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**Recent exceptions of reductions in lifespan inequality** [Let’s do title at the end depending on how this evolves, suggestions are welcome]

Main text [1000 words]

Giving people equitable opportunities to live is a fundamental goal of every country. In 1872, 23% of newborns in Italy died before their first birthday and less than 5% of them were expected to reach the age of 80 years. In contrast, 99.7% of babies born in 2017 survived to their first birthday and over 60% of them are expected to be alive in 2100. This exceptional progress on reducing mortality has meant that life expectancy at birth, one of the most common metrics to monitor health of a country, increased more than 53 years from levels below 30 years to almost 83 years over the last one and a half centuries. A crucial question with social and public health implications for demographers and policy makers is how evenly shared these improvements among individuals are.

Life expectancy is a metric of mean levels of mortality. It expresses the average years a newborn is expected to live given the death rates at a point in time. As an average, life expectancy therefore does not show how big differences in length of life are among people, which are substantial. These differences, usually captured by a metric of variation or inequality in ages at death, such as the standard deviation or the Gini coefficient, is usually referred to by demographers as *lifespan inequality.* Lifespan inequality at the individual level is a metric of how unpredictable the timing of death is. In other words, how long will a newborn in an exceptionally violent country such as Syria live is considerably more difficult to predict, than it is for a baby born in contemporary Sweden because lifespan inequality in Syria is much higher than it is in Sweden. This is important because people may take decisions over their lives, such as when to invest in education, migrate, or when to buy a house, considering the uncertainty around their expected lifespan. At the societal level, lifespan inequality indicates how unevenly shared improvements in longevity are and it has been described as the most fundamental of all inequalities. This is of utmost importance because resources to improve health in a country are limited, and their allocation becomes more difficult as deaths are more spread over different ages.

Lifespan inequality has decreased for most countries as life expectancy at birth increased. This dual advance is a major achievement of modern societies in giving better chances to survive to older ages to more people and it has triggered scientific interest among demographers. Numerous studies have looked at how higher levels of life expectancy usually correspond to lower levels of lifespan inequality. Limited attention, however, has been paid to how they change over time and what are the determinants of these changes. A recent article shows that changes of both life expectancy and lifespan inequality can be expressed as rates of progress in saving lives. How strong the relationship between increasing life expectancy and decreasing lifespan inequality depends on where the progress is placed. The more lives saved at the youngest, the stronger the relationship is especially when life expectancy is less than 70 years.

Ginevra I’ll stop here, do your magic

**References**