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“The Lee-Carter Model: an update and some extensions”

The Lee-Carter model has become widely used to model and forecast mortality, either in its original form, or with various extensions and modifications. I will explain the underlying logic of the model, and its strengths and weaknesses. I will discuss a number of topics: How well would the model have predicted future developments if it had been used in earlier periods starting in the early 20<sup>th</sup> century? How can the model be used when mortality data are available for only a few scattered years as in some developing nations? How can the model be adapted to accommodate the relative quickening of mortality decline at older ages in recent decades? How can the model gather strength from common patterns in mortality change within groups of populations (such as rich industrial nations, or males and females in the same country) while preserving the special patterns of each population?