Basic Mortality Methodology Course
Learning Objectives

Fall 2007

Primary course purpose: Introduce the student to analytic methodologies that can help quantify relative mortality and demonstrate how to apply this information in life underwriting.

I. **Mortality analysis:** Understand the elements that must be present in a clinical article for a mortality analysis to be performed. Understand the difference between actual and expected mortality. Demonstrate an ability to perform the basic calculations used in a mortality analysis and be able to interpret the results.

   A. Understand the elements necessary in an article for it to be suitable for mortality analysis.

   B. Demonstrate an understanding of the calculations necessary to complete a mortality analysis (via life table construction (using w, d, and e) or through analysis of a cumulative mortality or survival curve data only.

   C. Be able to interpret the results of a mortality analysis and understand how EDR's are used in calculating select mortality.

II. **Related concepts important in the development and utilization of relative mortality data:** Understand how to apply information from published life tables and the underlying reasons for differences in mortality rates between various tables. Be able to apply the information derived from your mortality analysis to common underwriting situations.

   A. Understand and be able to utilize the various data elements that are included in published life tables.

   B. Understand the differences between population, group life tables and life tables that detail the mortality experience of insured individuals.

III. **Probability theory:** Understand how probability theory can be employed in the estimation of mortality risk in those at risk of disease or in mixed groups of standard and substandard individuals.

   A. Understand that alternative methods (Bayes' Theorem, Decision Trees, and Likelihood Ratios) are available to aid in calculating post-test disease probability.