AJPH Podcast—October 2023
Life expectancy
Hosted by Alfredo Morabia, MD, PhD

[musical introduction]

AM Hello and welcome to this new podcast of the American Journal of Public Health. Well, today we are addressing a very and concerning and important question for public health in particular in the United States. You know, what's driving this decline in life expectancy? I mean, this should not happen. I mean we are really expecting the opposite from a country like the United States. Life expectancy should be growing, and all of a sudden, you know, it's stagnating or declining. What's going on? And we have here with Vickie Mays, my usual co-moderator that you know well if you follow our podcast. Hello, Vickie! And Vickie Mays, she's a professor at UCLA. So, with Vickie we'll be discussing with two persons: First, is Steven Woolf. He's the author of the main paper that will appear in the September issue about trends in life expectancy in the United States; and Lauren Gaydosh who's been working on these issues and in particular how we can know whether those ideas about something like, we may talk about now death of despair are real or more still of a hypothesis. So, Lauren, please introduce yourself.

LG Hi everyone, thanks for having me. My name is Lauren Gaydosh, and I'm an assistant professor of sociology at the University of Texas at Austin. My training is in demography and sociology, and my research focuses on the social and [lay course] determinants of population health and health disparities in the United States. Thanks, again.

AM Fantastic, thank you, Lauren; and you, Steve, please introduce yourself.

SW Sure, I'm Steve Woolf; I'm a professor of family medicine and population health at Virginia Commonwealth University where I am also director emeritus of our Center on Society and

Health. And my work is focused on trying to understand the drivers of population health and the contributors to health inequity.

AM Thank you both, and so let's start with the basics, you know, life expectancy 101. Why is life expectancy an important measure in public health?

SW Life expectancy is a useful composite measure for measuring our health; it's also a metric that the public seems to relate to. It gives us a sense of the overall mortality situation that a population is facing. It's often a misunderstood term; we could talk more about that. People sometimes get confused about what life expectancy actually means, but it's a convenient composite way to assess the health of the population.

LG Yeah, so I would just add to that. I think life expectancy is really useful because like Steve said it gives us this sort of snapshot into how the population is doing at the current moment. And so to get a little bit into sort of exactly what it's telling us, it's how long someone would live if they were born today and then were sort of exposed over the course of their life to the mortality profile that we observe at every age right now. So, it's really nice as a sort of measure because it's not affected by the size of the population or how young or old the population is, and so it can be a really powerful tool in public health that allows us to sort of look at population health over time and across space. And so, life you said at the beginning, Alfredo, it's something that we have sort of taken for granted that will improve, right, and give us an indicator that as its improving our population is healthier and more likely to survive, but as you mention that's not been the case in the US for quite some time now.

AM You know, sometimes I can't resist bringing, you know, the historian perspective in there, but longevity is the first outcome that was ever considered in public health or epidemiological approach. It was by Francis Bacon in the middle of the 17th century, and he laid down, you

know, how we could actually assess the determinants of longevity. So, it's also the first ever, you know, measure of health outcome that was ever proposed. So, there is a history to it. So, what have been the trends of life expectancy, Steve? What do you report in your article?

SW It would be a misconception to think that the reason why the United States statistics look the way they do is because of the poor health of our marginalized populations, because studies have shown that even the most advantaged Americans, white Americans, rich Americans, non-smokers, are doing worse in terms of their health metrics than their peers in other countries. There's something systemic about the United States that affects the health of all of us. Obviously, our more marginalized populations are affected even more.

AM Well, Vickie, what do you think? Isn't this paradoxical?

VM Yeah, I would ask a couple of questions here in that are those other individuals doing worse or is it that there is an over utilization of technology and medical devices that allow for a deeper probe into even the smallest of diseases and disorders these days. Maybe you can talk a little bit about that.

SW Well, one of the advantages of looking at mortality outcomes and life expectancy is that it sort of transcends questions about over-detection and diagnosis, because mortality is a pretty hard outcome. And so what we're saying is that the rate at which Americans die, regardless of what health care experiences they've had, is higher and earlier in life than it's occurring in other countries.

VM Well, I was actually referring to your statement in which you were talking about that there is greater illness among whites, among the rich, et cetera; and I think there's, you know, I guess I would ask if there is not a differential if you look at [or prioritze] low income, to me that

outcome is how much of their life do they live with disability versus when they die. And so I think there's some differences there that, you know, I think would be very interesting.

SW I want to make an important clarification. I don't think any of us are saying that white people experience worse disease outcomes than marginalized populations or people of color. We held a—the National Research Council and Institute of Medicine published a report that was produced by a committee that I had the honor of chairing. That report came out in 2013, exactly ten years ago, and it was called Shorter lives, poorer health. It's a 400-plus-page report that was commissioned by the NIH to document the scope of this health disadvantage, the US health disadvantage. And what we found and what Lauren was explaining is that not just the life expectancy or mortality but for dozens of health metrics--cause specific mortality rates, prevalence rates, what have you—the US was doing worse than people in other countries. Now, within the United States domestically, there is a stark racial and ethnic health disparity where those disease problems for the most part are occurring at higher rates among our marginalized populations. The point I was simply making is that even for the populations that seem to be doing the best, who seem to have the longest life expectancy in the US, and the least risk of disease, they are still doing worse than their peers in other countries.

AM And, Lauren, I mean on those structural factors that Steve mentioned that affect the whole of the United States even if it affects it differentially, we understand that, what do you think they are and how we should approach them, you know, to make sure we know, understand the cause that we can modify them?

LG Yeah, I think that's part of what is so powerful and important about the work that Steve has done in this paper is that the sort of comparative perspective really allows us to appreciate that the way we are currently experiencing population health in the United States is not the only way of being

or doing things and that there are alternatives that actually produce better outcomes. So, we can think then about what are we doing differently, both in a sort of international perspective but also within the country across states and across counties that might help us understand why population health is failing. You know, in sociology we think a lot about what we call upstream factors or these social and structural factors that sort of constrain or promote an individual's ability to lead a long and healthy life; and so for me I think if we look at other sort of patterns and events during this period, we may get some insight into sort of how to stop the decline or some of the causes of the decline. So, for example, as we've seen these sort of declines in life expectancy in the US, there are other social and economic trends that also show increasing inequality, so there's been very modest growth in average income, there's been declining rates of inter generational mobility, there's been an increase of wealth and resources among individuals at the top of our social structure. And this is kind of occurred alongside of the erosion of workers and voting rights and disinvestment from public goods and services and the real sort of explosion of corporate profit. So, I think we have to remember that social and economic policy are also health policy, and so in order to improve population health we'll likely have to sort of strengthen the social safety net, guarantee living wages, promote equality and opportunity, and make healthcare accessible and affordable.

AM Yeah, but Lauren, let me dive a little bit on that, because how do we know that—because it's logical. I mean we can say that all those factors causes the decline of life expectancy. It sounds reasonable, et cetera. How do we prove that? How do we go really to the evidence? And I think that's where your work is so interesting, and I wanted to talk more about that.

LG I think this is what you're getting at, like testing these hypotheses, particularly surrounding this idea that there is a shared underlying feeling of hopelessness and despair that is driving particular

causes of death in the United States. So, this is death due to suicide, drug overdose, and alcohol-related causes; and so part of the work that I've been doing with colleagues is really trying to take that hypothesis seriously and better define what we mean when we say despair; operationalize the measurement of despair; and then test whether it's related to the sort of behaviors that we would expect if it's truly causing, you know, increases in these particular outcomes.

SW The larger question of what's going on in this country that we're having such a bad outcome needs to be understood in terms of the context of how many other countries are outperforming the United States. So, one of the contributions of this paper that makes it different than the prior literature is not only that it went back earlier in time—the analysis begins in the 1930s to compare the US with other countries—but instead of just comparing us with peer countries which are typically defined as other high-income countries, it also includes middle-income countries and frankly even lower income countries. And we found that more than 50 countries have now outperformed the United States on life expectancy, and they include countries that are nowhere wealthy as we are, spend far less on health care, and approach policy in very different ways. As to, you know, why it is that the United States is doing worse than other countries, the committee I referenced, they identified five domains that shape our health and systematically went through each of those five domains to try to see if there's something distinguishing the United States from those other countries to explain its poor performance. So, those five areas were health care and public health, second is health behaviors, third social and economic factors, fourth the environment, and fifth public policies and social values—the most upstream macro-structural layer. And in all five of those, we found major problems in the United States compared to other countries: We don't have universal healthcare, Americans in terms of health

behaviors have high caloric intake, they own guns, the third area social and economic factors, Lauren talked about some of the deep inequalities in other areas where the US is being outperformed by other countries. The way our cities are designed and other aspects of our environment are unhealthy including the social environment and the existence of structural racism. But finally, it's our approach to policy. Those countries take a different approach to a variety of policies. To your question, Alfredo, about the evidence base for this, there is actually a rather extensive literature about the effectiveness of many of those policies in improving health outcomes, much of it actually published in the American Journal of Public Health. So, studies, for example just to pick one policy on minimum wage, a number of those papers have been published in this Journal and other journals demonstrating an effect on infant mortality and other birth outcomes. Medicaid expansion—we can go through a list of specific policies—but even if you want to play devil's advocate and discount all of that evidence, one of the important lessons of this analysis is that this should be a research question that we're paying more attention to. What is it that other countries are doing that allows them, despite far less on healthcare, to consistently outperform the United States. We identified, I think it was 17 countries that have had higher life expectancy than the United States for 50 years, 5-0. So, they've obviously figured something out, so even if we don't know for sure what it is about their approach that's making the difference, there should be a line of researching inquiry and a research priority in this country to figure that out and to start adapting those policies to the US, to Americanize them if you will, so that we can start achieving better outcomes.

AM You know why I insist so much on the evidence, because in the 19th century there was the growth of public health and they had the wrong theory. They thought that, you know, most of the diseases were caused by our pollution, and they totally neglected the progress of bacteriology.

And at the end of it, you know, the sanitarians lost all credibility, and we have today a system that is based on medical care and not public health because essentially there was a huge failure of public health. They had the right interventions but the wrong theory, and this led to disaster in terms of academics, et cetera. So, we cannot just go with our, what we feel is right, because miasma is a very powerful theory. You know, you thinking that what you breathe is what makes you sick. People have been believing that for 4,000 years at least, you know, so we need the evidence to sort the different theories and get the right policy and action.

SW We have an advantage in the United States in that we have a bit of a controlled experiment going on because we have 50 states. When we talk about the trends of the United States, US life expectancy, we're talking about the sum of 50 states, and it turns out that there's a heterogeneous pattern going on in which certain states are mainly responsible for driving this adverse health trend, but the experiment of our democracy where we have 50 states going about health policy in different ways allows us to compare the incremental benefit of certain policies versus each other's. So Medicaid expansion is an easy example to choose; EITC, the Earned Income Tax Credit, minimum wages—researches have studied how states that make different choices around those issues, tobacco taxes, and many others we could talk about experience different health outcomes and it begins to provide an evidence base to support the hypothesis that those matter. It's an increasingly important issue right now because of what's happening across our country. We saw during the pandemic the bipartisan or the partisan nature of the public health response and basically had, what I call, a macabre natural experiment in which we split up the states into two groups then had one set of states act very proactively to address the pandemic and others pushing back, and we had an outcome that was measurable within weeks and we could see very different excess death rates among the states that were less aggressive in addressing the

pandemic. And now in the wake of the pandemic, we have a period where across state capitols, there is very active efforts being made in state legislatures to change the laws and court decisions in ways that will also affect our health. So, these policy issues and their relevance to health outcomes play a central role in explaining why the US is doing worse than other countries and to the degree that we continue to pursue policies that are not conducive to health, we're going to see that gap widen.

AM Yeah, great point, absolutely.

LG So, I was just going to add I appreciate again the sort of push for evidence and I think similar, perhaps, to what you described in a preceding historical period, we've seen an attractiveness of a particular explanation for rising mid-life mortality in particular in the US, right, so we see these causes of death like suicide and alcohol-related diseases and drug overdose increasing, and it may appear that things, these are all sort of self-destructive behaviors that are rooted in a sort of sense of hopelessness that can maybe be tied to declining labor market prospects, but when we actually start to interrogate whether despair predicts these things, similarly or differently, and how the trends in these different causes of death have evolved over time and across groups, I think there's a lot more complexity than that sort of initial hypothesis would suggest, and so just one thing in particular, and Steve has worked on this quite a lot, the emphasis in the beginning of sort of narrative surrounding rising mortality has really focused primarily on white, non-Hispanic individuals with low educational attainment and sort of emphasizing their labor market experience as an explanation for such types of behaviors that lead to these causes of death. And so, I think what we've actually seen is a growing body of evidence that these causes of death and the behaviors that precede them are actually much more widely experienced across population subgroups and across race ethnicity as well as perhaps across social class.

SW Yeah, I want to add on, I'm not a fan of the depths of despair phrase because it oversimplifies, as Lauren said, what's actually going on. And if you look at cause-specific mortality rates, you'll definitely see that drug overdose and suicides and alcohol-related diseases play an out-sized role in explaining what's going on, but they are not the only sources of poor health in the United States. We talk about cardio metabolic disease, hypertensive heart disease, diabetes, maternal mortality rates. We can go through a long list of conditions that clearly are not being driven by despair. They're being driven by other factors. There's no question that someone who commits suicide is obviously dealing with a great deal of psychological distress and has reached a point of desperation to make such a choice. But despair cannot explain the vast and systemic nature of the US health disadvantage that cuts across body systems and different, you know, categories of injuries. We die in car accidents at a higher rate than people in other countries. I think getting outside the box of despair is important if we're really going to try to understand all of the root causes that are responsible.

AM In defense of Case and Deaton, we have to acknowledge that their solution are universal. I mean, the solution they propose would benefit not only the middle-aged white, non-Hispanic groups but the whole of the population like universal healthcare and insurance, et cetera, so that, there's an interesting connection between, you know, their, the agnostic of the situation and what they propose which is really universal, and I think there could be a lot of agreement on that. We get to the end of this podcast. I just want to give you the possibility to express some final comments and in particular, you know, what's the main recommendation you have for policy makers. And then, Vickie, if you want to give us your perspective on the whole discussion, I would love to hear that. So, who wants to start?

SW Go ahead, Lauren.

LG Ah, *[laughter]*, this is a really difficult question, and particularly I'm thinking about this sort of single recommendation. I'm not sure that I would have a sort of single recommendation. As Steve was saying, I think the sort of drivers of this overall decline that we see are quite disparate, and that's not to say that, you know, a single intervention like expanding insurance coverage or lowering healthcare costs or reducing access to sort of lethal means wouldn't improve population health across different outcomes, but I think fundamentally for me, my interest is not just improving population health but also in reducing health disparities. And so thinking about sort of structural interventions that can improve mobility and opportunity and decrease inequality are likely to have large and far-reaching effects for population health.

AM Thank you, Lauren. Steve?

SW Yeah, we know what the social determinants of health are, so we know if we do more around education and to broaden economic opportunity, reduce inequality, we're going to see huge gains. I feel that the problem is not a lack of solutions but a lack of political will. My main recommendation is about how to raise public awareness about the seriousness of what's happening. When we talk about this decline in life expectancy, it's being driven by an increase in death rates in young and middle-aged Americans, 25 to 64. And to put that in plain English, when death rates in that age group increase, it means that American adults are less likely to survive to age 65. So, that's been going on for a few years now, and people in my field thought that ought to be alarming enough to get policy makers motivated to do something about it. That's our work force, it's the working-age population. But now there's been a new development. Now, pediatric mortality rates are increasing. All-cause mortality rates between ages 1 and 19 are now increasing. So, now we're at a point where our children are less likely to become adults. They're less likely to reach age 20. It's time for policy makers to address this

issue. If we don't think there's good enough evidence, then fund the research so that we can get that evidence. I happen to believe we have a large body of evidence and know what to do, but for various social and political reasons we're not pursuing that agenda.

AM It's incredible. I mean in the early 20th century, that was the outcome, you know, surviving to age 20, and we're back there; that sounds just mind-blowing. So, Vickie, your last comment?

VM I really liked your question, Alfredo, about the evidence, and I think the way in which it's been talked about it's important. But I think there's a really missing factor, and particularly the missing factor to bring public health to the table, and that is—and I'm going to be a psychologist now about this—and that is in terms of people. And the whole issue as we start talking about, well is this depths of despair, [are] people hopeless, part of what we really haven't done is to make sure that the evidence is there for where people are in society. And I know we talked about it in these really fancy terms of social determinants of health and what have you, but it really is trust and trustworthiness. It really is people sometimes don't attempt to achieve their full potential because of the belief that it is blocked. You can put a school in front of a person, you can put advanced placement courses in front of the person, and if they believe there's no value, there's no job waiting for them, no one is going to lift them up, the world is unfair, then they will achieve kind of within their own expectation. You know, this notion that the Case and Deaton paper was wonderful in terms of calling attention but mainly calling attention for white males. That same attention has been lacking in the sense that pediatric deaths have always been higher in American Indian, Alaska natives, Blacks and African-Americans. So, I would say if there's a solution, it is the equity of the question. It is attention to, you know, kind of the behavioral side of what does it take to lift people up so that opportunity can really be utilized with the same drive and fervor and belief that one will be able to do better in society.

AM That's great, thank you Vickie. Thank you, Steve, thank you Lauren. Thank you for this great work you're doing and for, you know, ringing this alarm which is really concerning and hope that you will be heard, and we're all grateful for the great work you're doing and for the research and for sending us your article.

ALL Thank you!

AM And take good care.

[musical postlude]