UNIVERSITY OF Southampton

Auditory Implant Service

ACTIVITY REPORT 2017/8

AUDITORY IMPLANT SERVICE
USAIS
MAKING CONNECTIONS

OUR SERVICE

USAIS are commissioned by NHS England Specialised Services. This report is for the year 2017/8 starting on 1st April 2017 and ending 31st March 2018 for NHS England patients only.

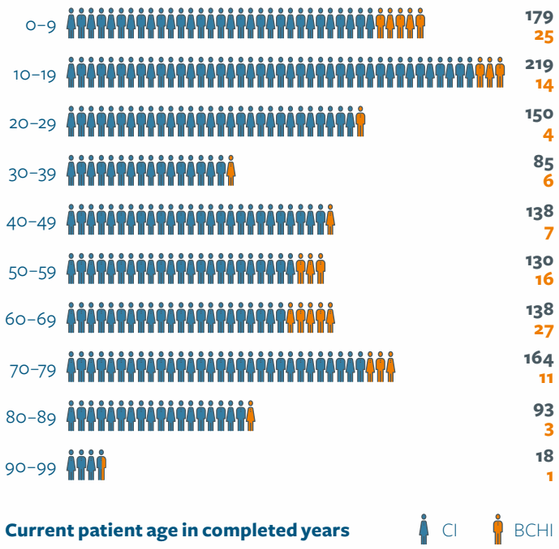
USAIS follow the service specifications for Cochlear Implants (D09/S/A) and for Implantable Hearing aids for Microtia, Bone anchored Hearing Aids and Middle Ear Implants (D09/S/B) and the new Commissioning Policy for Bone Conduction Hearing Implants (BCHI) 16041/P.

USAIS receive referrals for assessment for consideration of cochlear implants and bone conduction hearing implants from Audiology and ENT specialists.

The services offered by USAIS are multidisciplinary and involve a variety of clinical and medical staff. USAIS are in a unique position based within a university setting which is beneficial as it facilitates research driven clinical practice.

Age of service users

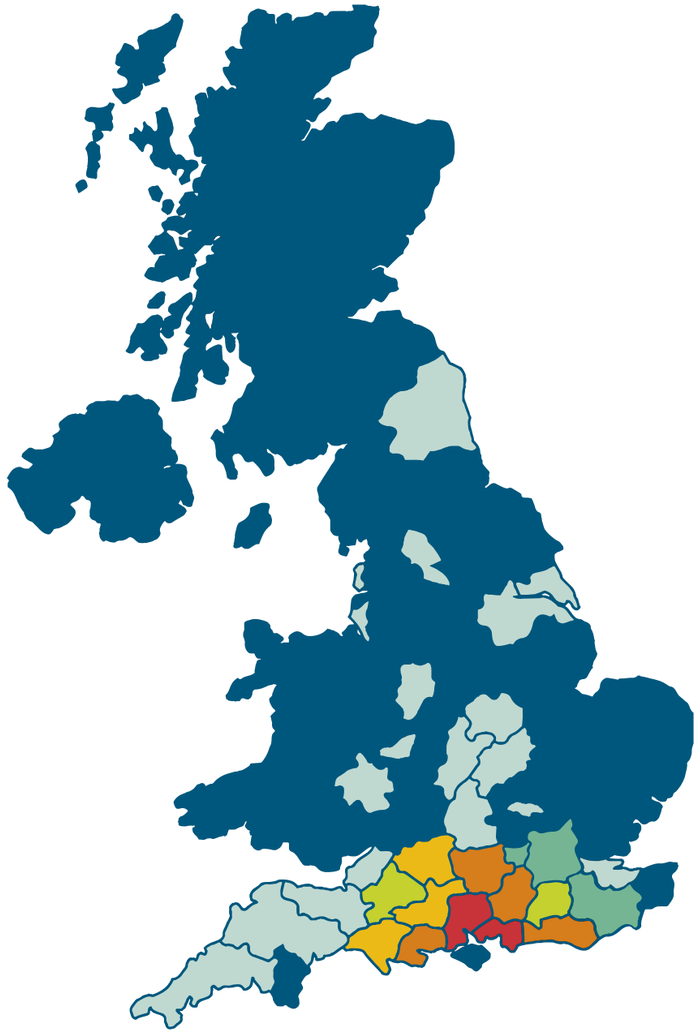
USAIS is an all age service and have auditory implant users in all sections of the age spectrum.



Location of service users

USAIS support service users from a large geographical base across the South of England. As such the service is divided into three core teams: East, Central and West.

Patients from the Channel Islands are not represented in this report due to having a different funding stream.



Number of patients

- 1-10
- 10-20
- 20-50
- 60-100
- 100-150
- Over 150

Additional Services provided

Other services provided by USAIS include the Private Hearing and Balance Clinic (PHAB), Auditory Processing Disorder (APD) and Self-Funded Cochlear Implant Programme.

During the last NHS year there have been two adults who have self-funded a sequential cochlear implant. A further two adults are currently being assessed for a unilateral self-funded cochlear implant.

USAIS offer support for all patients using assistive listening technology with their sound processors. This includes use of wireless accessories and contralateral hearing aids such as the Mini Microphone, Roger Pen or Naida Link hearing aid.

USAIS IN THE NEWS

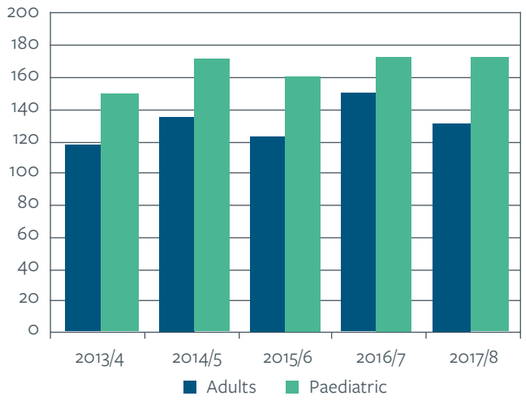
USAIS have increased their reach and impact through ongoing media and publicity. This is part of their wider agenda of raising awareness about hearing loss and cochlear implants.

During the period 2017/8 USAIS have conducted filming for two TV documentaries with adult patients. One of our patients will be featured on the ITV Prime Time show 'This Time Next Year' which airs in April 2018. Another of our patients has been filmed for a BBC documentary entitled 'The Day That Changed My Life' which has no broadcast date yet. A paediatric patient was featured in a Daily Echo article about their initial tuning appointment which was both in print and online. The article was entitled 'Cochlear implant allows three-year-old girl to hear for the first time'.

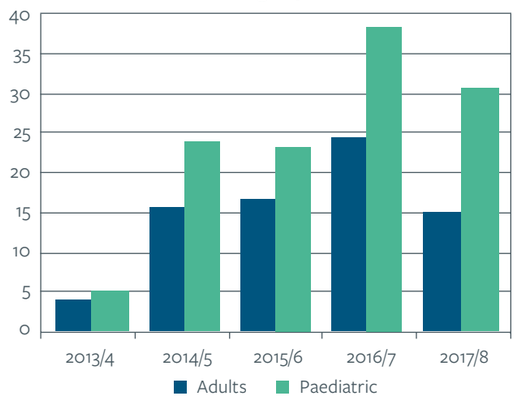
TRENDS OVER THE PAST FIVE YEARS

Our referral numbers have been fairly static over the past five years for cochlear implants but increasing for bone conduction hearing implants, as can be seen in the graphs below. These do not include transfers in to our service.

Cochlear Implant Referrals



Bone Conduction Hearing Implant Referals

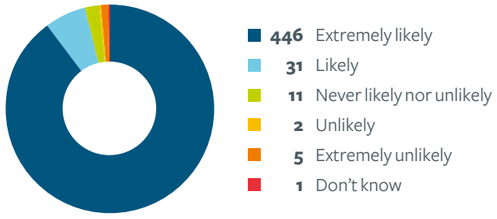


SERVICE USERS FEEDBACK

Audits—Patient Survey

Patients attending a review at USAIS are asked to complete a patient survey to enable USAIS to review the quality of the service provided. The NHS Friends and Family Test has been used and the results are shown below. 90% of the patients attending for review who completed the questionnaire (n=496) would be extremely likely to recommend USAIS to their family and friends should they require similar treatment.

How likely are you to recommend USAIS to friends and family if they needed similar care or treatment? (n=496)



Waiting times

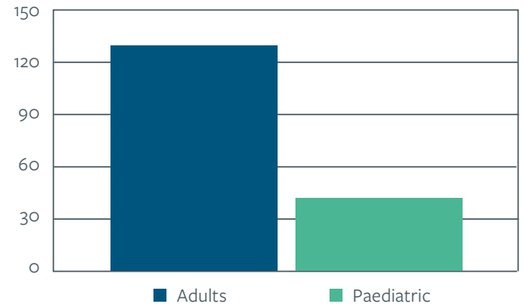
USAIS operate an 18 week care pathway from the multidisciplinary team decision to surgery/fitting. During 2017/8 there were 13 patients who breached this. Seven of these patients chose to delay their operation date through personal choice. Three breaches were due to cancellations at the hospital and three breaches were due to the patients requiring medical intervention before they were able to proceed with surgery.

CLINICAL OUTCOMES— COCHLEAR IMPLANTS

Patient Pathway

100% of referrals for cochlear implant assessment were acknowledged within five working days and **100%** of patients were offered an appointment within six weeks.

Cochlear Implant Referrals (n=172)



Discharges

During the period 2017/8, 61 patients referred for cochlear implant assessment were discharged prior to cochlear implantation. One was discharged due to no contact. The reasons for discharge were: 21 of the patients were audiologically not within NICE TAG 166; eight patients had additional difficulties or medical needs, and 31 patients decided not to proceed for personal reasons including investigating alternative treatment, family issues and concerns regarding surgery.

Transferred patients

During 2017/8, 17 patients were transferred into USAIS who had already been implanted with a cochlear implant prior to referral (11 adults, six paediatric). Nine patients were transferred out from USAIS (four adults, five paediatric) and 15 patients deceased (14 adults, one paediatric).

Cochlear Implant Operations (n=102)

	Adults	Paediatric
Unilateral	77	4
Bilateral Simultaneous	0	12
Staged Bilateral	0	3
Bilateral Sequential	1	1
Explant/Reimplant	3	1

Failures, Re-implantations and Non-Users

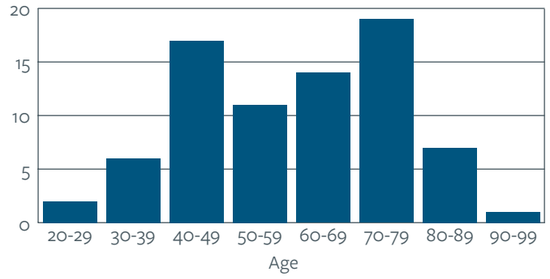
In the year 2017/8 five patients had device issues which were reported to the MHRA. Four patients had their cochlear implants removed and were subsequently re-implanted in the same ear. One user had a device failure but chose to have their care elsewhere. Of the remaining four patients who had their device explanted and re-implanted, three were for medical reasons and one had performance decrement.

There are 25 patients who are no longer able to make use of their cochlear implants who have not had their implants removed and have thus become non-users. Two were made non-users during the period 2017/8. A further three patients are known to us but have now become lost to follow up.

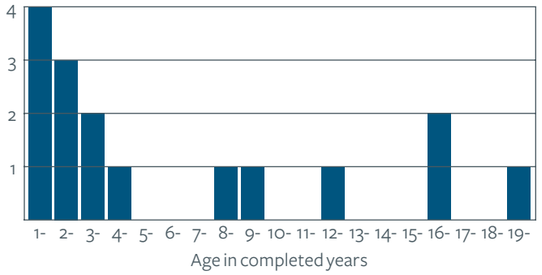
Age at Implant – CI Patients

USAIS treat patients of all ages. During the year 2017/8, the most common age for children to be implanted is between the age of one and two years old and adults were most often implanted between 70 and 79 years of age. This pattern is the same as the previous reporting year. USAIS are trying to reduce the age of implantation in children in order to improve potential outcomes.

Age at Implant - Adult (n=77)



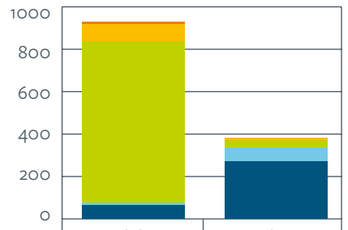
Age at first Cochlear Implant - Paediatric (n=16)



Patients on programme

Patients with cochlear implants need access to a maintenance programme. Patients have regular reviews to ensure that their device is continuing to function optimally. The graph below shows all of our current cochlear implant patients on programme and under assessment.

Cochlear Implant Patients on Programme - Maintenance (n=1313)



	Adults	Paediatric
Bilateral	63	271
Binaural	13	0
Unilateral	763	65
Assessing	77	36
Non-user	15	10

Bilateral Sequential Implants

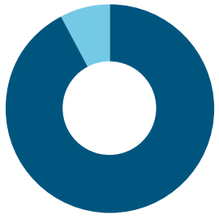
Three patients with cochlear implants received a second implant to enable them to hear in both ears. One child implanted prior to 2009 received a contralateral implant and one adult with a visual impairment was given a sequential implant as per NICE TAG 133. Another child had a sequential cochlear implant which was funded by an individual funding request.

Key Service Outcomes

The outcomes of Cochlear Implant patients are measured at their 12 month review. The following graphs represent the outcomes. Two adults have not been reported on as they choose not to attend their appointment.

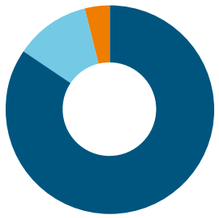
User Satisfaction and Benefit

For this Key Service Outcome the standard is >90% of adults using their cochlear implant consistently and reliably. As can be seen below USAIS met this target with 100% of adults and 96% of children wearing their implant often or always.



Adults (n=65) How often do they use their cochlear implant processor(s)?

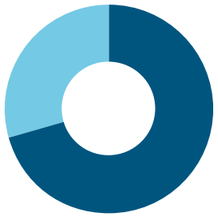
- **60** Always
- **5** Often
- **0** Sometimes
- **0** Rarely
- **0** Never



Paediatric (n=26) How often do they use their cochlear implant processor(s)?

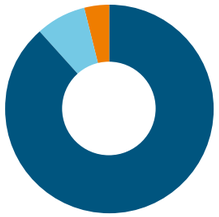
- **22** Always
- **3** Often
- **0** Sometimes
- **1** Rarely
- **0** Never

Similarly, 100% of adults and 96% of children felt that they were benefitting a lot or a great deal from their cochlear implant after 12 months, as seen below.



Adults (n=65) How much benefit do they feel they get from their cochlear implant(s)?

- **46** A great deal
- **19** A lot
- **0** Some
- **0** Very little
- **0** None at all

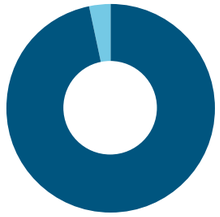


Paediatric (n=26) How much benefit do they feel they get from their cochlear implant(s)?

- **23** A great deal
- **2** A lot
- **0** Some
- **1** Very little
- **0** None at all

Listening

Our key service outcome is to have 80% of all patients with thresholds of 40 dB HL or better in implanted ears. Using the data of patients who have had their 12 month review within the period 2017/8, USAIS met this target in both adults and children. 96% of adults (n=65) met this criteria and 100% of children (n=26) had aided thresholds below 40dB(HL).

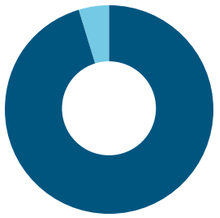


Adults (n=65) Aided Thresholds –40dB(HL)

- **63** Yes
- **2** No

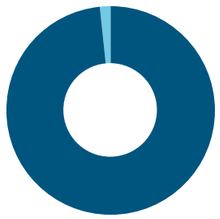
Improvement in Speech Perception and Quality of Life

USAIS has reviewed all the data of all patients that had their 12 month review within the period 2017/8. There was an improvement in speech perception scores and quality of life for adults, demonstrated below.



Adults (n=65) Improved Speech Perception

- **63** Yes
- **4** No



Adults (n=65) Improved Quality of Life

- **64** Yes
- **1** No

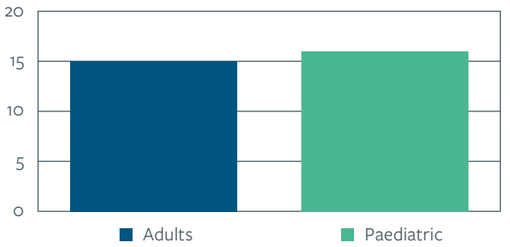
All of the children within the review period (n=26) had improved outcomes in auditory performance and/or speech perception compared with pre-implant.

CLINICAL OUTCOMES—BONE CONDUCTION HEARING IMPLANTS

Bone Conduction Hearing Implants (BCHI) includes Bone Conduction Hearing Devices and Middle Ear Implants.

USAIS support the Cochlear Baha and Carina devices and the MED-EL BONEBRIDGE and VIBRANT SOUNDBRIDGE devices. For the BCHI programme, patients are offered a choice of surgical or non-surgical options, depending on their degree of hearing loss. Those who follow an non-surgical route are referred to as 'fitted' using either a Cochlear SoundArc or Softband. Those who follow the surgical route are referred to as 'implanted'.

Bone Conduction Hearing Implant Referrals (n=31)



Patient Pathway

100% of referrals for BCHI Assessment were acknowledged within five working days. **100%** of patients referred were offered an appointment within six weeks.

Discharges

Eleven patients referred for bone conduction hearing implant assessment were discharged prior to implantation/fitting in 2017/8. Two were not within the service specification policy, three patients were discharged for audiological reasons and five patients were discharged due to their own decision. One patient was transferred to the cochlear implant programme.

Transferred patients

During the year 2017/8, two adult patients and two paediatric patients were transferred into USAIS from another service with an existing bone conduction hearing implant prior to referral. Two paediatric patients transferred from our service to another service.

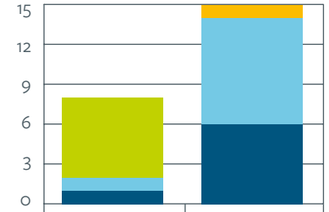
Operations

Six adult patients were implanted with a bone conduction hearing implant in 2017/8. Four were fitted with a Cochlear Baha Connect device (one of which was a bilateral sequential) and two were fitted with a MED-EL VIBRANT SOUNDBRIDGE. One child patient was implanted and fitted with bilateral Cochlear Baha Connect devices.

In addition to this nine paediatric patients were fitted unilaterally and six paediatric patients were fitted bilaterally with Cochlear Baha devices on a softband.

One adult was fitted bilaterally with Cochlear Baha Connect on a SoundArc and one adult was fitted unilaterally with a Cochlear Baha Connect on a SoundArc.

Bone Conduction Hearing Implant Operations and Fittings (n=23)



	Adults	Paediatric
Implanted Unilateral	1	6
Implanted Bilateral	1	8
Fitted Unilateral	6	0
Fitted Bilateral	0	1

STOCK AND EQUIPMENT

During the period 2017/8 USAIS dealt with 94% of the cochlear implant requests within three working days. 100% of bone conduction hearing implants requests were also carried out within three working days.

Equipment

All audiological equipment has been calibrated to British Standards and daily checks have been carried out and recorded.

Repairs

The target for all replacement processor requests to be dealt with within 3 working days in the Service Specification is more than 80%.

Upgrades

USAIS have an upgrade policy where patients are offered a processor upgrade at least once in every five years provided there is a newer processor suitable for their implant. Over the past year USAIS has been able to upgrade 149 cochlear implant patients with the latest technology available for their implant. An additional 17 bone conduction hearing implant patients received an upgrade during the same period.

Successful Surgery—BCHI

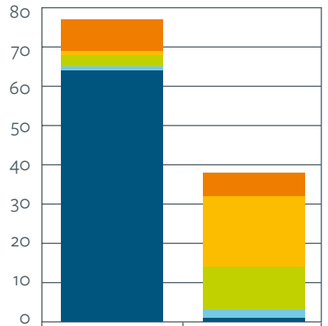
Successful surgery for BCHI is measured in terms of abutment loss and skin graft. The service specification is for 5% or less patients requiring revision of local skin graft within one year of surgery. No BCHI patients underwent skin graft surgery in this period.

The percentage of patients reporting abutment loss during the past five years should be 5% or less for adults and 7% or less for children. None of patients who had surgery at USAIS reported abutment loss.

Patients on programme

Patients with bone conduction hearing implants need access to a maintenance programme. Patients have regular reviews to ensure that their device is continuing to function optimally. The graph below shows all of our current patients on programme.

Bone Conduction Implant Patients on Programme - Maintenance (n=115)



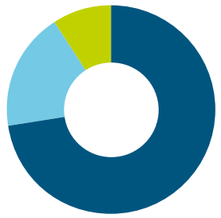
	Adults	Paediatric
Implanted Unilateral	64	1
Implanted Bilateral	1	2
Fitted Unilateral	3	11
Fitted Bilateral	1	18
Assessing	8	6

Key Service Outcomes

The outcomes of bone conduction hearing implant patients are measured at their 12 month review. The following graphs represent the outcomes. One adult who was due their 12 month review in the period 2017/8 has not been reported on as they choose not to attend their appointment and were discharged in the last reporting year.

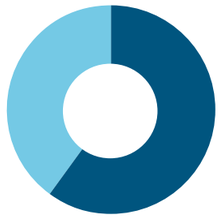
User Satisfaction and Benefit

For this Key Service Outcome the standard is 90% of patients reporting themselves to be satisfied or very satisfied with their implant. As can be seen below USAIS met this target with 100% satisfaction in both adult and paediatric patients.



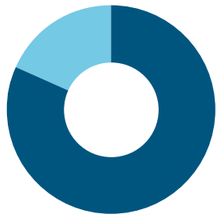
Adults (n=11) How often do they wear their processor(s)?

- **8** Always
- **2** Often
- **1** Sometimes
- **0** Rarely
- **0** Never



Paediatric (n=5) How often do they wear their processor(s)?

- **3** Always
- **2** Often
- **0** Sometimes
- **0** Rarely
- **0** Never



Adults (n=11) How satisfied are they with their auditory implant?

- **9** Extremely satisfied
- **2** Satisfied
- **0** Neither satisfied nor dissatisfied
- **0** Unsatisfied
- **0** Extremely unsatisfied

USAIS has reviewed all the data of all patients that had their 12 month review within the period 2017/8. **100%** of adults and children who have been fitted with a BCHI said they felt it had improved their quality of life.

Contact us:

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