HEARING CARE REIMAGINED

HOW TECHNOLOGY CAN TRANSFORM HEARING HEALTHCARE

RNID Supporting people who are deaf, have hearing loss or tinnitus

Contents

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Executive Summary

Across the UK, NHS hearing healthcare services are at risk of being overwhelmed by a combination of an ageing population and a dedicated but resource-constrained workforce. Audiology already has some of the longest waiting times for diagnostic tests, and the service delivery model has remained largely unchanged for decades. But there is another way forward.

At RNID, we believe now is the time to create change and test what is possible in hearing healthcare. By embracing new technologies and service delivery models, we can create a future where services are more sustainable, accessible, and person-centred.

These innovations can improve outcomes, reduce waiting times, and empower people to manage their hearing health as part of their overall wellbeing. By offering regular hearing checks, we can create a social norm that encourages earlier identification and intervention.

More than 18 million people in the UK are deaf, have hearing loss, or tinnitus[1]. This is 1 in 3 of us. Among them, around 8 million people could benefit from hearing aids but only 3 million use them[6]. By prioritising hearing health, we can improve the quality of life for millions whilst reducing the burden of untreated hearing loss.

RNID is at the forefront of the thinking in this area, leveraging our deep expertise and our significant experience working with healthcare professionals, academics, technology experts, and people with lived experience to improve people's hearing health.

The population data that can be created through new digital approaches offers the potential to transform our understanding of hearing health, how to design effective interventions, and shed new light on the relationship between hearing loss and other conditions such as dementia.

Promising ideas will need to be tested to ensure they meet people's needs. We will work with partners to test innovations that:

1. **Identify early signs of hearing loss**

2. **Support quicker diagnosis of hearing loss**

3. **Make it easier for people to get support**

4. **Empower people to manage their hearing health**

Join us in pioneering a future that delivers the hearing healthcare support every person deserves.

How RNID can help you

We can provide evidence, stress test ideas, and partner on innovation projects.

Our Research Panel of over 1,200 people who are deaf, have hearing loss, or tinnitus can offer valuable insights for testing ideas.

Our expert team of audiologists, technologists, and researchers can provide consultancy support or partner on projects to help translate the insights into better products and services.

Our specially trained staff and volunteers in our RNID community services teams can deliver aftercare services people can easily access in community settings. We also provide trusted information through our Contact RNID service and online support tools.

Contact healthcareinnovation@rnid.org.uk to find out more about how you can work with RNID.

Background

The challenge

Across the UK, it is estimated that more than 8 million adults could benefit from hearing aids but only about 3 million people use them[6]. This is partly because hearing checks are not a routine part of people's health behaviours. Many people do not notice changes in their hearing, worry about stigma, or find it hard to access healthcare services.

People who do try to get help often struggle with confusing processes, limited appointments, and rigid options for accessing support[7]. For example, in England, NHS audiology services have one of the highest proportions of patients waiting more than 6 weeks for an initial assessment out of 15 nationally measured diagnostic tests[8].

Unaddressed hearing loss can lead to barriers in employment, socialising, and access to everyday services, contributing to falls, social isolation, depression, and potentially cognitive decline[3,4,5,9,10]. These negative consequences, and the associated costs for the public sector, are avoidable.

How can the NHS meet the current and growing future need for adult hearing services to ensure people continue to get support free at the point of need?

The opportunity

Technology has rapidly changed the way we live and work. It is hard to imagine a world without online shopping, video calls, and digital maps. RNID facilitated the mass rollout of digital hearing aids in the NHS in the early 2000s, and while the quality of these devices has improved immensely, the process of getting them has remained largely unchanged.

At RNID, we believe there is a big opportunity to transform and enhance adult hearing healthcare by making better use of technology. Digital tools, remote services, and data-driven approaches can make services more efficient and responsive to people's needs.

People increasingly expect flexible and digital options[11]. The Government is also prioritising investment to more comprehensively use technology within the NHS. Strategies across the UK, including the 2025 Spending Review, 10 Year Health Plan for England, Welsh Government Future Approach to Audiology, the Scottish Government Digital Health and Care Strategy, and the Northern Ireland Health and Social Care Digital Vision and Strategy Summary all emphasise the need to accelerate digital transformation within healthcare. To achieve these ambitions, investment in population health data and the NHS workforce will be needed to create the most value for people and NHS services.

It is encouraging that some ideas which could improve hearing healthcare in the UK have already been tested in research environments, healthcare services for other long-term conditions, or in other countries. Now is the time to test and scale existing and emerging technologies to ensure they meet the needs of people who are deaf, have hearing loss, or tinnitus.

Developing RNID's vision

We have been working with academics, healthcare and technology professionals, and people with lived experience to explore ideas for improving hearing healthcare.

Thank you to everyone who shared ideas and experiences in surveys, workshops, interviews, and focus groups. You have helped to identify the key opportunities for change, and we are excited to take the next step to test ideas in practice.

Innovation opportunity 1: Identify early signs of hearing loss

We want to create a future in which everyone is encouraged to identify and recognise early signs of hearing loss, because hearing is an essential part of health and wellbeing.

What do people need?

People often do not realise they are losing their hearing, just as they may not notice when the light slowly fades at the end of the day until someone switches the light on.

Currently, people are not prompted by the NHS to check their hearing as part of supporting their health and wellbeing. There is also limited public information on where to get hearing tests on the NHS. For people who are looking for help for their hearing, it can be hard to know where to go for support.

Creating a social norm around regular hearing checks, similar to eye and dental check-ups, could help people recognise hearing changes earlier and seek support sooner.

"Generally, people are not looking after or testing their hearing as they would with, say sight or teeth."

Person who is deaf

38%

of people who think they may have hearing loss have not spoken to a professional about it

Key opportunities

There is already a range of technology-enabled solutions ready to be tested and scaled for encouraging people to identify and recognise early signs of hearing loss. These can be used independently for those who have access to smartphones, or with support from community-based services, such as those delivered by the third sector.

"Encourage the general population to get their hearing checked more often. It takes YEARS for people to get their hearing tested initially, compared to getting an eye or dental checkup."

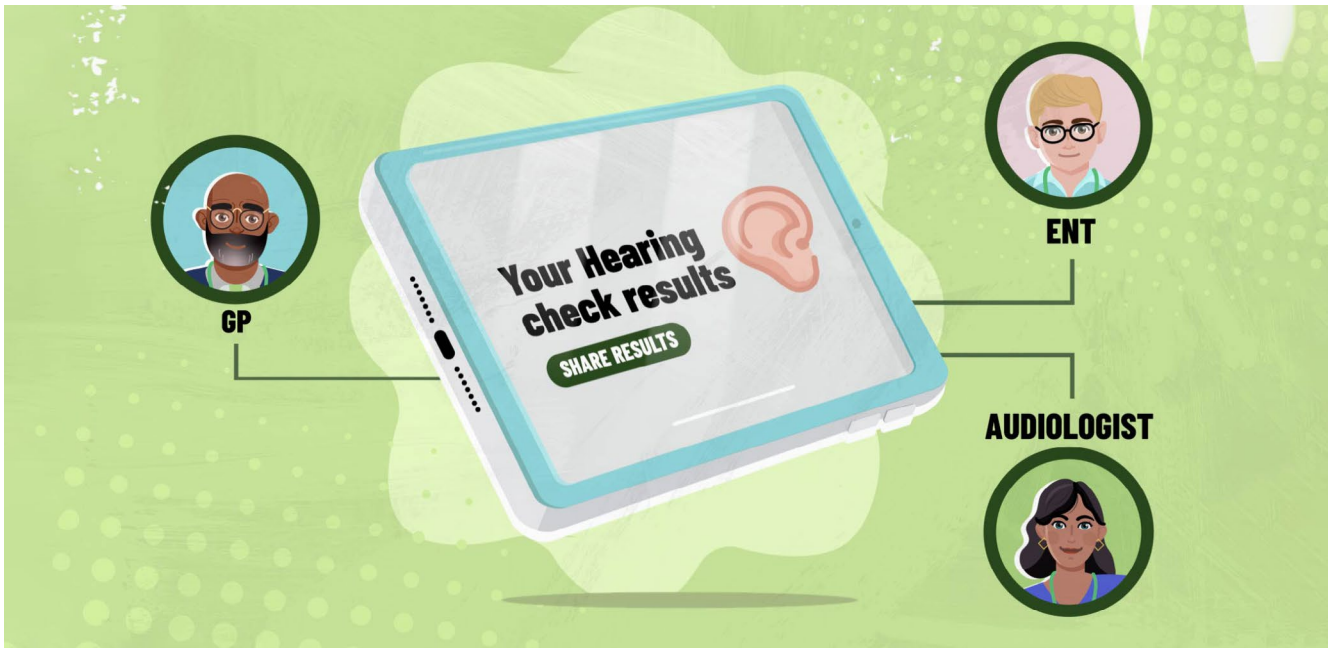
Person with hearing loss and tinnitus

Scaling existing technologies	Digital hearing checks	Existing digital hearing checks could encourage people to regularly think about their hearing health. These checks are free, quick, and easy to do at home. By integrating with NHS Apps, NHS platforms, or existing population health checks, they could also support effective triage, ensuring people see the right specialist at the right time. Population level hearing check data could aid service development and be linked with other health data to better understand links with co-morbid conditions.
Adapting existing technologies	NHS service directories	A hearing healthcare directory could include information on where and how to get a hearing assessment. Similar to the directories for pharmacies and GPs, this could help people to self-refer to relevant specialist services.
Testing emerging technologies	AI-based ecological hearing assessments	AI-based ecological hearing assessments could support real-time identification of hearing loss in everyday life. This technology could be a feature in wearables, such as earbuds, to infer early changes in hearing based on a person's responses to environmental sounds. Widespread adoption of the technology could also improve early detection by creating population health data on the early signs of hearing loss.

Innovation opportunity 2:

Support quicker diagnosis of hearing loss

We want to create a future in which people's hearing loss is diagnosed quicker, so that they can benefit from early interventions and reduce the risk of other comorbidities, such as falls, social isolation, depression, and potentially cognitive decline.



What do people need?

People often struggle knowing where to go or what to do when they want to take action on their hearing. Confusing referral processes, combined with a lack of timely appointments within GP and hearing healthcare providers have resulted in people waiting a long time, struggling to navigate different services, and being referred to inappropriate services for their need.

Additionally, many people also need ear wax removed before a hearing assessment. If people live in an area that no longer has an NHS ear wax removal service, they face paying up to £100, which is unaffordable for many, or further delaying access to essential hearing healthcare.

NHS audiology services have one of the highest proportions of patients waiting

more than 6 weeks

for an initial assessment out of 15 diagnostic tests[8]

Key opportunities

People have told us they want more flexible and accessible ways to get a confirmed diagnosis. This includes options to take a test or get an ear examination at home or nearby, and automatically share the results with the right healthcare professional.
A quicker hearing loss diagnosis would benefit millions of people through earlier intervention to improve quality of life and could even reduce the risk of developing other comorbidities such as falls, social isolation, depression, and potentially dementia.

"It's having the flexibility of being able to fit the necessary assessments into an already demanding life, without having to book a lot of time off work, and to have access to understandable results to manage my own health in a way that suits me."

Person who is deaf

Scaling existing technologies	Video otoscopes	Universal adoption of video otoscopes and image sharing could improve diagnosis by creating population health data, such as an image bank of ear examinations. Similar to existing technologies for skin and eye care, the data could be used to improve patient care by training AI models to triage patients to the right specialist, and monitor changes to an individual's ear health over time.
Adapting existing technologies	NHS Apps	NHS Apps could be developed to provide features that help patients understand their test results, navigate support from different specialisms, and update their communication preferences. These features could improve patient experience and referral quality.
	Automation and AI in triaging	Automation and AI in triaging have been tested and proven effective could be rolled out in hearing healthcare. Similar to existing technologies in radiology, eye, and skin care, it could support a quicker diagnosis whilst reducing the administrative burden for healthcare staff.
Testing emerging technologies	Remote hearing tests	Medical-grade remote hearing tests are emerging that could allow people to get an accurate diagnosis at home. These remote hearing tests could be a feature of hearing aids or wearables for non-complex cases.

"More choice, opportunities to test yourself, input your own findings and access your own records. Being informed about next steps is important too. It all means we are less likely to fall between the cracks."

Person with hearing loss and tinnitus

Innovation opportunity 3:
Make it easier for people to get support

We want to create a future in which everyone can easily and quickly get the hearing support they need, to live a healthier life.

What do people need?

Many people struggle with how time consuming it can be to access support and navigate services. This leads to people not accessing the services they need at the right time from the right professional.

People have told us they want easier and more flexible ways of getting support. This includes options for how to get help, such as using digital tools and remote services. As well as options for where to get help, including at home and in the neighbourhood.

People are also still facing barriers to services due to inaccessible information and communication. This is despite existing guidance for healthcare providers. People need more accessible formats, such as alternatives to telephone booking systems for scheduling an appointment.

"It's having the flexibility of being able to fit the necessary assessments into an already demanding life, without having to book a lot of time off work."

Person who is deaf

34%

of people are interested in having all or most treatment done remotely[7]

Key opportunities

There is already a range of ideas ready to be tested and scaled which could make it easier for people to get support for their hearing health. By making it easier, and not just quicker, to navigate services, the NHS can reduce health inequalities and unsuitable referrals to hospital services.

"I like the idea of being in control of accessing audiology services independently at home and being able to adjust my hearing aids accordingly."

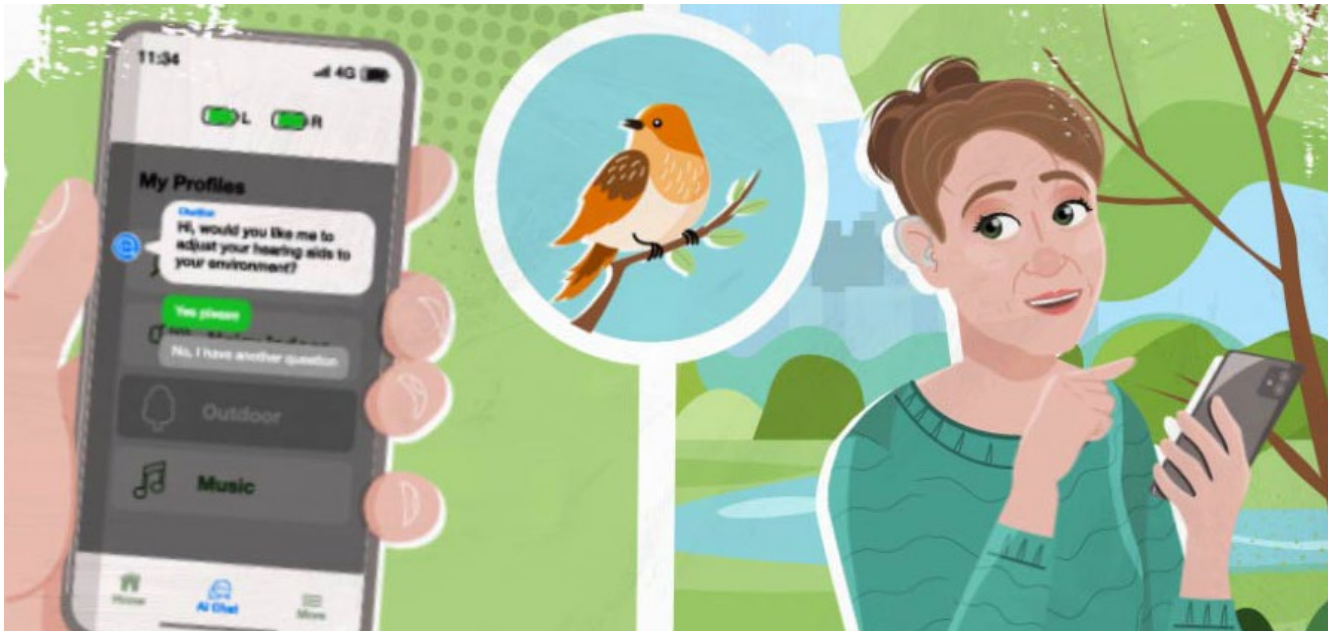
Person with hearing loss and tinnitus

Scaling existing technologies	Remotely adjustable hearing aids	Remotely adjustable hearing aids could support treatment at home, increasing access to audiology while reducing missed in-person appointments. This has already been tested in the NHS, and if data on uptake and outcomes were collected, has the potential to improve the deployment of skilled NHS staff.
	Accessibility technology features	Universal adoption of existing assistive technologies for communication would ensure that services are accessible for people who are deaf or have hearing loss. Existing technologies such as speech-to-text, should be an option before, during, and after appointments. They could also help streamline documentation for healthcare professionals.
Adapting existing technologies	NHS Apps and platforms	NHS Apps and digital platforms could be enhanced with features to help patients access online advice and remote consultations rather than relying on in-person scheduled appointments. This would help people get the right support at the right time and free up time for in-person support for those that need it.

Innovation opportunity 4:

Empower people to manage their hearing health

We want to create a future in which everyone feels confident and in control of their hearing health, so that they can live a more independent life.



What do people need?

Like many other long-term conditions, it can take time for people to adjust to a hearing loss or tinnitus diagnosis. The amount of information on treatment options and assistive technology can be overwhelming.

People have shared that they want information and support that is flexible, helpful, and accessible to help manage their own hearing health. This includes options for remote support, treatments that can adapt to the unique needs of the person, drop-in clinics, and community support services such as RNID Near You.

Insights from people supported through RNID's website, Contact RNID, and RNID Near You services, indicate that there is high demand for advice on available technologies and how to use them.

> ***"Posting my hearing aid(s) for maintenance terrifies me and leaves me unable to function. Even though they're posted back to me within one day that's still two whole days at least of not being able to function."***
>
> Person who is deaf

Key opportunities

There is already a range of existing practices and technologies on the horizon to empower people to manage their hearing health.

48%

of people are interested in remote hearing aid tuning[7]

"The use of new devices and equipment will benefit all of us, I believe we should embrace and encourage new ways and the use of new technologies which will make our lives and community better."

Person with hearing loss and tinnitus

Scaling existing technologies	AI-enabled hearing aids	Many hearing aids have features that utilise AI, such as advanced speech processing, to improve patients' experience in different listening environments. Wide-scale adoption of hearing aids with advanced AI features could improve individual hearing outcomes and quality of life.
	Wireless connectivity features	Increased adoption of assistive listening systems, such as Auracast and telecoil loops, would support people in difficult listening environments at home and at work. Assistive listening systems can be activated during a hearing aid fitting, alongside digital aftercare support for patients to get the most out of their medical technology.
Adapting existing technologies	NHS Apps and platforms	NHS Apps and digital platforms could include features to help patients understand their hearing aids, assistive technologies, and their hearing health data to aid continuous long-term management This would help patients have more ownership and control of their hearing health and improve clinical decision making.
Testing emerging technologies	In-ear biometric monitoring	In-ear wearable technology, including hearing aids, could support biometric monitoring of heart rate, step count, cognitive health and fall detection. These devices could help monitor an individual's health and wellbeing, as well as gather population data on hearing loss and comorbidities.

From vision to impact

This document has set out a bold but achievable vision for an alternative future for hearing healthcare. There are many emerging options that could transform people's health and use of NHS resources. At RNID, we are excited to take the next step to test ideas in practice.

Creating value for people and the NHS

Beyond individual technologies, there is huge scope to harness population health data to create meaningful benefits for people, services, and the system.

Immediate value: improving lives and reducing avoidable costs

Unaddressed hearing loss can lead to barriers in employment, socialising, and access to everyday services, contributing to falls, social isolation, depression, and potentially cognitive decline[3,4,5,9,10]. By prioritising hearing health, we can intervene earlier, reduce the burden of untreated hearing loss, and improve people's quality of life.

Technology-enabled innovations such as digital hearing checks and video otoscopes could support quicker diagnosis of hearing loss. This allows earlier intervention, avoids inappropriate hospital referrals, and frees up capacity in overstretched services.

By harnessing the population health data from these technologies, we can improve the accuracy of diagnoses, identify hearing loss patterns and risk factors, and enhance planning for diagnostic resources.

Innovations such as AI-enabled hearing aids, in-ear biometric monitoring, and AI-based ecological hearing assessments could build in-depth insights on people's hearing loss, hearing aid use, and broader wellbeing. By integrating the data from these innovations with a patient's health record, we can empower patients to manage their hearing health whilst creating population data for research.

Future value: improving evidence for living well for longer

Greater data collection will enable better understanding of the links between hearing loss, hearing aid usage and other long-term conditions, such as dementia.

For example, when linked with broader population health data, such as from the UK Biobank, this could transform our ability to design effective personalised interventions to improve outcomes for these conditions.

Summary of key innovation opportunities

Emerging technology-enabled innovations could be transformative in delivering better health outcomes whilst saving costs.

Some ideas are ready to scale and would take important steps to reduce health inequalities and improve outcomes for more than 18 million adults across the UK[1,2].

Other ideas are more transformative and offer an opportunity to pioneer new approaches to deliver hearing healthcare.

		Transformation potential		
		Incremental	**Transformative**	**Disruptive**
Technology readiness	**Emerging technologies ready to be tested**		Remote hearing tests In-ear biometric monitoring	AI-based ecological hearing assessments
	Existing technologies ready to be adapted	NHS Service Directories	NHS Apps and platforms Automation and AI in triaging	
	Existing technology ready to scale	Wireless Connectivity Features Accessibility technology features	Digital hearing checks Video otoscopes Remotely adjustable hearing aids AI-enabled hearing aids	

How RNID can help you

We can provide evidence, stress test ideas, and partner on projects and services.

At RNID, we believe now is the time to create change and test what is possible in hearing healthcare. By embracing new technologies and service delivery models, we can create a future where services are more sustainable, accessible, and person-centred.

We are working with forward-looking partners on pilots, innovation programmes, and initiatives that aim to improve hearing health.

Contact **healthcareinnovation@rnid.org.uk** to find out more about how you can work with RNID.

RNID Expertise

RNID has a team of audiologists, audio technologists, and researchers who can support in translating the insights and experiences of people who are deaf, have hearing loss, and tinnitus into better products and services.

RNID Community Services

Our specially trained staff and volunteers in our RNID community services teams can deliver aftercare services people can easily access in community settings. We also provide trusted information through our Contact RNID service and online support tools.

RNID Insights

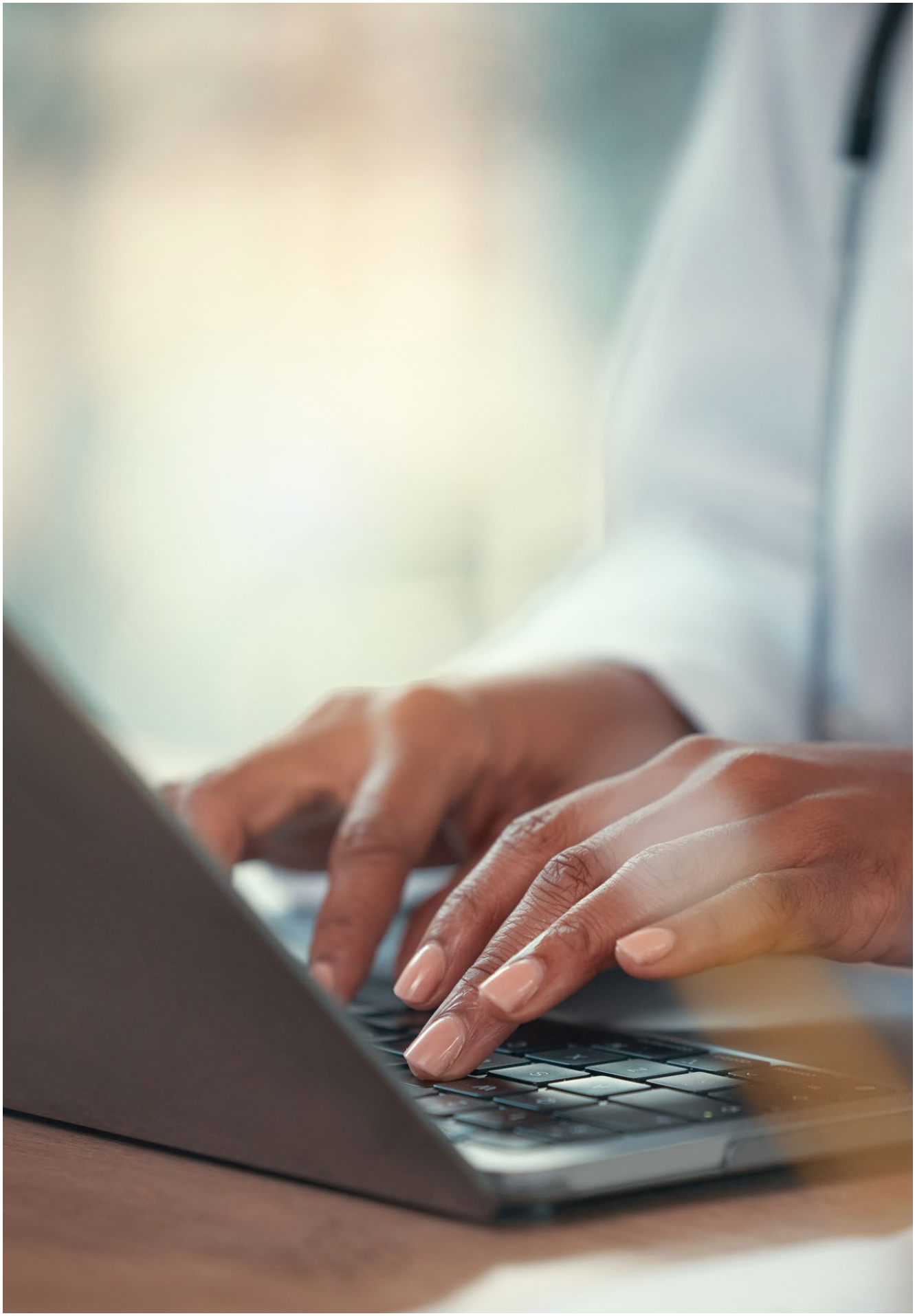
RNID's Research Panel offers organisations the opportunity to gain unique insights from a diverse group of people of over 1,200 people with lived experience of deafness, hearing loss or tinnitus.

By collaborating with our panel, you can:

Gather user insights: conduct surveys, interviews, and focus groups to understand the needs of your target audience

Co-design solutions: work directly with panel members to create products and services tailored to their needs

Test your products and services: receive feedback on accessibility features, apps, and new technologies



Acknowledgements

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Disclaimer

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References

[1] Akeroyd, M. A., & Munro, K. J. (2024). Population estimates of the number of adults in the UK with a hearing loss updated using 2021 and 2022 census data. *International Journal of Audiology, 63*(9), 659–660. https://doi.org/10.1080/14992027.2024.2341956

[2] Tsimpida, D., Kontopantelis, E., Ashcroft, D. M., & Panagioti, M. (2021). Conceptual Model of Hearing Health Inequalities (HHI Model): A Critical Interpretive Synthesis. *Trends in Hearing*, 25, 233121652110029. https://doi.org/10.1177/23312165211002963

[3] Goman, A. M., Tan, N., Pike, J. R., Bessen, S. Y., Chen, Z. (Sally), Huang, A. R., Arnold, M. L., Burgard, S., Chisolm, T. H., Couper, D., Deal, J. A., Glynn, N. W., Gmelin, T., Gravens-Mueller, L., Hayden, K. M., Martinez-Amezcua, P., Mitchell, C. M., Pankow, J. S., Reed, N. S., … Lin, F. R. (2025). Effects of hearing intervention on falls in older adults: findings from a secondary analysis of the ACHIEVE randomised controlled trial. *The Lancet Public Health*, 10(6), e492–e502. https://doi.org/10.1016/S2468-2667(25)00088-X

[4] Shukla A., Harper M., Pedersen E., Goman A., Suen J. J., Price C., Applebaum J., Hoyer M., Lin F. R., Reed N.S. (2020). Hearing Loss, Loneliness, and Social Isolation: A Systematic Review. *Otolaryngology Head Neck Surgery*, 162(5):622-633. https://doi.org/10.1177/0194599820910377

[5] Livingston G., Huntley J., Liu K. Y., Costafreda S. G., Selbæk G., Alladi S., Ames D., Banerjee S., Burns A., Brayne C., Fox N.C., Ferri C.P., Gitlin L.N., Howard R., Kales H.C., Kivimäki M., Larson E.B., Nakasujja N., Rockwood K., Samus Q., Shirai K., Singh-Manoux A., Schneider L. S., Walsh S., Yao Y., Sommerlad A., Mukadam N. (2024) Dementia prevention, intervention, and care: 2024 report of the Lancet standing Commission. *Lancet*, 10;404(10452):572-628. https://doi.org/10.1016/S0140-6736(24)01296-0

[6] RNID's hearing loss population estimates are calculated using the most robust data available. This estimate is based on (1) BIHIMA Market Data, (2) 2022 EuroTrak UK data and (3) Dillon et al. 2020

[7] RNID. (2024b). *In Their Own Words: Insights and ideas from adult Hearing Service patients.* RNID. https://rnid.org.uk/wp-content/uploads/2024/02/audiology-report_RNID_Feb24.pdf

[8] NHS England. (2025). *Monthly Diagnostic Waiting Times and Activity* [Statistics]. https://www.england.nhs.uk/statistics/statistical-work-areas/diagnostics-waiting-times-and-activity/monthly-diagnostics-waiting-times-and-activity/

[9] Barriers in employment: RNID. (2018). *Working for Change 2018: Workplace Experiences.* RNID (previously Action on Hearing Loss). https://rnid.org.uk/wp-content/uploads/2020/05/Working-for-Change-survey-report.pdf

[10] Access to services: RNID. (2024). *It Does Matter: Public attitudes toward deaf people and people with hearing loss*. RNID. https://rnid.org.uk/wp-content/uploads/2024/04/RNID-It-Does-Matter-Report-V2.pdf

[11] RNID. (2025) *RNID Future of Audiology Patient Survey* [unpublished]

[12] Tsimpida, D., Rajasingam, S., Panagioti, M., & Henshaw, H. (2024). The leaky pipeline of hearing care: primary to secondary care evidence from the English Longitudinal Study of Ageing (ELSA). *International Journal of Audiology*, 63(5), 349–357. https://doi.org/10.1080/14992027.2023.2186814


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