Accounting for temporal variation in morbidity measurement and projections

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Abstract

This is important stuff!

Age standardization is an essential tool for the contemporary practice of demography. Demographers age-standardize in order to assess trends and intensities in rates that vary in regular ways over age free from distortion in population structure. Without age standardization or its many cognates, we would judge trends and magnitudes based on crude rates, which are now understood not to carry the same predictive utility as rates that have been purged of structure. This is a cornerstone tenet of contemporary demography. Typically, in order to drive the point home, instructors find or concoct an example where a comparison of age-standardized rates leads to the opposite conclusion as crude rates suggest. This is quite motivating for the pupil, and it soon become second nature. This is the point we wish to remake with respect to unaccounted-for temporal variation in rates that are not vital rates.

Some processes vary over the life course, that is to say, within and over the lives of individuals. If members of the same birth cohort are thought to have something in common, it will surely be the case that members of the same birth cohort that also end up dying in the same year share even more features in their life course: Different aspects of their lives will on average align in empirically regular ways. In general, persons dying in the same year probably share many characteristics in the time prior to death, especially persons that die of intrisic or unavoidable mortality. This empirical alignment will in some cases hold, even if the persons are not

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from proximate birth cohorts. That is to say, for some conditions, temporal variation in terms of remaining years of life, or completed lifespan provides sharper and more regular relief than variation in terms of chronological age. In such instances, age standardization of the common variety does not provide the degree of control or precision that we may believe it does.