

Long-Term Care News



**SOCIETY OF
ACTUARIES**

**LONG TERM CARE
INSURANCE
SECTION**



Long-Term Care Insurance at a Crossroads

By Bob Yee

- 3 Chairperson's Corner**
By Rebecca Tipton
- 6 Editor's Corner**
By Paul Colasanto
- 8 Up Front with the SOA Staff Fellow**
By Joe Wurzburger
- 10 Long-Term Care Insurance at a Crossroads**
By Bob Yee
- 14 Insights Into Consumer Behavior: What We Learn From Twenty-Five Years of Research on Long-Term Care Insurance Buyers and Non-Buyers**
By Eileen J. Tell and Marc A. Cohen
- 18 Searching for Morbidity Improvement in the SOA Experience Database**
By David Benz
- 22 Group Life & LTC Combinations: New Options for Worksite LTC Planning**
By Steve Cain
- 24 The NAIC as Long-Term Care Insurance Innovator**
By John Cutler
- 26 First Principles Modeling for LTC: A Series Summary**
By Al Schmitz, Andrew Dalton, Dan Nitz, and David Weizeorick
- 28 Understanding What Consumers Want: Critical Framework for Product Innovations**
By Eileen J. Tell
- 30 Q&A with an Experienced Insurance Professional New to Long-Term Care: Clark Himmelberger**

Long-Term Care News

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Chairperson's Corner

By Rebecca Tipton

In the April newsletter, I shared our LTC Section goals for the year. Now that we are more than halfway through the year, it seems appropriate to share the progress we've made on these initiatives.

TACTICAL INITIATIVES

Valued Offerings

Our members have always placed a high value on newsletters, webcasts, podcasts, and industry meeting sessions. It is a continued priority of the section to develop strong content for these offerings. We continue to publish three issues of *Long-Term Care News* annually and truly appreciate all of the volunteers who help create content and edit the newsletter. You can find the archive of issues for the past four years on the website at www.soa.org/ltc under the "Newsletter" tab.

As we enter the second half of the year, meeting season is in full swing. The LTC Section has liaisons that help with a number of upcoming events: the Valuation Actuary Symposium in August in San Antonio, the Supplemental Health & Protection Conference (previously the DI & LTC Insurers' Forum) in September in Baltimore and the 2017 SOA Annual Meeting & Exhibit in October in Boston.

We will work to identify any LTC industry issues that may be underrepresented on the council.

Mission Statement

As previously mentioned, we revised the mission statement to have a broader scope and more accurately reflect the LTC industry. The SOA Board of Directors approved the updated mission statement:

To encourage and facilitate the professional development of its members, affiliates and other interested parties who



are involved in Long-Term Care issues, through thought leadership and educational outreach.

Next, we will work to identify any LTC industry issues that may be underrepresented on the council and how we can incorporate them into our scope.

INNOVATION/THOUGHT LEADERSHIP

LTC Regulator Forums

During our regulatory outreach work in 2016, we identified that regulators have a desire for LTC educational sessions with industry actuarial communities. Many regulators don't have a background in LTC Insurance and these online forums are meant to help bridge that gap. The forums are designed to educate regulators on the LTC industry and some of its current challenges. The forum topics currently planned include:

- History of Long-Term Care Insurance & Intro to Current Long-Term Care Issues
- SOA Pricing Study
- SOA Intercompany Study
- Rate Increases
- Claims Management
- Future of Long-Term Care Insurance

Think Tank

The Think Tank is continuing its progress through the formation of three concept teams: data driven support, service evolution and expansion, and paying for care. While the first two concept teams are still working on concept development, and therefore not yet ready for consumer testing, the third concept team—paying for care—has some truly exciting news to share. This team was approved for funding from the SOA's Research Expanding Boundaries (REX) Pool to perform consumer research specifically focusing on two of the "paying for care" concepts. These concepts include an account driven LTC (similar to Universal Life insurance) and a transitional product idea that combines term life insurance with an LTC product (LifeStage). This research will take place in four phases:

- Actuarial Modeling and Concept Development
- Qualitative Research (Part I of Consumer Testing)
- Quantitative Research (Part II of Consumer Testing)
- Predictive Modeling (to estimate consumer demand and market segments)

While the funding for the project comes from the SOA's REX Pool and not the section, the Project Oversight Group includes several members of the LTC Section Council, maintaining an important link to the section. In addition the three concept teams continue to work to evolve the innovative concepts from the Think Tank; this remains a key focus of the LTC Section Council. More details are included in a full length article in this issue.

Expand Marketing Initiatives

Earlier this year, a new section webpage launched with significant changes. We'd like to increase the value of the webpage so it will become a go-to resource. The goal is to provide regular content updates so information is available in a timelier manner. The most relevant information will be available as soon as you click on the LTC homepage. I encourage you to check it out at www.soa.org/ltc and provide any feedback that you have. If you have groups that would like to partner with the SOA LTC Section or have relevant information to link to the webpage, please let me know.

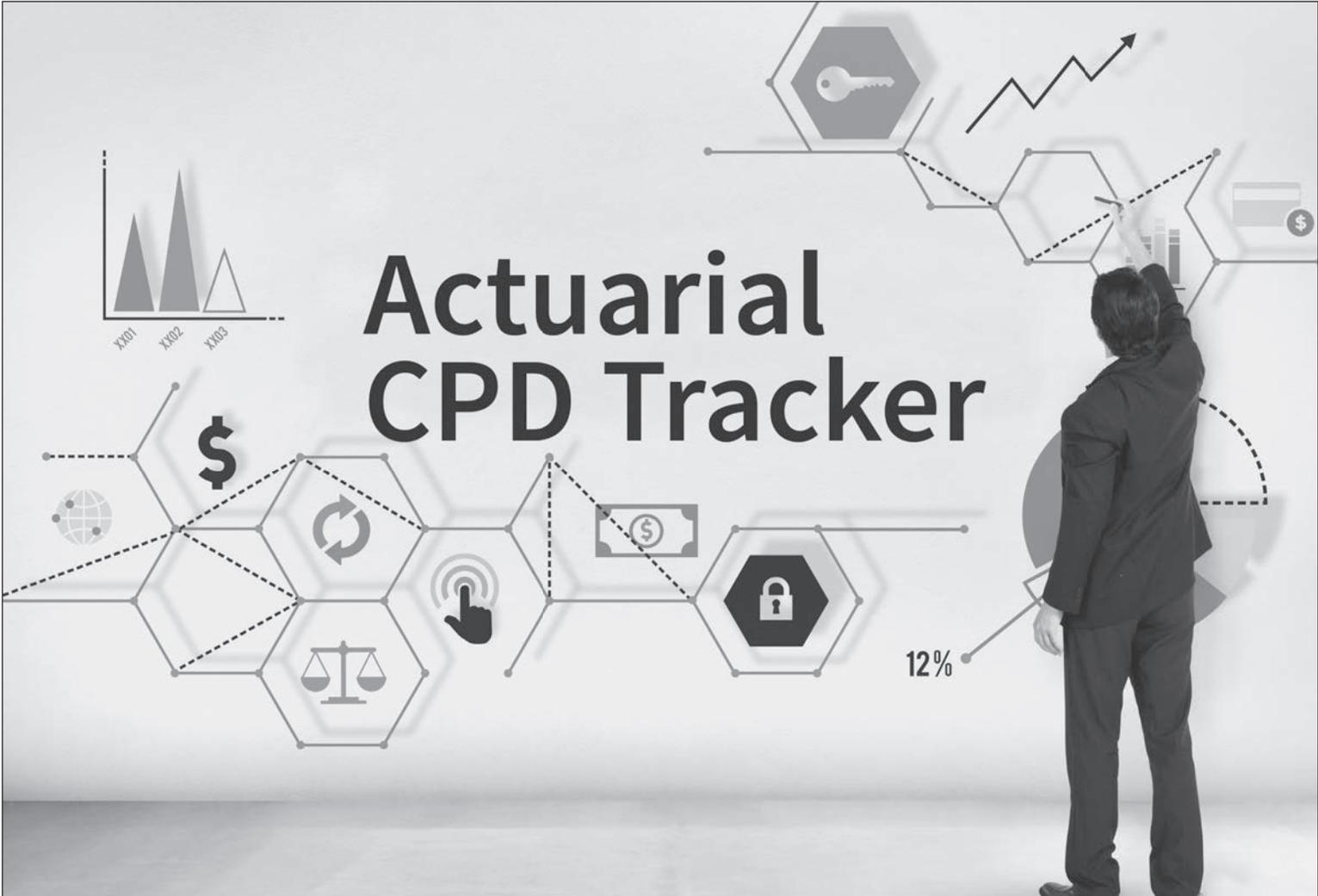
In addition, we are developing a social media strategy. Some initial goals are to provide content to a broader group of people and to drive traffic to the SOA LTC webpage. As a first step in that process, an LTC LinkedIn group has been created. We hope that you will join the group: <https://www.linkedin.com/groups/2768897>.

Lastly, we'd like to build relationships with industry trade groups. This is something that we expect to evolve over time.

THANK YOU to all of the council members, newsletter authors and other volunteers who help drive the work of the LTC Section forward; it is truly appreciated! If you would like to participate in any of the current initiatives or have ideas that the LTC Section should consider, GET INVOLVED—there are so many options! ■



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Editor's Corner

By Paul Colasanto

I'd imagine that in other situations, editing can be a thankless job, but that has not been my experience at all in my half-year or so of being co-editor of this newsletter. The section council chairperson (Rebecca Tipton), newsletter editor (Robert Eaton), and the authors (too many to mention), have all made this a thankful job. They each genuinely appreciate the efforts of reading each article and providing suggestions. And similarly, I would like to offer my sincere thanks to the authors of this issue, and of past and future issues. You make this newsletter special. Although writing for a publication can be a nerve-wracking endeavor, you continue to provide plenty of articles for each issue. In addition, many of you have gotten your feet wet with being published in this very newsletter, and many others will do so in the future.

With that in mind, I'd like to offer a challenge. For those of you that haven't already done so, try your hand at writing an article. It's always great to get new perspectives, and if you need some help, the section council is full of resources. Think about the things that you have seen published—can you expand on a topic or provide a different view? You can become a resource

to help others learn, and you don't even have to be an expert. You simply write about a topic that others are likely to find engaging, even if they know more about it than you do. Plus, you can add the article to your LinkedIn profile and elsewhere, so others can see your published work. If you're interested in even just exploring the idea, please contact Robert Eaton or me.

As far as the articles in this issue, you will notice a wide variety of interesting topics, ranging from the technical (including first principles mortality and a study related to incidence improvement), to the users and potential users of long-term care insurance (including an article on consumer behavior and one on worksite LTC), to updates on new ideas in long-term care insurance (including an update on the NAIC Innovation group and the section's Think Tank). In addition, we are continuing our new series featuring experienced insurance professionals writing about their recent transition to the long-term care world. This new series is one that I personally find very interesting, and I encourage you to check it out.

On behalf of the LTC Section Council, and the authors of this issue, I hope you enjoy reading it as much as we enjoyed pulling it together. I truly think this issue includes something for everyone, and hopefully a few "somethings." ■



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Up Front with the SOA Staff Fellow

By Joe Wurzburger

The SOA is proud to partner with LIMRA and LOMA to offer a new continuing education opportunity for actuaries: The Supplemental Health & Protection Conference. Taking place September 25–27 in Baltimore, this event promises to be a valuable addition to the complement of continuing education offerings available to LTC actuaries.

For those of you who have attended the jointly-sponsored DI & LTC Insurers' Forum in prior years, this event will feel somewhat familiar. The Supplemental Health & Protection Conference is essentially the expanded and improved version of that event. Continuing education content will be provided for professionals working with accident insurance, critical illness, hospital indemnity, individual disability income, long-term care, and combo products.

With the assumption that you are reading this because of your interest in long-term care, you will be pleased to know that there is a dedicated track for LTC. This means that there will be at least one LTC-related session available during each time slot of concurrent sessions.

For example:

- On the first day of the conference:
 - One session will focus on the outlook for LTC, delivery, and financing. Attendees can expect to hear a variety of viewpoints from a panel of experts, including thoughts about emerging technology and the demand in today's market for viable financing solutions.
 - A session on combo products will examine common structures, benefits, value and risks associated with combining various forms of insurance including but not limited to supplemental health products, long-term care and life insurance.
- On Tuesday, a couple of different sessions look at LTC innovation.



- The first one looks at innovative new products, specifically those being developed to meet the needs of the middle-income market and the retiree market.
- In the second session, a panel of industry experts will debate three product types on the basis of the size of the market opportunity, underwriting differences, policyholder value, company perspective on risk/profitability, actuarial/pricing assumptions and claim handling.
- Also on Tuesday, attendees can hear directly from LTC regulators on topics such as asset adequacy and rate increase consistency.
- A workshop later on Tuesday afternoon will introduce participants to emerging risk mitigation techniques related to interest rates, inflation, and mortality hedging, among other topics.
- On the third day, a couple of different options are available.
 - For attendees who have not yet earned their professionalism continuing education credit for the year, I will be presenting a double session that will get you most of the

way there. Join me for a mix of fun and education as we cover core professionalism concepts and explore challenging situations in the form of case studies.

- Additionally, there is an LTC-specific session that focuses on fraudulent claim detection. This session will explore various considerations for a claim fraud detection program from a legal, company and investigative perspective.

In addition to these compelling concurrent sessions, there are several relevant general sessions.

- Leading off the event will be keynote speaker Luke Williams, professor of innovation and executive director of the Berkley Entrepreneurship Center at New York University's Stern School of Business. He will share his insights regarding disruptive thinking and how to spark transformation in your business.
- Tuesday's keynote speaker will be Susan Dentzer, who is president and CEO of the Network for Excellence in Health Innovation. She will discuss competing and winning in today's health care environment.
- Tuesday's agenda closes with a general session focused on behavioral economics. Much attention has been paid in recent

years to the disruptive impact of the data and digital revolution, but behavioral economics is a newer disruptor that has had significant impact on other industries and is beginning to make its mark in the insurance industry. In this session, Chris Stehno from Deloitte will share concrete examples of the use of behavioral economics in other sectors and will discuss potential applications within the insurance industry.

- A medical director panel will kick things off on Wednesday, giving attendees a glimpse into the minds of these talented professionals. They will focus, in particular, on recent trends, challenges they face and what keeps them up at night.

All of this plus plenty of opportunities to network makes the Supplemental Health & Protection Conference an event you don't want to miss. For more details and to register, visit www.soa.org/calendar.

I hope to see you there. ■



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Long-Term Care Insurance at a Crossroads

By Bob Yee

After forty years of sales and seven million policies in force¹, the long-term care insurance (LTCI) market has become stagnant. Sales have precipitously dropped and many insurance companies have exited the market. Market penetration is barely at 10 percent of the buying population.² Moreover, policyholders are facing large premium increases due to actual experience being worse than anticipated. From the consumer's perspective, the value proposition of LTCI is unclear since the ultimate cost of insurance is undetermined. Single premium policies that combine life insurance and long-term care coverage have supplanted traditional LTCI in the high-income segment of the market; however combination policies have not penetrated into the rest of the market thus far.

Despite this downturn, the need for insurance protection against the financial risk of long-term care is as great as ever. With the repeal of the Community Living Assistance Services and Supports Act and proposed cutbacks in other health and welfare programs, the federal government has shown little appetite to provide insurance protection. Yet the aging population and rising costs of care demand viable financing solutions. Since not every senior will require long-term care services in his or her lifetime, the sharing of risk through insurance remains a cost-effective approach to fund these potential services.

The LTCI industry has arrived at a crossroads: it can continue to decline, or it can resolve the aforementioned issues to become a vital component of long-term care financing again.

HOW DID WE GET HERE?

In order to solve to these issues, it is helpful to understand the key forces behind the industry's present predicament. Similar to other consumer products, private insurance operates under the precepts of free enterprise: companies are free to offer products and consumers are free to purchase them, with laws and regulations in place to ensure a fair balance between both parties' interests.



Insurance companies began offering LTCI in the form of nursing home insurance in the mid-1970s when they recognized a demand for protection from the high costs of institutional chronic care. Virtually all other health insurance available at that time covered only acute care. Nursing home insurance paid a fixed daily sum for nursing home stay for a defined period of time. Coverage continued for the lifetime of the policyholder as long as premiums were paid. Premiums were adjustable, but subject to regulatory approval. The purchasers were mostly retirees over age 65. Compared to today's LTCI policies, nursing home insurance had a simpler design and the risks to the insurance companies were better contained.

Appropriately so at the time, nursing home insurance was regulated no differently than other forms of health insurance.

A major provision in health insurance regulations is the minimum loss ratio requirement. To ensure that policyholders receive adequate benefits, claim payments must meet a minimum percentage of the premiums over the lifetime of policies under the same policy form. For LTCI, state regulations generally require that claims payments be at least 60 percent of the premiums over the lifetime of a policy form, which usually lasts more than 40 years. Loss ratio requirement recognizes the uncertainty of future insured events. It allows for premium adjustments to maintain a reasonable relationship between claims payments and premiums. It follows that the insurance company and the policyholder enter a LTCI contract (approved by the regulators) under an implicit agreement on the required relationship between expected claims payments and premiums throughout the life of the contract.

The loss ratio requirement has worked successfully for many types of health insurance such as medical insurance, where claims are frequent and premiums are annually calibrated to recent claim experience. It has been less successful where claims are initially low, but increase with time, and premiums are intended to be level. In the case of LTCI, the probability of claiming benefits at age 60 is approximately 0.13 percent, but increases to 6.4 percent at age 85,³ which corresponds to a 50-fold increase. Unlike the early nursing home policies, LTCI policies are typically sold to individuals in their late 50s to early 60s; however, claims generally do not commence until policyholders reach their late 70s. In addition to claims, the financial outcome for insurance companies involves long-tailed risk factors that are typically not found in short-term insurance coverage. These include mortality, lapse, investment yield, and long-term care service cost inflation over the lifetime of a policy form, all of which are difficult to accurately predict over a long period of time. The total amount of claims paid is heavily influenced by these factors.

The popularity of LTCI began to rise in the 1980s. Many insurance companies entered the market buoyed by market potential and favorable early claims experience. Competition in price, product features and sales compensation spawned healthy sales growth. Home health care and assisted living facility benefits were added, as well as the option for unlimited lifetime benefits. With very limited experience on the population of policyholders, these features represented additional risks to the insurance companies. They also attracted younger buyers, which compounded the risks due to longer period to claim. The loss ratio requirement allowed certain companies to justify competitively low premiums since a relatively small change in assumption (for example, lapse rates) could significantly impact premiums. Certain insurance companies decided that aggressive pricing

and untested policy features were acceptable risks, because the initial prices could be corrected by future premium increases if necessary. At the same time, the loss ratio requirement assured regulators that, in the long run, sufficient benefits would be paid relative to the premiums charged.

In the industry's infancy, the long-tailed risk factors underlying the LTCI product were not well appreciated. Experience data on LTCI were not available in the public domain due to company privacy protection. Many company managers and outside consultants had health insurance backgrounds, but lacked expertise in assessing the financial impact of long-tailed risk factors. Likewise, many regulators with health insurance experience were not fully knowledgeable about LTCI. With a lack of available experience data, these regulators were not able to accurately assess the validity of the assumptions supporting the premiums. Moreover, claims experience emerged slowly due to low claim frequencies in the early years. During this time, loss ratios were well under the targeted 60 percent,

The need for insurance protection against the financial risk of long-term care is as great as ever.

imparting a false impression of premium adequacy. Until more credible experience data and better techniques became available, projection of these long-tailed risk factors was based more on judgment than actual data. Sound insurance practice relies on a relatively high probability of realization, but at this stage, insurance companies were effectively gambling in a situation where the probability of success was not well quantified. Nevertheless, the marketing forces for LTCI created an environment for growth exactly as a free enterprise system intended. The loss ratio requirement ensured competition for the best perceived value to the consumers in terms of prices and attractive policy features.

In the 1990s, the thriving LTCI market began to unravel when claims in older policies exceeded the expected claims set forth in the original development of the premiums. Insurance companies realized that more policies in LTCI were persisting than in other health products such as hospital indemnity and Medicare supplement insurance. High persistency was also due to improvement in mortality and policyholders' perception of the increasing value of their insurance protection as they aged and their health declined. More policies persisting would result in

recognized that the long-tailed risks were extremely difficult to manage. Instead of improving the financial performance of a block of business by repricing new business, management limited its potential losses by ceasing new sales. However, companies cannot terminate their existing blocks of business as long as premiums are paid. In conjunction with exiting the business, a number of publicly traded insurance companies recorded losses in their financial statements by strengthening their reserves. This resulted in little or no expected future profits, but further deterioration in experience would lead to future losses. Insurance companies also recognize that an under-performing closed block of business would be a drag on future earnings, financial rating, and stock price.

Considering policyholders as a group, they have collectively been receiving significantly more claims payments than were anticipated in the original premiums. Therefore, the argument for premium increases that correspond to higher claims may seem reasonable. However, as individuals, many policyholders can ill-afford the large premium increases. Even with large increases, there is no assurance that premiums will be stable in the future. At the same time, many find their insurance protection increasingly valuable due to declining health, so lapsing the policy is not desirable. It is a disservice to policyholders not to inform them what the ultimate premiums may be. If provided with appropriate information and guidance, policyholders may be able to make better decisions regarding the premium increases. Also, the heightened risk of company insolvencies, which would reduce their insurance protection, has not been disclosed. Thus consumers' confidence in the industry may well be vanishing.

The industry is facing enormous challenges on both new and in-force business. Even when sizeable premium increases can generally be justified based on loss ratios, regulators are reluctant to grant them. Delays in premium increases will likely result in larger increases in the future for the remaining policyholders. Few companies are left because the underlying risks in the current product structure and features are unacceptable. In the meantime, policyholders face uncertainties and a lack of transparency in their insurance protection.

WHERE DO WE GO FROM HERE?

There was no single party or event responsible for the current predicament of LTCI. Rather, this crisis is a byproduct of an imperfect free enterprise system. In retrospect, it is doubtful that the early proponents of LTCI could have had the foresight to avoid the pitfalls known today. The industry needs to reflect on its achievements, recognize its mishaps and shortcomings, and resolve to improve.

Despite its shortcomings, the LTCI industry has made modest strides in protecting the public from long-term care financial

risks. More than seven million policyholders are currently covered; over a quarter million policyholders received benefits during 2015 alone.⁴ LTCI can help lessen the burden of Medicaid on future generations by preventing policyholders from becoming Medicaid beneficiaries. As such, it is generally recognized that private insurance will play an important role in LTC financing irrespective of any future government involvement.

Due to the convergence of multiple unfavorable outcomes, large premium rate increases have been filed and will likely to continue in the future. An agreement on the responsibilities of the insurance companies and policyholders on premium adequacy can stabilize the in force business. This market is hardly mature, as the need for the product remains strong. If there is new vigor in the marketplace, an additional 20 million individuals may be insured in 20 years assuming a 30 percent market penetration in the buying population.⁵

The very nature of long-term care is based on the notion of caring in a community. At home, family members or hired aids assist elders. In nursing homes, staff members are responsible for the wellbeing of residents. The LTCI industry is a community, with the insurance companies and regulators striving to serve the best interest of the policyholders. If insurance companies and regulators focus on the spirit of caring for seniors, the industry will surely follow the right path at the crossroads. ■

Disclaimer: The views expressed herein is that of the author and not of his employer. This is the first of two articles regarding the issues in the long-term care insurance industry. This article examines the forces that created the current state of long-term care insurance. The second article describes several ideas to revitalize the industry.



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ENDNOTES

- 1 Long-Term Care Insurance Experience Report for 2015, National Association of Insurance Commissioners, page 7.
- 2 For the purpose of determining market penetration, the buying population is defined here as the group of relatively healthy heads of household ages 45 and over with income above \$35,000 and their spouses. Data is based on *U.S. Census Bureau Household Income in 2015*, Tables HINC-03.
- 3 Incidence rates from the Society of Actuaries' Long-Term Care 2000-2011 Intercompany Experience Study.
- 4 Long-Term Care Insurance Experience Report for 2015, National Association of Insurance Commissioners, page 7.
- 5 Estimate based on 2010 Census population projection by age.

Insights Into Consumer Behavior: What We Learn From Twenty-Five Years of Research on Long-Term Care Insurance Buyers and Non-Buyers

By Eileen J. Tell and Marc A. Cohen

If, as some say, the market for stand-alone long-term care (LTCI) insurance is in decline, with sales of combination products and other private finance solutions today outpacing sales of the traditional product, what could we learn from this latest installment of 25 years of research on buyers and non-buyers of the traditional product? In fact, there is much to learn. These studies provide important current and historical insights into why consumers seek out LTC protection, how

It is critically important to continue to raise awareness about the risk, associated cost and lack of public coverage for LTC.

they make purchase decisions, and what obstacles impede the sale. The motivations and concerns consumers have expressed over more than two decades—with regard to risk awareness, the value proposition for planning ahead for LTC needs, and the channels through which they prefer to obtain coverage—provide guidance for the effective marketing and sales of other variations of private LTC protection. This article provides an overview to key findings from the 2015 report and identifies important issues of relevance across product types.

ABOUT THE RESEARCH

Beginning in 1990, leading LTC insurers have participated in a vital series of consumer surveys to better understand

important issues related to their purchase or non-purchase decisions and their perspectives on the market and the product. The study is conducted every five years by LifePlans, Inc., with financial support from America's Health Insurance Plans (AHIP). The surveys provide important insights into consumers' attitudes about insurance, knowledge of LTC risks and costs and motivators and impediments to purchasing coverage. The studies include a consistent set of important questions identifying changes over time in these dynamics. Additionally, each survey includes questions germane specifically to current and emerging trends in product, marketing, insurer, agent, and government roles and other topics in that year. The 2015 survey included 1,326 people who bought LTC insurance that year (Buyers), 225 people who considered the purchase but declined to buy (Non-Buyers) and a telephone survey to a random sample of 800 Americans age 50 and older. Additionally, the specific policy design features of just under 9,000 recently sold individual policies were analyzed to understand the type of coverage being purchased.

LTC AWARENESS

Over the decades, the decision to buy LTC insurance is grounded in an acknowledgement and understanding that there is a real and significant risk of needing costly LTC and that neither Medicare nor Medicaid will cover this risk for individuals that have meaningful levels of income and assets, unless they spend down their wealth or transfer it before the need arises. Unlike non-buyers, however, buyers are more likely to correctly understand that without coverage, they or their family would have to self-pay for care (66 percent vs. 48 percent). Even though non-buyers are somewhat more aware of these harsh facts compared with the individuals who may have never considered the purchase of insurance, that is, those in the general target population (48 vs. 38 percent), they are not as well-informed as are the buyers. Similarly, buyers are more likely to correctly assess the magnitude of the risk for needing care compared to both non-buyers and the general population, both of whom are less likely to acknowledge the risk. The implication is that it is critically important to continue to raise awareness about the risk, associated cost and lack of public coverage for LTC. While insurance-based mechanisms for privately funding LTC may evolve over time, penetration will likely remain small, as consumers will not embrace a solution to a problem that they are unable to acknowledge and understand.

WHO ARE THE BUYERS?

People who buy LTC insurance are more likely to be married and/or female, compared with both non-buyers and the general older adult population. Both buyers and non-buyers have greater financial well-being, in terms of income and assets, as compared to the general population. The gender mix among

Figure 1
Who Pays for LTC?

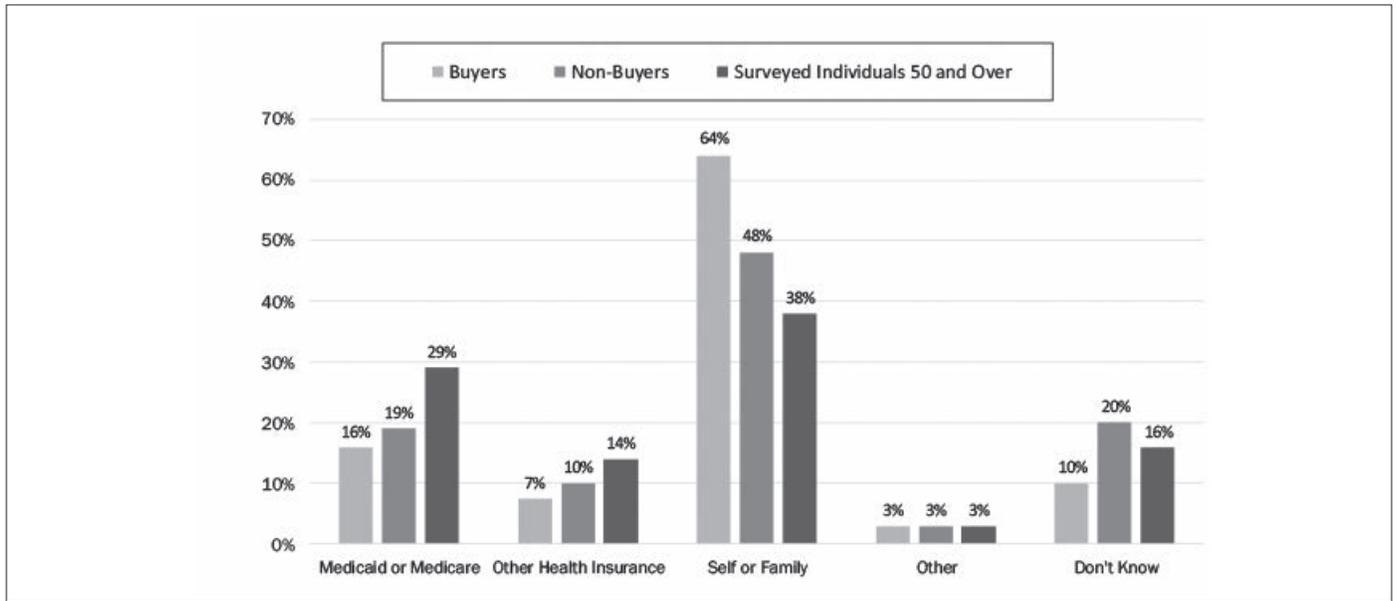
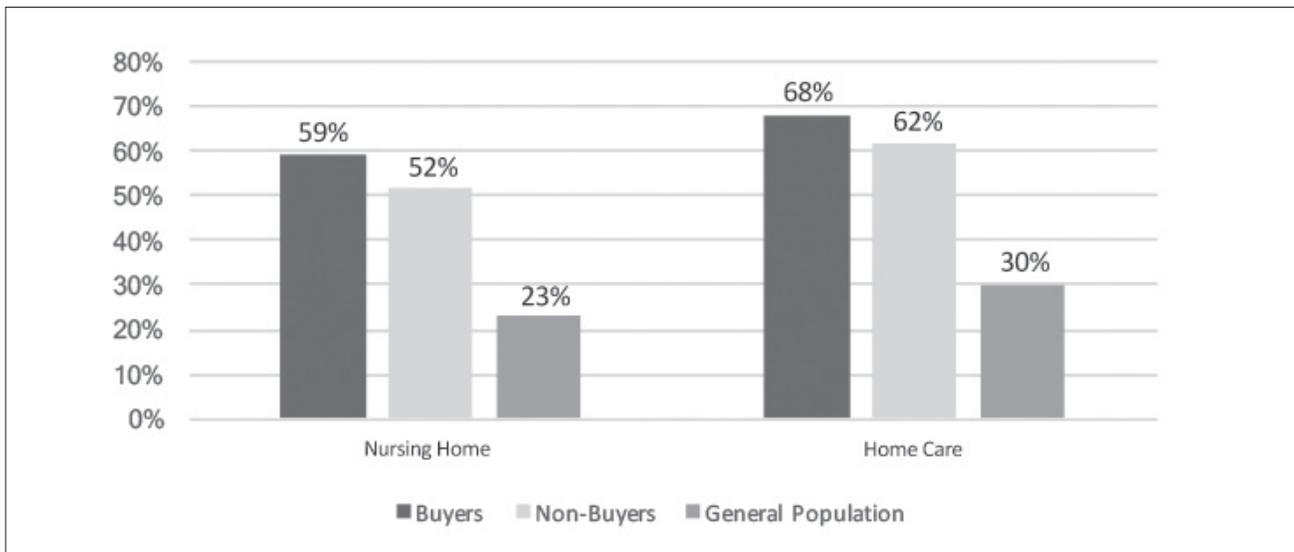


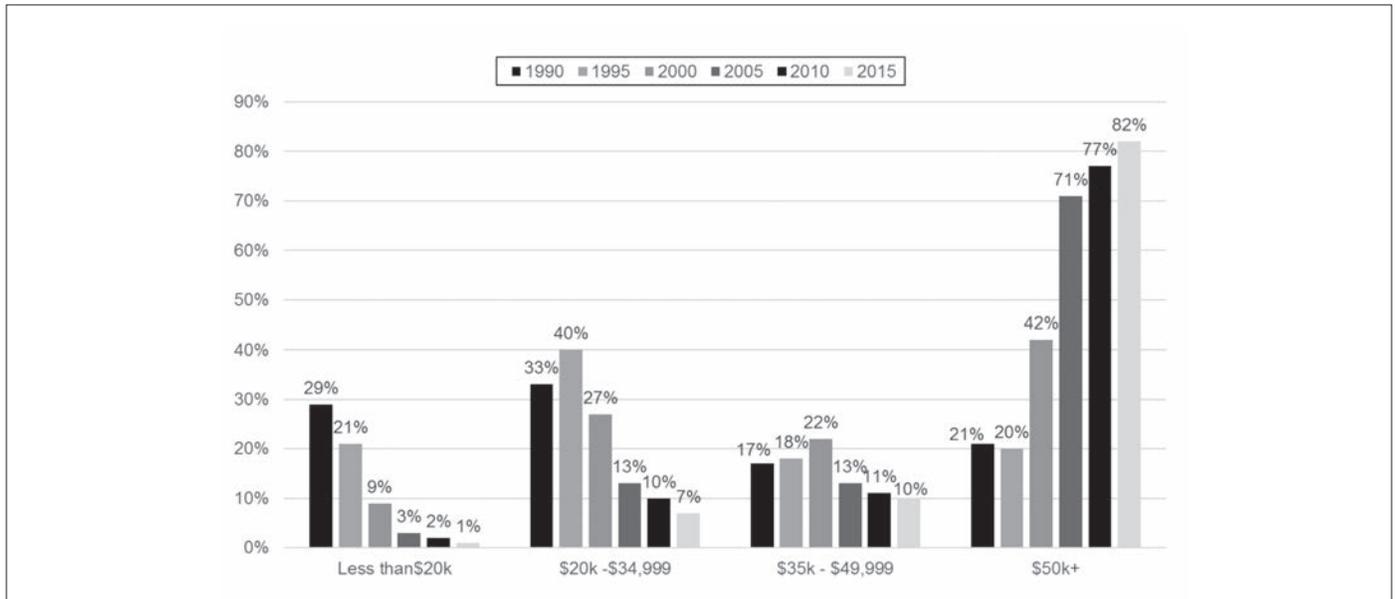
Figure 2
Believe They Have Greater Than 50% Chance of Needing Care



purchasers has narrowed considerably over the last decade; currently 54 percent of new buyers are female whereas in earlier years, females comprised roughly two-thirds of buyers. Gender-distinct premiums which offer lower premiums for males and more robust marital discounts likely account for this shift.

One of the most striking changes over time, of course, is that today's buyers are more affluent than were buyers in earlier decades. Over 80 percent of today's buyers have incomes of \$50,000 or more, nearly double the percentage in that income category (42 percent) in 2000. The change in the wealth

Figure 3
Income of Buyers by Purchase Year



profile of individuals purchasing the product is also a result of the fact that products prices have increased significantly over time. Fewer middle income people are attracted to the product at current prices. Today’s LTC policies cost more both because of pricing adjustments that more accurately reflect the current morbidity, interest rate and lapse experience but also because coverage sold today is more comprehensive than that purchased in earlier years.

BUYERS’ DECISION-MAKING PROCESS

People buy LTC insurance for different reasons. For many, protecting assets is the most important reason they cite. But also important are ensuring the affordability of LTC services and being able to avoid being a burden to loved ones. Buyers also clearly have a different view of the value proposition and affordability than do non-buyers, even in light of highly publicized rate increases in the past few years. Buyers seem to be paying attention to point of sale information about past and potential future rate increases. About 20 percent of today’s buyers are aware that the company from which they bought their policy had increased rates in the past. And just under 40 percent say they expect to see a rate increase in their coverage at some point in the future. Yet these buyers see a value proposition in making this purchase.

Buyers do not appear to be comparison shopping with regard to the traditional vs. combination LTC insurance product. The vast majority (84 percent) of buyers either did not consider or were not aware of combination products. Only 20 percent of

buyers considered either a life/LTC or annuity/LTC combination. This suggests that agents are either marketing to distinct market segments or that individuals are self-selecting toward one or another product type.

NON-BUYERS HAVE A DIFFERENT PERSPECTIVE ON AFFORDABILITY

The largest objection to product purchase continues to be cost. Since 1990, more than half of all non-buyers have cited “LTC insurance costs too much” as a very important reason for not buying. While other purchase objections have declined over time—such as a mistrust of insurers and the difficulty of making a choice among confusing products—the perception that the product costs too much has sustained as a prime factor. Even so, when asked what they could afford, 24 percent of those choosing not to buy a policy expressed a willingness to pay a premium in line with the average monthly premium for their age for the type of coverage currently sold in the market. Taken together, these findings suggest that many of the non-buyers simply do not see the value of the coverage relative to its price or are not fully convinced of the product’s relevance for them.

DO SOME NON-BUYERS INTEND TO BUY IN THE FUTURE?

As in prior years, non-buyers are not fully closed off to the idea of buying coverage at some future point in time. While 31 percent indicate they will never buy a policy, 44 percent are undecided and 26 percent do plan to buy coverage closer to or after retirement. Just over half of the non-buyers also indicated that they might be

more likely to buy a combination product. It is important to note, however, that the features and costs of those alternative product options were not presented in the survey. Nevertheless, non-buyers retain some interest in private insurance options as an option for addressing future LTC concerns.

IMPLICATIONS FOR COMBINATION PRODUCTS AND OTHER NEW PRODUCT CONFIGURATIONS

While the market for standalone LTC insurance is currently stalled and even in decline, new product options have emerged and are addressing at least one obstacle inherent in standalone products: one can pay premiums for many years and get no financial benefit back if the need for LTC does not arise—something that is likely to occur for roughly half of insureds. And although these new product options are designed to address this “use it or lose it” marketing challenge, other important obstacles to purchase still exist. These include confusion and misunderstanding about the magnitude of the risk, the need for the product as well as its cost. While we do not have publicly-available research about buyers and non-buyers of combination products, anecdotally, cost concerns remain a major obstacle to purchase, and will likely limit the ultimate reach of these products.

OPTIONS FOR LOWERING PRODUCT COSTS

Lowering product costs while also providing the coverage consumers want, in the context of greater rate stability presents a difficult challenge, to be sure. Some important cost-cutting proposals require legislative, tax and/or regulatory reform. Others assume significant public expenditures. For example, in the current study, the most important factors cited by non-buyers that would lead them to consider purchase are to include one or more of the following: a government back-stop to coverage; an income tax deduction for premiums; and the ability to use non-taxable funds such as IRAs or 401(K). Other product changes that would result in lower premiums include alternative amounts and types of inflation protection, expanding copayments and deductibles, making premium increases more palatable by allowing smaller but more frequent premium increases, including components of term pricing and others.

Enabling less costly distribution channels for sales is another option for both lowering premiums and boosting consumer confidence in and access to products. The majority of non-buyers said they would be more interested in buying a policy if they could do comparison shopping on the internet, although few are interested in buying online. This sentiment, along with interest in employer sponsored coverage, is also found among the general population of older adults, with three in five saying they would be more interested in learning about LTC insurance through a sponsoring employer.

A number of concrete cost reducing actions might include; (1) simplifying and standardizing products (similar to Medigap

coverage), with the aim of maintaining consumer choice while reducing selling costs; (2) changing the structure of premium payments so there is some level of indexing which would likely address cost as well as premium stability issues; (3) making it easier for consumers to purchase coverage by having employers and other organized purchases of insurance play a role in organizing opportunities for the purchase of LTC insurance (e.g., making the insurance available in conjunction with the purchase of health insurance, other employee benefits or even Medicare Advantage enrollment). These approaches can reduce selling costs, allow for broader participation and offer consumers more convenient ways to learn about and confidently purchase LTC insurance.

CONCLUSION

In closing, this research series is a critical resource for our understanding of market forces and consumer choice architecture that must be addressed if we are to broaden the market. It can also help inform new thinking about product design changes, help us better understand the price-value trade-off, identify changes in regulation that might address specific obstacles to purchase, point the way toward new roles for employers, affinity group and trusted public sector entities in distribution as well as financing roles.

The research described here suggests that there are multiple issues to address related to consumer education, awareness and the product cost and value trade-off. Carefully-designed consumer testing and post-sale research similar to the LifePlans’ studies, can help inform the best ways of doing both of these and other changes. Without well-constructed consumer research, industry will be unable to develop new products or fine-tune existing product configurations that can successfully take hold with consumers. Because there is no “one size fits most” solution, this type of consumer research can also help industry understand which product types are best suited to different consumer needs. ■



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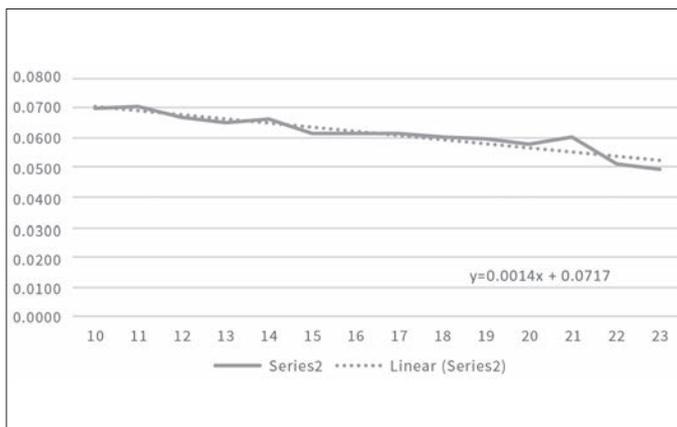
Searching for Morbidity Improvement in the SOA Experience Database

By David Benz

The topic of morbidity improvement in long-term care (LTC) insurance has been discussed for more than twenty years. *The Long-Term Care Morbidity Improvement Study* (Eric Stallard and Anatoliy Yashin) was published in July 2016 and represents the most pertinent (for long-term care insurance actuaries) analysis of activity of daily living (ADL) and cognitive impairment (CI) prevalence rates over a period for a non-insured population. However, an open question in the LTC insurance industry is to what extent morbidity improvement is present in the insured population. In this article, I will investigate an approach using the Long-Term Care Intercompany Experience Study – Aggregate Database (Database) to explore the issue of insured population incidence rate improvement.

The Database was released in January 2015 and is a great industry resource for insured experience. Plus, its pivot table format makes it readily accessible. However, the Database does not include a calendar year variable,¹ requiring some decisions on how to work around this. The approach I have pursued is to study incurred age buckets across durations. This approach will produce a mixture of calendar years within a duration but

Figure 1
Female, Age 85–89

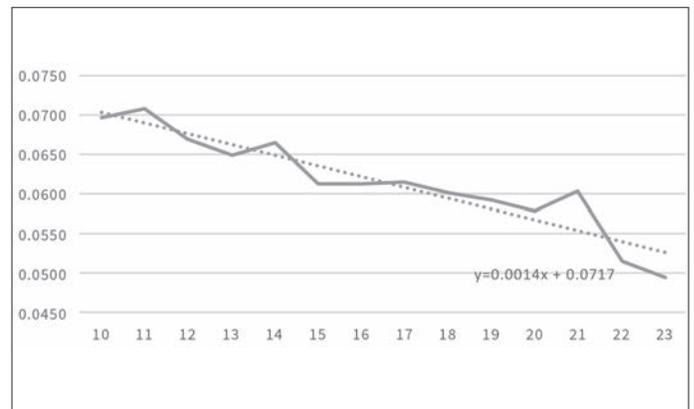


should produce a set of exposures where the average calendar year increases with duration.

From the Database, I determined the resulting set of incidence rates for a given gender-incurred age grouping. Female, incurred ages 85–89 is shown in Figure 1. Note, the figure shows all durations 10 or higher with at least 50 claims. Duration 10 was chosen to alleviate some issues underwriting might introduce—more on underwriting will be discussed later.

One will notice the generally downward slope of the incidence rates as duration increases. This may indicate the presence of improvement as the average calendar year increases as duration increases. Using Microsoft Excel, I added a linear trend line to the chart as shown in Figure 2 (note the y-axis scale was compressed for this graph to emphasize the line slope).

Figure 2
Female, Age 85–89



The use of a linear trend line means the percentage durational change increases each year since the rate of change is constant but the beginning of duration value is decreasing. For purposes of my analysis I took the first and last points on the line and calculated the constant durational change between the two points.

For this example, the first point is 0.0703 and the last is 0.0521. There are 14 observations, making 13 time periods. The resulting calculation is:

$$[0.0521/0.0703]^{(1/13)} - 1 = -0.0228$$

This change (-2.28%) is a measure of the observed annual incidence improvement in the data, where a positive value would indicate dis-improvement.

Repeating this exercise for other incurred age/gender groups produces the following values as seen in Table 1. I have included



Table 1
 Durational Change by Issue Age

Incurred Age Group	Calculated Durational Change	Durations Used in Analysis
Female 80–84	–1.4%	13
Male 80–84	–0.7%	12
Female 85–89	–2.3%	14
Male 85–89	–1.4%	13
Female 90+	–1.6%	14
Male 90+	–0.9%	13

only ages 80 and older. The process can be followed for other ages, though the smaller number of claims for younger ages will reduce the usable data points. I have included the number of durations with at least 50 claims included in the calculation.

The good news for the industry is the analysis shows incidence rate improvement by duration for a constant incurred age group. There is certainly hesitancy on my part to call this definitive evidence of morbidity improvement for several reasons discussed below.

CAVEATS

Use of an Industry Database

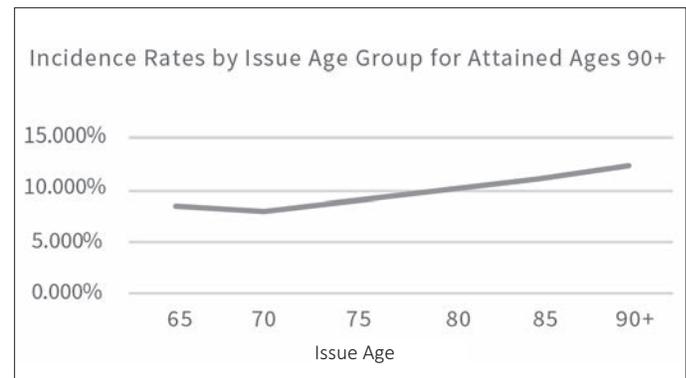
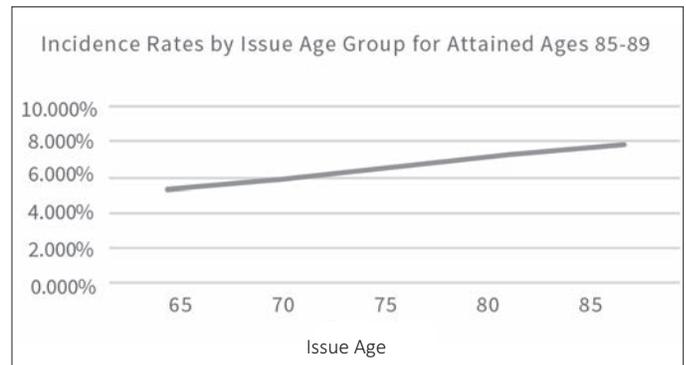
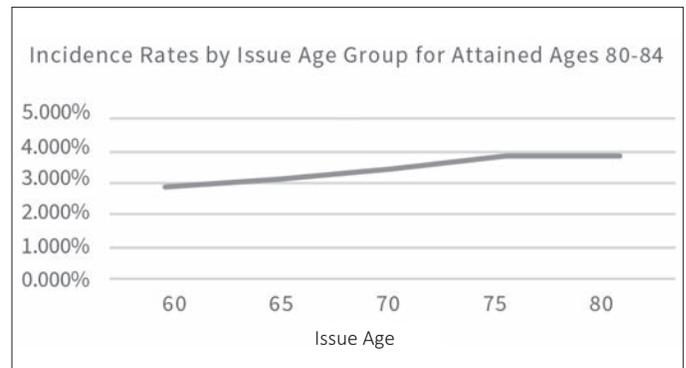
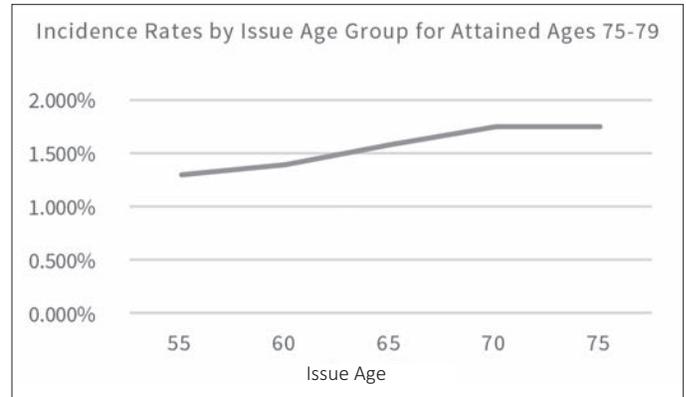
The report accompanying the Database lists 22 participating companies. Most of these companies stopped writing new business during the 2000–11 observation period. At least one started writing during the period. Sales volumes certainly changed for individual companies year to year. This means the mix of business by company will change by duration for a constant incurred age grouping. Variations in experience by company could be contributing to the observed results.

Underwriting effects

Any study of morbidity improvement using industry data needs to grapple with the general direction toward tighter underwriting through time on the results. Because the Database does not include a calendar year variable, there is even less clarity as to how industry underwriting changes may be affecting the results. The example used earlier (female, incurred age 85–89) will include business issued to applicants aged 75–79 over calendar years 1990 to 2001 in duration 10. Duration 15 will include business issued to applicants aged 70–74 in calendar years 1985 to 1996.



Figure 3



Two items of note may be mentioned at this point. First, the calendar issue years covered in the experience will move farther into the past as duration increases. This means higher durations were underwritten in earlier calendar years, typically with less underwriting scrutiny. Second, there is some uncertainty in the industry as to when selection completely wears off, if it ever does. Both items work against the observed incidence rate improvement seen leading to some thought the results shown may lessen the true underlying changes.

In a related thought, some in the industry have observed and project issue age differences lasting for the life of the business. Several explanations for the effect have been put forward including less ability on the part of applicants to project future LTC needs and lower anti-selection among younger applicants. Whatever the reason, each successive duration in my analysis will contain a younger average issue age. The Database does show evidence of issue age incidence differentiation by attained age as shown in Figure 3.

One will need to consider the interplay of issue age factors and morbidity improvement in drawing conclusions from this data and the need for consistency between inter-related factors when setting assumptions for projections. In my analysis of the results from the Database, the highest issue ages generally have incidence rates about 50 percent higher than issue ages 20 years

Table 2
 Durational Change by Issue Age and Underwriting

Incurred Age Group	Calculated Durational Change—all u/w types (# claims)	Calculated Durational Change—full u/w (# claims)	Calculated Durational Change—other u/w (# claims)
Female 80–84	-1.4% (17,451)	-1.0% (6638)	-1.5% (10,753)
Male 80–84	-0.7% (9089)	+0.8% (3472)	-1.5% (5563)
Female 85–89	-2.3% (17,182)	-2.5% (5735)	-1.6% (11,335)
Male 85–89	-1.4% (8593)	-2.6% (2907)	-0.5% (5577)
Female 90+	-1.6% (9454)	-2.7% (2636)	-0.9% (6727)
Male 90+	-0.9% (3827)	-1.6% (1070)	-0.8% (2673)

younger. One actuary might see this as strong evidence of an issue age effect on incidence while another might see it as evidence of morbidity improvement at a rate of 2 percent per year.

Finally, just to see what impact underwriting has on the calculated change factors, I repeated the exercise splitting the experience by underwriting type, as found in the Database. From these results, it seems underwriting has more of an impact at the older attained ages, though this could be tied to a greater effect at the oldest issue ages or just due to random fluctuation as less data is available for study at the oldest attained ages. Table 2 does show the total number of claims included in the analysis. The total for all underwriting types will not always equal the full plus other groups as only durations with at least 50 claims were included so the durations included in the categories are not always identical.

There is some uncertainty in the industry as to when selection completely wears off, if it ever does.

Severity

Finally, the analysis looked solely at incidence rates and made no attempt to consider any aspects of severity—claim continuance and utilization. Changes through time in severity could offset or enhance the observed changes in incidence rates.

CONCLUSION

This analysis is not intended to drive definitive conclusions on the issue of morbidity improvement but to be a stepping stone on the path of further investigation and discussion. The Database is the largest source of publicly available insured long-term care

experience. As such, it is a great source for the trend analysis performed for this paper, but also comes with caveats as outlined above. As a large LTC reinsurer, my company has access to data from a variety of direct writers. I have performed similar analysis (though we do have access to calendar year splits) and found the results to generally be consistent with those I found using the Database (though more variable and with instances of dis-improvement). ■

The author would like to thank James Berger, FSA, MAAA, for his thoughtful insight, review, and suggestions during the writing of this article.

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ENDNOTE

- 1 Per the Society of Actuaries, calendar year was collected but not included in the final data prepared for publication. Perhaps a future experience study update will include calendar year in the final data.

Group Life & LTC Combinations: New Options for Worksite LTC Planning

By Steve Cain

When it comes to long-term care (LTC) insurance as an employee benefit, the overwhelming choice over the years has been standalone LTC insurance products—whether offered via a group chassis or with individual (multi-life) products. Genworth, LifeSecure and Transamerica all provide current voluntary and employer-funded product offerings. Additionally, some industry insiders expect market entries or re-entries in 2018.

However, there is an emerging option for LTC planning available to employer groups. The new option is group life Insurance combined with qualified LTC insurance. These plans have been growing in popularity and have been offered in the individual or retail market for a number of years.

Why are these products gaining interest amongst benefits brokers and employers?

We're seeing a few reasons:

1. **Premium Structure**—standalone long-term care insurance (LTCI) has a “use it or lose it” premium structure that some people don't like. On the other hand, a combination life/LTCI plan will always pay either a death benefit or a LTCI benefit as long as premiums are being paid.
2. **Life Stage Planning**—a younger buyer can help ensure that their family is protected at an early age while also investing in Long-Term Care protection that may be needed after retirement. For most people, as they age their life insurance needs decline (as their children leave the house and become self-sufficient), but their need for LTC planning grows.
3. **Premium Stability**—a major appeal of some of the life/LTC plans is premium stability. While today's standalone LTCI is priced with conservative actuarial assumptions, premiums may increase over time due to the plans guaranteed renewable structure. In-force premium increases on both



group and multi-life LTCI policies have been well-documented. Although current products are priced to avoid large future rate increases, it is likely that many potential buyers of LTCI at the worksite will be concerned about rate increases. Some of the group life and LTCI combination products offer guaranteed premiums which will appeal to this group of employers & consumers.

HOW DO THE GROUP LIFE/LTCI PLANS OFFERED WORK?

Let's look at one plan available in the market—this one happens to offer a lifetime benefit term plan with an accelerated LTCI rider and extension of benefit LTCI rider. With this plan, participants select a dollar amount of coverage, let's say \$100,000 death benefit. Premiums would be guaranteed for the lifetime

of the policyholder, and premiums would be fully paid up at age 100. If the policyholder dies the beneficiary gets the \$100,000.

If the policyholder needs LTC during his or her lifetime, the plan would allow for a monthly acceleration of the death benefit at 4 percent of the death benefit (\$4,000) for 25 months. After the death benefit is exhausted, the policy then pays an extension of benefit rider for up to an additional 50 months. The total LTC Benefit available would be \$300,000.

The rider is a tax-qualified LTC rider, meaning the benefit triggers are the same as standalone LTC insurance and benefit amounts are received income tax-free. The advisor must have completed the required LTCI training in order to be an agent on the plan. Underwriting, such as offering guaranteed issue (GI) depends on the characteristics of the group and the enrollment strategy (i.e., the “broker” and enrollment strategy are usually underwritten by the carriers).

Similar programs (whole life & universal life) are available from a number of highly-rated group life insurance providers. All signs are pointing to more carriers recognizing worksite LTC planning opportunities and entering the marketplace.

Here are things to look for in a group life/LTCI plan:

- Lifetime premiums are a must so the LTC benefit is available into old age—avoid any term life programs with a limited time period. Of course, guaranteed premiums are nice as well.
- Make sure the plan includes a tax-qualified LTCI rider, which includes standardized benefit triggers and tax advantages.
- Consider options for adding additional coverage to keep up with the cost of inflation. Unlike most standalone LTCI plans, automatic inflation increases are normally not included.
- Partnering with a firm specializing in worksite LTC insurance planning, one that can provide employers with robust educational campaigns and telephonic and online support.

Sure, standalone LTCI offers the most LTCI benefit for the dollar and possible tax deductions, but combining life with LTCI may be worth a careful consideration. ■



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The NAIC as Long-Term Care Insurance Innovator

By John Cutler

The NAIC Innovation efforts outlined here represent only one of the three work streams of this group. This article focuses on their first product, recommendations to Congress on changes in federal laws that encourage broader participation by consumers in purchasing LTCI products and assisting in allowing more flexibility in product design. A second work stream will develop documents that help increase awareness of existing products. The third work stream will focus on model regulation changes that would allow for more innovation in product design. The NAIC is now actively moving forward on these other areas.

Somebody forget to tell the National Association of Insurance Commissioners (NAIC) that only insurance companies are allowed to create new products. Of course, it could be that the LTC insurance market is viewed by many as having stalled. So maybe time for others to step in.

Essentially what is going on is that state governments see the aging boom as still in full force, potentially wreaking havoc on their Medicaid and other aging support programs. They also feel a duty to their citizenry, many of whom may be left at risk if they have not planned for long-term care. So, what we are seeing is two-fold: States feel the need to step into the void left by the insurance world. But they have their traditional regulator duty to make sure products and regulations mesh better going forward.

To that end, the NAIC created an Innovation subgroup two years ago. They moved forward 10 ideas sent to Congress in April 2017. What you have below is the titles of each of those concepts and my, hopefully pithy, take on each. For those that want to see what was what the NAIC really said about each please go http://www.naic.org/documents/government_relations_ltc_fed_policy_opt.pdf

- **Option 1: Permit retirement plan participants to make a distribution from 401(k), 403(b) or Individual Retirement Account (IRA) to purchase LTCI with no early withdrawal tax penalty.** How cool is this?! You slave away for years putting money into retirement accounts and now you can tap it for long-term care or long-term care insurance. There are a lot of little details about how to do this but this is one of the few ideas that gives immediate relief when someone has a long-term care crisis. People have already saved/invested funds. So, no need to

move people to action such as buying LTC insurance. My personal take is that such accounts are not as good as if the person had insurance but, if they did not buy insurance, at least puts their money into play right now.

- **Option 2: Allow Creation of LTC Savings Accounts, similar to Health Savings Accounts (HSAs) and/or Enhance Use of HSAs for LTC Expenses and Premiums.** Republicans love HSAs. The idea is you pay more attention to your health care spending when it is right there in front of you than if you have the buffer of an insurance product. The problem with this idea is that people have to buy into it. Literally. In this Ayn Randian world of the future people may or may not put money aside for health needs via HSAs. But will they put other money into what we will call an LSA (long-term care savings account)? The same planning barriers exist as with buying LTC insurance. Frankly, I'm not going to hold out much hope for the broad middle class. Oh, and if you are going to go through all the trouble of convincing people they face a long-term care risk why solve it with a savings account? And at least with insurance you get the leveraging effect created when people pool money for a common risk. These LSAs will likely end up underfunded except for richer folk looking for a tax break.
- **Option 3: Remove the HIPAA requirement to offer 5% compound inflation with LTCI policies and remove the requirement that DRA Partnership policies include inflation protection and allow the States to determine the percentage of inflation protection.** I was one of those people that fought for 5 percent and now throw in the towel. No less notable a figure than Larry Summers says we are in for an extended period of "secular stagnation" like Japan has been seeing for decades. Decades! Kiss good rates of return good bye for LTC insurance (and life insurance, too). The best ideas going forward are those that allow the policyholder to track inflation but not over (or under) reserve for it. Good bye 5 percent.
- **Option 4: Allow flexible premium structures and/or cash value beyond return of premium (HIPAA and DRA).** Ooo-hhh, cash. Isn't this still just return of premium? Didn't it turn out it cost a lot more and no one bought it? Can't say I'm against it (you otherwise have that "use it or lose it" mentality) but not sure it will be a game changer until products are structured in such a way that the costs are not so high that purchasing this option is a non-starter. Perhaps the people selling products like universal life can step forward and give us their take on this.
- **Option 5: Allow products that combine LTC coverage with various insurance products (including products that "morph" into LTCI).** This is one of the most salient options requested by stakeholders to achieve market expansion. The reason is it better addresses consumers' needs over time. The Minnesota idea—LifeStage—for example would offer life

insurance to age 65 then turn into LTC. It does not solve all issues (for example what if the person still needed life insurance after age 65) but may be a better approach than combination products. Even better, just tap existing life insurance products better. As with Option 1 we are talking about products people have already bought. When you get the call that mom has to go into the nursing home tomorrow it will be funded by whatever she has at that point. About 60–70 percent of the population has some life insurance coverage and it's more direct to go after that than rely just on morphing products that will help 20–30 years from now. [Full disclosure: I have a client advocating for product/regulatory changes to access existing life insurance products.]

- **Option 6: Support innovation by improving alignment between federal law and NAIC models (HIPAA and DRA).** The basis of this idea is that federal law (HIPAA and the DRA primarily) link to the NAIC model at the time of passage of the federal law. The reason for this is that the feds probably won't just say "use current NAIC model" since the NAIC is not a federal body. In theory Congress could just update HIPAA and DRA every year. In theory. Good luck with that. The NAIC solution is more along the lines of saying "use current NAIC model." I don't think either the administration (this or any other) or the Congress will go for this. A better solution would be to for laws to better kick the matter over to the Department of Health and Human Services (HHS). HHS can more easily alter its regulations to follow the NAIC than Congress can but it keeps the control the federal government will want. [Full Disclosure: I was a federal regulator and had management responsibilities for the Federal Long Term Care Insurance Program.]
- **Option 7: Create a more appropriate regulatory environment for Group LTCI and worksite coverage (HIPAA and DRA).** One of the ideas here is to provide a safe harbor to limit the employer's fiduciary liability. Another is to allow an employer to permit LTCI to be available for purchase through Section 125 cafeteria plans. I run into the safe harbor issue on retirement policy and have respect for both points of view. It definitely inhibits employers from offering more services to employees but you don't want the employer to offer any old advice and walk away when it is lousy. The better approach here might be just to make sure group LTC gets into the cafeteria plans and figure out later how to expand on take up. (Just being in the cafeteria plan won't help most employees if they select dental and vision or other benefits and ignore the need for LTC coverage.)
- **Option 8: Establish more generous federal tax incentives.** This has been kicking around for years. The core idea is to allow a full federal tax deduction for LTCI premiums not just, as per HIPAA, for expenses over 7.5–10 percent of Adjusted Gross

Income. No to that. It only works for the higher income folks and they seem to be buying (or not) without tax consideration. Having said that, I'm not opposed to changing tax policy. As above, changing the tax code to allow tax benefits via cafeteria plans would be nice, and probably for FSAs as well. One wrinkle the NAIC noted was that you might have to recognize the shift to policies offering shorter maximum benefit periods (short-term care). Not allowed now. But under the theory that some protection is better than no protection, I'd go for that.

- **Option 9: Explore adding a home care benefit to Medicare or Medicare Supplement and/or Medicare Advantage plans.** This is my current hobby horse. [Full Disclosure: I'm a consultant to the Minnesota Department of Human Services which is looking at this very idea.] Medicare provides extensive acute care coverage but more limited post-acute coverage (home health and skilled nursing facility care). Medicare Advantage and Medigap plans fill the gaps in Medicare. What is not well known is that Medicare has been covering a greater and greater amount of post-acute care that essentially amounts to long-term care. There is some controversy around this but it may be one of the best ways to create a true social insurance base for long-term care needs that can be supplemented by private insurance. It will look more like Medigap than LTC but, hey, if that is what it takes, then we should go for it
- **Option 10: Federal education campaign around retirement security and the importance of planning for potential LTC needs.** This is the Own Your Future concept. I was the one that created the initial efforts when I worked at the U.S. Department of Health and Human Services. It has now been fielded in over half the states, usually through the governors' office. The problem with the initial campaigns was that there was no real push to action. You have to scare or titillate the buyer—move them to act—and have a product they can buy. With the LTC insurance market declining through the last 10–15 years that is a problem. But new solutions and innovative product ideas would allow public information campaigns to reinforce the corporate messaging and move people to act. ■

Disclaimer: The views in this article are solely of the author and do not necessarily represent NASI or the other organizations or clients he represents.



John Cutler is an attorney, a member of the SOA LTC Section Council, a senior fellow at the National Academy of Social Insurance (NASI), as well as a special advisor to the Women's Institute for a Secure Retirement (WISER). He can be reached at johncutler@yahoo.com.

First Principles Modeling for LTC: A Series Summary

By Al Schmitz, Andrew Dalton, Dan Nitz, and David Weizeorick

Over the past year, a group of Milliman consultants—Al Schmitz, Andrew Dalton, Dan Nitz, and David Weizeorick—published a series of articles on first principles modeling for long-term care (LTC) insurance. The series of articles covered a broad and diverse set of topics, beginning with an introductory case study published in March 2016, continuing with separate installments on modeling of mortality and lapses later in 2016, and concluding earlier this year with a capstone article addressing the advantages and enhancements associated with first principles modeling. This article summarizes the key topics from that series.

Companies have experienced significant benefits from their first principles models with respect to managing blocks of business.

The first article in the series, “Case study: Long-term care insurance first principles modeling,” discusses some specific challenges that LTC insurers have faced as they migrate from legacy models to a first principles basis, and offers perspective on how those challenges can be overcome. Legacy models were most commonly based on a total lives approach and used claim costs. Challenges associated with moving to a first principles basis include the development of more granular assumptions—e.g., splitting claim costs into separate claim incidence rates and claim termination rates; and splitting mortality into active life and disabled life components, often in the absence of fully credible data. Depending upon the desired complexity of the first principles model, additional challenges may exist with respect to modeling transfers between sites of care, splitting claim termination rates into separate assumptions for recovery and death, etc. The first article ends on an optimistic note, observing that companies have



been successful in overcoming these challenges while being able to preserve general consistency of the first principles model with the legacy model. Companies have also experienced significant benefits from their first principles models with respect to managing blocks of business—for example, an enhanced ability to benchmark experience relative to expectations at a more detailed level that is consistent with the mechanics of how the business operates, such as tracking new claim counts.

The next article in the series, “Long-term care first principles modeling: Mortality assumptions,” discusses the modeling of mortality in a first principles setting, which was noted as a particular challenge in the first article. First principles models generally require that mortality assumptions be split into separate active life and disabled life components, whereas most legacy models may have expressed mortality only on a total life basis. The article discusses three approaches that can be used for modeling mortality. These approaches vary with respect to which two of the three components of the mortality assumption are explicitly defined (active life, disabled life, and/or total life), and which component will be implied or defined by the other two. The article discusses advantages and disadvantages of each approach, focusing on data limitations that may exist and the extent to which consistency with a previously used mortality assumption is desirable. This installment of the series concludes with some observations concerning mortality improvement, including that mortality improvement has both a different interpretation and a different financial impact

THE INDIVIDUAL ARTICLES IN THIS SERIES CAN BE FOUND HERE:

Case study: Long-term care insurance first principles modeling

(<http://us.milliman.com/insight/2016/Case-study-Long-term-care-insurance-first-principles-modeling/>)

Long-term care first principles modeling: Mortality assumptions

(<http://us.milliman.com/insight/2016/Long-term-care-first-principles-modeling-Mortality-assumptions/>)

Long-term care first principles modeling: Lapse assumptions

(<http://us.milliman.com/insight/2016/Long-term-care-first-principles-modeling-Lapse-assumptions/>)

Long-term care first principles modeling: Advantages and enhancements in modeling

(<http://us.milliman.com/insight/2017/Long-term-care-first-principles-modeling-Advantages-and-enhancements-in-modeling/>)

depending upon whether it is applied to active lives, disabled lives or total lives.

The series continues with a discussion of modeling lapses in a first principles setting, “Long-term care first principles modeling: Lapse assumptions.” As in the discussion of modeling mortality, this article presents different possible approaches to modeling lapses. Using a series of examples, the article highlights some specific challenges that actuaries encounter. One example discusses the notion of an “ultimate” lapse rate, and explores the differing interpretation it can have on an “ultimate” lapse rate based on healthy lives versus an “ultimate” lapse rate based on total lives. Another example emphasizes how mortality and lapse are related, using an example to show how a suboptimal mortality assumption can produce misleading implied lapse rates.

The series concludes with a practical discussion of the advantages and disadvantages of first principles models, “Long-term care first principles modeling: Advantages and enhancements in modeling.” This article focuses on the transparency of first principles models and the simplification that first principles models can bring to actuarial projections. While first principles models are often considered to be “more complicated” than claim cost models, the article points out that such a characterization is misleading in several important ways. It is certainly true that first principles models can be more complex with respect to developing the required assumptions. However, once developed, those first principles model assumptions can be more easily adjusted and understood than is generally possible in a total life model. The article uses a simple example of a 5 percent load to disabled deaths—such an adjustment is easy and transparent in a first principles model, while making it to a claim cost model would require significant effort to restate the claim costs.

This final article in the series also includes discussion on a general cost/benefit analysis of first principles models. While the challenges identified early in the article series should not be ignored, those challenges can be overcome and are minor compared with the benefits of first principles modeling, including transparency/ease of adjustment and the improved understanding of, and ability to manage, the business. ■



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Understanding What Consumers Want: Critical Framework for Product Innovations

By Eileen J. Tell

Decades of product development, sales, marketing, and research on private financing for long-term care (LTC) tell us that consumers, for the most part, want to ignore the problem and hope it goes away. While some consumers acknowledge the risks and costs of needing LTC and understand that these needs are best met when they are planned for, they represent the minority. And there is still a significant gap between acknowledging the value of planning ahead and taking action toward that goal.

This is due in part to the lack of viable solutions to the LTC dilemma, as seen through the consumer lens. The social marketing literature confirms that there are two critical components to effective behavior change: (1) raising awareness of the problem; and (2) offering what the consumer deems to be acceptable solutions to that problem. To this end, the Society of Actuaries' LTC Think Tank continues to explore new private finance product options, and other solutions, so that more consumers have meaningful protection to meet their specific needs, wants and constraints.

The SOA's Research Expanding Boundaries (REX) Pool is currently funding critical consumer research to test two new product concepts which emerged from the October 2015 Think Tank initiative. The product concepts have come a long way since they were first identified by the three dozen Think Tank participants representing a wide range of LTC expertise. These concepts are now being further defined to the point where they can be tested for market appeal with consumers.

The two products being refined and tested represent different ways to enable consumers to pre-fund the costs for their future LTC needs. And both address one of the purchase objections some consumers raise with regard to traditional stand-alone LTC insurance – that is the objection that if they do not need LTC, then they have set aside funding which they cannot access or use for other purposes. (This is commonly called the “use

it or lose it” objection.) While there are combination products today that address this concern, they are generally too costly to be within the reach of the middle market. Both products, therefore, also strive to provide attractive coverage at a price point suitable for a middle market buyer. Another design objective is to broaden the appeal of LTC coverage by offering it in the context of more widely known and accepted products with which the consumer is already familiar.

The new products being developed and tested are:

1. **LifeStage Protection** is an insurance policy that begins as a term life insurance benefit during one's working years (generally up to age 65) and then switches to a LTC benefit from retirement age (or 65) and beyond. It provides a more modest amount of LTC coverage than historically offered but is designed to cover the majority of likely needs. For example, the consumer can select a \$100,000, \$150,000 or \$200,000 benefit amount. Prices vary based on the benefit selection but are typically less expensive than purchasing term life insurance and LTC coverage separately. For example, a 45 year old male would pay \$60/month for \$100,000 of coverage.
2. **Retirement Plus** is a flexible, tax-beneficial type of savings account that provides both LTC insurance when needed, but also provides an account surrender value if LTC is not needed, or if the insurance is no longer desired. In this way, it allows for saving on a tax-advantaged basis for either (or both) a healthy retirement or one in which LTC needs emerge. Consumers choose the account value based on the dollar contributions they make to the account and can also select additional LTC coverage beyond the account value if they choose to.

A critical component of effective consumer testing is a well-defined product translated into language the consumer can understand, presented along with fairly accurate age-based pricing for the product. An important piece of the consumer testing will also require the researchers to anticipate some of the likely consumer questions and concerns and be able to adequately address those during the testing. For example, consumers may ask if rates are guaranteed over the life of the product, or if they can be modified. Or they may want to know if there is medical underwriting in order to qualify or if pre-existing conditions are covered. They may also ask about limitations, exclusions and whether they have the freedom to choose their own care providers and which types of services are and are not covered.

The prototype product tested should be able to answer these questions, or, if the design and pricing is flexible to accommodate different variations, then consumers can be asked “how would you most like to see this product work?” In other words,



the product concepts need to be as fully and accurately developed as possible so that consumers are reacting to these new products in as close to their final configuration as feasible. This does, however, still leave room to fine-tune the product design and pricing based on consumer feedback.

There will be two phases to the consumer testing. The first is typically qualitative and exploratory in nature using focus groups with consumers that mirror the target demographics for each product. During the 90-minute focus group discussion, consumer impressions, interest and concerns are noted regarding the notion of LTC risks and costs, the general idea for the product solution, and the specifics of the product and its price. The conversation typically begins more broadly and takes note of the product features and price parameters that have the greatest positive and negative impact for the consumer.

Because by definition focus groups are qualitative and not representative of the general population, the findings from the focus groups are further tested with a larger representative sample of the target market using a quantitative (survey) approach. Phase two of the market testing will expand the sample size, present refined product concepts and premiums and provide a starting point for estimating product interest.

Finally, using a combination of proven and newly developed modeling techniques, the findings from the survey can be

translated into an estimate of actual purchase behavior. This modeling component can be used to size the demand for the product, explore how demand varies at different price points and product features, and to help define the specific market segments within the target market with the greatest propensity to make the product purchase.

These research activities are being conducted by Maddock Douglas, with actuarial support from LTCG Inc., and oversight from a panel of experts in LTC product pricing, market research, regulatory issues and product development. The Project Oversight Group (POG) meets by conference call to review and provide direction for critical components of the concept development and market testing.

Both research components will be conducted over the summer with a report on consumer demand and interest anticipated for delivery in early fall 2017. ■



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Q&A with an Experienced Insurance Professional New to Long-Term Care: Clark Himmelberger

WHAT IS IT LIKE BECOMING AN LTC ACTUARY?

In some ways it feels like getting traded from the New England Patriots to the Cleveland Browns. In my 30 years of life insurance experience, I've never before sat in an industry conference and had a regulator speak up and tell the audience that my line of business was a failure. And at my first actuarial meeting after becoming an LTC actuary, I listened to a rating agency executive basically say that LTC was viewed as the worst insurance line of business of all the insurance lines of business.

For all of LTC's issues, though, it is fascinating working with LTC. For those contemplating a rotation or permanent placement in a LTC position, I have to say it has its share of plusses.

My two years of LTC experience have helped me better appreciate the wisdom of the actuarial forefathers.

I think one of the things that makes LTC fascinating is that it isn't traditional short-term health insurance and it isn't traditional long-tail life insurance. It's long-tailed health insurance and there isn't a long history of long-tailed health products. I think it helps a lot to have a multi-discipline background to contribute to understanding how the product really works. Years spent working with long-tail life insurance coverages and years spent analyzing the financial leverage of the level term lapse rate assumption are directly applicable to facets of the long-term care insurance product. If the LTC department you're moving to is largely made up of longtime health

insurance executives, your experience in long-tailed life insurance will be useful. I think familiarity with cash flow testing and experience study development and analysis helps a life actuary contribute early on to the company's LTC operations while product knowledge is on the short side of things.

Two things stuck with me in my early months in LTC. The first was the amount of lapse support in the product. I used to think that life insurance was the longest-tailed insurance coverage but I now have come to think that LTC is even a longer-tailed product. I know the real-world order is disability comes before death, but when I compare the claim costs for life insurance compared to LTC (probably healthily impacted by the cost of living benefit increases inherent in the LTC) LTC is longer. Couple that with the fact that non-forfeiture benefits are near non-existent on standalone LTC coverage and lapse support becomes a much bigger issue for LTC compared to traditional life insurance.

The second is that health insurance has no safe harbor premium guarantee like life insurance. When rates are filed as Guaranteed Renewable, the sky's the limit for premium increases. Insurance regulator reaction to severely underpriced insurance coverages seem to be to artificially limit premium increases rather than focus on what the right premium level is. I still have a hard time getting my head around the simultaneous existence of one insurance company getting approved by a state's regulator to sell LTC insurance for X and another insurance company being denied a rate increase to a premium that is less than X. I guess maybe that's just the sin of being an early entrant to a market.

My two years of LTC experience have helped me better appreciate the wisdom of the actuarial forefathers toiling without computers that shaped the mature life insurance line of business. Non-forfeiture laws didn't always exist on the life insurance side and I think providing risk mitigating structures in the design of insurance coverages are what helps take a newbie insurance coverage phase to a mature insurance coverage phase and a much more stable line of business.

The frustrating thing about moving to a new line of business is the change from having immediate answers to questions to "I'll have to look that up" for even what are the most basic of questions. The nice thing about LTC is that enough similarities exist with life insurance that life in the new line of business is not completely foreign. ■



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