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OPTIMIZING LONGEVITY: FROM RESEARCH TO ACTION

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C O N T E N T S

OPTIMIZING LONGEVITY: FROM RESEARCH TO ACTION

Wednesday, February 12, 2025

U.S. SENATE
SPECIAL COMMITTEE ON AGING
Washington, DC.

The Committee met, pursuant to notice, at 3:34 p.m., Room 106, Dirksen Senate Office Building, Hon. Rick Scott, Chairman of the Committee, presiding.

Present: Senator Scott, McCormick, Justice, Johnson, Moody, Husted, Gillibrand, and Alsobrooks.

OPENING STATEMENT OF SENATOR RICK SCOTT, CHAIRMAN

The CHAIRMAN. The Senate Special Committee on Aging will now come to order. I want to thank all of you for being here today. Every member of this Committee is a parent, and most of us, well, some of us are grandparents, I'm a grandparent and living a long and healthy life is something that is very important to me, and I'm sure to all of our members on this Committee, but having more time with our loved ones is only half the issue.

My hope is your focus on today is extending not just our lifespans, but the number of years we live but also our health spans; the number of years we live free of disease or disability. I'm trying to make sure I have none of those.

It's no secret that we're facing significant health issues in our country. Americans are plagued by preventable chronic diseases, cancers, and other illnesses, and these are, not all of them, but many of them are preventable. Heart disease, cancer, diabetes are the leading causes of death and disability in the United States. It's a massive problem. Six in ten Americans have at least one chronic disease, and four in 10 have two or more chronic diseases according to CDC.

Here's the good news, healthy life choices can mitigate, in some cases, completely prevent these illnesses, and if you start anytime in your life, you can change your life. I believe that the American people make smart choices when they have good information. In Florida, we see that ahead of every hurricane season, when families understand the dangers of inaction, they make the decision to do what is best for themselves and their loved ones. With hurricanes, we say that preparedness saves lives, and it does. It's no different for our health.

Think about this way, preparedness happens when education is met with action. Just having the information is not enough, you got

to take action with it. Unfortunately, the American people are being underserved in both categories, education, and action.

Too much of the conversation around health these days is reactive instead of preventative, we spend a lot of time talking about how to deal with health issues and not enough time talking about the simple ways to prevent these illnesses in the first place.

Even more frustrating is that there is a huge amount of research out there showing how Americans can live longer, healthier lives, but an inexcusable lack of action to put these best practices in place. That's what today's hearing will be about-turning research into action that improves the health and wellness of Americans, so we can all enjoy living longer, healthier lives, and spend our senior years enjoying time with family.

It's time to put a lot more focus and action on wellness and prevention. As our witnesses here, will discuss, it's not too late for anyone, even our seniors, to start making informed choices that lead your healthier, happier, and longer lives. That's why I'm proud to be part of the MAHA Caucus here in the Senate. I look forward to working with RFK Jr. and Mehmet Oz to create a healthier country.

The issue of longevity is also something our government should be more focused on. When Americans live healthier lives, healthcare costs come down. The chronic diseases I mentioned before, also leading drivers of America's $4.5 trillion in annual healthcare costs according to CDC. We're all fiduciaries of the American taxpayers, and we can do something that helps people live healthier lives while saving taxpayer money. Everybody wins.

I look forward to an insightful discussion today on how we can advance good research, take action that improves wellness for American seniors today and for generations to come. Now let me turn it over to the Ranking Member, Senator Gillibrand.

OPENING STATEMENT OF SENATOR KIRSTEN E. GILLIBRAND, RANKING MEMBER

Senator GILLIBRAND. Thank you, Chairman Scott for calling today's hearing. We all want to live a long and full life. Longevity brings people so many wonderful things like opportunities to spend time with their family, to travel, and to continue to thrive. Ensuring that we remain healthy as we age is our utmost importance.

Today we'll hear from four witnesses who represent four components of healthy aging, research, nutrition, exercise, and medicine. We all know that we should eat a healthy diet, remain active, seek preventive care, and avoid habits that contribute to disease. As we'll hear from Dr. Nosal, so many Americans do not have access to affordable healthcare, stable housing, financial security, or even walkable communities, so we need to address some of those impediments and some of those challenges.

We also know that these factors, often called social determinants of health, are often key to understanding how we can then allow for people to make those healthier choices. Those structural barriers often make it hard to achieve health at any age.

Congress has to do more to ensure that all people are able to meet their basic needs so that they can learn how to optimize their longevity and their health. It's why I've introduced the strategic

plan for aging in the last Congress. This bill would provide states with critical funding to transform their infrastructure and build communities that meet the needs of older adults and future generations.

It would address everything from housing to healthcare to food insecurity, to make sure these systems are able to support our aging population, and I'm proud that my home State of New York is in the process of developing a strategic plan. These are positive steps to helping older adults achieve longevity.

We are all aging, which is not in and of itself a disease, but a natural process, and we have a duty to ensure all Americans can age well and age gracefully. I look forward to hearing from today's witnesses.

The CHAIRMAN. Thank you, Ranking Member Gillibrand. I'd like to welcome our witnesses here today. Before we introduce our first witness, I'd like to ask each of you to be mindful of our limited time here today and keep everyone's opening statements to five minutes.

First, I'd like to introduce Dr. Rhonda Patrick. Dr. Patrick is a scientist and health educator recognized for her leadership and nutrition, aging, and disease prevention. Dr. Patrick earned her Ph.D in biomedical science, conducting her graduate research at St. Jude Children's Research Hospital.

She completed her postdoctoral fellowship at Children's Hospital Oakland Research Institute and has also conducted research on aging at the Salk Institute for Biological Studies. Dr. Patrick's goal is to challenge the status quo and encourage the wider public to think about health and longevity using a proactive preventive approach.

As the founder of FoundMyFitness, she shares expert evidence-based insights on aging and disease prevention with her own unique brand of scientific rigor, engaging millions through her website, podcast, and YouTube channel, where she has a combined following of more than two million people across the world. Dr. Patrick.

STATEMENT OF DR. RHONDA PATRICK, PH.D., FOUNDER, FOUNDMYFITNESS, SAN DIEGO, CALIFORNIA

Dr. PATRICK. Thank you, chairman Scott. Yes, my name is Rhonda Patrick. I'm happy to be here today, and is this just an introduction I'm doing or is this my opening statement?

The CHAIRMAN. We're glad you're here. If you want to do your opening statement now. Yes.

Dr. PATRICK. Okay. We have to ask ourselves if we can call ourselves the greatest nation in the world, while 70 percent, nearly three out of four adults, are overweight or obese. While we spend about 18 percent of our GDP on healthcare, more than any other nation, and yet we rank 55th in life expectancy.

Our children are getting type two diabetes at unheard of rates. This is not just a health crisis; it is a cultural crisis. Obesity is not inevitable. It is not an act of God. It is something that can be prevented, it is a choice that has been compounded by bad habits over time. It is reinforced by a culture that does not foster good decisionmaking and self-discipline.

We have created a culture where these difficult truths have become personal attacks, where physicians are afraid to talk about a patient's weight because it's too taboo. If we can't have a conversation about obesity, how can we ever solve the obesity crisis?

Obesity is associated with 13 different types of cancers. It takes between three to ten years off of life expectancy. It damages DNA, causes double stranded breaks to DNA, which is the precursor to oncogenic mutations, and it fundamentally accelerates the aging process, and yet, it is the principal difference between our Nation and the longest-lived nations.

We are overfed but undernourished. About 60 percent of daily total calories consumed by the average American come from ultra processed foods. These foods are caloric rich, they are nutrient poor, they do not increase satiety so people do not get satiated. They continue to overeat, they gain weight. They're cheaper than whole foods, so people are economically incentivized to eat unhealthily, and they activate the dopamine reward pathways in our brain causing addiction.

This trifecta of no satiety, low cost, and addiction really kind of spiral us into this process of poor health outcomes and runaway healthcare costs, and overconsumption of calories is actually not the only problem, we are also micronutrient deficient.

The food we eat is supposed to provide us with essential vitamins and minerals that run our entire metabolism. Omega–3-about 80 to 90 percent of Americans have low Omega–3 levels. We now know that low Omega–3 levels have the same mortality risk as smoking.

Vitamin D deficiency-easily corrected. Vitamin D gets converted into a steroid hormone that basically runs about five percent of our protein encoding human genome. Everything from immune function to brain function to cancer. Very important, easily corrected.

Magnesium-about half the country does not get enough magnesium from their diet. Magnesium is essential for over 300 enzymes in the body, including repairing damage to our DNA.

DNA damage is happening every day. It's not something you can see in the mirror; it's not something that you're going to know about on a day-to-day basis, but it is what promotes cancer, so decades later, it rears its ugly head.

The real problem is simpler, we actually need to start thinking about physical inactivity as a disease. We now know that it carries the same mortality risk as smoking, cardiovascular disease, and type two diabetes. Yet when the average American reaches age 50, they lose about 10 percent of their peak muscle mass, by the time they reach age 70, they're losing about 40 percent of their peak muscle mass, and this isn't just about looking strong, it's about physical independence. It's about survival, so higher muscle mass is associated with a 30 percent lower all-cause mortality. Grip strength is actually a better predictor of cardiovascular related mortality, the number one killer in United States than high blood pressure, and yet nobody talks about it, and strength is also associated with a 42 percent lower dementia risk, and yet, we think of resistance training as an add-on as a luxury. It is not, it is a fundamental pillar of aging. It increases muscle mass, muscle strength, and bone mineral density.

Fractures are a death sentence between 20 to 60 percent of Americans that have a hip fracture die within a year, and yet, resistance training can lower fracture risk by 30 to 40 percent. This is preventable. We have the information, we have the data we need to take action and resistance training, exercise, getting the right foods are the most important things that we can do to prevent disease and make a difference in our country, so thank you.

The CHAIRMAN. Thank you. Next, I'd like to introduce Dr. Eric Verdin. Dr. Verdin is the president and Chief Executive Officer of the Buck Institute for Research on Aging, the world's only research institution singularly focused on the biology of aging, yielding insights into age-related diseases before they start.

Dr. Verdin received his Doctorate of Medicine from the University of Liege and complete additional clinical and research training at Harvard Medical School. Dr. Verdin has published more than 300 scientific papers and holds more than 23 patents. He has held faculty positions at the University of Brussels, the National Institutes of Health, the Picower Institute for Medical Research, and the Gladstone Institutes. He's also a professor of medicine at University of California San Francisco. Dr. Verdin.

STATEMENT OF DR. ERIC VERDIN, MD, PRESIDENT, AND CEO BUCK INSTITUTE FOR RESEARCH ON AGING, NOVATO, CALIFORNIA

Dr. VERDIN. Good afternoon, Chair Scott, Ranking Member Gillibrand, and members of the Committee. Thank you for the opportunity to speak today.

As Chair Scott mentioned, my name is Eric Verdin. I run the Buck Institute for Research on Aging in Northern California. This Buck is the leading research organization in the world focused on the biology of aging. Our mission is to eliminate the threat of chronic disease by addressing the aging process itself.

Over the past century, public health advances and medical breakthroughs have nearly doubled lifespan. This incredible success has come with a number of challenges. We live longer, but not healthier. The end of our long lives is now characterized by a whole series of debilitating diseases, including Alzheimer's, Parkinson's, heart attacks, strokes, type two diabetes, cancer, osteoarthritis, macular degeneration.

By the time an American reaches age 65, most have at least one chronic disease of aging, and 70 percent have two. We call these conditions the chronic diseases of aging.

Our current healthcare system is focused on treating these conditions when they occur, not in preventing them in the first place. This approach is expensive, inefficient, and ultimately ineffective. The cost of managing these illnesses is actually staggering, increasing as our population ages and places an unsustainable financial and emotional burden on our healthcare system, our citizens, and their families.

In the 20th century, we dramatically reduced death from infections, from heart disease and from cancer, extending life expectancy in the process, but progress is slowing. Even if we cure cancer tomorrow, the average lifespan would increase by less than three years. The reason is simple: Aging itself and its associated complications continue unchecked.

Aging is the greatest risk factor and the main driver for these chronic diseases. The good news is that we now know from research from the past 20 years, that aging can be slowed, and we have preliminary evidence that it can actually be somewhat reverted in some cases, thereby extending a healthy lifespan and delaying disease in animal model systems. There is not a single reason why these findings should not apply to humans as well.

By focusing on aging and its mechanisms, we can compress the period of illness associated with aging so that our later years are spent in good health. The economic and public health benefits of a shift from a reactive healthcare system to true preventative healthcare based on our understanding of aging, are enormous. Studies suggest that delaying aging will generate trillions of dollars in economic gains, reduce medical costs, and increase productivity, just as vaccines and antibiotics revolutionized medicine in the past, aging science is the next great frontier in preventive healthcare.

The science is at a turning point, and as policymakers, you will play a critical role in ensuring that we realize its benefits. Investing in aging research must be your priority. The NIH should increase funding on the molecular pathways of aging, with a new emphasis on translating discoveries into human applications.

We also need a much greater focus on lifestyle interventions, nutrition, exercise, sleep, stress management, and social connections. These variables account for more than 90 percent of our healthspan and our lifespan and should be an essential part of our health policy and our research.

We must also rethink how we allocate healthcare dollars. Right now, we spend trillions on treating diseases after they arise. A shift toward prevention, one that targets aging itself, would be far more productive and effective. The FDA needs clear guidelines for therapies targeting aging.

Biotech and pharma companies are investing in this field, but without a defined regulatory pathway, progress is slowed. Finally, we need stronger public private collaborations. Translating discoveries into real world application will require coordinated efforts between industry, government, and regulatory agencies.

This is a pivotal moment. The 21st century has the potential to witness one of the most profound medical breakthroughs in history, not just treating age-related diseases, but preventing them. The goal is not just to extend lifespan, but to ensure those extra years are spent on health, dignity, and independence.

I applaud the Committee for recognizing the urgency of this issue. Aging research is at an inflection point, and with the right policies, we can transform public health for generations to come. I look forward to working with you to make this vision a reality. Thank you.

The CHAIRMAN. Thank you, Dr. Verdin. I'd like to recognize Ranking Member Gillibrand to introduce her witness. Thank you.

Senator GILLIBRAND. Dr. Sarah Nosal is a family medicine physician who practices at a federally qualified health center in the South Bronx. She's also the President elect of the American Academy of Family Physicians. Thank you for being here, Dr. Nosal.

STATEMENT OF DR. SARAH C. NOSAL, MD, FAAFP, PHYSICIAN, PRESIDENT-ELECT, AMERICAN ACADEMY OF FAMILY PHYSICIANS NEW YORK, NEW YORK

Dr. NOSAL. Thank you so much. Chairman Scott, Ranking Member, Gillibrand, and members of the Committee. Thank you for the opportunity to testify today. My name is Sarah Nosal and I'm a practicing family physician in the South Bronx. As the President-elect of the American Academy of Family Physicians, I'm honored to be here today representing more than 130,000 physicians and student members of the AAFP.

I currently work at the Institute for Family Health, a network of federally qualified health centers with more than 27 locations across New York State. I am proud to be a family physician. In my office I have the honor and privilege of taking care of not just patients, but families and communities.

Last month, Chairman Scott laid out his priorities, which identified four aspects of someone to be well: having their physical health, financial security, a safe community to live in, and family and community support. Each of these are rooted in the very fundamentals of family medicine.

I have practiced for more than two decades in a community that ranks last for health outcomes in New York. My personal patient panel approaches nearly 90 percent Medicaid beneficiaries. A typical patient of mine presents with cane in hand, living with HIV, diabetes, hypertension, and chronic kidney disease. Patient tailored counseling on diet and exercise is something I do on every visit.

Unfortunately, while I talk about the importance of eating healthy whole foods, the reality is most of them are often out of reach, financially or otherwise inaccessible to most of my patients. This is only one of the health-related social needs that impact them. A lack of stable housing, reliable transportation, safe places to exercise and financial security also make it difficult, if not impossible for my patients to afford medications and even make it to medical visits.

Research has consistently shown that health related social needs can worsen health outcomes. On more than one occasion when I've asked a patient why they were not taking their insulin as I directed, I would learn that they did not have electricity in their apartments for the last few weeks when they fell behind on rent. Patients at our rural clinic have been known to walk long distances along roadsides without walkways.

At our urban clinic, patients with walkers face four flights of stairs at the subway. Many of my patients experience food insecurity for which the USDA SNAP program is a lifeline. Congress can strengthen to ensure it better serves those in need. However, that alone will not solve my patients' challenges. While diet and exercise are important to health and wellness, we cannot ignore that many communities are designed with them out of reach. Food and exercise can only be medicine if they're easily accessible.

As a family physician, I recommend a healthy diet and working out, but it is up to you, our elected leaders, to ensure the resources are in place to fill that prescription. Congress must support promising innovative policies to address health related social needs, such as expanding Medicaid coverage for reimbursable services.

For example, some states have used existing Medicaid authorities to provide medically tailored meals to whole households, not just the eligible beneficiary. This recognizes that a food insecure parent will often give their meal to a hungry child rather than feed themselves.

Many of my younger middle-aged patients are caregivers for both young children and older relatives. Any reforms that affect their healthcare coverage may impact their employment, their ability to help their mother make rent, to take their grandma to the laundromat or contribute to any productive, meaningful way in their community. Insurance does not help patients if there is no access to care.

Community health centers provide care to those in underserved areas and are often the only accessible care setting for many. CHCs have a significant economic impact and are incredibly efficient in terms of healthcare spending. Further, many CHCs are training the next generation of family physicians through HRSA's Teaching Health Center Graduate Medical Education Program.

Thanks to THCGME, our system has multiple family medicine residency programs. THCs have the highest success rate of any program for retaining residents in communities of need. Unfortunately, CHS and THCGME rely on a patchwork of inconsistent temporary federal funding. Right now, both programs are only funded through March 31st.

To support and improve the quality of life for all patients and in all communities, I urge Congress to make long-term funding for CHCs and the THCGME a priority. In closing, thank you again for this opportunity to testify, and I look forward to answering your questions.

The CHAIRMAN. Thank you. We do have one more witness coming, but he's had some travel issues, so he'll be here in just a few minutes, so we'll go ahead and go to questions and I'll start.

First off, thanks to all of you for being here. Thanks for caring. Dr. Patrick, our healthcare system is broken. It's reactive, not preventative. How do we get more longevity focused care into mainstream medicine and what's standing in the way?

Dr. PATRICK. Well, I think that the most important thing that we can do right now for longevity medicine is actually move more, and I think that the federal exercise guidelines are sort of out of date, to be honest. We don't focus at all on resistance training, it says two days a week. What does that mean? I mean, to be honest, people might just start doing some bicep curls, and I mean that there's not information there.

You need to give people specific information, actionable information. I think resistance training. OK, well, you can do, you know, seven or eight-or fifteen workouts throughout the week, and that's as good as doing three 45-minute workouts in terms of gaining muscle mass and strength, so giving some more specifics in terms of like types of exercise also, compound lifts, like you want to basically make people be physically independent, so you don't want biceps, you want people to be doing squats or you want them to be doing you know, rows or, dead lifts. Things like these that are multi-joint, right.

I also think exercise snacks is a big one, so there's nothing in the guidelines about how people can get exercise benefits by doing these short bursts of physical activity. Tons of research coming out on this, I mean, we're talking, a recent study just showed that doing 10 body weight squats every 45 minutes over a seven-and-a-half-hour work week was better at improving blood sugar regulation than a 30-minute walk. I mean, that's like two and a half minutes a day.

There are also tons of evidence coming out on these unstructured exercise snacks, and that's also something that can be recommended, so these are the kind of things that you take the stairs instead of the elevator or you walk briskly instead of, you know, taking a car to work.

There have been studies showing that people wearing these accelerometers are able to reduce their cancer mortality by 40 percent, their cardiovascular related mortality by 50 percent. If they're doing nine minutes a day of these unstructured snacks where they're just basically taking advantage of everyday situations to get physically active.

It doesn't cost money to do body weight squats. You don't have to have a gym membership, so I think that's one important way that I think information can be improved and more targeted.

The CHAIRMAN. Thanks. Dr. Verdin, what's the most important breakthrough in aging research that we should be paying attention to, and how can we use it to actually help people live healthier longer lives?

Dr. VERDIN. There's been an explosion of understanding of the biology of aging, and in particular, the identification of what we call molecular targets. We now understand that targeting unique molecules can actually have profound effects on the whole aging process and its associated diseases.

I also want to expand on what Rhonda just talked about, this idea of lifestyle factors. We talked about exercise, but there's a group of lifestyle factors that we all know about: nutrition, physical activity, sleep, human-connections that are really the critical determinant of your longevity. Actually, more than 90 percent of our longevity for most people is determined by the way we live.

What's really important is to know also each of these variables are stackable. That is, if you are eating well, you're going to live longer, but if you actually exercise on top of it, you're going to live even longer, and if you have good human connections, you're going to live longer.

Today, most of us in this country could expect to live to 90 to 95 in good health if we were to do everything right, so that's today, and there are communities within the U.S. who live today close to 90 years old on average, and I can guarantee that not all these communities are actually optimized in terms of doing everything.

Right now, as a Nation, as someone who studies aging, I'm struck by the divide, the lack of knowledge of some of the things that we know are conducive to good health are not actually implemented, and I want to add one last point about exercise. A 15-minute walk in the morning and at night will lead to a reduction of heart attack, stroke, cancer, all of these chronic diseases of aging by 40 percent, that's 30 minutes of walking every day.

I defy anyone, no matter what their lifestyle is, to tell me that they do not have the time to walk 15 minutes in the morning and 15 minutes at night. This is the type of information that people are not aware of. It could have a profound effect on the health of our population, so I'm pretty passionate about lifestyle.

Next will be of course the additional interventions that the research is pushing forward, but for me, the foundation has to be these lifestyle factors. Drugs that target the aging process will come in the future; we're working on them. There are some really promising leads, but there should not be a replacement for reestablishing a healthy lifestyle in ourselves, in the population at large.

The CHAIRMAN. Thanks. Let me turn over for questions to Ranking Member Gillibrand.

Senator GILLIBRAND. Thank you, Mr. Chairman. Dr. Nosal, how do you say it?

Dr. NOSAL. You said it perfectly from the beginning.

Senator GILLIBRAND. Sometimes there's barriers to the things that we know are needed for longevity, healthy eating is one. Obviously, there's barriers to affordability, there's barriers like food deserts when it's not easy to get to a grocery store. Sometimes, it's just mobility, if you're at a fifth store building and you're not very mobile and you can't walk to the grocery store and you don't have a car, and, and it's hard to get on the bus, the many barriers.

One of the barriers I want to talk about with you is the nutritious aspect of it. A lot of people don't even know what's nutritious. Our doctors don't really study it in medicine. It's not common knowledge in culture. It's really, it's not well known what's nutritious and what's good for you.

One of the things that you talked about in your testimony, a four-year nationwide pilot program through Medicare to provide medically tailored meals to eligible Medicare beneficiaries with diet impacted conditions. Now this is innovation. We know that a medically tailored meal for somebody with diabetes is going to be extremely healthy for them. It'll have a lot more fruits and vegetables in it, it will have whole grains, it will have lean proteins, it will have no processed foods.

Medically tailored meals really is pretty powerful. Can you talk about that a little bit and how could we implement it as just one of the barriers?

Dr. NOSAL. Thank you so much. As I said, I'm a practicing family doctor. I was seeing patients this week, and I actually saw a patient who I really wish this was one of the services I was able to prescribe her as part of her Medicare coverage. She gave me permission to share her story.

This is a woman I've taken care of for quite a number of years and has done a really great job at being physically active to the best of her ability. She uses a rolling walker with chair and she has really well controlled her diabetes, as well as it can be controlled, reduced her risk of complications, and then came in this week and saw me and her diabetes was fully uncontrolled, and I asked her what was going on and she said her apartment had moved.

Previously where she lived, she knew where the local soup kitchen was and the food pantry. She used her SNAP benefits, as I work

with my patients to use their SNAP benefits for fruits and vegetables, use the other resources which are more likely to give you more processed foods or carbohydrates, get those other foods there, but save your benefits and you can get some extra incentives.

This is really a patient who cannot find in her community where she is, the resources to have the healthy meal that she needs, that it will be part of her remaining well and full, and the idea that I could have prescribed her an appropriate low calorie, diabetic diet full of whole plant you know, protein and foods, would be the complete difference in her entire life.

I agree with those speakers before me that, your ability to move and your ability to eat healthy and have access to those nutritious food resources, this could be groundbreaking and life changing for our older adults, and this can be done right through our health centers, through our community health centers that are in the depths of the communities where we can do this for a whole family and prevent the outcomes.

I don't need to take care of people in a state of disease. We are ready and willing and able in our health centers to care for communities that we know their risk is greater, but our ability to provide these medically tailored meals, we'll change both cost and outcomes in that community.

Senator GILLIBRAND. Along the lines of impediments to access to nutritious meals, we have SNAP benefits. With SNAP benefits you go to the grocery store and buy your groceries and cook whatever you want, but for older people who aren't cooking as much anymore, again, who can't carry the two bags of groceries, of all those fruits and vegetables, and the whole grains that they're going to then cook appropriately to eat.

What do you think about the idea of being able to use SNAP benefits for congregate meals or for organizations like Meals on Wheels that deliver hot meals? Like is that a way to get over some of these barriers to the nutritious or Medically Tailored Meals that people need?

Dr. NOSAL. It would be tremendous if we could both increase funding for SNAP benefits. I can tell you they don't meet the needs even right now, but the kinds of creative programs I know that we've done where I live, where we have been able to increase funding for fruits and vegetables, but absolutely.

My elderly patients are often only eating a hot meal if a family member comes to help care for them and cook for them, they often have nutritional deficiencies because they are in fact eating things that either come in a bag or a box, which are my top list of things I tell patients to try to not eat, but that really isn't feasible or possible for them. It would be astounding if they could actually use those benefits and have that kind of food delivered at their home. It would be life changing.

The CHAIRMAN. Thank you. Now I'd like to recognize our last witness. I guess he had some travel issues, so we are glad you made it, Dan Buettner. Dan is an explorer, national Geographic Fellow, an award-winning journalist and producer, New York Times bestselling author and founder of Blue Zones.

The term Blue Zones was first coined by Dan in 2004 and refers to areas with high concentrations of centenarians? Individuals who

live to be over a hundred years old. His team uses research to highlight and promote specific life lifestyle habits that are tied to extended longevity and vitality. Thanks for being here, and we are looking forward to hearing your presentation.

STATEMENT OF DAN BUETTNER, FOUNDER, BLUE ZONES MIAMI, FLORIDA

Mr. BUETTNER. I am honored to be here. My goal over the next four minutes and 54 seconds is to convince you that most of what we think works for healthy aging and longevity is either in effective or just plain wrong.

I know most of you know these statistics, but we're spending $4.9 trillion on healthcare per year. About 85 percent of that money is spent on people with chronic conditions, most of them are avoidable chronic conditions. Another $300 billion on exercise and diet programs, and then another 42 billion on anti-aging industry that has failed to produce even one pill supplement or interventions that's been shown to stop reverse or slow aging, so if that doesn't work, what does?

Twenty years ago, working with National Geographic and a team of demographers, we found five areas in the world where people are living statistically longest. Something called the Danish Twin Study established that only about 15 percent of how long we live is dictated by our genes, 85 percent is something else.

The reason we find that something else among these five populations who are living about 10 years longer at middle age-our age. The reason they're living 10 years longer is because they're avoiding the diseases that foreshorten American's lives and are kind of bankrupting us in many ways.

What are they doing? Well, none of them are dieting or exercising or running down to Latin America for stem cell treatments. Every time they go to work or a friend's house or out to eat on occasions they walk, they're getting eight to 10,000 steps per day mindlessly. The cheapest and most accessible foods for them are peasant foods. Their whole grains, their tubers, the cornerstone of every longevity diet in the world is beans. They're eating about a cup of beans a day.

They're not spending time on Facebook, instead, they're spending time in face-to-face conversations, living in extended families, connecting with their neighbors. They have vocabulary for purpose. Now, there's an idea, purpose. We know that people have a sense of purpose live about eight years longer than people who are rudderless. They manifest their purpose usually in family, but also with religion.

We know people who show up to church or temple or mosque live about four years longer than people who don't show up at all, so taking this insight that where people are living the longest, it's not because they try, it's not because they pursue longevity. We tend to think that health is a result of a pursuit in this country, actually, it ensues. It's a result of an environment that makes a healthy choice, the easy choice. We're not relying on poor mothers to make the right choice, and then sending them out into an environment where 97 out of a 100 food choices are bad.

About 15 years ago, working with AARP and the University of Minnesota, we set out to manufacture Blue Zones by working with municipal governments where you can get policy done to help them decide on policies that favor healthy food over junk food and junk food marketing. To favor the human being over the motorists, to favor the non-smoker over the smoker, and to certify all the restaurants, grocery stores, workplace, schools, and churches who agreed to optimize their designs and their policies so that people are nudged into moving more, eating better, and socializing more.

The proof is in the pudding, our very first town, Albert Lea, Minnesota, we saw a 30 percent drop in healthcare cost among city workers, that was in 2009. In the beach cities of California, we saw about a 25 percent drop in obesity in the 10 years we were there, and in Fort Worth Texas, they themselves reported about a quarter of a billion dollars in healthcare cost savings after the five-years we were there. We succeeded, not because we came in telling people what to do, came in with an agenda. We simply came in with policy options and place options that made the healthy choice an easy choice.

We set people, we set Americans up for success. Right now, our food environment and our built environment sets people up for failure. We have about 25 times more fast-food restaurants than we did in 1980, when we had a third the rate of obesity that we have right now.

The big idea I'd ask you to think about, is shifting the focus from changing people's behavior and individual responsibility and setting Americans up for success by designing our cities so the healthy choice is not only the easy choice, but the unavoidable choice.

The CHAIRMAN. Thank you. Yes. I live in Naples, Florida, and they're working

Mr. BUETTNER. That's right. We have Blue Zone City in Naples and Jacksonville, Florida. I salute them.

The CHAIRMAN. They're doing a good job. Let me turn it over now to Senator Johnson

Senator JOHNSON. Thank you, Mr. Chairman. It's very good hearing, very interesting testimony. I held an event at the end of September with RFK Junior, with Dr. Casey Means, who'd written a book that interested me, ″Good Energy,″ talking about metabolic health. Awful lot of the testimony here relates to that in some way, shape or form, I think to the most significant parts of that testimony, Dr. Chris Palmer, he's a psychiatrist that does a lot of work in terms of nutrition, relates to mental health issues, said they don't want to know the root cause of chronic illness.

Dr. Casey Means talked about it in her medical education. They didn't spend an hour talking about nutrition and Mr. Buettner, you're talking about, you know, trying to design a city for the right food choices, but again, what are those right food choices? I think it's becoming pretty obvious, and I think that's one of the questions I have for you know, Dr. Patrick.

We've known about this for quite some time, right? I mean, the food pyramid was a marketing, but there's nothing scientific about that. It was just a marketing deal. We've gone to seed oils. Again, the problem we have as a consumer is you have all the books out there, you have all these different theories, who do you believe? It's

a very confusing thing. Unless you just go completely simple, all whole foods, no ultra processed food, try and approach it that way, but Dr. Patrick, just kind of comment on that.

Dr. PATRICK. Well, I do think that going whole Foods and trying to reduce your ultra processed foods as much as possible is the way to go, and I think we have a lot more information now than we did, you know, 30, 40 years ago. We know that these ultra processed foods are not causing satiety. That is, we know that they're activating this addictive reward pathways in our brain, so I think that information is a little more in depth.

I also think that some of the information on like, why do we eat? Okay, if we have nutrition in primary and secondary school, definitely medical school, you're right. I mean, one class in nutrition, it's absurd, right? I mean, if we can start educating at an early age, children why they eat, what are they supposed to get from their food? Why do you want to eat leafy greens, magnesium's there? What does magnesium do? What happens if you don't get magnesium? What is cancer?

There's even some data out of Japan, they have that program in Japan where they have in primary schools? Nutrition education, and they've shown longitudinal studies that people that were educated with nutrition in childhood are much more likely to eat healthy, nutritious later in life.

Senator JOHNSON. You know, part of the problem is just our medical education, our medical establishment. They call it Rockefeller medicine, all based on pharmaceuticals, and it's awful appealing, all we have to do is get a shot, or all we have to do is take a pill and you know, we're going to be well, when we think probably the exact opposite is true.

Eighty-five percent of our $4.9 trillion spend is on chronic illness, it's about preventing that chronic illness. Dr. Verdin, you talked about the basics, right? Nutrition, exercise and not necessarily—and there's all kinds of different opinions on the right type of exercise. Being active makes sense, getting good sleep, stress management, I mean, all those things make perfect sense.

How do we break through, how do we reeducate our doctors? How do we reeducate our public policy here? One thing we could probably do is with our SNAP program not allow certain foods to be purchased. The really highly ultra processed, the ones that we really are pretty convinced are not good for you. I mean, that would be a good switch, wouldn't it, Dr. Verdin?

Dr. VERDIN. Thank you for the question. I think first, let me completely agree with you on the idea that the foundation has to be there, the lifestyle factors, and the drugs should only come on top or in a subset of the population that is a increased risk of accelerated aging.

That being said, there is something that is happening in the aging field, which I think is going to allow us to work through the noise that you described, which diet, paleo diet, ketogenic diet, Atkins, I mean, there's proliferation, people are completely confused. The same about exercise. What are you supposed to do? Is it a strength training? Is it yoga? Is it endurance, aerobic, anaerobic? People essentially throw up their arms in the sky and say, I don't

know what to do. The same about sleep. Well, how much should you sleep? What is optimal?

The whole field of aging right now is in the process of developing what we call these biomarkers of aging, which allow us to measure and to predict the effect of interventions in the long term, so instead of doing a clinical trial, where you would take a group and have some exercise and do strength training and another one do flexibility and follow them for 30 years to see what happened to them, these novel markers allow us within a much shorter period within one year to actually detect a signature.

There is the promise that comes with further developing these tools. I think we need support to be able to actually test these interventions against one another so that we can actually make the best recommendation to people in terms of what is really the optimal way to actually live and to optimize your health. That's where the field is.

Again, there's a bottleneck in terms of the funding. These are not cheap studies, but they could have massive implications in terms of public policy recommendations in terms of what is the optimal way to exercise. I mentioned the point of you know, walking 30 minutes a day, that's already good. It's a 40 percent reduction. Can we get to an 80 percent reduction by adding another modality? To what degree are these interventions going to be in individual? That's a whole other area and field is studying.

Senator JOHNSON. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Johnson. Senator Husted.

Senator HUSTED. Thank you, Mr. Chairman. I appreciate the testimony, the thoughts, and the conversation. I listen, you can read, its exercise, its diet, it's lifestyle choices. If we just made better decisions and more active on those things we would drive down costs, we'd improve quality of life. I heard a lot of talk about longevity, it's not just the number of years, it's the quality of those years that also are almost immeasurable in terms of their value of terms of your productivity, your joy, your ability to contribute to your family, to your community, if you have those things.

I was also thinking when you were talking about the access to food, I was also thinking about when you live in a high crime neighborhood, how much harder it also is to be active and to live a healthier life.

I want to ask any of you that has have a thought on this, what about this: our technologies, they seem to be driving isolation and idleness, and has there—as we look at the difficulty we've had as Americans of getting healthier, even though we know all of these things, is there any evidence that you've seen about how our technology is driving isolation or idleness that would affect our health in a negative way versus a positive way? I'm just interested if any of you have thoughts on that.

Dr. PATRICK. I have thoughts on the opposite. I mean, so most of us have an Apple Watch or a Fitbit or some sort of wearable device where we can get to measure our heart rate, resting heart rate or during exercise, a lot of different health parameters, and yet I think there's a lot of regulations there that don't allow those devices to help give us medical advice.

I mean, we have like AI coming out with this. AI is now being shown to be as good as or better at predicting, disease and illness and looking at all the variables and contribute to that than physicians are, and yet we can't use that information, that health information for anything, and it seems like it's something that would be very useful for physicians

Senator HUSTED. Let me challenge you a bit on that. I agree that those things are valuable, I'm not sure that most of us have those things, though. I read in the last couple of years that the average prisoner spends more time outside a day than the average child.

I'm just wondering, when you read things like that and you see the amount of the way that social media's affecting particularly young people and that fewer of them are participating in sports, it seems like from the very beginning that we are getting children off to the wrong start as it relates to this, so I see some heads nodding. Others might have thoughts on that.

Dr. NOSAL. As a family physician, I take care of people in pregnancy, newborns, small children, I get to see great grandparents and the entire family. I think it's an interesting perspective across technology. I'm also the Chief Medical Information Officer at my organization, so overseeing the rollout of our electronic health record and patient portals in English and in Spanish.

I am right with you. I really worry about my young people in school. When I'm seeing the kids in my practice, I find out what sports they're doing, how much physical activity is in their afterschool activity? How often do they have recess? We know, particularly for young people, and it's a little different for adults about obesity and weight for young people, it really, really matters that activity level that they're doing.

We have models where schools will not have cell phones for during the school day, and you'll get rid of your cell phone at the start of the day and you'll get it back later, but I'm not seeing paired with that, the kind of investment in making sure we have that funding and education, that teaching staff and the supervision and expertise to make that physical activity possible there, and that is a wonderful place for prevention.

I want to come to the other part of technology for our older adults, our rural communities that don't have broadband access, that can't communicate or take advantage of things like telehealth, which are critical when we're following up complex medical issues or preventing falls and trying to really make sure we keep our older adults safe, that it's actually really critical.

Not only that we have infrastructure that makes access possible, but our isolated, older adults and helping and teaching and finding ways both to connect with your physician and with your community, that there's worthy investment there as well.

Senator HUSTED. Yes, no doubt. We've made a lot of progress on telehealth and allowing particularly for elderly, others thought.

Dr. VERDIN. Maybe if I can add something as a parent. I clearly have seen, and I think all of us who have children have seen the effect of portables on social isolation and inactive physical inactivity.

I do not know, as a scientist working on aging, how to solve this problem. Clearly there are other countries that have installed a

number of regulations that limit the use of these portables and iPhones and so on by younger individuals who are obviously more vulnerable.

One thing to note is that these are the formative years where critical habits are formed that will last a lifetime. I Just wanted to amplify the point about wearables. Wearables are, I agree with you, today are the remit of a subset of the population that is generally more well to do and able to afford it and more interested in its health.

I can see the day changing though, where wearables are going to be part of the tools used by physicians especially in areas that are remote in combination with telemedicine for increasing the health in those populations that might be more isolated and not have access to everyday physicians.

The wearable technologies are rapidly accelerating. They are actually, I predict that within the next five years, they will be valuable, recognized, medical tools in terms of assessing your rates for chronic disease, simply by measuring your movements, looking at your blood sugar, looking at a whole series of variables that I see under your blood pressure and so on, so I think they will become important tools and with their democratization, we can expect the prices to go down and the value to go up.

I think this is something if I were a regulator that I would keep my eyes on as a potential changing factor in the landscape of medicine. Thank you.

Senator HUSTED. Thank you

The CHAIRMAN. Senator Justice.

Senator JUSTICE. First of all, to our panel and our great witnesses, I didn't have the opportunity to hear you, but I'm sure that we're all singing from the choir, that's all there's to it. I've got to say just this, I'm from West Virginia, and West Virginia has surely got some really tough issues going on. To say the very least, we're the third oldest State in the country. You know, we have a life expectancy of 72.8 years, which is the second lowest, 20 percent of our folks in West Virginia are 65 and older.

We do have affordable housing in West Virginia, and that helps a bunch, but we've got risk factors like you can't imagine, whether they be social isolation or the risk of falls, you know, they could very well be food insecurity, the lack of broadband, transportation issues or medical care issues and obesity. Obesity, absolutely the worst of the worst.

Now, I don't look at by any stretch of the imagination, but I'm trying real hard, and between baby dog and I together, we continue to try really hard. I've lost 55 pounds, and I'm really proud of that, and I've got a long way to go.

Now, baby dog isn't subscribing to the same theory that I'm subscribing to, but for those of you that know her, she's a little brown, 62-pound watermelon, and she's a little bulldog and she absolutely loves everybody, but let me just tell you this, in West Virginia, we do have some things that are going on and are really, really neat stuff. We have the fact that we're a community, and it is so important, absolutely from the standpoint of family and community, it's so important to our seniors.

I just think about this beautiful little girl that's here and everything and if you could tell me her name, please, I can't—well, Addison, you are absolutely spectacularly beautiful, and I will promise you, if you'll look up online or whatever, baby dog, and look up and just know how much she would love you too.

I tell everyone, and I tell you this, just speaking from my heart, I tell you that in many ways, we are here for Addison. Not only are we here for all those of our seniors, all those of our aging, but we're here for Addison, because somehow, we've got to change the path of what we are doing today.

For that reason, and I don't want this to be such a political issue, but for that reason, that's why I will vote for RFK Junior because I believe he is at least trying to bring more awareness to all of us.

In all honesty, there's so many in my state that need help in every single way, but more than anything, we need knowledge. We need absolutely us to step up. I'll never forget my dad; I'll never forget him ever saying just this. He was trying to figure out where to build a road, and really and truly, he kept listening to engineers all around him, and finally the lead engineer's name was Kirby Bragg, and he looked at Kirby and said, ″Kirby, I don't know what the right answer is, but this dead gum well isn't it.″

Now, if you just think about just that, what we're doing in America today, isn't it. That's all there is to it, and we got to do better, and we got to do better for all of us, for myself, believe it or not, for baby dog, but more than anything for Addison, so Addison, thank you for being here, and thank you so much, Mr. Chairman. I'll yield back to you.

The CHAIRMAN. Thank you, Senator. Senator Moody.

Senator MOODY. Thank you, Senator Scott. I agree with you, Senator Justice. I think we're all sitting up here thinking that we can do better, especially with us Senators who sit around a lot. I am only three weeks into this tenure, and I'm noticing that we sit around a lot.

Thank you for being here today, thank you, Chairman Scott and Ranking Member Gillibrand, for holding this important hearing. I think it's important not just for those of us that are learning more about it on the Aging Committee, but those who may be watching and sharing this information around the country.

I agree with Senator Justice, becoming more aware and making sure that others within our states are aware, it's an incredible first step to making America healthy again, and so, thank you for taking the time to be here. I know it isn't always easy to break away from a practice or travel from another State across the country. I really appreciate it. I know some of you are residents. I am the newest senator from Florida. I know some of you are my constituents, so I'm grateful.

One of the things that I think our longstanding reactive approach to healthcare means is we spend a lot more money than we probably need to, and I was most fascinated by your work, Mr. Buettner. I've actually watched some of the documentaries that you've helped on. In fact, I've recommended my own parents watch those, and I'm fascinated.

I'm from a state that is growing exponentially, and there are many new communities being built. There's also those that are

going back and trying to readdress how they might rethink their existing communities, and I was really taken with some of the statistics that you included within your written testimony and some of the places that you've worked with reported annual savings.

Cities reported not just a drop in their physical BMI, but an actual drop in cost to their cities. I think it was in Minnesota you saw a town that saved 30 percent of their city worker healthcare costs since they started.

I was just wondering, in terms of existing communities that are trying to go back and reconfigure or new ones that you're working with to kind of build a city to highlight health and community and healthier options. Have you done a study that shows how much might be saved versus what the input of cost to a community or city would be?

Mr. BUETTNER. If you drop the BMI or the obesity rate in a city of a million people, it saves about 19,000 heart attacks over time. Average heart attack costs about $120,000, so you don't have to have a big movement to make a big difference, but essentially what I'm pitching to all you guys is the notion that we tend to think in silver bullets, there's going to be this one magical intervention that's going to save us. Meanwhile, we're surrounded by what I call silver buckshot, these small nudges, and defaults.

In all due respect to the Federal Government, it's a slow-moving tanker, it's hard to move, but city governments, municipal governments, they could move in a hurry. A mayor and a city council in coordination with the business community, they can get a lot done and simple things, and by the way, we've done this in Naples, Florida, and we're doing it in Jacksonville, something called a Complete Streets policy.

Do you know you can raise the physical activity level of an entire city by 20 percent, by just building streets? They invite pedestrians, they invite people to socialize, they invite cyclists instead of just cars. That doesn't cost any extra money. Once every seven years, a street needs to be redone, and when you redo that street, you can just as easily build it for humans and cars rather than just cars, so it's seen clearly.

We know there's a clear correlation between the number of fast-food restaurants permits and the obesity rate of a city. If you live in a neighborhood with more than seven fast food restaurants within a half mile of your home, you're about 35 percent more likely to be obese than if there are fewer than three. In the hands of a city council member, they may decide, well, our children's health is more important than another burger joint, and make the changes appropriately.

Billboard advertising: we know that two identical neighborhoods and one neighborhood has billboard advertising, the other one doesn't. The neighborhood with billboard advertising has about 15 percent higher BMI, so what we try to do is, rather than telling cities what to do, we show them the evidence, we give them about 30 different policies in each of smoking-built environment and food, things that cost them nothing, and we ask them, would this be effective for you? Would this be feasible for you? And if they say so, then we help them get it done.

The wrong thing to do is to come in and say there's a silver bullet. The wrong thing to do is to come in and tell people what to do, but when you show them the evidence, America's smart, it's a lot of very smart mayors and city council people who are tired of seeing their children grow up overweight and tired of seeing their neighbors die prematurely of heart disease and type two diabetes, and this is something we can act on right now.

I guess the pitch for Federal Government is to think about empowering, designing cities for health rather than continuing to look for just a silver bullet.

Senator MOODY. Thank you, chairman.

The CHAIRMAN. Thank you, Senator. Mr. Buettner, we hear a lot about diet and exercise, but you've said social connections and purpose are just as important. What can we do without more government spending to encourage stronger communities and healthier lifestyles?

Mr. BUETTNER. My name's Buettner. This is a small detail for the congressional.

Senator MOODY. I started that, I'm sorry, that was your fault. Well, it's my fault. I own that. I apologize.

Mr. BUETTNER. What's that?

Senator MOODY. I said I started that. I apologize.

Mr. BUETTNER. Oh, no, no problem. You guys are important. Believe it or not, it is encouraging people to eat at home. Every time we go out to eat, we consume about 300 more calories than we would if we ate at home, and those calories are going to be more laid in with sodium, ultra processed food, and sugar. You can control the calories when you live at home.

We think about educating people. One of my fellow testifiers here that had a very good point about teaching children how to cook at home, I know it sounds so hard. I quote from for National Geographic, I studied a place in, in Finland called North Karelia, had the highest rate of cardiovascular disease in the world in 1972, they brought it down by 50 percent. How did they do it?

They did it by changing the environment, making healthy choices easier, and one of those was using church basements to teach mothers how to cook with plants rather than just with meat, and that's an approach that works.

Once again, you know, if you take a person, a couch potato who is getting zero physical activity and get them to walk 20 minutes a day, you raise their life expectancy by three years. There's no pill, no pharmaceutical in the world that'll raise life expectancy by 3 years.

If you just get people to go from zero to 20 minutes, we can achieve that by designing our streets and our sidewalks so it's easy for people to go to the grocery stores, easy for people to pick up their coffee, easy for kids to walk to school. It's a very simple solution. It's within our grasp, and it can potentially cost nothing.

The CHAIRMAN. I think now we'll turn it over to Senator Alsobrooks. By the way, I have to go to a budget hearing, so I'll turn it over to Senator Moody, and I think you had some more questions Senator Gillibrand. Thank you, each of you for being here, and I love what you're doing.

Senator ALSOBROOKS. All right, thank you so much Mr. Chair and Ranking Member for hosting this important hearing today, and thank you so much as well to our witnesses who have been here.

Advancing research on healthy aging is key to helping seniors live longer lives, and Congress must ensure, I believe, that we take action to improve the quality of life for our seniors, so my first question is for Dr. Verdin. As someone who's worked at NIH and continues to engage in aging related research, the question is, would you speak to the role of the National Institutes on Aging and advancing research on longevity and health span?

Dr. VERDIN. Thank you, Senator. I came to this country 42 years ago with a suitcase and a MD degree from Belgium, and I was attracted at that time by what I knew about the NIH and the vision and the biomedical research enterprise that had been created in this country, and I must say that I never looked back and one day became an American citizen, made this country my home, and still at this point directing a whole institute, focused on the biology of aging is my dream job.

I think the NIH has been instrumental in creating what has been called the crown jewel of the American government, and frankly, the crown jewel of all biomedical research organizations in the world. The U.S., thanks to the work and the support of the NIH, has created the best biomedical research institute anywhere.

Remarkably, every dollar that is being invested in the NIH yields two of economic output, which is a remarkable outcome for our society. This has yielded countless cures. It has created millions of jobs, created a whole new industry, the whole biotechnology industry, and has given the U.S. a leadership position in the world. We still attract the very best to come and do research and conduct their careers here.

I think from a personal point of view, but also for the country, I think the output from the investment of Congress in the NIH has been nothing short of remarkable.

Senator ALSOBROOKS. I could not disagree with you, Dr. Verdin. I agree, especially your characterization that it's a crown jewel. I think it's also very important to aging research and to cures, so would you say that they are right now, NIH as you may know, is subject to a number of cuts that have been proposed, and would you say that cuts to NIH funding threaten the progress that we have made in research on the aging brain, on Alzheimer's disease and on dementia research?

Dr. VERDIN. Dramatically so, and I do worry about the institute that I direct and I worry about this leadership position that we are in right now. It's a comfortable position; we are leading by far every other country in the world. China is making great strides in terms of very pushing into biology.

A recent JP Morgan meeting in San Francisco about a month ago saw very strong presence from China. I think there's a danger that we are going to be relinquishing this leadership position, that we are going to be missing out on new opportunities to develop new treatments, especially in the field of aging, and that we are going to be basically losing a lot of jobs.

There's no way around this from a personal point of view in terms of the institute that I direct. If these cuts actually come into

effect the way we have seen them, we will have layoffs. We will have a difficult time, a difficult road ahead, and I think this will be replicated across the whole country, red and blue states.

Senator ALSOBROOKS. I agree. Thank you so much, Dr. Verdin. Just quickly, my time is winding. Also wanted to ask Dr. Nosal and the question for you is regarding research and preventative care, or actually the question I want to ask you about, since I just have a few moments, is about marginalized communities and Federal research funding that's helped make significant advances and understanding aging and age-related diseases, and ask you how should NIH ensure that its aging research includes diverse populations particularly for historically marginalized communities? And I know that's a longer, we don't have very much time, but whatever you can say to that would be helpful.

Dr. NOSAL. It is critical that research is happening in our communities and my communities that have black and brown individuals of various backgrounds, ethnicities from around our world. That how they are impacted and what needs to be done to really prevent the heavy cost of care in the future is different because of the dynamics of the communities that we're in.

Research into connections with faith-based organizations, connection with communities and we really see that those are opportunities within communities like mine that aren't being leveraged for research, where we know trust and strength is already in the community and it's a real place where we could make those benefits to health and outcomes possible.

Senator ALSOBROOKS. Thank you so much.

The CHAIRMAN.Thank you, Dr. Nosal. Ranking Member Gillibrand, I heard you had a few more followups?

Senator GILLIBRAND. I have a couple more questions for Dr. Buettner. I really liked your testimony. What I really liked about what you talked about was that you were talking to cities and communities and leaders about much more of a strategic plan for what they could do for the health and well-being of their citizens.

What I really liked about your approach; it was no silver bullet; it wasn't even silver buckshot. It was, you have to do all these things, and you mentioned transportation, making sure people could walk, walkable cities, so they could ride bikes. I would imagine as part of that, you'd want some kind of mass transit or some kind of public transit, so an older person could actually get somewhere. Because an older person might not be able to walk for a mile or a long distance.

Did you talk to them about access to fresh fruits, vegetables, whole foods? Like if you go to the Bronx today, it's a food desert in some areas where it's just not accessible to get to a grocery store. You might be able to get it to a bodega or a corner store, but you might be charged, I don't know, two for an Apple. You know, it's so expensive. It's not accessible and affordable. Did you look into those types of barriers as well? Did you make recommendations? Because I have legislation to incentivize to build grocery stores in food deserts so that we can get those quick fruits and vegetables for a lower cost price.

Then did you hear my conversation with Dr. Nosal about using the Federal benefits that we do have better. You know, we made

the change in SNAP, this is important for you because you're just new to the Committee. We made the change to SNAP to make it easier to use the SNAP benefit at what do we call them like a farm stand.

To go into a farm stand and to be able to buy the fruits and vegetables directly from the farmer, better for farming, better for people and using maybe the SNAP benefits to get the congregate meals, so instead of eating by yourself in front of a television as an 85-year-old, you actually can go to the senior center and have two meals a week that are congregate with community members. Do you have thoughts on that too?

Mr. BUETTNER. Yes, so we've worked in 70 cities and I've learned that every community thinks they're different and in that they're all alike, so what we've done we have boards of academic advisors and we've compiled, we call them policy menus, in food, built environment and tobacco, and these menus are evidence-based, and there's usually 30 different policies that have worked elsewhere at creating a healthier eating environment and more physically active community and a place where it's a little bit harder to smoke, so in other words, they've been improved health.

We measure with Gallup, so it's not just anecdotal. We take a measure, the well-being index metric at the beginning, and then in order for us to come in, the city council and the mayor have to pledge to go through this consensus process, and we go through every one of these menu items, every one of these policies, and we score it for feasibility.

Can we get it done in this community in five years? For effectiveness, do we believe it's effective? Do I believe that taxing sodas will lower the amount of sodas that children will drink? Yes, but to lead with that, you'll often be shown the door, but we keep it on the menu so they discuss it, so with each of these areas, we have 30 or so policy items. It's hard to mess with SNAP, but you, you can sometimes get us sell the idea of a pilot program, but SNAP, as you know, is a Federal program and it's very hard to——

Senator GILLIBRAND. We are the federal lawmakers, so when we are riding the farmville, we could improve that program. We could make it better and more accessible, more usable.

Mr. BUETTNER. Let me take you to Jacksonville, Florida and I'll show you some opportunities for the SNAP, but the bottom line is, again, trying to come in and tell people what to do doesn't get you far, but showing them how they can be successful within the parameters of what's important in their city, you can get a lot done and it's a different way of thinking about things, and SNAP, you know, my big criticism is it allows people to buy the same food that's making them sick.

Senator GILLIBRAND. Ideally, you'd like some nutrition dollars to be on education about what's nutritious?

Mr. BUETTNER. Teaching people how to cook with whole plant-based food.

Senator GILLIBRAND. Yes.

Mr. BUETTNER. You know, we were talking about this before, if you want to know what a healthy hundred-year-old ate to live to be a hundred, you have to know that what she was eating as a little girl in middle and lately, and I worked with Harvard's Walter

Willett, and we did a meta-analysis, 155 dietary surveys done in five blue zones over the past a hundred years, and without a shadow of a doubt, they're eating mostly whole food, about 90 percent whole grains, garden vegetables, tubers, nuts, and beans.

Senator GILLIBRAND. Access to those foods is key.

Mr. BUETTNER. Yes. Showing them how to make it taste delicious.

Senator GILLIBRAND. Correct.

Mr. BUETTNER. You can't guilt them into eating. They have to want to eat that more than——

Senator GILLIBRAND. Our most successful food banks in New York are the ones that have cooking classes at them, so they can teach the whole family how to make these vegetables that they may never have seen, they don't own any recipes for, and that's been really effective.

Also, along the lines of our earlier conversations, teaching pediatricians and even prenatal doctors, providers, when they get the pregnant woman in to say, when you have your baby, this is the best nutrition for you. This is the best nutrition for your baby, teaching it right away. You know, this is not a hearing on ed reform, but again, if you had the benefit of exercise every day in our schools and nutrition education, you'd be helping the next generation for sure.

Well, thank you so much, all of you. This has been an excellent hearing. I think we've had a very lively conversation about ways to improve and I just appreciate you Madam Chairwoman for hosting us, but all of you for the contribution you made to today's discussion.

Senator MOODY. All right. Thank you again for being here. The Committee hearing is adjourned.

[Whereupon, at 4:52 p.m., the hearing was adjourned.]

APPENDIX

Prepared Witness Statements

U.S. SENATE SPECIAL COMMITTEE ON AGING

"OPTIMIZING LONGEVITY: FROM RESEARCH TO ACTION"

FEBRUARY 12, 2025

PREPARED WITNESS STATEMENT

Dr. Rhonda Patrick

Chairman Scott, Ranking Member Gillibrand, and Members of the Committee, thank you for the opportunity to speak.

We have to ask ourselves: Can we call ourselves the greatest nation in the world while 70% - nearly three in four American adults - are overweight or obese?

While we spend 18% of our GDP on healthcare-more than any other nation-yet rank 55th in life expectancy? While our children are developing type two diabetes at rates once unheard of?This is not just a health crisis. This is a cultural crisis.

Because let's be clear: obesity is not inevitable. It is not an act of God. It is a choice-compounded over time, reinforced by a system that fails to foster- even from a young age - self-discipline and sound decision-making.

We have created an environment where difficult truths are treated as personal attacks, where doctors feel discussing a patient's weight is too taboo.

This is a disaster. If the devastating consequences of obesity are too uncomfortable to discuss, how can we expect people to change?

We must foster a culture where direct conversations are expected, not feared.

Obesity alone is linked to 13 types of cancer and cuts life expectancy by 3-10 years, depending on severity. It promotes DNA damage and accelerates our fundamental aging process-often measured by epigenetic age. It's one of the principal differences between the U.S. and many of the world's longest-lived nations.

We're overfed but undernourished. 60% of all calories Americans consume come from ultra-processed foods that:

- •Fail to induce proper satiety, pushing us to overeat.
- •Remain cheaper than whole foods, economically incentivizing the least healthy choices.
- •Hijack our dopamine reward pathways, reinforcing addictive eating behaviors.

This trifecta-no satiety, low cost, and built-in addictiveness-keeps us in a cycle of poor health outcomes and runaway healthcare costs.

Caloric excess is only part of the problem-we are also nutrient-deficient.

Low omega-3 levels-affecting 80 to 90% of Americans-carry the same mortality risk as smoking. Vitamin D deficiency-easily corrected-compromises immune function, cognition, and longevity. Nearly half of Americans don't get enough magnesium- impairing DNA repair and increasing the risk of cancer.

We are not solving these problems-we are medicating them. The average American over 65 takes five or more prescription drugs daily-stacking interactions that compound in unpredictable ways.

Polypharmacy is a crisis. We are not buying health-we are buying complexity.

The real problem is simpler. We must start treating physical inactivity as a disease. It carries the same mortality risk as smoking, heart disease, and diabetes. Going from a low cardiorespiratory fitness to a low normal adds 2.1 years to life expectancy.

By age 50, many Americans have already lost 10% of their peak muscle mass. By 70, many have lost up to 40%.

This isn't just about looking strong. It's about survival.

- •Higher muscle mass means improved insulin sensitivity - it means a 30% lower mortality risk.
- •Grip strength is a stronger predictor of cardiovascular mortality - the number one cause of death in the Unites States - than high blood pressure.
- •The strongest middle-aged adults have a 42% lower dementia risk.

Yet, we treat resistance training as optional. It is not. It is the most powerful intervention we have against aging including increasing muscle mass, strength and bone density..

Hip fractures alone kill 20-60% of older adults within a year. This is a death sentence we can prevent with resistance training - which has been shown to lower fracture risk by 30-40%.

The current RDA for protein is too low for older adults.

Studies have shown when it's increased by half this reduces frailty by 32%, while doubling it, combined with resistance training, increases muscle mass by 27% and strength by 10% more than training alone. If we want to prevent muscle loss and

frailty, we must update our protein recommendations and prioritize strength training.

We must foster a culture of American exceptionalism built on daily, effortful exercise. Not as an afterthought. Not as a luxury, but as a non-negotiable foundation for aging, but also clear thinking, resilience, and even leadership.

We must start by holding ourselves to a higher standard.

We should ask: Can a doctor struggling with their own weight truly counsel us on ours?

We should ask: Can a leader who neglects their own health make the best decisions for the constituents they serve?

If we don't like the answers, we must demand better.

The body and brain are not separate. The consequences of poorly regulated blood sugar, sedentary living, and muscle loss are not just physical-they affect cognition, judgment, and resilience. If exercise enhances focus and decision-making, then we should expect those in power to prioritize it most of all.

A strong nation starts with strong individuals. Strength is not inherited-it is built. It is earned. It is trained.

We cannot medicate our way out of what we have behaved our way into.

If we truly want to lead the world, we must first lead ourselves.

No law, no policy, no government program can make a nation strong. Only its people can.

Strength is a choice-compounded over time and earned through effort.

Now the question is - will we have the discipline?

U.S. SENATE SPECIAL COMMITTEE ON AGING

"OPTIMIZING LONGEVITY: FROM RESEARCH TO ACTION"

FEBRUARY 12, 2025

PREPARED WITNESS STATEMENT

Dr. Eric Verdin

Good afternoon, Chair Scott, Ranking Member Gillibrand, and members of the Committee.

Thank you for the opportunity to speak today. My name is Eric Verdin, and I am the CEO of the Buck Institute for Research on Aging-the world's leading research organization on the biology of aging. Our mission is to eliminate the threat of chronic disease by addressing aging itself.

Over the past century, public health advances and medical breakthroughs have nearly doubled the human lifespan. This incredible success has come with challenges. We live longer but not healthier. The end of our long lives is now characterized by debilitating diseases such as Alzheimer's, Parkinson's, heart attacks, strokes, type two diabetes, cancer, osteoarthritis and macular degeneration. By the time an American reaches age 65, most have at least one chronic condition and more than half have two.[1] We call these conditions the chronic diseases of aging.

Our current healthcare system is focused on treating these conditions when they occur, not in preventing them in the first place. This approach is expensive, inefficient, and ultimately ineffective. The cost of managing these illnesses is staggering - increasing as our population ages - and places an unsustainable financial and emotional burden on our healthcare system, our citizens and their families.

In the 20th century, we dramatically reduced deaths from infections, from heart disease, and from cancer, extending life expectancy in the process, but progress is slowing. Even if we cured cancer tomorrow, the average lifespan would increase by less than three years.[2] The reason is simple: aging itself continues unchecked.

Aging is the greatest risk factor and main driver for these chronic diseases. Research from the past 20 years clearly indicates that aging can be slowed, thereby extending healthy lifespan and delaying disease in animal models. There is not a single reason why these findings should not apply to humans as well. By focusing on aging and its mechanisms, we can compress the period of illness and frailty so that more of our years are spent in good health.

The economic and public health benefits of a shift from a reactive healthcare system to true preventative healthcare based on our understanding of aging are enormous. Studies suggest that delaying aging will generate trillions of dollars in economic gains, reduce medical costs and increase productivity.[3] Just as vaccines and antibiotics revolutionized medicine in the past, aging science is the next great frontier in preventive healthcare.

The science is at a turning point, and as policymakers you will play a critical role in ensuring that we realize its benefits. Investing in aging research must be a priority. The NIH should increase funding on the molecular pathways of aging, with a new emphasis on translating discoveries into human applications. We also need a much greater focus on lifestyle interventions-nutrition, exercise, sleep, stress management, and social connections. They account for more than 90% of our healthspan and lifespan and should be an essential part of our health policy and our research.[4]

We must also rethink how we allocate healthcare dollars. Right now, we spend trillions on treating diseases after they arise. A shift toward prevention-one that targets aging itself-would be far more effective. The FDA needs clear guidelines for aging-targeted therapies. Biotech and pharma companies are investing in this field, but without a defined regulatory pathway, progress is slowed. And finally, we need stronger public-private collaboration. Translating discoveries into real-world applications will require coordinated efforts between industry, government, and regulatory agencies.

This is a pivotal moment. The 21st century has the potential to witness one of the most profound medical breakthroughs in history-not just treating age-related diseases, but preventing them. The goal is not just to extend lifespan, but to ensure those extra years are spent in health, dignity, and independence.

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[2] https://www.science.org/doi/10.1126/science.2237414
[3] https://pmc.ncbi.nlm.nih.gov/articles/PMC4743067
[4] https://pubmed.ncbi.nlm.nih.gov/30401766/

I applaud the Committee for recognizing the urgency of this issue. Aging research is at an inflection point, and with the right policies, we can transform public health for generations to come. I look forward to working with you to make this vision a reality.

Thank you.

U.S. SENATE SPECIAL COMMITTEE ON AGING

"OPTIMIZING LONGEVITY: FROM RESEARCH TO ACTION"

FEBRUARY 12, 2025

PREPARED WITNESS STATEMENT

Dr. Sarah C. Nosal

Chairman Scott, Ranking Member Gillibrand, and distinguished members of the Committee, thank you for the opportunity to testify today. My name is Sarah Nosal, MD, FAAFP and I am a practicing family physician in the South Bronx. As the President-elect of the American Academy of Family Physicians (AAFP), I am honored to be here today representing the more than 130,000 physician and student members of the AAFP.

I currently serve as the Vice President for Innovation & Optimization and Chief Medical Information Officer at The Institute for Family Health, a federally qualified health center (FQHC) network with more than 27 locations in the Mid-Hudson Valley, Bronx, Manhattan, and Brooklyn. I am also an assistant professor in the Mount Sinai Department of Family Medicine & Community Health, where I focus on care of marginalized communities and the uninsured and share the role of medical director for Einstein Community Health Outreach, New York's oldest student-run free clinic.

While I am proud to now think of myself a New Yorker, I actually grew up just outside Washington, D.C. I always knew I wanted to be a doctor, and my journey to family medicine started as a grade schooler in the 80's, when I was troubled witnessing unhoused individuals - disproportionately veterans during that time in history - sleeping on sidewalks and street grates in the very heart of our nation's capital. I felt called to serve them but was not sure how. My mother, a social worker, told me that I could grow up to become the kind doctor who takes care of them. And so, I set my life's course to do just that.

While on my rotations in medical school, it became clear that to meet the needs of our most under-resourced patients and communities I needed to be the kind of physician who could do patient-centered, continuous, compassionate care for patients of all ages, across the life span, with them never aging out of my ability to care for them. The kind of medicine that allows me to do that is family medicine.

I am proud to be a family physician. I get to provide continuous, comprehensive medical care, health maintenance and education, and preventive services to patients across their entire lifespan - regardless of age, health goals, or challenges. Through enduring partnerships, family physicians lead care teams and help patients set goals; strive for wellness; prevent, understand, and manage acute and chronic illness; and navigate the complexities of the health system.

Last month, Chairman Scott laid out his priorities for this Committee which identified four key aspects for someone to be considered "well:" having their physical health; financial security; a safe community to live in; and family and community support. Each of these are rooted in the very fundamentals of family medicine, and I applaud this Committee for recognizing their significance in ensuring that an individual is not just living longer but living longer and better. That mission is one shared by all family physicians.

I have practiced for more than two decades in an extremely under-resourced area of the South Bronx. Health outcomes in my county are ranked 62 of 62 in all of New York state. My personal patient panel approaches nearly 90 percent Medicaid beneficiaries. In my office, I have the honor and privilege of taking care of not just patients, but families and communities. When I first started in my current clinic, my patients, like I was, were primarily younger women. As I planted my roots and affirmed to them I was going to stay, they started to seek care for their pregnancies, bringing their babies and toddlers, aunts and brothers, parents, grandparents, and great grandparents. Caring for patients across the lifespan also means caring for families across generations, often seeing a family history play out before me rather than just reading or documenting it.

Family medicine's uniqueness as a specialty means that, while working with patients towards wellness goals or managing chronic illness, we can anticipate barriers or risks due to social drivers of health, personal medical history, or family or genetic history that might be pre-disposing them to worse outcomes. These histories can manifest in complex needs; frequent among them are dietary needs for patients managing risks, predisposition and multiple complex diseases. A typical patient of mine presents with cane in hand, living with HIV, diabetes, hypertension, and chronic kidney disease. Patient-tailored counseling on diet and physical activity is

something I do in every visit. One tool that my clinic has developed to help guide patients with diet-influenced conditions and help them visually embrace and understand healthy, plant-forward eating is a series called ″Healthy Plates Around the World.″ These culturally appropriate plates engage my patients in a familiar context to best portion their meals using foods they are accustomed to.

However, no matter how well-illustrated, the unfortunate reality is that fresh, whole, healthy foods are out-of-reach financially or otherwise inaccessible to most of my patients. This is but one of the health-related social needs (HRSN) that impacts them. A lack of safe and stable housing, reliable transportation, safe places to exercise, financial security, in addition to access to nutritious foods, all make it difficult - if not altogether impossible - for many of my patients to simply afford necessary medications and reliably make it to medical appointments is my office.

Research has consistently shown that unaddressed HRSN can influence the onset or worsening of many health conditions, including chronic diseases.[i] On more than one occasion when I asked a patient why they were not taking their insulin as directed, I would find out they did not have electricity in their apartment for weeks at a time after falling behind on the rent. A neighbor was allowing them to store their medications that require refrigeration, but that also meant they did not have it readily accessible.

The empirical evidence backs this lived experience. Housing instability - difficulty paying rent, eviction, and living in overcrowded conditions - is associated with delayed medical care, medication nonadherence, and increased emergency department visits. When we screen across our patient community, housing is consistently the most commonly identified social need of our patients with the fewest resources readily available. Another top identified need is safe transportation, from our rural clinic where patients have been known to walk long distances along roadsides without walkways to our urban clinics where a patient with walker in hand faces four flights of stairs at the subway up and back. The lack of safe, accessible transportation in both rural and urban areas makes health and health care equally inaccessible. Unsafe, inconvenient transportation impacts a person's ability to access medical care and is also associated with higher rates of unemployment, poverty, and chronic illness.[ii]

The majority of the older adults I see in my practice fall into the group of low-income seniors who are eligible for both Medicaid and Medicare, known as dual eligibles, and have an average of 2.2 HRSN compared to 0.9 for non-dual eligibles.[iii] What that means in real life is they have a rolling walker with chair due to severe osteoarthritis, are unable to use public transportation, are forced to piece together the healthiest meals they can from soup kitchens, pantries and limited food assistance benefits, while doing laps around their daughter's living room as their most accessible form of exercise.

Medicaid serves a critical need, providing coverage for patients and sustaining community health centers delivering care to these struggling communities. Those same Medicaid beneficiaries with diet-related conditions experience higher levels of food insecurity. One study found that nearly one-third of Medicaid enrollees with diabetes were food insecure, in comparison to seven percent of those enrolled in private insurance.[iv] In another study, more than half of dual eligibles reported food insecurity.[v]

The U.S. Department of Agriculture's Supplemental Nutrition Assistance Program, otherwise known as SNAP, is a lifeline for those experiencing food insecurity. The program provides food benefits to low-income families to supplement their grocery budget. SNAP's healthy incentives programs (HIP) also help increase healthy food consumption by providing enrollees with a coupon, discount, gift card, bonus food item or extra funds. Program evaluations have shown that HIP participants consumed almost 1/4 cup more fruits and vegetables per day and had higher total household spending on fruits and vegetables than non-participants.[vi] Additionally, participants in one program redeemed more than $20 million dollars in nutrition incentives and produce prescriptions with the program generating an economic impact of about $41 million dollars.

However, there remains a gap in the nutrition needs of many individuals who are not enrolled in or eligible for SNAP benefits. An earlier cited study found that 29 percent of people with diabetes were not receiving SNAP benefits, and over two-thirds of uninsured individuals were not receiving SNAP benefits. Further, over 40 percent of Medicaid enrollees with diabetes who were receiving SNAP benefits remained food insecure. There is undoubtedly room for improvement to ensure SNAP and related programs better serve my patients who need them; to start, greater coordination and streamlined enrollment across safety-net programs such as SNAP and Medicaid, increased funding for benefits, improving public awareness about HIPs, and making it administratively easier for individuals to navigate and use said

benefits. However, that alone will not solve my patient's challenges with accessing and adhering to healthy lifestyle choices.

While diet and exercise are critically important to health and wellness, we cannot ignore that these are not accessible choices for those who live in communities designed with them out of reach. Food and exercise can only be medicine if they are equitably and easily available, safe, and accessible. As a family physician, I can recommend working out and having a healthy diet - but it is up to you, our elected leaders, to ensure the resources and support are in place to fill that prescription. Congress has the opportunity to advance additional policies to address food insecurity, unstable housing, and other health-related social needs and improve health outcomes at the community, family, and individual level. For instance, policies that support free or reimbursable public transit or improve the safety and accessibility of sidewalks and bike lanes help improve transportation access and can influence better health outcomes for both individuals and communities.

In our free clinic, we provide free, whole, plant-forward food to patients on Saturday mornings. Patients will often come even during the weeks that they do not have a medical appointment. I encourage you all to explore federal investments such as additional grants or more sustainable funding streams to expand these types of community-based resources, particularly in communities like mine that remain food deserts.

Many states have utilized existing Medicaid authorities to begin addressing HRSN, including state plan authorities, section 1915 waivers, managed care in lieu of services and settings and section 1115 demonstrations. In December 2022, the Centers for Medicare and Medicaid Services announced that states can use section 1115 demonstrations to cover nutrition supports and HRSN case management, among other services, as reimbursable benefits under Medicaid for certain populations.

Nutrition support may include nutrition counseling and education; medically tailored meals; meals or pantry stocking for children under 21 or pregnant patients, including two months postpartum; fruit and vegetable prescriptions; and protein boxes. For example, under Massachusetts' section 1115 waiver, medically tailored meals may be provided to the whole household, not only the Medicaid beneficiary eligible for the service. This policy recognizes that a food-insecure parent will often give their nutrition supports to a hungry child, rather than feed themselves. Expansion of these types of policies would be life-changing and make wellness and longevity possible for my patients.

Some states have used other levers, such as community reinvestment requirements for Medicaid managed care contracts. Examples of community reinvestments addressing nutrition needs include building and maintaining community gardens, farmers markets, community-supported agriculture, farm partnerships, or grocery stores in food deserts. Federal policymakers could explore opportunities for expansion of these types of community investment requirements at the national level or ways to support ongoing state initiatives. To truly be successful and community-centric, any such policies must include appropriate guardrails with a clear definition of community reinvestment and transparency and accountability reporting requirements. Plans or other entities subject to community reinvestment requirements should also be required to solicit local input to ensure that the investments are culturally appropriate and address true community needs.

Much of this work in the states is just getting off the ground. Therefore, I strongly urge Congress and the Administration to support and further invest in these promising, innovative efforts that seek to address the root causes of poor health outcomes.

Beyond Medicaid, the AAFP has supported legislation that would expand Medicare coverage of nutrition services for seniors with certain diet-impacted chronic conditions, such as diabetes, HIV, and hypertension. We have also supported legislation that would establish a four-year nationwide demonstration program through Medicare to provide medically tailored meals to eligible Medicare beneficiaries with diet-impacted conditions. I strongly encourage the Committee to consider these policies as you continue to explore opportunities to improve health across the lifespan.

There is also an opportunity for Congress to improve uptake of services that are newly covered but underutilized, particularly chronic care management (CCM). In 2015, Medicare began paying physicians for delivering non-face-to-face CCM through separate codes. These services are fundamental to the delivery of patient-centered, comprehensive primary care, including for seniors with diet-impacted conditions.

Unfortunately, operational challenges such as patient cost-sharing requirements limit uptake by patients who would truly benefit from this type of additional support. A 2022 study found that Medicare billing codes for preventive medicine and

care management services are being underutilized even though primary care physicians were providing code-appropriate services to many patients. The median use of the preventive and care coordination billing codes was 2.3 percent among eligible patients.[vii]

Put otherwise: patients are informed of a copay and shared costs as required by Medicare, so subsequently many patients opt out of these services because of the financial barriers. In my experience, it is often the ones who stand to benefit most from these services. This rings true for many of the other new codes Medicare has implemented, including G2211, social determinants of health risk assessments, and community health integration services. Patients are living on fixed incomes and have not anticipated paying for these services and, understandably, are resistant or unable to do so. If we want to incentivize usage of these high-value services, we must waive patient cost-sharing.

Removing cost-sharing for chronic care management and other primary care services increases access without increasing overall health care spending.[viii] Evidence indicates that reducing or removing cost barriers to primary care increases utilization of preventive and other recommended primary care services, which improves both individual and population health with long-term cost savings. While cost-sharing for most preventive services is currently waived across payers, many patients do not access all the preventive care recommended for them because they do not know what is or is not covered or they are concerned they might be charged for raising other health issues in the same visit. Therefore, the AAFP urges Congress to consider legislation that would waive patient cost-sharing for chronic care management and other primary care services.

As has been acknowledged by this Committee, we are all aging. Therefore, we must explicitly recognize the impact of health-related social needs across the lifespan and how they influence outcomes later in life. In particular, access to affordable health care coverage has positive long-term effects. Expanded Medicaid eligibility for pregnant women has been shown to increase their children's economic opportunity in adulthood through increased educational attainment and higher incomes.[ix] Children covered by Medicaid also pay more in cumulative taxes by age 28 compared to their peers who are not Medicaid-enrolled.[x]

If we want to give everyone the chance to age healthily and well, it is imperative Congress supports those programs which make it possible, regardless of a person's socioeconomic status or other demographics. In particular, cutting Medicaid does not just take away an individual's coverage and harm their health. It hurts entire families, has economic consequences, and jeopardizes community outcomes. Many of my young or middle-aged patients are caregivers for both children and older relatives. Any reforms that impede or altogether cut their health care coverage are likely to impact their employment, their ability to help their mother make rent, to take their grandma to the laundromat or her cardiologist appointment, or contribute in any productive, meaningful way to their community. If we want to truly improve our nation's health to optimize longevity, it must start with investing in Medicaid and other safety-net supports - not cutting them.

Health insurance coverage does not help patients if there is no access to care, however. Community health centers (CHCs), including FQHCs and rural health clinics, provide care to those in medically underserved areas and are often the only accessible health care setting for many individuals, including Medicaid beneficiaries and the uninsured. Nationally, Medicaid makes up 43 percent of community health center revenue.[xi] As a result, cuts to Medicaid would be a direct cut to CHCs and the communities they serve as well.

CHCs have a significant economic impact. In 2021, they supported more than 500,000 direct or indirect jobs nationally with nearly $85 billion in economic output. Both New York and Florida, which are proudly represented by this Committee's leadership, are in the top five of states that economically benefit from CHCs; the economic output is $6.1 billion in New York and $4.2 billion in Florida.[xii] Community health centers are also incredibly efficient in terms of health care spending. Research has consistently shown that health care costs for all patients served by CHCs - including Medicaid beneficiaries - are lower than costs for patients not served by CHCs.[xiii]

Further, many CHCs are working to combat our nation's primary care workforce shortage and training the next generation of family physicians by serving as Teaching Health Centers. The Health Resources and Services Administration's THC Graduate Medical Education (THCGME) program funds the development and implementation of residency programs in outpatient community-based settings in rural or medically underserved communities. Since the program's inception, it has trained more than 2,000 new primary care physicians and dentists - 61 percent of whom have been family physicians. Thanks to the THCGME program, our FQHC system

has multiple family medicine residency programs across our region. Many of residents stay to continue serving these communities upon graduation.

Unfortunately, CHCs and THCGME are reliant upon a patchwork of inconsistent, temporary federal funding to stay afloat. At the moment, funding for both programs is only guaranteed through March 14. This, in addition to recent executive actions which have stoked confusion about what federal funding is or is not available, is an existential crisis for our nation's safety net. CHCs operate on such thin margins that even a threat to funding can paralyze our ability to deliver all of the care that is essential to meeting our patients' and community's needs.

For THCs, uncertainty about future funding for the academic year has led to some programs either closing their doors entirely or accepting fewer residents. To support and improve the quality of life for patients of all ages and in all communities, I urge this Committee and your colleagues in Congress to make stable, long-term funding for CHCs and THCGME a priority and to ensure that access to other key programs and community-level interventions is not disrupted. Failure to do so would run counter to the Committee's stated goals.

In closing, thank you again for the opportunity to provide this testimony. On behalf of the AAFP and as a family physician, I look forward to working with the Committee to advance policies that invest in the health and wellbeing of individuals across the lifespan at the person, family, and community level. We all have the same goal: to improve the lives of the people we serve.

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[vii] National Association of Community Health Centers. (2023). Economic impact of community health centers in the United States: 2023 report. National Association of Community Health Centers. Retrieved February 8, 2025, from https://www.nachc.org/wp-content/uploads/2023/06/Economic-Impact-of-Community-Health-Centers-US—2023—final.pdf.

[xiii] Ibid.

U.S. SENATE SPECIAL COMMITTEE ON AGING

"OPTIMIZING LONGEVITY: FROM RESEARCH TO ACTION"

FEBRUARY 12, 2025

PREPARED WITNESS STATEMENT

Dan Buettner

My goal here is to convince you that most of what Americans think will lead them to a long, healthy life is misguided or just plain wrong.

I've spent the past 20 years partnered with National Geographic to identify, verify, and understand populations around the world with the greatest longevity. These "blue zones," as they're known, are places where people live up to a decade longer than the rest of us with a fraction of the chronic diseases that eat up most of the $4.9 trillion our nation spends annually on healthcare.

The famous Danish Twin Study established years ago that only about 20% of how long we live is dictated by our genes. Another 10-15% is dictated by our health care system. That means at least two thirds of our longevity comes from something else.

So, with an advisory board of academics, my team and I set off to find the correlates and common denominators driving longevity.

On the Italian island of Sardinia, for example, our demographers found a cluster of six mountain villages that produced centenarians at a rate many times that of the U.S. People there ate a mostly whole-food, plant-based diet-cheap peasant foods like fava beans, barley, and potatoes. They prioritized family and friends over status and wealth. They prayed. (Did you know that people who go to a faith-based community four times a month live four years longer than people who don't?) And every time these villagers went to work, school, or to visit friends, it occasioned a walk. They got in their 8,000-12,000 steps a day without even thinking about it.

The Big Secret here-and the one we miss-is that health and longevity are rarely successfully pursued. They ensue.

We spend nearly a half trillion a year trying to chase health with diet, exercise, and pills. They're all great business plans, but they fail for almost everyone all of the time. If you start with 100 people on a diet, you lose more than 95% in two years. Exercise programs have similar drop offs.

Similarly, the $47 billion a year Americans spend on antiaging products has not delivered a single pill, supplement, or stem cell treatment that has been shown to reverse, stop, or even slow aging.

In the blue zones, longevity ensues because people live in an environment where the healthy choice is the easy choice. The cheapest, most delicious foods are the simplest foods. It's easier to walk places than to drive. You can't avoid face-to-face contact with your neighbors, your fellow worshipers, or the extended family that lives with you. And you have a vocabulary for your purpose in life, so it's easier to pursue it. In other words, people in the blue zones don't have to muster the resources, the daily discipline, and the presence of mind to make the healthy choice. Their environment does it for them.

If we want a healthier America, we should shift our focus from the folly of trying to convince 340 million people to follow a diet or health plan and instead we should strive to set them up for success. My company, Blue Zones, has helped more than 70 American cities shape polices that favor healthy foods over junk foods, to build streets for human beings, not just for cars, which can increase physical activity for the whole city by 20%, and to encourage non-smokers over smokers. We also offer Blue Zones certification for all schools, restaurants, workplaces, and places of worship that optimize their designs and policies to nudge people into moving more, socializing better, and eating healthier. The key is optimizing our living environments.

The proof is in the numbers. Using our approach, Fort Worth, Texas, reported a drop in obesity and a quarter of a billion dollars in annual healthcare savings. The Beach Cities of Southern California reported a 15% drop in BMI. Our first Blue Zones Project city, the town of Albert Lea, Minnesota, has saved 30% of their city worker health care costs since they started-and they're still making their city healthier 15 years later.

The secret to longevity does not lie in any silver bullet. The secret is to shift the focus of public policy from trying to change individual behaviors to setting up all Americans for success by making the healthy choice the easy one.

Questions for the Record

U.S. SENATE SPECIAL COMMITTEE ON AGING

"OPTIMIZING LONGEVITY: FROM RESEARCH TO ACTION"

FEBRUARY 12, 2025

QUESTIONS FOR THE RECORD

Dr. Eric Verdin

Senator Raphael Warnock

Question:

Access to affordable healthcare is essential and allows seniors across the country to age with dignity. Federally funded research, facilitated by hardworking federal workers, helps healthcare providers better understand aging-related diseases, such as Alzheimer's. In Fiscal Year 2024, Georgia received $782,913,345 in federal funding to support 1,557 grant awards through the National Institutes of Health (NIH).[1] Additionally, the Centers for Disease Control and Prevention (CDC), which is headquartered in Georgia, supports valuable research to combat infectious diseases and public health threats. However, the Trump Administration's executive orders and funding cuts have affected life-saving research that could improve the health and longevity of seniors.[2]

How will cuts to the federal workforce and funding at research agencies, like the CDC and NIH, affect efforts to support research into age-related diseases?

Response:

At a time when we are on the verge of significant breakthroughs in the fight against age-related chronic disease - breakthroughs that could ease untold human suffering and achieve trillions of dollars in savings in healthcare costs - cuts to the NIH would be devastating.

On February 7, the National Institutes of Health (NIH), under direction from the Trump administration, announced a plan to cap indirect cost recovery on federally funded biomedical research grants at 15% of direct costs. While a federal judge has extended an order temporarily blocking implementation, this policy - which means little to the average American - could have devastating consequences for the future of American biomedical research.

NIH is the largest funder of biomedical research in the U.S., supporting thousands of projects at academic and medical institutions. The rationale for this proposed cut is a familiar one: the assumption that IDC represents unnecessary bureaucratic waste. That assumption is dangerously misguided.

Since the 1950s, NIH has divided research costs into two categories: direct costs-salaries, lab supplies, and equipment-and indirect costs, which cover essential infrastructure and administrative expenses necessary for conducting federally funded biomedical research. This includes lab space, utilities, security, compliance, IT support, equipment maintenance, and administrative staff for grants management, HR, and regulatory oversight. These indirect expenses are not arbitrary; they are calculated based on documented institutional costs and are subject to rigorous audits every four to five years. Institutions cannot simply inflate these rates at will.

Despite claims of excessive spending, indirect cost rates vary between 40% and 70%, depending on real institutional costs. And even that figure is often misunderstood. An indirect cost rate of 50% does not mean half of a grant goes to overhead; rather, it means that for every $100 in direct costs, $50 is allocated to necessary facilities and administration, making the actual overhead share of the grant just 33%.

What would slashing IDC reimbursements to 15% mean in practice? For most universities, research institutes, and medical centers, it would make large-scale research unsustainable. Some institutions would be forced to cut programs; others might abandon their research mission altogether. Our economy in general, and the biopharmaceutical sector in particular, would suffer. In FY 2023, every $1 of NIH funding generated approximately $2.46 of economic activity. The long-term damage

[1] NIH Awards by Location & Organization, National Institutes of Health, www.report.nih.gov/award/index.cfmot=fy=2024state=GAic=fm=orgid=distr=rfa=om=npid=view=statedetail.

[2] Sheryl Gay Stolberg and Christina Jewett, Judge Temporarily Blocks Trump Cuts to Medical Research Funding, The New York Times (Feb. 2025), https://www.nytimes.com/2025/02/10/us/politics/nih-trump-lawsuit-medical-research.html.

would be profound: the U.S., which has led the world in biomedical innovation for decades, would see its scientific preeminence erode.

The timing could not be worse. America faces a healthcare crisis, with annual costs exceeding $4.9 trillion. Biomedical research, largely funded through NIH, forms the foundation for innovations that drive the pharmaceutical and healthcare industries. Yet the NIH budget stands at just $47 billion, a mere 1% of total healthcare spending. By comparison, technology industries routinely invest 8-12% of revenue into R&D, and the U.S. military spends over $143 billion annually on research-three times the entire NIH budget.

Cutting indirect cost support will not save taxpayer dollars; it will sabotage the very research that leads to life-saving treatments and drives economic growth. Policymakers must recognize that this change is not a bureaucratic tweak-it is an attack on the future of biomedical discovery. If implemented, it will set American science back for a generation.

U.S. SENATE SPECIAL COMMITTEE ON AGING

"OPTIMIZING LONGEVITY: FROM RESEARCH TO ACTION"

FEBRUARY 12, 2025

QUESTIONS FOR THE RECORD

Dr. Sarah C. Nosal

Senator Raphael Warnock

Question:

Access to affordable healthcare is essential and allows seniors across the country to age with dignity. Most older adults in the United States are living with at least one chronic health condition, and many seniors face barriers, like lack of access to transportation, that impede their access to quality health care.[1] Medicare telehealth flexibilities have allowed providers to deliver quality care to seniors who might otherwise be unable to access certain services. I was proud to join my colleagues to approve an extension of telehealth flexibilities in the American Relief Act, 2025; however, these flexibilities will expire on March 31, 2025.[2]

How does expanding access to health care, such as through extending Medicare telehealth flexibilities, optimize longevity for seniors?

Response:

Expanding access to health care across modalities, be it in-person, audio-only, or video telehealth, is essential to delivering accessible, patient-centered care and improving health outcomes. On many occasions my older adult patients, often living alone or simply alone during the day while family is at work, rely on visiting grandkids or the few hours a home attendant is present in order to connect with a video visit. On their own, the only successful access to telehealth may be via audio-only. One study of Federally Qualified Health Centers (FQHCs) found that, by mid-2022, one in five primary care visits and two in five behavioral health visits were audio-only, and audio-only visits were still more common than video visits. Yet the lack of payment parity and numerous restrictions placed on these visits have made them unsustainable post-COVID.

The COVID-19 pandemic shown a spotlight on what a lifeline telehealth and audio-only services are for keeping patients, including seniors, connected to care. It demonstrated that enabling physicians to virtually care for their patients at home can not only reduce patients' and clinicians' risk of exposure and infection but also increase access and convenience for patients, particularly those who may be homebound or lack transportation. For our patients in rural and suburban communities, transportation is cited as the number one reason a patient is unable to attend their in-person visit, canceling important preventive and disease management care. I remember a patient who had been unable to make it into the office due to lack of family support for transportation and physical disability that prevented travel on her own. On our video visit I had her walk about and realized she was lightly holding on to the furniture as she did. The patient had skipped her follow up eye evaluation and had had a marked decrease in vision that required urgent follow up. This much more timely telehealth visit made it possible to evaluate this patient in her home and observe things we normally cannot during an in-office visit. For this patient, both clinical deterioration and obvious home safety issues with her diminishing vision were observed via video visit and made it possible to connect her to the personalized specialty and community services to address her low vision needs and high priority care.

For these reasons, I urge Congress to prioritize passage of permanent telehealth flexibilities to provide greater certainty and stability to both physicians and patients and ensure that we can care for our communities via whatever modality is accessible and appropriate - not just based on arbitrary rules.

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[1] Social Determinants of Health and Older Adults, Office of Disease Prevention and Health Promotion, https://odphp.health.gov/our-work/national-health-initiatives/healthy-aging/social-determinants-health-and-older-adults.

[2] Telehealth Policy Updates, Department of Health and Human Services, https://telehealth.hhs.gov/providers/telehealth-policy/telehealth-policy-updates.

Question:

Community Health Centers (CHCs) play a vital role in addressing provider shortages, especially in rural and underserved communities.[3] Following President Trump's executive order to freeze federal funding and pause external communications at federal agencies, CHCs in Georgia and safety-net providers across the country faced delays in funding, which threatened access to affordable care for millions of Americans, including seniors, who rely on CHCs.[4]

Why are investments in federal funding for Community Health Centers important for seniors across the country, especially those living in medically underserved areas?

Response:

In 2023, community health centers across the country served nearly four million patients 65 years of age or older. This number has been steadily increasing over the years, demonstrating a growing reliance upon CHCs by our nation's seniors. As noted in my written and oral testimony, CHCs are often the only care setting available to individuals living in rural (caring for one in five rural residents) and medically underserved areas (caring for one in three people living in poverty) and thus play a critical role in connecting seniors and others to necessary primary care and other medical services. We take seriously our commitment to supporting wellness and ensuring our patients live well and longer. In the vein of this hearing's topic, CHCs are essential to optimizing longevity for seniors and other populations as we also provide supportive services to directly address health-related social needs that negatively impact an individual's ability to be well.

Nearly two-thirds (65%) of adult patients who seek care at CHCs reported receiving certain medical-related assistance services and 22% reported receiving economic-related assistance through their health center. Housing, transportation and food assistance are some of the most common medical-related assistance services sought at my clinic. We identify needs on intake screening and case managers just this week have been able to help my patients with medical-related assistance services including help arranging external medical appointments for critical screening care not available onsite; connecting patients to appropriate health education; free and discounted medication resources; arranging transportation to appointments; providing interpretation services; and conducting home visits to evaluate the environment and better determine health needs. These same patients benefited from the collocation of evaluation for economic-related assistance including help applying for government benefit programs like Medicaid or nutrition assistance; obtaining food; finding housing; getting clothing or shoes; and finding employment.

Unfortunately, CHCs for far too long have been reliant upon a patchwork of inconsistent, temporary federal funding to stay afloat. This approach creates an existential crisis for our nation's safety net and clinics like mine. CHCs are truly nonprofit, operating on very thin margins and putting every dollar back into the community for which they care. The freeze that occurred earlier this year and the subsequent delay in accessing funds paralyzed our ability to deliver all of the care that is essential to meeting our patients' and community's needs. Proposals being floated to cut Medicaid are also deeply concerning. Nationally, Medicaid makes up 43 percent of community health center revenue. As a result, cuts to Medicaid would be a direct cut to CHCs and the communities they serve aswell.

To support and improve the quality of life for patients of all ages and in all communities and most impactfully our rural and under resourced communities, I urge Congress to make stable, long-term funding for CHCs a priority and to protect invests in Medicaid and other safety-net programs so that we can continue to deliver the whole-person, community-level interventions that are necessary to improving longevity.

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[3] America's Health Centers: By the Numbers, National Association of Community Health Centers (Oct. 2024), https://www.nachc.org/resource/americas-health-centers-by-the-numbers.

[4] Shannon Pettypiece and Bracey Harris, Health Clinics Face Cuts, Closures as Trump's Funding Fight Ripples Outside of Washington, NBC News (Feb. 2025), https://www.nbcnews.com/politics/donald-trump/health-clinics-face-cuts-closures-trumps-funding-fight-ripples-washing-rcna191014.

Statements for the Record

U.S. SENATE SPECIAL COMMITTEE ON AGING

"OPTIMIZING LONGEVITY: FROM RESEARCH TO ACTION"

FEBRUARY 12, 2025

STATEMENTS FOR THE RECORD

James C. Appleby Testimony

On behalf of the Gerontological Society of America (GSA), thank you for a holding a hearing on longevity and healthy aging and the opportunity to provide the U.S. Special Committee on Aging this statement for the record. Since 1945, GSA members have been at the forefront in researching innovative interventions leading to greater health outcomes and more meaningful lives as we age. We appreciate the conversations the Committee and panelists had, notably discussions recognizing the importance of our healthspan as we live longer lives and our approaches to the treatment and prevention of chronic disease.

GSA seeks to serve as a resource in working with you and members of the Committee to inform public policy with evidence-based research to advance improved health outcomes. Attached to this letter we included a sample of resources and research briefly covered in the hearing. GSA publishes five peer-reviewed journals with research that can advance the focus on biomedical research, as well as more than 60 interest groups formed around a topic or issue that cuts across disciplines.

GSA has developed several resources based on evidence-based research for managing obesity in older people. Access to comprehensive obesity care can lower the severity of these diseases and, in some cases, cure them entirely. This includes a useful framework for primary care providers to help older people with obesity challenges recognize their condition and take action to maintain a healthy weight.

In 2023, GSA hosted a roundtable discussion in Washington, DC with researchers, clinicians, and advocates who were asked to address key questions about obesity as a disease of body weight regulation and how outdated paradigms and perceptions about obesity can be improved among health professionals, policymakers, and the public. That discussion produced valuable information on key aspects of obesity care across the lifespan and particularly in clinical care for older adults. The report, titled "Bringing Obesity Management to the Forefront of Care for Older Adults: Seven Strategies for Success," presents the roundtable s insights, which are discussed in the framework of seven strategies for addressing barriers to quality obesity care for older people.

In 2024, GSA submitted a letter as part of the National Institute of Health s Request for Information on Research Strategies for Addressing Obesity Heterogeneity. In this letter, GSA discussed our understanding of obesity heterogeneity and how obesity presents differently for every patient.

We know that access to comprehensive obesity care can lower the severity of the disease of obesity and many other diseases, and in some cases cure them entirely. Current federal policy unfairly denies coverage and access for people over the age of 65 to vitally important evidence-based treatments for obesity, both preventing older people from starting these treatments while on Medicare and disrupting treatment for those who lose access as they age into Medicare. GSA believes it is crucial that Congress and the Centers for Medicare and Medicaid Services (CMS) take the steps necessary to end the current unjust policy and ensure that Americans have access to the holistic and comprehensive obesity care necessary to ensure healthy lives. GSA supports the Center for Medicare and Medicaid Services (CMS) rule that would expand access to AOMs for Medicare and Medicaid beneficiaries. These treatments can prevent and treat the development of cardiovascular disease, type 2 diabetes, sleep apnea, and more.

GSA supports a comprehensive approach to treating the chronic disease of obesity, and this includes behavioral interventions. Counseling patients on nutrition, physical activity and behavior change at frequent clinic visits, as proposed by intensive behavioral therapy (IBT), is an effective, proven approach to treating obesity treatment and can reduce the risk of co-morbidities. We support this approach when AOMs are part of treatment for obesity.

The GSA KAER framework Kickstart, Assess, Evaluate, and Refer (KAER) supports primary care teams to better meet the needs of older people with obesity and overweight. Using this framework and the tools and resources in the GSA Toolkit for the Management of Obesity in Older Adults, care teams can kickstart the discussion of body size with older people and their families; assess the presence of altered body fat amount, distribution, and/or function; evaluate treatment options for older people with overweight and obesity; and refer older people to community resources.

The mission of GSA is to foster excellence, innovation, and collaboration to advance aging research, education, practice, and policy; our vision is meaningful lives as we age. GSA's 6,000 members include gerontologists, health professionals, behavioral and social scientists, biologists, demographers, economists, and many other disciplines. These experts study all facets of aging with a life-course orientation. The multidisciplinary nature of the GSA membership is a valued strength, enabling us to provide a 360-degree perspective on the issues facing our population as we age.

GSA wishes to be a resource to you and your staff in your role serving in the Senate and on the Senate Special Committee on Aging. We would enjoy meeting with you and/or your staff in the coming weeks to discuss our work. In the meantime, if you have any questions, please contact Patricia D'Antonio, Vice President of Policy and Professional Affairs.

We look forward to continuing to work with you on improving the health of all of us as we age.

Sincerely,

/s/

James C. Appleby, BSPharm, MPH, ScD (Hon), Chief Executive Officer

U.S. SENATE SPECIAL COMMITTEE ON AGING

"OPTIMIZING LONGEVITY: FROM RESEARCH TO ACTION"

FEBRUARY 12, 2025

STATEMENTS FOR THE RECORD

The Alzheimer's Association & Alzheimer's Impact Movement Testimony

The Alzheimer's Association and Alzheimer's Impact Movement (AIM) appreciate the opportunity to submit this statement for the record for the Senate Special Committee on Aging hearing on "Optimizing Longevity: From Research to Action." We thank the Committee for its continued leadership on issues crucial to individuals living with Alzheimer's and other dementias. This statement underscores the critical role of family caregivers and research on modifiable risk factors in addressing cognitive impairment, including the need for greater risk reduction strategies and awareness to improve individuals' quality of life and longevity.

Founded in 1980, the Alzheimer's Association is the world's leading voluntary health organization in Alzheimer's care, support, and research. Our mission is to eliminate Alzheimer's disease and other dementias through the advancement of research, to provide and enhance care and support for all affected, and to reduce the risk of dementia through the promotion of brain health. AIM is the Association's advocacy affiliate, working in a strategic partnership to make Alzheimer's a national priority. Together, the Alzheimer's Association and AIM advocate for policies to fight Alzheimer's disease, including increased investment in research, improved care and support, and the development of approaches to reduce the risk of developing dementia.

The Impact of Family Caregivers

Caregivers of individuals living with Alzheimer's or another dementia play an essential role in maintaining the quality of life for their loved ones and helping them live independently in their homes and communities for as long as possible. They are the backbone of our nation's health care system, providing essential care to loved ones at great personal, physical, and financial sacrifice. In 2023 alone, over 11 million dedicated caregivers provided a remarkable 18.4 billion hours of unpaid care for individuals living with Alzheimer's or another dementia, valued at nearly $350 billion. One in three dementia caregivers has been providing care for five or more years. In fact, of the total lifetime cost of caring for someone with dementia, 70 percent is borne by families - either through out-of-pocket health and long term care expenses or from the value of unpaid care. As a result of this financial strain, many families significantly cut back on savings contributions and other spending, with some reporting eating less due to care costs.

It is evident that Alzheimer's takes a devastating toll on caregivers. Amid these challenges, there is an urgent need to alleviate the overwhelming costs faced by caregivers. We strongly support the bipartisan Credit for Caring Act, which would create a new, nonrefundable federal tax credit of up to $5,000 for eligible working family caregivers of individuals, regardless of age, with certain functional or cognitive limitations. The tax credit would help alleviate some of the financial strain on these selfless caregivers nationwide and could be used to offset some of the costs of caregiving, including the costs of respite care, transportation, lost wages, and more. Providing these dedicated caregivers with financial relief would not only improve their own quality of life but would also allow for greater access to caregiver education and resources essential to ensuring adequate care and long-term quality of life for their loved ones. In addition, prioritizing home-based care through a family caregiver tax credit can reduce reliance on costly long term care facilities, saving taxpayer dollars while improving the health and well-being of individuals living with Alzheimer's and other dementias. We look forward to working with Congress and members of the Committee to advance the bipartisan Credit for Caring Act and other legislation to support caregivers, as they enhance longevity and quality of life for our aging population.

The Science Behind Dementia Risk Reduction and Brain Health

As of 2024, nearly seven million Americans are living with Alzheimer's, a number expected to rise to nearly 13 million by 2050. With many more at risk of developing the disease or another form of dementia, the need for effective dementia risk reduction strategies that help all communities increases by the day. Two-thirds of Americans have at least one major potential risk factor for dementia. As the prevalence of dementia continues to rise, addressing modifiable risk factors is essential not only

to reduce the number of new cases but also to prevent current projections from worsening.

Population-based and epidemiologic studies show that certain modifiable risk factors can increase the risk of cognitive decline and possibly dementia. A growing body of evidence shows that healthy behaviors can protect and promote brain health. Given the growing evidence that lifestyle factors play a significant role in cognitive health, larger studies are essential to further understand how we can effectively reduce the risk of cognitive decline and help individuals live longer, happier lives. The Alzheimer's Association U.S. Study to Protect Brain Health Through Lifestyle Intervention to Reduce Risk (U.S. POINTER) is a two-year clinical trial to evaluate whether lifestyle interventions that simultaneously target many risk factors protect cognitive function in older adults who have an increased risk for cognitive decline. U.S. POINTER is the first such study to be conducted on a large group of Americans across the United States. Approximately 2,000 volunteer older adults who are at increased risk for dementia have been enrolled and will be followed for two years. Two lifestyle interventions will be compared, which vary in intensity and format. Eligible volunteers are randomly assigned to these interventions to evaluate whether cognitive benefits from a structured program differ from a self-guided program. Lifestyle interventions combining multiple behavior components show promise as a therapeutic strategy to protect brain health. We look forward to sharing the results of this groundbreaking study soon.

Alzheimer's Association Public Health Center of Excellence on Dementia Risk Reduction

The prevention of aging-related cognitive impairment and dementia is a major and urgent public health priority as well as a priority for individuals, families, and communities. Because evidence for the effectiveness of specific health-related behaviors and practices has begun to emerge, in 2018, Congress passed the Building Our Largest Dementia (BOLD) Infrastructure for Alzheimer's Act (P.L. 115-406) to empower public health departments to develop and implement effective dementia interventions in their communities. We are deeply grateful for the bipartisan, bicameral support that led to the reauthorization of this vital law in December 2024, through the passage of the BOLD Reauthorization Act (P.L. 118-142), allowing this great work to continue for an additional five years.

Sustained funding for the BOLD Act's implementation over the years has allowed the CDC to award funding to three Public Health Centers of Excellence (PHCOE) and make 66 awards to 45 state, local, and tribal public health departments. The PHCOEs are working to increase the education of public health officials, health care professionals, and the public on public health strategies that promote brain health, and support people living with dementia and their caregivers. These investments are critical to advancing public health strategies that not only promote brain health but also support longer, healthier lives. The PHCOEs are working to increase the education of public health officials, health care professionals, and the public on public health strategies that promote brain health and longevity, while also supporting people living with dementia and their caregivers. We look forward to continuing working with Congress throughout the appropriations process to ensure this vital work may continue.

With support from the CDC, the Alzheimer's Association is proud to lead the PHCOE on Dementia Risk Reduction, which works to help state, local, and tribal public health agencies address risk factors for cognitive decline and dementia. Launched in 2020, the Center serves as a national resource in translating the latest science on dementia risk reduction into tools, materials, and messaging that public health agencies can use to reduce dementia risk for all people. More specifically, the Center offers one-on-one engagement with public health officials to encourage action in their communities; provides technical assistance to help public health officials design, implement, and evaluate risk reduction activities; and publishes online resources on dementia risk factors and what public health can do to address them. By identifying and mitigating key dementia risk factors, these efforts directly contribute to the goal of increasing a healthy lifespan.

The Alzheimer's Association PHCOE on Risk Reduction has also partnered with Wake Forest School of Medicine to convene a panel of nationally and internationally renowned scientists with expertise in specific areas of dementia and cognitive impairment prevention research. The panel's charge was to review, evaluate, and synthesize the current knowledge on preventing or delaying the onset of cognitive decline and dementia. In the report ″Reducing Dementia Risk: A Summary of the Science and Public Health Impact,″ the panel ultimately identified eight modifiable risk factors based on the level of research support and strength of evidence, to inform emerging efforts by public health agencies throughout the United States to ad-

dress the risk for cognitive decline and dementia: diabetes and obesity, physical activity, social engagement, diet and nutrition, vascular health, sleep, smoking and alcohol, and sensory impairments. Addressing these risk factors not only reduces the risk of dementia but also enhances overall longevity, enhancing the aging population's independence and vitality.

While new treatments may slow the progression of cognitive decline, steps can be taken now to reduce the risk of developing it and, in turn, optimize individuals' quality of life. As illustrated above, the science on dementia risk reduction is quickly evolving, and the evidence linking certain behaviors and conditions and long-term cognitive health and dementia is growing stronger.

Conclusion

By prioritizing policies that support caregivers and investing in risk reduction strategies, we can help the aging population live longer, healthier lives. The Alzheimer's Association and AIM deeply appreciate the Committee's continued commitment to advancing issues vital to the millions of families affected by Alzheimer's disease and other dementias. We look forward to working with the Committee in a bipartisan way to enhance longevity and improve quality of life for those impacted by dementia.

U.S. SENATE SPECIAL COMMITTEE ON AGING

"OPTIMIZING LONGEVITY: FROM RESEARCH TO ACTION"

FEBRUARY 12, 2025

STATEMENTS FOR THE RECORD

Dr. George C. Shapiro Testimony

Thank you for the opportunity to submit this statement on behalf of Fountain Life. Our mission is to extend healthspan by identifying and addressing chronic disease before symptoms arise, using cutting-edge diagnostic technology and precision medicine. We fully support the Committee's efforts to ensure that innovative research leads to actionable solutions that improve the health and quality of life of older Americans.

The Need for a Proactive Approach to Longevity

Chronic diseases, driven by inflammation, metabolic dysfunction, and lifestyle factors, account for over 90% of healthcare costs and significantly reduce quality of life in aging populations. Traditional healthcare models focus on reactive treatment rather than early detection and prevention. At Fountain Life, we believe the future of medicine lies in proactive, data-driven care that empowers individuals to take control of their health before disease manifests.

Fountain Life's Precision Health Model

Fountain Life integrates advanced diagnostics, AI-driven analytics, and regenerative therapies to optimize healthspan and longevity. Our approach includes:

•Whole-Body MRI & Multi-Cancer Early Detection with AI overlay: Non-invasive imaging technologies detect asymptomatic cancers and early-stage disease, allowing for timely intervention.

•AI-Powered Cardiovascular Screening: AI-driven imaging predicts heart disease risk with unmatched accuracy, leading to targeted preventive strategies.

•Epigenetic & Multi-Omic Analysis: Assessing biological aging markers, inflammation, and metabolic health to tailor personalized longevity plans.

•Regenerative & Cellular Therapies: Utilizing precision interventions, such as stem cell therapies and peptide treatments, to reverse age-related decline.

Real-World Impact: Case Studies & Data

Fountain Life's model is already demonstrating significant outcomes:

•A 58-year-old asymptomatic male underwent our comprehensive screening, revealing early-stage pancreatic cancer. Prompt surgical intervention led to a full recovery, avoiding the typically grim prognosis of late-stage diagnosis.

•A 63-year-old woman was identified with critical coronary artery disease through AI-powered imaging, despite normal cholesterol levels and no symptoms. Early intervention prevented a potentially fatal heart attack.

•In a recent internal study, 14% of asymptomatic individuals screened at Fountain Life had undiagnosed cancer or significant cardiovascular disease, highlighting the critical need for proactive detection.

Bridging Research & Action for Better Outcomes

To translate longevity research into real-world impact, we advocate for policies that:

1. Promote Preventive & Precision Healthcare: Incentivizing proactive diagnostics and biomarker-driven treatments to delay or prevent disease onset.

2. Expand Access to Advanced Screening: Increasing insurance coverage for early-detection technologies to make longevity-focused care widely available.

3. Support Data-Driven, AI-Powered Healthcare: Encouraging the integration of AI in diagnostics to improve accuracy, efficiency, and scalability.

Commitment to Collaboration

Fountain Life welcomes the opportunity to collaborate with policymakers, researchers, and healthcare leaders to advance longevity-focused healthcare. We look forward to participating in future hearings or roundtable discussions to further explore solutions for optimizing healthspan and reducing chronic disease.

Thank you for your leadership in this critical area. We appreciate the Committee's dedication to ensuring that longevity research translates into meaningful, actionable improvements for aging Americans.

″In addition to the insights shared here, Fountain Life has compiled comprehensive data demonstrating the economic impact of our precision medicine and longevity strategies. This data highlights the cost savings associated with early disease detection, proactive interventions, and improved healthspan. We would welcome the opportunity to present these findings in detail at your next meeting to further illustrate how our approach aligns with the committee's mission of translating research into action that enhances public health outcomes.″

Respectfully submitted,

George C. Shapiro, MD, FACC
Chief Medical Innovation Officer, Fountain Life

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