Hearing and Value-based Healthcare

Why better hearing and patient-doctor communications are vital in today's outcomes-based healthcare environment.

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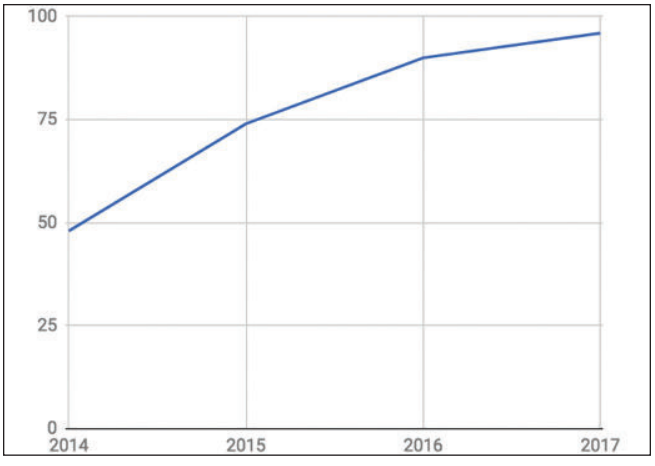
As healthcare shifts its focus to "value-based" or "outcomes-based" reimbursement, chronic disease management and telehealth will rise in importance. However, many of the newer care models assume patients can easily hear verbal instructions...

By Lena Kauffman

According to the latest figures from the Centers for Medicare and Medicaid Services (CMS), US healthcare spending grew 4.3% in 2016, reaching $3.3 trillion, which is 17.9% of the nation's total Gross Domestic Product (GDP).[1] Furthermore, while the rise in healthcare costs has slowed somewhat in recent years, it is still growing faster than the GDP.[2] CMS predicts that by 2025 healthcare costs will be nearly 20% of GDP.

When healthcare costs grow, it squeezes out other types of spending in the economy, drives up the national debt, and holds down wages for employees. Policymakers have been concerned about this for decades, but efforts to control costs like managed care and accountable care organizations have largely failed to meaningfully stem the rising costs, says John Bakke, MD, MBA, a general internist and senior consultant for Zolo Healthcare Solutions who has studied healthcare reform efforts extensively. Therefore, attention is turning away from just how to limit the use of healthcare services to *how to improve overall value of those services*. Think paying a bit more to manage heart disease risk factors in order to avoid paying a lot more for advanced life-saving care after a heart attack has occurred.

This value-based care movement has the potential to drastically change how healthcare services are delivered, and could potentially elevate the role of hearing health services in medicine. This is because, in healthcare, value is often found in fairly inexpensive primary care services that can help prevent the need for costly specialized care in the future.



According to the National Business Group on Health,[8] 96% of large employers planned to offer telehealth services in 2017.

Dr Bakke is careful to caution that no study has proven that hearing health interventions lead to overall savings in care costs. However, it is a promising area of study because researchers have found correlations between hearing loss and worse patient outcomes—which, in turn, lead to greater expenses in treating the patient.

John Bakke, MD

For example, in 2011, Frank Lin, MD, PhD, an otologist and epidemiologist at Johns Hopkins University in Baltimore, led a research team that found that hearing loss correlated with a 24% increased risk of cognitive decline and dementia.[3] According to the Alzheimer's Association, the direct costs to American society of caring for those with Alzheimer's and other dementias was an estimated $259 billion in 2017.[4] As hearing loss is a risk factor for dementia, treating hearing loss more aggressively in older patients could potentially save billions in preventable dementia-related care costs.

In addition, Lin and his colleague Luigi Ferrucci, MD, PhD, of the National Institute on Aging, had previously found that older people with only a 25-decibel hearing loss were nearly three times more likely to have a history of falling.[6] Falls cost Medicare more than $31 billion per year. Treating hearing loss would of course not prevent all falls, but even if it lowered the risk slightly, it could save money while reducing a great deal of pain and suffering for many elderly patients.

Perhaps most intriguing, in 2008, Canadian researchers found that hospital patients with a communication problem like hearing loss were three times more likely to experience a preventable adverse event, like a medication error, than patients without such problems.[7] Reducing wasted healthcare dollars from preventable medical errors is a top focus of the move toward value-based care.

"I have not seen robust evidence that an intervention for hearing loss will lead to decreased costs, but it is a logical conclusion that it will," Bakke says. "Every primary care physician knows that errors occur because of communication problems due to hearing difficulty with their patients. What they are not thinking about is the cumulative effect on their entire practice's cost or the amount of un-reimbursed rework they themselves have to do [when patients do not understand care instructions]. Taking care of patients who can hear you is a lot more efficient than taking care of patients who cannot."

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HEARING'S ROLE IN POPULATION HEALTH

One of the mantras of value-based medicine is having the right care delivered by the right person in the right setting. When physicians are paid per office visit and per procedure, there is an incentive to have patients come into the office for all care. However, in a population health scenario, physician groups and health systems may be paid a fixed amount for each patient (not each visit). At that point, the incentives are flipped upside down. Now it is better if the patient does not come into the office unless absolutely necessary. And it is vastly better if the patient's care can be managed at home rather than in a hospital or skilled nursing facility.

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Health systems have begun investing in telemedicine as one solution for delivering the same quality of care without all the costs associated with an office visit, including office staff and facility costs. Oakland, Calif-based Kaiser Permanente is the largest private healthcare provider that is paid a fixed price per patient regardless of how much or little care that patient receives. In 2016, it conducted more than half of its patient encounters virtually.[8] Furthermore, 96% of large employers surveyed by the National Business Group on Health indicated plans to offer telehealth services this year,[9] and 71% of healthcare providers use some form of telehealth currently according to HiMSS Analytics,[10] a global health IT research firm.

Yet, relatively little attention is paid to whether patients with hearing loss will be equipped to participate in managing their care from home. The phone-based parts of telehealth only work if the person on the other end of a call can hear you well, and according to the National Institute on Deafness and Other Communication Disorders (NIDCD), approximately 1 in 3 people in the United States between the ages of 65 and 74 has hearing loss, and nearly half of those older than 75 have difficulty hearing.[11]

Barbara Weinstein, PhD, a professor at the City University of New York (CUNY), studies hearing loss in the elderly and how well hospitals and health systems address these patients' needs. She says

researchers have found that transitions of care are associated with a lot of negative health outcomes—for example, failure to adhere to medication recommendations. The prevailing theory, Weinstein says, is that this is primarily due to communication breakdowns between care teams and between providers and patients.

Barbara Weinstein, PhD

Health systems are beginning to address communication challenges as reimbursement systems have changed to penalize them for some types of preventable medical errors. Medicare, for example, reduces the amount it pays if a hospital has a higher-than-expected average rate of readmissions within 30 days of discharge. As a result, hospitals are doing more follow-up of their discharged patients, including having nurses call to check on them after they are discharged. But so far, in Weinstein's own research, she has not seen a great deal of improvement in addressing communication with patients who have hearing loss.

"Communication breakdowns relate to hearing loss, because in order to communicate, you have to hear your doctor's recommendations," she says. "Hearing is integral to communication, but in a healthcare system, most people do not associate hearing with communication."

Emblematic of this is how most hospitals instruct patients having elective surgery to leave hearing aids at home because they do not want to assume risk related to these expensive devices being lost or stolen while the patient is hospitalized. This recommendation sometimes even includes patients having cochlear implants who by definition have serious hearing loss, Dr Weinstein says. She has seen patients with hearing loss flagged for dementia or depression because they were not communicating after surgery, even though their health record indicated that they had hearing loss that would prevent them from communicating normally.

"Older patients especially are encouraged not to bring hearing devices when having elective surgery," Dr Weinstein notes. "My hope is that audiologists can become communication advocates who can talk to their patients about the importance of hearing when it comes to physician-patient communication...The patients have to advocate for themselves because electronic health records do not include alerts to signal care providers that a patient has hearing loss, and screening for hearing loss is not recommended by the US Preventive Services Task Force for asymptomatic patients." A medical record alert could be helpful, she adds.

In the traditional fee-for-service (FFS) reimbursement system, a US Preventive Services Task Force recommendation is required before doctors can be paid for any healthcare service, even a low-cost screening test. However, in a value-based payment world—where doctors are paid extra for things like having high patient satisfaction scores and better care outcomes for their patients with chronic conditions—there could also be a way to influence doctors to give greater thought to hearing out of financial self-interest.

Weinstein shared that patients with hearing loss rate their physician-patient communication as suboptimal and their healthcare experience as suboptimal. Both of these are patient-satisfaction measures that count in current pay-for-performance reimbursement models. In addition, if patients cannot follow instructions for managing their blood glucose or blood pressure because they cannot hear those instructions well, then a doctor's outcome measures on follow-up A1c and blood pressure measures tied to reimbursement will suffer.

Without more data, however, doctors may not draw these connections, Weinstein and Bakke both note. Furthermore, many doctors are skeptical of expensive hearing aids as they've had many patients get these devices and then not

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use them — a care compliance issue that hearing care professionals have greatly improved in recent years but that still remains an issue with many patients.

Yet, if more doctors can be introduced to no-cost* or low-cost hearing assistance devices that can be used in the office setting or with phone calls, it may convince them of the value of addressing hearing and referring patients that are helped with these devices to an audiologist for even better technology.

"If the doctors were actually part of the solution, saying essentially 'this person seems to have a hearing difficulty, let me try to use this little gadget,' and they notice an improvement, maybe this will help them realize that it is important to do something to make sure patients can hear and understand better," Weinstein says.

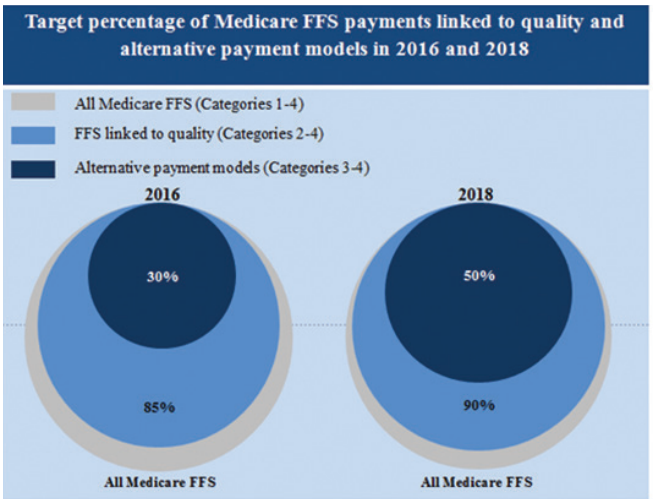
TELEHEALTH AND THE VA

Outside the office setting, telephonic assistance may be important as the value-based medicine movement and recent federal reimbursement changes make telemedicine more attractive to healthcare providers. Nationally, one of the leaders in telehealth adoption is the US Department of Veterans' Affairs (VA).

Gabrielle Saunders, PhD, is associate director of the National Center for Rehabilitative Auditory Research at the VA, and says the VA is doing a lot with audiology and telemedicine. According to Saunders, 7% of VA patients in rural areas and 95% of VA patients in highly rural areas have to travel more than two hours to reach a VA facility. In addition, under the *Veterans Access, Choice, and Accountability Act of 2014*, any VA patient who has to wait more than 30 days for a needed appointment with a VA healthcare provider or has a great deal of hardship accessing a VA provider (eg, living 40 miles or more from the nearest VA facility) has the option to receive that care from a non-VA provider. For the government, it is much more expensive to reimburse a private-sector healthcare provider for care given to a veteran than it is to care for veterans using the government's own facilities and doctors, so the VA is very interested in ways it can become more accessible to its patients, like using telemedicine visits for some types of care.

"It is fantastic how telemedicine increases access," Saunders says. "And it is not just for those living far away; telemedicine is also valuable to people who live in congested areas like Washington, DC, where it can take an hour to get to the doctor and back because the traffic is so bad, or they may have a mobility issue that makes it hard to get to the doctor."

Best of all, Saunders says that telemedicine can do more than simply replace traditional care with remote care; it can expand the possibilities of what type of care can be offered. For example, telehealth is ideal for routine monitoring, such as following patients on chemotherapy for ototoxicity and/or adjusting their hearing aids. VA audiologists can remotely direct technicians at community-based healthcare centers to adjust patients' hearing aids, thus reducing patients' travel burdens while eliminating longer appointments with VA audiologists, who may be located far away or booked up for more than a month in advance. In the future these services could be provided directly to the patient in their own home.



Reimbursement models are now focusing on quality outcomes and patient satisfaction. The Centers for Medicare and Medicaid Services (CMS) has made a concerted push towards "value-based or quality-based reimbursement" to replace the former "fee-for-service" (FFS) model which pays healthcare providers based on the quantity and complexity of services. Source: CMS.

The VA had 30,000 audiology telehealth encounters in fiscal year 2017, and it has studied these and its other telemedicine encounters, Saunders explains. What it found was that outcomes for care delivered with telehealth are the same as for traditional in-person office visits. However, for telemedicine to be effective, communication between the provider and the patient cannot be compromised by using telemedicine.

Gabrielle Saunders, PhD

"If communication is compromised, you are really not providing a service," Saunders says. "In reality, that goes for both telemedicine and in-person encounters."

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One of Saunders students did a retrospective study looking at the electronic health records of 20 VA patients with documented hearing and vision impairment.[12] A key finding was that, for some patients, care was highly coordinated across medical teams, with both the hearing loss and vision loss taken into consideration. However, for other patients, it was disappointingly uncoordinated.

"For one patient there was documentation in the telemedicine encounter noting 'patient doesn't like to answer the phone, and you have to speak up,'" Saunders recalls. "We wonder why telemedicine

via phone call was even being used with a patient whose medical record noted substantial hearing loss."

Findings like these indicate there may be a big opportunity to improve care by making hearing screening and audiology services an integral part of a multi-disciplinary care model and better coordinating care for patients with hearing loss, whether that care is happening in person, in an office setting, or through telemedicine, she adds.

ADVOCATING FOR ASSISTIVE DEVICES

As health monitoring and various routine health services shift to remote or telemedicine care models using both the internet and traditional phone calls, paying attention to the patient's ability to understand instructions clearly should be part of the care delivery process, notes Dave Blanchard, national marketing program manager for Hamilton CapTel, a leading provider of captioned telephones for individuals with hearing loss. Blanchard travels the country, speaking to various audiences about how a no-cost* assistive technology like the captioned telephone can make a big impact on the quality of life and well-being of people with hearing loss.

"If you've met someone with hearing loss and they can only pick up maybe 80% of the conversation, when you are talking about healthcare issues or dispensing medications, those details are critical and you have to be accurate," Blanchard says. "Oftentimes, we will see folks with hearing loss defer the call to a significant other who maybe doesn't have hearing loss or to adult children… Being able to read what the other person is saying via captioning really levels the field for people with hearing loss."

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Having a family member speak with the doctor and then relay the message also greatly increases the chances that a critical part of the message will be lost or misinterpreted along the way. As part of employee training at Hamilton CapTel, staff members play a version of the old game of "Telephone" where a message is passed verbally from person to person. "By the time it gets to the fifth person, it can become a totally different message," Blanchard says.

Dave Blanchard

Then there is the matter of privacy. Many seniors do not want their adult children or others to know all the details of their medical care. Furthermore, if communication is poor between the patient and the care team, it can have an impact on the patient's chronic conditions.

"When we are at trade shows and speaking to audiologists and hearing healthcare professionals, they totally get it. They know the impact hearing can have on other chronic conditions," Blanchard says. "But there are times when we are talking to medical assistants, nurse practitioners, or even doctors at senior living communities, and they are not as concerned or aware of the impact of hearing loss. We bring it up in the context of managing comorbidities — if we treat the hearing loss or apply tools to assist in communication, then perhaps the management of care would be more effective."

It seems like a simple thing, but for a person with even mild-to-moderate hearing loss, being able to manage their own healthcare phone encounters is a confidence and self-worth builder that can help fight cognitive decline and depression, while at the same time reducing the odds of a communication error that leads to a potentially serious medical mistake, Blanchard explains.

IMPLEMENTING A VALUE-BASED MINDSET IN HEARING HEALTHCARE

One of the issues healthcare will need to confront as it shifts to more of a value-based care model is the size of the problem of poor communication due to hearing health issues, Dr Bakke says. But it will take leadership from primary care providers, hearing device manufacturers, audiologists, and healthcare administrators to get there, as hearing is undervalued at the moment.

He points to a 2017 survey of Medicare-Medicaid dual eligible patients enrolled in health plans participating in PRIDE (PRomoting Integrated Care for Dual Eligibles), a national initiative to improve patient outcomes that is testing a variety of communication technologies for patients. The survey found that more than half of the health plan members surveyed preferred to visit their providers in-person and that 80% said they understood information better when it was presented to them face-to-face.[13] Yet the survey did not ask why this might be or check what percentage of the respondents who preferred in-person communication had hearing issues — an important thing to know if your health system plans to use more telemedicine for follow-up care and disease monitoring.

The under-appreciation by physicians of the importance of hearing loss does not come as a surprise to Bakke. He himself practiced primary care for 30 years and says that, in all that time, he only tended to notice a patient's hearing loss if he had to yell at the patient to make himself understood. Like most primary care providers, if the patient could understand him in the quiet exam room with good acoustics, he assumed the patient's hearing was fine. That's just not true.

"Mild hearing impairment is not manifested in the exam room, but it certainly is over the phone or in a noisy or stressful environment, so when the nurse calls the patient or the patient calls the doctor with a problem, the instructions are not as clear as in the exam room," Bakke says.

If audiologists and other hearing care professionals reconsider their role in the overall health outcomes of patients, and advocate for a greater appreciation of the impact of hearing health, it can open the door to new opportunities for referrals, Bakke says.

"Since audiologists have not historically been part of the healthcare team, they tend to think of themselves as device fitters and

they think of their profit margin as being on the sales and service of the devices," he says. "The whole audiology industry does not seem to be paying attention to value creation in the healthcare space."

Experts interviewed for this story suggested that hearing care professionals:

- Reach out to primary care physician practices (and hospital or health systems, if possible) and convince them that referring patients for a hearing evaluation not only doesn't cost them anything but also can *save them time and money*. Patients who have trouble interacting with their care team because they cannot hear well are more difficult and expensive to manage.
- Become the technology advisor for other specialties, not just the hearing aid dispenser, leading them to low-cost adaptive technologies their patients may be able to use in the office setting or over the phone.
- Work with home health agencies or other programs for patients with complex medical problems on how addressing hearing health can help keep patients in the home—where patients prefer to be and where care is much less expensive. According to Bakke, although he has seen many different health agency home safety evaluation models, he has yet to see one that includes referring patients out for hearing screening.
- Encourage patients to become advocates for themselves and insist that their hearing health is addressed in any healthcare encounter, whether in a hospital, in an outpatient setting, or through telemedicine.

"There is a market out there that is different than the usual direct-to-consumer advertising market, but it is out there waiting for somebody," Bakke said.

Although there has been a change in administration, the Centers for Medicare and Medicaid Services is not backing off on the transition to value-based care reimbursement models for medicine. If audiologists, researchers, and device manufacturers can show more definitively the potential cost savings of addressing hearing health, then the value-based care movement should be a large benefactor of hearing healthcare, Bakke predicts.

Lena Kauffman is a freelance writer and the former editor of Hearing Review's *sister magazine,* Sleep Review. *She is based in Ann Arbor, Mich.*

Hearing Loss and Associated Comorbidities: What Do We Know?

Harvey Abrams, PhD

In only the last dozen years, many important studies have surfaced linking hearing loss to disabling chronic conditions, such as cognitive decline and Alzheimer's disease, clinical depression, diabetes, falls among the elderly, and many more. A new webinar and related paper[14]—presented by audiologist and former VA researcher Harvey Abrams, PhD, and sponsored by Hamilton CapTel—reviews several of the most eye-opening of these studies and summarizes their findings so that healthcare professionals can use the information to foster more informed and impactful patient counseling.

To view the free webinar, visit: https://goo.gl/zTPCkW

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