

**AGING WITHOUT COMMUNITY: THE
CONSEQUENCES OF ISOLATION AND LONELINESS**

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THURSDAY, APRIL 27, 2017

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

The Committee met, pursuant to notice, at 9:48 a.m., in Room SD-430, Dirksen Senate Office Building, Hon. Susan M. Collins (Chairman of the Committee) presiding.

Present: Senators Collins, Flake, Tillis, Fischer, Casey, Nelson, Gillibrand, Donnelly, Warren, and Cortez Masto.

OPENING STATEMENT OF SENATOR SUSAN M. COLLINS, CHAIRMAN

The CHAIRMAN. The Committee will come to order.

Good morning. Today we are shining a light on a growing phenomenon: the consequences of isolation and loneliness on older Americans who are aging without a strong sense of community. This is the first of a two-part series. In our next hearing, we will explore solutions that reconnect older people to communities.

One survey to assess isolation among seniors asks this question: If you had good news or an interesting story to tell, do you know someone with whom you could share it? Increasingly, older Americans are answering this question not with the name of a relative or a friend, but with the name of their cat or their dog. While studies have shown that pets can help to alleviate loneliness, they should not be an individual's only social contact. In fact, the science is clear that isolation and loneliness are dangerous to the health of our seniors. Having friends is as important for good health and well-being as food and water.

Isolation and loneliness can result in negative mental, behavioral, and physical health outcomes. Seniors who are lonely have a 45 percent greater risk of dying. They have a 59 percent greater risk of functional decline, causing deterioration in their mobility and ability to perform daily tasks. Isolation and loneliness are associated with higher rates of heart disease; a weakened immune system; more depression and anxiety; dementia, including Alzheimer's disease; and nursing home admissions. Prolonged isolation is comparable to smoking 15 cigarettes a day. I must say that was a statistic that really hit home to me.

Older Americans who are isolated or lonely are also more susceptible to financial scams and elder abuse. Last Congress, we uncov-

ered the tragic story of a 77-year-old man from Maine who turned to the Internet for companionship. Lured by scam artists, he ended up in a European prison as a convicted drug smuggler. Without the persistent work of this Committee and diplomatic negotiations, he would still be there today. The plight of this man and thousands of seniors in his shoes could have been avoided had he and others not been so susceptible due to their desire for simple companionship.

A number of risk factors for isolation and loneliness are age related—including widowhood, chronic health conditions, and mobility impairments. The size of one’s social network also decreases with age. I have heard seniors in my state compare this phenomenon to “watching the world die before you,” as they lose more and more of their friends.

Maine is the oldest state in median age, is aging the fastest, and is among the most rural. An epidemic of loneliness and isolation is growing, and we face major challenges. Those who live in Maine year round can be left isolated. Winter can keep them indoors for long stretches, homes are often far apart, and transportation is often a barrier.

Established programs such as Meals on Wheels are reaching seniors in important ways. For many, Meals on Wheels is not just about food. It is about social sustenance, also. Seniors look forward to greeting the driver and having a bit of conversation. That is why I am concerned that the administration’s proposed budget cuts would affect programs like this one and many others that help keep our seniors connected. If you look at it, those cuts are really penny wise and pound foolish, because in the end they are going to cause more hospitalizations, more nursing home admissions, and poorer health outcomes.

The fact is the consequences of isolation and loneliness are severe: negative health outcomes, higher health care costs, and even death. The root problem is one that we can solve—by helping seniors keep connected with communities. Just as we did when we made a national commitment to cut smoking rates in this country, we should explore approaches to reducing isolation and loneliness. Each has a real impact on the health and well-being of our seniors.

I am now pleased to turn to our Ranking Member, Senator Casey, for his opening statement. Before I do so, however, I want to extend my thanks to our witnesses for being so flexible on this hearing. It seemed that every time it was scheduled, we had something intervene, most recently the briefing at the White House yesterday on North Korea. So I very much appreciate your staying over and being with us today.

**OPENING STATEMENT OF SENATOR ROBERT P. CASEY, JR.,
RANKING MEMBER**

Senator CASEY. Chairman Collins, thank you very much for calling this hearing and for your opening statement.

We, of course, want to begin a process today of examining both social isolation and loneliness. And as the chairman mentioned, this will be a two-part hearing series. Today we will focus on loneliness and social isolation, and in two weeks, we will be able to examine more macro solutions, focusing on livable communities.

Taken together, these hearings will provide the Committee with the opportunity to examine the full scope of an issue facing seniors as well as others across the country.

One of the most searing reminders of this came from a New York Times op-ed back in December by Dr. Khullar from Harvard Medical School and Massachusetts General Hospital, entitled “How Social Isolation Is Killing Us”. He was talking about an individual that he knew would be dying, and the individual knew they were dying, he said—and this is the doctor speaking—“for me the sadness of his death was surpassed only by the sadness of his solitude.” And I think that sums it up.

We hope that this hearing, and the series of two hearings, will inform our engagement on other matters as well that may be coming before the Senate, like the President’s budget request or potentially an infrastructure package.

You might be asking how those two are related. Well, let me explain.

Back in March, like a lot of parts of the country, my hometown of Scranton, in Lackawanna County, was hit hard by a last gasp of winter with a terrible blizzard. Meals on Wheels, of course, in that moment became even more important. The blizzard did not stop Meals on Wheels in northeastern Pennsylvania. One of the drivers that I met with a couple of days after he had been out in that snowstorm went to a home in Lackawanna County to drop off a weekly supply of meals. Upon arrival, the driver heard the homeowner calling out for help. This individual had fallen into a snow bank wearing shorts and just a T-shirt. He had fallen after going outside. That Meals on Wheels driver saved that man’s life that day. There is no doubt about it.

And when it comes to not only Meals on Wheels but also other programs, but especially a program like Meals on Wheels, I think the administration’s cuts to that program are misguided, to say the least.

I believe that Democrats and Republicans can agree on issues like that. We have a great deal to work together on to address our Nation’s infrastructure in addition to that so that we have improved accessibility. This would include improving signage that makes it easier to read. It also includes constructing curb cut-outs so those who are aging or have disabilities can continue to get around in their communities; and, finally, enhancing access to technology and broadband so that those in rural communities can stay connected to their loved ones.

I would say parenthetically another story that I read in Politico talking about loneliness and isolation in rural America is recommended reading for all of us.

So improvements like the ones I just mentioned will help individuals venture outside of their homes and into their communities with success, as well as stay connected to those who are most important in their lives.

So I look forward to the hearing and discussing the pressing issues with our witnesses today, who I thank, as well as the Chair, for being here and for rearranging your schedules.

Chairman Collins, I am also told in the audience today we also have the Acting Director of the Administration on Community Liv-

ing at the Department of Health and Human Services, Bob Williams. We want to acknowledge his presence as well.

Thank you, Madam Chair.

The CHAIRMAN. Thank you. We will now turn to our panel of witnesses.

First I would like to introduce Dr. Julianne Holt-Lunstad. Dr. Holt-Lunstad is a professor of psychology at Brigham Young University in Utah and studies the influence of social relationships on long-term health. Her work has been nationally and internationally recognized.

Next we are going to be very fortunate to hear from one of my constituents, Dr. Lenard Kaye. I first met Dr. Kaye some 17 years ago. He is a professor of social work and director of the Center on Aging at the University of Maine. He is also the director of the Encore Leadership Corps, a statewide adult volunteer program that involves older residents in community service. He, too, is a nationally recognized leader in the field of health care and aging, and I am delighted that he could be here to join us today.

I would like to next turn to my colleague Senator Flake to introduce Mr. Mark Clark.

Senator FLAKE. Thank you, Madam Chair, and thank you for being here. And I just wanted to personally welcome Mr. Clark, an Arizonan traveling here to discuss this important issue of isolation and innovative programs that your organization has developed to help combat the issue. Mr. Clark currently serves as president and chief executive officer of the Pima Council on Aging as well as grass-roots coordinator for the National Association of Area Agencies on Aging. He has extensive experience in administrative advocacy and policy experience working for a variety of community service organizations in Tucson. He has also served as a faculty associate with Pima Community College's Social Services Program and ASU's School of Social Work.

Welcome, Mr. Clark. Thank you for coming from Arizona. I am also glad that there is a fellow BYU alumni on the panel as well.

Thank you, Madam Chair.

The CHAIRMAN. Thank you, Senator Flake.

And now I want to once again turn to our Ranking Member, Senator Casey, to introduce the final witness on this panel.

Senator CASEY. Thank you, Madam Chair. I am pleased to introduce Rick Creech from Harrisburg, Pennsylvania. Rick, I am going to use some of your own words to describe you. I hope that is okay.

Rick, in your book you refer to yourself as a "unicorn," and I know we will hear more about that. But we are grateful that you are here, and I do not think I could have come up with a single word like that. But I have also read your work. And I had an opportunity to meet with Rick today, and I have to say his spirit is inspiring and even magical, your ability to communicate. And we know that your cerebral palsy does not define you. Instead, you have defined cerebral palsy in your own way.

Early on in life, Rick relied upon an alphabet board made of wood to communicate. Today, using his powered wheelchair and augmentive communication devices, Rick works at the Pennsylvania Training and Technical Assistance Network in Harrisburg. He is an educational consultant providing training and technical

assistance on assistive technology and augmentive communication and assists schools, providers, parents, and administrators about how technology can promote inclusion. He is an author, and he is also a poet.

Rick, I am certain that throughout your life people have second-guessed your ability. I am sure after today they will have a different point of view. This panel is excited to hear your story and hear how you have defied the skeptics and wound up here before the Special Committee on Aging discussing, among other things, how technology has enabled you to remain actively engaged in your community and how your work helps to combat loneliness and social isolation in others.

Rick, thanks for being here.

The CHAIRMAN. Thank you very much, Senator Casey.

We will now turn to our witnesses, starting with Dr. Holt-Lunstad.

STATEMENT OF JULIANNE HOLT-LUNSTAD, PH.D., PROFESSOR OF PSYCHOLOGY AND NEUROSCIENCE, BRIGHAM YOUNG UNIVERSITY

Ms. HOLT-LUNSTAD. Thank you, Chairman Collins, Senator Casey, and members of the Committee, for your interest in social isolation and loneliness and for the opportunity for me to present testimony today. My name is Julianne Holt-Lunstad. I am a professor of psychology and neuroscience at Brigham Young University, and my research focuses on the influence our social relationships have on our physical health outcomes. In my remarks today, I will be talking about the public health relevance of social isolation and loneliness, including data on prevalence rates, health and mortality risk, and potential risk factors.

Being connected to others socially is widely considered a fundamental human need—crucial to both well-being and survival. Extreme examples show infants in custodial care who lack human contact fail to thrive and often die. And, indeed, social isolation and solitary confinement has been used as a form of punishment. Yet an increasing portion of the U.S. population now experiences isolation regularly.

It is estimated that more than 8 million older adults are affected by isolation. However, if we consider social connection more comprehensively, this includes the extent to which relationships are present, can be relied upon, and one's satisfaction with them. And if we consider this, the prevalence of adults in the United States may be—or the prevalence of this may be much larger. So, for instance, a quarter of the population and 28 percent of older adults live alone, and over half the U.S. adult population is unmarried. Three in ten marriages are severely distressed, and the majority of adults do not participate in social groups. More than a third of older adults experience frequent and intense loneliness.

There is also evidence that isolation or social disconnection is increasing. For instance, the average size of social networks has declined by one-third, and social networks have become less diverse. Census data also shows trends of decreasing marriage rates, fewer children per household, and increased childlessness and living alone.

Taken together with an increasing aging population, smaller families and greater mobility reduces the ability to draw upon familial support in times of need and in older age.

To estimate the prevalence—or the influence that this has on the risk for premature mortality, my colleagues and I have conducted two meta-analyses. We first examined the social connections, including a variety of indicators. Cumulative evidence from 148 studies revealed that greater social connection is associated with a 50 percent reduced risk of early death.

The second focused specifically on social deficits, including social isolation, loneliness, and living alone. Cumulative evidence from 70 different studies, including over 3.4 million participants, indicates that each of these have significant and independent effects on mortality risk.

To contextualize this cumulative data on social connections relative to other leading health indicators, we created Figure 1 (page 37) to benchmark the magnitude of the effect on overall mortality risk. Despite some variation across social indicators, there is a consistent and significant effect on mortality risk, and the magnitude is comparable and in many cases exceeds that of other well-accepted risk factors, including smoking up to 15 cigarettes per day, obesity, and air pollution.

As seen in Figure 2 (page 36), prevalence rates or the proportion of the population affected are also comparable with other risk factors that receive considerable attention.

Social isolation has also been linked to a variety of mental and physical health outcomes. For example, those who are isolated are at increased risk for depression, cognitive decline, and dementia.

Social relationships influence health-related behaviors such as medication and treatment adherence and have a direct influence on health-related physiology such as blood pressure, neuro-endocrine and immune functioning, increasing the likelihood of the development and progression of a variety of chronic illnesses.

Risk factors include living alone, being unmarried, no participation in social groups, fewer friends, and strained relationships. Retirement and physical impairments, including reduced mobility and hearing loss, may also increase the risk for social isolation.

Why is it important among older adults? Chronic exposure to either protective or risk factors are more pronounced as individuals age; therefore, we are more likely to see the effects of lacking social connection in older adults. Further, there are a number of important life transitions among older adults that reduce social connection. These include retirement, widowhood, children leaving home, and age-related health problems.

Given the incidence of loneliness is known to increase with age and social networks shrink with age, the prevalence of loneliness is estimated to increase with increased population aging.

In conclusion, the World Health Organization explicitly recognizes the importance of social connections, and many nations around the world now suggest that we are facing a loneliness epidemic. The scientific evidence is clear that social isolation poses a significant risk to both older adults and public health more generally. The challenge we face now is what to do about it.

I am very pleased to see that the Committee has recognized and is bringing attention to this important issue, and I am happy to assist in advancing an agenda to address social isolation and loneliness among older adults.

Thank you again for the opportunity to comment, and I welcome your questions.

The CHAIRMAN. Thank you very much.
Dr. Kaye.

**STATEMENT OF LENARD W. KAYE, D.S.W., PH.D., DIRECTOR,
CENTER ON AGING, AND PROFESSOR, SCHOOL OF SOCIAL
WORK, UNIVERSITY OF MAINE**

Mr. KAYE. Chairperson Collins, Ranking Member Casey, and members of the Senate Special Committee, thank you so much for inviting me to be here today. I appreciate it. And I also applaud your willingness to be addressing what is a very, very troubling issue but, unfortunately, an under-recognized issue of the day, and that is social isolation.

As director of the Center on Aging at the University of Maine, it has become clear to me that aging Mainers across the oldest and the most rural state in the Nation are a stoic and fiercely independent lot. But like millions of their counterparts in other rural states, they may be losing the battle when it comes to protecting themselves against the devastating consequences of isolated living and loneliness.

The fact is social isolation is a silent killer, and it is lethal in its impacts. More Americans are dying of isolation and loneliness than ever before. The prevalence, in fact, may be as high as 43 percent if you break out certain subgroups of older adults who are at particularly high risk. And let me remind you that risk is high as well for caregivers of older adults given that when they engage in elder caregiving, as if it were a career, it can become a very, very isolating experience.

Perhaps that is why multiple national social work associations have identified social isolation as one of 12 grand challenges to societal well-being and why AARP, NIH, and, as you heard, the WHO have also recognized that social isolation requires it be placed on a high-priority list of concerns.

I will only add a couple of risk factors that perhaps were not mentioned as much as they might be. One would be facing critical life transitions in the lives of older adults, and I am referring to divorce, death of a spouse, an abrupt retirement, a health crisis, and even children moving out and away from under the roof in which older adults live.

Also, I want to highlight the lack of instrumental supports, and here I am talking about the absence of Internet, of available transportation, even of telephones in the case of some older adults who live in extremely rural and even frontier communities.

The importance of having a social support network cannot be overstated in this discussion. Family, friends, and neighbors—what we call “informal supports”—and professional caregivers together provide not only social support, but please know they are socially influential; they create a buffer against stress; they increase one’s access to resources; they can even stimulate the immune system of

older adults. Social interaction, like a breakthrough medication or balanced low-fat diet, extends life.

Solutions to preventing social isolation and loneliness are presenting themselves both locally and nationally and need not be excessively costly. Many of them simply require that we mobilize local citizens and existing community organizations.

At the local level, combating social isolation entails bringing the older adult either out into the community or bringing the community to them. Area Agencies on Aging remain one of the first lines of defense, and I will tell you, the University of Maine, in partnership with the Eastern Area Agency on Aging, is supporting, for example, a student-led program called “Project Generations” that brings college students into the homes of older adults for friendly visiting and lending a helping hand. Programs like this offer students the opportunity to interact with elders and for older adults to serve as role models for those younger people as they grow older themselves.

In at least one Maine community—namely, Augusta—postal service workers are trained to ask questions of homebound older adults and to check in on them and ensure their well-being. Doctors, too, if they so choose, are able to screen for social isolation during routine doctor’s appointments. These solutions are often called “sentinel approaches,” and they provide gatekeepers—gatekeepers who offer an extra set of eyes and ears in the community to identify and address social isolation.

Many communities have begun to organize programs as well where volunteers and law enforcement officers provide regular calls and wellness checks to older adults who are known to be frail or homebound. One example is in Franklin County, which sends sheriff’s deputies to regularly check on older adults to not only help reduce their risk of falling victim to a scam, but also to increase their social contact and ultimately well-being.

Creative housing solutions like co-housing where older adults live with younger adults can also help to combat social isolation and help create a sense of purpose among both the young and old.

If you add to that the availability of smart technologies in those homes, you can further enable regular communication and contact between older adults and the outside world.

Remember also that information empowers people and that local informational clearinghouses that keep older adults informed of services, entitlements, and benefits, and other programs available to them and their family caregivers, enables them to more easily stay connected with the world around them.

Several federal programs add to the support infrastructure available, and I am referring here to the Meals on Wheels Program. That network reaches 800,000 homebound older adults across the Nation. They provide not only home-delivered meals, they also provide socialization. And the Senior Companion Program—part of the national network of Senior Corps programs—pairs older adult volunteers with homebound older adults in their communities for ongoing socialization and support.

We also know there are ways to prevent social isolation before it even occurs, and here I am referring to the importance of encouraging older adults to be involved as volunteers in their commu-

nities through churches and civic groups, which can be important avenues for ensuring that they stay healthy but also feel vital and needed by the communities in which they live. Programs like RSVP, another Senior Corps program, and Senior Colleges, of which Maine is proud to say we have 17 such lifelong learning programs, offer older adults opportunities to meet people and have a purpose.

Older adults residing in small towns and rural communities may be especially vulnerable to the dangers of isolated living, but such communities, with relatively modest levels of local and federal support, can be mobilized to take action against what, in fact, is the lethal threat to their well-being.

Thank you.

The CHAIRMAN. Thank you very much, Dr. Kaye.

Mr. Clark.

**STATEMENT OF W. MARK CLARK, M.S.W., PRESIDENT AND
CHIEF EXECUTIVE OFFICER, PIMA COUNCIL ON AGING**

Mr. CLARK. Good morning. Thank you, Chairman Collins, Ranking Member Casey, and members of the Aging Committee, for your interest in this topic and the opportunity to testify today.

As Senator Flake noted, I have the honor of serving as president and chief executive officer of Pima Council On Aging, the Area Agency on Aging serving Pima County, Arizona, since 1976. Area Agencies on Aging, of which there are 622 across the country, were created by the Older Americans Act in 1973. We serve as local planning, development, and delivery systems, providing home and community-based services to older adults so that they may age successfully with maximum health, independence, and dignity.

Pima County is roughly the size of the State of Vermont, and one in four of our residents is age 60 or older. But the fastest-growing segment of our population is people 85 years of age and older, up 35 percent in the past decade.

Every four years, we collect information about the issues of most concern to older adults. Nearly 2,300 people completed our survey last fall, almost half of whom lived alone. The ability to continue to live independently in one's own home was a significant concern of nearly 67 percent of responses. Other indicators of isolation, such as loss of a spouse, depression, and anxiety, also appeared as significant issues. Social isolation itself was cited as a concern by 46 percent of responses.

While aging at home is cited as a top priority by a majority of older people and doing so has both emotional and economic benefits, it can also lead to isolation. And so meal delivery drivers or direct care workers who come into the home to drop off lunch or assist with giving a bath, changing linens, or shopping can become a social network. Such regular contact can help stave off the depression and ill health effects that accompany isolation. In fact, these Older Americans Act home and community-based programs were intentionally designed to meet those socialization needs, as well as other needs, including safety, independence, and nutrition.

As we have heard, the causes of social isolation are many. What we witness happening is isolation even in the midst of community. Long-time residents often have no connection to the younger fami-

lies in their neighborhoods. People retiring from other states move to communities like ours and leave behind their families, friends, and support systems. We have become in a very real sense communities where the garage door is the front door, and many come and go without ever seeing neighbors except through the car window.

Other challenges include isolation from the community by language or cultural barriers as well as by fear. Many older people do not reach out for assistance for fear of losing their ability to remain in their homes. Changes to mobility, cognitive ability, or health status can cause an individual to hold back from previously enjoyed social activities. Older adults in rural areas who can no longer drive are at incredible risk of physical and social isolation unless transportation options are available. And as has been noted, acting as a caregiver can itself also be isolating.

Reaching out to all older people with messages that resonate and suggestions they will embrace is critical. That is why we participated in last year's "Expand Your Circles: Prevent Isolation and Loneliness As You Age" campaign, a national effort of the Federal Eldercare Locator to boost public awareness and education of social isolation among seniors.

While PCOA will continue to tackle the problems as best we can at home in Pima County, we offer several policy recommendations for consideration by Congress and the administration.

First, public education needs to be increased. Current national efforts to raise awareness, assessment, and remedy should be strengthened and new interventions developed so that we can elevate the issue with more older adults and their families. In tandem with national campaigns, local communities like ours and the aging and community groups that serve them need effective messages and resources to deploy at the ground level.

We also believe that all Older Americans Act programs should be increased in fiscal year 2018. We urge you to pay particular attention to the Older Americans Act Title III B Supportive Services, which provides flexible funding for a range of services from in-home supports to transportation, as sequestration has eroded III B funding to levels not seen since before fiscal year 2002.

Programs that get older adults engaged in serving the community help reduce social isolation for both volunteers and those they serve, and we support funding the Corporation for National and Community Service's Senior Corps programs.

Transportation is one of the most pressing needs for all older adults who are trying to remain at home and in the community, so we need more investment in affordable, accessible transportation options.

We also need to create livable communities for all ages. Although there is much that individuals can and should do to maximize their independence as they age, public policymakers make critical decisions about issues such as transportation systems, housing opportunities, and land-use regulations that affect whether older adults can live successfully and productively at home and in their communities.

Finally, the problem of social isolation can be reduced with better coordination between acute health care systems, such as hospitals,

doctor's offices, and managed care organizations, and the social and human services systems of which Area Agencies are a key part.

Thank you again for the opportunity. I look forward to answering questions.

The CHAIRMAN. Thank you, Mr. Clark.

Mr. Creech.

**STATEMENT OF RICK CREECH, EDUCATIONAL CONSULTANT,
PENNSYLVANIA TRAINING AND TECHNICAL ASSISTANCE
NETWORK**

Mr. CREECH. Chairwoman Collins, Ranking Member Casey, and other members of the Committee, thank you for inviting me to speak today.

There can be no social engagement with others without interactive communication.

As someone who was born with cerebral palsy and was without the ability to speak in the accepted way, I grew up lonely and isolated—except for my parents and grandmothers. It was not until I received my first vocal output communication device that people began to realize that they could speak to me and I could speak to them—well, at least, some people did.

I was born in 1954 in Smithfield, North Carolina. Back then babies like I was were not expected to live, and if we did live, we were not expected to be out in public, we were not expected to be educated, and we were certainly not expected to become independent adults. However, I had extraordinary parents who trusted in God, and not in all the doctors, the therapists, the social workers who said I would never do that, or that, or certainly not that.

My father told me once—and I never forgot this—that he wanted me to learn math so that I would be able to manage my own money. He wanted me to read so that I would be able to read and understand anything that someone might write about me and what should be done to and for me. And he wanted me to be able to communicate so that I could have control over my life.

My parents presumed competence in my ability to learn to do those things. They insisted that I learn. Boy, did they push me. When it came to teachers, I would always prefer to have my mother because with her I could slack some. With my father, the Baptist preacher, there was no way I could slack. He was more demanding than God was with Moses.

[Laughter.]

Mr. CREECH. However, they taught me that I was competent. I was competent enough to go beyond their goals—and their dreams—for me. This is what great parents, great teachers, and great schools do.

Supporting individuals who need to use AAC is not simple. The person may want to communicate; however, the person will have to be taught how to use an augmentative and alternative communication device for his or her expressive communication. The vocal-impaired person will not know how, what, when, or why to express thoughts, feelings, ideas without being encouraged, without being pushed.

I am speaking from experience. Initiating a conversation and carrying on a conversation is the hardest thing I do in life. To put it

simply, I am no good at chit-chatting. I believe that there is an optimal age to learn communication skills, that age being as young as possible. However, I was 28 when I got my first voice output communication device, and although I still have deficits, I can expressively communicate my ideas in conversations.

I had to work extremely hard, and I work long hours to learn to communicate with an AAC device. I used to read passages from the Bible and newspapers aloud to practice with my AAC device. My point is that we cannot provide a person with assistive technology or AAC and expect people to use it.

I recently got the Amazon Echo to help me to control the lights in the house. Sometimes I am ready to throw Alexa out the window, and I will not tell you the names my wife has called the thing. Amazon Echo is simple compared to AAC devices. I started telling people many years ago that assistive technology without training is not assistive.

Even today, as proficient as I am with my AAC device, I cannot talk to some people because they are too much in a hurry or too caught up in my Accent1400, saying things such as, "What can you say?" "Can you say my name?" or they are hollering at me as if I am deaf, saying, "it—is—good—to—meet—you. What—are—you—doing?" I get tempted to reply, "Talking to an idiot."

[Laughter.]

Mr. CREECH. But my parents taught me that if you cannot say something nice, say nothing at all, so I do not.

As I get older, I feel my body slowing down. My bones snap, crackle, and pop—like Rice Krispies. My muscles hurt. Right now, I have my best friend and my protector, my wife, but she is almost my age and has a bad back, arthritis, and diabetes. I know that I might not always have my wife by my side. One day I will probably be in the care of a minimum wage worker, who will have 24 other patients all requiring less time and care than I. The only way I have to individualize myself to my caretakers will be through my ability to communicate with them so that they will be able to see me as a person rather than just another patient.

Of course, if that does not work, I could always call one of my three 250-pound sons and say, "Son, I need help."

I would like to thank the Committee on Aging for giving me this opportunity to speak here, although I do not think I am that old. I would like to thank the Association of Assistive Technology Programs for sponsoring my trip here. Before I started working for Pennsylvania Training and Technical Assistance Network, I worked with Pennsylvania Initiative on Assistive Technology. I started PIAT's Short Term Loan of assistive technology to adults nearly 30 years ago, so maybe I am that old.

The communication device I use, the Accent1400, costs in the neighborhood of \$10,000. It is one of the more sophisticated AAC devices. However, even simpler augmented communication devices with speech output cannot be found for less than \$5,000. The AAC devices with eye tracking so that people can speak with them using only their eyes cost in the neighborhood of \$20,000.

All of my assistive technology, my AAC device, my van converted for a powered wheelchair passenger, my smart home equipment, my powered wheelchair all cost upward of \$200,000. Still, ladies

and gentlemen, that is cheap compared with a lifetime of taking care of me in a nursing facility.

For my work at PaTTAN, Pennsylvania Training and Technical Assistance Network, I help manage its Assistive Technology Short-Term Loan Program that provides assistive technology to school therapists and teachers statewide to try with their students. Each year the Pennsylvania Department of Education generously provides around a third of a million dollars for equipment. To a poor North Carolina country boy, that sounds like a lot, but we have constant waiting lists of students, and at the end of every school year, there are requests that I have to cancel or delay until the next school year because we do not have enough inventory to meet the requests. These students need appropriate assistive technology to receive education so that they can grow to be productive and independent adults who can be social members of our society.

I want to leave the Committee with this thought: Living without being able to communicate is like being behind four glass walls. You are able to see others and people can see you, but you are ignored, or worse, talked down to, until you stop remembering who you are and why you are important.

The CHAIRMAN. Mr. Creech, forgive me for interrupting you. I have to go cast a vote just across the hall. I will be right back. You can continue while I am gone because Senator Tillis is going to take over temporarily as the Chair of the Committee. Senator Casey may have to go and cast that vote also, but I did not want you to think I was one of those idiots that you talk to.

[Laughter.]

The CHAIRMAN. Or that I was disrespectful. And I will return very quickly. Thank you.

Senator TILLIS. [Presiding.] You can continue, Mr. Creech.

Mr. CREECH. I have finished.

Senator TILLIS. Well, I hope I did not cut you off, but I am from North Carolina, and it is nice to see another North Carolinian here before us. Welcome.

I will, acting in the chair, defer to Senator Casey for the first questions.

Senator CASEY. Well, thanks very much. I want to thank our panel. And, Rick Creech, thank you in particular. I am, of course, showing deference to Pennsylvania. I am sure the other witnesses will grant me that privilege, at least for part of the hearing.

Rick, I will start with you. You mention in your testimony that your assistive technology keeps you connected to others, that it combats isolation and allows you to interact with those around you. You also tell us that for you your technology costs about \$200,000, which is quite an investment. So here is my question.

First of all, how do you pay for your technology, and what would life be like without it? That is one question. And maybe I will continue on so we have it all in one. And since you work with so many other people who need assistive technology to keep them connected, how should the Federal Government be supporting the costs of assistive technology so that others may stay connected for their communities and live independently?

Mr. CREECH. My employer's insurance paid for my powered wheelchair and my Accent1400, my communication device. That is

one reason that I am not planning on retiring anytime soon, that and the mortgage on my house.

The Office of Vocational Rehabilitation in Pennsylvania helped pay for my van conversion. The Office of Vocational Rehabilitation only will help pay if I am working or I wanted to work, another reason I am not retiring anytime soon.

My personal care aide, who is not technology but certainly is assistive, is subsidized by a state program. My smart home technology I am paying for piece by piece.

One of the biggest breakdowns is in transportation. Too often paratransit buses are unreliable. I have been told that drivers can be rude, although I have never experienced that myself. What I have experienced are vans being late or not coming; being taken on a 90-minute ride when where I needed to go was 10 minutes from my home; my powered wheelchair not being fastened down properly. I absolutely love this one. My van breaks down, so paratransit is called. Someone tells my wife that I cannot use paratransit because I am not registered. You have to register every 6 months. If you do not, you are dropped from registered users. I guess they figure you are dead.

So my wife says, "How can I re-register?" They say first I will have to get a doctor's note saying that I need paratransit. Then I will have to go down to the paratransit office in person to get a photo ID. My wife stopped them right there and asked, "How about if I rent a U-Haul trailer, load my husband and his powered wheelchair in it, and drop him off at your front door?" They replied, "Oh, no, you cannot do that. It takes 4 to 6 weeks to process his registration and put him on the schedule." My wife hung up.

So the short answer to your question: Get us decent and reliable transportation.

Senator CASEY. Rick, thank you very much for your answers.

I will yield back to Senator Collins, the Chair.

The CHAIRMAN. [Presiding.] Thank you very much, and I want to thank Senator Tillis for taking over the gavel. How did it feel?

Senator TILLIS. It was a tough job.

[Laughter.]

The CHAIRMAN. Dr. Holt-Lunstad, I understand that you flew here directly from a conference in Germany—for which I want to thank you for making that kind of effort to be with us. I am curious whether you find that there is a difference between other countries and our country when it comes to issues related to isolation and loneliness among our seniors.

Ms. HOLT-LUNSTAD. Thank you. That is a very good question. So there are a couple of different ways in which we can approach that. First I will mention that when we look at actual data from the meta-analysis that we conducted on risk for mortality, we did not find significant differences across country of origin. However, I should mention that most of the data comes from Western nations, and there is less data from developing nations.

However, we also know that there are some similarities in terms of other nations that have also in essence called for a loneliness epidemic, so nations such as Germany, the U.K., Australia, North America, and Europe have all reported similar trends and are considering efforts to alleviate this.

Another way to consider this, though, is also some of the different norms across nations. So in Western nations, we tend to value independence. Other nations and cultures tend to value collectiveness and being part of a group. And our national value on independence to some extent may come at our detriment in terms of desire for connecting in older age and the desire for independence; and that perhaps if we can change some of the national dialogue around the value of interdependence and relying upon others as well as being someone to be relied upon, that could be a potential solution that we could strive for.

The CHAIRMAN. Thank you.

Dr. Kaye, you made a very interesting point, and I am reminded of it by the testimony we have just heard about people wanting to be independent. Your point focused on the caregivers and that we have in our state fiercely independent seniors, and it is not at all uncommon to find a spouse in her 80s taking care of her husband who may be in his 90s, living down at the end of a rural road in an old, big farmhouse, and their children have moved away, their friends have died, they no longer are well enough to go to church each week, and they really are cut off.

Could you talk a little bit more about the impact on caregivers and what we could do to try to assist the caregiver who may end up being just as isolated as the person for whom she is caring?

Mr. KAYE. That is a crucially important question, Senator Collins. The fact is America's families and friends and neighbors—again, what we call the “informal support network”—are unsung heroes. These are the very individuals who provide the lion's share of care in this country. It is not doctors or nurses or social workers. They provide supplemental assistance. But 80 percent or more of care in this country, and certainly in Maine, is provided by primarily family members, and they, as I said, are at risk of living isolated lives. They are also likely to be less healthy than members of the general population. They themselves are aging. They themselves are struggling with chronic illnesses and know that the burden they feel when it comes to caregiving is multidimensional. And so it is not just a burden on them physically. It is also a burden on them socially and emotionally and financially.

And so caregiving is dangerous business, especially for those who are involved in it literally for years at a time. For them it becomes a career. And for all too many of them, it is their second or third career, because they are also employed. And so they are caught between a rock and a hard place. They need to hold down employment and at the same time manage the responsibilities of caring for a spouse or a grandparent or other member of the family.

So caregivers need as much of our attention and support through a comprehensive network of benefits and entitlements and programs as older adults themselves.

The CHAIRMAN. Thank you. Senator Tammy Baldwin and I have a bill that we have introduced known as the “Raise Family Caregivers Act,” which we hope we will be able to get through this session of Congress.

Mr. KAYE. I am aware of that bill, and what is very inviting and attractive about it, in my view, in particular, is that it addresses this comprehensively and it aims to establish a national infrastruc-

ture, and it realizes that caregiving needs responses that are broad-ranging, from information to respite care to training and preparation to assessment. And that bill appears to recognize all such needs.

The CHAIRMAN. Thank you.

Senator Tillis?

Senator TILLIS. Thank you, Madam Chairman.

Mr. Creech, again, thank you. I am from North Carolina. I am from a different part of the state, but I thank you for being here.

Mr. Clark, you mentioned Senior Corps earlier. As I understand Senior Corps, it is primarily focused on 55 and over adults getting engaged in the community, more or less engaging them, but the focus is on a younger population, foster parenting and other kinds of programs. Is that program or other programs out there focused on engaging seniors to engage with other seniors?

Mr. CLARK. Chairman Collins, Senator Tillis, the Senior Corps programs, in fact, do focus, several of them, on older adults. The RSVP program, the historic Retired and Senior Volunteer Program, the Senior Companion Program, which I referenced in my written material, is a program where low-income older adults are actually placed and stipended, but placed with specific older adults who have support needs. And so there is a commonality between those two folks who work very closely together.

So, yes, in fact, the Corporation for National and Community Service programs do a lot of good for older adults.

Senator TILLIS. Mr. Kaye, I think you alluded in your opening comments to some use of technology. My mother is 84 years old. If it is on C-SPAN, she is probably watching this right now. My father passed away 20 years ago. She is also one of the most politically astute people that I know. But we got her engaged in something as simple as Facebook probably 10 years ago, and it has had a remarkable impact on her feeling engaged in our daily lives. Sometimes, when somebody engages me on my Facebook page, she engages a little bit too much.

[Laughter.]

Senator TILLIS. She still takes care of her kids. But, you know, to what extent are best practices arising to where we are leveraging—you know, there are bad parts to the Internet, but there are a lot of good uses to connect people when geography—particularly in my case, six kids spread out all over the Southeast, the few that live near her. But are there best practices out there or states that are doing, you know, particularly better than others that were instructive?

Mr. KAYE. I am so delighted, Senator Tillis, that you raised the technology question. We in Maine take that very seriously, and I am pretty proud to tell you the University of Maine system has a major aging initiative underway, and I am thinking of other universities—I know for a fact in other states as well—who have identified and recruited scientists and researchers who are aiming to put devices and products that enable older adults to age in place and stay connected and advance those products on the fast track and get them commercialized and available. But what we do know is our best practices need to accompany that process, that the best

technology is going to be that which is responsive to the needs of the consumer.

We in Maine think that means what we have called “engaging older adults in co-design functions”—that is asking consumers how that product or that device needs to be styled, what design should it reflect, how much should it cost, where should it be available for purchase, what should the user interface look like; that is, is it easily utilized and taken advantage of by older adults.

And so principles of co-design are driving the research we are doing at the University of Maine in our aim to put that technology into the homes on as fast a track as possible.

Senator TILLIS. I absolutely believe—I have become just obsessed with making sure seniors that I interact with spend a moment to go on Facebook—they probably have family members on there—to expose them to this interaction tool. And I think the more that we use these tools to connect people maybe first through the network, that it will naturally foster relationships that may result in actual touch and presence, which is also very important. So I would be interested in getting any feedback you have on the program in Maine or any other states.

Dr. Holt-Lunstad, I am going to ask my last question of you. The health impacts of isolation and loneliness I think are very compelling. Do you know of any research out there that is focused on programs that have affected or maybe bent the curve in a positive direction and, if so, whether or not we have tried to dollarize them? I think one of the things that we need to do—and I kind of pound this in a number of our hearings here, or focus on it—is that we need to understand that, on the one hand, this is a good thing to do for someone who is isolated, but at the same time, it is also, I think, a fiscally sound investment of dollars because it reduces cost of health and other bad outcomes, whether it is illnesses or similar things that tend to cost more if we do not invest.

Is there any research out there or information you can point me to on the subject?

Ms. HOLT-LUNSTAD. Thank you. Yes, so I want to briefly mention one thing about the technology, and then I will also talk about effectiveness as well as costs.

One thing that we need to have some caution about in terms of technology is that we need to recognize that it can be a tool to bring people together—

Senator TILLIS. And it can become isolating.

Ms. HOLT-LUNSTAD. Absolutely. And we really need to do more research on this and determine to what extent that this can facilitate social connection versus bringing people apart.

Senator TILLIS. That is why I made the point of also using technology and knowledge of who you are interacting with in close proximity to ultimately get them to the point to where there is a human connection or a connection with someone else. That is why I asked the question earlier.

Ms. HOLT-LUNSTAD. Right, and there are some that are certainly very concerned about particularly younger generations that will be our future aging adults, and thus reducing the ability to connect face to face and may substitute connections, potentially leading to

greater isolation. And so certainly more attention needs to be paid to that.

In terms of effectiveness, my colleagues and I, we are currently working on another meta-analysis looking at interventions and their effectiveness in terms of reducing risk for mortality. This is currently still in progress, so we do not—this is not published yet. But what I can tell you from the preliminary data is that the data is mixed. There are some interventions that are effective, and there are others that are not effective. And so we do need to be careful and not assume that any kind of intervention will be effective.

Senator TILLIS. That information—and I have gone way over, but that information is critically important because it is instructive to the extent that the federal government gets involved in funding or promoting any programs that you are going to be—you are naturally inclined to do it because of the subject matter, but we want to make sure that we are putting the limited dollars into the ones that have the most empirically based—positive results empirically based so that we—we are going to continue to struggle to have enough money even for the good ones. What we do not want to do is spread it out, and I think at the expense of drilling down on ones that can produce more transformative results.

Thank you, Madam Chair, for indulging me for going over. And my mother is watching. Hey, Mom.

[Laughter.]

The CHAIRMAN. Thank you very much.

Senator Cortez Masto?

Senator CORTEZ MASTO. Thank you.

Thank you all for being here, and this is such an important topic. I am so happy we are having this conversation. I am from the State of Nevada and have worked most of my career fighting against neglect and exploitation for many in our senior community. And just recently, when I was home over the break, I had the opportunity to deliver a meal with a Meals on Wheels driver. I had an incredible conversation, not only with the Catholic Charities who provides the programs in Nevada for Meals on Wheels, but also with the driver, as well as the senior who was the recipient. And one thing I did learn—and we are talking about this now—is it addresses and helps with the issue of social isolation and more particularly, medical needs. The driver that I was riding with actually responded to a medical need of a senior who had fallen. Thank goodness he showed up that morning with the meal and was able to help that individual.

I am curious—and I do not think we have heard it yet today—are your thoughts on pets and animals, to address isolation. Is this something that we should be looking at as well. I know many of the seniors that this gentleman talks with and delivers Meals on Wheels to, have animals that they treat just like their children.

And then, more importantly, I think we should be funding programs like this at the front end. I do not support any cuts to any funding for Meals on Wheels or any senior programs, because I think in the long-term it saves dollars for Medicaid, medical care costs, things that we would be looking at had we not had these front-end programs.

I'd like your thoughts with respect to animals and isolation, and front-end programs. How we save money, which is really what they say, penny wise, pound foolish, if we are going to go down this path of cutting the funding.

Mr. KAYE. I would like to begin, if I may. There is no doubt about it that the availability of pets and companion animals makes an enormous difference in the lives of older adults. In my experience, in fact, it is those programs that may be the most popular and most utilized programs offered in the community through Area Agencies on Aging. Pets are known to reduce the blood pressure and calm anxiety in older adults. In fact, more than a few pets are far more popular than many relatives when it comes—

[Laughter.]

Mr. KAYE. [continuing]. To providing support for older adults in the community. There is no question about it. There is a natural tie and connection when animals are brought into assisted living facilities and nursing homes. There is an immediate response. It is visceral, it is observable. Older adults are immediately engaged, and it makes it clear and drives home the point for me that that should be among the arsenal of programmatic responses that we offer in fighting against social isolation.

Mr. CLARK. Madam Chairman, if I might also, Senator Cortez Masto, absolutely, pets are important. One of the issues that we hear about from our Meals on Wheels drivers is the concern that sometimes our meal recipients are actually feeding their meals to their pets or sharing their meals with their pets. And so we are actually working with local pet stores and securing pet food donations with our animal welfare organizations in the community and actually exploring ways that we may be able—you know, with the health requirements and everything, that we may be able to deliver some pet food at the same time we are delivering lunch. So it is definitely an issue that we are concerned about.

We also are working with our older adults between our social service agencies and our animal welfare agency to try to develop a notification system, sort of an end-of-life-care plan for my pets, not when the pets die but what is going to happen with my pet when I die. And so through end-of-life-care planning processes, we are working on that as well.

Senator CORTEZ MASTO. Thank you, and I am glad you brought that up because recognizing that many of the seniors are giving their food to their pets, the program that I was able to ride along with started obtaining pet food to also give to the seniors, and then the driver has little treats that he gives to the animals when he shows up to deliver the food as well. So I appreciate that. Thank you so much.

The CHAIRMAN. Thank you.

Senator Warren?

Senator WARREN. Thank you, Madam Chair.

It is hard to maintain social relationships when you cannot communicate very well, and a big reason that older adults have trouble communicating is hearing loss. When people cannot hear, they do not just drop out of a conversation in a noisy restaurant. They often drop out of social life altogether. Research shows that seniors with hearing loss are more likely to experience loneliness and they

score higher on measures of social isolation, meaning, for example, reporting that they do not have any close friends, not having anyone to talk over problems with if they face a difficult situation. And this is a really big deal on the numbers. More than two-thirds of people in their 70s have hearing loss, and that figure jumps to 90 percent of people over the age of 80.

So, Dr. Kaye, in your experience studying healthy aging, does untreated hearing loss play a role in people's ability to stay active and engaged in their communities?

Mr. KAYE. Of course it does. Senator Warren, it is a critical issue. Sensory impairment is a frequent and commonplace chronic impairment, and I would argue that hearing loss may be the most crucial sensory impairment because, as you said, it cuts off the ability of one individual to communicate with another. And the fact is not only is it untreated, but initially it is undiagnosed. As I understand it, over 9 million individuals over 65 suffer from hearing loss, and my understanding is some three out of five of them have not had it treated, which means they are not taking advantage of the rapid advance in the quality and the efficacy of hearing aids.

Senator WARREN. So let us talk about that for a second, because there is the good news. The good news is we can treat hearing loss, and hearing aid technology has just gotten better and better and better. The bad news is that the vast majority of people with hearing loss, more than 80 percent according to the estimates I have read, are not using hearing aids, and one of the principal reasons is they cannot afford them. Out-of-pocket costs for a single hearing aid average more than \$2,000, and most people do not need one, they need two.

So the question becomes: Why are hearing aids so expensive? And the reason in part is because state and federal regulations restrict this market. They limit competition and channel all of the business to licensed hearing aid dispensers, even though evidence shows that with some oversight from the FDA, hearing aids could be made directly available to consumers in a way that is safe, effective, and far less costly.

So, Dr. Kaye, let me ask you this one: The National Academies of Science, Engineering, and Medicine have recommended changing regulations to permit over-the-counter sales of hearing aids to bring down prices dramatically. Do you think this would make a difference for seniors, and particularly for seniors in rural areas who are closed out of markets more often?

Mr. KAYE. My knee-jerk reaction is that any policy that makes devices, technologies, programs, services more readily available is to be applauded.

Senator WARREN. Good.

Mr. KAYE. In rural communities, lack of access is a major issue. Lack of affordability, of course, is as well.

Senator WARREN. Good. Thank you. And if I could ask, Mr. Creech, you do not use hearing aids, but you do use technology to help you communicate. Could you just say a brief word about the importance of access to technology so that you can stay engaged with your friends and colleagues?

Mr. CREECH. If I did not have access to technology, I would be in a nursing home in my pajamas, being pushed in a manual

wheelchair in front of a television until my brain turned to mush that not even zombies would eat.

[Laughter.]

Senator WARREN. Thank you, Mr. Creech.

Mr. CREECH. Assistive technology has to be affordable, and it is not.

Senator WARREN. Yes.

Mr. CREECH. I am trying to build a smart home system through Amazon Echo and my smartphone. I will be paying \$30 a month for three years for the phone; the Amazon Echo, \$175. The Echo Dot, which I will need in every room, is \$40 each. A smart thermostat will be \$275 plus installation. Smart keyless lock, \$250. Smart ceiling fans and lights, \$400 each. I have not even checked into smart televisions and appliances. This wonderful smart home thing holds a lot of promise, but just like any other assistive technology, people with disabilities cannot afford this amazing technology without funding assistance. The cost of not providing assistive technology would be more than the country could afford in lost productivity, in lost creativity, in lost humanity, and in increased medical cost, in increased personal care cost, and in increased cost to family members who would have to stay home to care for their loved ones instead of being free to work outside of the home.

Senator WARREN. Thank you very much. It is a powerful statement about the importance of technology. And on hearing aids, I just want to say they should not be reserved for the privileged few who can afford \$5,000 in order to have some assistance. I just want to say this is why I have introduced bipartisan legislation with Senator Grassley, Senator Isakson, and Senator Hassan that would implement the recommendations of the National Academies panel and create an FDA-regulated category of safe and effective over-the-counter hearing aids. It has been endorsed by the AARP, by the Gerontological Society of America, and by the American Doctors of Audiology, a leading group of health practitioners who deal in hearing aids.

One way to tackle the problem of loneliness and isolation and depression for some older adults is to cut the cost of hearing aids so they have a chance to participate in conversations with other people.

Thank you, Madam Chair, and thank you for letting me have a little extra time.

The CHAIRMAN. Thank you.

Mr. Clark, when I was listening to your testimony and read your written testimony, I was reminded of an important fact, and that is that we should not only talk about how we can get services to our seniors but also our seniors have a lot to offer, and I do not think we should forget that part of the equation.

I was thinking, when Dr. Kaye was talking about the senior companion program, for example, and also our Senior Colleges in Maine, of which there are 17, I think you said, and oftentimes the courses for those colleges are taught by people who are retired. So you talked about certain programs, the Aetna model, for example, that can be useful to change our perception of seniors as solely needing service but, rather, looking at the fact that they can serve

others, too. And, of course, that is a wonderful way to end isolation and loneliness. Could you talk a little bit more about that?

Mr. CLARK. Well, at Pima Council on Aging, we have been working with older adult volunteers for a number of years. We were one of the original RSVP programs. We are not doing that program anymore, but we work very collaboratively with the Senior Corps program, which is the program that Aetna participated in, which is where older adult volunteers are paired—they are actually stipended volunteers—with older adults who need some in-home assistance, and so they both benefit.

But I also want to reference the Neighbors Care Alliance, which I also mentioned in my testimony. That is a program that PCOA began 10, 12 years ago, I think, as part of a compassion connection grant, and that really is a collection of neighborhood-based, but also faith communities and a couple of social service agencies, volunteer organizations like the one in the neighborhood I live close to, the Old Fort Lowell Live-at-Home Program. That program is neighbors actually caring for each other, and so they are driving—and most of them are older adults who are doing the caring, so they are driving people to physician appointments; they may be taking people shopping, stopping by for friendly visiting, or maybe placing a call, occasionally bringing a meal in if somebody needs one on a short-term basis, maybe somebody coming in and changing a light bulb; you know, not so much yard work, maybe once a year sort of major cleanup. And then another neighbor allows his or her—his, I think—garage to be used as a durable medical equipment lending library, so if somebody has a short-term need for a potty chair or a wheelchair they can get it rather than having to buy it.

So we have about 15 of those Neighbors Care Alliance affiliates in the community, and they serve thousands of folks. We have a little bit of money from our regional transportation authority for senior volunteer driving, and so we are able to reimburse their driving volunteers on a per mile basis for the driving. And driving is a big piece of what those NCA affiliates do, but they do all those other things. And so it is a way—we know that people age much more healthfully, if I can make up a word, if they stay active and involved. And those kind of programs are really helpful in allowing people to stay active and involved.

The CHAIRMAN. Thank you.

Mr. Creech, first of all, I want to thank you for sharing your story. In addition to the technology that has been so important to you and it has allowed you to connect with people and communicate, are there other steps that you have taken to overcome isolation?

Mr. CREECH. The loneliest time in my life was during childhood. I had no friends. My outings out of my home was limited to the churches my father pastored. My days were spent in my home trying to find ways to fight boredom. I had plenty of toys; with some I could actually play. I was always able to bamboozle my parents into letting me have a dog or a cat, the same way I bamboozled my wife into letting my youngest son have a dog, and we have had dogs in the house ever since. There was nothing for me to do except watch TV or read books. I found that I much preferred my books

over TV. Back then, my communication was limited to the typewriter and an alphabet board. Have you tried to communicate with someone who used an alphabet/word board? Most people cannot. My experience has been after you finish spelling the third word, they forget what was the first word you spelled. You dare not use words that have over two syllables else you will completely mess up your communication partner's mind.

I do not know if you have watched the television show "Speechless." JJ on that show supposedly uses an alphabet/word board with an optical head pointer, and he is able to point to a few squares on the board, and his aid comes out with these correct sentences. That is not how it works in the real world, folks. When I used an alphabet board, I was lucky to get three simple words together before blowing the other person's mind. And what teenager wants to talk with friends through a grown adult reading over his or her shoulder? I am flabbergasted every time I see that in the show.

The CHAIRMAN. Thank you.

Senator Casey?

Senator CASEY. Madam Chair, thanks very much.

Rick, I was thinking as you were giving testimony today and telling your own story, you know, you said in your testimony, "I am no good at chit-chatting." After all this time, Madam Chair, chit-chatting is so yesterday, isn't it?

[Laughter.]

Senator CASEY. But I have two final questions, two serious questions that involve, Rick, part of your family's story. You shared with the Committee that your mother has Alzheimer's disease. The Committee recently held a hearing on the topic and continues to advocate for medical research funding that will—will one day—lead to a cure, for funding to support those who are caring for family members with Alzheimer's. However, the disease can also lead to isolation for the individual diagnosed and their family.

So two questions in one. How has your mother's diagnosis changed your interaction with her? And has it resulted in any feelings of isolation for you?

Mr. CREECH. This is hard for me to put into words. For 28 years my mom was life. She fed, she dressed, she bathed me. For 28 years, she was the first face I saw in the mornings and the last face I saw at nights. Ever since she went to a nursing facility, I have not been able to call her on the phone. This afternoon, I will be going down to North Carolina to visit mom. I do not know if she is going to recognize me. This is the woman who a few years ago gave my wife a box full of old papers of everything that I had typed since I was 8 years old. I thought, "OMG, what other potentially embarrassing things has she kept?"

[Laughter.]

Mr. CREECH. This is the woman who during my first year of college, because I had gotten a mouthful of mouth ulcers and could not eat, came and stayed in my dorm for a month and nursed me back to health so that I would not have to drop out and go back home.

Mom is not here anymore. What lingers is the shell that used to contain my precious mother. Mom is gone as certainly as dad is

gone. I feel like a captain of a sailing ship after the stars have fallen and the sun will not show itself. All I have is my memory of them and the principles they instilled in me to guide me through.

Senator CASEY. Rick, thank you very much.

Thank you, Madam Chair.

The CHAIRMAN. Thank you very much, Senator Casey.

I want to thank all of our witnesses for being here today, for your patience as we maneuvered the time and date of the hearing. To my knowledge, this is the first hearing on Capitol Hill to address the issue of isolation and loneliness among our seniors, and it is such an important issue when you look at the impact on our seniors' health and well-being. When I learned the startling statistic that we heard today from Dr. Holt-Lunstad about the mortality risk of isolation and loneliness, something that Dr. Kaye also talked about, it tells us that this problem is a serious one and it is pervasive, and yet it has received very little attention outside of the work done by the experts in the field and in academia.

So one of my hopes today is that we have raised public awareness of this problem and we can start to explore some of the creative solutions that you all have talked about, whether it is greater use of technology or having Meals on Wheels drivers specifically check on the health of the seniors or pairing college students and seniors, which I love that program, Project Generations, that Dr. Kaye has started in Maine, or helping seniors be of service to others as well. As I said, I think it is really important that we remember that this problem can be addressed from both directions in many cases. And using the resources that we have, we can come up with some creative solutions to reach out and connect seniors with communities. "Connections," it seems to me to be the word, whether you are connected with your family, your neighbor, your community, your church, your college. That seems to be what helps to keep people healthy and strong and increases their well-being.

So now today we have learned a lot about the problem. We have all heard the phrase that it takes a village to raise a child. Well, I think the flip side of that is the village can also care for our seniors, and our seniors need to be an integral part of that village.

So at our next hearing, we are going to look at some of the solutions across the country, and I am very proud that my State of Maine is really leading the way. Dr. Kaye, you get a great deal of credit for that.

I want to thank our staff for their hard work, all of our witnesses, and all of the Committee members who are here today. Many of them had conflicts so could only be here briefly, but we actually had an excellent turnout, and I think that shows that people are very interested in this issue.

Committee members will have until Friday, May 5th, to submit any questions for the record, which we will forward along to you.

Senator Casey, do you have any closing comments?

Senator CASEY. Just briefly. Madam Chair, thank you for convening the hearing. I want to thank our witnesses for being with us, Rick especially, and we are grateful for your presence here and your message.

Despite the challenge of this issue, isolation and loneliness, we know what works. We know that drop-by programs work, whether

it is Meals on Wheels or some other program. Group interventions work. And we know, of course, that assistive technology works. So we are looking forward to more discussion on these issues and are grateful to have the opportunity today. Thanks very much.

The CHAIRMAN. Thank you, and this hearing is now adjourned.
[Whereupon, at 11:26 a.m., the Committee was adjourned.]

APPENDIX

Prepared Witness Statements

**Prepared Statement of Julianne Holt-Lunstad, Ph.D., Professor of Psychology and
Neuroscience, Brigham Young University, Provo, UT**

Introduction

Thank you, Chairman Collins, Senator Casey, and members of the committee for your interest in social isolation and loneliness and for the opportunity to present testimony today. My name is Julianne Holt-Lunstad, and I am a professor of psychology and neuroscience at Brigham Young University. My research focuses on the influence of our social relationships on physical health outcomes. In my remarks, today, I'll talk about the public health relevance of social isolation and loneliness, including data on prevalence rates, health and mortality risk, and potential risk factors.

Being connected to others socially is widely considered a fundamental human need—crucial to both well-being and survival. Extreme examples show infants in custodial care who lack human contact fail to thrive and often die¹, and indeed social isolation or solitary confinement has been used as a form of punishment. Yet, an increasing portion of the U.S. population now experiences isolation regularly.

Prevalence

It is estimated that more than 8 million older adults are affected by isolation². When we consider social connection more broadly—including the extent to which relationships are present in our lives, the extent others can be relied upon, and our satisfaction with them (see table 1)—the prevalence of U.S. adults lacking social connection may be much larger.

- More than a quarter of the U.S. population (28% of older adults) lives alone, over half the U.S. adult population is unmarried, and 1 in 5 have never married³.
- The divorce rate in the U.S. is around 40% of first marriages and 70% for remarriages⁴.
- Among married couples, 3 in 10 relationships are severely distressed⁵.
- More than a third of U.S. adults over age 60 experience frequent or intense loneliness—higher than the prevalence of merely living alone⁶.
- The majority of American adults do not participate in social groups⁷.

Thus, there is evidence that a significant portion of the population, and older adults in particular, may be socially isolated.

There is also evidence that isolation (or social disconnection) is increasing.

- The average size of social networks has declined by one-third since 1985, social networks have become less diverse, and they are less likely to include non-family⁷.
- Average household size has decreased and there has been 10% increase in those living alone⁴.
- Census data also reveal trends in decreased marriage rates, fewer children per household, and increased rates of childlessness⁴.

Taken together with an aging population, smaller families and greater mobility reduces the ability to draw upon familial sources of support in old age^{8,9}. Given that the incidence of loneliness is known to increase with age¹⁰, and that social (particularly friendship) networks shrink with age¹¹, the prevalence of loneliness is estimated to increase with increased population aging. These trends suggest that Americans are becoming less socially connected.

Epidemiological Evidence of Public Health Relevance

To estimate the influence this has on longevity, or risk for premature mortality, my colleagues and I conducted 2 meta-analyses^{12,13}. The first meta-analysis examined the influence of social connections, including a variety of indicators (see table 1). Cumulative evidence from 148 different studies, including over 300,000 participants revealed that greater social connection is associated with a 50% reduced risk of early death¹². The second meta-analysis examined deficits in social connection (social isolation, loneliness, living alone). Cumulative evidence from 70 different studies¹³, including over 3.4 million participants indicates that each have a significant and equivalent effect on risk for mortality—that exceeds the risk associated with obesity¹⁴. These findings also account for potential alternative explanations (e.g., age and initial health status), and thus also rule out reverse causality. Together, these data demonstrate that social disconnection is indeed a severe problem.

The effect of social relationships can be benchmarked against other well-established lifestyle risk factors. As shown in Figure 1a, the magnitude of effect of social connection on mortality risk is comparable, and in many cases, exceeds that of other well-accepted risk factors, including smoking up to 15 cigarettes per day, obesity, and air pollution¹². Prevalence rates, or the proportion of the population affected, are also comparable with well-established risk factors (Figure 1b). Despite some variation across social indicators, there is a consistent and significant effect on mortality risk.

Social isolation has also been linked to a variety of mental and physical health outcomes. For example, those who are isolated are at increased risk for depression, cognitive decline, and dementia¹⁵. There is also substantial evidence that social relationships can influence health related behaviors such as medication/treatment adherence¹⁶, and have a direct influence on health-relevant physiology such as blood pressure, immune functioning, and inflammation^{17,18}.

Risk Factors

Can we identify those who are at greatest risk? It is important to note that the overall effect of lacking social connection on risk for mortality can be applied quite broadly—robust effects were found across age, gender, health status, and cause of death—and the prevalence occurs across age. Further, the protective effect of social connection or conversely the risk of disconnection is continuous—there is evidence that for every level of increase in isolation there is an increase in risk¹⁹. Nevertheless, there are factors that may contribute to increased risk.

Risk factors include: living alone, being unmarried (single, divorced, and widowed), no participation in social groups, fewer friends, and strained relationships¹². Retirement, and physical impairments (e.g., mobility, hearing loss) may also increase risk for social isolation.²

Social isolation and loneliness are particularly important among older adults. Chronic exposure to either protective or risk factors will be more pronounced as individuals age—thus, we are more likely to see the effects of lacking social connection in older adults. Further, there are a number of important life transitions among older adults that may result in disruptions or decreases in social connection (e.g., retirement, widowhood, children leaving home, age-related health problems). A growing body of research shows that health problems in adulthood and older age, stem from conditions earlier in life, suggesting the importance of preventative efforts⁹.

Conclusion

There is robust evidence that lacking social connection/isolation significantly increases risk for premature mortality, and the magnitude of the risk exceeds many leading health indicators. The World Health Organization (WHO) explicitly recognizes the importance of social connections²⁰. Social isolation influences a significant portion of the U.S. adult population and there is evidence the prevalence rates are increasing. With an increasing aging population, the effect on public health is only anticipated to increase. Indeed, many nations around the world now suggest we are facing a “loneliness epidemic”²¹⁻²⁴. The challenge we face now is what can be done about it.

I am very pleased to see the committee has recognized and is bringing attention to this important issue. I am happy to assist in advancing an agenda to address social isolation and loneliness among older adults. Thank you again for the opportunity to comment and I welcome your questions.

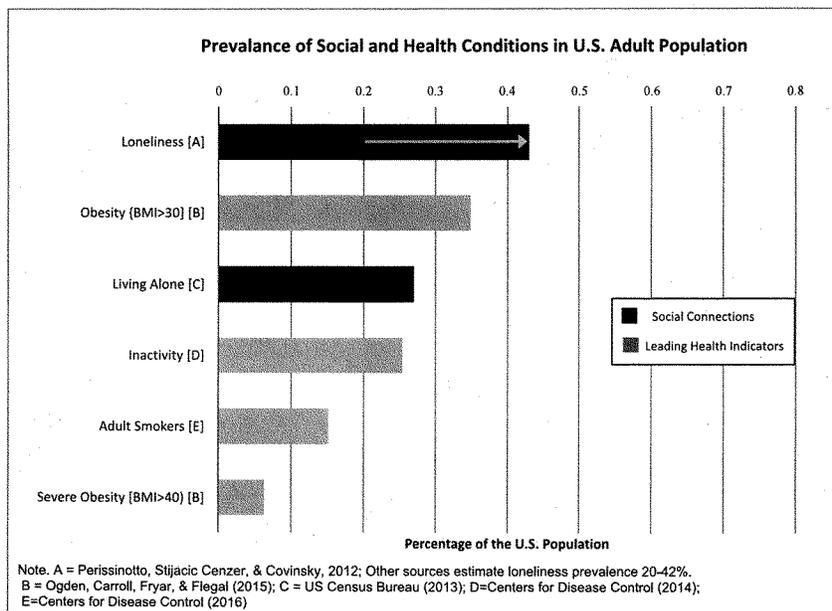
Table 1. Defining Social Connection²⁵

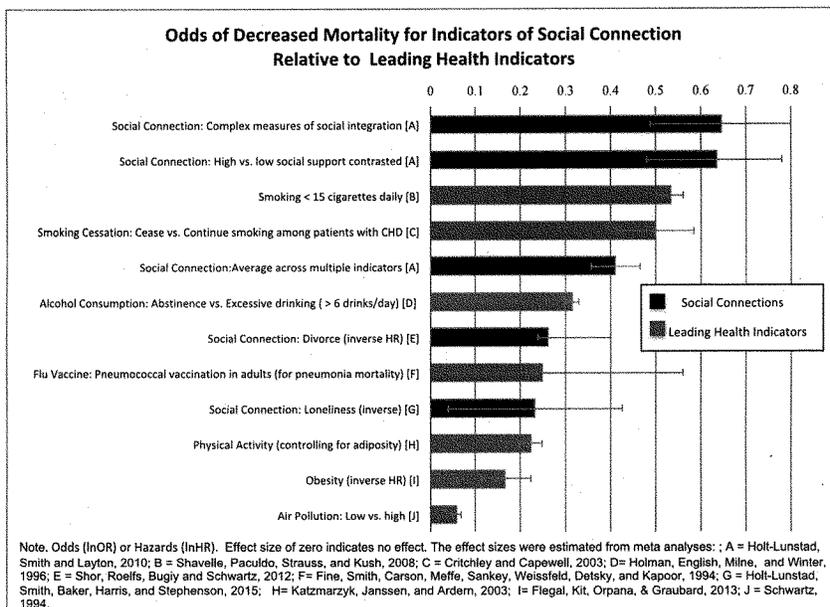
Social Connection	
<i>The extent to which an individual is socially connected takes a multifactorial approach including (1) connections to others via the existence of relationships and their roles; (2) a sense of connection that results from actual or perceived support or inclusion; and (3) the sense of connection to others that is based on positive and negative qualities.</i>	
Type of Measure	Description
(1) Structural	<i>The existence and interconnections among differing social relationships and roles</i>
Marital Status	Married vs. single, separated, divorced, widowed
Social Networks	Network density or size, number of social contacts
Social Integration	Participation in a broad range of social relationships; including active engagement in a variety of social activities or relationships, and a sense of communality and identification with one's social roles.
Living Alone	Living alone vs. living with others
Social Isolation	Pervasive lack of social contact or communication, participation in social activities, or confidant
(2) Functional	<i>Functions provided or perceived to be available by social relationships</i>
Received support	Self-reported receipt of emotional, informational, tangible, or belonging support.
Perceptions of social support	Perception of availability of emotional, informational, tangible, or belonging support if needed.
Perception of loneliness	Feelings of isolation, disconnectedness, and not belonging
(3) Quality	<i>The positive and negative aspects of social relationships</i>
Marital Quality	Subjective ratings of satisfaction, adjustment, cohesion in couples
Relationship Strain	Subjective ratings of conflict, distress, or ambivalence
Social inclusion/ exclusion	Feelings of belonging or rejection from others.

References:

1. UNICEF (1997) Children at risk in Central and Eastern Europe: Perils and promises. Florence, Italy: United Nations Children's Fund, International Child Development Centre. UNICEF1997Children at risk in Central and Eastern Europe: Perils and promises. Florence, Italy United Nations Children's Fund, International Child Development Centre
2. <https://connect2affect.org/about-isolation/>
3. Jonathan Vespa, Jamie M. Lewis, and Rose M. Kreider, 2013, America's Families and Living Arrangements: 2012, Current Population Reports, P20-570, U.S. Census Bureau, Washington, DC.
4. United States Census Bureau (2011). Changing American Households.
5. Whisman, M. A., Beach, S. R. H., & Snyder, D. K. (2008). Is marital discord taxonic and can taxonic status be assessed reliably? Results from a national, representative sample of married couples. *Journal of Consulting and Clinical Psychology, 76*(5), 745-755.
6. Perissinotto, C. M., Stijacic Cenzer, I., & Covinsky, K. E. (2012). Loneliness in older persons: a predictor of functional decline and death. *Archives Of Internal Medicine, 172*(14), 1078-1083. doi: 10.1001/archinternmed.2012.1993
7. Pew Research Center. (2009). Social Isolation and New Technology. Pew Research Center. Nov 4, 2009.
8. Rook, K. S. (2009). Gaps in social support resources in later life: An adaptational challenge in need of further research. *Journal Of Social And Personal Relationships, 26*(1), 103-112.
9. World Health Organization (2011). "Global Health and Aging." Available at http://www.who.int/ageing/publications/global_health.pdf
10. Dykstra, P. A., van Tilburg, T. G., & de Jong Gierveld, J. (2005). Changes in Older Adult Loneliness: Results From a Seven-Year Longitudinal Study. *Research on Aging, 27*(6), 725-747. doi: 10.1177/0164027505279712
11. Wrzus, C., Wagner, J., Hänel, M., & Neyer, F. J. (2013). Social Network Changes and Life Events Across the Life Span: A Meta-Analysis. *Psychological Bulletin, 139*(1), 53-80.
12. Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: a meta-analytic review. *Plos Medicine, 7*(7), e1000316-e1000316. doi: 10.1371/journal.pmed.1000316
13. Holt-Lunstad, J, Smith, T.B., *Baker, M*, *Harris, T, & *Stephenson, D. (2015). Loneliness and Social Isolation as Risk Factors for Mortality: A Meta-Analytic Review. *Perspectives on Psychological Science, 10* (2), 227-237. doi: 10.1177/1745691614568352
14. Flegal, K.M., Kit, B.K., Orpana, H., & Graubard, B.I. (2013). Association of all-cause mortality with overweight and obesity using standard body mass index categories: a systematic review and meta-analysis. *JAMA, 309*(1):71-82. doi: 10.1001/jama.2012.113905.
15. Global Council on Brain Health (2017). "The Brain and Social Connectedness: GCBH Recommendations on Social Engagement and Brain Health." Available at www.GlobalCouncilOnBrainHealth.org
16. DiMatteo, M. R. (2004). Social Support and Patient Adherence to Medical Treatment: A Meta-Analysis. *Health Psychology, 23*(2), 207-218. doi: 10.1037/0278-6133.23.2.207

17. Uchino, B. N. (2006). Social Support and Health: A Review of Physiological Processes Potentially Underlying Links to Disease Outcomes. *Journal of Behavioral Medicine*, 29(4), 377-387. doi: 10.1007/s10865-006-9056-5
18. Hostinar, C. E., Sullivan, R. M., & Gunnar, M. R. (2014). Psychobiological mechanisms underlying the social buffering of the hypothalamic–pituitary–adrenocortical axis: A review of animal models and human studies across development. *Psychological Bulletin*, 140(1), 256-282. doi:10.1037/a0032671
19. Yang, Y. C., Boen, C., Gerken, K., Li, T., Schorpp, K., & Harris, K. M. (2016). Social relationships and physiological determinants of longevity across the human life span. *Proceedings of the National Academy of Sciences*, 113, 578-583.
20. World Health Organization (n.d.). *The determinants of health*. Retrieved from <http://www.who.int/hia/evidence/doh/en/>
21. <http://www.campaigntoendloneliness.org/loneliness-research/>
22. <http://www.spiegel.de/international/germany/germany-faces-epidemic-of-lonely-and-isolated-seniors-a-876635.html>
23. <https://startsat60.com/health/new-survey-reveals-australias-loneliness-epidemic>
24. <http://www.huffingtonpost.com.au/tania-de-jong/loneliness-is-the-global-epidemic-of-our-times/>
25. Holt-Lunstad, J, Robles, T. & Sbarra, D. (in press). Advancing social connection as a public health priority *American Psychologist*.





Prepared Statement of Lenard W. Kaye, D.S.W., Ph.D., Director, Center on Aging, and Professor, School of Social Work, University of Maine

Aging Mainers across the oldest and most rural state in the Nation are a stoic and fiercely independent lot. But like their millions of counterparts in other rural states across the Nation, they may be losing the battle when it comes to protecting themselves against the devastating consequences of living a socially isolated and lonely life. Let there be no doubt, social isolation is a killer and more Americans are living in isolation than ever before. The prevalence may be as high as 43% among community dwelling older adults. And, the risk is high as well for caregivers of older adults given that caregiving can be a very isolating experience. Perhaps that is why the National Association of Social Workers, the World Health Organization, AARP, and the National Institutes of Health, among others, have recognized the need to place social isolation on their lists of major challenges and high priority threats to societal well-being. It is a perplexing, potentially lethal problem, impeding a successful and productive old age. The bad news is that the challenge is perhaps greatest for older adults living in small towns and rural communities where individuals are separated geographically, children and grandchildren have often left for the bright lights of the big cities, and critical community supports are in short supply.

I've come to realize that stoicism and a fiercely independent spirit can be overrated qualities and not always something to aspire to. Not when we learn that such individuals are at higher risk of living social isolated and lonely lives which, in turn, research confirms, will place them at higher risk of a variety of poor outcomes including disability, high rates of mortality and morbidity, dementias, hospitalizations, falls, not surviving natural disasters, poor health practices, psychological distress, neglect and exploitation, lower self-reported health and well-being, and even the common cold.

Who is at greatest risk? That would be LGBT older adults, those with physical, sensory, and functional impairments, who live alone, are 80 years of age and older, are geographically isolated, living on limited income, lacking instrumental supports (access to transportation, the Internet, telephones, etc.), with poor mental health, weak social networks, and facing critical life transitions (i.e., divorce, death of a spouse, an abrupt retirement, a health crisis, children moving out, etc.).

The importance of having available a social network cannot be overstated in guarding against social isolation. Family, friends, neighbors, and professional caregivers provide social support, social influence, create a buffer against stress, increase your access to resources, and can even stimulate your immune system.

Local Solutions That Make a Difference

Solutions to preventing social isolation and loneliness are presenting themselves both locally and nationally and need not be excessively costly. We do, however, need to remain vigilant and especially mindful of those conditions that put older adults at risk.

The University of Maine Center on Aging recently gathered 200 professionals and community members together at a conference to discuss older adult social isolation. Their front-line experience suggests additional factors can increase the risk of social isolation including ageist views and stigma about aging, a lack of transportation to get older adults out into the community, lack of access to technology which could bridge communication gaps with loved ones, poor health, alcoholism, and increasing lifespans which mean that many older adults outlive their friends and family. Responding to these challenges, the University of Maine has identified aging research as an emerging area of excellence and is especially encouraging its scientists to focus on developing user friendly, accessible, and affordable technologies that will keep older adults safe, secure, and mobile not only in their homes, but in their communities.

At the local level, combating social isolation entails bringing the older adult out into the community or otherwise bringing the community to them. The University of Maine in partnership with the Eastern Area Agency on Aging, is supporting a student-led program, Project Generations, that brings college students into the homes of local older adults for friendly visiting and lending a helping hand. Programs like this offer students the opportunity to interact with and learn from older adults while providing elders with a much needed source of support.

In at least one Maine community (Augusta), postal service workers are trained to ask questions of homebound older adults to check in on them and ensure their well-being. Doctors, too, if they choose, are able to screen for social isolation during routine doctor's appointments. These solutions, often termed sentinel approaches, provide an extra set of eyes and ears in the community to identify and address social isolation through screening and referral.

Many communities have begun to organize programs where volunteers and law enforcement officers provide regular calls and wellness checks to older adults who are known to be frail, homebound, and isolated. One such program in Franklin County, Maine, sends sheriff's deputies to regularly check in on older adults to not only help reduce the risk that an older adult would fall victim to a scam, but also to increase social contact and well-being for the older adult.

Creative housing solutions like co-housing where older adults live with younger adults can also help to combat social isolation and help to create a sense of purpose among older adults.

Several federal programs are providing lifelines to older adults who are homebound including the Meals on Wheels Program, a network that reaches over 800,000 homebound older adults across the Nation, providing not only home-delivered meals but also socialization. The Senior Companion Program, (part of the national network of Senior Corps programs), pairs older adult volunteers with homebound older adults in their communities for ongoing socialization and support. One such Senior Companion volunteer shared a story of Mrs. C, a woman whom she visits, and how she supported Mrs. C after the death of her husband. The loss of a spouse is a particularly critical time for supporting older adults and ensuring that they do not become shut off from those around them:

"Mrs. C experienced the loss of her husband after a long terminal illness. Having devoted her life to the continuous care of Mr. C, she was left without purpose in her life. Mrs. C had no family in this area and felt completely alone. As her Senior Companion, I was able to assist her through arrangements to be made for Mr. C's cremation and celebration of life. Other difficult areas included finances, health, and well-being. It has been nearly two years since the passing of Mr. C. With continuous compassion and understanding, I have been able to help Mrs. C connect again to the world around her. She has made great progress spiritually, emotionally and with socialization. As a Senior Companion, I am always at hand for comfort and support or simply just to listen."

We also know there are ways to prevent social isolation before it occurs. Encouraging older adults to be involved in their communities through churches, civic groups, and volunteer roles can be important avenues for ensuring that older adults stay healthy and connected to the world around them. Programs like Retired and Senior Volunteer Program (RSVP) and Senior College offer older adults opportunities for meeting new people and learning new skills.

Dr. Kelley Strout at the University of Maine has developed a pilot program called GROW which sets up garden beds at low-income congregate housing sites. Originally intended to increase the consumption of healthy foods, the program also increased social ties between residents who would not have otherwise interacted and formed friendships despite living within the same housing complex. There are numerous examples of programs like this throughout the country that provide an outlet for older adults to naturally connect with others.

Summary of the State of Current Research

There is still significant progress to be made in determining what works for helping to reduce social isolation. Lack of rigor in studies of interventions aimed at reducing loneliness make it difficult to evaluate some of these strategies.

Due to the various life events that can trigger social isolation, from death of a significant other, to loss of transportation, to health decline, effective interventions will need to be diverse and they will need to be tailored to the personal circumstances of the isolated individual.

AARP's *Framework for Isolation in Adults Over 50* states that "Reviews support that effective interventions target specific groups, use representative samples of their target population, use more than one method of intervention (target more than one aspect), allow participants an element of control, include individual participation in intervention planning, and have facilitators who have adequate training and resources."

Other Community-Level Strategies

The Maine Health Access Foundation has initiated a significant grant program in the State of Maine called "Thriving in Place" which supports individuals with chronic conditions and disabilities in remaining in their homes as they age. Although the activities being undertaken to support aging-in-place are diverse, reducing isolation is a key component of Thriving in Place activities. In a review of Thriving in Place initiatives in the state, project evaluators identified promising strategies and lessons learned related to reducing isolation that were emerging from these community change efforts. These include the importance of developing systems of care whereby

people who may have contact with isolated older adults, such as EMTs, Meals on Wheels drivers, and other individuals who are knowledgeable enough about community resources and referral processes, can act as gatekeepers and key points of access to supportive services which can reduce isolation and meet other needs.

Another finding was that services promoting older adult well-being have added benefits in reducing social isolation. Examples include morning check-in calls from law enforcement programs, which often have a primary stated purpose of ensuring physical safety for homebound adults. This finding has been borne out in conversations conducted by the Center on Aging with coordinators of check-in programs who have indicated that participants have become less isolated due to these brief daily contacts. Additionally, through a research partnership with a local Village to Village model organization, At Home Downeast, interviews with volunteer drivers have indicated that volunteer provided rides to health and non-health related destinations serve also as an opportunity for members of the Village to receive much need social contact.

AARP's Age-Friendly community initiative is another community-level strategy for supporting aging-in-place and reducing social isolation. Like the Thriving in Place initiative, it examines aging-in-place holistically through a framework called the "eight domains" that contribute to a livable and age-friendly community including:

- Outdoor Spaces and Buildings
- Transportation
- Housing
- Social Participation
- Respect and Social Inclusion
- Communication and Information
- Community and Health Services, and
- Civic Participation and Employment

Although all domains have implications for reducing isolation and loneliness, two of the eight domains are particularly important: Social Participation, and Respect and Social Inclusion. Key elements of these domains that can impact social isolation are ensuring accessibility of local gatherings in terms of transportation, affordability, and physical accessibility; ensuring that outreach for events in a community are targeted at those at risk of isolation, and combating negative stereotypes of aging individuals.

We should not minimize the lessons learned from the age-friendly community movement in terms of what individual towns and communities can be encouraged to do to reduce the risk of social isolation among its older citizens, and all its citizens for that matter. The University of Maine Center on Aging recently conducted a series of community focus groups with citizens of Bangor, ME and discovered the following high priority action steps that can be taken to fight isolation, include: developing and maintaining robust transportation programs geared to meeting the needs of older adults, making the community walkable, offering senior center/community center programming, ensuring that outdoor spaces and buildings are accessible, maintaining opportunities for meaningful volunteer and civic engagement, and establishing a more comprehensive and timely informational clearinghouse that reaches elders and their caregivers with available resources and programs. I'm proud to say that Maine leads the Nation in the number of towns and communities that have formally joined the age friendly community movement—some 35 of the 163 such communities across the U.S.

Older adults residing in small towns and rural communities may be especially vulnerable to the dangers of isolated living, but such communities, with modest levels of support, can be mobilized to take action against this threat to well-being in later life.

Prepared Statement of W. Mark Clark, M.S.W., President and CEO, Pima Council On Aging

Good afternoon. Thank you, Chairman Collins, Ranking Member Casey and members of the Aging Committee, for the opportunity to testify today on the problem of social isolation and loneliness among older adults.

My name is W. Mark Clark and I have the honor of serving as President and CEO of Pima Council On Aging, the Area Agency on Aging serving Pima County, Arizona. Since 1967, Pima Council On Aging (PCOA) has identified the needs of older adults in our planning and service area, and responded to those needs with community-based programs and services. In our role as the Area Agency on Aging for Arizona Region II, PCOA has served generations of older adults and their families in com-

munities across Pima County, through planning, advocacy and providing and contracting for services. Area Agencies on Aging, of which there are 622 across the country, were created by the Older Americans Act in 1973 to serve as the local planning, development and delivery system providing home and community-based services to older adults so that they may age successfully with maximum health, independence and dignity.

The Aging of Pima County

Pima County is home to the city of Tucson, the second-largest metro area in Arizona. Because of our mild winters, thriving hospitality industry, natural desert beauty and relatively low cost of living, Tucson and other parts of Pima County are primary destinations for new retirees and older winter visitors, contributing to it being among the fastest aging regions in the Nation. Pima County covers 9,184 square miles—roughly the size of the State of Vermont—and is home to more than 248,000 people who are 60 years of age or older. That means one in four County residents is age 60 or older today. The population growth among those under 50 years old has remained stagnant in the last 5 years in the County, while the population in their 60's grew by 16%. The fastest growing segment of the population were people over 85, which has increased by an astonishing 35% in the past decade. We are not alone in these remarkable numbers—while Arizona is one of the most rapidly aging states, every single state in the Union is growing older as the baby boomers age and people live longer. By 2030, one in five Americans will be age 65 or older.

PCOA's Role in the Community

Pima Council On Aging's 50 year history of supporting older adults in their homes and communities means we are one of the nation's longest-serving providers of the critical home and community-based services that are the mandate of every Area Agency on Aging. In fact, we began providing these vital supportive services even before Area Agencies on Aging were formally established in the 1973 reauthorization of the Older Americans Act.

Today this coordinated system of services provides supportive programs including home-delivered meals, congregate meals and socialization, transportation, in-home care, home repair and adaptations, legal services, evidence-based health promotion programs, and assistance for family caregivers. The federal dollars we receive through the Older Americans Act are the foundation of this system, as we leverage state and local dollars to increase our ability to meet the need and help older adults meet their goals of aging at home and in the community, remaining healthy, and retaining their independence for as long as possible. To accomplish these lofty goals, we work in partnership with approximately two dozen service provider partners to provide an array of services, programs and options for older adults, as well their caregivers.

But to stay healthy and to age well, older adults need to remain engaged. The home-and-community-based services we offer, such as home-delivered meals through the Pima Meals on Wheels program, senior lunch programs, senior center programming and in-home services, increase or maintain self-sufficiency and independence and reduce social isolation for the people we serve. In our last fiscal year, PCOA delivered just shy of 204,000 meals, utilizing 20 routes to cover metro Tucson—and the outlying rural communities where people are at even greater risks for isolation—to nearly 1,500 individuals who are homebound, unable to prepare a nutritious meal because of health or physical limitations and have no one to assist them. For many, the driver who delivers their meals may be the only person they see regularly during the week. It is not uncommon for our delivery drivers to find people who have been experiencing medical emergencies for a day or longer, and have to provide crisis assistance.

In collaboration with our community partners, PCOA also provides nutrition programs in community settings, and these congregate meals have, since inception, had a twin goal of enhancing seniors' nutrition and encouraging socialization. We served nearly 87,000 meals through lunch programs to around 2,000 older adults at our network of 13 community and neighborhood-based centers; 91% of them tell us that the program gives them someone to talk to each day. The majority of our home-delivered meal clients live alone (67%) and all are frail or disabled. More than half (55%) of congregate meal participants live alone, and nearly 30% are frail or disabled. Our home-and-community-based system of services known as the Community Services System includes not only these two types of meals programs, but also other supports and services that allow people unable to perform basic tasks of daily living for themselves to remain living in their own homes. Common in-home services include homemaker services (laundry, cleaning), personal care services (bathing,

dressings) and personal safety systems, while community supports include transportation, legal services and caregiver supports.

Social Isolation Harms Health, Independence

Data from our local communities tell us that social isolation and related factors significantly impact the lives of our older friends and neighbors, which is validated by national data and emerging research on the significant negative health effects of becoming isolated or lonely. In our role as the Area Agency on Aging, since 1975 PCOA has conducted the only community needs assessment of its kind to identify the needs of older adults age 60 and older. Every three to 4 years, PCOA collects information about the issues of most concern to older adults in our communities through a written survey, public listening sessions and focus groups with professionals in the field. Through our most recent community needs assessment process in the fall of 2016, nearly 2,300 seniors completed surveys in English and in Spanish, with nearly half of those respondents reporting they lived alone. The second-highest ranking concern for older people in our community, only slightly outranked by falls and fear of falling, was being able to continue living independently in their own homes. Remaining independent and aging in place was expressed as an issue of some or serious concern by nearly 67% of the people we surveyed. Other significant concerns included loss of a spouse, depression, mental health issues and related indicators of isolation, *as well as social isolation itself, which was specifically cited as an issue by 46% of respondents.*

While aging at home is cited as a top priority by a majority of older people, and doing so has both emotional and economic benefits, aging in place at home can also lead to isolation. As socialization that occurs naturally throughout much of adult life through work, raising children, volunteerism, and connection to family wanes in one's life, without opportunities to build new social networks, including having the health and mobility to do so, living independently can lead to that person becoming nearly entirely isolated over time. And so, Area Agency on Aging funded service providers, such as meal delivery drivers or the direct care workers who come into the home to assist with giving a bath, changing linens and shopping, become their social network, providing not only services that allow the person to remain in their home, but also regular contact that can help to stave off the depression and ill health effects that accompany isolation.

Yet not every senior needs those particular programs, so how do we do our part to combat and respond to social isolation among a broader aging population in our community?

First, we have to understand the causes of the problem. What we as service providers witness happening in our society is isolation even in the midst of community. People are aging in place in many of our older neighborhoods, while the composition of those neighborhoods has changed to younger families with whom they have no connection, so they no longer know their neighbors. Our communities continue to see a decades-long influx of retired people from other states who have left behind their families, friends, and support systems. Depending on the area they move to, the social opportunities that are available, and their ability to navigate the community, they may or may not start rebuilding a social network in their new community. Living in gated communities often leads to isolation among a relatively homogeneous group of people. We have turned into communities where the front door is the garage door and that for many, especially those without small children, it is possible to come and go without ever seeing neighbors except through the car window. We also noted that for some of our longtime retirement communities like Green Valley, a community of about 22,000 people 20 miles outside of Tucson where individuals aged 85 years and older make up more than 10% of the population, those who moved there in the early years of their retirements have often outlived their savings and their vitality. We hear stories about the fact that since the home owners' associations maintain the exteriors of the housing units and landscaping, hidden behind a facade of normalcy is the despair that exists inside where people simply can't take care of themselves and don't reach out to others.

These community patterns and structural challenges contribute greatly to the problem of social isolation, but there are other challenges we see regularly too, including seniors isolated from the community by language or culture barriers, as well as by fear. Living alone with increasing frailty can be terrifying, and it's easy for these vulnerable older adults to stay inside and resist asking for help. And, given the prevalence of elder abuse and the perception of crime and violence, we understand their caution. Many older people don't reach out for assistance for fear of losing their ability to remain in their homes.

Finally, we know that there are other risk factors that put some older adults at greater risk for having their health compromised by increasing isolation. Changes

to mobility, cognitive ability, or health status, which happen frequently in the lives of older adults, can cause an individual to hold back from previously enjoyed social activities. Older adults in rural areas who can no longer drive are at incredible risk of physical, and thus social isolation, unless other transportation options are available. The loss of a spouse or a new, difficult role as a family caregiver may also lead to a withdrawing from the community at a time when more engagement is needed the most.

Solutions to Reach and Engage Isolated or At-Risk Seniors

Reaching out to all older people with messages that resonate and suggestions they will embrace is critical. That's why we participated in last year's "Expand Your Circles: Prevent Isolation and Loneliness As You Age" campaign, a national effort of the Federal Eldercare Locator (*Endnote 1*) to provide a new consumer awareness tool to boost public awareness and education of social isolation among seniors. Funded by the Administration for Community Living and in partnership with AARP Foundation and its' social isolation reduction online platform, Connect2Affect (*Endnote 2*), the National Association of Area Agencies (n4a), which operates the ACL-funded Eldercare Locator and of which we are a member, created a simple, consumer-friendly brochure on the problem of social isolation, risk factors, negative health consequences and a self-assessment checklist. The campaign provided additional materials for aging providers to ensure that the national effort's leveraged media attention was mirrored locally across the country. Like our Area Agency on Aging peers around the Nation, we found the new brochure a great tool and resource to raise the issue locally.

In addition to sharing the resource itself, a member of our staff devoted her monthly column in the Arizona Daily Star, the second-largest newspaper in the state, to the issue, reaching 200,000 print and online readers with specific tips to stay engaged, access supports and services and reduce isolation. We saw a significant boost in calls coming into PCOA the day the story ran and for the next few days.

To supplement and build upon our core Older Americans Act services, Pima Council On Aging developed the Neighbors Care Alliance to encourage neighbors to reach out to one another and formally organize volunteers who could provide transportation, friendly visits and calls, meals, and run errands. These include many of the top concerns and unmet needs voiced by our community in prior-year surveys of the most pressing issues facing older adults. The 15 active Neighbors Care Programs and their 120 partners are dedicated to helping their aging neighbors remain independent, safe, and less isolated in their homes for as long as possible. Our communities need to continue to seek innovative, often low-cost, neighborhood-based solutions such as this effort to address the challenges of aging in our society.

We have seen first-hand how social isolation impacts quality of life and overall well-being, and the dramatic effects that breaking down that isolation can have in people's lives. I'm reminded of Edna, a woman in her late 60's, who lived alone, suffered from multiple chronic health conditions and depression, and received several services from us including home-delivered meals, housekeeping help and grocery shopping assistance. She rarely left her home. Her concerned case manager suggested that she consider volunteering through the Corporation for National and Community Service funded Senior Companion Program, which at the time had recently been brought to Pima County by community partner, Our Family Services. Over time, Edna began volunteering to offer companionship to other isolated older adults receiving in-home services from us, and within a year, she discontinued most of her own services because she simply no longer needed them. She said that going to visit with older people in the community every day and a newfound sense of purpose had led her to getting around better and doing more than she had in a long time. Edna volunteered as a Senior Companion and benefited from the boost in vitality that social interaction gave her for 8 years, contributing significantly to her ability to maintain independent living and her overall quality of life.

In the course of five decades of service to older people and their families, Pima Council On Aging has recognized that social isolation is an issue that not only requires intervention to improve overall health and well-being, it demands prevention, as well. Encouraging people as they age to engage in continuing health-related education, volunteerism, and community engagement are critical to reducing systemic social isolation in later years. And so, our challenge as a society becomes not only continuing to provide and expand critical home and community-based supports and services that ensure safety and promote independence like those supported by the Older Americans Act, but also to break down systemic barriers to lifelong good physical and mental health and meaningful engagement. It is our role as an Area Agency on Aging to both find ways to reduce social isolation for older people like Edna,

forestalling the need for deeper interventions, and to ensure that those interventions are in place and adequate for those who eventually need them.

Policy Recommendations

Unfortunately, the problem of social isolation is widespread and knows no race, gender, income or geographic boundaries. According to our national association, n4a, our fellow Area Agencies on Aging share our concern, our willingness to respond and our desire to see greater awareness and resources deployed to address this problem that, with a nation that's aging as fast as ours is, cannot be ignored.

While PCOA will continue to tackle the problem as best we can at home in Pima County, we offer several policy recommendations for consideration by Congress and the Administration.

1. Increase Public Education

Current national efforts to raise awareness, assessment and remedy should be strengthened and new interventions developed. Our agency knows what to look for and how to respond, but we don't have the capacity to serve every older person in Pima County. The issue needs to be elevated so that more older adults and their families understand that social isolation is a public health issue and should not go unaddressed. In tandem with national campaigns, local communities like ours and the aging and community groups who serve it need effective messages and resources to deploy at the ground level. The Eldercare Locator and Connect2Affect campaigns have been extremely helpful but we need more national emphasis on this critical issue.

2. Expand Services that Promote Health, Engagement, Aging at Home and in the Community

As our population ages, it's essential that life-saving, independence-maintaining and isolation-reducing home and community-based services are expanded to meet the incredibly growing need. The Older Americans Act's critical services and supports must grow as we adjust to this age wave. If we don't meet the need, many older Americans will lose their independence and health, resulting in higher costs for taxpayers in the form of increased Medicaid nursing home costs and avoidable Medicare expenditures. **PCOA believes that all Older Americans Act (OAA) programs should be increased in FY 2018.** *OAA Title III B Supportive Services*—which provides flexible funding for a range of services from in-home supports to transportation—needs particular attention, as sequestration and other budget cuts have reduced it to spending levels not seen since before FY 2002, 15 years ago! This same title supports Area Agencies on Aging information and referral (I&R) efforts, so that consumers have someone to call for information on and access to aging services in that community. While the OAA meals programs of *Title III C Nutrition* have seen restoration from sequestration, much more needs to be done to meet growing community need now and in the future.

As Edna's story showed, programs that get older adults engaged in serving the community help reduce social isolation for both volunteers and those they serve. **We support funding for the Corporation for National and Community Service's Senior Corps programs**, which are specifically designed to engage and serve older adults.

Transportation is one of the most pressing needs for all older adults who are trying to remain at home and in the community—especially those who are isolated, and yet it can be difficult to find reliable, accessible, and affordable options to get to the doctor, the grocery store, religious services, or social events—all of which are critical to staying healthy and independent and prevent isolation. **Lawmakers must invest in federal, state and local programs that create a wider array of affordable, accessible transportation options.**

3. Build Livable Communities for All Ages

As the population of older adults grows so does the desire and need for communities to support people of all ages to ensure that they can grow up and grow old with maximum independence, safety, and well-being. Although there is much that individuals can and should do to maximize their independence as they age, public policymakers make critical decisions about issues such as transportation systems, housing opportunities and land-use regulations that affect whether older adults can live successfully and productively at home and in their community. That's why Tucson, through the leadership of Mayor Jonathan Rothschild and Council Member Steve Kozachik, recently joined the World Health Organization (WHO)/AARP Age-Friendly Communities List, as the 144th city in the Nation to join; we are currently deeply involved in the planning work to make our community even more age-friendly.

Federal leadership in livable and sustainable communities is vitally needed, yet federal investments in promoting sustainable and livable communities has lagged significantly since 2010. In the meantime, states and local governments tasked with developing and implementing broad long-term community infrastructure and service systems have increasingly recognized the value of ensuring that these systems meet the needs of the ever-growing aging population. These community efforts will only be cost-effective and efficient if they reflect our aging reality. This means directing a portion of any new infrastructure spending to community agencies and nonprofit organizations by encouraging states and local governments to embrace livable-communities-for-all-ages principles and make them central to the core work of all government departments.

The more livable a community is, the easier it will be to prevent isolation among older adults. If seniors have appropriate housing options, can get around smoothly and safely, are tapped as a resource, and are vital to the life of the community, it will do a great deal to prevent social isolation and loneliness.

4. Create Stronger Connections Between Health Care Systems and Community Systems

The problem of social isolation can also be reduced with better coordination between acute health care systems (hospitals, doctor's offices, managed care organizations) and the social and human services systems. According to the Robert Wood Johnson Foundation, nearly 90 percent of physicians indicated they see their patients' need for social supports, but unfortunately 80 percent of doctors said they do not fully know how to link patients to these networks. Clearly, there is still a wide gap to bridge between these very different social services and medical systems, and it is imperative that new intersections, partnerships and coordination processes are created rather than allowing the medicalization of social services, which will undoubtedly lead to higher costs and reduced consumer satisfaction.

This list is just a great starting point for a longer list of policy prescriptions that this Committee and all of us who care about older adults should develop; we know there's more to be done.

I thank you for shining a spotlight on this critical issue and for inviting me here to share Pima Council On Aging's perspective, and I look forward to taking any questions you may have.

Endnotes

1. *The Eldercare Locator* is the only national information and referral resource to provide support to consumers seeking assistance across the spectrum of issues affecting older Americans. The Locator was established and is funded by the U.S. Administration on Aging, part of the Administration for Community Living, and is administered by the National Association of Area Agencies on Aging (n4a). Through its National Call Center (1-800-677-1116), which operates 5 days a week from 9 o'clock a.m. to 8 o'clock p.m. ET, and website (www.eldercare.gov), the Locator serves as a trusted gateway for older adults and caregivers searching for information and resources which can be crucial to their health, well-being and independence.

2. Because the issue of social isolation is so complex, AARP Foundation spearheaded *Connect2Affect* to seek out solutions. Through research and innovative efforts, the AARP Foundation and its partners are working to create a deeper understanding of loneliness and isolation, draw crucial attention to the issue, and catalyze action to end social isolation among older adults. The goal of *Connect2Affect* is to create a network of resources that meets the needs of anyone who is isolated or lonely, and that helps build the social connections older adults need to thrive. Website www.connect2affect.org.

Prepared Statement of Rick Creech, Educational Consultant, Pennsylvania Training and Technical Assistance Network

Chairwoman Collins, Ranking Member Casey, and other members of the Committee, thank you for inviting me to speak before you today.

There can be no social engagement with others without interactive communication.

As someone who was born with cerebral palsy and was without the ability to speak in the accepted way, I grew up lonely and isolated—except for my parents and grandmothers. It was not until I received my first vocal output communication device that people began to know that they could speak to me and I could speak to them, well, at least, some people did.

I was born in 1954 in Smithfield, North Carolina. Back then babies like I was were not expected to live, and if we did live, we were not expected to be out in public, we were not expected to be educated, and we were certainly not expected to become independent adults. However, I had extraordinary parents who trusted in God, and not in all the doctors, the therapists, the social workers who said I would never do that, or that, or certainly—not that.

My father told me once, and I never forgot this, that he wanted me to learn math, so that I would be able to manage my own money. He wanted me to read, so that I would be able to read and understand anything that someone might write about me, and what should be done to, and for me. And he wanted me to be able to communicate, so that I could have control over my life.

My parents presumed competence in my ability to learn to do those things. They insisted that I learn. Boy, did they push me. When it came to teachers, I would always prefer to have my mother because with her, I could slack some. With my father, the Baptist preacher, there was no way I could slack. He was more demanding than God was with Moses. However, they taught me that I was competent. I was competent enough to go beyond their goals—and their dreams—for me. This is what great parents, great teachers, and great schools do.

Supporting individuals who need to use AAC is not simple. The person may want to communicate, however, the person will have to be taught how to use an augmentative and alternative communication device for his or her expressive communication. The vocal impaired person will not know how, what, when, or why to express thoughts, feelings, ideas without being encouraged, without being pushed.

I am speaking from experience. Initiating a conversation and carrying on a conversation is the hardest thing I do in life. To put it simply, I am no good at chit-chatting. I believe that there is an optimal age to learn communication skills. That age being as young as possible. However, I was 28 when I got my first voice output communication device, and, although I still have deficits, I can expressively communicate my ideas in conversations.

I had to work extremely hard, and I work long hours to learn to communicate with an AAC device. I used to read passages from the Bible and newspapers aloud to practice with my AAC device. My point is that we cannot provide a person with assistive technology or AAC, and expect people to use it.

I recently got the Amazon echo to help me to control the lights in the house. Sometimes I am ready to throw Alexa out the window, and I will not tell you the names my wife has called the thing. Amazon Echo is simple compared to AAC devices. I started telling people many years ago that assistive technology without training is not assistive.

Even today, as proficient as I am with my AAC device, I cannot talk to some people because they are too much in a hurry, or too caught up in my Accent1400, saying things such as, what can you say?, can you say my name?, or they are hollering at me as if I'm deaf, saying "it-is-good-to-meet-you, what-are-you-doing?" I get tempted to reply, "talking to an idiot", but my parents taught me that if you cannot say something nice, say nothing at all, so I don't.

As I get older, I feel my body slowing down. My bones snap, crackle and pop—like Rice Crispies. My muscles hurt. Right now, I have my best friend and my protector, my wife, but she is almost my age and has a bad back, arthritis, and diabetes. I know that I might not always have my wife by my side. One day I will probably be in the care of a minimum wage worker, who will have 24 other patients all requiring less time and care than I. The only way I have to individualize myself to my care takers will be through my ability to communicate with them, so that they will be able to see me as a person rather than just another patient.

Of course, if that does not work, I could always call one of my three 250 pound sons, and say, son, I need help.

I would like to thank the Committee on Aging, for giving me this opportunity to speak here, although I do not think I am that old. I would like to thank the Association of Assistive Technology Programs for sponsoring my trip here. Before I started working for Pennsylvania Training and Technical Assistance Network, I worked with Pennsylvania Initiative on Assistive Technology. I started PIAT's Short Term Loan of assistive technology to adults nearly 30 years ago, so, maybe I am that old.

The communication device I use, the Accent1400, costs in the neighborhood of \$10,000. It is one of the more sophisticated AAC devices. However, even simpler augmented communication devices with speech output cannot be found for less than five thousand dollars. The AAC devices with eye tracking, so that people can speak with them using only their eyes, cost in the neighborhood of \$20,000.

All of assistive technology, my AAC, my van converted for a powered wheelchair passenger, my smart home equipment, all cost upward of \$200,000. Still, ladies and

gentlemen, that is cheap, compared with a life time, of taking caring of me in a nursing facility.

For my work at PaTTAN, Pennsylvania Training and Technical Assistance Network, I help managed its Short Term Loan of assistive technology program that provides assistive technology to school therapists and teachers statewide, to try with their students. Each year the Pennsylvania Department of Education generously provides around a third of a million dollars for equipment. To a poor North Carolina country boy, that sounds like a lot, but we have constant waiting lists of students, and at the end of every year, there are requests that I have to cancel or delay until next school year because we don't have enough inventory to meet the requests. These students needs appropriate assistive technology to receive education so that they can grow to be productive and independent adults, who can be social members of our society.

I want to leave the committee with this thought. Living without being able to communicate, is like being behind four glass walls. You are able to see others, and people can see you, but you are ignored, or worse, talked down to, until you stop remembering who you are and why you are important.

Thank you, have a blessed day.

Additional Statements for the Record

Chelsea Conaboy, Freelance Writer

The Agenda—Politico, 04/12/2017

They're Out There—If We Can Find Them

In rural America, social isolation isn't just a private woe. It's increasingly seen as a public health crisis, with new ideas for tackling it.

FRIENDSHIP, Maine—Robin Overlock worries about Elizabeth Brown. That's his job.

The retired paramedic checks in frequently with Brown, 94, who lives in the same farmhouse in rural Maine where she's lived since 1940, where she raised sheep and her four children as well as cared for her own mother for the last two decades of her life. The white clapboards have weathered to gray and the barn, the sheep long gone, is beginning to collapse in on itself.

Congestive heart failure and a stroke, plus other consequences of aging, have left Brown housebound and largely confined to a recliner, watching TV to pass the time or talking by phone with friends or her oldest son, who lives about 100 miles away and has health issues of his own. Brown hasn't seen her son in more than a year, she said; her other children are dead or estranged. Overlock, who works for a small startup that helps low-income seniors stay in their homes, has become the person in her life who monitors her swollen legs for infection.

As he drives toward Brown's home, on a finger of land bordering Muscongus Bay, Overlock passes houses with logging equipment parked in the driveway or lobster traps stacked outside. Some, like Brown's home, show signs of neglect, and Overlock worries that the people who live in them also might be elderly and isolated.

"They're out there," he said, pointing out the windshield toward rolling hills that lead quickly to the bay and the Atlantic Ocean. "If we can find them, help them, keep them safe ..."

Overlock is part of a vanguard of health care workers tackling what researchers say is a growing health risk: social isolation. Researchers increasingly are convinced that living alone and losing contact with family and friends can be as much a threat to people's health as more physiological factors, like high blood pressure or obesity.

And the problem is set to get worse in coming decades. Baby boomers, who had fewer children than previous generations, are living longer, often with chronic diseases that can reduce their mobility. Family networks that traditionally cared for older generations are more dispersed or have unraveled altogether. The trend is already acute in rural regions like those in Maine hard hit by the collapse of the paper industry and other manufacturing losses, where young people continue to leave for jobs to the South.

Social isolation is not only unpleasant; it can be deadly. Someone who lacks social relationships has the same risk for early death as someone who is severely obese, according to a 2015 analysis by researchers at Brigham Young University. The feeling of loneliness, or a person's perception of being isolated, has been linked to higher blood pressure and cognitive decline. Taken together, social isolation and loneliness were associated with a 29 percent increased risk for coronary heart disease and a 32 percent increased risk for stroke, according to another large-scale analysis led by researchers at the University of York in Great Britain.

Just how isolation erodes health is a matter of some speculation. Scientists have long thought that interaction with others is beneficial because of "social control." Friends and family members prop each other up, encouraging good behavior and healthy habits. When those relationships break down, so can a person's health.

But in recent years, research has found that something more is at work: Loneliness, often thought of as a matter of the heart, may actually change the brain. The authors of a 2015 paper published in the *Annual Review of Psychology* theorize that chronic loneliness increases activity in a network of glands that control stress responses and create an inflammatory effect that raises the risk for chronic illnesses.

The reason for this may be a product of evolution. Loneliness may be meant to motivate us, when a spouse dies or when we move to a new city, to seek out new connections that can sustain us physically and emotionally. But when a person can't act on the feeling in a way that resolves it, loneliness can make people more sensitive to threats and less likely to seek out meaningful relationships for fear of negative consequences.

"We aren't, by our evolution, designed to be solitary survivors," said Louise Hawkey, who studies social relationships at NORC, an independent research organization at the University of Chicago. "We need to have others around us."

When Sandra Lane, 79, was growing up in Bristol, Maine, where the local newspaper regularly printed the names of people in the hospital so friends and neighbors could call, an elderly aunt lived next door. Afraid of thunderstorms, the aunt would pull on rubber boots and run to Lane's family home to wait out each squall.

Lane now lives with her husband, Russell, 85, a former lighthouse keeper and lobsterman disabled by post-traumatic stress disorder and depression, in a home they built down a rutted gravel road on a remote pond. More homes have been built nearby in the years since, but most are seasonal. When a blizzard comes during the quiet winter months, Lane said, she feels so isolated "I almost go crazy."

The Lanes, whose son moved back to Maine from Pennsylvania to help care for them, are working with Overlock through Access Health, a nonprofit launched this year by their longtime doctor, Allan "Chip" Teel, who regularly performed house calls before he closed his practice. Now Teel is working with a local hospital group to pair video calls from a doctor with home visits and phone calls from people like Overlock, who not only checks on medical issues but listens to his patients' stories, takes out their trash, or couriers a broken hearing aid across the state for a speedy repair. When he called recently and learned Russell Lane was having hallucinations, he took quick action to get Teel on the phone to adjust his medication. The aim of Access Health is to restore some of the attention that a "country doctor" once provided, Overlock said, as well as provide a small sense of community.

Nearly half of Mainers 65 and older—about 46 percent—live alone, slightly higher than the national rate, according to 2015 U.S. Census data; fewer than one-third lived alone in 1990. Older adults who are lonely are less likely to be married and more likely to have annual household income of \$25,000 or less, according to a report conducted for the AARP Foundation by Hawkeye and others at NORC using 2010 data. Experts say shifts in family dynamics have compounded other factors that are part of rural life that contribute to isolation, including poor public transportation and long travel times to grocery stores, doctors, community centers or even neighbors' homes.

It used to be that grandparents "moved into the spare room, and they were there until they left—until they died, I'll be blunt—and that was part of life's lesson," Overlock said. "In today's society, we all are busy. We all have careers, and we move around." Access Health, he said, is taking "a step to be a surrogate."

The reach of Access Health, which will cost about \$99 a month per patient when the program is fully rolled out, is relatively small. Overlock serves 12 patients now, though Teel hopes each of the program's health advocates eventually will serve up to 100 people. The need is great.

That's apparent in the hospital emergency department in Augusta, the state capital, where Rob Boudewijn works as a physician's assistant. About once or twice a week, he admits a patient who has no acute diagnosis but who lacks the support at home to manage ongoing chronic conditions, such as lung disease and obesity, or simple frailty. "Social admissions," a frowned-upon reality in many hospitals, allow social workers time to contact family members or to enroll a patient in support services. Sometimes, Boudewijn said, a patient will come to the emergency department showing signs of dementia. Then they spend time with nurses and doctors, just connecting with other people, and their whole disposition changes.

In those patients, he said, he can see the harmful effects of social isolation. "Everybody likes to feel worthwhile."

Oxford County, a paper-making region stretching along much of Maine's border with New Hampshire, was named the state's least healthy county by a Robert Wood Johnson Foundation analysis in 2010. That prompted a broad group of public health organizations and community groups to undertake a years-long assessment, looking at the root causes of the county's poor health. They eventually settled not on access to healthy food or exercise or even poverty but on something deeper: disconnection, a feeling of being undervalued, and social isolation.

"Everything we have done since then has been with an eye toward . . . reducing that root cause," said Jim Douglas, director of Healthy Oxford Hills, a public health program of the local hospital that facilitated the process.

But what to do about it? While research has made progress in identifying the problem, solutions remain few and far between.

Some studies have found that targeted psychotherapy can help people cope with loneliness in older age. That is unlikely to be a widely adopted strategy in rural communities with limited resources. In the meantime, countless social service agencies are working, much like Overlock, to address the needs of isolated individuals by providing in-home support, meal delivery, transportation or group activities. However, many lack the resources for rigorous research necessary to persuade policymakers to invest in their work.

Oxford has come up with a few local initiatives. A plan to expand community gardens became a means of teaching young people leadership skills. A group concerned about the opioid crisis organized a “recovery rally” in one town and put together a how-to to help other towns do the same. Others organized community conversations about broadband internet access to improve lobbying for its expansion, an important step for job growth and the use of telemedicine.

“It’s a very long-term strategy,” Douglas said. “This is not something we’re expecting to be able to point to in two, three, even seven years and say, ‘This happened because of that.’ It’s really a long-term investment in the county-wide community.”

Julianne Holt-Lunstad, a health psychologist at Brigham Young University and lead author on the 2015 mortality analysis, said reducing social isolation on a national level likely will require something bigger, a societal change prompted by something like the public health campaigns that altered public perception of tobacco use and dramatically reduced smoking rates over the past four decades.

A few efforts are getting underway. In December, the AARP Foundation launched Connect2Affect.org, a website aimed at raising awareness of social isolation as a major determinant of health. It includes links to research and a searchable data base of local and national resources. President Lisa Marsh Ryerson said she hopes it will help inspire more communities to take a broad-based look at how to improve health generally while putting isolation front and center.

“The reality is that social isolation cuts across the lifespan,” she said.

John Gale, a researcher at the University of Southern Maine’s Muskie School of Public Service who grew up working on his grandparents’ Maine farm and is a national expert on behavioral health in rural communities, said the answer lies in finding new ways to rebuild the community fabric lost over the years. Such efforts, he said, don’t need scientific proof.

“The fact that someone is living out on a farm in the middle of nowhere, can’t get enough food . . . that seems to be a problem in and of itself,” Gale said. “We all fall into the trap of wanting an evidence base, but sometimes, at the end of the day, [it’s about] doing the right thing. We have to get started.”

Which is where people like Overlock come in. During his visit, Brown reminisced about the days when televisions first arrived in town and she served as a member of the Friendship Women’s Ambulance Corps. As she sat in her recliner in what used to be the dining room, where she spends her days and nights, Overlock checked on her legs, swollen enough that she could be admitted to the hospital. But she won’t go.

“This is my life,” she said, sweeping her arms across her lap and over side tables overflowing with newspapers and letters, cans of food for her white-pawed Miss Alley Cat, and a television remote. “This room is my life.”

Chelsea Conaboy is a freelance writer focused on health care and was features editor at the Portland Press Herald in Maine when this article was published.

**Dhruv Khullar, M.D., M.P.P., Massachusetts General Hospital
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New York Times Op-Ed, 12/22/2016

How Social Isolation Is Killing Us

My patient and I both knew he was dying.

Not the long kind of dying that stretches on for months or years. He would die today. Maybe tomorrow. And if not tomorrow, the next day. Was there someone I should call? Someone he wanted to see?

Not a one, he told me. No immediate family. No close friends. He had a niece down South, maybe, but they hadn’t spoken in years.

For me, the sadness of his death was surpassed only by the sadness of his solitude. I wondered whether his isolation was a driving force of his premature death, not just an unhappy circumstance.

Every day I see variations at both the beginning and end of life: a young man abandoned by friends as he struggles with opioid addiction; an older woman getting by on tea and toast, living in filth, no longer able to clean her cluttered apartment. In these moments, it seems the only thing worse than suffering a serious illness is suffering it alone.

Social isolation is a growing epidemic—one that’s increasingly recognized as having dire physical, mental and emotional consequences. Since the 1980’s, the percent-

age of American adults who say they're lonely has doubled from 20 percent to 40 percent.

About one-third of Americans older than 65 now live alone, and half of those over 85 do. People in poorer health—especially those with mood disorders like anxiety and depression—are more likely to feel lonely. Those without a college education are the least likely to have someone they can talk to about important personal matters.

A wave of new research suggests social separation is bad for us. Individuals with less social connection have disrupted sleep patterns, altered immune systems, more inflammation and higher levels of stress hormones. One recent study found that isolation increases the risk of heart disease by 29 percent and stroke by 32 percent.

Another analysis that pooled data from 70 studies and 3.4 million people found that socially isolated individuals had a 30 percent higher risk of dying in the next seven years, and that this effect was largest in middle age.

Loneliness can accelerate cognitive decline in older adults, and isolated individuals are twice as likely to die prematurely as those with more robust social interactions. These effects start early: Socially isolated children have significantly poorer health 20 years later, even after controlling for other factors. All told, loneliness is as important a risk factor for early death as obesity and smoking.

The evidence on social isolation is clear. What to do about it is less so.

Loneliness is an especially tricky problem because accepting and declaring our loneliness carries profound stigma. Admitting we're lonely can feel as if we're admitting we've failed in life's most fundamental domains: belonging, love, attachment. It attacks our basic instincts to save face, and makes it hard to ask for help.

I see this most acutely during the holidays when I care for hospitalized patients, some connected to I.V. poles in barren rooms devoid of family or friends—their aloneness amplified by cheerful Christmas movies playing on wall-mounted televisions. And hospitalized or not, many people report feeling lonelier, more depressed and less satisfied with life during the holiday season.

New research suggests that loneliness is not necessarily the result of poor social skills or lack of social support, but can be caused in part by unusual sensitivity to social cues. Lonely people are more likely to perceive ambiguous social cues negatively, and enter a self-preservation mind-set—worsening the problem. In this way, loneliness can be contagious: When one person becomes lonely, he withdraws from his social circle and causes others to do the same.

Dr. John Cacioppo, a psychology professor at the University of Chicago, has tested various approaches to treat loneliness. His work has found that the most effective interventions focus on addressing “maladaptive social cognition”—that is, helping people re-examine how they interact with others and perceive social cues. He is collaborating with the United States military to explore how social cognition training can help soldiers feel less isolated while deployed and after returning home.

The loneliness of older adults has different roots—often resulting from family members moving away and close friends passing away. As one senior put it, “Your world dies before you do.”

Ideally, experts say, neighborhoods and communities would keep an eye out for such older people and take steps to reduce social isolation. Ensuring they have easy access to transportation, through discounted bus passes or special transport services, can help maintain social connections.

Religious older people should be encouraged to continue regular attendance at services and may benefit from a sense of spirituality and community, as well as the watchful eye of fellow churchgoers. Those capable of caring for an animal might enjoy the companionship of a pet. And loved ones living far away from a parent or grandparent could ask a neighbor to check in periodically.

But more structured programs are arising, too. For example, Dr. Paul Tang of the Palo Alto Medical Foundation started a program called linkAges, a cross-generational service exchange inspired by the idea that everyone has something to offer.

The program works by allowing members to post online something they want help with: guitar lessons, a Scrabble partner, a ride to the doctor's office. Others can then volunteer their time and skills to fill these needs and “bank” hours for when they need something themselves.

“In America, you almost need an excuse for knocking on a neighbor's door,” Dr. Tang told me. “We want to break down those barriers.”

For example, a college student might see a post from an older man who needs help gardening. She helps him plant a row of flowers and “banks” two hours in the process. A few months later, when she wants to cook a Malaysian meal for her boyfriend, a retired chef comes by to give her cooking lessons.

“You don't need a playmate every day,” Dr. Tang said. “But knowing you're valued and a contributing member of society is incredibly reaffirming.”

The program now has hundreds of members in California and plans to expand to other areas of the country.

“We in the medical community have to ask ourselves: Are we controlling blood pressure or improving health and well-being?” Dr. Tang said. “I think you have to do the latter to do the former.”

A great paradox of our hyper-connected digital age is that we seem to be drifting apart. Increasingly, however, research confirms our deepest intuition: Human connection lies at the heart of human well-being. It’s up to all of us—doctors, patients, neighborhoods and communities—to maintain bonds where they’re fading, and create ones where they haven’t existed.

Correction: December 24, 2016

An Upshot article on Thursday about the health risks of social isolation misstated the purpose of a grant by the Robert Wood Johnson Foundation to a program, linkAges, dedicated to fighting the problem. The grant to linkAges was for testing a new project connected to the program; it was not meant to help linkAges expand across other areas of the country.

Dhruv Khullar, M.D., M.P.P., is a resident physician at Massachusetts General Hospital and Harvard Medical School.

**Meals on Wheels
Additional Statement for the Record**

Chairman Collins, Ranking Member Casey and Members of the Committee:

We first want to commend you for your bipartisan leadership and commitment to improving the lives of, and protections for, our nation’s older adults. Second, we want to express our appreciation to you for holding this important hearing and bringing to light the serious issue of social isolation and loneliness among this population. Meals on Wheels of America is grateful for the opportunity to submit this statement for the record and eager to work with you as we continue to seek solutions to address the growing problems of senior hunger and isolation. We offer our perspectives on the risks and consequences of social isolation and loneliness as they relate to the individuals served through Meals on Wheels, as well as our thoughts about how this nationwide network is delivering a cost-effective and vital intervention for America’s most at-risk seniors every day.

In a recent speech to healthcare journalists, Ellie Hollander, our President and CEO, highlighted an alarming statistic originally presented by Dr. Julianne Holt-Lunstad, both a leader in loneliness research and a witness at the hearing, that the effects of loneliness and isolation are comparable to the impact of well-known risk factors such as obesity and substance abuse, and are the equivalent of smoking 15 cigarettes a day. Loneliness is prevalent among older adults, and the statistic of one in three older adults over the age of 60 experiencing loneliness is thought to be an underestimate, as witness Dr. Lenard Kaye presented in his testimony. We echo Dr. Holt-Lunstad’s assertion that senior social isolation and loneliness is an epidemic and a growing public health concern amidst demographic, geographic and societal shifts toward smaller, more isolated families.

The factors that make older adults more susceptible to social isolation and loneliness are commonly found among individuals receiving Meals on Wheels. According to *AARP Foundation’s Isolation Framework*, living alone, having lower incomes, and having more physical impairments make already vulnerable older adults susceptible to loneliness. Data from the Administration for Community Living’s *State Program Reports* and *National Survey of Older Americans Act (OAA) Participants* indicates that seniors receiving meals at home and in congregate settings, such as senior centers, are primarily women, age 75 or older, who live alone, have multiple chronic conditions, take six or more medications daily and are functionally impaired. Significant numbers of OAA meal recipients are also impoverished, live in rural areas and belong to a minority group, making them more at-risk for social isolation and loneliness.

Findings from a 2015 study entitled *More Than a Meal*, conducted by our organization in conjunction with Brown University and AARP Foundation, found that those receiving and/or requesting Meals on Wheels services are significantly more vulnerable compared to a nationally representative sample of comparably-aged Americans. Specifically, seniors who are on Meals on Wheels waiting lists were significantly more likely to:

- Report poorer self-rated health (71% vs. 26%)
- Screen positive for depression (28% vs. 14%) and anxiety (31% vs. 16%)

- Report recent falls (27% vs. 10%) and fear of falling (79% vs. 42%) that limited their ability to stay active

Moreover, functional impairment is not just a risk factor but also a consequence of social isolation and loneliness (Luo, Hawkey, Waite, & Caccioppo, 2012), along with mortality and chronic illnesses like cardiovascular disease (Holt-Lunstad & Smith, 2016). The good news, however, is that Congress' foresight 45 years ago to authorize a nutrition program demonstration for older adults in the greatest economic and social need has since grown into a highly effective community-based, nationwide network of 5,000 senior nutrition programs (e.g., Meals on Wheels). Today this network is successfully fulfilling its *purposes outlined in the OAA* and carrying out what it was intended and designed to do by:

- Reducing hunger and food insecurity among older individuals
- Promoting socialization of older individuals
- Promoting the health and well-being of older individuals
- Delaying adverse health conditions for older individuals

Delivering More Than Meals

During the hearing, Senators drew from their own experiences of delivering Meals on Wheels and shared compelling testimonials from constituents about how volunteer drivers often identify medical issues before they became serious problems. It was also noted that Meals on Wheels provides opportunities for meaningful social engagement among a particularly vulnerable older adult population. In his testimony, Mark Clark, Director of Pima Council on Aging and Member of Meals on Wheels America, reiterated anecdotal evidence that Meals on Wheels volunteers can become important members of seniors' social networks, helping to deter loneliness. Below are some additional quotes gathered from recent news articles or were shared with our organization that illustrate the social benefits of Meals on Wheels services, as told by older adults receiving Meals on Wheels or family members or local programs:

- *Meals on Wheels delivers more than food; they deliver companionship and friendship five days a week. I think that's vital for people who are shut-ins or semi-shut-ins. That's our visitor. Food and friendship and pleasantness. It's more than food.*
- *I am served nourishing meals and enjoy being able to eat with friends. Socialization is almost as important as the food.*
- *We hear story after story of people who are hungry and have nobody to help. Often times, our clients tell us that the driver is the only person they see throughout the week. It breaks my heart to think about the number of people who are on our waiting list because we don't have the funding to feed them.*
- *I have a reason to live now. I need to be up and dressed in time to greet my Meals on Wheels delivery person when they arrive.*
- *Both my mother and father were fortunate to be able to receive this service starting on 2012 until my mother's death at age 85 in 2014 ... my father still enjoys this service today at 88 years old. Not only does the service provide him with a good nutritious meal but the added benefit of having the delivery person touch basis with him is a blessing.*

Along with compelling personal stories of the health benefits of Meals on Wheels, the same *More Than a Meal* study referenced above found that seniors who received daily home-delivered meals (the traditional Meals on Wheels model of a daily, home-delivered meal, friendly visit and safety check), experienced the greatest improvements in health and quality of life. Specifically, between baseline and follow-up, seniors receiving daily home-delivered meals were more likely to report or exhibit:

- Improvements in mental health (i.e., levels of anxiety)
- Improvements in self-rated health
- Reductions in the rate of falls and the fear of falling
- Reductions in hospitalizations
- Improvements in feelings of isolation and loneliness
- Decreases in worry about being able to remain in home

Meals on Wheels can be used to reduce the social isolation that occurs due to functional decline and also help prevent costly hospitalizations and nursing home placement (Valtorta & Hanratty, 2012) that, in and of themselves, lead to social isolation. In addition to being a preventative measure for emergency department visits and hospital admissions, Meals on Wheels is also a proven way to reduce readmissions to the hospital and other post-discharge costs. Based on the results of a pilot for a five-year program that eventually spanned 36 states and more than 135,000 Medicare Advantage beneficiaries, post-discharge costs were reduced by one-third on average per patient who was served by Meals on Wheels, as compared to those who

did not participate. Furthermore, several other pilot projects showed seniors receiving short-term nutrition interventions from Meals on Wheels post-hospital discharge, ranging from a daily hot meal to a combination of different meal types (i.e., lunch, dinner, snack, hot or frozen meals), resulted in readmission rates of 6%–7% as compared to national 30-day readmission rates of 15%–34%.

As noted above, Meals on Wheels programs deliver so much more than nutritious meals to the seniors they serve. Many programs are providing social isolation interventions beyond the daily visit and safety check. In his testimony, Dr. Kaye summarized AARP's *Framework for Isolation in Adults Over 50*, highlighting the importance of drawing on multiple methods of intervention. Below are some examples of creative interventions currently being used by Meals on Wheels programs to address social isolation and loneliness among their clients:

- Many Meals on Wheels programs across the country are offering extended or follow-up visits with clients beyond the mealtime delivery. Others conduct regular wellness checks that incorporate casual conversation, and still others have volunteer befriending or friendly visitor programs to accompany home-delivered meal services. The efficacy of these types of interventions is supported by research which finds that the addition of volunteer visitors to planned home-making and nursing care made a difference for elderly in the community (MacIntyre, 1999).
- Numerous Meals on Wheels programs across the country are helping to support older adults with pets by also delivering pet food along with the seniors' meals. As noted by Senator Cortez Masto and Dr. Kaye, pets can alleviate social isolation, feelings of loneliness and doctor visits among older adults, especially among individuals who live alone (Stanley et al., 2014).
- Dr. Kaye discussed the importance of technology as a potentially powerful tool for connecting socially isolated older adults and introduced the University of Maine's initiative to develop these tools. Some Meals on Wheels programs are, in fact, partnering with businesses and other local community organizations to install technologies in clients' homes that would help facilitate both social connections and telehealth. Although leading to some positive outcomes, we must also reiterate Dr. Holt-Lunstad's caution that more research is necessary to better understand which interventions are most effective and under what conditions, as we do not fully understand the adverse effects of some of these newer technologies (Chen et al., 2016).
- An important strategy for addressing social isolation is getting homebound seniors out into their communities. One particularly innovative and exciting program called "Outings to Your Taste" took older adults receiving home-delivered meals to a restaurant of their choosing. The program seemed to attract socio-demographically diverse clients, and older adults who participated seemed satisfied with the endeavor (Richard et al., 2000).
- In a multifaceted approach to addressing both social isolation and health, one initiative trained Meals on Wheels volunteers in health literacy coaching (Rubin et al., 2013). Loneliness has been associated with poor health behaviors, which adversely impacts health outcomes. This type of intervention also appeals to the call for more preventative work in the areas of both health and social isolation (Nicholson, 2012).

Challenges Holding Meals on Wheels Back

As outlined throughout this statement, Meals on Wheels programs are already doing much to address the issues of isolation among the nation's elderly, but more can and should be done. The issues of senior isolation and hunger is grave and growing, with *1 in 4* seniors living alone and *1 in 6* struggling with hunger, a 65% increase since the start of the recession in 2007. Federal funding through the OAA has not kept pace with either inflation or need, and the network overall is serving 23 million fewer meals today than we were in 2005. In 2014, funding provided through the OAA supported the provision of meals to 2.4 million seniors, yet there are millions more in need. In fact, a 2015 *Government Accountability Office* report found that about 83% of food insecure seniors and 83% of physically impaired seniors did not receive meals [through the OAA], but likely needed them. This gap, coupled with an increasing demand as the senior population grows at an unprecedented pace, portends a serious national dilemma. With this backdrop, we urge your consideration of the following policy priorities:

1. Fund, Protect and Strengthen the Older Americans Act Nutrition Program

The OAA has been the primary piece of federal legislation supporting social and nutrition services to Americans age 60 and older since 1965. In 2014, the last year for which data exists, the OAA enabled 218 million meals to be provided to 2.4 mil-

lion seniors. Despite the longstanding bipartisan, bicameral support for the Act, it remains woefully underfunded. As such, we ask Congress to:

- Provide, at a minimum, a total of \$874.6 million for all three nutrition programs authorized under the OAA (Congregate Nutrition Program, Home-Delivered Nutrition Program and the Nutrition Services Incentive Program) in FY 2018. Current funding is \$36.8 million below the levels authorized under the Older Americans Act Reauthorization Act and unanimously passed by Congress last year.
- End sequestration for FY 2018 and beyond and replace it with a balanced plan. OAA programs, among others, were hit hard by the unnecessary and harsh cuts in 2013 and waiting lists for Meals on Wheels continue to climb in every state.

2. *Modify Medicare and Medicaid plans, as recommended by the National Commission on Hunger, to improve nutrition assistance options for our most vulnerable*

The health consequences of inadequate nutrition are particularly severe for seniors. Proper nutrition, on the other hand, averts unnecessary visits to the emergency room, reduces falls, admissions and re-admissions to hospitals, saving substantial Medicare and Medicaid expenditures. It is notable that a senior can receive Meals on Wheels for an entire year for about the same cost of 1 day in the hospital or 10 days in a nursing home. Accordingly, we recommend the following:

- Expand Medicare managed care plans to include coverage for home-delivered meals prepared and delivered by a private nonprofit for seniors with physician recommendation.
- Expand Medicaid managed care plans to include coverage, with a physician recommendation, for home-delivered meals prepared and delivered by a private nonprofit for individuals who are too young for Medicare, but who are at serious medical risk or have a disability.
- Allow doctors to write billable Medicare and Medicaid “prescriptions” for nutritious and medically appropriate meals prepared and delivered by a private nonprofit for individuals prior to being discharged from a hospital.

Across the nation, we already see some outstanding initiatives to address social inclusion through Meals on Wheels services, but more systematic research and evaluation is necessary. In this effort, Meals on Wheels is beginning a research project that will test the effects of various types of loneliness interventions, including those that are technology-based, employed through Meals on Wheels programs. We again applaud Chairman Collins and Ranking Member Casey for holding the first congressional hearing on social isolation and loneliness among older adults. We cannot emphasize enough the timeliness of raising public awareness on this hidden issue.

We look forward to working with every Member of the Committee to advance this agenda and ultimately, to not only eradicate senior hunger in our country, but also to make sure no older adult feels alone or left behind. We hope this information has been instructive and are pleased to offer our assistance and expertise at any time.