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Declinature is not an option

Possibly your quickest decision on an average underwriting day is where the risk is clearly unacceptable. An applicant who had a stroke or heart attack last week is an obvious postponement for most insurance products. Metastatic cancer, end-stage major organ failure, severe dementia, terminal AIDS: no such risk is likely to sit on your desk for too long.

But what if you can't postpone or decline?

A growing number of underwriters are assessing mortality risk beyond the traditional maximum limit. Impaired annuity underwriters, specialists taking on high-mortality business, underwriters in markets where declinature is not permitted, viatical or life settlement appraisers, all need to be skilled in the assessment of severely impaired lives.

This article focuses on impaired annuity underwriting and how severely substandard lives are assessed for this product. Impaired life annuities are big business in the UK, and there is increasing interest in other countries where retirees have sizeable funds at their disposal.

Life underwriters and medical directors in the UK are

Executive Summary *Underwriting beyond +400 extra mortality is uncharted territory for many life underwriters and medical directors. This article looks at why you might need to underwrite severely substandard lives and the major differences when it comes to underwriting impaired life annuities.*

At a high level the underwriting process is much the same too. You look at the risk factors, take account of all medical conditions and make an assessment about the extra mortality. The key difference is that instead of charging an extra premium for the extra mortality, you offer an increased (or enhanced) annuity income. A loss is incurred if the annuitant lives longer than estimated.

Apart from the obvious difficulties of estimating life expectancy for severely impaired lives, there are major differences in the following areas: rating methodology, average age of the target market, co-morbidity and medical underwriting evidence.

Severely substandard lives

The most striking difference is the severity of impairments that need to be assessed, as many annuitants are forced into retirement by a severe or life-threatening disease.

Unfortunately, life underwriting manuals are not too helpful. So the first major task is to work out how to deal with severely impaired annuitants. There are three main solutions.

The first approach is to assess each risk individually. This requires highly trained research underwriters or medical directors to evaluate every case. Consistency of underwriting decisions is maintained by close control within a small underwriting team. However, bespoke research is costly in the long term and increases risk of underwriting errors.

An alternative solution is to use broad rating categories. For example, four major risk groups could be identified: diabetes, heart attack, stroke or kidney

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Figure 1 - Life expectancy curve for a healthy male age 60, illustrating 50% and 90% survival points (adapted from RGA's Annuity Risk and Rating Tool).

by the frailty of old age.

Co-morbidity

Another major feature in the elderly market is co-morbidity. At older ages many people have two or more major illnesses along with multiple risk factors, e.g., it's not unusual to see a hypertensive annuitant suffering from diabetes, kidney failure and coronary artery disease. As such risks are not usually handled by most life underwriting manuals, it's vital to understand the disease inter-relationships when assessing life expectancy for annuities.

Is the final risk based on the sum of the ratings ($2+2=4$), are the combined risks worse ($2+2=5$), or is there an element of double-counting ($2+2=3$)? If one disease is likely to cause very early death, but the second disease is not expected to impact mortality for quite a few years, a case could be made to only rate for the worst disease ($2+2=2$).

The approach taken largely depends on the shape of the survival curve, specifics of each disease and also on the source mortality data. For example, if a study quotes a hazards ratio which is adjusted to control for related risk factors, it makes sense to increase the annuity rating for those other factors.

In practice, most mortality data does not account for every co-morbidity and therefore annuity guide-

lines need to be carefully adjusted to avoid double-counting.

Medical evidence

In annuity underwriting, the problem is over-disclosure, not non-disclosure. This is particularly relevant if the market is highly competitive and applicants are not prepared to wait a few weeks for medical evidence to be obtained.

In the UK most annuity business is underwritten with information provided by the annuitant. To deter fraudulent over-disclosure, medical reports are obtained on a random sample of cases after the policy has been issued. From a traditional underwriting perspective, it seems risky to accept high mortality lives without detailed medical reports. But relying solely on information from annuitants has been successful and over-disclosure has not been an issue. Some over-disclosure is counter-balanced by under-disclosure.

Lack of medical evidence adds to the challenge to assess life expectancy accurately. Applicants are not familiar with all the details of their medical history and sometimes provide scanty information. Annuity underwriters need to make maximum use of disclosures about the degree of disability, symptoms and treatment.

As every life underwriter knows, details of treatment

can provide powerful clues about diagnosis, severity and prognosis. For example, cancer treatments are often highly specific to the type and stage of cancer. You can tell a lot about the cancer just by knowing whether they received chemotherapy, radiotherapy or surgery alone. Similarly, information about previous and current treatment for heart conditions can often confirm the most likely diagnosis and provide important pointers about severity and prognosis. An obvious example is congestive cardiac failure which

About the Authors

Dr Philip Smalley is the Vice President and Medical Director for RGA International Corporation. His key roles are to guide product development initiatives and research evidence-based underwriting guidelines. Phil is an internal medicine specialist, with over 20 years of insurance medicine experience. He is an active member of medical and insurance organisations and is 2008-2009 past president of the Canadian Life Insurance Medical Officers Association. Phil is a qualified lecturer and presents his ideas regularly at insurance conferences and seminars. He is also Managing Director of the Longer Life Foundation, an RGA and Washington University research partnership. The Longer Life Foundation is focused on improving ways to predict mortality and to promote healthier and longer lives.

Yunus (Pip) Piperdy is Underwriting Research and Development Manager for RGA UK. He specialises in medical research, underwriting systems and product design. His main focus is to ensure underwriting guidelines remain suited to client needs. With more than 25 years medical underwriting experience, Pip has worked in senior underwriting roles for both direct and reinsurance companies. He has been involved in all aspects of life, disability and annuity risk management, including development of underwriting manuals and expert systems. He is the UK editor of *ON THE RISK* and enjoys writing articles about underwriting. Pip is an active member of insurance industry committees and currently sits on the ABI Genetics and Select 74 underwriting committees.