U.S. Mortality Monitoring Report

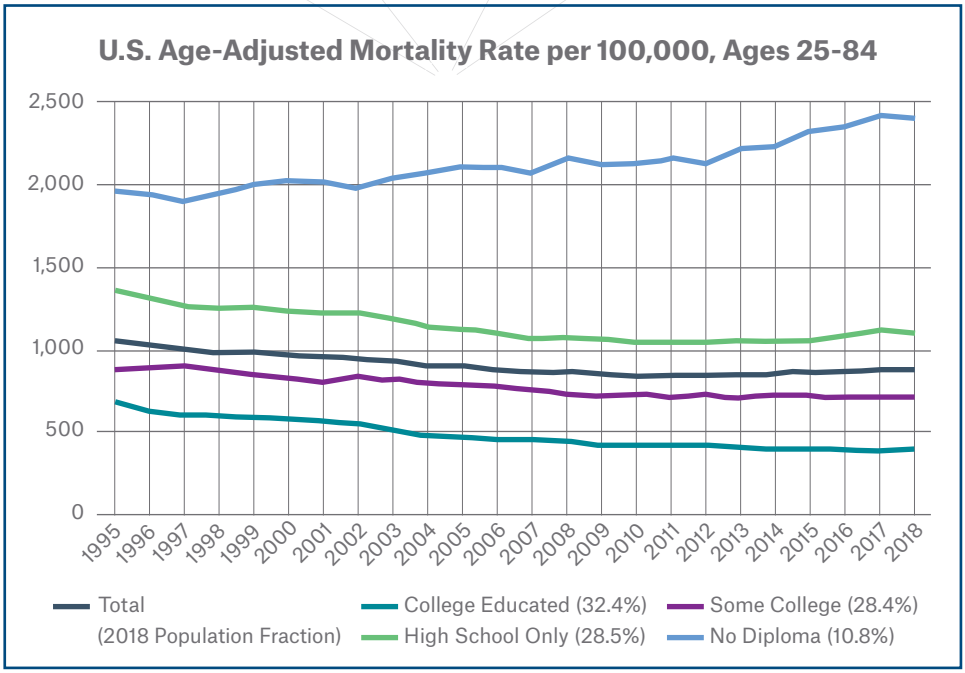
U.S. Mortality in the News

Although the exact effects of COVID-19 on insured population mortality cannot yet be predicted, Munich Re is continuing to monitor the size and duration of its impact on the insured population. The analysis in this paper is based on research conducted prior to the global pandemic and focuses instead on long term mortality trends.

On January 30, 2020 the Centers for Disease Control and Prevention (CDC) released mortality data for year 2018. An accompanying report hit news outlets in a big way: after three years of worsening mortality, U.S. life expectancy was again on the rise.[1] While positive, this news misses the mark for life insurers. What is driving this change? What trends can we expect to see in the future? How much is this impacting the insured population?

By skipping the policy report and going straight to the underlying data we can help uncover the real implications for life insurers. First, the insured population is by and large socioeconomically advantaged. The best surrogate for socioeconomic status available in the U.S. national data is education level.

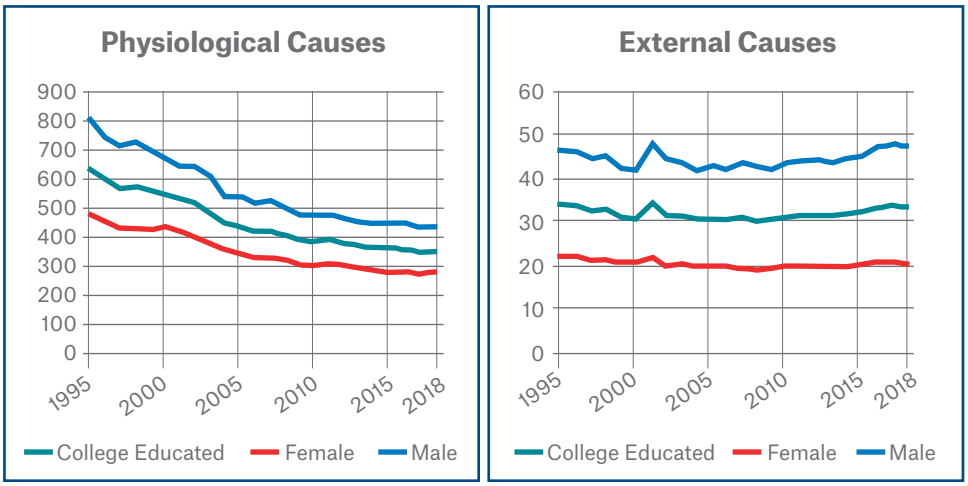
The college educated group (those with four-year degree or more) can be seen as a proxy for the individual life insured population. The college educated show a significantly lower mortality and a better trend than any other educational group.



In fact, those with a college degree never saw a real turn around in life expectancy, only a slowdown of overall mortality improvement.

College Educated Mortality Trends by Cause of Death

Similarly, we can look at how these trends for the college educated population are driven by different causes of death. Physiological (physical health based) causes are the main driver of mortality. Within this category, mortality rates have maintained an overall improving trend. By contrast, external (behavior/environment based) causes such as suicides, accidents, and overdoses have seen a relatively minor increase. Data for year 2018, with a 1.5% improvement over 2017, gives hope that this trend may see improvement going forward.

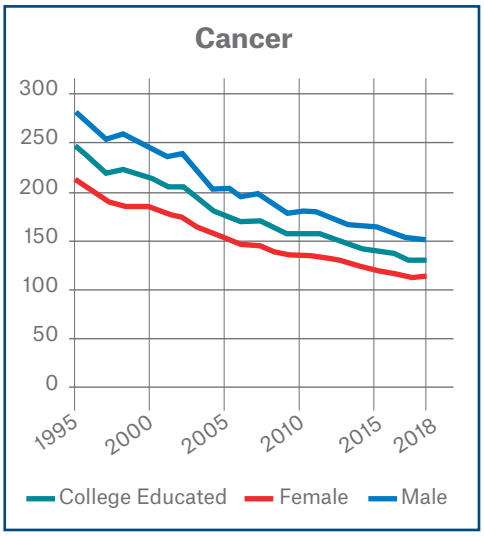


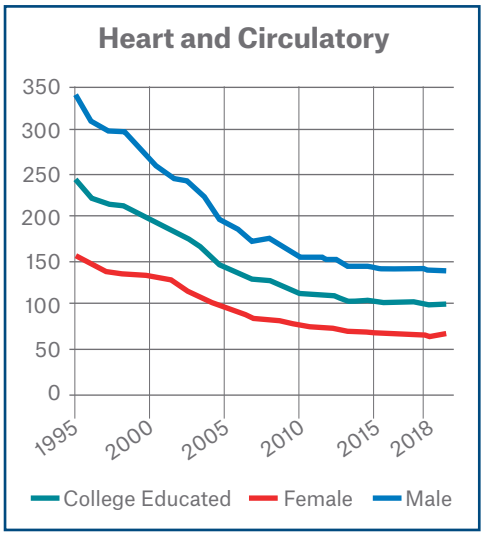
U.S. College Educated Age-Adjusted Mortality per 100,000 by Cause of Death: Ages 25-84.

The leading physiological causes of death for the college educated are cancers and heart/circulatory conditions. Cancer mortality has seen accelerating improvement for many years. In addition to medical advances, this is also driven by decreased rates of lung cancer as the prevalence of smoking decreases in the U.S. Since life insurance policies are typically smoker-distinct, a portion of this improvement will not be visible in the insured population.

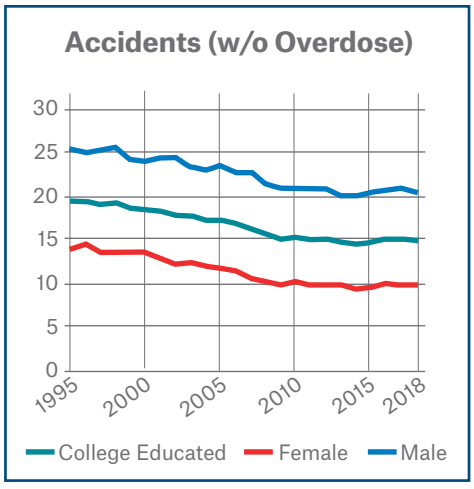
Heart and circulatory conditions, on the other hand, have seen a significant slowdown in mortality improvement. This is led by heart disease mortality apparently stagnating since 2010. A likely cause is the increased rate of obesity in the U.S. In insured populations, obesity impacts may be alleviated through underwriting.

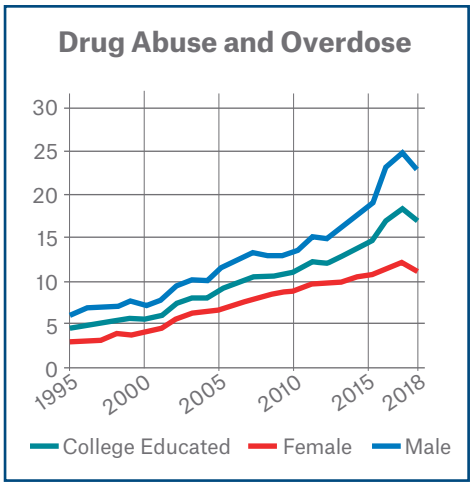
Accidents are the leading driver of external cause mortality. While not all drug related deaths are properly classified in the U.S. population data, by removing overdoses we see that non-drug accident mortality has not seen real increases for the college educated.





U.S. College Educated Age-Adjusted Mortality per 100,000: Major Physiological Causes, Ages 25-84.





U.S. College Educated Age-Adjusted Mortality per 100,000: Selected External Causes, Ages 25-84.

While almost negligible when compared to other educational groups, college educated mortality has seen some negative impacts from the opioid epidemic. Fortunately, drug related mortality saw a sharp change in trend in 2018, with a statistically significant drop in college educated deaths. In our monitoring we have seen effectively no impact on the insured population from the opioid crisis. If the trends seen in 2018 continue, we expect this to remain the case for life insurers.

Conclusions for Life Insurers

While mortality trends for the general population are beginning to see signs of recovery from recent slumps, the life insured population has continued to see ongoing mortality improvement. The college educated population, a surrogate for the insured population, has seen at most a slowdown in mortality trends. At this time, we expect these trends to continue after accounting for the impacts of COVID-19.

Notes on the Dataset

All data from this article comes from Munich Re analysis of publicly available data. Mortality and population data were taken from 'Mortality Multiple Cause-of-Death Public Use Record' and 'Bridged-Race Resident Population Estimates', respectively, both available from the National Center for Health Statistics. Educational exposures were calculated from 'Educational Attainment in the United States' published by the U.S. Census Bureau.

All mortality rates have been age-standardized to the 2018 U.S. population. Educational data is of varying quality before 2005. Some states have been excluded in years when they had incomplete educational status reporting on death certificates. Care should be used when relying on educational data from 2004 and before.

References

1. Health E-Stats, January 2020, NCHS. Retrieved via https://www.cdc.gov/nchs/data/hestat/life-expectancy/life-expectancy-2018.htm

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