Long Term Drivers of Future Mortality – A Podcast Series - Chapter 3 - Lifestyle

Mortality and Longevity

Podcast Transcript

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Lifestyle choices, mortality rates, physical activity, dietary trends, smoking rates, alcohol consumption, stress management, obesity levels, public health, socioeconomic groups, mental health, COVID-19 pandemic, opioid crisis, future mortality, longevity.

SPEAKERS

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TRANSCRIPT

RONORA STRYKER 00:05

Hi listeners, and welcome to the Research Insights Podcast. I'm Ronora Stryker, a Senior Practice Research Actuary here at the Society of Actuaries Research Institute. And welcome back to our special podcast series focusing on the paper Long Term Drivers of Future Mortality that was part of our 2023 Living to 100 Symposium. The paper is authored by Yair Babad, Professor Emeritus at the University of Illinois Chicago, and Al Klein, Principal and Consulting Actuary at Milliman. Today we're exploring Chapter Three on Lifestyle. I'm joined by two members of our Mortality and Longevity Strategic Research Program Steering Committee. Our first member is Al Klein, one of the authors of our paper. Welcome Al!

AL KLEIN 00:53

Thanks, Ronora, and welcome everyone from near and far!

RONORA STRYKER 00:56

We also have Eric Pickett, actuary and Chief Content Officer of Club, Vita, Hi, Eric!

ERIC PICKETT 01:03

Hello, Hello! It's great to be here!

RONORA STRYKER 01:05

Okay Listeners. As a quick reminder, if you want to download the paper, just go to soa.org and click on the research institute tab, look for research by topic, and click on Mortality and Longevity. This will take you to the M & L landing page, where you will find the link to the paper and this podcast in the upper right-hand corner. And with that, I'll pass you over to Al and Eric, take it away. Al!

AL KLEIN 01:35

Thanks, Ronora, as you mentioned today, we're diving into Chapter Three, where we examine how lifestyle choices impact mortality and longevity. Lifestyle choices are some of the more significant drivers of future mortality. Actuaries need to consider how evolving lifestyle trends, both positive and negative, will shape mortality and population forecasts and projection models, whether for life insurance, annuities or pension plans. Lifestyle choices also affect demographers and public health official's future estimates.

ERIC PICKETT 02:09

Exactly and lifestyle factors such as physical activity, diet, smoking, alcohol consumption and stress management all play significant roles in determining health outcomes, longevity and quality of life. Understanding trends in these behaviors at the population level and for different socioeconomic groups is crucial when building long term mortality and population projections. And unlike many of the other drivers featured in this paper, these are ones over which individuals actually have some control. So, there's a really wide range of influences on how these trends may develop into the future. Are behaviors improving? Are new risk factors emerging? Are attitudes towards different behaviors changing? Are there any changes to public health interventions on the horizon? How will such changes affect different groups of people? These are the key questions that actuaries need to consider.

AL KLEIN 03:03

That's a lot to consider, but you're right, Eric, even small shifts in behavior over time can have significant implications for mortality rates of individuals and society as a whole. Let's start by discussing one of the most influential factors, exercise. Why don't you start with this one?

ERIC PICKETT 03:20

Yeah, thanks Al! So regular physical activity is known to improve many health outcomes, including reducing the risk of cardiovascular disease, diabetes, obesity and even mental health issues like depression. And the amount of data we have to study on this driver has recently increased with the use of pedometers and other activity tracking through mobile health apps. Right now, physical inactivity is a growing concern. The US Physical Activity Guidelines for adults recommends at least two and a half hours of moderate aerobic activity per week, but the latest figures from the CDC in 2020 show that less than half the US adult population achieves this recommendation with some big differences between different geographical and socio-economic groups across the US. Conversely, there's also a push towards more health-conscious living with wearable technology, corporate wellness programs and fitness tracking becoming more popular, although this has slowed some with COVID. That said, while there's the potential to mitigate some of the sedentary behavioral trends, there's also the potential to increase the differential between

groups as unemployment increases. Yeah, a really interesting set of interactions there, I think, and it certainly will be a challenge to predict their overall effects on the future mortality rates, some of the key questions for actuaries to consider then are, how have inactivity levels changed over recent decades, and how are they likely to change in the future? Are we becoming more or less sedentary, and how does this differ between socio economic groups or geographical groups? Also, how long does it actually take for inactivity levels to filter through into mortality and morbidity statistics. For example, when does a change in behavior for a 40-year-old now show up in the data? Is it right away, or is there a lag until they reach their 60s or their 70s?

AL KLEIN 05:14

Understanding how different sub populations engage with physical activity is key when modeling future mortality rates, factors such as urban planning, access to recreational spaces and the integration of exercise into daily life can all impact long term trends in mortality and the overall population, which in turn, can affect public policy and community service budgeting. And before we leave this topic, it is my hope that as you research things like exercise for projecting future mortality, you also consider it personally. Now let's turn to the next topic, diet. Dietary trends are another major lifestyle factor impacting mortality, and understanding this impact is made more challenging as there does not seem to be a wide consensus on a recommended healthy diet. That said, if you see me in person at any of the SOA or other meetings, I'd be happy to discuss this topic further, maybe over a healthy lunch!

ERIC PICKETT 06:11

I might take you up on that Al, I think I need all the help I can get! Nevertheless, by various measures, dietary habits seem to have been getting worse over the years, and this is correlated with the increase in overweight and obesity rates. A key question for actuaries is whether we will see a reversal in unhealthy dietary trends. While some populations are shifting towards more plant based and whole food diets, the widespread availability of high calorie low nutrition processed foods remains a concern. Additionally, food insecurity and nutritional inequality could exacerbate health and mortality disparities. We are also eagerly awaiting more information on the long-term effects and take up rates of the recent appetite suppressing obesity medications, which is still a relative unknown.

AL KLEIN 06:59

Forecasting dietary trends is challenging, but actuaries must monitor the levels of obesity in the population at large as well as the insurance population. Obesity typically leads to conditions like diabetes, cardiovascular disease and metabolic disorders, each of which are significant drivers of mortality.

ERIC PICKETT 07:18

Okay, next, let's turn our attention to one of the big ones, and that's not a pun. After talking about obesity, I now want to discuss smoking. Smoking remains one of the leading causes of preventable deaths worldwide and is one of the major behavioral drivers of differences in mortality rates.

AL KLEIN 07:37

That's right, Eric, although smoking rates in the US have decreased significantly over the last 60 years. The latest figures estimate around 11.6% of the US population smokes down from about 40% or over 40% in the 1960s and this large reduction in smoking rates is at least partially responsible for the mortality improvements we have seen in the US over the recent decades.

ERIC PICKETT 08:05

So, when considering changes to future mortality rates, we'll need to think about where the further reduction in smoking rates will be possible over the coming years. Remember, someone who doesn't smoke can't give up smoking.

AL KLEIN 08:17

That should be pretty easy to remember, Eric. Something else to consider is the difference in smoking rates among different groups in society. There are more smokers among men than women, and lower socioeconomic groups are more likely to smoke than higher socioeconomic groups, so there may be even more room for mortality improvements among these populations, assuming they reduce their rate of smoking.

ERIC PICKETT 08:41

Yeah, that's a really good point. Al, we've recently seen higher mortality improvements among higher socio-economic groups in the US, but from a smoking perspective, maybe there is more potential for future gains among lower socio-economic groups. Also, actuaries must consider the prevalence and potential impact of movements from tobacco cigarettes to electronic smoking.

AL KLEIN 09:03

Again, to monitor these developments, we'll need to monitor emerging data on tobacco related mortality and consider e cigarettes, but also public health efforts and changes in generational attitudes towards smoking. Now moving on to our next topic, alcohol and drug use. Present another lifestyle factor that will affect future mortality, morbidity and overall quality of life, while moderate alcohol use may not significantly impact mortality, and according to some studies, may even have a slightly positive effect on mortality. Heavy drinking and substance abuse are problems that contribute to premature deaths.

ERIC PICKETT 09:40

As far as alcohol and recreational drugs are concerned, we again need to consider if there are any major changes to consumption that might develop over time, apart from the gradual relaxation of marijuana laws, it doesn't seem that major regulatory changes are on the horizon. However, there may be some generational changes in attitudes towards consumption. It seems that larger numbers of Gen Z may be turning towards sobriety, with a number of surveys showing abstinence from marijuana and alcohol reported in in higher numbers in younger generation.

AL KLEIN 10:13

That is an interesting development. Another thing to keep an eye on is the impact on the recent COVID 19 pandemic. There was an increase in alcohol related deaths during the first few years of the pandemic, and the data is not yet in to show whether this effect has dissipated. And before we move on, we can't forget to mention the widely reported opioid crisis seen in the US over recent years that has significantly increased mortality in certain demographics, especially the working age, age bracket, the addictive nature of opioids makes this difficult to stop. Actuaries need to assess whether policies aimed at reducing addiction and overdose deaths, or even the availability of opioids will be effective in reversing this trend.

ERIC PICKETT 10:58

Okay, so the final area for us to talk about today, then, is stress. Stress is often overlooked when we talk about mortality, but chronic stress can have an impact on health outcomes, contributing to higher levels of inflammation

and increasing the risk of heart disease, stroke and cognitive decline. Actuaries should consider the long-term impact of stress related diseases and the role of mental health support in reducing these risks.

AL KLEIN 11:22

That's right, and I don't think the mental health issue is considered often enough. Another important thing for actuaries to consider here is the increase in stress levels through the COVID 19 pandemic. The American Psychological Association has warned that the nation is facing a mental health crisis that could yield serious health and social consequences for years to come, so this will be something to monitor in the future.

ERIC PICKETT 11:47

Thanks Al, so listeners, we've now touched on the key areas of the chapter, and we hope that gives you a good overview of lifestyle considerations for future mortality before we both head off to the gym. Al, would you like to run through a summary of how you and Yair saw the likely impact for the general population.

AL KLEIN 12:05

Yes of course, as a reminder at the end of each chapter, Yair and I included a table where we highlight the outlook for the impact on future mortality expectations of the different areas covered in the chapter, the key drivers included in the table for this chapter were diet and obesity, physical activity, smoking, addiction and stress. Of these drivers, we projected modest impacts in the short term, but we thought diet and obesity, as well as stress, were likely to have larger negative impacts on long term future mortality rates. Please remember that you need to adjust these expectations, so they are relevant to the specific population for which you are predicting future mortality assumptions.

ERIC PICKETT 12:49

Thanks. Al. So to summarize the key takeaways from today, then lifestyle factors play significant roles in shaping health outcomes and longevity, and they are one of the key determinants of differences in both current and future mortality rates between socio economic groups and geographical groups across the US. Reductions in smoking rates have made large contributions to mortality improvements over recent decades, but there is now a question around whether it is possible for these rates to reduce even further. We've seen increases to overweight and obesity levels in the US in recent years, likely driven by the changes in physical activity and diets. But how will this develop into the future, and what impact will new weight management drugs have? And a few other emerging questions that I will be keeping a close, close eye on are, will changing attitudes to things like alcohol consumption and exercise among younger generations, resulting greater mortality improvements in the future. And what long term impact has the COVID 19 pandemic had on lifestyle behaviors?

AL KLEIN 13:51

Eric thanks for that summary. The only thing I will add is that while what to monitor makes a lot of sense, how to monitor it and predict the outcomes remains a challenge. That said, this is certainly an interesting and ever evolving field. That's it for now Listeners. Please join us for our next podcast where we'll be tackling the topic of inequality. Back to you, Ronora to close out this podcast.

RONORA STRYKER 14:17

Thanks Al and Eric. I really appreciate your time and sharing your thoughts and expertise about lifestyle and how it might impact future mortality. Okay, listeners, that's all we have time for today. Join us at the end of next month for our next episode, which is focused on chapter four, Inequality and its impact on longevity. We'd love to hear your

feedback on this podcast series and thoughts on topics for future research. Just email us at Research-ML@soa.org. Thank you, listeners, for joining us on our chapter-by-chapter journey through The Long-Term Drivers of Future Mortality podcast series. We always appreciate your support and engagement. For the Mortality and Longevity Strategic Research Program Steering Committee and the Research Insights Podcast, I'm Ronora Stryker for the Society of Actuaries Research Institute.

ROSE NORTHON 15:20

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