On August 9, 2011, SCOR SE, a global reinsurer with offices in more than 31 countries, acquired substantially all of the life reinsurance business, operations and staff of Transamerica Reinsurance, the life reinsurance division of the AEGON companies. The business of Transamerica Reinsurance will now be conducted through the SCOR Global Life companies, and Transamerica Reinsurance is no longer affiliated with the AEGON companies.

While articles, treaties and some historic materials may continue to bear the name Transamerica, AEGON is no longer producing new reinsurance business.

Archive Materials

Causes of Death Study - Part I
Reprinted from the October 2009 Messenger newsletter

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Analyzing insured mortality by cause of death (COD) often provides insights that a typical actual-to-expected study may not reveal. Our proprietary Transamerica Experience Database (TED) provides an excellent resource for examining COD statistics for an insured population. In Part 1 of this two-part series, we will focus on analyzing TED deaths by various sub-categories and explore the possible reasons for variations in the distribution of COD.

TED Statistics
TED encompasses nearly all life insurance policies ceded to Transamerica Reinsurance, with more than 45,000 total deaths tabulated from January 1, 2004, through June 30, 2008. About 41,000 of these are linked to a COD other than “unknown/unspecified” or “miscellaneous.” The distributions in this article relate to the claim count, not the amount of reinsurance. Later, we will look at cause of death by original face amount.

Age at Death
Figure 1 (on the next page) compares the distribution of top causes of death (COD) from TED for selected age at death groups.

As one would expect, motor vehicle and other accidents account for a large portion of deaths for ages under 35, while Cancer and Cardiovascular make up the bulk of deaths for 45 and over. Also note that the proportion of deaths due to Suicide and Homicide declines dramatically with increasing age. For the oldest age groups, Respiratory and Influenza and pneumonia become more prominent. In the 85 & Over age group, Renal/genitourinary, Alzheimer’s disease, and Parkinson’s disease make up 10.4 percentage points All Other category.
Gender

Figure 2A shows the distribution of COD by gender. Most notable is the difference in the proportion of cancer deaths by gender (33.8 percent for males versus 44.5 percent for females).

Further sub-dividing the Cancer category we see that breast cancer makes up the majority of the difference (Figure 2B). Prostate cancer deaths are higher for males for obvious reasons. The higher proportion of esophageal cancer deaths is presumably due to the higher prevalence of smoking and alcohol consumption among men.

Smoking Status

On the surface, it would appear from Figure 3 that there is very little difference in cause of death between smokers and nonsmokers except for a slight increase in Respiratory ailments.

However, taking a closer look at cancer deaths, we find that lung cancer in smokers is over two and one-half times higher than in nonsmokers. For smokers, 39.5 percent of all cancers are lung compared to 14.8 percent for nonsmokers.

Face Amount

Figure 4 shows COD by original face amount of insurance, not reinsurance cession size.
Some of the apparent trends by face amount (for example, the increase Alzheimer’s Disease for policies under $100,000) are actually due to differences in age distributions. The average age at death for the four face bands is 68, 59, 56 and 59 respectively. The higher average age for the under $100,000 group also explains the increased proportion of deaths due to Influenza and pneumonia.

On the other hand, the highly correlated relationship between suicides and face amount most likely is not age related. The TED data clearly validates the assumption that an insured’s amount of insurance is a motivating factor in the decision to take one’s own life.

**Product**

Figure 5 shows COD for permanent versus term insurance. Most of the subtle differences may be attributed to a higher average at-age death for permanent products (average age 67 versus age 58 for term insurance). For permanent, nearly 60 percent of the claims were at attained ages 65 and over, compared to only 30 percent of claims for term.

The higher proportion of suicides among term policies may be due to a higher average claim amount, as well as the younger age at death. Excluding claims in excess of $5 million, the average claim size for permanent is about $175,000 compared to $275,000 for term.

**Coming Up in Part 2**

In Part 2 of this series we will continue to explore cause of death by various insurance product and insured characteristics. We will also look at trends by claim year to see if the distribution of causes has changed significantly over the past four-and-a-half years. Finally, we will compare our TED insurance population study to a general U.S. population study provided by the National Center for Health Statistics.