As we eventually achieve some distance from 2020 much will be said about the extraordinary year.

Yet despite the unprecedented upheaval caused by the global COVID-19 pandemic, the 2020-21 academic year feels like the year the Johns Hopkins Cochlear Center for Hearing and Public Health really hit its stride. Our training and mentoring opportunities are sought-after, and we have had exceptional cohorts of trainees. Our large epidemiological studies and clinical trials continue, with one randomized trial testing the efficacy of a community health worker model of hearing care delivery completed this past year. And we are optimistic that this year the Food and Drug Administration will finalize their regulatory classification for over-the-counter hearing aids which were due to be released in August 2020 but delayed due to the COVID-19 pandemic.

Some things remain necessarily paused: The Longitudinal Aging Study in India (LASI), National Health and Aging Trends Study (NHATS), and other large epidemiological studies where we’ve led the addition of hearing assessments are on hold until face-to-face interactions with research participants can be restarted safely. Other studies including the ACHIEVE trial, ARIC study, and a study of inpatient hearing care provision at Johns Hopkins are just now resuming in-person study visits after being on pause for the past year.

Some things we expanded or improved: We developed an online format for our Fellows Program in Aging, Hearing, and Public Health which is designed for overseas clinicians and researchers, and in June 2021 we will debut this program with the Latin American fellows who were accepted to last summer’s in-person program which had to be cancelled. Rather than forego our annual Research Day for a second year, in March 2021 we hosted a week’s worth of 30- to 60-minute daily research briefings, trainee presentations, and a keynote talk via Zoom. Technology now also enables us to remotely offer our epidemiological course on hearing loss and aging in the Johns Hopkins Epidemiology and Biostatistics Summer Institute, removing travel time and expense from students’ considerations in taking this course.
Some new ventures were begun: Along with other researchers interested in sensory function and aging, we launched the SENSE Network, an international consortium that draws researchers from a dozen countries to collaborate on studying the role of sensory functioning - vision, hearing, olfaction, touch & taste - in health and aging. We’ve now engaged a communications partner to launch our Center’s first-ever national public health campaign to establish the pure tone average as a neutral, actionable hearing metric that will be rolled out over the next 2-3 years in partnership with diverse stakeholders. We are also now beginning to plan and seek out a communications agency partner to expand our role as a trusted voice of science and research in hearing healthcare policy at the national level as we work toward our policy goal of reforming Medicare’s coverage of hearing loss treatment. And with the early growing pains of starting a new center behind us we tackled the task of clarifying our strategic vision for the next 10 years. The resulting Strategic Vision, detailed in the next pages, outlines where hearing-related issues stand now, where we want to see them in the future, and the strategies and initial tactics that will get us there.

We don’t know what the future holds. But we do know that flexibility and creativity will continue to rule the day. I’m proud of the resilience of Cochlear Center faculty, staff, and trainees, and am delighted to share this academic year Annual Report synopsizing our work at the intersection of aging, hearing, and public health.

Frank R. Lin, MD, PhD
Director, Johns Hopkins Cochlear Center for Hearing and Public Health
**VISION**

The Cochlear Center for Hearing and Public Health will work to effectively optimize the health and functioning of an aging society and become the premier global resource for ground-breaking research and training on hearing loss and public health.

**IMPACT**

The Johns Hopkins Cochlear Center for Hearing and Public Health is the only global research institution focused exclusively on issues related to hearing loss and public health in older adults. Our researchers are interested in understanding the impact of hearing loss on public health, crafting and testing solutions, and supporting and working to advance medical, public health, and governmental understanding of these issues all around the world.

The impact of the Cochlear Center for Hearing and Public Health will ultimately be measured by the accomplishments of the individuals and trainees who comprise the Center and whose research, advocacy, and academic pursuits will advance Center mission areas. These accomplishments will take place at the macro level (e.g., public policy legislation) to the micro level (e.g., programs to deliver hearing care to individuals in a particular community) and everywhere in between (e.g., acquiring grant funding for Center mission areas, influential research publications, etc.). Common to all these accomplishments will be the foundational understanding that strategies and solutions that allow older adults with hearing loss to communicate and effectively engage with their environment are fundamental to optimize human health and aging.

**FUNDING**

The Cochlear Center for Hearing and Public Health is supported by NIH grants to Center faculty, a gift from Cochlear Ltd., other philanthropic funding, and infrastructural support and resources from the Johns Hopkins Bloomberg School of Public Health and the Johns Hopkins University School of Medicine.

**Grants for which Cochlear Center for Hearing and Public Health core faculty are principal investigators:**

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Grant Title</th>
<th>Agency/Institution</th>
<th>Amount</th>
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<tr>
<td>02/01/19 – 01/31/23</td>
<td>Contribution of sensorimotor function to risk and pathogenic mechanisms of Alzheimer’s disease and related dementias</td>
<td>NIA/NIH, R01AG061796</td>
<td>$3,668,824</td>
<td>Frank Lin, Jennifer Schrack, Yuri Agrawal</td>
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<td>02/01/19 – 07/30/19</td>
<td>Supplemental Benefit Availability and Uptake in Medicare Advantage</td>
<td>The Commonwealth Fund</td>
<td>$46,053</td>
<td>Amber Willink and Eva DuGoff</td>
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<td>09/01/18 – 05/31/23</td>
<td>Hearing loss, brain aging, and speech-in-noise performance in the ACHIEVE study</td>
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<td>06/15/18 – 04/30/23</td>
<td>Accessible hearing care for reduction of disruptive behaviors and caregiver burden in dementia</td>
<td>NIA/NIH, K23AG059900</td>
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<td>08/01/18 – 07/31/20</td>
<td>Loan Repayment Program</td>
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<td>$62,000</td>
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<td>09/01/19 – 06/30/21</td>
<td>Services Not Covered by Medicare: Unmet Beneficiary Needs and Potential Policy Reforms</td>
<td>Commonwealth Fund</td>
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<td>08/15/17 – 05/31/22</td>
<td>Role and mechanism of hearing impairment in cognitive decline and dementia</td>
<td>NIA/NIH, R01AG054693</td>
<td>$673,807</td>
<td>Jennifer Deal</td>
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<td>06/01/17 – 05/31/22</td>
<td>Aging, Cognition, and Hearing Evaluation in Elders (ACHIEVE) Randomized Trial</td>
<td>NIA/NIH, K01AG054693</td>
<td>$673,807</td>
<td>Frank Lin and Josef Coresh</td>
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<td>12/01/15 – 11/30/20</td>
<td>Implementing a Community Health Worker Model of Providing Hearing Health Care Services to Older Adults</td>
<td>NIDCD/NIH, R21/R33DC015062</td>
<td>$2,494,615</td>
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<td>07/31/21 – 12/31/20</td>
<td>Administrative Supplement: Community-Delivered, Affordable, Accessible Hearing Care to Reduce Symptom Burden in Alzheimer’s Disease: Adaptation of the HEARS Intervention</td>
<td>NIA/NIH, R33 DC015062-03S1</td>
<td>$4,580</td>
<td>Frank Lin</td>
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Our Strategic Vision for the next 10 years focuses on what can be done now across five core areas – population health evidence, public awareness, care models, healthcare policy, and hearing technology – to address hearing loss in older adults at scale. Our ability to hear and engage with others and the environment around us is foundational to healthy aging. And the widespread prevalence of hearing loss, which affects two-thirds of all adults 70 and older, is not going away. Preventive interventions, like reducing noise exposure, and research into future neurorestorative therapies, like gene therapies, are all needed but are in no way a panacea.

Strategic Vision

This Vision will inform decisions about growth, research directions, new opportunities we create or join, partnerships we seek or deepen, and where we invest time and funds.

Diversity Supplement: Extending Affordable, Accessible, Community-Delivered Hearing Care to Home Care
NIDCD/NIH, R33 DC015062-05S1; $87,749
PI: Frank Lin
04/01/19 – 03/31/21 Measurement of Cognitive Function in Older Adults with Sensory Loss NCE to 03/31/22
NIA/NIH, R21AG060243; $275,000
Co-PI: Jennifer Deal and Bonnien Swenor
02/01/19 – 01/31/24 Sensorimotor predictors of preclinical AD
NIA/NIH, 1R01AG063786; $2,279,600
MPI: Schrack, Agarwal, Lin
PI: Amber Willink
12/01/20 – 11/30/21 Maximizing Inclusion of Researchers with Visual Impairments R13 NIB/NIH, 13 EO031927; $50,000
PI: Bonnie Swenor
03/01/17 – 02/28/22 Vision Loss and Cognition: Testing the sensory loss consequence hypothesis
NIA/NIH, 1K01AG052640-01; $672,260
PI: Bonnie Swenor

Ongoing Philanthropic Support

Cochlear Ltd
A transformational $10 million gift from Cochlear Ltd. to the Johns Hopkins Bloomberg School of Public Health provides funding for core Center infrastructure and personnel, research trainees, and faculty to carry out the mission areas of the Center.

Eleanor Schwartz Charitable Foundation
The Foundation provides annual support to Center faculty and trainees to carry out research and training related to hearing loss, public health, and aging.

Estate of Miriam Hardy
Miriam Hardy was a world-renowned speech pathologist and audiologist at Johns Hopkins who, with her husband, William Hardy, revolutionized the process of identifying and educating children with hearing and speech disorders. A gift from her estate continues to support research trainees interested in the interface of hearing and public health.

William and Judith Borten American Delirium Society Junior Investigator Award
Core faculty Esther Oh received the funding to establish the William and Judith Borten American Delirium Society Junior Investigator Award which will provide $40,000 over 10 years (two $2,000 awards per year).
Hearing is not routinely considered in epidemiological and health economic studies, and population health methods for hearing assessment and analysis are often flawed.

**STRATEGIES AND INITIATIVES**

Develop robust population health evidence on hearing loss through Center-led research and through facilitating routine inclusion of hearing into population health studies.

➤ The Cochlear Center is leading research and clinical trials like the ACHIEVE study, slated for completion in 2022.

➤ We are integrating hearing assessment & analytic protocols into large population health studies. By the end of 2021 the Center will have overseen 30,000 unique hearing tests.

➤ We launched the SENSE Network in 2020 with other researchers to support international sensory aging research efforts.

**IN THE FUTURE**

Hearing is routinely considered in studies of older adults resulting in robust evidence. Established methodologies for hearing measurement and analysis are routinely used.
PUBLIC AWARENESS

There is poor awareness of what hearing loss is, what one’s own hearing is, how to obtain care, and how to address hearing loss.

AT PRESENT

Everyone knows their PTA. General principles are known around what hearing loss is, how it can influence other issues in aging, and how to address it.

STRATEGIES AND INITIATIVES

Establish a common language and metric for understanding and discussing hearing loss.

We have engaged a communications partner to help us launch the first phase of a Know Your PTA public health campaign that establishes the pure tone average as an anchor point for describing hearing test results. A neutral, widely understood metric destigmatizes hearing loss and improves understanding of hearing loss as a public health issue, which supports our efforts to change policies around Medicare and insurance coverage of hearing care and hearing aids. Over time we will target:

➤ Audiology/other clinicians, to embrace and push out the metric.
➤ Patients, to discuss their PTA with clinicians.
➤ Industry, to use this common metric to communicate clearly the functional improvement their products offer.

IN THE FUTURE

Everyone knows their PTA. General principles are known around what hearing loss is, how it can influence other issues in aging, and how to address it.
The clinical model of in-person 1:1 care between patient and clinician is the dominant model. There are massive economic and racial disparities in access to and utilization of hearing care.

**Strategies and Initiatives**

Develop, test, and disseminate other models of care, particularly those focused on task sharing to expand workforce.

The Cochlear Center is leading two large studies to test different models of care:

➤ **HEARS model:** The HEARS program is a first-in-kind affordable, accessible hearing care intervention delivered by community health workers that is uniquely designed for older adults with hearing loss. HEARS incorporates education on age-related hearing loss, basic principles of aural rehabilitation, and the provision and step-by-step fitting of over-the-counter hearing technology. Data are being analyzed for publication in 2022.

➤ **ENHANCE model:** ENHANCE is designed to deliver a simple, scalable program that is compatible with healthcare workflow to identify and address hearing loss with amplifiers and communication strategies. The core principle of ENHANCE is that hearing loss and communication modifications that address patient-provider communication is required by the provider – it should not fall on the patient.

**In the Future**

Diverse models of care at all levels of accessibility and affordability are available to consumers/patients depending on their preferences and needs.
Healthcare policy is outdated with respect to the current understanding of importance of hearing to health and functioning of older adults, technology advances, role of services vs. devices in hearing care.

**AT PRESENT**

Healthcare policy is outdated with respect to the current understanding of importance of hearing to health and functioning of older adults, technology advances, role of services vs. devices in hearing care.

**STRATEGIES AND INITIATIVES**

**Be a go-to resource for decision makers regarding hearing care and funding policy.**

- We developed policy briefs that illustrate the gaps and opportunities in Medicare coverage of hearing care and hearing aids, and are in routine contact with policy makers and elected officials who are addressing Medicare reform.
- We will engage a policy communications partner that can identify/create opportunities to amplify the science-based evidence that supports the Medicare reforms that will make hearing care coverage available, and hearing aids more accessible and affordable.
- We actively engage influential national and international advisory bodies to address hearing loss, including the National Academies of Sciences, Engineering, and Medicine and the World Health Organization.

**IN THE FUTURE**

Insurance policies routinely cover hearing care and distinguish between the role of hearing care services versus technology. Healthcare policies and guidelines routinely account for importance of effective hearing to optimize health outcomes and promote patient autonomy.
HEARING TECHNOLOGY

AT PRESENT

There is a highly consolidated hearing aid market focused on high-margin segments. Hearing aids and hearing technologies are considered niche products.

STRATEGIES AND INITIATIVES

Champion hearing technologies that incorporate principles of universal design.

The Cochlear Center was instrumental in passage of the 2017 Over-the-Counter Hearing Aid Act. While the COVID-19 pandemic has delayed the FDA implementing a regulatory classification for over-the-counter hearing aids, we anticipate those being issued this year, which will dramatically alter access to and the cost of hearing technologies in this country.

➤ Support market-shaping regulations around OTC hearing aids that can ensure safety and efficacy.
➤ Investigate the efficacy and effectiveness of hearing technologies incorporating universal design principles.
➤ Support development and implementation of Bluetooth LE audio standards for broadcast sound transmission.

IN THE FUTURE

Broad technology choices exist for hearing. Effective hearing is incorporated into all aspects of life through universal design of technologies.
**2020-2021**

*The Year In Review*

**FEBRUARY 2020**
- Frank Lin describes his research in the New York Times - Can Hearing Aids Prevent Dementia?

**MARCH 2020**
- Jennifer Deal, Carrie Nieman, Jon Suen, Anna Jilla, and Danielle Powell attend Population Hearing Health Care (PopHHC) meeting at American Auditory Society in Scottsdale, AZ.
- The Covid pandemic spurs widespread closures in the U.S. and around the world. All Cochlear Center activities go remote.

**APRIL 2020**
- Jennifer Deal and trainee Danielle Powell lead four students in the Epidemiology of Sensory Loss course to contribute to a Wikipedia assignment. The 4SHP students added 723K words to Wikipedia, edited 10 articles, created 4 new entries, added 66 references, and received about 857K page views as part of a cohort of 409 courses whose 7464 students contributed 5.27M words to Wikipedia.
- Carrie Nieman awarded Johns Hopkins Alzheimer’s Disease Resource Center for Minority Aging Research 2020-2021 Pilot Project Award.

**MAY 2020**
- Bonnielin Swenor, PhD, MPH joins the core faculty, bringing disability health expertise to Center research.

**JUNE 2020**
- Frank Lin and Nicholas Reed selected as members of a National Academies of Medicine Consensus Study on evaluating hearing loss for individuals with cochlear implants.

**AUGUST 2020**
- We clarify our Strategic Vision for the next 10 years, outlining where hearing related issues stand now, where we want to see them in the future, and the strategies and initial tactics that will get us there.
- The 2020-2021 Cochlear Center Seminar Series begins – remotely - with a webinar by Willa D. Brenowitz, PhD, MPH from the University of California San Francisco.

**SEPTEMBER 2020**
- The 2020-2021 Cochlear Center Seminar Series begins – remotely - with a webinar by Willa D. Brenowitz, PhD, MPH from the University of California San Francisco.
- SENSE Network founded by faculty Bonnie Swnson, Jennifer Deal, Frank Lin and other researchers as an international consortium that collaborates on research examining the role of sensory functioning on health and aging.
- SENSE Network founded by faculty Bonnie Swnson, Jennifer Deal, Frank Lin and other researchers as an international consortium that collaborates on research examining the role of sensory functioning on health and aging.

**OCTOBER 2020**
- Frank Lin authors “Hear & Now” for the Dana Institute’s Cerebrum magazine.
- Bonnie Swenor and Nick Reed launch the podcast “Included: The Disability Equity Podcast” to share stories, data, and news that challenge stereotypes and expand views of disability.
- Access HEARS, a non-profit cofounded by Carrie Nieman and Frank Lin to deliver affordable and accessible hearing care, named a runner-up for the Johns Hopkins Urban Health.

**JUNE 2020**
- Access HEARS, a non-profit cofounded by Carrie Nieman and Frank Lin to deliver affordable and accessible hearing care, named a runner-up for the Johns Hopkins Urban Health.
- Amber Wilkink lent expertise to Reuters Health article: “Few Medicare Advantage plans cover social needs for chronically ill patients” and weighed in on “The Reality of Hearing Care in Nursing Homes” in The Hearing Journal.
- Baltimore HEARS, led by Carrie Nieman, named one of 22 winners of the National Academy of Medicine’s Healthy Longevity Catalyst Awards — a component of the Healthy Longevity Global Competition.
2020-2021
The Year in Review

NOVEMBER 2020
➤ Center faculty and trainees present research, lead or participate in symposia, and give seminars about sensory loss at the Gerontological Society of America meeting.

DECEMBER 2020
➤ JAMA Otolaryngology-Head Neck Surgery publishes Frank Lin and Nick Reed’s editorial “The Pure-Tone Average as a Universal Metric—Knowing Your Hearing.”

JANUARY 2021

FEBRUARY 2021
➤ Center faculty Bonnielin Swenor and team launch the COVID-19 Vaccine Prioritization Dashboard to begin understanding how the disability community is prioritized in COVID-19 vaccine distribution and to help people with disabilities determine when they qualify for a COVID-19 vaccine in their state. The tool gains widespread media coverage.

MARCH 2021
➤ The World Health Organization publishes its first-ever World report on hearing - with significant contributions from Cochlear Center faculty and trainees.
➤ Cochlear Center Research Week!
➤ 48th Annual American Auditory Society Scientific and Technology meeting: faculty and trainees participate in symposia, give seminars about sensory loss at the Gerontological Society of America meeting, publish posters, and present research, lead or research talks; Center faculty and trainees present posters and research talks.

APRIL 2021
➤ Cochlear Center selects Hager Sharp as communications partner for the Center’s first public health campaign, focused on establishing a common hearing metric.
➤ Nick Reed serves as guest editor for the quarterly review journal Seminars in Hearing.

MAY 2021
➤ The Cochlear Center’s first PhD students graduate, along with two MPH students!
➤ Trainee Danielle Powell interviewed in Today’s Geriatric Magazine.

JUNE 2021
➤ Cochlear Center’s first international dental, vision, or hearing care Work? Beware a Big Bill.
➤ Bonnie Swenor spoke at the Biden-Harris COVID-19 Health Equity Taskforce about disability data gaps in the COVID-19 response.

JUNE 2021
➤ Nick Reed and trainees Danielle Powell and Jon Suein were panelists for ASHA professional panel titled “Audiology With An Emphasis on Public Health Applications”

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New Ventures

EXPANDING COLLABORATION WITH THE SENSE NETWORK

The SENSE Network, founded by Cochlear Center faculty Bonnie Swenor, Jennifer Deal and Frank Lin; Joshua Ehrlich at the University of Michigan; and Jay Pinto at University of Chicago, is a consortium of researchers that meets monthly to collaborate on research examining the role of sensory functioning - vision, hearing, olfaction, touch, and taste - on health and aging. Launched in September 2020, this international network will accelerate research in this area via new collaborations, create novel resources, including a sensory databank, and generate tangible scientific studies. Meetings have attracted attendance from 20 to 40 researchers monthly from all around the world.

Organizers aim for SENSE to be a diverse and inclusive network, and encourage researchers from all backgrounds and underrepresented groups, including researchers with disabilities, to participate in monthly meetings.

Speakers since the SENSE Network’s inception include:
- September 2020, group discussion: Introductions, Overview, Mission
- October 2020, group discussion: GSA Interest Group Meeting
- November 2020, group discussion: Impact of COVID on People with Sensory Impairments
- January 2021, Amber Willink, PhD, “Sensory Loss: A Policy Perspective”
- February 2021, Heather E. Whitson, MD, MHS, “Of Sight and Mind: Brain Connectivity Patterns in People With and Without Age-Related Macular Degeneration”
- March 2021, Piers Dawes, PhD, “Ears, Eyes and Mind: The ‘SENSE-Cog Project’ to improve mental well-being for elderly Europeans with sensory impairment”
- April 2021, Shelly Chadha, PhD (World Report on Hearing) and Stuart Keel, PhD (World Report on Vision), Global Health - WHO Hearing & Vision Reports
- May 2021, Alden Gross, PhD, “Mode of Assessment Effects in Cognitive Performance”
- June 2021, D.P. Devanand, MD, PhD, “Intact olfaction predicts lack of transition to dementia”

CLARIFYING OUR STRATEGIC VISION

Detailed in a previous spread, we tackled the task of clarifying our strategic vision for the next 10 years, focusing on what can be done now across five core areas (population health evidence, public awareness, care models, healthcare policy, hearing technology) to address hearing loss in older adults at scale. This guidance outlines where hearing-related issues stand now and where we want to see them in the future, and the strategies and initial tactics give us a roadmap for how we will get there. This Vision will inform decisions about growth, research directions, new opportunities we create or join, partnerships we seek or deepen, and where we invest time and funds.

INITIATING THE “KNOW YOUR PTA” PUBLIC HEALTH CAMPAIGN

A major gap in discussing hearing is the lack of a consistent, conversational metric around hearing health. The Cochlear Center’s ‘Know Your PTA’ public health campaign would establish the four-frequency pure tone average, or PTA, as an anchor point for describing hearing test results, much in the way that visual acuity, blood glucose, total cholesterol, and blood pressure are commonly used health metrics that are familiar to both clinicians and the lay public. We shared our request for proposals with three select health communications agencies; after vetting proposals and meeting with each agency we selected DC-based Hager Sharp as our partner for this effort.

Why mount a public health campaign establishing the PTA as a hearing metric? Embracing a neutral metric for hearing is a step toward destigmatizing hearing loss. Framing the PTA in the context of how it can help improve function will make the knowledge actionable. And introducing an approachable, widely understood metric for hearing improves fluency in hearing loss as a public health issue which supports our efforts to change policies around Medicare and insurance coverage of hearing care and hearing aids.

A similar effort called “Hearing 2020,” which targeted a consumer audience, was begun by Cochlear Ltd in 2020. We are coordinating with Cochlear Ltd’s US-based marketing team on ways to complement each other’s efforts.
Healthcare policy in the U.S. is outdated with respect to how it reflects the importance of hearing to the health and functioning of older adults, how it accounts for advances in hearing technology, and how it discerns between the roles of services vs. devices in hearing care. Ahead of what we expect to be a renewed federal government focus on healthcare in 2021 and in the context of anticipating new FDA regulations of over-the-counter hearing aids, we prepared high-level summaries for Congressional policy staff or others looking for concise summaries of hearing and policy topics that are often hard to find the best references or background for. We’ve shared these policy briefs with legislative directors and health policy advisors for Senators and Representatives; budget analysts at the Congressional Budget Office; the National Academies of Sciences, Engineering, and Medicine; veteran health, science, and policy journalists; and leadership at the Hearing Loss Association of America, AARP, the Center for Medicare Advocacy and others.

As well, we are initiating a search for a health policy communications agency partner who can help insert our trustworthy, science-based, public-health based voice into hearing care policy discussions. We aim to persuade influential national policy makers to include hearing treatments in proposed expansion of Medicare, with the goals, ultimately, of reaching the point that insurance policies distinguish between – and cover - hearing care services and hearing technology, and that healthcare policies and guidelines routinely account for the importance of effective hearing in optimizing health outcomes and promoting patient autonomy.

This policy work follows on previous efforts by Center faculty on the Over-The-Counter Hearing Aid Act, passed with bipartisan support as a rider to the Food and Drug Administration Reauthorization Act and signed into law in 2017. This law required the FDA to develop a separate regulatory classification and standards for over-the-counter hearing aids that are intended for adults with perceived mild-to-moderate hearing losses. We also played a role in the language of the Medicare Hearing Act of 2019 (H.R. 4618) which was later incorporated into the broader Elijah Cummings Lower Drug Costs Now Act (H.R. 3) and passed by the House of Representatives in December 2019. While that bill did not advance to the Senate, it is being actively considered again by Congress for the FY2022 budget.

Cochlear Center Core faculty members Bonnielin Swenor and Nicholas Reed created and launched “Included: The Disability Equity Podcast” to share stories, data, and news that challenge stereotypes and expand views of disability. Weekly episodes of “Included” look at disability issues, like voting and healthcare, from personal, advocacy, and research perspectives. A sampling of topics covered on “Included” include: disability in higher education, in medicine, and in policy; disability identity; the economic cost of ableism and racism; and bioethics and disability. You can find Included: The Disability Equity Podcast on Amazon, Apple, Spotify, or wherever you download your favorite podcasts.

Stay current with Cochlear Center initiatives, research, and events with our newsletter (new in 2020!) and on Twitter. Join our newsletter list by emailing JHSPHCochlearCenter@jh.edu, and follow us on Twitter @JHSPH_Hearing.

**INCREASING OUR NATIONAL EFFORTS TO INFLUENCE HEARING CARE POLICY**

**LAUNCHING “INCLUDED: THE DISABILITY EQUITY PODCAST”**

**STAY IN TOUCH!**
Effective hearing and communication are critical for optimizing the health and functioning of older adults. However, hearing is rarely the focus of public health research and interventions. The Cochlear Center for Hearing and Public Health aims to change this paradigm not only through research to better understand how hearing problems affect health, but by identifying and implementing viable and scalable solutions. The broad research underway at the Center includes understanding the impact of hearing loss in older adults on public health; developing and testing strategies to mitigate these effects; and helping to implement policies at the local, national, and global levels to address hearing loss. This work spans diverse fields including otolaryngology, audiology, epidemiology, health economics, neuropsychology, cognitive neuroscience, and biostatistics.

Epidemiologic research since 2010 led by Center faculty has established the contribution of hearing loss to the risk of cognitive decline and dementia in older adults. Reports from the Lancet Commission in 2017 and 2020 identified hearing loss as the dominant risk factor for dementia that was based on three landmark studies, two of which were authored by faculty at the Cochlear Center. This epidemiologic research has led to the Aging and Cognitive Health Evaluation in Elders (ACHIEVE) study which is an ongoing, large-scale randomized controlled trial. This first-in-kind trial led by Center faculty is designed to definitively determine if treating hearing loss in older adults reduces the risk of cognitive decline and dementia. This study is sponsored by the National Institute on Aging (Clinicaltrials.gov Identifier: NCT03243422). The original study recruitment target of N=850 was reached on schedule in July 2019, but additional NIA funding for an extension of enrollment until October 2019 resulted in a final sample size of 977 participants. Final study results are anticipated in 2023.

➤ Research by Center faculty, including Jennifer Deal and Frank Lin, is actively focused on the mechanism underlying the relationship between hearing, cognition, and brain aging in population-based studies.

➤ Ongoing work includes investigating the relationship of hearing to Alzheimer’s disease biomarkers and how hearing may affect brain structure and networks, as measured through structural and functional brain magnetic resonance imaging (MRI).

Health Economic Outcomes

Hearing loss has both direct and indirect economic implications for individuals and society. The cost of hearing aids is well documented as a substantial barrier to accessing the devices among older Americans. Cochlear Center Director Frank Lin was instrumental in the passage of the Over-the-Counter Hearing Aid Act of 2017 to make hearing aids more accessible and affordable, and these regulations should be disseminated by the FDA in 2021. At present, hearing aids can typically be purchased by consumers only when bundled together with associated professional services, which may or may not be needed. Center research, led by Amber Willink, highlighted how many Medicare beneficiaries are now enrolling in Medicare Advantage plans with hearing aid benefits. Another recent publication from the group has shown how out-of-pocket costs for hearing aids remain very high for people in these plans. Center faculty involved in these health economic studies are working closely with policy makers to design a hearing aid benefit that would improve access to hearing treatment under Medicare, while also optimizing the benefits of the Over-the-Counter Hearing Aid Act. This research laid the foundation of the hearing aid benefit (Medicare Hearing Act of 2019) which was later incorporated into the Elijah E. Cummings Lower Drug Costs Now Act (H.R.3) that was passed by the House of Representatives.

➤ In 2021, the activities of the health economics outcomes workgroup will continue to explore hearing health services, the health economic consequences of hearing loss and opportunities for better care.

➤ There is also great policy interest in examining different models of coverage for hearing care services and their effectiveness in providing care at both the federal (Medicare Advantage) and state level.
HEARING LOSS AND HEALTH CARE

The National Academies of Sciences, Engineering, and Medicine recognize optimal patient-provider communication as a key to improving health care outcomes. Despite the impact of hearing loss on communication, hearing is rarely addressed in the context of patient-provider communication. Patient-provider communication has been associated with improved patient satisfaction, treatment adherence, and other health outcomes. Center researchers Nicholas Reed, Amber Willink, and Esther Oh oversee work to understand the impact of hearing loss on key health care utilization outcomes and lead initiatives to address hearing loss as a barrier to communication in health care settings via screening and intervention programs embedded in the ENHANCE intervention. These include universal screening of adults admitted to the hospital and the provision of amplification and/or use of communication strategies among hospital providers.

Nicholas Reed and Esther Oh are leading a pragmatic trial of Johns Hopkins patients to better understand the association of hearing loss on delirium in the hospital and whether addressing hearing loss via the ENHANCE program mitigates the prevalence of delirium.

Nicholas Reed and Amber Willink are continuing their efforts to explore hearing loss and patient-centered health care outcomes, such as satisfaction and perception of care, through planned analyses in the Medicare Current Beneficiary Survey, National Health and Aging Trends Study, and Health and Retirement Study. Their work was recently featured in Health Affairs in a spotlight article on age-friendly health care systems.

COMMUNITY-BASED SOLUTIONS TO HEARING CARE PROVISION

The established model of hearing health care delivery in the U.S. and much of the world is based on clinic-based audiolinguistic and hearing needs assessment, rehabilitative counseling, and education, and sensory management with the provision of amplification and other assistive devices. This model of care is associated with improvements in communication and overall domain-specific quality of life, but these services are beyond the resources of many older adults. Center researchers, led by Carrie Nieman, are committed to incorporating public health practices in order to develop new models for the delivery of hearing care and provide access to all older adults. One model is through the HEARS program which incorporates over-the-counter hearing technologies as well as key principles in designing materials and technology that are accessible to all older adults, regardless of education, literacy level, or cognitive status. Much of this work is being done in partnership with the Center for Social Design, led by associate faculty Mike Weikert at the Maryland Institute College of Art.

An NIH-funded randomized trial of the efficacy of the HEARS intervention in improving self-reported communication function is ongoing in Baltimore. Enrollment in the trial closed in October 2019 with 151 participants randomized and follow-up is ongoing. Results of the clinical trial will be available in 2021-2022.

Access HEARS, a non-profit co-founded by Carrie Nieman, is continuing to provide community-based hearing care services throughout Baltimore and the region with funding from AARP Foundation and other philanthropic partners. Beginning in 2020, Access HEARS, in partnership with HASA and the Baltimore City Health Department Division of Aging, established a first-in-the-nation Hearing Health Collaborative. The Collaborative is led by a Hearing Health Navigator who is embedded within the Health Department and works to connect older adults with needed hearing services and support while building capacity around hearing health within the local Area Agency on Aging.

HEARS was named among the 2020 winners of the National Academy of Medicine’s Healthy Longevity Catalyst Awards — a component of the Healthy Longevity Global Competition, a multiyear, multimillion-dollar international competition seeking breakthrough innovations to improve physical, mental, and social well-being for people as they age. As well, the study was named a runner-up for the Johns Hopkins Urban Health Institute’s Henrietta Lacks Award, given annually to organizations and initiatives which prioritize health equity in Baltimore.
Gold-standard hearing rehabilitative care typically comprises one-on-one sessions with an audiologist for an auditory needs assessment, fitting and programming of hearing aids and related technologies, and educational counseling and rehabilitation. While this model is the gold standard, not all individuals, particularly adults with milder forms of hearing loss, may require or desire this level of care. At present, however, hearing aids in the U.S. and most countries in the world remain medically regulated devices that can only be dispensed or sold through a licensed provider. However, by 2020-21, FDA-regulated hearing aids that meet explicit performance and safety criteria for mild to moderate hearing loss will be available to the public as over-the-counter products. Nicholas Reed, Joshua Betz, and Laura Sherry are currently examining the comparative effectiveness of various self-testing software vital to a robust over-the-counter hearing aid market.

Peggy Korczak and Nicholas Reed are currently mentoring a Towson University audiology doctoral student conducting thesis research on attitudes towards over-the-counter hearing care among audiologists to better understand steps needed to integrate over-the-counter devices into future clinical practice.

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Training

**TRAINING OPPORTUNITIES**

At the Johns Hopkins Cochlear Center for Hearing and Public Health, we are training a generation of clinicians and researchers to study the impact that hearing loss in older adults has on public health and to develop and implement public health strategies and solutions for hearing loss. The Cochlear Center’s trainees are graduate students, audiologists, physicians, and medical students drawn from around the world who work with Cochlear Center mentors on research that illuminates the connections between sensory loss and healthy aging.

The Cochlear Center provides research fellowships for pre- and post-doctoral trainees, as well as several funded training programs open to students enrolled in the Johns Hopkins Bloomberg School of Public Health, and to students and faculty from other academic institutions.

Fellowships for postdoctoral trainees, visiting pre-doctoral students and visiting faculty from other academic institutions can range from 1 month to 2 years. Fellows work with Cochlear Center faculty on research projects related to the Center’s mission.

**BY THE NUMBERS**

- **11** Trainees
- **22** Presentations made
- **16** Papers published by Trainees in Cochlear Center mission areas
- **15** Upcoming/close to submission papers by Trainees in Cochlear Center mission areas

**SCHOLARS IN HEARING AND AGING RESEARCH PROGRAM - SHARP**

**About**

The Scholars in Hearing and Aging Research Program (SHARP) is designed for individuals who are enrolled in a Master’s or doctoral degree program (for example, MPH, MHS, PhD) at the Johns Hopkins Bloomberg School of Public Health and are interested in aging, hearing, and public health. SHARP trainees are assigned an academic and research mentor at the Cochlear Center and take part in all Center training activities.

**Who**

Individuals enrolled in a JHSPH Master’s or doctoral degree program with a strong interest in aging, hearing, and public health.
THE FELLOWS PROGRAM IN AGING, HEARING, AND PUBLIC HEALTH

About

The Fellows Program in Aging, Hearing, and Public Health is designed to provide an overview of public health concepts, methods, and strategies to assist clinicians and researchers in different regions of the world who are pursuing public health research and projects focused on addressing hearing loss in older adults. The one-week program is held once per year, and each year’s program is targeted to a specific world region. Typically, accepted applicants come to Baltimore for a week of in-depth, didactic training and mentoring. The pandemic forced us to postpone hosting the Latin American fellows in 2020 and challenged us to reconsider how we offer our international training programs in the future. Over the last year, we collaborated with the Johns Hopkins Center for Teaching & Learning to organize our Fellows Program into a new format. This international training program offers a blended classroom pedagogy of asynchronous online lectures and synchronous “in-person” discussions facilitated by Cochlear Center faculty. We initially plan to reengage with the Latin American Summer Fellows who were accepted for the 2020 program, but this modified, virtual approach also allows us to continue our international training work regardless of ongoing or future travel restrictions, and its inherent efficiencies make it scalable to a larger number of clinicians. The Latin American Fellows slated for participation in the updated 2021 program hail from Argentina, Brazil, Chile, and Mexico and include:

- Patricia Abravanel, MD, PhD, University of Sao Paulo, Brazil
- Raquel Agostinho, AuD, PhD, University of Sao Paulo, Brazil
- Katia Alvarenga, AuD, PhD, Universidade de Sao Paulo, Brazil
- Roberto Beck, PhD, University of Sao Paulo, Brazil
- Lilian Cassia Jacob Corteletti, University of Minas Gerais (UFMG), Brazil
- Barbara Niegia de Goulart, PhD, Hospital de Buenos Aires, Argentina
- Tatiana Campos, MD, PhD, Hospital das Clínicas, School of Medicine Brazil
- Sirley Carvalho, PhD, Speech, Language and Audiology Department, UFMG, Brazil
- Barbora Niega de Goulart, PhD, Universidade Federal do Rio Grande do Sul, UFRGS Brazil
- Carolina Delgado, MD, MSc, University of Chile, Chile
- Denise Goncalves, MD, PhD, University of Sao Paulo, Brazil
- Tatiana Mano, Hospital Federal dos Servidores do Estado, Brazil
- Fernanda Yasmin Miguel Padilha, AuD, University of Sao Paulo, Brazil
- Maltais Pereira, MD, PhD, Hospital de Buenos Aires, Argentina
- Luciana Reisemel, PhD, Aud, Universidade Federal de Minas Gerais (UFMG), Brazil
- Tatiana Sadowski, AuD, Clinical Hospital of Medicine School of USP, Brazil
- Alessandra Samelli, PhD, University of Sao Paulo, Brazil
- Livia Santiago, SLP, Federal University of Rio de Janeiro, Brazil
- Tyciana Sassi, AuD, Universidade de Sao Paulo, Brazil

The CHAMPs program is an intensive, multidisciplinary, summer program designed for pre-doctoral audiology, medical, or public health doctoral students to gain a foundation in concepts and methods that will lead to research careers addressing hearing loss, aging, and public health. Early career clinicians still in clinical training (for example, medical/surgical residents) are also eligible. If selected as a CHAMP, students receive complimentary tuition for required didactic coursework and there is no cost to participate.

The CHAMPs participants slated to join the updated 2021 program include:

- Teresa Anthony, MA, CCC-SLP, University of South Florida
- Natalie Lenzen, AuD, CCC-A, FAAA, Boys Town National Research Hospital
- Sahar Assi, American University of Beirut, Lebanon
- Marjan Majid, Rice University

COCHLEAR CENTER HEARING & AGING MENTORING PROGRAM (CHAMPS)

About

In response to pandemic travel restrictions CHAMPs was postponed in 2020 and reconfigured from a four-week program to a one-week virtual program. Students will begin the June 2021 program with a one-day intensive summer course, Epidemiologic Approaches to Hearing Loss and Public Health (340.690.11), which includes didactic lectures covering epidemiology, biostatistics, clinical trials, gerontology, and intervention concepts in hearing loss. The rest of the week-long program will include additional didactic lectures, seminars, and journal clubs with Cochlear Center faculty. During the entirety of the program, students will work in cross-disciplinary teams under the mentorship of Cochlear Center faculty to produce a final research project.

Who

Pre-doctoral audiology, medical, or public health PhD students; typically after the 1st, 2nd, or 3rd year of graduate school. If selected as a CHAMP, students receive complimentary tuition for required didactic coursework and there is no cost to participate.

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**OTHER OPPORTUNITIES:**

**Courses, Seminars, and Journal Clubs**

**Courses**
Cochlear Center faculty offer two didactic courses each academic year through the Department of Epidemiology at the Johns Hopkins Bloomberg School of Public Health.

340.699.01 Epidemiology of Sensory Loss in Aging is a 3-credit course offered from January to March. This course introduces the biologic, epidemiologic, and clinical aspects of aging-related declines in the auditory, visual, and vestibular systems, demonstrates methods of assessment of sensory function for epidemiologic studies, and reviews current epidemiologic knowledge of sensory function and aging-related outcomes in older adults, including the epidemiology and consequences of dual sensory loss.

340.699.11 Epidemiologic Approaches to Hearing Loss and Public Health is typically a 1-week intensive course offered in June as part of the Graduate Summer Institute of Epidemiology and Biostatistics in Baltimore, Maryland, compressed to one day in 2021. This course is a subset of 340.699.01 focusing only on hearing and may be taken for academic credit or for non-credit/professional development.

**Seminars**
The Cochlear Center offers monthly seminars highlighting research related to the Cochlear Center’s core mission. In September 2020 we resumed the series as Zoom webinars, and hosted speakers from Johns Hopkins University and other academic and professional institutions who share expertise on a variety of topics around hearing, aging, and public health including social isolation, consumer hearing technologies, task sharing for hearing care, delirium, and dementia.

**Journal Clubs/Research-In-Progress meetings**
To provide an opportunity for students to engage with Center faculty, fellow students, and postdoctoral fellows, Cochlear Center student trainees lead monthly discussions of a peer-reviewed published article, or present ongoing research. Journal clubs/research-in-progress meetings are open to all Johns Hopkins students and faculty, and Cochlear Center trainees.

**POSTDOCTORAL TRAINEE**

Anna Marie Jilla, AuD, PhD
Anna Marie Jilla, AuD, PhD, is a clinical and research audiologist at the University of Texas Health Science Center at Houston. Her clinical interests are in adult management of hearing and vestibular disorders. Her research interests include applications of health economics for improving hearing health care accessibility and shaping health policy for adults with hearing impairment. She currently serves as the Chair of the American Academy of Audiology’s Coding and Reimbursement Committee.

**DOCTORAL STUDENTS**

Pablo Martinez Amezcua, MD, PhD
Pablo Martinez Amezcua, MD, PhD received his medical degree from the National Autonomous University of Mexico, and his PhD in 2021 from the Department of Epidemiology at the Johns Hopkins Bloomberg School of Public Health. Martinez Amezcua is a postdoctoral research scientist in the Department of Medicine, Division of General Medicine at the Columbia University Irving Medical Center in New York City. He is interested in studying social determinants of health, physical activity and prevention of diseases associated with age, including hearing loss, cardiovascular disease, and physical and cognitive decline.

Alison Huang, MPH
Alison Huang, MPH, is a PhD student in the Department of Mental Health. She studies the associations between concurrent hearing and vision impairment, social isolation, and dementia. Prior to coming to John Hopkins University, Huang worked for several years at a social behavioral firm studying early life risk factors for dementia in later life. She currently holds an MPH and a Certificate in Survey Methodology. Huang is co-advised by George Rebok, PhD, and Jennifer Deal, PhD.
Lama Assi, MD

Lama Assi, MD completed her MPH studies at the Johns Hopkins Bloomberg School of Public Health as a trainee at the Cochlear Center for Hearing and Public Health, where she worked on projects related to sensory loss and health care utilization under the mentorship of core faculty Nicholas Reed, AuD. Prior to joining the Center, she received her medical degree from the American University of Beirut in Lebanon and completed a postdoctoral research fellowship with core faculty Bonnielin Swenor, PhD, MPH at the Dana Center for Preventive Ophthalmology, Wilmer Eye Institute. Assi will now complete her ophthalmology residency training at LSU New Orleans and hopes to later combine her clinical and research interests by working on improving access to care for older adults with sensory loss.

John Shin

John Shin is a SHARP fellow at the Johns Hopkins Cochlear Center for Hearing and Public Health. Before arriving at the Center, Shin spent two years at the National Institute on Aging as a post-baccalaureate Intramural Research Training Award Fellow in Susan Resnick’s lab. Working with his mentor, Murat Bilgel, PhD he implemented a retrospective study design looking at the associations between amyloids, brain atrophy, and cognition in the Baltimore Longitudinal Study of Aging. Shin received his Bachelor of Science degree in neuroscience from Johns Hopkins University in 2018, and in May 2021 completed a Master of Public Health degree with a concentration in epidemiological and biostatistical methods for public health and clinical research at the Johns Hopkins Bloomberg School of Public Health.

Danielle Powell, AuD, PhD

Danielle Powell, AuD, PhD, completed her PhD from Johns Hopkins Bloomberg School of Public Health’s Department of Epidemiology in April 2021 with her dissertation on “Hearing Loss and Late-life Mental Health,” mentored by Cochlear Center director Frank Lin, MD, PhD and core faculty Jennifer Deal, PhD. She received her AuD in 2013 from the University of North Carolina - Chapel Hill. Powell will continue at the Bloomberg School as a post-doctoral T32 fellow within the Department of Health Policy and Management at the Johns Hopkins University, mentored by Jennifer Wolff, PhD and core faculty Esther Oh, MD, PhD, with research interests in hearing loss and communication on health services and outcomes research, dementia, and caregiving.

Jonathan J. Suen, AuD

Jonathan J. Suen, AuD is currently a PhD candidate at the Johns Hopkins University School of Nursing where his research examines the relationship between hearing loss and loneliness in older adults through a mixed methods design. Following his clinical studies in audiology at Gallaudet University, Suen completed a postdoctoral fellowship with Frank Lin, MD, PhD where he developed a novel community-based delivery model of hearing care through innovative academic-community partnerships. Through his activities at the School of Nursing’s Center for Innovative Care in Aging, he fostered an interest in healthy aging, health equity, and behavioral interventions. Suen is currently co-advised by Jennifer Wenzel, PhD, MS, RN at the School of Nursing and Frank Lin, MD, PhD at the Cochlear Center for his PhD training.

Perry Kuo

Perry Kuo is a physician from Taiwan and currently a visiting fellow with Luigi Ferrucci, MD, PhD in the Longitudinal Studies Section, Translational Gerontology Branch at the National Institute on Aging after completing his PhD training in Epidemiology at the Johns Hopkins Bloomberg School of Public Health. In addition to uncovering the mechanisms of aging, his research interests include investigating potential modifiable risk factors for age-related hearing loss, evaluating the effect of hearing loss on physical activity and physical functions, and assessing the impact of hearing aids on physical activities and physical functions.

DOCTORAL STUDENTS, CONT.

MASTER OF PUBLIC HEALTH STUDENTS

DOCTORAL STUDENTS, CONT.
Events

COCHLEAR CENTER RESEARCH WEEK, MARCH 23-26 & 29, 2021

With travel out of the question and Zoom fatigue a reality, we devised a lightning-fast, intensive, and engaging format to share our research, and replaced our annual in-person Cochlear Center Research Day with Cochlear Center Research Week. We promoted Research Week on Twitter using hashtag #JHSPH_Hearing2021, and used that platform along with a “better poster” model from user experience designer Mike Morrison (@mikemorrison), to create a “Tweet storm” highlighting additional research that we couldn’t include in the daily presentations. We hosted 71 unique attendees during the week’s presentations.

During Research Week, we offered daily, tightly coordinated, 30-minute, midday virtual presentations from Cochlear Center Core Faculty and poster sessions by trainees addressing various aspects of our research work. Research Week culminated with a keynote webinar address by Bret Rutherford, MD, of the Columbia University Vagelos College of Physicians and Surgeons and New York State Psychiatric Institute. Rutherford shared his lecture “Addressing Hearing Loss to Improve Mood Disorders and Neurocognitive Health in Later Life” with 73 participants.

Research Week “Lightning Rounds,” Noon – 12:30 pm:
Tuesday, March 23: Jennifer Deal, PhD, “Hearing Loss and the Aging Brain”
Wednesday, March 24: Carrie Nieman, MD, MPH, “HEARS: An RCT of Community-Delivered Hearing Care for Older Adults”
Thursday, March 25: Nicholas Reed, AuD, “Hearing Loss and Preventable Hospitalization”
Friday, March 26: Bonnielin Swenor, MPH, PhD, “The Interconnection Between Vision, Hearing, and Aging”

Exactly how lightning fast were “lightning rounds”? Each session was tightly coordinated to be 30 minutes.

Noon (ET): Welcome and Orientation
12:05 pm: Cochlear Center Trainee Poster Presentation
12:08 pm: Core Faculty Presentation
12:22 pm: Cochlear Center Trainee Poster Presentation
12:25 pm: Q&A Moderated by Cochlear Center Director Frank Lin, MD, PhD

MEDICAL STUDENTS

Julie Yi
Julie Yi is a 4th year medical student at Johns Hopkins University School of Medicine. She was a trainee at the Johns Hopkins Cochlear Center for Hearing and Public Health during the 2020-2021 academic year and worked with core faculty Carrie Nieman, MD, MPH on projects related to hearing health care among minority populations. Yi plans on applying for residency positions in Neurology.

Harry Wu
Harry Wu is a final year medical student at the University of Otago in New Zealand. He was a short-term visiting trainee at the Johns Hopkins Cochlear Center for Hearing and Public Health during the 2020-2021 academic year and worked with center director Frank Lin, MD, PhD. His manuscript describing temporal trends in the increasing prevalence of hearing aid use in the U.S. was accepted at JAMA-Otolaryngology. Harry is now completing his medical training in New Zealand and plans to pursue a residency in otolaryngology.

UNDERGRADUATE STUDENTS

Ethan Wang
Ethan Wang is an undergraduate sophomore majoring in Public Health at Johns Hopkins University. With the Woodrow Wilson Fellowship, he is currently working with his mentor Jennifer Deal, PhD, on studying the association between dual sensory impairment and depressive symptoms and anxiety in older adults in India from the Harmonized Diagnostic Assessment of Dementia for the Longitudinal Aging Study in India.

Bret Rutherford, MD and Center Director Frank Lin take questions at the end of Rutherford’s keynote address.
During the 2020-2021 academic year our monthly seminars became remote webinars. Speakers shared their expertise on a variety of topics around hearing, aging, and public health including social isolation, consumer hearing technologies, task sharing for hearing care, delirium, and dementia, including:

- Hearing Loss and Dementia: Causal Inference and Testing Alternative Hypotheses
  Willa D. Brenowitz, PhD, MPH, University of California San Francisco, 9/28/2020

- An Approach to the Measurement of Auditory Wellness in Older Adults
  Larry E. Humes, PhD, Indiana University Bloomington, 10/26/2020

- Connecting, Aging, and Crisis: Challenges and Opportunities

- Reducing Disparities in Access to Hearing Healthcare on the US-Mexico Border
  Nicole Marrone, PhD, CCC-A, Aileen Wong, AuD, CCC-A, Laura Coco, AuD, CCC-A, University of Arizona, 1/25/2020

- Hospital Elder Life Program (HELP): development, testing, implementation, and dissemination
  Sharon K. Inouye MD, MPH, Harvard Medical School, 2/22/2020

- Addressing Hearing Loss to Improve Mood Disorders and Neurocognitive Health in Later Life
  Bret Rutherford, MD, Columbia University Vagelos College of Physicians and Surgeons, and New York State Psychiatric Institute. This webinar was the keynote address at the conclusion of Cochlear Center Research Week 2021, 3/29/21

- Ear and Hearing Care For All: Inventing the Future
  Shelly Chadha, MBBS, MS, PhD, World Health Organization

- An Approach to Equitable Provision of Hearing Care
  Audra Renyi, BSc, BA, World Wide Hearing, 4/26/2020

- Hearing Loss and Dementia: Causal Inference and Testing Alternative Hypotheses
  Willa D. Brenowitz, PhD, MPH, University of California San Francisco, 9/28/2020

- An Approach to the Measurement of Auditory Wellness in Older Adults
  Larry E. Humes, PhD, Indiana University Bloomington, 10/26/2020

- Connecting, Aging, and Crisis: Challenges and Opportunities

- Reducing Disparities in Access to Hearing Healthcare on the US-Mexico Border
  Nicole Marrone, PhD, CCC-A, Aileen Wong, AuD, CCC-A, Laura Coco, AuD, CCC-A, University of Arizona, 1/25/2020

- Hospital Elder Life Program (HELP): development, testing, implementation, and dissemination
  Sharon K. Inouye MD, MPH, Harvard Medical School, 2/22/2020

- Addressing Hearing Loss to Improve Mood Disorders and Neurocognitive Health in Later Life
  Bret Rutherford, MD, Columbia University Vagelos College of Physicians and Surgeons, and New York State Psychiatric Institute. This webinar was the keynote address at the conclusion of Cochlear Center Research Week 2021, 3/29/21

- Ear and Hearing Care For All: Inverting the Future
  Shelly Chadha, MBBS, MS, PhD, World Health Organization

- An Approach to Equitable Provision of Hearing Care
  Audra Renyi, BSc, BA, World Wide Hearing, 4/26/2020
Frank R. Lin, MD, PhD

Frank R. Lin, MD, PhD is the Director of the Cochlear Center for Hearing and Public Health and a Professor of Otolaryngology, Medicine, Mental Health, and Epidemiology at the Johns Hopkins University School of Medicine and the Johns Hopkins Bloomberg School of Public Health. Lin completed his undergraduate degree in biochemistry at Brown University and his medical education, residency in otolaryngology, and PhD at Johns Hopkins. He completed further otologic fellowship training in Switzerland. Lin joined the faculty at Johns Hopkins in 2010 and is a practicing otologist with expertise in the medical and surgical management of hearing loss. His epidemiologic research established the impact of hearing loss on the risk of cognitive decline, dementia, and brain aging in older adults and served as the basis of the 2017 Lancet Commission on dementia conclusion that hearing loss was the single largest potentially modifiable risk factor for dementia. Lin currently leads the ACHIEVE study which is a $20M NIH-funded randomized trial investigating if treating hearing loss can reduce the risk of cognitive decline in older adults. As the founder and inaugural director of the Cochlear Center for Hearing and Public Health, Lin leads a first-in-kind research center resulting from an academic-industry collaboration that is dedicated to training a generation of clinicians and researchers to understand and address the impact of hearing loss on older adults and public health.

Lin has worked extensively with the National Academies of Sciences, Engineering, and Medicine to address the need for more accessible and affordable hearing care for adults in the United States. From 2014-2016, Lin served on sequential NASEM committees (workshop, consensus study) to investigate this issue and concurrently advised the White House President’s Council of Advisors on Science and Technology on their report. Recommendations from these groups led to the subsequent introduction and bipartisan passage of the Over-the-Counter Hearing Aid Act of 2017, on which Lin testified before Congress. This law overturns 40 years of established regulatory precedent in the U.S. and reflects the direct result of Lin’s prior research and broader policy work on hearing loss and public health. Lin currently serves as a member of the Board on Health Sciences Policy at the National Academies.

Josh Betz, MS

Josh Betz, MS, is biostatistician in the Johns Hopkins Biostatistics Consulting Center and is a research associate in the Department of Biostatistics at the Johns Hopkins Bloomberg School of Public Health. Betz leads the Cochlear Center’s Analytics Core. He obtained his MS in biostatistics from the University of Maryland Baltimore County in 2012 and joined Johns Hopkins shortly afterwards. Betz has worked on epidemiological studies, clinical trials, software for data visualization and study design and providing statistical consulting to public health researchers. Much of his work has involved studying associations between hearing loss and health outcomes in older adults, as well as developing pilot studies for hearing loss interventions. Betz’s interests are in statistical education and practice in science, understanding and mitigating the impact of hearing loss, public health, gerontology and clinical trials.

Jennifer Deal, PhD

Jennifer A. Deal, PhD, is an epidemiologist and gerontologist with expertise in cognitive aging. She is an assistant professor in the Departments of Epidemiology at the Johns Hopkins Bloomberg School of Public Health and Otolaryngology-Head and Neck Surgery at the Johns Hopkins University School of Medicine. Trained in the epidemiology of aging, Deal studies the effects of hearing loss on an aging brain and how hearing loss influences cognitive function to inform strategies for the primary prevention of cognitive decline and dementia in older adults.

Carrie L. Nieman, MD, MPH

Carrie L. Nieman, MD, MPH is an assistant professor in the Department of Otolaryngology-Head and Neck Surgery at the Johns Hopkins University School of Medicine and co-founder of Access HEARS, a nonprofit committed to the delivery of affordable, accessible hearing care. As a clinician, researcher and social entrepreneur, her commitment to social justice is inseparable from her drive to provide innovative solutions to address disparities in hearing care. Her epidemiological work documents widespread disparities in hearing health care. In order to move toward innovative, evidence-based and sustainable solutions, Nieman works across disciplines and translates research and approaches in gerontology, social design, behavioral intervention research, community-based participatory research and human factors to advance hearing health equity and bring innovation to underserved communities.
Esther Oh, MD, PhD
Esther Oh, MD, PhD is an associate professor in the Division of Geriatric Medicine and Gerontology, and an associate director of the Johns Hopkins Memory and Alzheimer’s Treatment Center. Oh’s research interest is in Alzheimer’s disease and related disorders including delirium. Oh actively collaborates with members of the Center on projects related to enhancing communication and improving hearing care for older adults with dementia and hearing loss. In addition to her clinical and research work, in June 2021 Oh was elected 2022-2023 president of the American Delirium Society, an organization dedicated to advancing research and improving care in delirium, which also collaborates closely with the European and the Australasian Delirium Associations. As part of this role, Oh will co-chair the planning committee for the 2022 American Delirium Society Annual Conference.

Nicholas Reed, AuD
Nicholas Reed, AuD is an assistant professor in the Department of Epidemiology at Johns Hopkins Bloomberg School of Public Health with a joint appointment in the Department of Otolaryngology-Head and Neck Surgery at Johns Hopkins School of Medicine. Reed is core faculty at the Cochlear Center for Hearing and Public Health where he is the director of the Audiology core. In this capacity, he oversees the integration of hearing measures and hearing care into cohort studies and clinical trials. This includes selection of appropriate measures, grant preparation support, development of hearing data collection protocols, technician training procedures, quality assurance, data management, and quality control. He currently manages hearing data collection the Baltimore Longitudinal Study of Aging, the Atherosclerosis Risk in Communities Neurocognitive Study, the BIOCARD Study, the Baltimore Epidemiologic Catchment Area Study, and National Health Aging and Trends Study. He is a co-investigator in the Aging and Cognitive Health Evaluation in Elders (ACHEIVE) trial where he is a member of the hearing intervention subcommittee and co-chairs the recruitment subcommittee.

Amber Willink, PhD
Amber Willink, PhD is an associate professor at the University of Sydney and adjunct associate professor in the Department of Health Policy and Management at the Johns Hopkins Bloomberg School of Public Health. Her research focuses on the economic and health service utilization implications of gaps in health policy benefits on older adults. At the Cochlear Center for Hearing and Public Health, Willink will be examining the economic impacts of hearing loss on older adults and the Medicare program as well as health services utilization outcomes associated with treated and untreated hearing loss.

Bonnielin Swenor, PhD, MPH
Bonnielin Swenor, PhD, MPH is the founder and director of the Johns Hopkins Disability Health Research Center and an associate professor of ophthalmology at the Wilmer Eye Institute. She is also an associate professor of epidemiology at the Johns Hopkins Bloomberg School of Public Health, as well as a core faculty member at the Johns Hopkins Center on Aging and Health.

Swenor’s research aims to improve the health of people with disabilities and is fueled by her personal experience with vision impairment. To achieve this, Swenor and her group have concentrated on three interrelated areas:

- Aging: This research aims to improve the health and well-being of individuals with visual impairment and other disabilities across the lifespan.
- Access to Care: This area of research focuses on identifying health care disparities and improving healthcare utilization, quality, and access for people with disabilities.
- Disability Inclusion: By identifying and addressing barriers for people with disabilities across society, Swenor and her team are working to increase disability inclusion.

The overarching goal of Swenor is to maximize health, equity, and inclusion of people with all types of disabilities and shift the paradigm from ‘living with a disability’ to ‘thriving with a disability.’ Swenor received her Master of Public Health and doctorate degrees in epidemiology from the Johns Hopkins Bloomberg School of Public Health and completed a postdoctoral research fellowship at the National Institute on Aging prior to joining the faculty at Johns Hopkins University.
ASSOCIATE FACULTY

Marilyn Albert, PhD

Marilyn Albert, PhD, is director of the Division of Cognitive Neuroscience, a professor in the Department of Neurology at Johns Hopkins University School of Medicine, and director of the Johns Hopkins Alzheimer’s Disease Research Center. Albert’s research focuses on the early identification of Alzheimer’s disease and the cognitive and brain changes associated with aging. Albert is actively engaged in collaborations with center faculty exploring the impact of hearing loss on cognition and brain changes in older adults.

Josef Coresh, MD, PhD

Josef Coresh, MD, PhD, is the George W. Comstock Professor of Epidemiology, Biostatistics and Medicine at the Johns Hopkins University Bloomberg School of Public Health. Coresh serves as the co-principal investigator of the Aging and Cognitive Health Evaluation in Elders (ACHIEVE) study and works closely with center faculty exploring data from the Atherosclerosis Risk in Communities Study (ARIC) to investigate the relationships between hearing loss and other health variables. He is a recognized leader in the epidemiology of kidney disease, big data and biomarker research which has impacted clinical practice guidelines and policies.

Luigi Ferrucci, MD, PhD

Luigi Ferrucci, MD, PhD, is the Scientific Director of the National Institute on Aging and conducts research on the causal pathways of age-related declines in health and functioning. Ferrucci collaborates with and mentors members of the Center exploring the relationships between hearing loss and health outcomes.

Adele Goman, PhD

Adele Goman, PhD is a research associate in the Department of Epidemiology at the Johns Hopkins Bloomberg School of Public Health. She holds a doctorate in psychology from the University of York, UK and completed postdoctoral training in epidemiology and clinical trials at Johns Hopkins University. Goman’s research focuses on the basic epidemiology of hearing loss with respect to the prevalence of hearing loss and the impact hearing loss is expected to have in the coming decades.

Margaret Korczak, PhD

Margaret Korczak, PhD, is a professor in the Department of Audiology, Speech-Language Pathology & Deaf Studies at Towson University. Korczak works closely with Center faculty on projects exploring the efficacy of technology products for individuals with hearing loss.

Christine Mitchell, ScM

Christine Mitchell, ScM is a research associate in the Department of Epidemiology at the Johns Hopkins Bloomberg School of Public Health, where she earned her master’s degree in 2009. Her expertise is in project management of multicenter clinical research studies to ensure their successful conduct. She has been involved in overseeing and coordinating all aspects of research including design and grant writing, implementation, data collection and cleaning, and data analysis and manuscript preparation. Christine has assumed the role of project manager for the ACHIEVE study, a randomized trial testing whether hearing intervention can reduce the risk of cognitive decline in older adults. Her prior research has focused on quality of life and developmental outcomes following pediatric cochlear implantation in the CDaCI Study.
Moyses Szklo, MD, MPH

Moyses Szklo, MD, MPH, is a native of Rio de Janeiro, Brazil. He received his medical degree from the State University of Rio de Janeiro and both his Master of Public Health and Doctor of Public Health degrees from the Johns Hopkins University Bloomberg School of Public Health. He is a professor of Epidemiology and Medicine at the Johns Hopkins University, editor-in-chief emeritus of the American Journal of Epidemiology, and a visiting professor at the Federal University of Rio de Janeiro (UFRJ) Institute of Public Health. Szklo has published more than 300 articles in peer-reviewed journals and is the main author of an advanced epidemiology textbook. Szklo has been principal investigator of two of the largest cohort studies of the natural history of atherosclerosis: the Atherosclerosis Risk in Communities (ARIC) study — of which he was also chair of the Steering Committee — and the Multi-Ethnic Study of Atherosclerosis (MESA) study. Currently, he chairs the Presentations and Publications Committee of the MESA. Since 1983 he has directed the Summer Institute of Epidemiology and Biostatistics at Hopkins. Szklo is currently working closely with Cochlear Center faculty to extend the work of the Cochlear Center to Latin America by developing research and training collaborations throughout the region.

Mike Weikert, MFA

Mike Weikert, MFA, is the founding director of the Center for Social Design and the Master of Arts in Social Design graduate program at the Maryland Institute College of Art (MICA). He and his team actively collaborate with members of the Center to design programs to improve the accessibility and affordability of hearing care for older adults.
Vidisha Agarwalla, MA, MICA Social Design Fellow

Vidisha Agarwalla is the Cochlear Center’s Social Design Fellow and an alumna of the Center for Social Design graduate program at Maryland Institute College of Arts, Baltimore. During her time at MICA, she developed a holistic understanding of community-centered, collaborative design processes and learned how to promote the value of design in advancing equity and social justice. Agarwalla is interested in working at the intersection of social justice, civic innovation, and systems design. Before graduate school, she worked as a product designer with a social enterprise called BEMPU Health to develop life-saving health products aimed at giving every child a chance to live a full and healthy life, especially in low resource areas. Agarwalla worked on the “KangaSling,” a wrap that enables parents to easily provide prolonged “kangaroo care” (or skin-to-skin contact) to their newborn. Her product is used in many hospitals in India and was also showcased at the World Health Assembly.

Mindy Dmuchowski, Academic Program Coordinator

Mindy Dmuchowski is the Cochlear Center’s Academic Program Coordinator, where she assists trainees and staff, and provides administrative support to the Center’s core faculty. Dmuchowski received her bachelor’s degree in Communication Studies from West Virginia University.

Emmanuel E. Garcia, PhD, Biostatistician

Emmanuel E. Garcia, PhD, joined the Cochlear Center for Hearing and Public Health as a Biostatistician. He obtained his PhD in Economics from Johns Hopkins University. Garcia’s research experience includes studying the effects of assistance programs on the health and human capital of youth with disabilities. His current research explores the economic consequences of age-related hearing loss.

Kening Jiang, MHS, Biostatistician

Kening Jiang, MHS, joined the Cochlear Center as a biostatistician. She is a graduate of Johns Hopkins University with a Master of Health Science degree in epidemiology. Jiang received training in the epidemiology of aging, and is interested in the health of older adults, especially in determinants and consequences of hearing loss, cognitive decline, and sleep disturbances.

Christina Kohn, MS, Research Program Coordinator

Christina Kohn is a research program coordinator, supporting the work of the Audiology Core and assisting with data collection for the ACHIEVE pilot study. She earned her Bachelor of Science degree in biology from William Paterson University, and a Master of Science degree in biotechnology from Johns Hopkins University. Kohn’s research interests are the correlation between hearing loss and cognitive decline and increasing health equity in underserved communities. She plans to apply to graduate programs.

Audrey Mossman, Research Program Assistant

Audrey Mossman is a research program assistant for the Baltimore HEARS study and a Doctoral Diversity Scholar working toward completing a post-baccalaureate program at Johns Hopkins School of Medicine. Her research interests include recognizing and addressing healthcare disparities and working toward solutions to improve health equity for these populations. Mossman recently graduated from University of Colorado with a BS in Biology and will be attending medical school beginning Fall 2021, continuing her journey in science and medicine.
Clarice Myers, AuD, Audiology Core Coordinator
Clarice Myers, AuD, is currently the Audiology Core Coordinator for the Cochlear Center and an assistant faculty audiologist in the Department of Otolaryngology-Head & Neck Surgery, Division of Research at the Johns Hopkins University, School of Medicine. She received her clinical doctorate from Texas Tech University Health Sciences Center. Myers’ research interests include alternative methods of device delivery models in inpatient settings and improving patient-provider communication.

Molly Sheehan, Communications Specialist
Molly Sheehan joined the Cochlear Center in Spring 2020 to organize and expand its communications efforts. She draws on her years of experience in healthcare communications at Ketchum’s Washington, DC office, and subsequent work as director of communications for the nonprofit National Aquarium in Baltimore to amplify the Cochlear Center’s research, education, and policy efforts. Sheehan’s interest is in mining the Cochlear Center for compelling stories about research and policy advocacy work, and telling those stories in ways that are relevant and timely.

Laura Sherry, AuD, Research Audiologist
Laura Sherry, AuD, received a clinical doctorate from Towson University in 2017. She is a research audiologist in the Department of Otolaryngology-Head & Neck Surgery, Division of Research at the Johns Hopkins University, School of Medicine. Her research interests include the correlation between hearing loss and cognitive decline, as well as improving accessibility to hearing healthcare. Sherry is currently the lead study audiologist at the Washington County field site for the Aging and Cognitive Health in Elders (ACHIEVE) study, a randomized trial seeking to determine whether a best-practice hearing intervention can reduce the risk of cognitive decline in older adults.

Shannon Smitherman, Senior Academic Program Coordinator
Shannon Smitherman received her bachelor’s degree in human services from the College of Notre Dame of Maryland (now Notre Dame of Maryland University). She currently works as the senior academic program coordinator for the Cochlear Center where she coordinates and helps advise Center trainees, oversees all administrative and operational aspects of Center activities, and assists the director.

Tara Thallmayer, MPH, Research Data Manager
Tara Thallmayer, MPH, is a research data manager for the Cochlear Center. She supports faculty, staff, and students with their data management needs. Thallmeyer is a graduate of Temple University with a Master of Public Health degree in Epidemiology and Biostatistics.

Jami Trumbo, MSPH, Cochlear Center Administrator
Jami Trumbo, MSPH, oversees day-to-day operations and manages Cochlear Center projects and initiatives as the Center Administrator. She is also the research coordinator for the Baltimore HEARS study and future center research studies. Trumbo recently partnered with the Johns Hopkins Center for Teaching and Learning to develop an online format for the Center’s Fellows Program in Aging, Hearing, and Public Health, which is designed for clinicians and researchers outside the US, this program will debut in June 2021. She received her Master of Science in public health degree in health education and health communication from the Johns Hopkins Bloomberg School of Public Health.
**Feb 2020**

Frank Lin discussed the connection between hearing loss and dementia with Kim Tingley of the New York Times for a “Studies Show” article “Can Hearing Aids Prevent Dementia?”

“The relationship seems to be ‘very, very linear,’ Lin says, meaning that the greater the hearing deficit, the greater the risk a person will develop the condition.”

**May 2020**

Amber Willink lent her policy expertise to discussion of supplemental benefits that were added to the Medicare program in 2018, for the Reuters Health article: “Few Medicare Advantage plans cover social needs for chronically ill patients”

“This is important for Medicare beneficiaries and families, as many may assume that because MA plans now can provide supplemental benefits that they will,” Willink added. “The plan benefit fine print is more important than ever.”
May 2020

Amber Willink weighed in on “The Reality of Hearing Care in Nursing Homes” in The Hearing Journal.

“The hearing treatment is excluded from the Medicare program, so I began to look at what impact that was having on access to services and hearing aids,” said Willink... “It’s very hard to address hearing loss if it isn’t considered a priority by care providers or nursing home administrators,” said Willink. “It’s also very hard to address hearing loss if it requires treatment to be paid for completely by the individual.”

Trainee Jon Suen was interviewed by The Hearing Journal on “Social isolation, loneliness, and hearing loss during COVID-19.”

August 2020


October 2020

Frank Lin authored “Hear & Now” for Cerebrum magazine about what we’ve learned and what we still need to know about the relationship between hearing loss and cognitive decline in older adults.

“It was not surprising to learn that numerous studies show a significant connection between hearing loss, loneliness, and social isolation,” said study co-author, Jonathan J. Suen, AuD, of the Johns Hopkins School of Nursing and the Cochlear Center for Hearing and Public Health at the Johns Hopkins Bloomberg School of Public Health. “Even anecdotal assumptions about a link make sense because we know that hearing loss affects our communication patterns, which therefore can impact our relationships with others.”
December 2020


“The Hopkins team has been testing whether trained community health workers could help low-income seniors improve their hearing. (A pilot study indicates they can.) Their research protocol uses an effective PSAP from Sound World Solutions that retails for about $700 a pair. But, Dr. Lin said, ‘most of what you see out there — ‘$50 miracle device!’ — is complete garbage. People can’t tell which to trust.’”

January 2021

Frank Lin joined interviewer Julie Rose for the program Top Of Mind on BYU Radio for a thoughtful conversation on hearing aid deregulation: why hearing aids are so expensive, the lack of Medicare funding for hearing health generally, and the potential of the US OTC Hearing Aid Act of 2017 to reduce costs and increase access.

“No one wants to know they have hearing loss,” he said. “But when you’re given a metric you’re not labeling it, instead you’re alerting them to a change. It’s a metric about yourself you would know and could respond to. That number is meaningful and actionable,” he said.

April 2021

Core faculty member Nick Reed described the quality of OTC hearing aids in “Hearing Aids for the Masses,” for the New York Times’ ON TECH column by Shira Ovide.

“Dr. Reed’s research, however, has found that some hearing helpers for $350 or less were almost as good as prescription hearing aids for people with mild-to-moderate hearing loss. Dr. Reed described the best lower-cost devices as the Hyundai of hearing help. (This was a compliment.) They aren’t flashy, but they will get many people safely and effectively where they need to go. He also imagines that the F.D.A. rules will create the conditions for many more people to buy hearing aids — both over the counter and by prescription.”

Carrie Nieman interviewed for “COVID Masks Disrupt Connections for Hearing Loss Patients” by Public News Service, an independent news service in 37 states that reaches a weekly audience of 30-50 million.

“Dr. Carrie Nieman, assistant professor for the Cochlear Center for Hearing and Public Health at Johns Hopkins University in Baltimore, said a survey shows 95% of people living with hearing loss in the U.S. say masks are creating serious communication barriers.”
Trainee Danielle Powell, AuD, PhD weighed in on untangling the connection between hearing loss and dementia in Today’s Geriatric Magazine.

Trainees Danielle Powell, AuD, PhD and Jon Suen, AuD were interviewed by WedMD Connect to Care, to describe “Four signs your loved one may be hearing impaired.”

Core faculty member Amber Willink, PhD, was interviewed by the New York Times’ Mark Miller about the lack of Medicare coverage for dental, vision, or hearing care in “On Medicare and Need Dental Work? Beware a Big Bill.”

“Good oral health, hearing and vision are things that we often just take for granted, but they are so fundamental to our daily needs, especially when it comes to improving and maintaining our health as we get older.”

About Medicare, Nicholas Reed, AuD explains, “Vision, hearing and dental all sort of got left out.” Bobbi Dempsy’s Perspective piece in the Washington Post includes Carrie Nieman and puts a human face to Medicare failure to cover hearing care: “My mom can’t afford hearing aids. The pandemic reminded us why she needs them.”

Illustrator: Nathalie Lees
Ophthalmol who counts depends on who is counted.

Reed NS, Boss EF, Lin FR, Oh ES, Willink A. Satisfaction with Self-Reported Functional Hearing Difficulty Have Unmet Medicare Beneficiaries. 


UPCOMING TRAINEE PUBLICATIONS (SUBMITTED, UNDER REVIEW, IN PREPARATION)

1. Assi L, Campanile J, Samuel L, Reed NS, Deal JA, Swenor BK. The Prevalence of Food Insufficiency, Mental Health Symptoms, and Unmet Health Care Needs Among Americans with Disabilities during the COVID-19 Pandemic.


3. Assi L, Ryam ES, Swenor BK, Deal JA, Wilkins A, Reed NS. Association of Sensory Loss and Knowledge of Heart Disease in Older Adults. [Under review]

4. Assi L, Rozhaya K, Swenor BK, Reed NS. Vision Impairment and Patient Activation Among Medicare Beneficiaries. [Under review]

5. Assi L, Reed NS, Nieman CL, Wilkins A. Factors Associated with Hearing Aid Use Among Medicare Beneficiaries. [Under review]


8. Nieman CL, Suen JJ, Dean LT, Chandran A. Foundational approaches to advancing hearing health equity: A primer in social epidemiology. [Under Review]

9. Powell DS, Brenowitz WD, Yoffi K, Armstrong NM, Reed NS, Lin FR, Gross AL, Deal JA. Examining the Combined Estimated Effects of Hearing Loss and Depressive Symptoms on Risk of Cognitive decline and Incident Dementia. [Under Review at JGMS, Series B]


**Trainee Presentations**


**Faculty Presentations**

1. Betz J. Analyzing Data from Complex Surveys: NHANES and Beyond presented at the UnLocking NHANES symposium, July 2020.


17. Deal JA, Swenor BK. Apples and oranges: Inconsistencies in assessing cognitive functioning in individuals with sensory impairment. Accepted for presentation at the Cognitive-Aging Conference; April 2020, Atlanta, GA. (Conference cancelled due to COVID-19).


19. Lin F. Hearing, Aging, & Public Health: From Epidemiology to Public Policy presented at the House Ear Clinic; June 2020; Los Angeles, CA.

20. Lin F. Hearing, Dementia & Brain Aging - From Epidemiology to Clinical Practice presented at the New Zealand Society of Otolaryngology Annual Meeting, October 2020; Auckland, NZ.

21. Lin F. Hearing Loss and Dementia presented to the NIDCD Advisory Counsel; September 2020; Bethesda, MD.


23. Lin F. Hearing Loss in older adults - an EMT’s perspective from the clinic to public health & policy in the U.S. presented at the Chinese University of Hong Kong Department of Otolaryngology; June 2021.


26. Lin F. Sexotoneural hearing loss presented at an External-funded Focused Drug Development Meeting hosted by the Hearing Loss Association of America in collaboration with the Food and Drug Administration; April 2020.


30. Nieman C. Addressing Hearing Care Disparities for Individuals with Hearing Loss & Dementia presented as part of the Stillwater Series, co-sponsored by Special Interest Groups at Audiology & Public Health, Gerontology, and Aural Rehabilitation & its instrumentation; November 2020.

31. Nieman C. Advancing Equity in Hearing Care: Community-Delivered Hearing Care from Research to Impact presented as part of the Why Hearing Research Matters as a Longevity and Community Issue at the Association of Retired Rice University Faculty Conference; April 2021.


33. Nieman C. Engaging Our Older Adults: Applying Human-Centered Design to Advance Hearing Health Equity presented at the HEAR & the Australian Hearing Hub’s Public Health & Hearing Webinar Series; Macquarie University; October 2020; Sydney, Australia.

34. Nieman C. HEARS: An ICT of Community-Delivered Hearing Care for Older Adults presented at the Cochlear Center for Hearing and Public Health Research Week; March 2021.

35. Nieman C. HEARS: Community-Delivered Hearing Care From Research to Impact presented at Columbia University Irving Medical Center Department of Otolaryngology-Head & Neck Surgery Grand Rounds; January 2021.


42. Nieman C. Hearing Loss & Healthy Aging: Advancing a Public Health Approach to Hearing Care presented at the Hearing Loss Association of America Montgomery County, MD Meeting, January 2020; Bethesda, MD.


45. Nieman C. Hearing Loss & Hearing Care Disparities among Older Adults with Cognitive Impairment. Findings from ARIC-NCS presented as part of the Epidemiology Sensory Impairment & Cognition symposium at the Alzheimer’s Association International Conference; July 2020, Amsterdam, Netherlands.

46. Nieman C. Hearing Loss, Cognition & Disabilities in Care Findings from ARIC-NCS presented as a recipient of the New Investigator Award at the American Auditory Society Annual Scientific & Technology Meeting; March 2020; Scottsdale, AZ.


49. Nieman C. Leveraging Over-the-Counter Hearing Technology & Older Adult Peer Educators to Increase Access; Lessons from HEARS presented as part of the Communication and Governance symposium at the International Society for Gerontechnology World Conference of Gerontechnology; October 2020.

50. Nieman C. Leveraging Task Shaining & OTC Hearing Technology to Increase Access; Lessons from HEARS presented as part of the Advancing Alzheimer’s Disease Care and Services Among Racial and Ethnic Minorities symposium at The Gerontological Society of America (GSA) 2020 Annual Scientific Meeting Online; November 2020.


55. Nieman C. World Report on Hearing presented at the CI Futures Forum, April 2021; Sydney, Australia.

56. Reed NS. Hearing Loss and Frailty Among Older Adults: The ARC Neurocognitive Study, The Study of Sensory Aging in Existing Cohorts of Older Adults presented at the Gerontological Society of America (GSA) 2020 Annual Scientific Meeting Online; November 2020.


59. Reed NS. Hearing Loss, Health Care Seeking Behaviors, and Preventable Hospitalizations presented as a recipient of Early Career Research Award Lecture at the American Auditory Society Conference; March 2021.

60. Reed NS. Trends in Hearing Aid Use Among Older Adults in the United States, 2011-2018 presented at The Gerontological Society of America (GSA) 2020 Annual Scientific Meeting Online; November 2020.

61. Reed NS. Update on Hearing Loss and Hearing Care Interactions presented at Hearing Loss Association of America Hospital Safety for People with Hearing Loss Program; October 2020.
Once vaccines were widely available, faculty, staff and trainees enjoyed an end-of-year picnic in Patterson Park - some meeting face to face for the first time!