

Key Innovative and Beneficial Elements of 21st Services' Methodology as fully implemented January 2005

Tables Utilized

Base tables are the 2001 VBT tables.

Value of enhancement

- 2001 VBT tables are the most current tables issued by the Society of Actuaries and have the best data currently available on mortality for elderly insureds.
- 2001 VBT tables are viewed as appropriate for the life settlement industry by A.M. Best in their rating guidelines for securitizing life settlement transactions.
- 2001 VBT tables adjusted for 21st Services by an independent actuary from an internationally recognized consulting firm designed to reflect the unique early roll-off elements of the life settlement insured population.

Age-Dependent Debits

Many of the impairments used in our underwriting system are designed to erode as an insured ages rather than remaining a constant factor over the life of the insured.

Value of enhancement

- As a rule, the older a person is, the less important any single impairment becomes.
- As certain medical conditions become the norm rather than the exception in our target population, a portion of the mortality impact of these impairments becomes imbedded in the base mortality rates. Therefore, the debits for these conditions must erode over time to avoid “double counting” the impact of these conditions in both the base table mortality and the debit-driven mortality adjustment.

Elapsed Time Dependent Debits

Certain impairments used in our underwriting system are designed to decrease as history of the impairment becomes more remote in the insured's medical history.

Value of enhancement

- Certain medical conditions, such as some types of cancer have a strong impact on mortality until such time as the condition is brought under medical control. Cancers that have been treated can only be thought of as being cured after the passage of time. With greater passage of time, the mortality impact is reduced substantially.
- As an example, our system assigns each type of cancer to eight different degrees of malignant potential and erodes all stages of all cancers to zero at a predetermined future point.
- Heart attacks and other clinical events are treated in a similar manner.

Mortality Credits

Mortality credits reduce the total mortality risk and can have the effect of extending the life expectancy for an individual when compared to his peers.

Value of Enhancement

- Some important impairments are common. Coronary artery disease is a prime example. Since coronary artery disease is the cause of at least one third of all deaths, a credit is applied if testing has demonstrated that the insured has no coronary artery disease at a certain age and above.
- The system applies other credits of varying degree for insureds whose medical records reflect specific conditions that show better than average health when compared to their peers.

Co-morbid Diseases

The relevance of some impairments is affected by the presence or absence of other medical conditions.

Value of Enhancement

- Diabetes and cigarette smoking have their own mortality risks. However, the combination of diabetes and smoking exceed the sum of the two risks. The system accounts for enhanced mortality risk of the combination.
- There are several cardiac conditions which each have their own stand-alone mortality risks. When several are found in the same person, the risk is less than the sum of the individual risks because they are each manifestations of the insured's particular form of underlying heart disease.

Focus on Functional Impairment

Certain impairments, particularly related to coronary disease, are evaluated on multiple levels in our underwriting system to ensure that the most detailed information available is used to evaluate the functional status of the insured.

Value of Enhancement

- Confirming that an insured has a diagnosis of coronary disease or has a history of a heart attack is a useful underwriting element. However, it is even more useful to know how impaired the insured's heart function is as a result of the coronary disease or the heart attack. Our enhanced methodology provides a more detailed tool to differentiate between insureds with coronary disease that have poorly functioning hearts versus insureds with a similar history with a well functioning heart.
- This system function and the others noted in this document increase underwriting precision to a new level of sophistication for the life settlement industry.