

Compression of Morbidity and Mortality: Separate or Related?

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Compression of morbidity is a reduction over time in the total lifetime days of chronic disability, reflecting a balance between (1) morbidity incidence rates and (2) case-continuance rates – generated by case-fatality and case-recovery rates. Chronic disability includes limitations in activities of daily living and cognitive impairment, coverable by long-term care insurance.

Compression of mortality is a reduction over time in the variance of age-at-death. Such reductions are generally accompanied by increases in the mean age-at-death; otherwise, death rates at older ages would need to increase for the variances to decrease.

Morbidity improvement is a reduction over time in age-specific disability prevalence rates; such improvement may result from changes in incidence rates and/or case-fatality/case-recovery rates. Morbidity improvement will lead to compression of morbidity if the reductions in age-specific prevalence rates are sufficiently large to overcome the “pre-programmed” increases in disability that would occur as more persons survive to older ages where the age-specific prevalence rates are progressively higher.

Professor Stallard will review these concepts, describe how they are related, show how they apply to the United States over the past one-third century, and discuss their implications for morbidity and mortality in future years.