies so much on the long-term memory and orientation section, it's not as sensitive to mild impairment. Long-term memory is one of the last faculties to go with most types of cognitive impairment.

Another test that is still the most widely used in clinical practice is the Mini Mental State Examination (MMSE), which was also developed in 1975. It tests a number of different domains and is still probably the standard in the industry. One of the issues with this test, however, is that it has several different sub-tests, and provides the same weighting for each of these types of sub-tests. Therefore, it's possible that somebody could fail all of the short-term memory sections and still pass the examination. Short-term memory is one of the real keys for catching mild impairment early on. Also, I've just read a couple articles saying that the MMSE is very sensitive to the level of education. The developers are now working on creating different criteria for those who have a college education and those who have less than eight years of schooling.

The Cognistat is a test that we've used for quite a while at Nation's CareLink. It has high sensitivity but there is a question on its specificity. In one study it showed 100% specificity, or no false positives, but in other studies, the specificity has been as low as 47%, so it's very difficult to make heads or tails of that. Each of the sub-tests is scored independently, which is an advantage. You can pay more attention to short-term memory, orientation, and some other things, but you need some training before you're able to understand what the profiles of some of these cognitive impairments look like.

The telephone interview of cognitive status (TICS) is a test that was designed specifically for telephonic use, and it's very similar to the MMSE. It's a little surprising that the results are a bit higher when the TICS is given over the phone than when the MMSE is given face-to-face. Again, it still has the same issues with mild dementia that the MMSE has.

Now we're going to get into the second generation cognitive screens. The Delayed Word Recall (DWR) test was developed in 1989. Applicants are given 10 words and asked to recall them five minutes later. The uniqueness of this test is in the encoding mechanism. Most delayed word recalls would just ask people to recall the words after the five minutes. However, in this test, they are given a word, asked to repeat that word, and then asked to use that word in a sentence. That process is done twice, allowing people to encode that word. People who are not impaired will score much higher on a test like that. For people who have an impairment, however, that encoding does them almost no good, so it adds to the effectiveness of identifying mild impairment.

The DWR is highly sensitive and specific. However, because it is a short test and only has 10 items in it, the reliability is not as strong as it is in some of the longer tests. One of the important things, and I think it sometimes is overlooked in our industry, is that the DWR requires consistent intervening tasks between the time that the words are given and the time that they are recalled. These tasks have to be very similar for all of your subjects. If you're using different stimuli, it may not be distracting people enough, and their scores may vary because of that.

A new test that just came out in 1998 is the Seven-Minute Screen. It uses a huge recall type of test. I don't know that it actually can be delivered in seven minutes, but it seems like a good test. It was developed with a grant from Jansen Pharmaceuticals. I suspect that Jansen has big plans to use this to try and direct more patients to its cognitive drugs, similar to the way these drug companies are doing with every other type of medication now.

I'll talk just a little bit about the Minnesota Cognitive Acuity Screen (MCAS). It was designed for telephonic and face-to-face administration. Before I get into this, I wanted to mention that we decided about two years ago that we wanted to develop a new cognitive screen to be used specifically for LTC insurance. We did a nationwide search and came back to Minneapolis and found some doctors to help us develop it. It's been developed for both telephonic and face-to-face and incorporates the DWR for the first time into a telephonic test. It takes about 15 minutes to administer and was validated to correctly classify cognitive status in 98.1% of all cases. It has a strong reliability as well.

To develop the MCAS, we went out on a nationwide search and ended up with a company called Assessment Systems Corporation who really did all the work on this. The MCAS includes sub-tests for orientation which is one of those long-term memory types of things. If people aren't able to remember their name, age, date of birth, or current date, they're probably moderately to severely impaired. But some of those people do apply, so it's very important.

There is also a digit span, or attention section, in the DWR exam. The next three tests—comprehension, repetition, and naming—are there for two purposes. The first is to provide that intervening task for the competing stimulus for the DWR test. Also, these three tests are very good for testing for non-Alzheimer's related types of dementia, aphasia, impairments that result from a stroke, and so on. There's a short computation section and then a judgment section that asks questions I think we all should hope we can answer. For example, what if you were in your home and you smelled or saw smoke, what would you do? Then there's a verbal fluency test, which is pretty new in the literature. People are given a category of words. For example, in 30 seconds name all the animals you can. The people who are not impaired end up with an average of about 15 or 17 words. Those who are impaired can only come up with about four words. Maybe they'll add another word and then they just get stuck. It was very interesting to look at the curves for the two groups.

In the development process for the MCAS, first, we did an extensive literature search spanning the past 15 years. We did a review of the current exams, including not only the brief cognitive screens, but developments that had occurred in larger-scale cognitive exams. Then a prototype was developed and sent out to six geriatric psychiatrists and neurologists to be reviewed to ensure not only the relevance of each of the sections, but also that they weren't discriminatory by race, gender, or area of the country. Then the data were collected and we did the analysis. The test data were randomized and entered into a common data file and the statisticians did a discriminate functions analysis, which may mean more to you than it does to me. This provided weighting for each of the sub-tests to identify which sub-tests were more discriminate in determining cognitive functioning. Each of the nine sub-tests did have positive weighting toward checking the cognitive status and some of them were weighed higher than others.

MCAS comes up with one composite score, and you can set that cut point based on your needs. Where it's set right now is to provide maximum specificity and sensitivity. Sensitivity is set at 97.5% and specificity is set at 98.4%. If you wanted to move the sensitivity up to a 100% to make sure you don't get anybody who has cognitive impairment, the specificity will go down a little bit, but that can be done with this test. We can adjust that test point based on what you need.

With respect to the results, the whole was much better than the sum of its parts. The highest weighted sub-tests were orientation, DWR, verbal fluency, and the computation section. Table 1 gives a comparison of some of the tools that are used in the LTC industry. There's a lot of variation and a lot of good tools that can be used.

TABLE 1
COMPARISONS OF COGNITIVE SCREENS

	Sensitivity	**Specificity**	**Reliability**
MCAS	97.5%	98.45%	93%
Mini-Mental	59–92	62–92	65–95
Short Portable	55–92	72–87	82–83
D.W.R.	89–96	98–100	75
Cognistat	97–100	?	N/A
7-Minute Screen	92	96	91

Ms. Helwig: I'm going to be talking about a couple of different topics. I'll be talking, first of all, about the actuarial pricing implications of the different styles of underwriting that Margaret and Mike talked about. Then I'm going to talk about risk classification.

There are three different kinds of classifications of LTC underwriting: tight, moderate, and loose. I want to talk about them in terms of how they relate to the pricing of the policy. Tight underwriting is state-of-the-art, where a company is trying to pull off the best risks or the cream of the crop. A loose style of underwriting is where the company is trying to be very agent-friendly and taking as many risks as it possibly can. Moderate underwriting is somewhere in the middle. In reference to the different forms that Margaret was referring to, my categories

would translate to the long form, thorough application (tight) as opposed to a guaranteed issue or a short-form application (loose).
Margaret talked about many tools, including face-to-face assessments, the application itself, using medical records, etc. But, despite these tools, the ultimate decision as to whether somebody falls into tight, moderate, or loose is still going to depend on what the underwriter does with the information. You can have a situation where you have two companies get all the same data. They decide to request medical records on every single individual that comes in. They do a face-to-face assessment on everybody. However, one of them decides to take every single person and the other one doesn't. That means they're still going to fall into different overall classifications.

I'm going on the basic premise that the underwriters know what to do with the information once they get it, that they are trained nurses, and that they're skilled in analyzing the data and determining which conditions have strong probability of leading to ADL impairment or cognitive impairment in the future.

Companies that are doing a tight style of underwriting extensively use all of the tools that Margaret talked about. They'll be getting medical records on a fairly regular basis. Many companies doing real tight underwriting get medical records on virtually every application they bring in the door. They're probably doing a face-to-face assessment on at least everybody in the older ages, and most times that would be everybody at ages 70–75 and older. They're doing paramedical exams particularly on the younger insureds who haven't seen a doctor in a while. They'll send a paramedic out to do an exam on them. They might not be using telephone verifications that much, because they're using these other tools instead.

Companies who use the moderate style of underwriting would be a little more limited in how often they'd use medical records and face-to-face assessments. Primarily, they'd be doing those at the underwriters' discretion if they happen to notice something at the younger ages that gave them some cause for concern. They might be replacing those regular medical records and face-to-face assessments with some telephone interviews.

With the loose style of underwriting, the use of any of these tools is very sporadic. There might be a consistent rule that face-to-face assessments are done for everybody age 80 and older or that medical records are gotten on all of those people. But for anybody below age 80, quite often the use of any of these tools is just done at the underwriters' discretion.

In working with a couple of different underwriters, I discovered how they would classify tight versus loose underwriting at the various ages, and what kind of tools they'd be using. With tight underwriting, they get a medical application at every age and they might get a paramedical exam at the younger ages if there are no medical records available. They get face-to-face assessments regularly at ages 70–72 and older and might require it below those ages if the person has not seen a doctor recently.

Going to the opposite extreme, for the loose underwriting, they still take the application, but other than that, things are fairly sporadic. They might get the paramedical exam and/or the APS or they might not. It's really very much at the underwriter's discretion.

Theoretically, these different styles of underwriting have an impact, both on the reject rate and on the loss ratio (Table 2). The reject rate given here is based on the assumption that you have a consistent group of agents selling with each of these different underwriting styles; the agents are not gaming the system at all. It also assumes that you have something akin to an individual issue age distribution, where the average age is in the 55–70 range. The loss ratios are based on the assumption that you have a fixed premium. In other words, if you've priced your policy to give you a 60% loss ratio on the assumption that you're going to be doing tight underwriting, but instead you do loose underwriting, your loss ratio would probably end up closer to 80%.

TABLE 2
THEORETICAL EFFECT ON INDIVIDUAL
LIFETIME LOSS RATIOS

	Average Reject Rate	**(Fixed Premium) Loss Ratio**
Tight	30%	60%
Moderate	20	68
Loose	10	80

The pricing implications of this for group LTC are far more complicated because of the selection pattern and the implications of the underwriting. As Margaret referred to, on the group side, there is more pressure toward doing some form of guaranteed issue to smaller sized groups. With true guaranteed issue, your goal is to accept anybody, even if they're actively at work with a disability. There are a lot more people in the work force that meet those conditions because of the Americans with Disabilities Act, so most insurers feel that you have to have a very large group to be able to do true guaranteed issue. I've heard that numbers in the 2,000–3,500 range are required before companies feel comfortable with that, because you're going to get a sizeable number of immediate claims with guaranteed issue.

When companies talk about guaranteed issue, they're usually talking about what we call modified guaranteed issue, where there is a limited number of questions for those actively at work. You're probably going to ask some questions whether the person has any current ADL limitations and about the use of services in the last year or so.

The short-form and the long-form applications are sometimes used in the group market, depending on the size of the group or how comfortable you feel with the group. They will almost always definitely be used as well for spouses. The long form will be used for retirees or other family members.

With the group style of underwriting, your lifetime loss ratio and the type of selection curve that you're going to get will vary dramatically, depending on which style of underwriting you use as well as on the size of the group and the type of participation rate you're getting. If you have a group of 20 people and take a modified guaranteed issue approach with them, but the employer is going to pay 100% of the premium, then you might get a very different slope on your loss ratios, or wear-off patterns, than if you have a group of 100 people and expect to get only a 10% participation rate. We're getting into antiselection issue. However, even if you're going to guarantee issue a group of 20 people and the employer's going to pay 100% of the premium, there needs to be a little bit of underwriting on the group, in general, to make sure, for example, that you're not selling this group because the owner is 62 years old and realizes he has a problem and, therefore, wants to buy coverage on his whole family-related business.

To try to put a perspective other than the theoretical on this, we looked at some of the NAIC LTC experience exhibits. I can caveat this to death, because if any of you have worked with the LTC experience exhibits, you know companies are doing them very differently and the data is not very reliable. But, with the understanding that there are a lot of limitations in looking at these exhibits, let's take a quick look at what they might be saying to us as far as the antiselection and wear-off that companies are seeing.

To refresh your memory, or if you're not familiar with these exhibits, there are three different forms that companies file. Form A has experience from the most recent calendar year, form B has cumulative inception-to-date experience, and form C is by state. The exhibits that the NAIC publishes are based on form B, the cumulative experience exhibits. That, in and of itself, leads me to have to give you a caveat, because a company's underwriting style can change dramatically over time, and most companies go through some sort of learning curve as they're underwriting, particularly if they're doing it themselves.

Having said that, though, we took the form B experience exhibits and made a variety of adjustments to them, in order to look at the change in loss ratios by duration due purely to the underwriting wear-off rather than aging. Also, the NAIC experience exhibits are on a calendar-year basis, and we converted to a policy-year basis as approximately as we could. Table 3, for each of the first five policy years, shows the ratio of the durational loss ratio to the loss ratio in duration 5.

TABLE 3
1996 RESULTS (FORM A)

Policy Year	Group	Indiv. Loose	Indiv. Tight	All Others
1	53%	52%	39%	40%
2	80	77	55	57
3	93	92	76	80
4	98	97	92	95
5	100	100	100	100
Dur. 5 Loss Ratio	34.1	45.5	27.3	28.3

The split in Table 3 was not mine. I talked to several people in the industry. You won't be able to pay me to find out who we put into the different categories, but generally we split the major writers into four different groups: companies considered to be loose underwriters, companies that were doing a very tight style of underwriting, companies that were doing almost totally group, and all others.

The results were pretty interesting. We saw, first of all, that the companies we had categorized as the tight underwriters, compared to all the other individual companies, were almost identical. It seems that the companies we perceived as being tight underwriters in the industry were very similar to what the rest of the industry was doing.

The companies that were categorized as loose definitely had a very different selection curve compared to the tight underwriters. Interestingly, and this is something I didn't expect, the group underwriting curve, at least in comparison to policy duration 5 was very similar to the loose underwriting curve. However, you see a bit of a difference if you look at the bottom line—the actual duration 5 loss ratio for each of those companies. Again, we didn't look at what the average premium size was and didn't try to make any adjustments for benefits, etc. There aren't any hard conclusions you can come to from the bottom line, but gives you an idea that the pattern by duration can vary pretty substantially in actual experience, not just in theory.

Let's move into the risk classification area. There is more of a trend lately toward risk classifications. Companies are trying to split their premiums out and differentiate by preferred risk versus standard risk. A few have ventured into the substandard area, though not that many. I think companies are trying to differentiate themselves and pull out as many of the best risks as they possibly can and give them the lowest rates that they possibly can.

A lot of companies do it to alleviate some of the agent dissatisfaction that occurs. Agents go through all this time and effort writing an application, send it in, and it gets rejected. Even if you tell the insured, "We have good news and bad news. You're accepted, but only in a substandard classification with rates 50% higher," many agents feel they can make the sale quite easily, because the initial work was done up front. You just prepare them on what they need for the coverage.

Also, you can spread some of your underwriting costs out with more accepted risks that could potentially reduce your underwriting costs per issue, but that depends on how much extra work you have to do to differentiate those risks. This is kind of a controversial issue, but if you can differentiate those risks correctly, you might be able to make some potentially profitable sales which you wouldn't otherwise.

In doing risk classification, there are a lot of questions that have to be looked at as you get into it. First of all, how many classes should you have? There are some policies on the market that have as many as five classes and others that are limited to just two. What's the right rate differential between the classes? Which risks do

you put into each class? What's the right relationship between those? There really aren't any data to answer these questions right now.

Some studies have been performed on the probability of someone going into the nursing home given certain conditions. But so far those studies have not extended to the probability of getting home health care, unless somebody knows something that I don't know. Companies are starting to collect their own data, but there hasn't been any published data at this point that would say this risk has morbidity exactly 125% of average, etc.

Finally, once you've made the determination of which risk classes and what kind of differentials you want, how do you know what the selection wear-off pattern between the different classes is going to look like? There is some data that that could be used, but thus far, it hasn't been accessed. The National Long Term Care Survey tracks people over time to determine their movement from zero ADL status to one, two, or whatever, and that could be linked to the person's medical history via the Medicare records and all tied together. We've looked at doing it, but it's a lot of very time intensive work, so we just haven't done it yet.

The practical reality is that much of the risk classification being done right now is very judgmental. Ideally, as actuaries, what we'd all like to do is put certain risks into preferred, others into standard, and others into substandard so that one class will have morbidity that's exactly 97% of the other class and that the split between the two will be 60/40 or whatever, but right now, that data are usually not available.

In reality, it's more of a marketing decision. A company will make a decision that it wants three rate classes with factors of 85% for preferred and 125% for substandard, and estimate the split between the three categories to be 50%, 40%, 10%. The end result is that your composite rate for the three classes is a rate of 95%. Once you've developed a composite rate, you divide by 0.95 to get to the standard rate, and it's usually as simple as that.

Companies that have been in the market and have their own data are usually able to get help with some of these elements. They can have the underwriters go back and sample applications for the past certain number of applications or for a past period of time to fine tune what that estimated split between the rate classes is going to be. And, as data sources evolve, I think we're going to be able to get to the point where we can have a better idea of what will happen if you put these types of risk in this class.

Right now most companies are just looking at a preferred versus standard risk class. Some are looking at smoking status and certain lifestyle indicators, such as whether the person is driving a car or is actively involved in outside activities. They may have different height/weight tables for the different risk classes. Some companies are looking at the length of time that a condition has been present. If applicants had minor cancer treatment within the last three years, they might go into the standard class, if it took place longer than three years ago, they might go into the preferred class. Some companies are looking at the severity of the

condition to make a determination. How many doctor's visits or medications is that condition requiring? One or two companies are using a point system method.

I want to give just a couple of examples to give you an idea of how much variability there is in the market on these different risk classes. I looked at the field underwriting guides of three different companies to try to get an idea of where they would classify a couple of the more controversial conditions. The first was congestive heart failure. The first company says that, if a person had a single event that had been surgically corrected more than 12 months ago, it would classify that person as standard. Otherwise, the company wouldn't insure them. The second company said, if it was a single event with no medication, over 12 months ago, it might consider the person as preferred. But if the condition is chronic and ongoing, the person would be noninsurable. The third company said that if the condition was well-controlled and happened more than six months ago, it would consider the person for a preferred risk. If it was chronic or the person was hospitalized in the last six months, the company would still insure him or her, but as standard. These are three pretty different extremes on how these three companies would handle that condition.

Similarly, we studied the same three companies for diabetes. The first company said, if was controlled by diet or oral medication, it would issue them a standard. However, if a diabetic is insulin-dependent, the company won't insure him or her. The second company said if diabetes is controlled by diet or oral medication and the onset was more than six months ago, it might put the person in preferred risk. But, again, it won't insure someone who is insulin-dependent. The third company would actually issue the person whose diabetes was controlled by diet as preferred. If it's being treated with insulin, the company would issue it as standard. However, the company says if a diabetic is taking, for example, over 75 units of insulin per day, it would put him or her into the substandard class. Again, there's a lot of variability in what companies are doing.

With respect to one of the questions Margaret posed earlier, about whether underwriting and risk classification are science or art, I concur that it is very much a mix of the two right now. I'd say it's leaning towards the art side in many companies than science. For us as actuaries, I think the bottom-line point is that monitoring the experience is absolutely key. Having your claim costs broken out by frequencies so you can track frequencies in the early years, as opposed to just claim costs, and really starting to track it very early on, is what's going to be important.

Mr. James M. Glickman: I have two comments, one for Mike, one for Dawn. Mike, you talked about a study of the medical records, looking at the percentage of those we already knew were cognitively impaired who had the diagnosis on their medical records. I wanted to point out, as with many statistics, you have to put them in a framework. One of the things that I know from our underwriting is that it is extremely rare to see a diagnosis of cognitive impairment on a medical record, and, it's almost nonexistent among those who have mild problems. However, we see a very large percentage of people who have both mild and moderate impairment with notes in the medical records that you can pick up, for example,

forgetfulness, getting lost on the way home, or spouses reporting a problem with the other spouse. I'm sure those are not picked up on your study, but it would be a very interesting follow-up to your study to see what correlation there is.
The second comment is for Dawn. Interestingly enough, we did a very similar type of study with the NAIC reports that Dawn did, but on a more simplified basis, because we were looking for the loss-ratio patterns more than the select patterns. It's a very simple test that anybody can do. The NAIC puts out the reports, as Dawn mentioned, every year. Each of the companies is listed and you pick those that you think are tight, moderate, and loose. Then you put them in an Excel spreadsheet by duration and come up with totals across each of those classifications. What we found is that the tight underwriting had loss ratios that were about one-third lower than the moderate. In other words, the moderate were 50% higher. Moreover, the loose were approximately 100% higher. It tracked at that level throughout duration, although it was a little higher at the early durations, and a little bit less at the older durations. Now, since these are loss ratios, which are based on companies' actual premiums and results, it indicates exactly what Dawn was saying, that the different style of underwriting is not being reflected in any way, shape, or form in the aggregate pricing for that underwriting, and I think it's a very important consideration.

Mr. Mayer: Jim has a very good point. The study did specifically talk about diagnosis in the medical records. I would not rely solely on the medical records to determine cognitive status and I'm wondering if that's how you're doing it currently.

Mr. Glickman: The answer is no. Obviously, you want to use face-to-face and telephone interviews, depending on age and so forth, as well as the things that show up in the medical records. But my key point is that there are lots of companies now looking at face-to-face as the primary detection method, only using medical records when they think there's a specific medical indication and trusting the face-to-face to find all the cognitive problems.

Mr. Mayer: A trend that I see is that, with more and more cognitive drugs on the market, I think you're going to find fewer primary care doctors who aren't taking these comments seriously in the medical record. If somebody comes in now and says, "I think I'm getting a little more forgetful," generally I think the doctor is not doing a whole lot with it. I think as time goes on and these cognitive drugs get better and better, there may be some liability on those physicians for not doing anything, so I think you're right.

From the Floor: Mike, your company does an excellent job at the early stages of Alzheimer's of being able to predict and screen for it. My question is from an industry standpoint. With medical technology taking off the way it is, do you feel that we, as an industry, are going to be selected against and have our hands tied? Is it true that Alzheimer's disease can be determined through genetic DNA markers before a person develops any symptoms?

Mr. Mayer: I'm not really clear on that. I know there were some articles about a year-and-a-half ago that talked about a breakthrough, and then there were some

smaller articles about a month later that said it wasn't really that much of a breakthrough after all. But I think it's definitely something we really need to be concerned about. Obviously, if people can give DNA tests for cognition and we can't have access to that data, there's going to be a major problem.

From the Floor: That's what I was getting at. I know it wouldn't happen with any sales agents representing companies in this room, but if I'm an agent who is down on my luck and it's the end of the month, why couldn't I set up shop outside of one of these Alzheimer's clinics? If the people are young, they wouldn't have any symptoms at all, and I could be selling them off the street, because they need the product and we would be selected against. That's my concern and I wonder how can we prevent that from happening. What steps can you take to help tighten up underwriting to watch out for that?

Mr. Mayer: I think there's been a cutoff in the industry now and many companies aren't doing any formal cognitive screening under age 65. I have personal experience with a father of a friend of mine who developed Alzheimer's at 58, so it does happen. As these cognitive screening tests get better and better, you're going to have less of that risk occurring. You have to look at the cost effectiveness of doing that across the entire population versus what your risk really is. And, of course, you don't have any agents who would do that.

Mr. Dennis M. O'Brien: I have two questions. One regards administration of these cognitive tests via telephone. The head of our underwriting department came back from an underwriting convention with a story that disturbed me greatly. In one of the cocktail parties, she was talking to an underwriter from another company who was doing cognitive screenings by telephone. Our underwriter was worried about the effectiveness of such tests. And the underwriter from the competing company said that, on the DWR, it worked very well. In fact, most of the people got 10 right and in the exact order. I wonder if any of you can comment about how you can be certain that when tests given over the phone, there's no aid given on the other end?

Mr. Mayer: One of the things that we do is to remind them not to write anything down. One of the other issues, though, is that we have nurses on the phone who are doing these tests days and evenings. On average, these nurses have done over 5,000 cognitive exams. They're very keyed into it. In fact, we had one of these cases a couple of weeks ago, where the person did very poorly on some of the other sub-tests, but got a 10 on the DWR. The problem is that most people don't get all 10 right if they're cognitively normal, so there are some keys that you can look at. Also, you have to be very attentive to the way people are acting on the phone, to determine if there are people on other lines and things like that.

Mr. O'Brien: On this new MCAS test, if you've tested it in the field, how long does it take compared to the kinds of face-to-face interviews that are not genuinely being done, and how much is the cost compared to the tests that are now normally being done?

Mr. Mayer: We began using the test telephonically last month and I believe we've done about 400 to 500 of them so far on the telephone. We're planning to roll it out face-to-face at the end of this month. But, as far as a telephone screen, generally, we're charging somewhere around $25 and it takes about 15 minutes to administer. The DWR takes 9 of those 15 minutes to administer, so that's an indication of other tests that are being used.

Ms. Hottinger: I just wanted to make a comment about the issue of cognitive screening by phone. I think it's an interesting issue that the industry needs to look at carefully. I share the concerns that were expressed by Dennis and some of the others about its reliability is it in the context of an underwriting screening for an LTC insurance program. We're optimistic at some point, but skeptical within the LTCG about complete reliance on a cognitive phone screening tool.

From the Floor: I've looked at quite a number of blocks of business where the early claims history has been quite bad. One of the things that I noticed is that often the failings are not tight, loose, or medium underwriting, but rather inconsistent underwriting. Companies will have a list of conditions and any clinician would say that condition A is a lot worse than condition B, yet, the company will accept A and not accept B. Or, alternatively, there are an awful lot of dumb decisions that they just don't have an explanation for. I'm wondering if that's the experience of other people on the panel and what should be done about it.

Ms. Helwig: I would agree with you completely on that and would categorize that style of underwriting as loose. When I talk about loose underwriting, part of what I refer to is the fact that companies are very inconsistent and when they use tools and are very loose about what they do. Sometimes people take the test and sometimes they don't. They might decide to put somebody through a cognitive test twice. The person fails it both times and then the agent says, "But I know this person. You've got to accept him," and they accept him. They don't stick to their own underwriting rules consistently. I think what you see, when you look at the companies that were put into this tight underwriting category versus the loose, is that the former are being very consistent. They have a very definite set of underwriting rules and they're being very consistent about applying them versus the companies on the other end.

Ms. Hottinger: I would characterize that a little bit differently. I would categorize it more as expertise and execution. You can buy the best tools that are out there. There are a lot of organizations that have underwriting guidelines and criteria that work really well. However, if you don't spend the time and attention either to find an organization that can help you execute those or to get the right kinds of people on staff doing the day-to-day work, you will have inconsistency in how the tools are executed. We like clinicians to be involved in that process. We don't necessarily believe that's the only right formula, but that having some clinical judgement at the bottom line is part of the art side of underwriting for LTC and helps achieve more consistency and execution. Quality assurance does as well.

Mr. Robert K. W. Yee: I have one comment and a completely different question. My comment is on genetic testing. Definitely this has been brewing for a couple

years on the regulatory front regarding prohibiting use of genetic data for underwriting. It seems like the insurance industry is losing its battle on the health insurance side. But on the life side, it seems there's some hope, and some things workable. Unfortunately for LTC, regulators sometimes can't decide what is life or health. I'm real concerned about how LTC eventually will fall in regard to genetic testing. My completely different question is mostly directed to Mike and, perhaps, to Margaret, too. What kind of quality assurance are you giving to clients in terms of the service you perform?

Mr. Mayer: Are you talking about primarily at Nation's CareLink on the telephonic side?

Mr. Yee: Yes.

Mr. Mayer: On the telephone interviews that we do, both the personal health interviews and the ones to which we add a cognitive exam, all of those conversations are digitally taped, so we have the capability of pulling them up at a moment's notice. We can e-mail them to our customers if there's ever a question. We have a full-time quality assurance person who reviews those tapes. We try to do about two a week, I believe, on each of the nurses that we work with and get the feedback back to them if there's an issue.

Mr. Glickman: One more question on genetic testing. My understanding is that there are oral tests with a very high reliability in terms of determining the Alzheimer's marker, that the marker has a very high reliability in terms of determining if somebody who lives long enough will develop Alzheimer's, and that that number is the neighborhood of 30% of the population. I'd like to hear your comments.

Ms. Hottinger: I'm not going to claim great expertise on this issue of genetic testing at all. It's food for thought. Has anybody looked at it in detail enough to understand the impact of certain age bands? Just because someone is ultimately going to get Alzheimer's and it's known, depending on when they buy the policy and how long you're going to collect premium on it, it might be fine. From a risk perspective, there may be reasons to believe that there are some ages that might work fine within your pricing assumptions on LTC.

Essentially, the issue is that everybody who goes to have genetic testing done is going to buy LTC insurance, because they will know. It's the whole issue of adverse selection. Then the question to ask is, how many people are actually going to go through the process and want to know whether they're ultimately going to get Alzheimer's?

Mr. Glickman: Well, if I were an agent and I knew that I could get one out of three hits, I'd pay for the test and let people know there are providers to cover it.

Ms. Hottinger: Insurance companies should be able to protect against that.

Mr. Ali A. Zaker-Shahrak: I was surprised that a company with tight underwriting would have a lower loss ratio, unless everyone pays the same premium. If they don't have the same premium, you can have a company with loose underwriting. But as long as companies have, say, 20% over the market average, they would have a loss ratio comparable to companies with tight underwriting.

Ms. Helwig: I didn't look at what the average premiums were on this, so there hasn't been an adjustment made for difference in average premiums. It is not inconceivable knowing the companies that were put into the loose underwriting category, it's not inconceivable that those companies actually have lower premiums on average than companies that are in the tight underwriting category. But I think the other factor is that you have the selection curve wearing off for probably a longer period of time on the companies with tighter underwriting. They will get to the same 60% ultimately, but their loss ratio by the fifth duration is lower because they've got a longer wear-off curve.