Underwriting older life insurance applicants (those greater than 70 years of age) involves somewhat different concerns than when evaluating younger and middle-aged adults. During most of adult life, the function of the essential organ systems are effectively maintained at a level that allows us to carry on with our routine daily activities without noticeable difficulty. Although adulthood appears to be a largely static period for most people, all of the organ systems are actually slowly declining in their function. Probably the best-measured organ systems are the lungs and kidneys. Healthy people have a small-but-measurable decline in respiratory and renal function on an annual basis. This decline is substantially linear, and eventually in all people (if they live long enough) will lead to a noticeable loss of function. Factors such as cigarette smoking usually increase the normal rate of loss of respiratory function. Probably the best-measured organ systems are the lungs and kidneys. Healthy people have a small-but-measurable decline in respiratory and renal function on an annual basis. This decline is substantially linear, and eventually in all people (if they live long enough) will lead to a noticeable loss of function. Factors such as cigarette smoking usually increase the normal rate of loss of respiratory function.

As yet, there is no obvious way to arrest or reverse this normal vital organ degeneration. Fortunately, most of us are born with organs that far exceed the basic functions that are necessary to sustain life. This excess capacity may be considered reserve function. Even with the normal loss of organ function during the aging process, the reserve capacity enables us to carry on with our daily activities without noticeable difficulty. Although adulthood appears to be a largely static period for most people, all of the organ systems are actually slowly declining in their function. Probably the best-measured organ systems are the lungs and kidneys. Healthy people have a small-but-measurable decline in respiratory and renal function on an annual basis. This decline is substantially linear, and eventually in all people (if they live long enough) will lead to a noticeable loss of function. Factors such as cigarette smoking usually increase the normal rate of loss of respiratory function.

Sincerely,

J. Carl Holowaty, M.D.
process, most of us have enough reserve capacity to handle temporary extra demands on organ function, such as during acute illnesses, trauma, etc. As an example, healthy people can usually survive pneumonias that impair lung function, since they have sufficient reserve capacity in the uninfected parts of the lungs. This phenomenon is often termed compensation.

People in the older-age category (>70), even those without a history of disease, may have very small reserve capacities in their various organ systems. In this state, even a normally innocuous infection such as a cold may overwhelm the shrunken reserve capacity of the lungs and lead to significant symptoms, or even death. Further complicating this risk is the fact that frequently in the elderly, multiple organ systems are operating on very narrow reserve capacities and it is common during a physical crisis for more than one system to begin failing. For example, an elderly person with a relatively minor respiratory infection may develop hypoxemia that can lead to mental or vascular symptoms.

As a general rule in the elderly, it is just as important to ask yourself why a sudden change has occurred, as it is to notice what the change is. For instance, in the case of recent weight gain, it is important to at least consider if the person is retaining fluids from CHF or ascites, whereas in the younger-age group, this consideration is usually not very fruitful.

Another important factor to consider in the elderly is the association of specific signs and symptoms with disease prevalence. As an example, in a young adult, it might be a reasonable risk to accept that a small amount of bright red rectal blood is probably due to benign disease such as rectal hemorrhoids. In the elderly, however, this same occurrence would lead to greater caution, since the probability of G.I. malignancy is much higher in this age group. A second example would be the occurrence of hematuria. In a young female of menstrual age, it would be correct to consider that this is likely secondary to menstruation, whereas in the elderly, the issues of G.U. cancer is more concerning.

### Organ Systems

#### Skin

Recent ulcerations (stasis), unexplained rash, chronic infections (e.g., bacterial or fungal), or color changes (pallor, dusky or cyanosis, ashen, or jaundiced) may reflect alterations in nutrition, immune system function, perfusion, or visceral organ function. Changes in skin...
Liver
Although the liver is unlikely to fail solely due to old age, years of injury secondary to alcohol or chronic viral hepatitis may eventually culminate in evidence of failure. While the traditional signs such as ascites, esophageal varices, jaundice, etc., are the usual evidence of existing liver failure, poor appetite and persistent pruritis may be the only available clues warning underwriters of impending failure. Low serum albumin is a useful laboratory marker suggesting that the liver is no longer functioning normally, and is often associated with imminent death.

Renal
Kidney function declines on a fairly predictable basis. In the absence of a prior history of disease, however, old age alone is seldom responsible for kidney failure. This is usually due to a history of diabetes, hypertension, vascular disease, or recurrent or chronic nephritis.

Fortunately, renal function is usually measured by blood and urine tests on most elderly applicants. Blood tests are highly useful in determining the risk of imminent renal failure. Serum creatinine is normally slightly lower in the elderly than in younger adults due to the smaller muscle mass in the elderly. Blood Urea Nitrogen (BUN) can often be moderately higher in this age group, even in the absence of disease. This is sometimes attributed to chronic under-hydration.

Sensory Function
Most of the elderly experience noticeable loss of balance, smell, hearing, vision and taste. This may impact mortality through increased falls, and via depression from the loss of the routine pleasure of living.

Cardiovascular System
Although the elderly are prone to the same common diseases of the CVS as younger adults, there is a greater prevalence of diseases such as CAD in the elderly. Of equal underwriting concern, however, is the possibility of heart failure. This may be secondary to advanced primary cardiomyopathies (i.e. hypertrophic, dilated or restrictive) or secondary to diseases such as CAD. It is normal to expect that the cardiac output of the elderly is less than that of young adults, however it is important that a significant amount of cardiac output exists between the resting state and the peak exercise state. Failure to achieve more than four METS of exercise on an exercise test is particularly worrisome, whether this is due to cardiovascular, respiratory or orthopedic reasons.

Caution should be taken when a person's cardiac output is described as being 'adequate for their normal functions', unless a person's range of normal function is known. For the elderly, this should certainly include the ability to do more than spend most of their time in a chair or bed. In this age range, knowledge of ADLs, IADLs, and AADLs is quite useful in estimating a person's normal cardiac capacity.

Gastrointestinal System
Recent changes in bowel function should be taken very seriously in the elderly, especially if these changes represent a deviation from the normal for age. While it is common for the elderly to experience constipation secondary to inactivity or chronic dehydration, the occurrence of new or more severe-than-normal constipation or diarrhea could be a warning sign of GI malignancy. Recent doctor visits regarding GI malfunction need to be taken more seriously than they do for other age groups. Gradual loss of appetite is common in the elderly, but if coupled with weight loss, is often ominous, particularly if associated with changes in skin color, bowel function, diminished physical activity, or signs of depression.

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Mental/Nervous
Two common impairments of concern in the elderly are depression and dementia. Although depression is of concern at all ages, it is particularly worrisome in the very young and the very old. In the elderly, the problems are often compounded by chronic illness, loss of family and friends, and diminution of the ability to enjoy life through loss of sensory-organ function. In addition, depression may often be related to occult physical illness such as malignancies and metabolic disorders. Often in this age group there is much less apparent reason to ‘want to live’. Suicidal ideation must be taken very seriously. Lack of family support should be a warning sign in cases of depression.

Dementia is a condition that increases in prevalence with age, and is associated with significant extra mortality regardless of cause. Acute dementia is suggestive of conditions such as brain tumors, metabolic disturbances, etc. Any history of acute dementia should lead one to consider a medical referral. The more usual case of gradual onset and progression of dementia is often best resolved by trying to estimate the person’s ADL and IADL. Often in the elderly, one partner’s mental deficiencies may be masked by compensation by their spouse. It is best to try differentiating between the individual’s capabilities and that of the couple. Often when the mentally normal partner dies, the other partner goes into a steep decline without their customary spousal support.

Musculoskeletal
The elderly frequently suffer from a lifelong accumulation of chronic musculoskeletal problems. These problems are somewhat unique in the elderly in that their diminished sense of vision, hearing and balance, as well as generally poor muscular conditioning and osteoporosis make them particularly prone to serious falls. These falls all too frequently cause fractures and head injuries that might be avoidable in the younger population. Periods of enforced bed rest occasionally lead to permanent loss of mobility and independence, as well as increase the risk of deep venous thrombosis. Significant extra mortality from hip fractures extends out to about 6 months following the fracture.

Build
In general, obesity in the otherwise healthy elderly is of less mortality concern than in younger people. It is also normal for weight to gradually decline in the elderly. This is most commonly secondary to a decrease in lean body mass (muscle loss) and perhaps bone loss. Any sudden unexplained weight loss, however, requires investigation and clarification. Similarly any sudden gain in weight is suspicious. A possible explanation may be a change in physical activity levels, which in itself needs to be justified. Another more ominous explanation may be related to fluid retention, such as from heart, renal, or liver failure. One clue to note in an APS would be frequent weigh-ins coupled with the use of diuretics/digoxin and the presence of measurements for dependent edema (particularly pitting edema).

Blood Pressure
Hypertension is associated with extra mortality at all ages, however it is more prevalent in the elderly. It is not only of concern in CAD and renal disease, but increasingly so in cerebrovascular disease, particularly stroke. Wide pulse pressure poses a threat to the relatively fragile cerebral blood vessels of the elderly.

Medications
Many elderly persons under the care of a physician eventually wind up taking multiple prescription and non-prescription medications. In addition, it is also common to document use of non-regulated herbal and homeopathic medications taken for a variety of reasons. Although it is not generally wise to underwrite solely on the basis of medication use, it is probably prudent to be cautious in cases where a great many medications are being used.

The primary concern in this case is that the person either has multiple (possibly co-morbid) diseases or poor coordination of medical care. Although most medications are prescribed appropriately, there is in an increasing awareness of the possibilities of dangerous drug interactions or side effects, especially when many drugs are being used. It is also not uncommon for the elderly to take their medications inappropriately due to the large number of medications that they are required to take, as well as a failure to understand how and why they are to be taken. Shortcomings in cognition and vision can also lead to dangerous pharmaceutical consequences.

Smoking
Elderly smokers have often been smoking for very many years. Unfortunately, it is not uncommon to see the side effects of lifelong smoking (heart and lung disease and a wide variety of cancers, specifically) occurring shortly after applying for life insurance coverage. Particular care should be given to recent changes in weight, appetite, bowel and bladder function.

In my opinion, the elderly seldom stop smoking, unless they have had a recent health scare such as blood in their sputum, etc. Caution is advised in evaluating the elderly that have suddenly given up smoking, unless they have had a very thorough examination and chest X-Ray.

Operative Mortality
The elderly, by nature of their naturally reduced cardiac, renal, hepatic, neurological, and respiratory reserves, are inherently higher-risk surgical candidates, even when otherwise healthy. Prolonged general anesthetics may be problematic. Whereas most routine elective procedures in younger patients have relatively low-mortality risk, postponing a similar case should be at least considered in an elderly person. In addition to avoiding the peri-operative mortality, a postponement period may also minimize the risk that the elective procedure will reveal an unsuspected life-threatening condition. Another consideration is the concern that the elderly may have significant difficulty returning to their pre-operative functional level.
Looking Beyond Health in the Older Age Market

"Man fools himself. He prays for a long life, and he fears an old age."  
-- Chinese Proverb

It's no surprise—older-age applicants will continue to be a growing demographic for several decades, and with that comes the need for underwriters to become even more aware of the often complicated task of assessing the associated risk in underwriting the elderly.

Medical assessment of the elderly can be difficult in itself, but assessing the associated risk presents other challenges including posing the fundamental question of ‘why get insurance now?’ The life underwriter will face a growing challenge of assessing these risks and justifying the need for life insurance. For the applicant, the traditional need of income is substituted by the need to cover final expenses and estate transfer. Late entrants into the insured pool should cause the underwriter to pause, at least briefly, to consider the motivations involved in the insurance purchase.

The Influence of Health, Wealth, & Self

Underwriting older-age applicants presents obvious medical underwriting challenges, as well as not-so-obvious non-medical challenges.

Laboratory Values

The significance of lab values in the elderly may on occasion give rise to more concern than in the young population. Although it is impossible to give a brief description of all the differences, these are a few values to pay attention to:

Albumin

Low serum albumin is a marker for advanced liver malfunction and death.

Cholesterol

High cholesterol in general is of less mortality concern in the elderly than in the young. On the other hand, low cholesterol is a marker for stroke, and in combination with other risk factors for stroke, should not be ignored.

White Blood Count

Whereas younger people often have an elevated WBC in response to bacterial infections, elderly people often do not elevate their WBC very readily. When the WBC is elevated, extra concern should be focused on the possibility of the existence of leukemia.

Social Function

Apart from a past medical history and physical, the social function of the elderly gives important insight into their likelihood of long-term survival. Whenever possible, it is advantageous to determine the IADL and AADL of the elderly. For instance, are they active in hobbies, sports, volunteer work, pet ownership, family life, personal finances, etc.? Interest in these activities implies a higher level of mental and physical competence, as opposed to those who are primarily engaged in the vegetative functions of living. Highly functioning elderly are often free from the serious degenerative diseases that are associated with extra mortality and morbidity.

Although difficult to measure, social isolation is common in the elderly, often secondary to sensory impairment, physical disability, or loss of family. Despondency and abuse of alcohol or tranquilizer/sedatives are not uncommon results of this isolation.

Summary

It is always rare to be provided with all the desired information when assessing life insurance applicants, and assessing medical risk in the elderly can be particularly challenging. However, there are usually clues hidden in even the most brief of application forms and interview statements. I hope this article will provide you with some beneficial ideas and indicators that will be useful in your underwriting of the elderly.

J. Carl Holowaty M.D.
A significant link exists between a senior's physical and mental status and the ability to interact with the world and environment. For example, changes in health can have major impact on a senior's social interactions. Sudden changes to social and other non-medical factors can also have significant negative medical consequences. From a financial perspective, seniors with the ability to meet rising health-care costs, deal with daily expenses, and enjoy relaxing activities such as vacations will better deal with their golden years than their less affluent peers.

Expectations that proposed insureds may have about themselves and their future strongly influence their ability to adapt to change. Proposed insureds with good life-coping skills and adequate time will readily adapt and accept the inevitable changes that occur as they age. However, a poor outlook on life, depression, or unrealistic expectations about the aging process can be precursors for unsatisfactory and diminished retirement years.

**Nonmedical Considerations**

“No man is so old as to think he cannot live one more year.”

-- Cicero

Seniors compensate for their physical limitations by adapting their lifestyle. Some adaptations are subtle and will likely remain unknown unless the underwriter asks specific questions. Has the senior added aids for opening doors or assisting with reach, or moved most activities and items to one floor of the house to avoid stairs? Such compensatory changes can indicate the degree to which the proposed insured can adapt to a changing environment. These compensations actually require some time and thought. What happens if the change in physical or mental status is swift? Do changes occur with the assistance of others?

ADL, IADL and AADL are ways to describe the senior’s adaptations to his or her physical or mental limitations. Let’s consider some of the other factors that influence the life and longevity of our older clients.

**Social**

Marital status. Married couples tend to do better from a mortality standpoint than unmarried, divorced or widowed persons. Married couples watch out for one another and are better equipped to deal with medical emergencies and impaired functioning. Co-compensation is not uncommon, with each spouse adapting to the other’s limitations. Of course, the compensation ends upon the death of one spouse which can uncover unknown conditions or problems in the functioning of the surviving spouse.

Living circumstances. Consider the following: Is the individual ‘growing old in place’, or recently relocated to a new area such as a tropical climate? Does the senior still own and maintain a home, or are retirement years being spent with peers in a nursing home or retirement community? Perhaps the senior has moved in with family. Consider whether the proposed insured can get along alone, or whether current living arrangements may be compensating for a deteriorating quality of life, physical ability, cognitive ability, or limited finances.

**Emotional support.** Is there a recent loss of emotional support? Loss of spouse? Death within a circle of friends? Loss of a spouse is devastating at any time, but to a senior, loss of a life partner can bring on sudden lifestyle changes to which one may not be able to adapt. A lengthy bereavement period, or failure to overcome grief are dangerous signs and should be viewed with caution. Additionally, as seniors age their peer group begins to dwindle. Life-long friends pass away leaving emotional loss, and attendance at funerals can become an all too regular activity. Loneliness can have a distinct negative impact on a senior's desire to go on living.

Community activities and hobbies. Active participation in activities outside the home is a good indicator of advanced daily-living ability. Active seniors must have the cognitive, physical/mobility, and sometimes financial means to participate in activities. Active seniors will also tend to have a better outlook on life and see that there is ‘something to live for’. On the other hand, a sudden decrease in activity level should be assessed carefully.

Driving. The ability to remain mobile and active is an important quality of life issue. Maintaining an active driver's license is an indicator (though not a guarantor) of intact mental and physical ability. A poor driving record can indicate potential future accidents and can give insight into possible medical problems.

Travel. Travel has been shown to be a positive predictor of longevity as well. Planning a trip and traveling can be stressful, and requires a degree of cognitive ability that shows the proposed insured is up to other challenges in life.

**Personal**

Regular exercise. Regular exercise is an AADL that can indicate many positive factors. Walking is a good indicator of a desire to maintain a good quality of life. Even better are exercise programs that also maintain social connections: golf, bowling, tennis, and other regularly scheduled activities.

Education. Higher education is associated with longevity, as are other forms of cognitive challenge. Regular reading as a hobby indicates active cognitive ability. If a long-standing hobby of reading is discontinued, consider whether it is due to vision issues, or increasing cognitive problems.

Smoking. Underwriters should consider whether an applicant has quit smoking or has never smoked. The
benefits of avoiding tobacco are realized in this age group. While discontinuing a life-long smoking habit may have some benefit at these ages (arguable after 50-100 pack-a-year histories), proposed insureds who have never smoked are at lower risk for Chronic Obstructive Pulmonary Disease (COPD)/emphysema and symptomatic coronary artery disease. Greater lung capacity in non-smokers can also allow for greater activity levels.

**Accidents and falls.** Accidents of all types are a significant cause of disability and death among the elderly. While motor vehicle accidents pose an obvious threat, it is well-documented that simple accidents around the home and during the course of routine activity are far more common. The underwriter should be alert to any emergency room visits even if the proposed insured was not kept for observation. Falls are common and can lead to death. Broken bones limit mobility, and can inhibit social interaction. Head trauma can cause cognitive problems and confusion. Pain medications can have unwanted side effects. While the medical implications of the incident can be devastating, even a recovered individual may have residual problems such as limited physical or social interactivity. This can be the sudden change that starts a downward trend.

**Hospitalization.** Hospital stays can interfere with a senior’s daily routine. Hospitals have their own regimen and schedule that disrupts a senior’s life-long habits and routine. In some cases, these changes in environment can bring on episodes of confusion. Pneumonia is a common sequela of a hospitalization and a prevalent cause of death in the elderly. Other infections associated with hospital stays are not well tolerated by this age group. Underwriters should consider whether the proposed insured returned to his prior level of functioning after hospitalization.

**Additional factors and questions**

**Application process.** Was the proposed insured able to complete the application, medical requirements, and interview process without the help of children or spouse? Check all signatures on the insurance forms. Is the signature steady? Is it nearly the same on each document or is there variation? Is there a possibility the application was signed by someone else?

**Alcohol use.** Alcoholism is prevalent in the older population. While moderate alcohol use in social situations can be favorable, alcohol use while alone, and associated with limited communal or social interactions, should present a warning sign.

**Teeth.** Healthy teeth reflect good nutrition and also indicate the desire to maintain personal hygiene.

**Financial Considerations**

**General Considerations**

Why buy insurance now?

When underwriting the elderly for life insurance the principle question remains: If no life insurance is in force at this time, why is the applicant interested now? Is there a long history of maintaining life insurance as part of an overall financial plan? Perhaps the proposed insured is merely updating a policy. Even so, putting off buying life insurance to “the last minute” when the number of years remaining are short may be a good plan for the proposed insured, but could lead to serious anti-selection against the company.

Is the insurance part of a complete financial plan, or is it the primary vehicle? Is the premium being paid at the expense of other financial investments, or even day-to-day living expenses? If the elderly applicant has suddenly decided to move funds from interest bearing vehicles used for, or planned for, living expenses to life insurance plans that will benefit heirs, underwriters have to consider why and to what extent.

Is the proposed insured pursuing, or already in possession of Long Term Care Insurance or an annuity? A proposed insured that is building a complete plan to cover risks, including the risk of outliving current financial resources, may be a better candidate for life insurance.

What financial need is being served?

There exists a lingering issue of surviving elderly widows that did not spend as much time in the job market, and have fewer retirement benefits. Income is often fixed, with residual income generally coming from “unearned” sources, retirement accounts, investments, and social security.
Key financial questions and concerns in the seniors market
The underwriter should consider the following key questions and concerns:

> What is the purpose of the insurance?
> What is the annual income and source(s)? Current savings?
> Is there an estate tax problem?
> Any indication of degree of recent medical expenses as percentage of income? Generally, it is accepted that the majority of medical expenditures in one's lifetime occur in the last year of life. Sharp increases in medical expenditures should be investigated thoroughly.
> Are there any recent loans? Second mortgages? Loans and new mortgage debt can indicate recent financial challenges, including increased medical expenses.
> Is there recent history of financial difficulty, even short of bankruptcy?
> What percentage of fixed income is being spent on premiums?

Ownership
Children or grandchildren must show good reason to be policy owner and beneficiary. If the proposed insured is not capable of controlling finances they fail at one of the primary IADL’s.

Children and grandchildren will often shoulder much of a deceased's final expense burden. If they see warning signs that the proposed insured's health has begun to deteriorate, or has taken a sudden turn for the worst, they may have opportunity for significant anti-selection. Changes in health, mood, behavior, or cognitive status may be obvious to loved ones and family members before the personal physician, or the proposed insured, is aware.

Middle Income and Wealthy Clients: Needs Based Sales
While wealth tends to aggregate in the elderly population, there is a need for continuing income (not necessarily 'income replacement') and a reliance on “unearned” income.

The elderly also have needs in terms of estate and tax planning, and view life insurance as a means to help provide estate money and pay for final expenses. Underwriters, therefore, must be very cautious of the scheme known as “Estate Doubling”, whereby the proposed insured will develop a program to donate the equivalent of the estate to a charity, while also leaving the full value of the estate to heirs.

Lower Income Clients: Needs Based Sales
There is still a substantial portion of the senior population that lives near the poverty level—by some estimates 10 percent. Mortality is measurably higher in that group. Lower-income clients, like wealthier ones, are often seeking a means by which to pay for final expenses or to “create” an income stream for loved ones.

Conclusion
“I am not young enough to know everything.”
-- Oscar Wilde

The life insurance market for older applicants continues to grow. The last decade has already seen the size of this market multiply, and it will continue to do so in the coming years. This population is still underserved by our industry, and provides both challenges and opportunities for our companies. There are resources available for underwriters to expand their knowledge and expertise in this market, and I hope this article has provided you with some new food for thought as you approach your next elderly applicant case.

After all, “Old age comes to he that waits.” I’m expecting it to hit me sometime after lunch.

Mark Dion