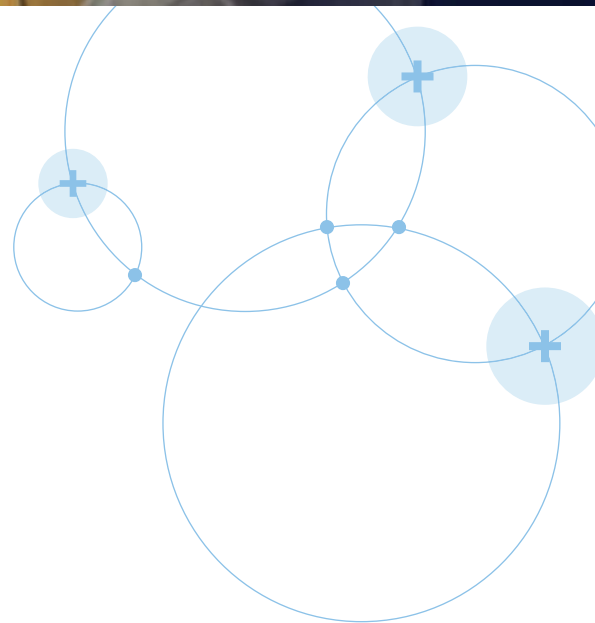


Fighting Social Isolation Among Older Adults



Loneliness and Social Isolation – Focus is There, Solutions are Emerging

Heightened focus on social isolation has resulted in more research, and greater concern. Since the initial correlation between loneliness, social isolation and poor health outcomes, new reports have emerged to try and understand why people are lonely and what can be done to mitigate it. For example, as GreatCall noted in its 2017 white paper, [Connecting the Lonely](#), a [baseline report in 2016 from the AARP Foundation](#) defined 'loneliness' as "the way people perceive their experience [of

social isolation] – that is, whether they feel isolated or not." AARP, which has been researching the subject since 2010, released [new survey results in 2018](#) confirming the same percentage – 35 percent of adults age 45+ are lonely – but with a growing number of older adults in the population, this represents an **additional five million adults** based on census data and asks them to assess their health (see **Figure 1** and **Figure 2**).

PERCENTAGE OF MIDLIFE AND OLDER ADULTS WHO ARE LONELY By overall health

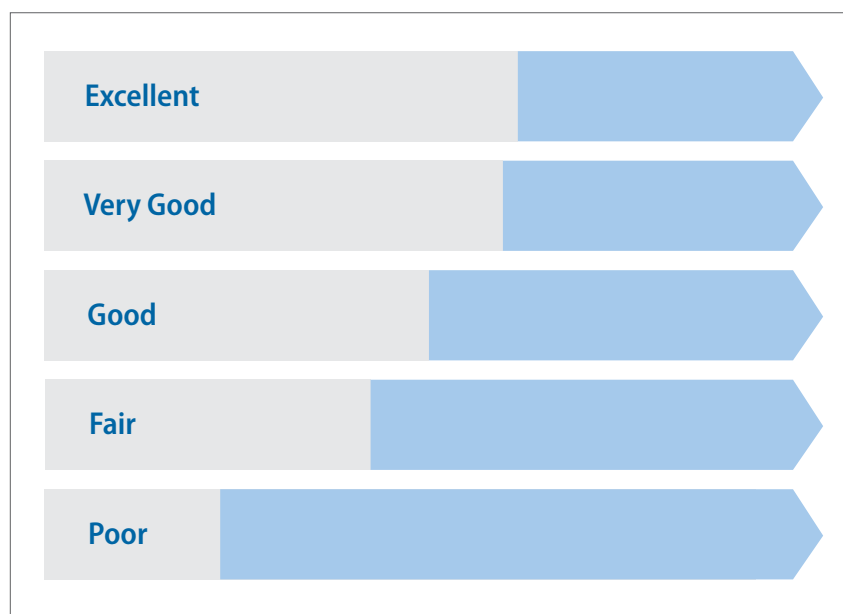


Figure 1 Older adults who are lonely report poorer health

Loneliness and Social Connections: A National Survey of Adults 45 and Older. AARP Research. 2018. | doi.org/10.26419/res.00246.001

PERCENTAGE OF MIDLIFE AND OLDER ADULTS WHO ARE LONELY AND NOT LONELY

By age, income, education, marital status, race/ethnicity, and LGBTQ identification.

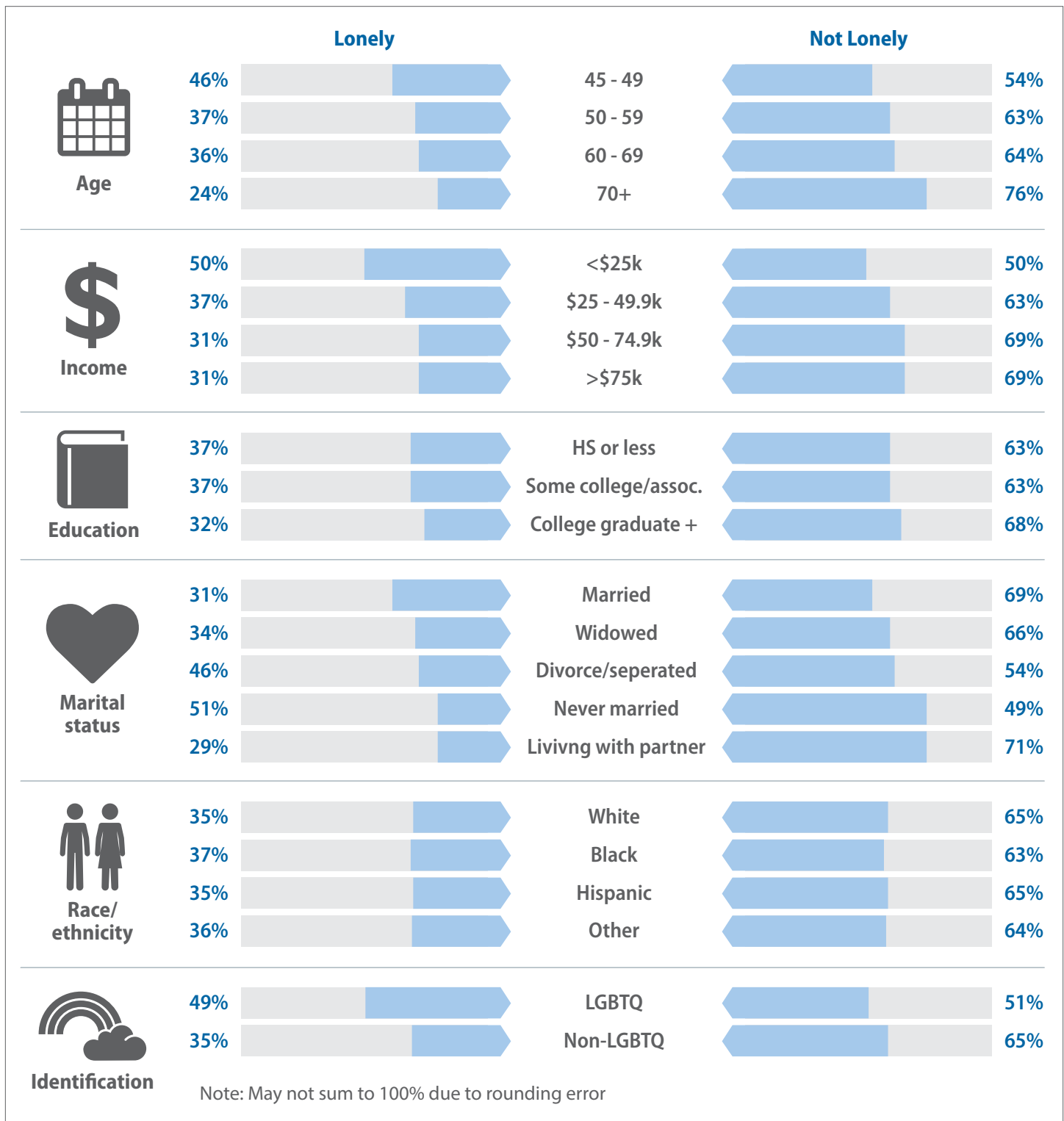


Figure 2 Comparison between lonely and not lonely (Source AARP Research, 2018)

Loneliness and Social Connections: A National Survey of Adults 45 and Older. AARP Research. 2018. | doi.org/10.26419/res.00246.001

What has changed in the past two years? First, the research. Once the correlation between social isolation and poorer health outcomes was made, the volume of research spiked. From its pre-correlation measurement in the [1996 UCLA Loneliness Scale](#), a number of other surveys have been released that include correlation with health care costs, [economic status](#), and [lifestyle preferences](#). In late 2017, research from AARP's Public Policy Institute concluded that socially isolated older

adults cost the U.S. health system an [additional \\$6.7 billion in health-related spending](#) (See **Figure 3**). Newer research from the National Institute on Aging is focusing on the connections between loneliness, long viewed as a [predictor of cognitive decline](#), and other health risks, including: [high blood pressure](#), [heart disease](#), [obesity](#), a weakened immune system, anxiety, [depression](#), [cognitive decline](#), [Alzheimer's disease](#), and even death.

ISOLATED OLDER ADULTS COST TO THE U.S. HEALTH SYSTEM

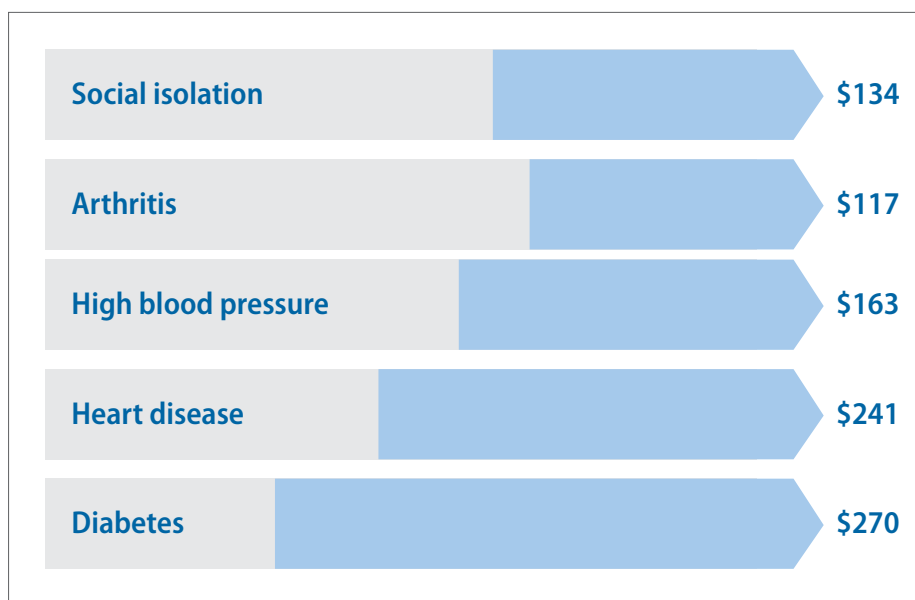


Figure 3 Additional Monthly Cost to Medicare for a Socially Isolated Enrollee and an Enrollee with Selected Chronic Conditions

Social isolation – is this a worsening 21st century phenomenon? Is social isolation more of a problem today than in the past? And, what is the prognosis for the future? The recent AARP report zeroed in on the key predictors of loneliness, sometimes referred to as “perceived social isolation.” Living situations and marital status may provide a clue to societal changes that result in social isolation and loneliness. In 2018, the [Administration for Community Living \(ACL\)](#) released its survey profile of older Americans (age 65+). It showed that while only 14 percent of the 65+ population lives alone, almost half (45 percent) of women aged 75+ live by themselves. [According to Pew Research](#), among those 65 and older, the divorce rate has tripled since 1990.

A top predictor of loneliness is size and quality of one’s social network. To assess these elements and their connection to loneliness, the AARP respondents were asked for both the number of people in their lives who have been supportive in the past year and the number with whom they can discuss matters of personal importance. From the study: “As expected, as one’s social network

increases, loneliness decreases. Also as expected, as physical isolation decreases (the factor which included items such as disability status, number of hours spent alone and household size), so does loneliness.”

Health limitations can exacerbate social isolation. While loneliness and social isolation are emerging as public health issues, less has been published about the health issues that may lead to social isolation: mobility limitations, depression, [cognitive impairment](#) and [hearing loss](#). In [another study](#), older adults with mobility impairments were more likely to report being isolated from friends. These surveys underscore the fact that elderly people are the most likely to experience social isolation and its related health effects. According to a [UK study](#), those who provide care – including family caregivers such as children or spouses – are also known to experience loneliness in their roles and would benefit from greater societal appreciation and possible interventions such as respite care.

Untreated hearing loss contributes to social isolation. According to [government statistics](#), among adults aged 70 and older with hearing loss who could benefit from hearing aids, fewer than 30 percent have ever used them. Denial and [unreimbursed cost](#) (\$2400/year) are factors, and delay in acquiring them [can worsen the isolation](#). Hearing aids today also offer features that include fall detection, smartphone integration, and AI capabilities.

Moving forward, Medicare Advantage plans are beginning to contribute to a portion of the cost. Audiologists play a role in managing user expectations and training an individual to adjust to the change from little or no sound to the noisy environment of stores, restaurants, office buildings and streets.

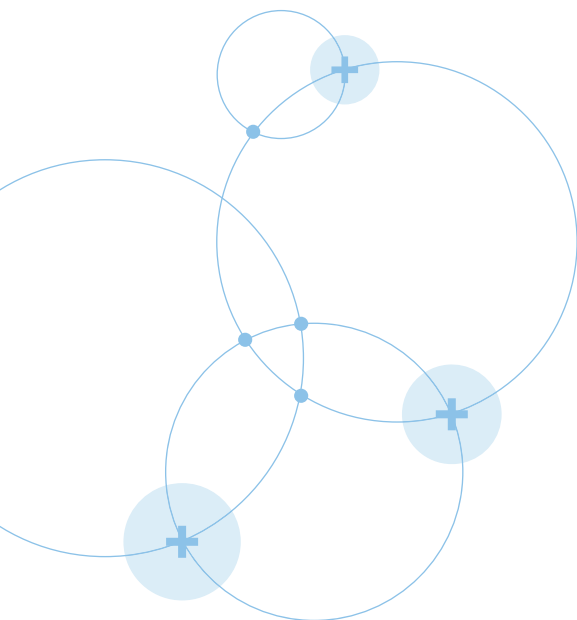
"If I had to choose one technology category to help mitigate social isolation, it would be hearing. Helen Keller noted that hearing loss was worse than vision loss, because it separates one from others."

– Charlotte Yeh, Chief Medical Officer, AARP

Social isolation is linked to poorer health outcomes and higher health care costs. In an [Aging Life Care](#) article, Dr. Clifford Singer, Chief Geriatric Mental Health and Neuropsychiatry of Acadia Hospital and Eastern Maine Medical Center, and Adjunct Professor, University of Maine, examined results of studies about social isolation and loneliness, noting "poor social relationships in general (social isolation and loneliness) were associated with a 29 percent increase in risk of coronary heart disease and 32 percent increase in stroke risk." In late 2017, research from AARP's Public Policy Institute concluded that socially isolated older adults cost the U.S. health system an [additional \\$6.7 billion in health-related](#)

[spending](#) (see [Figure 2](#)). Given this, it is widely believed to be a social determinant of health that public policy should address. Social isolation, noted as the [health equivalent to smoking 15 cigarettes per day](#), has been linked to greater risk of [heart disease](#). Social isolation has also been associated with greater risk for [mental health issues such as depression and stress](#).

Family caregivers bear a burden that worsens their isolation and stress. Caregivers consistently report higher levels of stress than non-caregivers; chronic stress has been associated with poor health outcomes. Unpaid caregivers are eight percent more likely to be lonely than non-caregivers. According to the 2017 AARP research, [40 percent of caregivers are men](#) -- up from 34 percent in 2001 -- who are "less likely to open up to others when they feel stressed and overwhelmed." This behavior likely exacerbates their isolation.



"Loneliness acts as a fertilizer for other diseases. The biology of loneliness can accelerate the buildup of plaque in arteries, help cancer cells grow and spread, and promote inflammation in the brain leading to Alzheimer's disease. Loneliness promotes several different types of wear and tear on the body."

– Steve Cole, Social Genomics Core Laboratory, UCLA

Global Problem – Global Solutions

The Kaiser Family Foundation compared social isolation and loneliness internationally. The [results of this 2018 study](#) might seem surprising – loneliness and social isolation were more prominent in the US and UK than in Japan – and more prominent in younger age groups than the elderly. Focusing just on UK older adults, [Age UK published a survey](#) indicating that half a million people over the age of 60 spend each day alone – and another half a million do not speak to other individuals for 5-6 days at a time. Further, the health cost of each lonely person is [equivalent to an additional \\$7800](#).

The UK launched the Campaign to End Loneliness. The Campaign to End Loneliness initiative launched in 2011 and is

[targeted to address loneliness](#) among the four million affected older adults. [Be More Us](#) runs workshops across the UK, intended to help businesses and individuals boost connections that can reduce feelings of loneliness (see **Figure 4**). And, in December, the Scottish government [identified a campaign manager](#), created a [coalition of charities](#) and formulated Scotland's first Loneliness Strategy. In addition, the Campaign to End Loneliness has published a white paper, [Promising Approaches to Reducing Isolation and Loneliness in Later Life](#). It mentions technology's potential usefulness, but notes that one of its current effective approaches includes [Call-in Time](#), a free service where volunteers call people who are lonely and can match them with potential new friends.

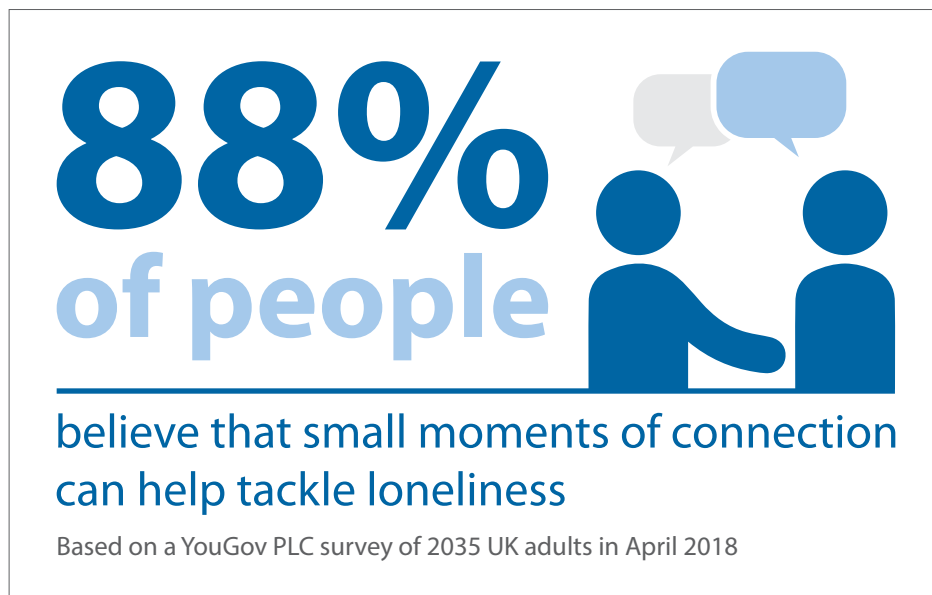


Figure 4 From the 2018 “Be More Us” study of UK adults

Bloomberg Philanthropies targeted loneliness in three cities. In the UK in 2014, Swindon, U.K. [partnered with Bloomberg Philanthropies](#) and founded Cities of Service, launching Swindon Circles of support. It is a program where volunteers contact 100 older adults, a process similar to the Age UK Call-in Time. In Barcelona, a Bloomberg Philanthropies supported program created an app, Vincles, to connect networks of families and friends, as well as connect residents with their neighbors. In Tel Aviv, one proposed project would repurpose old synagogues as communal spaces for older, long-time residents in a rapidly

changing neighborhood. Another pairs elderly Israelis with students who can help them get around the city and accompany them on daily activities.

In Norway, a survey revealed that older adults experience greater social isolation. A [survey published in 2016](#) showed that older adults aged 67+ experience greater social isolation than younger cohorts. Furthermore, it reported that “a third of them have two or fewer people to rely on should personal problems arise.” (See **Figure 5**)

SOCIAL ISOLATION IN NORWAY

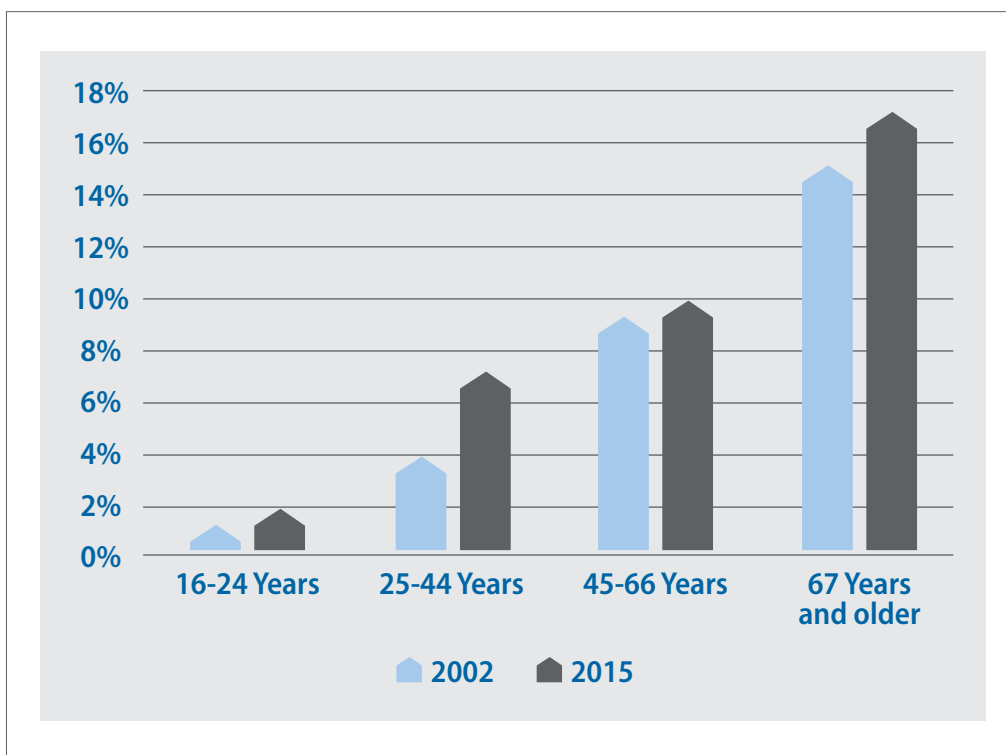


Figure 5 Without good friends or meeting less often than once a month

As part of the “[social tech](#)” work of Norwegian startup [No Isolation](#), founders have created a program for seniors called [Komp](#) that requires no technology skills. The one button screen allows seniors to receive pictures, messages and video calls from friends and family. Winners of a Nesta’s Smart Aging prize in October 2018, the firm plans to introduce the technology across Europe.

In Japan, loneliness makes the news – tactics are focused on technology. Despite being ‘less lonely’ than in the US and UK (according to the earlier-referenced [Kaiser Family Foundation study](#)), loneliness and social isolation are viewed as a national crisis in this rapidly aging society (see **Figure 4**). In fact, according to publishing firm [Toyo Kaizai](#) research, 15 percent of Japanese

elderly men have fewer than one conversation in two weeks. What’s more, [perhaps as many as 30,000 per year](#) are dying alone. The Japanese Ministry of Economy, Trade and Industry predicts that the [robotic service industry](#) will “boom to nearly \$4 billion annually by 2035.” The government has been funding development of elder care robots to help fill a projected shortfall of an estimated 380,000 specialized workers by 2025. [Numerous social initiatives](#) are also underway, including creating salons for exercise and socializing as well as community cafes, and having the postal service keep a watchful eye on residents.

FIGURE 6 NUMBER OF ELDERLY LIVING ALONE IS ON THE RISE

(Women 80 and older, men in their 50s and 60s)

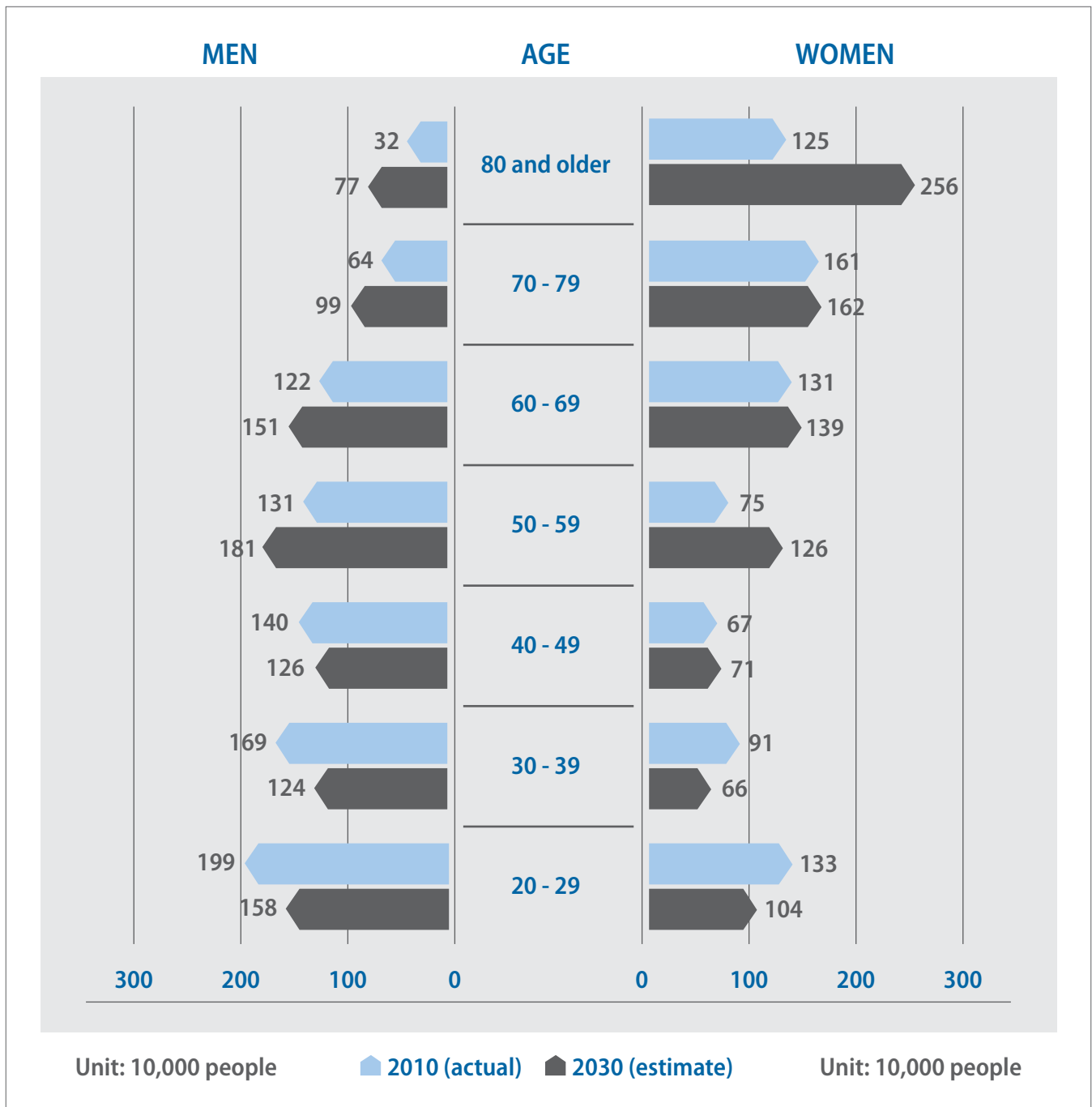


Figure 6 Elderly Living Alone in Japan, Actual 2010, Projected 2030

Source: [Japan Public Policy Forum, published 2016](#)

Mitigating Social Isolation in the United States

Proposed solutions to social isolation abound in the US as well as abroad. Likely a result of the correlation studies about health cost and outcomes, there are a growing number of programs launching by organizations that include insurers, non-profits and public policy groups. These programs range from health screenings to policy and reflect the broad scope of the issue.

Having health professionals screen for loneliness. AARP Public Policy Institute made a series of recommendations about screening and suggested interventions, including advice in the 'Welcome to Medicare' process when adults turn 65. In annual wellness visits, The Institute of Medicine has also recommended that an assessment be included in Electronic Health Records (EHRs). Efforts are underway to incorporate loneliness screening with CareMore, a subsidiary of Anthem, that is an integrated health plan and delivery system for Medicare and Medicaid patients. [United Healthcare](#) and [Cigna](#) are screening for loneliness and offering interventions. CareMore, in fact, has hired a Chief Togetherness Officer to [maintain focus on the issue](#). Interventions for those identified as "lonely" include phone calls, home visits, personal encouragement, and connection-to-community focused programs.

Suggesting tactics for health professionals to recommend to patients. A report published in the Institute of Geriatric Medicine offered recommendations to doctors that would help them [categorize interventions based on the individual](#), including suggesting ways to:

- *Improve social skills*
- *Enhance social support*
- *Increase opportunities for social interactions*
- *Address maladaptive social cognition (with behavioral therapy)*

Having a sense of purpose is important in mitigating loneliness. While that purpose may vary, its role is defined: It is our driver, our motivation and creates meaning and a sense of well-being. [Social engagement has been seen to significantly reduce rates of loneliness in older adults](#), particularly when paired with cognitively stimulating activities.

Improving policy: Initiatives exist and more may be considered. At the federal level, the Older Americans Act is up for reauthorization at the end of Fiscal 2019 (September 30, 2019). The National Association of Area Agencies on Aging (n4a) published a [policy brief recommending reauthorization](#), noting a number of ways in the Act to help mitigate issues associated with social isolation. These range from congregate meals to transportation services and health programs. In January, 2019, HRSA, a division of Health and Human Services published a report called "[The Loneliness Epidemic](#)," building on [research findings](#) from Oxford University's Public Policy & Aging Report. The HRSA publication reported that 28 percent of older adults live by themselves. Living alone in and of itself does not cause social isolation but can be a contributing factor, along with "being unmarried (single, divorced, widowed), no participation in social groups, fewer friends, and strained relationships."

AARP Public Policy recommendations. It seems obvious that healthcare and social services providers would want to help older adults who show signs of poorer health outcomes that may be a result of social isolation. To date, however, little policy change in the US has specifically addressed it. In its report on the link between [Medicare spending and social isolation](#), AARP has recommended "some approaches that federal and state governments, in partnership with the private sector, should consider:

- *Fund the development of a valid and reliable tool to screen beneficiaries for social isolation, keeping in mind that marital status and widowhood are not necessarily reliable markers of social isolation.*
- *Fund public-private partnerships to identify and test interventions—including health prevention and promotion activities—for social isolation that are culturally competent and that consider differences in socioeconomic status, marital status, mental and functional health status, and chronic illness status. Interventions should explore the desirability and feasibility of using technology to reduce isolation among older adults.*

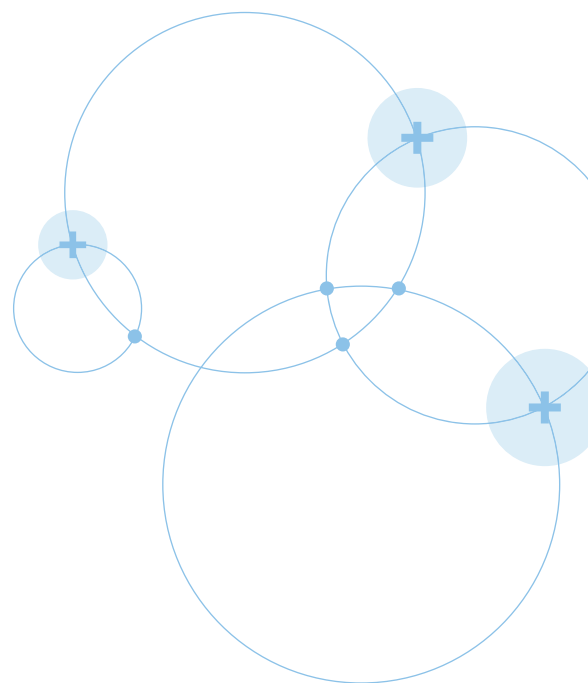
- After a valid and reliable screening tool is developed and well-tested interventions are identified, require providers to use the tool during the Welcome to Medicare and annual wellness visits.
- Elevate the discussion of social isolation in the public health community.
- Take steps to ensure that social isolation becomes a part of the lexicon of social determinants of health by, for example, including it as a social determinant in official documents published by the federal government.”

Intergenerational approaches to mitigating social isolation.

One way to reduce social isolation among older adults is to include them in programs that involve young people. Housing more than one generation can simultaneously lower costs for each group, especially in high-priced housing areas, offer an able-bodied individual to help seniors with repairs or tasks, and encourage seniors to take better care of themselves, perhaps helping them get out of the house. Programs can leverage the availability of young people in a geography to help. For example:

- [JoinPapa - On Demand Grandkids](#). Through local college students, a program called PapaPals, from JoinPapa that was founded in 2016 by Andrew Parker, provides assistance and socialization to seniors. (South Florida)
- [Nesterly – Homesharing with another generation](#). Nesterly helps make intergenerational homesharing safe and easy by providing screening, customizable homesharing agreements, and ongoing support. (Boston, Cincinnati)
- [H.O.M.E. – Housing Opportunities and Maintenance for the Elderly](#). This initiative is inclusive of families as well as students and the elderly. (Chicago)
- [New Life Village and Treehouse](#). These intergenerational communities often focus on supporting a specific group such as children who have come out of the foster care system and their adoptive or foster parents. For the older residents, the benefits include companionship and a sense of purpose. (New Life Village is in Tampa, FL, Treehouse in Easthampton, MA)
- [Multi-generational households](#). According to [Pew Research](#), in 2016, there were 64 million Americans living in multi-generational households. They note that in the United States, 25 percent of them are Asians, 23 percent are African Americans and 22 percent of Hispanics live in multigenerational homes, in contrast with 13 percent of whites.

- [Artists-in-residence in senior housing](#). This artists-in-residence program offers free room-and-board in exchange for concerts for residents of Collington, a non-profit senior housing community (Maryland). Artists-in-residence program was launched with Western University music students at Oakcrossing Retirement Living (London, Ontario), Judson Manor and students from the Cleveland Institute of Music (Ohio) and gerontology students from USC in Kingsley Manor (CA). There are also pilot programs with NYU, Washington Univ and Hunter College students.
- [Co-housing and roommates](#). In addition to intergenerational programs like the ones noted here, other housing options have emerged that reduce isolation, including [cohousing](#), access to resources and/or help in finding roommates (like [Silvernest](#) or [Roommates4Boomers](#)).
- [The Village movement](#). Villages, made up of neighbors from a certain geographical area, can set up members with socialization opportunities, as well as volunteer opportunities that involve people of different generations.



Technology to Mitigate Social Isolation

Recently studies have emerged (or are launching) that document (or will document) the impact of specific technologies to improve engagement and/or combat social isolation. These include:

- The 2017 [Front Porch Amazon Alexa Pilot](#), which demonstrated the use of the Amazon Echo with residents of Carlsbad By the Sea. Feedback from pilot participants also suggested that Voice First devices help increase social interaction and engagement levels of older adults. 60 percent felt more connected to family, friends and their community since starting the pilot.
- The 2018 [AARP Foundation Pilot](#) was conducted in several low-income housing communities. According to one of the housing executives, the pilot results indicated that Voice First technology showed promise: “Just talking to it, it’s actually producing that positive emotional response that can help combat loneliness.”
- In May, 2018, a collaborative study between [Orbita and AARP](#) launched to measure the impact of voice technology for both remote patient monitoring and for reducing social isolation.
- Also in 2018, [Hasbro spun out Ageless Innovation](#) into a separate company to further focus on its line of Joy For All pets. The benefits are illustrated, according to the firm, in “Stories and testimonials from caregivers on the positive impact on isolation, loneliness, and all forms of cognitive decline.”
- In 2018, [OneClick.Chat](#) received an NIH grant to further develop its online meeting software specifically to focus on mitigating social isolation, for example, when eating dinner alone.

“We must continue to find new ways for addressing loneliness and social isolation among older adults. The quality of life for all generations can and will improve. And as studies now show, the health of older adults depend on our finding and deploying solutions.”

– David Inns, CEO, GreatCall

In addition to these initiatives, the table below showing communication technologies is extracted from the [2019 Market Overview, Technology for Aging in Place](#) (see **Figure 7**):

COMMUNICATION TECHNOLOGIES

PRODUCT	FEATURES			WEBSITE
Amazon Echo Show	Cloud-based voice hub	Screen with voice-enabled AI access	Appliance	Amazon.com/Echo
Bose Hearing Aid	Hearing aid/hearables	Self-fitting	Hearing aid	bose.com
Breezie Tablet	Senior tablet	Simplified interface	Android	breezie.com
Embodied Labs	Virtual Reality	Caregiver training	Experience Headset	embodiedlabs.com
Eversound	Wireless Headphones	For hearing impaired	Senior living focus	eversoundhq.com
Google Home	Cloud-based voice hub		Appliance	store.google.com
grandPad	Senior tablet	Simplified interface	Android	grandpad.net
Intuition Robotics	ElliQ Companion	Virtual companion	Tabletop robotic companion	elliq.com
iN2L	Engagement System	Games, health, movies, spiritual content	PC Workstation, Android tablet	in2l.com
GreatCall Jitterbug Phones	Feature, smart phones	Simplified keypads connect to Call Center	Android smartphone	greatcall.com
JoyforAll Pets	Robotics	React and respond to touch	Toy	joyforall.com
Starkey Livio AI	Hearing aid	Activity tracking, personalized	Hearing aid	starkey.com
MyndVR	Virtual reality	Assisted Living	Experience Headset	myndVR.com
OneClick.Chat	Video conferencing	Small, large group meetings	Online meetings and live events	oneclick.chat
Oticon	Hands-free calls	Internet connected for IoT controls	Streaming to wireless hearing aids	oticon.com
Nuheara	Hearables	IQ Buds Boost, Max	Hearing aid, Google, Siri Integration	nuheara.com
Rendever	Virtual Reality	Senior engagement	Experience Headset	rendever.com

Figure 7 Communication Technologies from 2019 Market Overview

Looking to the Future

Now that loneliness and social isolation are evident in a variety of contexts, including health risks, the next step should include tracking improvements, not just declines. Organizations that have surveyed individuals in recent years should conduct follow-up surveys periodically. Social services organizations should begin to measure the impact of interventions (or expand on measuring them), as in the UK. With the recent associations between isolation and health cost in the US, relating interventions to reduction in costs must be part of the measurement equation.

