

Auditory Implant Service

Activity Report 2024/5



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The University of Southampton Auditory Implant Service (USAIS) is an Enterprise Unit in the Faculty of Engineering and Physical Sciences and is commissioned by NHS England Specialised Services for the assessment, treatment and long-term care of patients needing auditory implants. USAIS has separate contracting arrangements with the Channel Islands.

This report is for the year 2024/25 starting on 1 April 2024 and ending on 31 March 2025.





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Overview

USAIS receives referrals for assessment from Audiologists, Ear, Nose and Throat (ENT) specialists and GPs for assessment for Cochlear Implants (CI), Bone Conduction Hearing Implants (BCHI) - including Middle Ear Implants (MEI) - and non-surgical Bone Conduction Hearing Devices (BCHD).

USAIS also runs a Private Hearing and Balance (PHAB) clinic.

Since the service opened in 1990, our Surgeons have implanted over 2000 devices (including CI, BCHI and MEI). Our clinicians provide lifelong support to implant users helping them to gain maximum benefit from their devices.

USAIS follows NHS England Service Specification for Cochlear Implantation services (adults and children) (2023) and NICE Cochlear Implants for children and adults with severe to profound deafness TAG 566 and the NHS England Service Specification for Bone Conduction Hearing Implant and Middle Ear Implant Service (all ages) (2024) and NHS England Clinical Commissioning Policy: Bone Conducting Hearing Implants (BCHIs) for hearing loss (all ages) (2016).

Most of our clinics are held in Building 19 on Highfield Campus, Southampton University, but we also work from The Elizabeth Foundation in Portsmouth, local Audiology departments, and provide remote care to patients in their home or in clinics in local Audiology departments.

USAIS Milestone Activities

Patient referrals

Referrals to USAIS increased every year up to 2024/25. There were 517 referrals to the Cochlear Implant, Bone Conduction Hearing Implant, and Private Hearing and Balance services. However, we know that only 5-20% of adults who are eligible for an auditory implant are referred for one, so there continues to be considerable unmet need.

Patient appointments

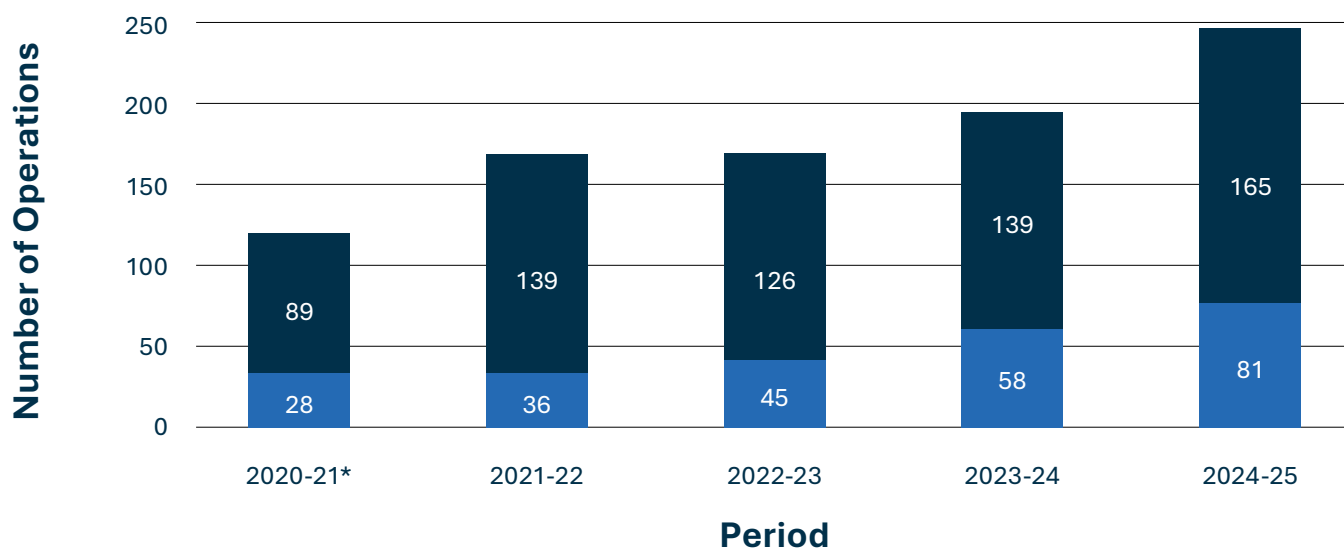
In 2024/25, 7486 appointments were attended by patients, who saw a range of professionals including Audiologists, Rehabilitationists, Consultant Surgeons, Psychologists and an Advanced Nurse Practitioner. Most appointments were with Audiologists (3336) and Rehabilitationists (2314).

The rate of non-attended appointments (including children who were not brought to appointments) remained at 6% overall, which is in line with national data. USAIS aims to reduce the non-attendance rate by introducing SMS text reminders for appointments.

Patient operations

Operation activity has increased due to increased demand and a reduction in waiting times.

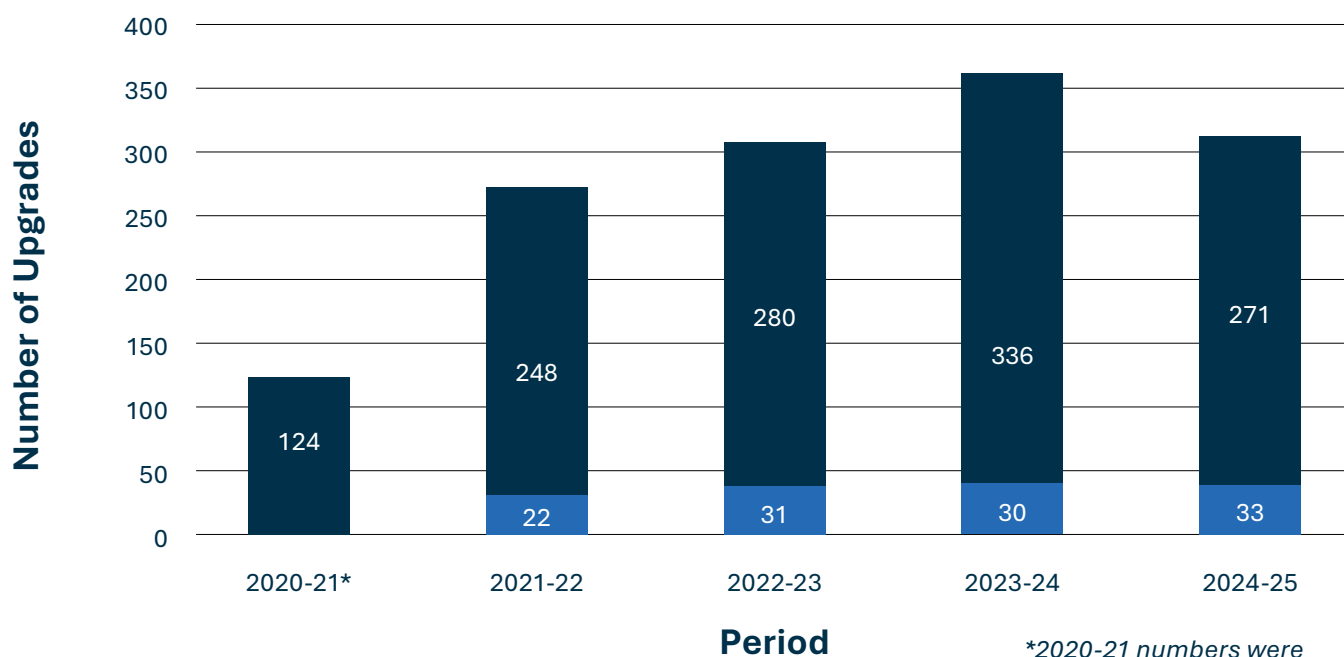
- Cochlear Implants
- Bone Conduction Hearing Devices



Processor upgrades

Patients are usually offered an upgrade to their processors every 5 years. Upgrades were not prioritised during the COVID 19 pandemic. There was then an increase in the number of upgrades during the following years.

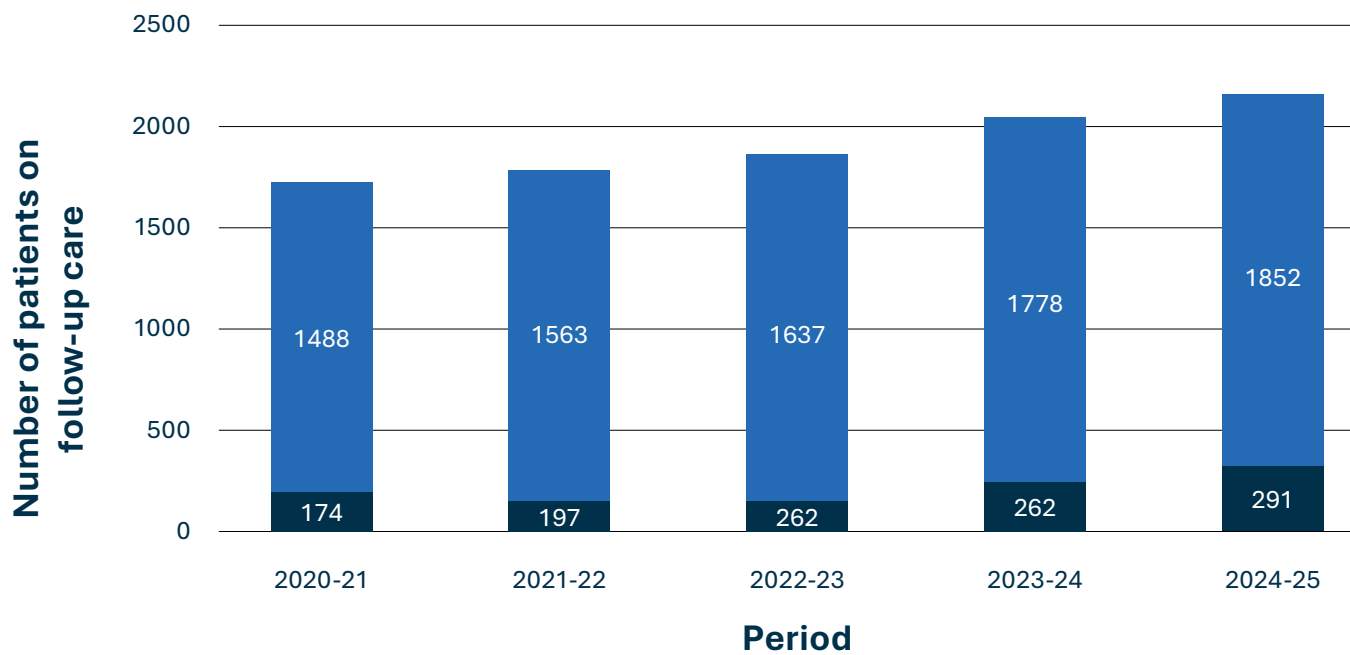
There were fewer processor upgrades in 2024/25 than the previous year, as numbers stabilised following the fluctuations caused by the pandemic and post-pandemic recovery.



**2020-21 numbers were affected by COVID-19*

Long Term Patient Care

There are now 2178 patients on USAIS’ long-term follow-up care programme (maintenance). As the number of patients referred to the service continues to grow, so does the number of patients on the life-long follow-up care programme.



Patient Demographics

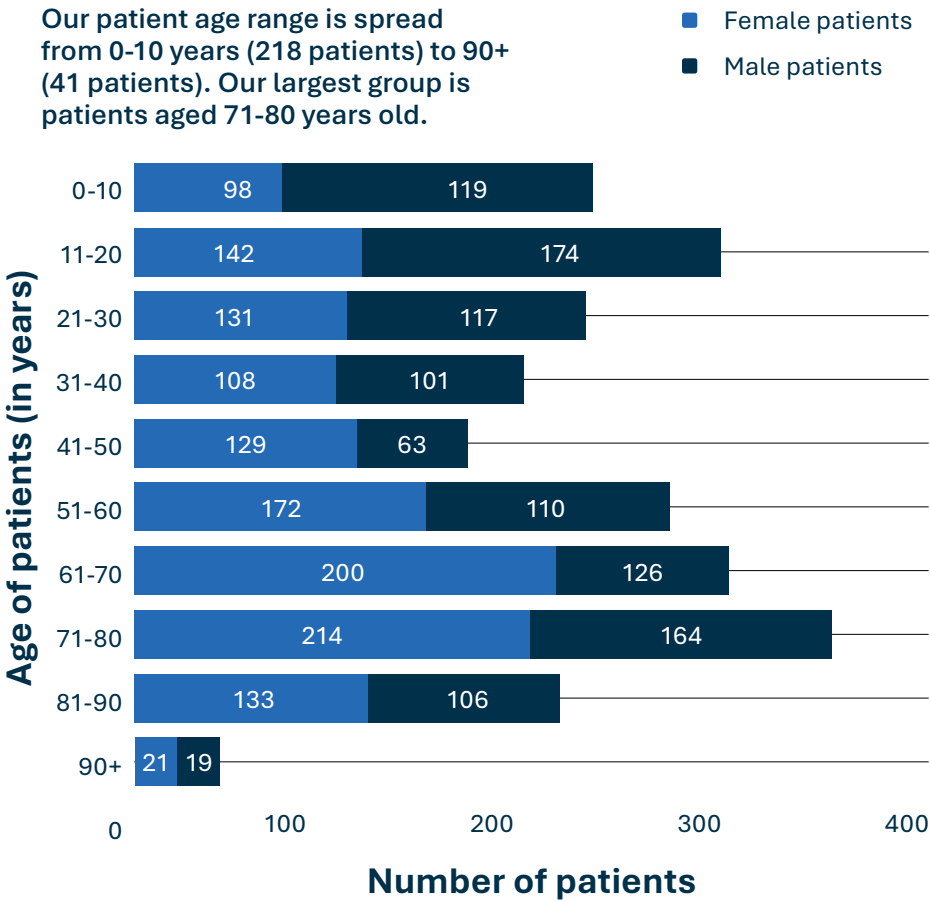
Geographic location of patients using USAIS

The majority of USAIS patients live in the south of England, with smaller numbers living further afield either temporarily (while studying) or permanently.

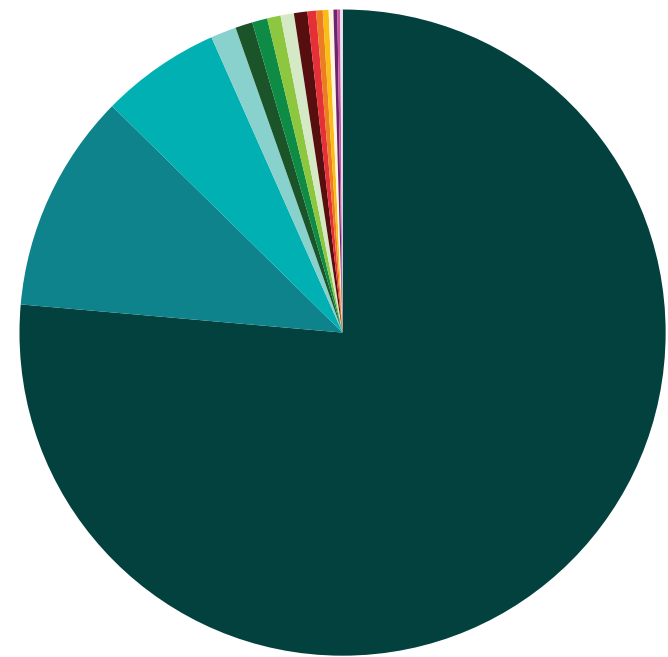


Geographic Location of USAIS patients

Our patient age range is spread from 0-10 years (218 patients) to 90+ (41 patients). Our largest group is patients aged 71-80 years old.



NHS Patient Ethnicity 2024 - 2025



Ethnicity of USAIS NHS patients

- White (British) — 76.39%
- White (any other White background) — 10.97%
- Not stated — 5.99%
- Asian or Asian British (Indian) — 1.28%
- Black or Black British (African) — 0.86%
- Asian or Asian British (any other Asian background) — 0.76%
- Mixed (any other mixed background) — 0.67%
- Asian or Asian British (Pakistani) — 0.67%
- Mixed (White and Asian) — 0.67%
- Mixed (White and Black Caribbean) — 0.43%
- Other ethnic groups (Chinese) — 0.33%
- White (Irish) — 0.29%
- Other ethnic groups (any other ethnic group) — 0.24%
- Black or Black British (Caribbean) — 0.19%
- Asian or Asian British (Bangladeshi) — 0.14%
- Mixed (White and Black African) — 0.14%
- Total — 100.00%**

Service Outcomes

USAIS monitors Key Service Outcomes and 48 Key Performance Indicators, to assess how well USAIS meets the Care Quality Commission (CQC) assessment framework. This report focuses on whether USAIS is: Safe, Effective, Caring and Responsive.

100%

of Cochlear Implant patients who were wearing their processors felt that their quality of life had improved.

Clinical Outcomes



Key Service Outcomes are measured at patient 12-month reviews against the relevant NHS Service Specifications

The results were as follows:

Cochlear Implant Service

Proportion of recipients to be using their processors consistently and reliably. (Target: 80%)

96%

(101 patients) were wearing their device 'often' or 'always' and 97% (61 patients) were either 'satisfied' or 'very satisfied' with their device(s).

Proportion of patients with improvement in speech perception scores and/or quality of life. (Target: 80%)

100% of adults & teenagers (73 patients) reported that they could understand speech better or felt that their quality of life had improved.

100% of children (10 patients) had an improvement in auditory performance and/or speech perception post-implant.

Bone Conduction Hearing Implant Service

Proportion of recipients to be using their processors consistently and reliably. (Target: 80%)

82%

of patients (28 patients) were wearing their device(s) 'often' or 'always'.

Proportion of patients satisfied with their devices. (Target: 80%)

96% of adults and

80% of all paediatric patients (or their carers) reported that they were 'very satisfied' or 'satisfied' with their device(s).

Device failure

A Cochlear Implant device has a warranty of 10 years. Unfortunately, sometimes the implant will need to be removed and replaced due to device failure or medical complications.

In 2024/25 there were 13 Cochlear Implant device explants and re-implants. Eleven procedures took place within the warranty period. Eight of these explants resulted from device failure. The two implants replaced after their warranty periods were also explanted due to device failure.

Speech Perception Test Levels

On 30 October 2024, USAIS identified an issue regarding the sound level of its AB Words Speech Perception Test. The criteria for an NHS Funded Cochlear Implant for adults in the UK is based on the result of two tests: a hearing test of both ears when not wearing hearing aids, and an AB Words Speech Perception Test when wearing aids. Patients must reach the required thresholds in both tests to be eligible for a Cochlear Implant.

USAIS undertakes both tests as part of the assessment for suitability for a Cochlear Implant. When new speech perception testing software (Audiqueen) was introduced, sound level testing showed that the speech volume with the previous software has been around 8-10dB quieter than

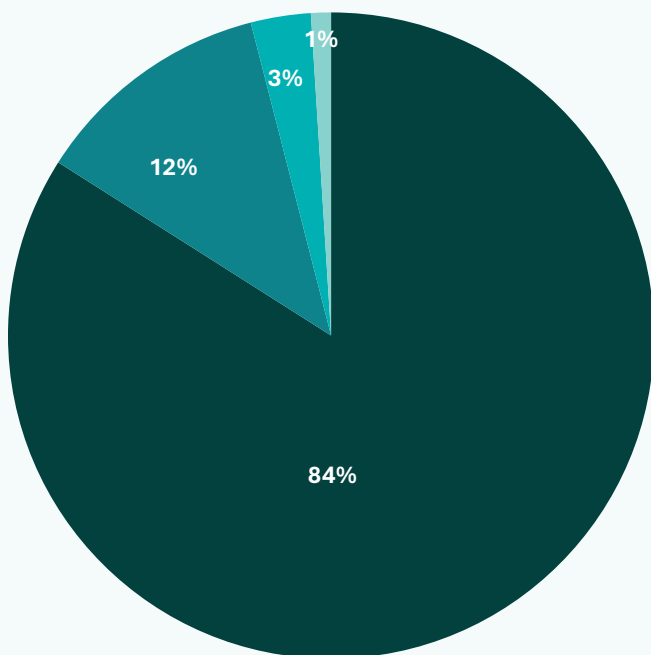
the required 70dB(A). This meant that 78 patients had potentially been tested at a quieter speech volume than the required 70dB(A), which may have affected their score on the test and therefore their eligibility for an NHS-funded Cochlear Implant.

Working with NHS England, all patients with an AB word score of greater than 10% (agreed threshold with NHS Commissioners) were retested using the correct volume. When retested, 74 of the patients (95%) still met the criteria for an implant. Four patients scored over 50%, placing them outside of criteria. However, NHS funding was approved for their surgeries based on individual clinical circumstances.

Is it Caring?

Patient survey

USAIS undertakes the standard NHS Friends & Family Survey. Between 1st April 2024 and 31st March 2025, 625 surveys were completed in total (compared to 683 in the same period last year). 588 questionnaires were collected in clinic and a further 35 via the USAIS Website.



96%

Between April 2024 and March 2025, 96% of patients or carers said that their experience of our service was either “good” or “very good”

- Very Good
- Good
- Acceptable
- Poor
- Very Poor

Patient survey results for 2024-25

As part of the Friends & Family questionnaire, patients are asked what we do well and what we could do better.

What we do well:

“Always so helpful, kind, patient, never feel rushed and all spare parts arrive almost as soon as they’re requested. A very efficient service all round. Always enjoy the ‘Southampton’ experience and visiting the Team.”

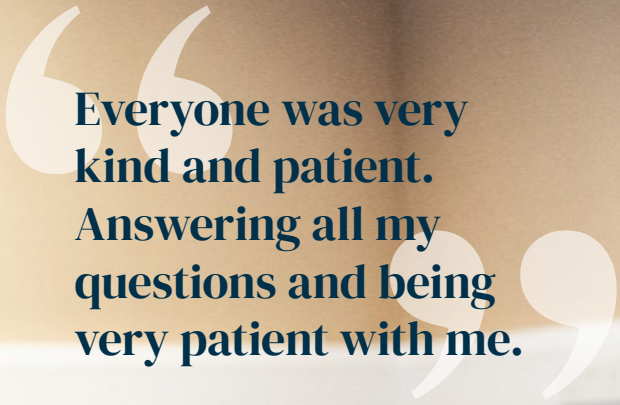
“Excellent care is given in surgery follow up appointment; the nurse had one small reservation and arranged for it to be checked by the surgeon in attendance that day. The presentation of implant exterior parts was amazing accompanied by the backpack to take away and familiarize with the different accessories. Everyone so kind and supportive.”

What we could do better:

“Slight niggle about parking the car. There seems to be a lot of disabled bays that were empty at the time I was there. Although I appreciate the fact that disabled drivers must be prioritised. I think as you’ve expanded more parking is required.”

“Maybe some of the appointments could have been done following each other rather than on separate days.”

“I wish we had time to experiment with my mobile phone, and try out bluetooth.”



Is it Responsive?

Waiting Times

USAIS monitors its patient pathways against the national NHS Referral to Treatment Pathway (18 weeks) which states that patients should receive their first, definitive treatment (CI, BCI, MEI surgery or BCHD fitting) within 18 weeks of their referral. This standard was introduced to USAIS in 2025/26, so will be reported on in the 2025/26 Activity Report. We know that currently not enough of our patients meet this standard and we are working to address the issues that cause delay for patients. The main causes of delay are insufficient imaging (CT & MRI) capacity within hospitals and insufficient clinic capacity within USAIS.

Since January 2025, USAIS has been assessing how long patients wait between implant surgery and initial tuning/fitting of their external device.

For Bone Conduction Hearing Devices

100%

of patients (20/20) received their processor within 3 months of surgery from January to March 2025.

For Cochlear Implants

90%

of patients (135/150) had their initial tuning within 28 days of surgery from January to March 2025.



Stock and Equipment

All audiological equipment is calibrated to British Standards and Stage A checks are carried out and recorded daily.

It is important that devices are functioning optimally, that patients are supported to use their processors and accessories, and that any issues that arise are addressed.

The team encourages all CI patients to subscribe to the Manufacturer Led Repairs Service (MLRS). Most USAIS Cochlear Implant patients are subscribed to one of the MLRS providers. However, USAIS has retained an in-house repairs team to triage and resolve patient enquiries.

The team services all BCHI devices and the devices of CI patients who are not subscribed to MLRS. The team order and maintain stock levels for parts and processors for patients who need these or are due an upgrade.

The number of patients enrolled on each service:

Advanced Bionics (AB4U)

237
patients (91%)

Cochlear (Cochlear Care)

1088
patients (86%)

MED-EL (MED-EL DirectCare)

289
patients (97%)

The manufacturer's MLRS is the first point of contact for patients subscribed to the service. Patients are referred back to the USAIS repairs team for issues that are not resolved by the provision of new parts or for parts not provided by the MLRS.

USAIS funds replacement processors when patients lose or damage their processors, and the repairs team process these enquiries. MLRS and USAIS repairs service patients receive their parts and processors within 2 working days or the next working day in most cases.

Replacement parts are sent out using 1st class post and processors are sent out using the Special Delivery service. For BCHI patients 100% of required parts are sent out within the 7-day service specification.



Research & Service Evaluation

USAIS undertakes research, service development and evaluation studies as part of its commitment to providing the best, evidence-based care to patients, offering patients a unique opportunity to advance the Cochlear Implant field. We aim to give all our patients the chance to take part in research, including studies being conducted nationally across multiple implant centres. During 2024/25 much of our research has focused on six themes. Much of our research is funded by grants, sponsorship and awards. Many of our staff supervise students across different disciplines including audiology, medicine, speech and language therapy, engineering, and computer science.

We involve patients, family members and the public in our research to help us prioritise areas for study, develop research questions and share results. We are working hard to improve the diversity of our research participants, to make sure our findings apply to everyone. Our unique position within the University of Southampton allows us to translate research into clinical care quickly, and our clinicians lead some research areas both nationally and internationally.



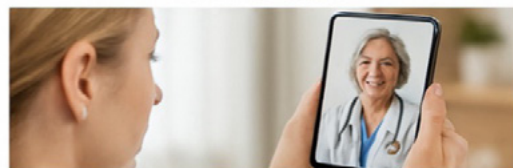
USAIS Research Themes

Bilateral Cochlear Implants



Do people hear better with two CI and how can we optimise listening with two ears?

Remote care



Does seeing people remotely improve access to care? How can we make it better?

Haptics



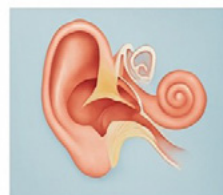
Can touch enhance speech and music perception?

Monitoring



Can new tests track internal implant function better?

Inflammation



How does inflammation affect how well someone hears with their implant?

Virtual reality



Can playing with VR games at home help children to hear better?

Our Funded Research Projects

Name of Study	Funder	Main Aim	Multi or Single Site	Adult/Child
BEARS	NIHR	Determine if using BEARS Virtual Reality games at home leads to better hearing for children and teenagers with bilateral cochlear implants	14 UK sites	Children and teenagers
BEARS Include	NIHR	Assess the diversity of children taking part in the BEARS	7 UK sites	Children and teenagers
LUCIA	NIHR	Find out if bilateral CI improve adults' quality of life and hearing	14-16 UK sites	Adults
IMPACT	MRC/NIHR	Evaluate the efficacy of a parent-implemented therapy (It Takes Two to Talk) on language development	10 UK sites	Children
TICIT	Cochlear	Determine if there are meaningful changes in tinnitus outcomes following cochlear implantation in adults with bilateral severe-to-profound HL	2 UK sites	Adults
Real world bilateral hearing	Cochlear	Establish viability of routine evaluation and optimization of bilateral hearing in adults	Single centre	Adults and teenagers
CHIEF	NIHR	To determine whether the immune environment of the middle ear differs between children at time of implantation, and how this is associated with hearing outcomes.	2 sites (Manchester recruitment, Southampton analysis)	Children and teenagers
Haptic enhancement of music perception in cochlear implant users	William Demant Foundation	To determine if haptics can enhance music perception in cochlear implant users	Single centre	Adults

Education and Training

Education, Training & Professional Development

Many members of the USAIS team are actively involved in student teaching and research supervision including PhD students and act as external examiner for other national and international universities.

USAIS runs an Auditory Implant MSc module which is open to both engineering and audiology students. Staff also teach on other audiology and engineering modules. The teaching brings the real world and relevance of our work into the classroom with live auditory implant

tuning sessions with real patients. USAIS staff teach on engineering and other modules across the University and externally, for example The Health Sciences University in Bournemouth.

USAIS also delivers training to those who support our services, such as school staff, local advisory teachers and carers. Courses are held at Southampton University. The courses delivered on-site at the University of Southampton in 2024/25 were:

Cochlear Implants: The Basics – September 2024

This course delivers a full day of training for school and local authority staff who support our patients but have little or no previous experience of Cochlear Implants and processors. Trainees learn about how a CI works, device familiarisation, meet a parent of a CI user and a CI user, acoustics of the classroom and listening checks. Feedback from the 2025 course was positive.

Device troubleshooting – January 2025

This course is for anyone supporting patients with a Cochlear Implant who would like more experience handling speech processors. Attendees can select up to two processor manufacturers with the course focusing on handling the processor and its parts. The course has been attended by care home staff and carers, as well as professionals from educational settings.





Word cloud using words and phrases from CI: The Basics course participants

Short visits and professional placements

USAIS also offers clinical visits, work experience, and Cochlear Implant clinical placements for qualified audiologists as well as other professionals.

Speech and Language Therapists, Teachers of the Deaf, medics and students can attend for one day of observation free of charge.

Work experience placements are available for 1-3 days and are open to students aged over 16 years who may undertake administrative tasks during their time with USAIS.

Clinical placements within the team are for Audiologists who want to gain experience within a clinic specialising in hearing implants. Placements last either one week or twelve weeks and must be funded by the applicant. They are competitive and require a full application and review by an USAIS panel.

My 9-week placement at USAIS was a wonderful and rewarding experience, but equally demanding at times – I learnt a lot!

Adnan, Clinical Placement Audiologist

Other USAIS Activities

Private Hearing and Balance Service

Since 2015, USAIS has offered Private Hearing and Balance assessments for adults and children. Referrals are received from local ENT surgeons and neurologists.

These assessments are funded by the patient, the patient's family or medical insurance. Cochlear Implant patients have been provided access to balance support when appropriate. During 2024/5, 170 referrals were received by the private service and 163 appointments took place.

During 2024/5:

170 referrals
163 appointments

Patient and public involvement

USAIS works with a Patient and Public Involvement and Engagement (PPIE) group across a range of areas including service evaluation and development, and research. ALL_EARS@UoS was established in March 2022, by researchers Professor Tracey Newman and Dr Kate Hough, to ensure the voices of those with lived experience of deafness and hearing loss are at the heart of research at the University of Southampton, including USAIS, and at the centre of decisions around service development and improvement at USAIS.

To build and develop the group, members were initially recruited by advertising the group to patients at USAIS. The group has continued to grow and develop over time, and through active engagement with members of the local community, the diversity of the group has increased. The group now better reflects the diversity of the deaf and hard of hearing community and that of the local community. Clinicians and researchers from USAIS actively engage with the group to discuss research and service development projects to gather valuable insight from people with lived experience. ALL_EARS@UoS members, alongside researchers, run events and exhibits to raise the profile of hearing loss, deafness and Cochlear Implants to the public with the aim of reducing the barriers to accessing these aids.





Stuart Whyte
Principal Fellow and
Educational Audiologist

Representing USAIS at the Houses of Parliament

In 2025, **Stuart Whyte**, Principal Fellow and Educational Audiologist, represented USAIS at an event in the House of Commons. Stuart attended the All Party Parliamentary Group (APPG) on Deafness event hosted by the Speaker of the House of Commons, Rt Hon Sir Lindsay Hoyle MP. The event brought together parliamentarians, charities, deaf advocates and community leaders to celebrate achievements within the deaf community and highlight ongoing challenges around accessibility and inclusion.

The Minister for Disability, **Stephen Timms MP**, addressed attendees, reinforcing his commitment to tackling inequality and embedding the voices of disabled and deaf people at the heart of government policy. He highlighted key national initiatives, including the work of the British Sign Language (BSL) Advisory Board, established after the BSL Act 2022. The Board's recent focus includes early years education, improving access to health and social care, and exploring the role of emerging technologies, such as Artificial Intelligence, in BSL interpretation.

Vice-Chair Alison Griffiths MP spoke movingly about losing 70% of her hearing at age 19 following meningitis. She highlighted the barriers still faced by deaf people in education, employment and public life, stressing the need for improved audiology services, better workplace awareness and greater inclusion across public spaces. She emphasised that small individual inclusive actions could make a meaningful difference.

Tasha Ghouri, a model, dancer and advocate for the deaf community was born profoundly deaf. She reflected on her educational challenges, the importance of BSL in early life, and the ongoing need to address accessibility gaps in schools, transport, healthcare and workplaces. Tasha called for three key areas of reform: rollout of the BSL GCSE, a digital accessibility fund, and strengthened support for deaf learners through more specialist staff and better resourced services.

The event served to highlight the need for continued development of support for the deaf community and a reminder that meaningful change requires collaboration across charities, policymakers, professionals and communities.

Advisory roles

USAIS Staff have advisory and leadership roles on regional, national and international groups developing quality standards, including:

- National 'Quality Standards for Assistive Listening Technology' (National Deaf Children's Society and Assistive Listening Technology Working Group)
- European Core Group on Paediatric Implantation
- British Cochlear Implant Group Quality Standard for Cochlear Implants
- British Society of Audiology
- British Society of Audiology APD Steering Committee
- The International Journal of Audiology Steering Group

Remote Care

USAIS now offers a remote care pathway for adults. When our patients have had their implants for one year, we talk with them and their families about how they would like us to support them going forward. We have a range of pathway choices to suit different people.

Patients on the remote care pathway who have a Cochlear Implant manufactured by Cochlear and a suitable phone are sent a Remote Check Test and questionnaire through the manufacturer's app.

The Remote Check allows the patient to carry out simple tests of their implant function, test their hearing with their implant, send photos of their head to check for implant-related skin problems, and complete a questionnaire about their hearing.

Our audiologists then review the results and decide whether the patient should come in for a clinic appointment.

Patients on the remote care pathway who have a different make of implant, or cannot use the Remote Check, are sent a paper questionnaire.

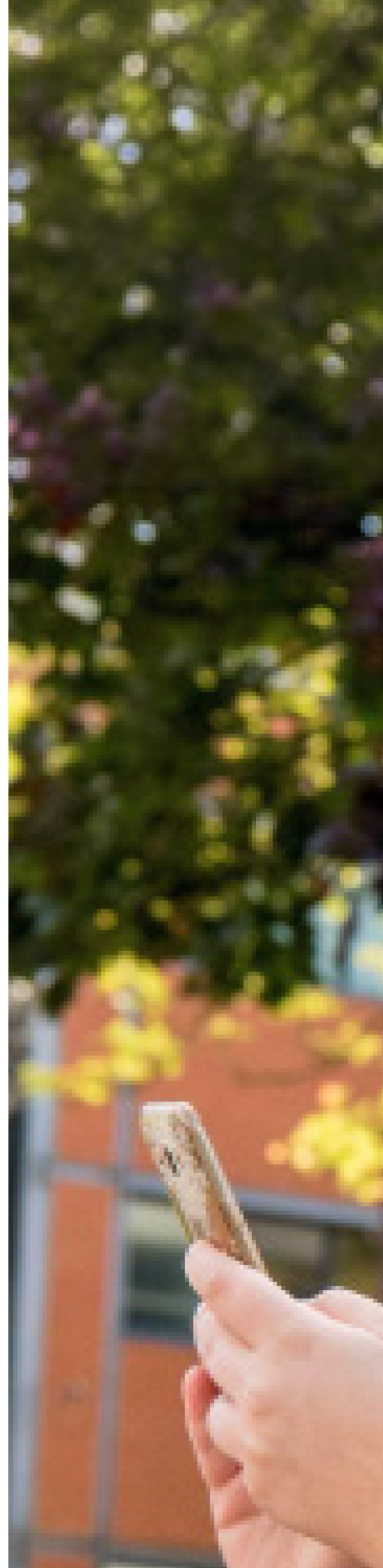
Remote care gives patients further choice in how their care is provided. Many patients find this empowering, as it allows them to continue to have their hearing and implant function monitored, while removing the time and financial costs associated with attending appointments at USAIS.

For patients where the remote care pathway is not appropriate, appointments at USAIS continue to be offered. Patients on the remote care pathway can also request an appointment should they need it.

All three cochlear implant companies (AB, Cochlear, MED-EL) now offer some remote tuning options which vary by manufacturer and implant model. USAIS is always happy to discuss remote tuning options with patients and carers.

Remote checks are painless, easy to complete, and require little effort on the user's part, in return for a lot of useful feedback from the audiologists. And my teenaged granddaughter thinks it impressively techie, which is good for my ego :)

John, our 499th reviewed Remote Check patient





Author: USAIS

*Auditory Implant Service (Building 19),
Southampton University, Highfield Campus,
University Road, Southampton SO17 1BJ*

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