Appendix 1. Calculation of Standardized Comparison Group

Statistics Canada Life Tables publish the probability of a person dying at age X before reaching X+1, q(x). These are published in gender specific tables for the overall Canadian population, as well as for each province. The male and female life tables for Newfoundland and Labrador for 2009 to 2011 were used in our study. Using the age and gender of each patient in our study, an age and gender matched individual survival probability was calculated for each of the five years following their injury. This was done by first by referencing the Statistics Canada Life Tables for the q(x) value for a patients age and gender. This value was then converted into a 1 year survival rate by the following equation.

1 year survival = e –(q(x))

To then calculate the survival rates for the subsequent four years, a cumulative death rate (CDR) was calculated. This was done by adding a patients gender specific q(x) value for the year of their injury to the q(x) values for the years subsequent, to yield 2, 3, 4, and 5 year CDR's for each patient.

For example, the 3 year CDR for a patient who was injured at age 70 would be calculated by adding the q(x) values for ages 70, 71, and 72.

Each CDR was converted into an individual survival rate for each year by the following equation.

Individual survival = e –(CDR)

The predicted individual survival rates for each patient were calculated for each of the five years following injury. The mean of the individual expected survival rates was calculated for our entire patient sample population for these years. These age, gender and province matched survival rates for the general population are then compared to our study population on a survival curve.