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Health Care.

WHAT'S MISSING

from our conversations about reducing
health risks and health care costs

Why conversations about healthy living must include hearing health



“Whole person health” holds profound implications for health insurance companies and employers. People who maintain optimal overall health cost less to insure than others who require frequent medical care. They’re also more productive employees and less likely to call in sick.

But something is missing from conversations about whole person health. A growing body of research points to the significant impact of hearing loss — experienced by an estimated 36 million Americans — on many aspects of physical and mental health. And the longer hearing loss goes untreated, the more profound the impact.

As this document will reveal, each of these health issues exacts an enormous personal and economic toll on our nation — and this includes higher costs for health insurers and reduced productivity in the workplace.

Facets of whole person health influenced by hearing loss include:

- » [Social isolation and loneliness](#)
- » [Mental health](#)
- » [Cognitive function](#)
- » [Injury-causing falls](#)

Conversations about social isolation and loneliness



It's a conversation that occurs every day across the country: family members discussing a parent or other loved one who has mysteriously "disappeared" from special events and other social occasions. What's behind the growing trend toward social isolation and loneliness? For clues, let's listen in on the conversation between a brother and sister...

Jared: "What's going on with Mom? I heard she's not going to Freddy's birthday party. Is she sick?"

Heather: "I don't think so. She seemed okay when I talked to her a couple days ago. But I've noticed that she's been staying at home by herself a lot lately."

Jared: "Yeah, you're right. Did you know she canceled my lunch date with her last week? She said she had a bad night and was feeling tired."

Heather: "That's weird — Mom has always loved going to Murphy's for lunch!"

What's really going on here?

When people withdraw from social situations, family members and friends are often left wondering why. Is the person ill? Or avoiding someone due to a personal conflict? But it could be something else — something that nobody has considered. Maybe it's the person's hearing loss.

One of the most perplexing things about hearing loss is how problematic it becomes in noisy situations and settings, such as large family gatherings and busy restaurants. Under these circumstances, background noise can make it extremely difficult or impossible for a person with hearing loss to understand normal conversation.

Consequently, people with hearing difficulties often find it easier and less stressful to avoid social situations. Why is this so concerning?

People with hearing loss often **avoid social situations.**



The far-reaching, serious health consequences

Social isolation isn't just about missing out on special occasions with family and friends. In fact, social isolation and, more specifically, loneliness have been implicated as significant social determinants of health (SDOH), the social and economic conditions that influence health risks and outcomes.

Several studies have found that social isolation and loneliness are risk factors for a number of costly, life-altering health conditions, including:



Dementia



Depression



Heart Disease



Stroke

A [study of 20,000 people](#) by health insurer Cigna concluded that loneliness is associated with a reduction in lifespan similar to that caused by smoking 15 cigarettes daily, and it posed a greater health risk than obesity.

A [National Council on Aging \(NCOA\) survey](#) and various other studies have indicated a pathway from hearing loss to social isolation to cognitive decline, including dementia, and mental health

conditions, especially depression. (The next two sections of this document describe in more detail how hearing loss is connected to mental health and cognitive function.)

“We know that older adults with hearing loss often withdraw from social occasions, such as family events, because they have trouble understanding others in noisy situations, which can lead to emotional and social loneliness,” said Blake Lawrence, lead author of a [study](#) conducted by Ear Science Institute Australia and the University of Western Australia.

Loneliness is associated with a reduction in lifespan similar to that caused by **smoking 15 cigarettes daily.**



“We also know that older adults with hearing loss are more likely to experience mild cognitive decline and difficulty completing daily activities, which can have an additional negative impact on their quality of life and increase the risk of developing depression.”

Blake Lawrence, PhD, lead study author of the Ear Science Institute Australia and the University of Western Australia

Conversations about mental health



Millions of Americans suffer from depression, anxiety and other mental health conditions. Often family and friends don't understand what the individual is experiencing or what caused these conditions, as illustrated in this conversation between two members of a card-playing group...

Sam: "Has anyone seen Brett? The bridge tournament starts in fifteen minutes!"

Julie: "I don't know, but when I saw him yesterday he seemed a little down."

Sam: "Any idea what's wrong?"

Julie: "No. I got the feeling he doesn't want to talk about it. I wonder if it has anything to do with his daughter — you know, she's going through a divorce."

Sam: "Didn't Brett just go to the doctor? Maybe he got some bad news."

What's really going on here?

Unbeknownst to his friends, Brett was experiencing clinical depression, one of America's most common mental health conditions, affecting more than 17 million adults, according to the National Institute of Mental Health.

What causes depression? The National Alliance on Mental Illness (NAMI) cites a number of possible contributing factors, including trauma, genetics, life circumstances, brain changes, other medical conditions and the misuse of alcohol or drugs. However, the exact cause in an individual case can be difficult to determine.

In recent years, it's become increasingly clear that hearing loss may significantly elevate a person's risk for developing mental health conditions, particularly depression. People of all ages with hearing loss are susceptible to depression, according to [research](#) conducted by the National Institute on Deafness and Other Communication Disorders (NIDCD). This study found that 11.4% of adults with a self-reported hearing loss experienced moderate to severe depression, compared to 5.9% of adults with normal hearing.

The risk appears to be even higher for older adults. Notably, people age 60 or older with hearing loss are 47% more likely than their normal-hearing peers to experience symptoms of depression, according to the previously mentioned [study](#) conducted by Ear Science Institute Australia and the University of Western Australia.

People age **60** or older with hearing loss are **47% more likely** than their normal-hearing peers to experience symptoms of **depression**.

Contributing factors and consequences

Besides social isolation, researchers think other factors may play a role in the hearing loss-depression connection. For example, people with hearing loss often have balance issues, which can lead to decreased physical activity and ultimately depression. Another side effect of hearing loss is tinnitus, commonly called “ringing in the ears.” Severe cases of tinnitus can disrupt a person’s life, contributing to depression.

At a personal level, depression can disrupt key aspects of life, including sleep, appetite, concentration, energy and interest in activities. People with depression may also experience feelings of hopelessness and suicidal thoughts.

Depression also causes major financial consequences. One prominent health care consultant, [published in the Journal of Clinical Psychology](#), estimates the cost to U.S. society at \$210 billion annually. Much of this expense, he explains, can be attributed to treating related mental illnesses, such as anxiety, as well as associated physical illnesses. Employers also pay a steep price through absenteeism and reduced productivity.



\$210 billion

Estimated cost of depression
to the U.S. society.

Conversations about cognitive function and dementia



Approximately 5.7 million people in the United States are living with Alzheimer’s disease and other forms of dementia, according to the Alzheimer’s Association. People frequently associate dementia, as well as general cognitive decline, with advancing age. However, the following conversation between two sisters suggests that another risk factor may be in play...

Janelle: “Dad really had me worried last night.”

Kathy: “Why, what happened? Didn’t you take him to the theater?”

Janelle: “Yeah, but we almost didn’t make it. When I went to his house to pick him up, he wasn’t ready. He said he didn’t remember we were going, even though I had called in the afternoon to remind him.”

Kathy: “I’ve noticed that he seems more forgetful lately. Anyway, you made it to the play. Did he enjoy it?”

Janelle: “You know how it goes — he complained about not being able to hear a lot of the lines.”

What's really going on here?

Because their dad is older, Janelle and Kathy attribute his forgetfulness to his age — which is indeed one of the risk factors for cognitive decline and dementia. But Janelle's last comment about his inability to hear parts of a theatrical production points to the possibility of hearing loss, a risk factor that's not widely understood or recognized.

These sisters might be surprised to know that hearing loss is a factor in an estimated 36% of U.S. dementia cases, according to [Johns Hopkins research](#) conducted by Frank R. Lin, MD, PhD, and Marilyn Albert, PhD. [In another study](#), Dr. Lin concluded that mild hearing loss doubled an adult's dementia risk, moderate hearing loss tripled the dementia risk, and severe hearing loss increased the dementia risk fivefold.

As Dr. Lin noted, hearing loss doesn't have to be substantial to have an impact on cognitive function. In fact, [researchers](#) at New York-Presbyterian/Columbia University Irving Medical Center concluded that a 15-decibel loss — roughly equivalent to the volume of a whisper or rustling leaves — increased an older adult's risk of "clinically meaningful" cognitive decline.

While cognitive decline doesn't necessarily equate to dementia, it still needs to be taken seriously. The Alzheimer's Association [contends](#) that even mild cognitive decline increases a person's risk of developing Alzheimer's disease or another dementia.



Even those with just mild hearing loss are at an **increased risk for dementia.**

Connecting the dots from hearing loss to dementia

There's no clear-cut answer to the question of why hearing loss boosts the risk of cognitive decline and dementia.

As discussed earlier, communication difficulties for people with hearing loss may cause them to avoid social situations. In turn, social isolation can morph into loneliness, which is a known risk factor for cognitive decline and dementia. A [study](#) by researchers at Rush Alzheimer's Disease Center found that **lonely individuals may be twice as likely as those who are not lonely to develop the type of dementia linked to Alzheimer's disease.**

Experts have suggested other possible mechanisms for the hearing loss-cognitive decline connection. For example, the brain in a person with hearing loss may undergo "cognitive load," that is, it's stressed by constantly straining to understand speech and other sounds. This uses up resources that would otherwise be available for other functions such as learning and memory. Yet another possibility: Hearing loss may alter brain structure in a way that contributes to cognitive problems.

Hearing loss may alter brain structure in a way that contributes to cognitive problems.

An enormous personal and economic toll

The sisters involved in the "overheard" conversation above are justifiably concerned about their dad's cognitive health. They may wonder whether he's in the early stages of dementia — a condition that takes a terrible personal toll on the individual as well as loved ones.

Dementia also comes with an enormous economic burden. In 2019 the direct costs to American society of caring for those with Alzheimer's and other dementias totaled an estimated \$290 billion, according to the Alzheimer's Association. Much of this expense is borne by Medicare, Medicaid and health insurance companies.

Conversations about injury-causing falls



The statistics associated with injury-causing falls should be setting off alarm bells throughout U.S. society, starting with the fact that more than one in four Americans over the age of 65 experiences a fall each year, according to the Centers for Disease Control and Prevention ([CDC](#)). What causes people to fall isn't always so clear-cut, as the following conversation between a mother and daughter illustrates...

Britney: "Mom, I'm going to leave now, but I want you to be extra careful — no more falls, okay? I'm glad you weren't seriously hurt, but you might not be so fortunate the next time."

Penny: "I thought I was being careful. I just don't know what happened."

Britney: "Well, Dr. Bartholomew thinks the change in your medication might help. And we got rid of those throw rugs, just to be safe. Oh, and the maintenance guy is coming over tomorrow afternoon to install grab bars in the bathroom."

Penny: "What did you say? Who's coming over to do what?"

What's really going on here?

As any concerned child would do, Britney is trying to help her mother avoid a catastrophic fall. She started by learning about the many risk factors for injury-causing falls, including certain medications, loose rugs and slippery bathroom surfaces. But Britney missed one possible risk factor — hearing loss. The clue was contained in her mother's last statement.

Although it's experienced by people of all ages, hearing loss is one of the most common health conditions among older adults, affecting one in three individuals from ages 65-74 and nearly half of those older than 75.

Is it mere coincidence that older adults are also most at risk for falls resulting in injury or death? Perhaps not. [Research](#) conducted by Johns Hopkins University School of Medicine found that a 25-decibel hearing loss (classified as mild) was associated with a threefold higher risk of falling, compared to someone with normal hearing. Every additional 10 decibels of hearing loss increased the chances of falling by 1.4 fold.

On the surface, the connection between hearing loss and injury-causing falls may not seem obvious. However, experts point to a number of possible explanations. One is that hearing loss individuals possess reduced environmental awareness (what's going on around them) or less spatial awareness (relationship to other people or objects around them). Cognitive overload may be another factor — the brain is devoting excessive mental resources to hearing, at the expense of maintaining balance.

Those with hearing loss
are at **3X or greater**
risk of falling.



Huge impacts for individuals and insurers

The “overheard” conversation at the beginning of this section demonstrates a common scenario in which people (in this case the daughter) fail to recognize the correlation between hearing loss and other significant health issues, including injury-causing falls.

While Britney was motivated by a desire to keep her mother healthy and out of the hospital, there’s another part of this story that also deserves attention: the huge economic impact. During 2020, injury-causing falls will cost the U.S. healthcare system a projected \$67.7 billion according to the NCOA. Obviously, Medicare and private health insurers will bear a huge portion of this burden.



Injury-causing falls will cost the U.S. healthcare system a projected

\$67.7 billion



Completing the conversations:

Let's address hearing loss – and improve overall health



As portrayed in each of the illustrative scenarios above, hearing loss increases the risk of certain adverse health conditions. However, as is often the case in real life, this connection is not recognized by the individual with hearing loss, nor by family members and friends. Consequently, hearing loss often goes undiagnosed and untreated.

But can individuals reduce their health risks by getting treatment for hearing loss?

The [NCOA report](#) referenced at the beginning of this document contained survey results from 2,300 adults age 50 and older with hearing loss. It concluded that that people with untreated hearing loss were less likely to participate in organized social activities compared to those who wore hearing aids. In addition, the NCOA determined that **people with untreated hearing loss are more likely to report sadness, depression, worry, anxiety and paranoia than hearing aid wearers.**

People who wear hearing aids for age-related hearing loss maintain better brain function over time than their non-aided peers, concluded another [study](#) conducted by the University of Exeter and King's College London. Exeter's PROTECT online study involved 25,000 people age 50 and over, divided into

two groups: hearing aid wearers and non-wearers. Participants took annual cognitive tests over a span of two years. After that time, those who wore hearing aids performed better in measures assessing working memory and aspects of attention than those who did not.

These findings are consistent with the findings of a [study](#) at New York-Presbyterian / Columbia University Irving Medical Center. Dr. Justin Golub, the study's lead author, said he "suspects that people might be able to remain more mentally sharp if they started wearing hearing aids as soon as they started to have even mild issues with hearing."

Hearing loss treatment also appears to play a role in maintaining balance and preventing catastrophic falls. A [study](#) conducted at the University of Michigan found that older adults who used hearing aids within three years of a hearing loss diagnosis had a 13% lower risk of being treated for fall-related injuries compared to non-hearing aid wearers.

At Washington University School of Medicine in St. Louis, another [study](#) showed that amplification helped test participants with maintaining balance. Specifically, patients with hearing aids in both ears performed better on standard balance tests when their devices were turned on compared with when they were off."

The participants appeared to be using the sound information coming through their hearing aids as auditory reference points or landmarks to help maintain balance," said senior author Timothy E.

Hullar, MD, professor of otolaryngology at the School of Medicine. "It's a bit like using your eyes to tell where you are in space. If we turn out the lights, people sway a little bit — more than they would if they could see. This study suggests that opening your ears also gives you information about balance."

Wearing hearing aids can prevent memory issues and fall-related injuries.



Overcoming a major barrier to treatment

Despite the mounting evidence of health benefits from hearing loss treatment, approximately **14.6 million people in the U.S. live with untreated, disabling hearing loss**, according to Kim Ruberg, Secretary General of Hear-it AISBL. This translates to an annual cost of \$133 billion, or \$9,100 per person with untreated hearing loss, he writes in a [Hearing Review article](#).

In many cases, individuals are unaware of their hearing loss, or they downplay its impact on their lives. Physicians can help increase awareness of hearing loss and its consequences by making a hearing screening part of every wellness check or physical exam. When a screening indicates hearing loss, the patient is then referred to a hearing care professional for additional testing and treatment.

Another big barrier to hearing health care is cost. Consumers spend an average of \$4,000 on a pair of hearing aids, plus about \$700 for batteries and professional services. As a result, many individuals simply choose to live with their hearing loss.

By offering a hearing benefit or hearing health care program, health insurance carriers and employers can significantly reduce the cost of hearing aids and professional services. Besides improving access to hearing health care, this also may boost loyalty and their quality of life among health plan members and employees. For example, **Medicare Advantage plans that added hearing aid coverage, in partnership with Amplifon Hearing Health Care, reported 10% to 20% year-over-year enrollment growth, while also enhancing member retention.**

In addition, by incentivizing members to address their hearing concerns, these health insurers have taken a step toward decreasing payouts for medical claims – not just from hearing care but also from more serious, costly conditions such as dementia, depression, and risk of falls – and improving bottom-line performance.

Your organization can help complete important conversations about reducing health risks and health care costs by offering a hearing benefit or hearing health care program. For information and guidance, [contact Amplifon Hearing Health Care](#).

Key takeaways



Hearing loss is the missing component in many conversations related to achieving and maintaining optimal whole person health and, specifically, to the goal of reducing the risks of several life-altering and costly physical and mental health conditions.

Important conclusions presented in this document include study findings that hearing loss:

- » Leads to **social isolation and loneliness**, which are risk factors for dementia, depression, heart disease and stroke; loneliness is associated with a reduction in lifespan similar to that caused by smoking 15 cigarettes daily
- » Increases the risk of **mental health** conditions, especially depression, which costs U.S. society an estimated \$210 billion annually; older adults with hearing loss may be at the highest risk
- » May be a factor in approximately 36% of **dementia** cases, requiring an estimated \$290 billion in direct patient care during 2019
- » Significantly increases the risk of **injury-causing falls**, which will cost the U.S. healthcare system a projected \$67.7 billion in 2020.

On a positive note, hearing loss treatment may prevent or mitigate certain physical or mental health conditions.

Research indicates that the use of hearing aids among individuals with hearing loss may:

- » Increase participation in social activities
- » Reduce the likelihood of depression, anxiety and paranoia
- » Lead to improved working memory and aspects of attention
- » Improve balance and help prevent catastrophic falls

The total cost of untreated, disabling hearing loss in the U.S. is estimated to be \$133 billion, or \$9,100 per person, every year — and much of this expense must be borne by health insurers and employers.

Reducing untreated hearing loss requires a multifaceted approach, including a hearing screening performed by physicians at every wellness check or physical exam. In addition, a hearing benefit or hearing health care program can substantially lower the cost of hearing aids and professional services for health plan members and employees. By making hearing health care more affordable and accessible, health plans and employers can help individuals live healthier lives.

By making hearing health care more **affordable and accessible, health plans and employers can help individuals live **healthier lives**.**



About Amplifon Hearing Health Care



Amplifon Hearing Health Care connects people and resources to improve the lives of people with hearing loss by partnering with health care organizations to administer hearing benefits. As an independently owned and operated organization, Amplifon's products and services improve health, increase satisfaction and lower costs for health plan partners. Amplifon's full-service model includes member advocacy, claims processing, eligibility management, and reporting. With a steadfast commitment to delivering an exceptional experience, Amplifon's solutions make high-quality hearing health care affordable and accessible.

For more information, visit
amplifonusa.com/healthplans.



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