

Chi Squared Test of Mortality Experience against a Standard Table in R

A life insurance company actuary wishes to compare recent mortality experience against the standard AM92 Ultimate mortality table. The table below shows observed deaths and Exposed-to-Risk for ages 65 to 74 along with mortality rates in the standard table.

Assess the overall goodness of fit of mortality experience against the standard table.

Age x	Observed deaths	Exposed to Risk	AM92 Ult q_x
65	39	2390	0.014243
66	33	2499	0.015940
67	57	2680	0.017824
68	52	2172	0.019913
69	42	2348	0.022226
70	71	2716	0.024783
71	69	2435	0.027606
72	53	2014	0.030718
73	83	2703	0.034144
74	86	2321	0.037911