Long Term Care Insurance: Medical Risk Management Issues in Underwriting

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Introduction

This article focuses on medical aspects of the risk selection process for long term care insurance products. Our objective is to identify for medical directors and underwriters key underwriting considerations upon which to build a sound strategy. Section I reviews demographic, social and other factors contributing to the need for these products. This snapshot of the long term care context sets the stage for Section II, a description of the infrastructure of long term care insurance products. That infrastructure includes basic product models, an array of functional capacity measurement approaches, and patterns of functional loss. Section III discusses the range of contract variables and underwriting options which impact risk selection strategies. Section IV compares and contrasts the prediction of risk in the long term care market with more traditional life and health underwriting. Section V outlines a range of data collection options and discusses approaches to assessing that data.

Medical risk management is an important vehicle for implementing a sound risk selection strategy. Both medical directors and non-physician decision-makers play a major role in medical risk management. On a very basic level, it is the application of the right level and quality of medical expertise at the right time and place to the three major checkpoints of a product’s lifecycle: design, risk classification, and benefits administration. On a different level, this risk management approach entails the recognition and resolution of certain issues which transcend any one case or claim. Systematic application of the resulting solutions or approaches to all similar cases or claims completes the process. The primary focus of this article is risk selection, but it is clear that medical risk management principles, when applied in a concerted way to product design and benefits administration, result in useful synergies.

Section I. The Graying of America

America’s population is aging. In 1986 29.2 million Americans or 12.2% of the population were over age 65, an increase of 3.6 million since 1980. This population continues to grow rapidly. By the turn of the century, it is expected to approach 35 million. In addition, not only are more individuals living past age 65, but increasing numbers of older people are living longer. The American Association of Retired Persons estimates that in 1986 there were eight times more people in the 65-74 age group than in 1900, that the 75-84 group was twelve times larger and the 85-plus group was twenty-two times larger.

From a different perspective, by 2025 the 75 and over age group will nearly double and the 60 to 74 age group will increase by 85%. Equally staggering is that the 45 to 59 age group will increase by almost half. The social, financial and political impact of that demographic evolution is pervasive and the health care needs of this group, both acute and chronic, are immense.

In 1985 the major sources of income for families and individuals over age 65 were Social Security (35%), asset income (25%), earnings (23%), public and private pensions (14%) and transfer income (2%). Recent statistics indicate that a significant percentage of the care received by these individuals is provided by informal care givers: family, friends, or charitable organizations who are not directly compensated for their services. When chronic illnesses requiring such care do occur, these resources can be quickly exhausted, requiring the individual to dispose of assets in order to cover these unexpected expenses.

Not only is this gap between income and expenses a concern to those currently over age 65 and their families; it is increasingly a concern to baby-boomers and others under age 65. The insurance industry has responded to this need for additional protection by developing products which cover the various elements of risk for different age segments of the population. This article focuses on that response. The peril of concern is loss of capacity to live independently. Although this peril has a higher prevalence and incidence in the older age groups, early morbidity generating long term care needs obviously represents a significant risk to younger age groups.

Section II. The Infrastructure: Long Term Care Product Models and Functional Capacity Measurement

This section outlines basic models of long term care products. It also reviews the spectrum of functional capacity measurement schemes. The degree of independence in activities of daily living (ADLs) as an index of functional capacity, one of the more commonly used functional parameters, is examined in depth.

Models of Long Term Care Insurance

First, "long term care insurance" means different things to different people. Some restrict the interpretation to "nursing home insurance" or "insurance for cost of medical or custodial care among the elderly". To clarify this, we are referring here to an array of insurance products that provide for the long term care needs generated by inadequate functional capacity, such as inability to dress oneself independently. Thus that
array would, of course, include products covering extended care in a nursing home for an elderly person who loses functional capacity. Also, though, it includes products covering extended care in a nursing home for young, disabled employees and products covering costs of personal assistance care in the home, or in assisted living units of continuing care retirement communities (CCRCs). In fact, there are numerous categories of products, covering the many pockets of long term care risk among various demographically and sociologically distinct segments of our population.

The majority of such products follow one of three typical approaches: a disability model, a medical model, and a hybrid model. These models are complex and hardly homogeneous themselves. In the medical model, benefits are triggered when the insured demonstrates a specified quantum of lost capacity and receives medically necessary services provided by certified health care providers. In the disability model, benefits are triggered solely upon the demonstration of lost functional capacity as defined. The fundamental distinction is that under the disability model the claimant need not receive any specific medical or institutional services to qualify for benefits. For example, a pure disability product might provide benefits when the insured loses independence in two ADLs, whether or not the insured received medical or institutional care. A medical model product might require that the same insured be in an assisted living unit or a nursing home to receive benefits. A hybrid product might provide for one level of benefit when independence in two ADLs is lost even though the insured is still at home, and a higher level of benefit when independence in three ADLs is lost and the insured is receiving nursing home care. Another example of a product combining both disability and medical model concepts is a policy covering extended care in a nursing home for individuals who have met specific Long Term Disability criteria for disability.

Long term care insurance products with a disability model component vary considerably. The definition of disability is probably the most important variable. An important first step in sound medical risk management is to contribute to the development of the definition and to understand its working nuances. In general, for disability products of all kinds, an insured is disabled only if and when the decision-maker determines he or she has met all the requirements of the program or policy which generated the definition of disability.

More specifically, in long term care insurance the number of definitions of disability are limited only by the number of protocols available for measuring functional capacity. In fact, there are generally two major components to the definition of disability. The first is a basic scheme or scale for assessing functional capacity. The second is the specific quantum of loss on that scale necessary to qualify as disabled. For example, using the common basic measurement of independence in ADLs, the specified quantum of loss would be the number of ADLs in which the claimant must no longer be independent to be considered disabled. One disability level might be dependency in two ADLs; a less expensive policy, assuming other variables are controlled, might set the necessary loss at four ADLs. Within one particular policy, the contract might specify two levels of disability, with the higher level of dependency qualifying the insured for a higher benefit amount.

Other variables include elimination periods, maximum benefit durations, maximum benefit levels, and methods of cost-sharing. At any rate, the commonality among many so-called long term care products is the provision of some sort of benefit generally triggered, at a minimum, by some type of functional loss.

Approaches to Measurement of Loss of Functional Capacity

There are numerous approaches to measuring functional capacity.

In their chapter on Functional Assessment Instruments, Gresham and Labi describe PULSES, an early evaluation system. Developed in 1957 by Moskowitz and McCann, this system rates individuals in six categories: overall physical condition, self-care using the Upper extremity, mobility using the Lower extremity, Sensory intactness and communication, Excretory management, and psychosocial Status. Each of these categories is rated on a scale of 1 (essentially normal) to 4 (severely disabled and dependent) and the profile generated gives a reasonable scale of the individual's dependency.

Katz and his co-workers developed a separate system in 1963. They defined an Index of Activities of Daily Living: bathing, dressing, going to the toilet, transferring, continence, and feeding. An overall performance grading is established for each individual, ranging from A (independent in all six functions) to G (dependent in all six functions).

In 1965 the Barthel Index was proposed. This uses 10 ADLs and scores an individual's performance numerically from 0 to 100. A score of 100 indicates the individual is sufficiently independent in self-care and mobility and does not require an attendant.

Another approach is the Comprehensive Assessment and Referral Evaluation (CARE), which classifies information concerning the health and social problems of older individuals. This assessment consists of 1,500 items and takes approximately 90 minutes to administer. A shorter version, Short-Care, measures three major areas: depression, dementia and disability, and takes a shorter time to administer.

The Minnesota Department of Health has developed a case mix classification for reimbursement purposes. This approach focuses on individual dependencies in a variety of functions, including dressing, grooming, bed mobility, wheeling, communication and others.

The American Medical Association Guides to the Evaluation of Permanent Impairment (3rd Edition) provides yet another approach to measuring at least some aspects of functional capacity. Other methods also are available.

Review of these and other approaches to measuring functional capacity provides decision-makers an in-depth under-
standing of functional capacity assessment in the long term care insurance arena. It is also important to understand patterns of functional loss and their evolution over time.

Scenarios Leading to Functional Loss

These scenarios of increasing functional loss over time are illustrated in Figure 1. Pattern A represents loss of function as a result of an acute illness or injury, such as mobility loss due to a "slip and fall" induced hip fracture. Pattern B shows increasing dependence due to a slowly progressive illness, such as some patients with Parkinson's Disease experience. Here, functional loss occurs at a relatively steady rate. In pattern C, an individual with a chronic illness suffers an acute event. For example, an acute myocardial infarction is superimposed upon chronic but compensated congestive heart failure. The concept of co-morbidity is shown in pattern D. Here, two or more illnesses which individually do not cause functional loss but, combined, have an additive or multiplicative effect, result in loss of function. Consider an individual with diabetes and arthritis manifesting significantly shortly after issue. Early on, neither of these illnesses results in sufficient loss of capacity to trigger a claim. Yet the combined effects of the two conditions could result in a disabling functional loss which might not have occurred in the absence of one or the other.

Section III. Specific Underwriting Considerations

This section examines contract variables impacting the risk selection process and discusses the range of underwriting options available to the decision-maker. Risk classification efforts require a strategic risk management approach to provide the company optimal protection and marketability simultaneously. Good medical risk management of any long term care product requires underwriting policy-makers to continually challenge the underwriting approach: What proof of disability does the contract specify? What data does the contract allow the insurer to obtain and by what processes? More specifically, it is important to operate according to this practical guide: How would a claimant with this impairment, which might cause a functional loss sufficient to cause disability, actually manifest and demonstrate that loss? Too, while the cause of a functional loss might not seem relevant at claim time, it can be. For example, if there's a rehabilitation option, either contractual or administrative, knowing the underlying cause can enhance rehabilitation efforts. If it is relevant to a claims examiner, it is relevant to an underwriter.

Contract Variables Impacting The Risk Selection Process

Some contracts provide for medical underwriting in all cases. Others require evidence of insurability in certain circumstances, while some do not provide for any medical underwriting. The remainder of this section assumes medical underwriting is being performed.

The impact of the definition of disability on the risk selection process cannot be overstated. Indeed, the variations in functional measurement schemes and the quantum of loss specified, coupled with insurers' ability to meld the definition into its underwriting practices, are major differentiators in pricing, risk classification, and ultimately, a product's success. If the definition of disability is ADL based, medical risk management principles focus on identifying predictors of conditions leading to loss of independence in ADLs. We are not aware of any single resource describing these predictors, although the medical literature is replete with outcome and descriptive studies. Some of these are functionally based and relate risk factors and medical impairments to functional deficits. To identify and interpret these studies and integrate their findings into operationally useful guidelines is the medical director's challenge. Moreover, to develop these predictors, close attention to the specific definition of loss of independence in a particular ADL is necessary. Loss of capacity to dress, for example, is defined differently depending on the contract. These differences can be highly significant in determining those conditions leading to loss of capacity to dress.

Another contract variable impacting risk selection is the length of the elimination period. Waiting period specifications for recurrent disability also are important. These specifications may be further differentiated by the type of underlying condition causing the recurrent disability.

The existence of a pre-existing condition limitation or exclusion can significantly alter one's underwriting approach. Moreover, specific timelines built into a particular provision drive that change in approach. For example, a long pre-existing period with a long, rolling subsequent period during which disability must occur for the limitation or exclusion to apply, would protect the company from liability due to functional losses resulting from diseases conforming to that morbidity pattern. A short pre-existing period and a fixed subsequent period of the same length as the rolling period in the first contract would provide protection against a different subset of diseases or impairments. Thus, such a product would invite a different underwriting approach.

An exclusion for psychological, psychiatric or mental conditions is included in some policies. It is vital to know how that
 exclusion is defined. Again, medical risk management principles call for the medical director to make a major contribution to the development of this exclusion, particularly given the recent controversy around the "mental and nervous" limitation from the perspective of "organic versus non-organic disease". On the other hand, some insurers expressly intend to cover losses due to Alzheimer's Disease. An underwriting challenge in this regard is to identify applicants with symptoms or signs of early cognitive loss. A perfect predictor of future development of Alzheimer's does not exist, though there are a number of cognitive function screens that attempt to identify early dementia.

Are there rehabilitation options? One's first impression might be that most conditions leading to loss of independence in ADLs are not reversible. While that may be true for many claimants, there will be a significant number who have considerable rehabilitation potential (see Figure 2), perhaps enough to make a difference in the benefits arena. Therefore the underwriting decision-makers should consider rehabilitation potential in developing an underwriting approach. The key here, of course, is to focus on rehabilitating the individual's functionality, not necessarily curing the underlying disease. If continence is an ADL of concern, one must consider the success of treating or helping patients adapt to fecal incontinence of various causes.

Contrast that model with one offering substandard options. Again, the medical director and underwriter must fully understand every possible use of these options in an operational and risk management sense. Ratings, longer elimination periods, shorter benefit durations, exclusion riders and other substandard issue provisions all require a strategic approach to optimal use in this arena.

**Section IV. Estimating Risk**

Simply put, risk prediction would answer this question: Among a large group of individuals of the applicant's age, sex, health condition and other variables, what percentage will lose the specified quantum of independence over the next relevant interval?

Thus, the concept of "horizon of concern" becomes integral. The medical director or underwriter will focus primarily on factors or conditions predictive of dependency in ADLs within the relevant horizon. For example, applicants with a condition that is potentially serious from a morbidity perspective, but is unlikely to manifest itself to a disabling degree prior to the expected mortality, probably will not have a much different morbidity experience than a similar group of applicants without that condition. Thus, conditions likely to either resolve or cause death within the elimination period are not within the horizon of concern. It is obvious, too, that the horizon for a group of applicants under 50 years of age is entirely different, and therefore requires a different underwriting approach, than the horizon for a group of applicants over age 65. One simple but important distinction is that predictors of risk will differ, even for the same, ultimately disabling condition. More complex, perhaps, is to overlay on current predictors a discount for major medical/technical advances in restoring and maintaining functional capacity.

Put another way, the key risk question is: What percentage of applicants will have or will develop conditions that will progress to the specified level of functional loss, but not die within the elimination period, not likely regain function, and survive through a significant part of the maximum benefit duration?

Obviously, accurate answers to these fundamental risk management questions can only come from a sound knowledge of the natural history of impairments causing functional loss. That is one of the unique contributions medical directors can make to the process.

Coupling that knowledge with the horizon concept one can delineate significant subsets of factors or conditions that change the estimate of risk.

**Similarities and Differences in Underwriting Different Product Lines**

Long term care underwriting is a hybrid of the analytical approaches of life, health and disability underwriting, and requires one further unique step to arrive at an appropriate underwriting recommendation.
In life underwriting the primary goal is to estimate a mortality ratio for a large group of individuals comparable to the applicant. In long term care underwriting the same skills have application, albeit in a different context and leading to only a piece of the puzzle, not the complete picture. Basically, in the long term care insurance arena, groups of applicants with very high mortality ratios will not necessarily have poor morbidity experience. By overlaying a screen for those conditions and risk factors likely to be associated with sudden death, or death within a few months of the first major manifestation of morbidity, one can segregate the group into morbidity subsets. Many with certain types of cancer beyond a given stage lose functional independence but do not survive long. Basic age-stratified cancer statistics provide a useful place to start, though one generally has to go further to identify subsets of individuals who will likely survive their cancer condition with disabling morbidity. On the other hand, many individuals with a completed stroke lose functional independence and survive.

In health underwriting, as opposed to disability underwriting, the primary underwriting goal is to estimate the risk of a large group of applicants of developing a condition requiring health care intervention of various expense levels over relevant intervals. Obviously, many conditions predictive of this peril are not predictive of poor experience in a long term care insurance setting. For example, a group of individuals with gall bladder disease might have a poor experience over the next two years relative to a standard group under a medical expense policy. The same group probably would have a near standard experience under a long term care policy. On the other hand, there are aspects of health underwriting which are relevant in long term care underwriting. For example, there is a subset of conditions which generates both high medical expense and long term, irreversible loss of functional independence.

Perhaps the most important and useful parallel to underwriting long term care insurance is disability underwriting. Disability risk classification relies on identification of conditions or risk factors predictive of future loss of function sufficient to result in inadequate work capacity. Just as in long term care, there are a myriad of approaches to assessing, and therefore, defining loss of functional capacity which might result in loss of work capacity. Similarily, both types of underwriting are concerned with the subset of conditions resulting in prolonged morbidity. Major differences do exist, though. For example, in traditional disability underwriting, the work-referenced definition of disability is seldom as clear as the ADL-based definition in the long term care arena. Inability to perform the material and substantial duties of one's own occupation, while seemingly straightforward, is often more difficult to quantify than inability to dress. Another fundamental difference, and perhaps the medical director's greatest challenge in the long term care arena, is the need to translate impairment into impact on functional capacity at a different level and generally involving different conditions among a different age group.

Section V. Data Collection

Much of the underwriting data collection process in any product arena is similar. A personal profile might include basic biographical data such as name, address, phone, social security number, birthplace, and citizenship. In long term care underwriting, though, it could include less commonly sought data which help the underwriter in risk classification. For example, information about the existence and health of potential future care givers can be relevant. Knowing about existing plans for, or past history of, residing in a retirement community or long term care facility is important. Whether the applicant has a valid driver's license, how often he or she drives, driving record and other details around this important proxy for current capacity can be helpful.

Similarly, employment information, current and historical, can be enlightening. Knowledge of current or prior "disabilities" resulting in loss of employment is important. Equally useful is the individual's documented response to various injuries and conditions. Information regarding other insurance also may be helpful.

The medical history, of course, is a primary focus of the underwriter's scrutiny and often contains "footprints" of risk of functional loss. Obtaining a comprehensive list of current and recent health care providers and conditions treated is an important first step. Obviously, a list of current medications is important. In addition, it is helpful to ask the applicant to list the dosage, frequency and condition for which the drug is taken. The degree of completeness and accuracy of the applicant's understanding of the current drug regimen, compared to the "gold standard" of the Attending Physician's Statement, is worth assessing. A family history might be useful in a limited number of cases.

Responses to the "review of systems" questions, similarly, provide additional important information. These questions may vary according to the market and the horizon involved, and therefore, may be similar to or dissimilar from standard questions used in both the life and health arena.

Use of medical equipment or support devices is particularly important to know about, as is history of alcohol, drug or chemical abuse. Receipt of special types of treatment, such as physical, occupational or speech therapy, can signal a potentially serious functional deficit. On the other hand, it might mean the applicant is compliant with a recommended treatment program for a reversible, non-recurring or non-progressive condition.

Also important is the response to questions designed to learn the degree of assistance the applicant requires performing various tasks thought to impact current and perhaps future functional capacity: managing finances, mobility, grocery shopping, dressing and other tasks. It is also valuable to learn why and in what way the applicant requires assistance in any of the tasks.
Medical Directors have the skills and opportunity to canvass the medical literature to develop a comprehensive understanding of the natural history of impairments contributing to functional loss. There is a tremendous need to identify those risk factors likely to be predictive of functional loss. At least as important is the development, by condition or risk factor, of morbidity curves that define loss of independence over time. A burgeoning literature in gerontology\(^2\) and an equally staggering growth in the rehabilitation medicine literature are two primary sources from which to draw. As an insurer’s primary scanner of opportunities and threats on the medical horizon, the medical director must focus on the long term and identify early those technological advances and practice patterns likely to impact risk selection in the long term care arena. For example, five years ago percutaneous coronary angioplasty was infrequently performed on older patients. Yet consider the functional implications of increased utilization of this procedure in the over 65 age group.\(^{26}\) 145 men per 1000 in that group have symptomatic coronary artery disease. Given that PTCA tends to provide symptom relief and presumably restore function without the degree of perioperative mortality and morbidity associated with bypass surgery, this change clearly will impact functional morbidity patterns.

Finally, as with any new product area, it will be important to track experience carefully. Effective tracking requires close and thoughtful collaboration among a company’s medical directors, underwriters, benefits administrators, systems staff and others.

While underwriting long term care products is a new challenge, it could well turn out to be the most difficult, yet rewarding type of underwriting in the life and health arena. The insurance medical director with a good grasp of basic underwriting approaches in life, health and disability insurance is well positioned to work effectively with underwriters in the long term care product arena. A refocused return to insurance medicine’s basic principles and a strategic knowledge search in the rehabilitation and gerontology literature will help the medical director in this new and important function.

**Data Assessment**

Once the appropriate data have been collected, underwriting policy-makers must develop approaches to assessing that data. Sound medical risk management calls for consideration of the model, the range of expected disability scenarios, the horizon of concern, the natural history of the major diseases contributing to functional loss, contract variables, underwriting options and other factors. Some insurers begin the process with a list approach, particularly to enhance field underwriters’ capacity. If an applicant has a condition or risk factor on an exclusion list, the application is declined at that point. That screen requires very careful scrutiny and ongoing internal assessment against experience and in light of developments recorded in the medical literature. Even with this seemingly simple screening approach, there remains a need to define uninsurable and substandard risks relative to conditions or risk factors not on an exclusion list. Predicting this risk may be based on a combination of the extent of current impairment and the risk of future loss of functional capacity.

**Conclusion**

Medical Directors have the skills and opportunity to canvass

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