15th ANNUAL CONFERENCE
8-9 November 2018
ACC Liverpool

Conference Handbook
Complete with full programme, abstracts and useful information
Conference Rooms

Hall 1A – Main Auditorium
Hall 1B – Main Breakout Room
Hall 1C – Sponsors Track
Room 4A – Professional Development Lounge

Exhibition, refreshments & posters can be found on the lower level (Hall 2).
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BRITISH ACADEMY OF AUDIOLOGY
ANNUAL GENERAL MEETING 2018

Thursday 8th November
2pm in the Main Auditorium Hall 1A within the Arena and Convention Centre Liverpool

All members of the BAA are invited to the AGM to hear what your professional body has been doing for you over the past 12 months and what our priorities are for the next 12 months.

The Agenda

- Welcome and introduction and apologies (this meeting will be recorded for the minutes)
- Approval of previous minutes
- Treasurers report
- Acceptance of accounts and approval of auditors
- Presidents report
- Report on elections and confirmation of incoming board members
- Confirmation of election of president and vice president
- Any other business

Why attend the AGM?

- Meet the president and vice president who will be representing you over the next year
- Hold your board to account
- Put faces to the names of the BAA board, and hear about what they have been doing
- See where your membership money has gone
- Take the opportunity to ask questions and discover what lies ahead for us all in audiology
- Hear about the issues we manage as a professional body and how you could influence this
Welcome to Liverpool and to The British Academy of Audiology Conference 2018

This amazing conference centre and city will be the host of our conference for 2 years and I hope you all get chance to appreciate the facilities in the conference centre but also the fantastic city we are in.

This year’s Programme Team along with Claire Benton have worked hard to bring you a varied and relevant conference agenda which I hope will give each of you something new to take back to your work on Monday morning.

Conference is hard work, to organise, to present at and some would say to attend and get the most out of the experience, I would say enjoy the hard work and enjoy the presentations.

I’m looking forward to our key note speaker’s presentations and I want to extend my thanks to them for engaging with BAA. The key note speaker’s topics are varied but all 4 of them come highly recommended as engaging speakers with a point of view that is relevant for audiology.

There are many presentations aimed at service improvement this year and I hope that some of the more senior audiologists in the room find these informative and inspiring.

Conference does not happen without the input of our sponsors and the exhibitors. Please take the time to view the programme in the sponsors track. World class speakers attend each year and produce great content in this track that is relevant and cutting edge.

As always please visit and take notice of the exhibitor’s stands and the poster presentations downstairs, the effort here is easy to see and you will undoubtedly learn by talking to the exhibitors.

I hope this year we have made it easy for you to move between rooms and the App as well as your programme at a glance lanyard will ensure you are never short of anything to do.

Our evening event is themed conservatively after last year’s 80s extravaganza and I thank the conference organising group for always stepping up to the mark and producing a great evening. This year is no different and I hope to join many of you at our Monte Carlo themed evening.

As President of the British Academy of Audiology I am proud of the Board we have in place and the teams they work with and I hope they too enjoy conference. They will be your moderators but they will also be on the BAA Stand within the fabulous exhibition and I hope you will come along to the BAA stand to meet the board during the breaks.

Enjoy conference, enjoy Liverpool and if you see me please feel free to stop and chat.

Sue Falkingham
President, British Academy of Audiology
power one –
the test winner is getting even better.

power one sets new standards.

up to advantage with the 15%

high level hearing

Find out more at our booth No. 72.

www.powerone-batteries.com
Accreditation and CPD
This conference has been awarded CPD points by British Society of Hearing Aid Audiologists (BSHAA). 5 points for day 1 and 4.5 points for day 2. An additional point is awarded each day for visiting the exhibition giving a maximum possible 11.5 points.

Admission to Sessions
You must ensure you are wearing your lanyard and badge to ensure admittance to conference sessions. Whilst in sessions, please ensure that phones and other electronic devices are switched off or are on silent.

Annual General Meeting
The British Academy of Audiology AGM will be held on Thursday 8th November from 14:00pm – 14:30pm in the Main Auditorium (Hall 1A). The AGM is open to BAA members only. If you are not a member, please spend your time exploring the exhibition or networking with colleagues.

Awards & Posters
The results of the awards nominations will be announced in two parts – Thursday 8th November from 10:15am to 10:30am in the Main Auditorium (Hall 1A) and Friday 9th November from 10:15am to 10:30am in the Main Auditorium (Hall 1A). More information on the awards can be found on the awards page of this book. Poster winners will be announced at 14:00pm during lunchtime of Friday 9th November in the exhibition hall at the BAA stand.

Badges
You will be issued with a badge onsite. You must wear this badge at all times within the ACC Liverpool. The lanyard colours determine attendees as follows:

<table>
<thead>
<tr>
<th>Colour</th>
<th>Role</th>
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<tbody>
<tr>
<td>Dark Blue</td>
<td>Delegates</td>
</tr>
<tr>
<td>Light Blue</td>
<td>Exhibitors (Conference attendance allowed)</td>
</tr>
<tr>
<td>Red</td>
<td>Organisers and Board Members</td>
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British Academy of Audiology Secretariat
The organising secretariat for the conference is:
Fitwise Management Ltd.
Blackburn House, Redhouse Road, Seafield, West Lothian, EH47 7AQ
Tel: +44 (0)1506 811 077

Certificate of Attendance and Evaluation
Certificates of Attendance will be sent electronically following completion of the conference evaluation. We appreciate all feedback and encourage all delegates to share their thoughts and ideas for the 2019 conference.

Conference App
The app will allow delegates to view the programme, speakers, exhibitor list etc. Anyone with an Apple or Android device will just need to search for EventsAIR in the App Store, then download the app as normal. Once downloaded you will be prompted to enter the event code BAA2018. You will be issued with a personalised pin prior to the event and you can use this to create your own account on the app to enable you to personalise your agenda.
**Conference Sponsors**
The British Academy of Audiology would like to acknowledge the following sponsors for their significant contribution towards our 15th Annual Conference:

**Platinum Sponsors:**

![Phonak](image1)

![Oticon](image2)

![Starkey](image3)

![SiVantos](image4)

![Danalogic](image5)

**Silver Sponsor:**

![Otometrics](image6)

**All You Need To Know Talks**
There are a series of talks entitled All You Need to Know. The aim of these sessions is to introduce newly qualified delegates and to update experienced staff on practical areas of Audiology. Delegates should be provided with all the information and tools needed to take back to their departments and implement the given test/technique/knowledge straight away.

Extra time for questions has been allocated to encourage a fully interactive session.

All You Need to Know sessions happen during the first session after lunch on both days.

**Disabled Access and Other Requirements**
The venue is accessible via access ramps from the city, car park and taxi drop off point. All areas within the venue are fully accessible via either lifts or ramps. Registration will be in the Galleria (main entrance level) where there are two lifts available to both the Upper and Lower floors.

**Hearing Loops**
The Visitor Services desk features a fixed loop hearing system. An infra-red system is available in specific seating areas for conference use, a necklace can be collected from a member of ACC staff.

**Exhibition and Passport Competition**
Featuring a wide array of companies working within Audiology, the exhibition provides the ideal opportunity to discuss your audiology requirements directly with representatives from a wide range of companies, discover new products and procedures and arrange meetings with both existing suppliers and new companies. A list of exhibitor and company editorials is published at the back of this handbook and the floor plan is published at the front. The exhibition will be open during the following times:

- **Thursday 8th November:** 08:30 – 17:30
- **Friday 9th November:** 08:30 – 14:20

Each delegate will receive a ‘Passport’ in their delegate bag. For a chance to win one of the many prizes on offer, delegates should travel around the exhibition collecting signatures from participating exhibitors. Once completed, the passport should be handed into the British Academy of Audiology stand by 13:00pm on Friday 9th November to be entered into the prize draw. The prize draw will take place from 13:45pm to 14:15pm on Friday 9th November in the exhibition hall at the BAA stand by Sue Falkingham.
**First Aid**
If you require first aid assistance, please contact one of the ACC or Fitwise staff. Dedicated first aiders will be onsite throughout the event.

**Insurance**
The British Academy of Audiology secretariat accepts no liability for any travel problems getting to and returning from the conference nor personal injuries sustained either during or as a result of the conference, nor for loss or damage to property belonging to conference delegates.

**Internet Access**
Wi-Fi is available on site free of charge for delegate use for checking emails etc.

**Posters and Free Paper Presentations**
The poster display and free paper presentations are an essential part of the conference’s educational content and we would like to thank everyone who took the time to submit an abstract for consideration. We had an exceptional number of people submitting their research and we have included as many as possible within the programme as well as having a large display of posters within the exhibition hall. There will be dedicated poster viewing times during each lunch break with authors standing by their posters to answer questions. Odd numbered posters will be presented on Thursday between 12:45pm and 14:00pm and even numbered posters will be presented on Friday between 12:50pm and 13:30pm. There will be awards for the best posters and these will be announced between 13:45pm and 14:15pm on Friday in the exhibition hall. We hope that this year’s successful entries inspire you to consider submitting for 2019.

**Programme Key**
To make a more informed choice about which session to attend please see the key below:

- **Parallel Session** – Held in a theatre style setting, designed to be informative sessions
- **Workshops** – Held in a more informal setting, designed to be interactive with some group discussions
- **Sponsors Track** – A mixture of informative and interactive sessions hosted by our Platinum Sponsors
- **All You Need to Know Sessions**

**Registration Desk**
The registration desk will be based in the Galleria area and will be open at the following times:
- Wednesday 7th November  16:00 – 19:00
- Thursday 8th November  08:00 – 17:30
- Friday 9th November  08:00 – 17:00

**Sli.do**
**NEW FOR 2018** – Session Question & Answer Time.
This year we’re introducing a new, easier way to put questions to our speakers.
Sli.do is an interactive tool which allows questions and answers from the floor to be uploaded to the Moderator who can then make a selection to be shown on the screen.
You can simply access it from the BAA App, or if you prefer go into the website, you will submit an event code which you will be given at sessions.
No more passing mics around or awkward silences!

**Venue for 2019**
ACC Liverpool
Kings Dock,
Liverpool Waterfront,
Liverpool, L3 4FP.
Every year at the British Academy of Audiology Annual Conference, we take the time to acknowledge those individuals and teams who have excelled, or shown exceptional commitment to the Audiology profession, over the past year. There are seven awards in total with six open for nominations. In order to be eligible for any of the below awards the people you are nominating must be a member of the BAA.

**Lisa Bayliss Award**
Lisa Bayliss was a 20-year old student Audiologist working at the Royal Liverpool Hospital. Sadly, in 1992, Lisa’s life was tragically taken on her way home from work. Lisa is greatly missed by all who met her but especially her family, colleagues and her patients. Lisa was kind, caring and worked well with everyone she met. She was described as a great people person. When it was suggested that an award be named in her honour, it came as no surprise that the award would be given to someone who showed the qualities Lisa possessed in abundance.

The Lisa Bayliss award was traditionally given to the student who performed best at the BAAT part 2 practical exam. With the changes in Audiology education the award is now given to the student who performs best during their clinical placement, from any programme.

**Prize:**
£200, Trophy and Certificate

**Presented:**
Friday 9th November at 10:15am in the Main Auditorium (Hall 1A)

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**Audiologist of the Year Award in Memory of Peggy Chalmers**
The BAA award for the Audiologist of the Year, in memory of Peggy Chalmers, is an award that will recognise an Audiologist who stands out from the crowd with regards to patient care. We are looking for an individual who has gone above and beyond to put the patient first, or improve their experience in even a small way, making a difference to them. The award is focused on patient care and we particularly welcome testimonials and case studies from patients, or colleagues, highlighting the reasons their Audiologist should be nominated.

Peggy contributed immeasurably to Audiology in many ways, improving professional standards and training and supporting hundreds of students from the UK and overseas. Her hard work and enthusiasm has inspired many professionals in Audiology and with this award we hope each winner will continue to inspire with their excellent work.

**Prize:**
Free place at Conference 2019, Trophy and Certificate

**Presented:**
Thursday 8th November at 10:15am in the Main Auditorium (Hall 1A)

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**Team of the Year Award**
The BAA Team of the Year Award was created in 2004 to celebrate the coming together of the different professions within Audiology. The prize is awarded to a team which has worked together to improve the quality of service in their area. Teams which work within an audiology department, in education, in research, or in an organisational capacity are all eligible. Past...
winners have shown particularly innovative and original ideas, or worked on a specific project directly connected to audiology.

**Prize:**
£300, Trophy and Certificate

**Presented:**
Thursday 8th November at 10:15am in the Main Auditorium (Hall 1A)

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**Paul Doody Supervisor of the Year Award**

Paul Doody was an extraordinary Audiologist and totally committed to training, he made a huge difference to the lives of numerous Audiologists. Sadly, shortly before the 2016 conference and after organising the Associate track for us, Paul passed away. Although he himself would not consider this an honour or indeed necessary, his family, friends and colleagues strongly disagree with him. They and the BAA Board feel he had all the qualities all nominees for this award should aspire to.

This award will recognise an Audiologist who stands out from the crowd with regards to supervising and supporting a student while on placement. We are looking for an individual who has gone above and beyond to provide a supportive learning environment on placement for students, providing leadership and guidance as well as inspiration. The award is focused on the mentoring of students and we particularly welcome testimonials and case studies from student, colleagues and university placement teams highlighting the reason a particular Audiologist should be nominated.

**Prize:**
Free place at Conference 2019, Trophy and Certificate

**Presented:**
Thursday 8th November at 10:15am in the Main Auditorium (Hall 1A)

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**BAA Paediatric Audiologist of the Year – Sponsored by Phonak**

This award is for audiologists working in the field of paediatrics. It is aimed at those in any area of paediatrics who, it is felt, have influenced the audiological world. We welcome nominations from colleagues or patients and families highlighting why this person stands out from the crowd. We just stipulate that the nominated audiologist has worked in their current position for at least 6 months.

**Prize:**
The winner will hold the title and trophy of “BAA Paediatric Audiologist of the Year – Sponsored by Phonak” and will also be invited to write an editorial feature in the BAA Magazine

**Presented:**
Friday 9th November at 10:15am in the Main Auditorium (Hall 1A)

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**BAA Student of the Year Award – Sponsored by Oticon**

The Oticon student of the year award is presented every year to the student who has achieved academic success in their course, particularly in their final dissertation. This is open to students on all audiology courses leading to qualification or registration. All Higher Education Institutes will be invited to nominate students who they feel have achieved a high standard of work in their course; these students will then be invited to submit an abstract on their dissertation to be judged by a panel.

**Prize:**
Title and trophy of “BAA Student of the Year – Sponsored by Oticon”, Trip to Eriksholm International Summer Camp and cash prize

**Presented:**
Friday 9th November at 10:15am in the Main Auditorium (Hall 1A)

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**The Jos Millar Shield Award**

Jos Millar started his career in audiology at the Royal Victoria Hospital in Belfast. He had an interest in sound and radio and when an opportunity within audiology came along, he moved to this field and went to Manchester to complete his training. He was always fond of paediatric audiology so returned to the Royal Belfast Hospital for sick children. Later in his career he embarked on a new challenge to set up a paediatric service in his home town of Ballymena.

Within his long standing dedication to Audiology, it was only fitting for an award to be named in his honour. The Jos Millar Shield is a long standing award given each year for the best contribution to a BAA publication. The recipient is chosen from all articles printed in the previous year’s magazine and newsletter and is chosen by the publicity and communications team.

**Prize:**
Free place at Conference 2019, Trophy and Certificate

**Presented:**
Thursday 8th November at 10:15am in the Main Auditorium (Hall 1A)

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**Other Awards**

**1st Place Clinical Paper Poster Prize**

**Prize:**
£100 and Certificate

**1st Place Research Paper Poster Prize**

**Prize:**
£100 and Certificate

**1st Place Student Poster**

**Prize:**
£20 Voucher and Certificate

**2nd Place Student Poster**

**Prize:**
Certificate
Let us take you to the sunny shores of the Mediterranean Sea as our gala dinner this year will transport you to glamorous Monte Carlo.

**Join us on the evening of Thursday 8th November 2018 for the Gala Dinner.**

The Gala dinner will take place in Anfield Stadium, Liverpool Football Club, Anfield Road, L4 0TH. President’s Reception and Pre-dinner drinks from 19:00.

Doors open and call to dinner at 19:30.

It will be an evening of music from The Daddy O’s, food and fun taking in the high glamour of the famous Casino de Monte Carlo, Grand Prix and the lifestyle of those from the Principality of Monaco.

**Dress code:** Formal dress is required, take tips from Monaco’s famous residents and visitors – Grace Kelly, Jensen Button or perhaps James Bond?

Transport will be provided and details of coaches will be on your Gala dinner ticket.

**Tickets are to be pre-purchased and entrance will not be permitted without a ticket.**
Audiology & Neurotology
The Science of Hearing and Balance

Editor: Harris J.P. (San Diego, Calif.)

www.karger.com/aud

Does your library provide access?
Recommend a subscription to your librarian at www.karger.com/LibraryRecommendation
### Parallel Session – Held in a theatre style setting, designed to be informative sessions.

- Hall 1A
  - 11:20–11:40: All New Practice Guidelines: The Ins and Outs of Tinnitus Care  
    - Dr Derek Hoare, Associate Professor in Hearing Sciences, University of Nottingham
  - 11:40–12:00: Prioritising Hyperacusis: The Top 10 Research Priorities  
    - Dr Kathryn Fackrell, Research Fellow, NIHR Nottingham Biomedical Research Centre

### Workshops – Held in a more informal setting, designed to be interactive with some group discussions.

- Hall 1B
  - 11:20–11:40: Vestibular Assessment, Diagnosis and Management in Children  
    - Dr Soumit Dasgupta, Consultant Audiologist/Neurotologist and Clinical Lead in Paediatric Audiology, Alder Hey Children's Hospital NHS Foundation Trust
  - 11:40–12:00: Cortical Contribution to Balance and Postural Control  
    - Patricia Castro, Audiologist, Research Assistant (PhD student), Imperial College London

### Sponsors Track – A mixture of informative and interactive sessions hosted by our Platinum Sponsors.

- Hall 1C
  - 11:20–11:40: Dynamic Soundfield a Driver for Change in Educational Outcomes: Common Themes between Deaf and Hearing Children Living in Areas of Deprivation  
    - Brian Shannan, Educational Audiologist Manager, Fife Council Sensory Support (Deaf); Course Coordinator (Audiology) and Associate Tutor, University of Edinburgh
    - Debbie Care, Audiology Lecturer & Senior Clinical Scientist, Manchester University & Withington Community Hospital

### All You Need To Know Sessions

- Hall 1B
    - Debbie Care, Audiology Lecturer & Senior Clinical Scientist, Manchester University & Withington Community Hospital
  - 12:25–12:45: Free paper
    - Improvement of Utricular Function after Repositioning Manoeuvres in Benign Paroxysmal Positional Vertigo  
    - Free Paper: Visual Vertical Misperception in Patients with Benign Paroxysmal Positional Vertigo  
    - Dr Abeer Dabbous, Cairo University

### Main Auditorium Hall 1A – Upper Level

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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>08:30</td>
<td>Exhibition Opens – Hall 2 – Lower Level</td>
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<td>09:00</td>
<td>Opening Ceremony – Sponsored by PC Werth</td>
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<tr>
<td></td>
<td>Sue Falkingham, President, British Academy of Audiology</td>
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| 09:15  | Adrian Davis Lecture – Hearing Loss and Healthy Aging: Public Health Considerations  
    - Dr Nicholas S Reed, Assistant Professor, Johns Hopkins University
| 09:45  | Keynote Lecture – Hearing Loss and Dementia Updates  
    - Prof Barbara E Weinstein, Professor and Founding Executive Officer Health Sciences Doctoral Programs; Founding Executive Officer AuD Program, Graduate Center, CUNY |
| 10:15  | Award Presentations Part 1                   |
|        | Audiologist of the Year Award in memory of Peggy Chalmers |
|        | The Jos Millar Shield Award                  |
| 10:30  | Refreshment Break and Exhibition Viewing – Hall 2 – Lower Level / Poster Viewing – Lower Galleria |
| 11:20  | Main Auditorium Hall 1A – Upper Level        |
| 11:20  | Moderator: Michelle Booth                    |
| 11:20  | 11:20–11:40: All New Practice Guidelines: The Ins and Outs of Tinnitus Care  
    - Dr Derek Hoare, Associate Professor in Hearing Sciences, University of Nottingham
| 11:40  | 11:40–12:00: Prioritising Hyperacusis: The Top 10 Research Priorities  
    - Dr Kathryn Fackrell, Research Fellow, NIHR Nottingham Biomedical Research Centre
| 12:00  | Comfort Break                                |
| 12:05  | 12:05–12:25: Shared Decision Making in Tinnitus Care  
    - Dr Helen Pryce, Senior lecturer in Audiology and Hearing Therapy, Aston University, School of Life and Health Sciences
    - Dr Veronica Kennedy, Audivestibular Physician, Bolton NHS Foundation Trust
| 12:45  | Lunch and Exhibition Viewing – Hall 2 – Lower Level / Poster Viewing – Lower Galleria |

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**Thursday 8th November**

**Main Auditorium Hall 1A – Upper Level**

- Moderator: Sue Falkingham

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<tr>
<td>14:00-14:30</td>
<td>British Academy of Audiology Annual General Meeting – (BAA members only)</td>
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<td>14:35-15:05</td>
<td>Main Auditorium  Hall 1A</td>
<td>Moderator: Sarah Hodgson Free paper Hearing Care: Myths and Reality, The User Perspective Emmanuelle Blondiaux-Ding, National Association Of Deafened People</td>
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<tr>
<td>14:35-14:45</td>
<td>Hall 1B</td>
<td>Moderator: Michelle Foster Auditory Processing Disorder and Implications for Sensory Processing Difficulties Nerys Hughes, Clinical Director, Advanced Practitioner, Paediatric Occupational Therapist, Whole Child Therapy</td>
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<tr>
<td>14:45-15:05</td>
<td>Hall 1C</td>
<td>Sponsors Track Moderator: Kath Lewis A True Binaural Listening Experience Michael Guy, NHS Sales Manager, Skantos Ltd Sponsored by Skantos</td>
</tr>
<tr>
<td>15:05-15:35</td>
<td>Main Auditorium  Hall 1A</td>
<td>Moderator: Sarah Hodgson An Integrated Psychology Model for Tinnitus Consultations – for Non-Psychologists Tony Kay, Head of Audiology Services, Aintree University Hospital NHS Foundation Trust Dr Dominic Bray, Consultant Clinical Psychologist, Lancashire Care NHS Trust</td>
</tr>
<tr>
<td>15:05-15:35</td>
<td>Hall 1B</td>
<td>Moderator: Michelle Foster Moving on up: Transition to Adult Audiology Services for Young People with Down’s Syndrome or Learning Disabilities Dr Rosa Crunkhorn, Specialty Registrar in Audiovestibular Medicine, Royal Bolton NHS Foundation Trust</td>
</tr>
<tr>
<td>15:05-15:15</td>
<td>Main Auditorium  Hall 1A</td>
<td>Moderator: Sarah Hodgson Teleaudiology in Hearing Aids: “Like Having the Audiologist in Your Pocket” Miguel Angel Aranda de Toro, PhD, Director of External Relations, Global Medical Affairs, GN Hearing Sponsored by GN Hearing</td>
</tr>
<tr>
<td>15:15-15:35</td>
<td>Main Auditorium  Hall 1A</td>
<td>Moderator: Sarah Hodgson Clinical Research Update on Assessment Methods used for Patients Seeking Help for Tinnitus and/or Hyperacusis from an Audiology Clinic Dr Hashir Aazh, Tinnitus &amp; Hyperacusis Therapy Specialist Clinic, Audiology Department, The Royal Surrey County Hospital NHS Foundation Trust Sponsored by Phonak</td>
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<tr>
<td>15:35-15:40</td>
<td>Main Auditorium  Hall 1A</td>
<td>Moderator: Sarah Hodgson Comfort Break</td>
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<td>15:40-16:00</td>
<td>Main Auditorium  Hall 1A</td>
<td>The hearWELL Collaboration Lt Col Linda Orr, Consultant ENT surgeon and military lead of hearWELL Collaboration, Defence Medical Services/Queen Elizabeth Hospital Birmingham</td>
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<tr>
<td>15:40-16:00</td>
<td>Main Auditorium  Hall 1A</td>
<td>The Prevalence of Hearing Loss in Athletes with Learning Disabilities Following Hearing Screening at the Special Olympics Games Wendy Stevens, Senior Lecturer, De Montfort University</td>
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<tr>
<td>15:40-16:00</td>
<td>Main Auditorium  Hall 1A</td>
<td>Considering Cognition in the Clinic Jeff Crukley, Manager of Audiology Research and Hearing Science, Starkey Hearing Technologies Sponsored by Starkey</td>
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<tr>
<td>16:00-16:25</td>
<td>Main Auditorium  Hall 1A</td>
<td>Moderator: Charlotte Rogers Refreshment Break and Exhibition Viewing – Hall 2 – Lower Level / Poster Viewing – Lower Galleria</td>
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<tr>
<td>16:30-17:30</td>
<td>Main Auditorium  Hall 1A</td>
<td>Moderator: Charlotte Rogers Snowflakes and Millennials – Lazy Arrogant Selfish The Challenge of Building an Engaged Future Workforce Kevin Wyke, Director/Founder, Leap Further Ltd</td>
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THURSDAY 8th NOVEMBER

09:00–10:30 MAIN AUDITORIUM – HALL 1A
Moderator: Sue Falkingham

09:00–09:15 Opening Ceremony sponsored by PC Werth
Sue Falkingham
President, British Academy of Audiology

09:15–09:45 Adrian Davis Lecture – Hearing Loss and Healthy Aging: Public Health Considerations
Dr Nicholas S Reed
Assistant Professor, Johns Hopkins University

Abstract:
Once considered a relatively inconsequential aspect of the aging process, a growing body of epidemiologic evidence suggests broader health-related implications of age-related hearing loss, including independent associations with cognitive decline, incident dementia, and poorer physical functioning. Epidemiologic data suggests positive effects of hearing loss treatment on cognition and quality of life; however, there are few well-controlled, randomized trials from which to draw conclusions. With a majority of older adults affected by age-related hearing loss and less than a quarter of those adults accessing rehabilitative hearing care, we must look to novel approaches to reach more adults and enhance healthy aging. Personal sound amplification products (PSAPs) and over-the-counter (OTC) hearing aids represent a potentially affordable and accessible option in hearing health care. Despite advances in technology, there is a dearth of research regarding their capabilities or potential utilization in hearing rehabilitation. This session will discuss recent epidemiologic research, current and planned studies to investigate the impact of rehabilitative hearing intervention on reducing cognitive decline and the risk of dementia, provide results from PSAP comparative effectiveness studies, and discuss the role of technology and community health workers within a public health approach to treating age-related hearing loss.

Key Learning Objectives:
• Understand associations of age-related hearing loss and broader health issues such as cognitive decline
• Identify novel community-based solutions for hearing care
• Debate potential for over-the-counter hearing care as a complement to clinic-based care

Biography:
Nicholas Reed is an Assistant Professor of Audiology at the Johns Hopkins School of Medicine. He received his clinical doctorate in audiology from Towson University and completed his clinical externship at Georgetown University Hospital. Concurrent to his duties as a researcher and lecturer, he is pursuing a PhD in clinical investigation at the Johns Hopkins Bloomberg School of Public Health under the mentorship of Dr. Frank Lin. Nicholas is core faculty at Cochlear Center for Hearing and Public Health at Johns Hopkins where he studies the impact of hearing loss on healthcare utilization, the effect of amplification on gerontologic outcome measures and novel models to address hearing loss.

09:45–10:15 Keynote Lecture – Hearing Loss and Dementia Updates
Professor Barbara E Weinstein
Professor and Founding Executive Officer Health Sciences Doctoral Programs; Founding Executive Officer AuD Program, Graduate Center, CUNY

Abstract:
Dementia and age related hearing loss are recognized as costly public health challenges. In light of its growing prevalence and emerging data, hearing loss is considered a leading modifiable risk factor which, if identified and managed earlier in the life span, could be transformative socially, communicatively, and economically for persons affected with dementia. As such, audiologists are potential gatekeepers who should be poised to recognize changes in memory function, and communication status which may represent previously undetected warning signs of dementia. This responsibility requires heightened clinical awareness and an understanding of dementia, its presentation, and how best to work with persons with dementia and their caregivers. This session is designed to provide hearing health care professionals with the skill set needed to help ease the burden of dementia on the individual, family, and society.

Key Learning Objectives:
• Enumerate the causes and modifiable risk factors for dementia and the significant role for hearing loss in this complex equation
• Appreciate the implications of the communication changes and behaviors that occur with dementia and the implications for audiologic practice
• Discuss the contribution of hearing interventions to dementia onset, dementia progression and brain health

Biography:
Professor Barbara E. Weinstein is a Professor of Audiology at the Graduate Center, CUNY in NYC and an Adjunct Professor of Medicine at NYU School of Medicine. Dr. Weinstein received her Ph.D. in Audiology from Columbia University where she began her academic career as a young faculty member. A recipient of numerous national and international awards, Professor Weinstein developed the Hearing Handicap Inventories, the world’s most widely used tools to identify patients with hearing loss which has been translated into 20+ different languages. Dr. Weinstein’s primary research interests include hearing loss, dementia and social isolation, screening for age related hearing loss and quantification of patient reported outcomes. Dr. Weinstein has long advocated for the integration of hearing health care into the mainstream be it cultural, medical or religious institutions. Her research on hearing loss and dementia, and on the social consequences of hearing loss, have profound implications at the intersection of audiology, medicine and society.

11:20–12:45 MAIN AUDITORIUM – HALL 1A
Moderator: Michelle Booth

11:20–11:40 All New Practice Guidelines: The Ins and Outs of Tinnitus Care
Dr Derek Hoare
Associate Professor in Hearing Sciences, University of Nottingham

Abstract:
Tinnitus involves the perception of a sound or sounds in the ear or head without an external source. Most individuals experiencing tinnitus...
Prioritising Hyperacusis: The Top 10 Research Priorities

Dr Kathryn Fackrell
Research Fellow, NIHR Nottingham Biomedical Research Centre

Abstract:
Hyperacusis is characterised by decreased tolerance of ordinary environmental sounds. It is reported by about 4% of children and 8% of adults and affects individuals in a variety of ways. Despite its prevalence much remains unknown and misunderstood. It is therefore essential to prioritise research according to what is most important to people with lived experience of hyperacusis (patients and parents/carers) and healthcare professionals. To identify research priorities we initiated a James Lind Alliance Priority Setting Partnership. The process involved two online surveys and a facilitated workshop with people with lived experience of hyperacusis and healthcare professionals. In the first survey, 2370 questions were submitted by 312 respondents worldwide, including people with lived experience and healthcare professionals. Following a literature search to verify which questions were unanswered, similar questions were synthesised into a list of 85. In the second survey 327 participants voted for their priority questions with 28 questions receiving the most representative votes. The final Top 10 research priorities were agreed during a final workshop involving 21 participants, held in Nottingham, UK, in July 2018. The “Top 10” research priorities for hyperacusis focus on important aspects of treatment, cause, mechanism, prevalence, and healthcare provider knowledge and training.

Key Learning Objectives:
• To understand why hyperacusis is a problem
• To understand the process of priority setting
• To describe research priorities as determined by people with lived experience of hyperacusis and healthcare professionals

Biography:
Kathryn studied at Nottingham Trent University achieving a first class BSc (Hons) degree in Psychology. She started her translational hearing research career during her undergraduate degree where she completed a summer internship working on tinnitus research. Since this Kathryn has continued to work with the tinnitus and hyperacusis team, working closely with clinicians and academic colleagues and gaining her PhD in tinnitus outcome measurement from the University of Nottingham in 2015. The team’s research aims to explore new treatments, measurement and to look at how to maximise the benefits of current NHS Management options. She is working with patients and partners to improve knowledge and how to treat and measure tinnitus and hyperacusis. Kathryn initiated the James Lind Alliance Priority Setting Partnership for hyperacusis with colleagues at Nottingham BRC (Dr Derek Hoare) and the patient representatives in May 2017 to identify the top priorities in research.

12:05–12:25

Shared Decision Making in Tinnitus Care
Dr Helen Pryce
Senior lecturer in Audiology and Hearing Therapy, Aston University, School of Life and Health Sciences

Abstract:
This presentation describes three linked studies into shared decision making in tinnitus care. Firstly we consider the preferences people with tinnitus hold for their treatment and outcomes. Secondly we consider what happens in practice and report on observations of clinicians and patients together. Finally we describe the development of a decision aid to facilitate shared decision making in tinnitus care and consider how to apply shared decision making to practice.

Key Learning Objectives:
• To describe shared decision making process
• To identify patient preferences for tinnitus care
• To describe the decision aid and its role in facilitating shared decision making

Biography:
Helen is a Senior Lecturer in the Audiology department at Aston University. She is programme Director for the MSc Advanced Hearing Therapy Practice and the Doctor of Hearing Therapy programmes. Helen’s training is in Hearing Therapy and her MSc is in Evidence-based Healthcare. Her Doctorate was in medically unexplained hearing conditions.

Her research interests focus on patient experience, in particular the interactions between audiology volunteers and professionals and their patients. Helen has led several programmes of research examining how tinnitus care is provided and the preferences patients hold for their treatments. Her team have published two decision aids for care in audiology – one for hearing and one for tinnitus. Helen has practiced in Hearing Therapy for 28 years and she retains a small clinical role in Bath.
12:25–12:45
A Practical Approach to Managing Hyperacusis in Children

Dr Veronica Kennedy
Audiovestibular Physician, Bolton NHS Foundation Trust

Abstract:
Many children are sensitive to loud noises. While for most children, this is a transient problem with little impact on a child’s day to day activities, for some it can cause significant distress. This can affect their enjoyment of school, home and social activities and often result in a marked limitation in the activities in which a child chooses to engage. For some, it can lead to avoidance of activities and marked restrictions of family life. These children may fit different clinical profiles supported by a classification of possible mechanisms for the hyperacusis in children. This classification is as follows:

• Immature but normally developing auditory system
• Temporary auditory deprivation
• Disorder within the auditory system
• Disorder of sensory processing.

This talk will explore how different presentations and medical conditions combined with the use of this classification may help in understanding the basis for hyperacusis in a child. This in turn can help in discussing likely prognosis with the parents. The talk will also explore a selection of management strategies relevant to the different clinical profiles.

Key Learning Objectives:
• Using a classification system to develop a clinical profile of the child with hyperacusis
• Be familiar with the range of problems that children with hyperacusis report
• Be aware of a range of strategies that may help a child with hyperacusis

Biography:
Dr Veronica Kennedy is a Consultant Audiovestibular Physician working within a paediatric audiology setting. She regularly lectures on the UCL course on Tinnitus and Hyperacusis. She was a key figure in the development of the British Society of Audiology’s Good Practice Guidance on the management of tinnitus in children and in the development of a series of resources by the British Tinnitus Association to support a child with tinnitus. She is keen to develop similar guidance for children with hyperacusis and was part of the recent James Lind Alliance Hyperacusis Priority Setting Partnership steering group looking at identifying research priorities in hyperacusis.

11:20–11:40
Vestibular Assessment, Diagnosis and Management in Children

Dr Soumit Dasgupta
Consultant Audiovestibular Physician/Neurotologist and Clinical Lead in Paediatric Audiology, Alder Hey Children’s Hospital NHS Foundation Trust

Abstract:
Vestibular disorders in children are important causes for generating morbidity and may be overlooked or undiagnosed. Assessing a child’s vestibular system entails special skills, expertise, a detailed knowledge of the anatomy and physiology of the inner ear with its central connections and is essentially an art. A thorough history followed by a meticulous examination of the vestibular system need to be performed to obtain frequency specific information of the entire vestibular sensory epithelium to customise rehabilitation. Once diagnosed, management leads to a very rewarding and successful outcome.

Key Learning Objectives:
• To raise awareness in this field and introduce the audience to this highly stimulating and challenging discipline
• To acquire knowledge about paediatric vestibular assessment and the diagnostic algorithm
• To acquire an overview of paediatric vestibular disorder management and rehabilitation

Biography:
Dr Soumit Dasgupta MBBS DLO MS FRCS MSc FACHNS is a Consultant Audiovestibular Physician and Clinical Lead in Audiology in Alder Hey Children’s NHS Foundation Trust where he established a unique state of the art dedicated paediatric balance unit. His private practice is exclusively adult Audiovestibular Medicine in Sheffield. Dr Dasgupta is an honorary faculty at the University of Manchester and teaches at the Universities of Liverpool and Sheffield and is an external examiner for the University College London. He is well published in peer reviewed journals and text books and has been lecturing extensively at national and international levels as faculty. Dr Dasgupta is an expert reviewer for 3 index journals and the General Medical Council. He is a member of the working group on balance in the European Academy of Otology and Neuro-otology; a founding member/secretary of the Vertigo Academy International and the chairman of the Education subcommittee of our national body.

11:40–12:00
Cortical Contribution to Balance and Postural Control

Patricia Castro
Audiologist, Research Assistant (PhD student), Imperial College London

Abstract:
Cortical activity related to posture has been studied for several years, but the key areas participating in postural performance and its perception have not been clearly identified. Despite the commonplace assertion that postural control declines with age and that older individuals often develop anxiety and fear in relation to balance function, the role of anxiety and age-related cortical dysfunction in postural control has not been fully elucidated. A further understanding of the cortical elements involved in postural control may allow us to describe, identify and eventually treat balance disorders, especially in old patients who commonly have unexplained dizziness.

The main aim of this talk is to show current work on cortical processes and networks involved in the objective and subjective aspects of postural control. This evidence includes cortical involvement and emotional modulation of postural responses in healthy subjects and in patients with balance disorders, measured using imaging, electroencephalogram, static and dynamic postural assessment, behavioural tasks and symptoms questionnaires.

Key Learning Objectives:
• To increase understanding of the underlying brain processes and areas involved in normal posture maintenance
• To provide a better understanding of how age-related changes can modulate the objective and subjective aspects of postural control
• To characterise the role of the emotional components on the objective and subjective elements of posture
12:05–12:25

**Life in Balance and Balance in Life. Mindfulness Techniques for Chronic Dizziness.**

**Debbie Cane**

Audiology Lecturer & Senior Clinical Scientist, Manchester University & Withington Community Hospital

**Abstract:**

"Please see this patient with chronic dizziness in your rehabilitation clinic. What reaction does this evoke in you? There is limited evidence on the best management of chronically dizzy patients. Habituation exercises, medication and psychological techniques have all been proposed. Clinicians are often unsure how to best help these patients, whose symptoms can profoundly affect their quality of life. This talk will discuss how mindfulness techniques may be useful for patients with chronic dizziness. It aims to give delegates an understanding of the basic concepts of mindfulness, how these concepts may be applied to chronically dizzy patients, discuss patient experiences of mindfulness for dizziness and raise awareness of techniques that can be used with their patients in clinic.

**Key Learning Objectives:**

- To be aware of the definition of secular mindfulness
- To learn how the concepts of mindfulness may be applied to patients with chronic dizziness
- To learn about mindfulness techniques that can be used by clinicians in a vestibular rehabilitation clinic with their patients with chronic dizziness

**Biography:**

Debbie qualified as a Clinical Scientist in Audiology in 2003. She led the adult Diagnostic Audio-Vestibular Services at the Royal Berkshire NHS Foundation Trust for 10 years before taking up a lecturership in Audiology at the University of Manchester in October 2015. As well as her academic workload, (leading teaching for vestibular assessment and management modules at undergraduate, post graduate and doctoral level, and supervision of dissertations in this area) she has continued her clinical work. Her specialist area of interest is the rehabilitation of patients with chronic dizziness using CBT and mindfulness techniques and she is a qualified mindfulness teacher. Debbie is particularly interested in raising awareness of vestibular disorders in patients of all ages, and in optimizing pathways for patient’s timely diagnosis and management.

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12:25–12:45

**Free Paper 1: Improvement of Utricular Function after Repositioning Maneuver in Benign Paroxysmal Positional Vertigo**

**Free Paper 2: Visual Vertical Misperception in Patients with Benign Paroxysmal Positional Vertigo**

**Dr Abeir Dabbous**

Cairo University

**Abstract 1:**

**Background:**

In Benign Paroxysmal Positional Vertigo (BPPV), the otocoriaia are dislodged from their usual position within the utricle and migrate into one of the semi-circular canals. Utricular dysfunction in BPPV has been reported. Residual dizziness (RD) is common following treatment. Objectives: To assess the utricular function in patients with posterior canal BPPV following canalith repositioning maneuver (CRM) using ocular vestibular evoked myogenic potential (oVEMP) and to correlate the findings with any RD after CRM.

**Methods:**

30 adult patients with posterior canal BPPV (6 males and 24 females) were compared to well-matched controls. oVEMP and Dizziness Handicap Inventory (DHI) Questionnaire were administered before and after successful CRM.

**Results:**

Before CRM, the affected ear showed a significant delay in latency of N1 in the affected ear oVEMP and a significantly decreased in N1-P1 amplitude compared to controls and to the non-affected ears. After CRM their amplitudes were comparable. The BPPV group had a greater Interaural amplitude difference percent (IAAD%) compared to controls before and after CRM. The non-affected ear showed only decreased in N1-P1 amplitude compared to controls. After CRM the affected ear amplitude increased and became comparable to the controls. The IAAD% was larger in RD group than non-RD group before and after CRM. The Dizziness handicap severity decreased following CRM. But the occurrence of RD could not be predicted from DHI scores.

**Conclusions:**

Utricular function measured by oVEMP in the affected ear improved after CRM, and contralateral ear showed sub-clinical affection. Persistent VEMP abnormality reflecting persistent utricular dysfunction was related to residual dizziness.

**Key Learning Objectives:**

- To know the ocular vestibular evoked myogenic potential (oVEMP) latency and amplitude characteristics in posterior canal Benign Paroxysmal Positional Vertigo (BPPV) patients
- To know the change in utricular function in patients with posterior canal BPPV following canalith repositioning maneuver (CRM)
- To know the relationship between oVEMP findings and any residual dizziness after CRM

**Abstract 2:**

**Background:**

The Subjective Visual Vertical (SVV) is a measure of otolith-mediated verticality perception. The aim of this study was to test otolith function using the SVV in patients with posterior canal (PC) Benign Paroxysmal Positional Vertigo (BPPV) before and after Epley’s canalith repositioning maneuver (CRM).

**Methodology:**

This study included 20 PC BPPV patients and 20 healthy control subjects. SVV was tested using special equipment, at the time of BPPV diagnosis, then after CRM, and then 1 week after the resolution of the vertigo and nystagmus. SVV was determined from clockwise (CW) and counter-clockwise (CCW) directions. The absolute average and the conventional numerical average was calculated.
Results:
Using the conventional method, there was no statistically significant difference between BPPV and their controls regarding either the CW or the CCW-SVV or the average slope. There was no statistically significant difference between CW and CCW-SVV in the patients. There was no statistically significant difference in the mean SVV values or the distribution of normal and abnormal results or the distribution of the SVV tilt between both sided BPPV. Using the absolute average, SVV tilt was significantly higher in the patients than the controls. The preset angle affected the result. The mean SVV was significantly lower after resolution of BPPV than before treatment.

Conclusion:
Absolute SVV average was more accurate than numerical SVV average. There is a reduction of the SVV tilt after the CRM in BPPV patients. So, the SVV test can be used as a prognostic test for BPPV improvement after treatment.

Key Learning Objectives:
- To learn the different methods of calculating the subjective visual vertical (SVV)
- To know whether there is any Visual Vertical Misperception in Benign Paroxysmal Positional Vertigo (BPPV) patients
- To know the change in Visual Vertical perception, in patients with posterior canal BPPV, following canalth repositioning maneuver (CRM)

Biography:
Dr Abeir Osman Dabbous, graduated from Cairo University school of Medicine (signed up Excellent with honors) M.B.B.Ch 1994. She obtained her MSc (1998) and MD (2002) degrees in Audio-Vestibular medicine from Cairo University, where she was a resident then a clinical demonstrator, an assistant lecturer, lecturer then an assistant professor, then a professor in the Audio-Vestibular Medicine Unit, Otolaryngology Department, Kasr Al-Ainy Faculty of Medicine, Cairo University. She has clinical experience, research and post-graduate teaching over the past 22 years to date. She is a member of the Egyptian Oto-Rhino-Laryngologic Society; the Egyptian Audio-Vestibular Medicine Association (EAVMA), the International Association of Physicians in Audiology (IAPA). She is a Co-editor in the Egyptian Journal of Otolaryngology, an ad-hoc Reviewer in the Journal of Hearing Science. Dr Abeir Dabbous has attended a 3 months clinical attachment to the Nottingham Tinnitus Clinic (Queen’s Medical Centre, Nottingham University Hospital, United Kingdom (2000), and is a London Tinnitus Retraining Therapy (TRT) course graduate (2001). She also attended many medical instructional courses and workshops, and actively participated in organizing scientific events. Her main research interests are related to tinnitus and hyperacusis, vertigo and balance, hearing aids, auditory processing, tympanometry and multi-frequency tympanometry, auditory evoked potentials, and otoacoustic emission testing. She has presented her scientific research as oral and poster presentations in national and international scientific conferences and published several scientific papers in national and international journals and conference proceedings.

12:05–12:25

Hearing Loss, Hearing Aids and Memory

Elaine Ng
Senior Researcher, Oticon A/S

Sponsored by Oticon

Abstract:
Research has shown that hearing loss has a negative impact on higher-level cognitive processes such as memory, and some recent studies investigated the connection between hearing loss and cognitive decline. This presentation will review recent studies investigating the relationship between hearing loss and different types of memory, and will discuss the immediate and long-term effects of hearing aid use on memory.

Key Learning Objectives:
- The connection between hearing and cognition
- The impact of hearing loss on cognitive and memory performance
- The effects of hearing aid use on memory

Biography:
Elaine Ng, PhD, is currently a senior researcher at Oticon A/S, Denmark. She received her MSc in Audiology from the University of
PROFESSIONAL DEVELOPMENT LOUNGE

11:20–12:45 ROOM 4A – UPPER LEVEL

11:20–12:00
From Clinics to Academia: Navigating the Pathway into Research

William Brassington, Hashir Aazh, Gemma Crunwell, Tanjinah Ferdous, Emily Frost & Amanda Hall
Clinical Research Network – Regional Audiology Leads, NIHR – Clinical Research Network

Abstract:
The opportunity to become involved in research is often overlooked by clinicians in the field of Audiology. Audiological research in the UK is typically undertaken within academic institutions and a selected number of larger Audiology centres commonly associated with large ENT departments. The common barriers that prevent clinicians becoming involved in research are associated with lack of research expertise, poor knowledge about research infrastructure and support networks, time and funding. This lack of engagement in research activities is limiting the broader role of modern healthcare clinicians. The prospect of entering into the field of research is often daunting and whilst many Audiologists would be keen to be involved in research, a lack of previous experience or exposure leads many to consider this beyond the bounds of their ability. In 2017, the National Institute for Health Research (NIHR) ENT specialty group identified the lack of Audiological engagement in research and subsequently appointed regional Audiology leads within its 15 clinical research networks. The role of the CRN Audiology leads is to support and promote local staff with the set up and delivery of Audiological research in their regions. This workshop will address the pitfalls and challenges experienced by the Audiology leads and will provide aspiring researchers with the insight and support necessary to take their career forward beyond the clinic into the world of research.

Key Learning Objectives:
- Understand the role of the CRN Audiology Champions and network of support available to audiology professionals
- Develop a plan to overcome the primary barriers preventing their engagement in research
- Develop a plan to initiate a successful research project

Biography:
This session will be delivered by 6 of the CRN Audiology Champions:
William Brassington – A Consultant Clinical Scientist with a current research interest in implantable hearing devices.
Hashir Aazh – A lead in tinnitus and hyperacusis with a research interest in this field.
Gemma Crunwell – An Audiologist working in Implants with a research interest in this field and oto-toxicity.

Tanjinah Ferdous – A specialist diagnostic Audiologist and research Audiologist working in the evidENT program.
Emily Frost – A clinical academic and Adult Audiology lead currently undertaking a PhD in hearing loss and dementia.
Amanda Hall – An NHS clinician in Paediatric Audiology and University Lecturer with a research interest into the causes and impact of hearing loss in children.

The 6 contributors to this session have a broad range of experience working in clinical, academic, educational and leadership roles. Between them the team contributes to a large and varied portfolio of research projects addressing some of the key areas of interest in Audiology.

12:05–12:45
How to Teach your Patients about New Technology

Miguel Angel Aranda de Toro, PhD
Director of External Relations, Global Medical Affairs, GN Hearing

Abstract:
This is the challenge: on the positive side, hearing technology keeps getting more and more sophisticated, and all manufacturers are constantly introducing new features that have a tremendous impact in the quality of life of end users. At the same time, end users are getting younger and results from the latest MarkeTrak (IX) show that for the first time the average age of hearing-aid users has decreased from 70 to 63 years old. The reason being because younger users seem to be attracted to the exciting possibilities of the new technology.

On the negative side (you knew there was a “but” coming), research shows that hearing-aid users do not fully understand how to use all the wonderful features they were so eager to get. And that’s the problem, because if the users do not find the benefit they expected from their new hearing instruments, the devices will probably end up in the drawer...again.

This will be a very interactive session where we will review and discuss video footage from real life situations and I will share with you a very simple technique that – from my experience – has proven to be very effective to teach end users how to get the maximum benefit of their new instruments.

Key Learning Objectives:
- Identify which features are important for your patients
- Recreate the use of important features with your customer
- Observe and let your customer explore the features. All the steps will be illustrated with practical examples

Biography:
Driven by his passion for music and rock and roll, Miguel studied acoustic engineering at the Polytechnic University of Madrid (Spain, 1995—1999) and played drums in probably the most terrible – and fortunately forgotten – rock band in the Spanish music scene. “We were so bad and played so loud that we were probably the only rock musicians who were worried about their hearing”, recalls Miguel. Because of this, Miguel became interested in the prevention of hearing loss, especially among musicians and he moved to Aalborg University (Denmark) to continue his education as MSc Electronic Engineer with special focus on the use of engineering methods for audiological purposes. In December 2010 Miguel completed his PhD in the topic of otoacoustic emissions and early detection of hearing loss.

Miguel joined GN Hearing (Denmark) in 2010 as International Audiologist and Product Trainer, providing audiological and technical support in more than 80 countries. Currently, Miguel works as Director of External Relations within the EMEA region, where he is responsible for communication with Key Opinion Leaders to continue the development of state-of-the-art hearing solutions as well as the execution of scientific...
15:05–15:35 An Integrated Psychology Model for Tinnitus Consultations – for Non-Psychologists

Tony Kay
Head of Audiology Services, Aintree University Hospital NHS Foundation Trust

Dr Dominic Bray
Consultant Clinical Psychologist, Lancashire Care NHS Trust

Abstract:
• Tinnitus symptoms and treatments commonly have a significant psychological component
• Many audiology services have limited or no access to psychological professionals
• Some audiologists will have had training in Cognitive-Behavioural Therapy (CBT) but may still struggle to help patients, particularly those who are most disappointed, angry or depressed
• A model will be presented, co-developed over a number of years between an audiologist and a psychologist, that goes a significant way to meeting these challenges

Key Learning Objectives:
• Learn ways of demonstrating appreciation to our patients with tinnitus of their struggles and strengths … hence enhancing the therapeutic alliance
• Learn how to use questions about patients’ wishes for the future to enable hopeful and energized consultations
• Be inspired (hopefully) to use our integrated consultation model, whereby patients will experience a seamless consultation that ‘covers all the bases’ (diagnostically) embedded within a conversation about their hopes and strengths

Biography: Tony Kay

Tony qualified as an Audiologist in 1984, and is Head of Audiology Services at Aintree University Hospital (AUH) in Liverpool. It is an adult service offering a range of diagnostic and therapeutic services to individuals with hearing loss, tinnitus and balance disorders.

Tony’s main clinical interests are tinnitus and hyperacusis, and he runs the audiology-led tinnitus clinic at AUH. His passion for tinnitus support extends beyond the clinic and led him to set up the Aintree Tinnitus Support Group in 2008. He is a past member of the British Tinnitus Association’s Professional Advisors Committee and a current steering group member of the British Society of Audiology’s Tinnitus & Hyperacusis Specialist Interest Group.

To understand who makes up the hearWELL Collaboration

The current main research themes and projects contained within the hearWELL Collaboration aims to understand how to support a child with Auditory Processing Hallucinations (APD). The Collaboration works with the Royal College of General Practitioners (GPs) in their Collaborative Care and Support Planning initiative. The backbone of his work is the solution-focused model which constructs people as co-experts with professionals in their own improvement—towards living lives informed by what matters to them.

15:40–16:00

The hearWELL Collaboration

Lt Col Linda Orr
Consultant ENT surgeon and military lead of hearWELL Collaboration, Defence Medical Services/Queen Elizabeth Hospital Birmingham

Abstract:
The HearWELL Collaboration is the vehicle through which the Defence Medical Services are coordinating UK Defence hearing research in order to maximise the quality and impact of true translation work and be as resource efficient as possible in this key priority area. The collaboration began about 18 months ago pulling all the strands together and it has quickly developed into a fantastic, strongly collaborative initiative with partners inclusive of academic, NHS, Government, charitable organisations within and outside the UK both military and civilian. This presentation will outline who we are, how we are funded, the main research themes, the current and future work we would like to undertake and will share with you an exciting vision for the future and most importantly outline how you might become involved—Your Country Needs You!

Key Learning Objectives:
- To understand who makes up the hearWELL Collaboration
- The hearWELL Collaboration aims
- The current main research themes and projects contained within them

Biography:
Lt Col Linda Orr DM FRCS(ORL-HNS) is a Consultant Ear, Nose and Throat Surgeon at the Queen Elizabeth Hospital in Birmingham and the military lead for the HearWELL programme, the vehicle through which UK military hearing research is supported and coordinated, and Acting Defence Professor of Surgery and Trauma at the Royal Centre for Defence Medicine and the Royal College of Surgeons. Her clinical interests include head and neck trauma, noise induced hearing loss and voice pathology. Her active research studies include hidden hearing loss and cochlear synaptopathy in blast exposed people and telemedicine assessment of hearing with a combination of endoscopic imaging and boothless audiometry. In addition to her clinical and academic responsibilities she serves on several national and international committees relating to acoustic injury and regularly advises figures at the highest levels in Government and the Armed Forces.

14:35–15:05 HALL 1B

Moderator: Michelle Foster

14:35–15:05

Auditory Processing Disorder and Implications for Sensory Processing Difficulties

Nerys Hughes
Clinical Director, Advanced Practitioner, Paediatric Occupational Therapist, Whole Child Therapy

Abstract:
In this session we will explore Auditory Processing Disorder (APD) and its link to wider Sensory Processing Difficulties for both hearing impaired and hearing children. We will look at the main red flags and what you can do to support children with APD.

Key Learning Objectives:
- To understand the broader experiences of children with APD
- To recognise the red flags for SPD
- To understand how to support a child with Auditory Processing Difficulties

Biography:
Nerys is the founder and clinical director of Whole Child Therapy, London (WCT). WCT is one of the first inter-disciplinary social enterprise clinics in the UK, providing occupational therapy, speech therapy, physiotherapy, osteopathy, nutritional therapy, play therapy and family support for families, schools and charities.

Nerys is a specialist children’s OT, with advanced practitioner recognition in sensory processing disorders, complex eating and drinking dysfunction and postural and seating management. Nerys is also trained in primitive reflex integration. She specialises in complex disorders such as down syndrome, autism and chromosomal disorders as well as working with gifted and talented children to help them thrive.

Nerys lectures across the country on the treatment and management of sensory processing disorders. Her commitment to multi-professional practice that is both evidenced based and effective is the core of WCT values.

15:05–15:35

Moving on up: Transition to Adult Audiology Services for Young People with Down’s Syndrome or Learning Disabilities

Dr Rosa Crunkhorn
Specialist Registrar in Audiovestibular Medicine, Royal Bolton NHS Foundation Trust

Abstract:
The prevalence of hearing loss in adults with learning disabilities is approximately 40%. However most do not have their hearing tested. Young people with Down Syndrome or other learning disabilities are often seen in paediatric audiology services but a recent regional survey showed that at transition age, those with normal hearing or an unaided loss often don’t have a specific pathway for transition. Recent guidelines from the Down Syndrome Medical Interest Group recommend that young adults with Down syndrome should have a hearing test every two years. New NICE guidelines suggest that all adults with learning disabilities have 2 yearly hearing assessments.

Hence our paediatric audiology team have developed a new joint pathway for transition which is specifically designed to support young adults with learning disabilities. We worked with service users, adult audiology services, and the paediatric learning disabilities team. We also developed an information leaflet specifically designed to enable
the service users to tell us about their needs and concerns. We are delighted to be able to share our work and hope that highlighting the need in this vulnerable group will help to ensure that all young people are able to access the audiological care appropriate to their needs.

**Key Learning Objectives:**
- All young adults with learning disabilities regardless of hearing status should be transitioned from the paediatric to adult audiology service to enable regular monitoring of hearing
- New guidelines from NICE (2018) state to consider referring adults with a diagnosed learning disability to audiology for a hearing assessment at transition and then every 2 years
- Best Practice Guidance from the Down Syndrome Medical Interest Group (2017) recommends that all young adults with Down Syndrome should have hearing assessments at least 2 yearly and throughout adult life

**Biography:**
Rosa is a Specialty Registrar in Audiovestibular Medicine, currently working in Paediatric Audiology in Bolton. She trained at the University of Birmingham, working part time as a support worker for people with learning disabilities alongside her medical studies. Having met some inspirational people, Rosa is enthusiastic about advocating for and encouraging independence in people with learning disabilities. Rosa completed her ENT SHO rotations around the West Midlands and beyond, working in New Zealand for 18 months. She began her training in Audiovestibular Medicine in Cardiff in 2015 where she particularly enjoyed the busy balance clinics. Rosa began her MSc Advanced Practice (Audiology) while in Cardiff and is currently on the lookout for any interesting dissertation project ideas! Rosa will be continuing her training in the North Western Deanery and is developing interests in adult and paediatric balance, and auditory neuropathy as well as working with children and adults with learning disabilities.

**15:40–16:00**

**The Prevalence of Hearing Loss in Athletes with Learning Disabilities following Hearing Screening at the Special Olympics Games**

**Wendy Stevens**
Senior Lecturer, De Montfort University

**Abstract:**
The mission of the Special Olympics (SO) Healthy Athletes Programme (HAP) is to improve the health, fitness and general well-being of athletes, so they can not only perform better during training and competitions but also in the daily life.

The HAP is an international program in which the health of SO athletes is screened by professional volunteers in 7 different health disciplines. The athletes can participate in these screenings for free and without any obligation during SO events. One of the disciplines is Healthy Hearing (HH). The HH-program was founded in 1999 by Dr. Gil Herer, PhD, CCC-A. Worldwide approx. 89, 000 athletes have been screened and in the UK over 2,000 have been screened since 2009. The objectives of the program are: to research the prevalence of ear problems and hearing loss in athletes who compete at SO events; to inform the athletes, their parents, their coaches or caregivers about the detection of possible ear and hearing problems and to recommend follow-up care as needed.

**Key Learning Objectives:**
- To inform members nationally about the work of Special Olympics
- To discuss the findings from the screening programme with regards to prevalence and outcomes
- To raise an awareness of prevalence and the need for a screening service nationally

**Biography:**
Wendy has worked in Audiology for over 30 years. She started her career as a volunteer at The Royal Hallamshire Hospital and then studied for 9 year to progress to Chief Audiologist. She was there for 18 years. Wendy’s special interest have always been working with people with Learning Difficulties. She left to take up a post at De Montfort University as a Senior Lecturer and has been there for over 14 years. Wendy taught many students over the years who have now become brilliant audiologists. She is Clinical Director for the healthy hearing programme at Special Olympics GB and has worked with colleagues and students in screening approximately 2000 athletes. Wendy is also involved in a university project in the Gujarat India where we work with a charity hospital and offer free hearing screening and fit hearing aids that have been donated to people who need them.

**14:35–16:00**

**SPONSORS TRACK**

**14:35–14:55**

**A True Binaural Listening Experience**

**Michael Guy**
NHs Sales Manager, Sivantos Ltd
Sponsored by Sivantos

**Abstract:**
We believe that hearing should be as natural and easy as possible – even for patients with hearing loss. When manufacturers talk about wireless processing, what do we really mean? Do all systems do the same thing and what’s the benefit for the wearer. So with Signia Contrast, what feature is at the heart of the system and how can we enable people to have effortless hearing especially in challenging listening environments.

**Key Learning Objectives:**
- Understand what we mean by true binaural processing
- What features does binaural processing allow
- How do patients and clinicians benefit from this technology

**Biography:**
Michael is the NHS Sales Manager heading up the Sivantos team of Audiologists who support their NHS customers. He started his career as an NHS Supernumerary student, spending time in both Audiology and Cardiology before deciding on a career in Audiology. He worked for various NHS Hospitals in London and the South East before moving into the retail sector.

**14:55–15:15**

**Teleaudiology in Hearing Aids: “Like Having the Audiologist in Your Pocket”**

**Miguel Angel Aranda de Toro, PhD**
Director of External Relations, Global Medical Affairs, GN Hearing
Sponsored by GN Hearing

**Abstract:**
With the fast development of telecommunications, and especially since the introduction of smartphones, teleaudiology has become one of the hot topics within the hearing industry. In this presentation we will focus on ReSound Assist – one of the options currently available in the
The participant will be able to list at least 2 guidelines of

among the main advantages we will focus on three that have a direct impact on customer satisfaction: 1) the possibility of doing remote fine tunings, which can save unnecessary trips to the clinic and transportation costs; 2) users can request adjustments directly from those environments that are part of their daily life and that would be difficult to simulate otherwise in the clinic; and 3) personalisation of hearing care, as it is possible to support users remotely according to their needs and lifestyle.

Among the main challenges the most significant is probably the lack of experience of many professionals with this new tool, which raises many questions. The most common are: 1) how does it work and how does it impact the regular working flow of my clinic? 2) what happens with data protection of medical data? and 3) whether teleaudiology really saves consultation time or, on the contrary, adds unnecessary consultations.

During this session we will do a demonstration of ReSound Assist to show that, as many of our end users report, it is like having the audiologist in your pocket.

Biography:
Driven by his passion for music and rock and roll, Miguel studied acoustic engineering at the Polytechnic University of Madrid (Spain, 1995—1999) and played drums in probably the most terrible – and fortunately forgotten – rock band in the Spanish music scene. "We were so bad and played so loud that we were probably the only rock musicians who were worried about their hearing", recalls Miguel. Because of this, Miguel became interested in the prevention of hearing loss, especially among musicians and he moved to Aalborg University (Denmark) to continue his education as MSc Electronic Engineer with special focus on the use of engineering methods for audiological purposes. In December 2010 Miguel completed his PhD in the topic of otoacoustic emissions and early detection of hearing loss.

Miguel joined GN Hearing (Denmark) in 2010 as International Audiologist and Product Trainer, providing audiological and technical support in more than 80 countries. Currently, Miguel works as Director of External Relations within the EMEA region, where he is responsible for communication with Key Opinion Leaders to continue the development of state-of-the-art hearing solutions as well as the execution of scientific studies to test the validity of current methods.

Miguel lives in Copenhagen, he is happily married (for most of the time) and has two children.

Clinical Research Update on Assessment Methods used for Patients Seeking Help for Tinnitus and/or Hyperacusis from an Audiology Clinic
Dr Hashir Aazh
Tinnitus & Hyperacusis Therapy Specialist Clinic, Audiology Department, The Royal Surrey County Hospital NHS Foundation Trust
Sponsored by Phonak

Abstract:
The aim of this presentation is to summarise and discuss the outcomes of several research studies conducted in 2017-18 at Tinnitus & Hyperacusis Therapy Specialist Clinic (TH-TSC), Guildford, which are essential to be implemented in day-to-day clinical practice. The key topics which will be discussed comprise: (1) avoiding discomfort during PTA and ULLs. (2) relevance and applicability of psychological questionnaires to patients seeking help for tinnitus and/or hyperacusis, (3) tinnitus and hyperacusis in elderly, (4) diagnosis of hyperacusis, (5) characteristics of severe hyperacusis, and (6) suicidal and self-harm ideations among patients seeking help for tinnitus and/or hyperacusis.

Biography:
Hashir is the team-lead for the Tinnitus & Hyperacusis Therapy Clinic, Royal Surrey County Hospital, Guildford. He has written over 20 scientific papers in the field of Audiology. Hashir is the course director for the Tinnitus Masterclass (8-10 July 2019, London) and the organiser for the International Conference on Hyperacusis (11th July 2019, London).

Considering Cognition in the Clinic
Jeff Crukley
Manager of Audiology Research and Hearing Science, Starkey Hearing Technologies
Sponsored by Starkey

Abstract:
There is a lot of buzz around cognition and hearing healthcare. But what do we know and where should we go next? Epidemiological studies suggest cognitive decline and hearing loss often co-exist. The potential confound of hearing loss on cognitive assessment is of great interest to hearing professionals. Individuals with hearing loss may fail cognitive screening due to difficulty hearing verbal instructions rather than due to the presence of an actual cognitive impairment. This session will review current research on cognitive screening in a hearing healthcare context and provide guidelines for consideration in clinical practice.

Key Learning Objectives:
• The participant will be able to list at least 2 guidelines of implementing cognitive screening in the hearing healthcare practice
• The participant will be able to describe the relationship of hearing loss and cognitive decline

Biography:
Jeff Crukley is the Manager of Audiology Research and Hearing Science at Starkey Hearing Technologies. He earned his MSc in audiology in 2007 and his PhD in Hearing Science in 2011. Jeff completed a post-doctoral fellowship at the Brain & Mind Institute at Western University and worked as a clinical audiologist in private practice. He engages in research on naturalistic approaches to understanding auditory ecology, and the relationships between hearing loss, cognition, and technological innovations. As an adjunct professor, Jeff enjoys mentoring students and teaching in the fields of audiology and hearing science.
know. This will be free for all to access and accredited by BAA. We hope this will be disseminated throughout Audiology, giving all Audiology professionals the tools they need to answer basic questions about tinnitus and gain a thorough understanding of when to and when not to refer a tinnitus patient onto more specialist support.

**Biography: Michelle Booth**
Michelle has worked in Audiology since 1987, training as the original MPPM student in Chesterfield. Michelle obtained her BSc from Leeds University in 2002. She has worked at Sherwood Forest Hospitals NHS Foundation Trust since 1993. They were the first Audiology department in the East Midlands to achieve IQIPS accreditation. Michelle’s specialist area of interest is tinnitus and she worked with the NHS Improvement team in 2009 to develop and implement a direct access service for patients with tinnitus. Michelle has been involved with BAA since 2009, initially as a regional representative, but she joined BAA Board in 2011 leading the Service Quality, Publicity and Communications and the Conference teams during her term, before becoming Vice President and President. Michelle is passionate about her profession and was immensely proud to represent Audiology as President of the BAA in 2016-17.

Michelle has recently obtained a Post Graduate Diploma in Healthcare Leadership studying with the NHS Leadership Academy. She is passionate about leadership development in Audiology and wants to be proactive in developing the future leaders within the profession.

**Biography: David Stockdale**
David was appointed Chief Executive of the BTA in February 2010. He is responsible for the day to day running of the charity, and implements the strategy, as set by the Board of Trustees. He sees supporting the tinnitus community, ensuring a preventative message targets those at risk and increasing research into tinnitus as the BTA’s priorities.

15:05–16:00

**One Voice – Hearing Audiologists**

**Wendy Farrington Chadd**
Chief Executive Officer, British Academy of Audiology

**Prof Brendan Cooper**
Consultant Clinical Scientist/President, AHCS, Academy for Healthcare Science

**Abstract:**
Healthcare scientists cover over 53 professions in the NHS and since the formation of the NHS have often developed their professional voices separately and have rarely come together in “one voice” as the doctors and nurses have been able to do for decades. The AHCS has been established over 7 years and the President was established 3 years ago to represent and promote all professions coming together through the AHCS Council One Voice. The aim of this presentation will be to inform what the Academy One Voice does and where we need to take that voice to have maximum influence. Naturally, our One Voice will focus on raising awareness and issues around the challenges ahead for the NHS and how it will inevitably affect the working lives of Audiologists. We all need to learn from other healthcare scientists; how they have changed their profile, had an impact or been influential in changing healthcare services both locally and nationally. Furthermore, benchmarking how change happens in other diagnostic and therapeutic scientific services will offer new solutions and a broader view of what we need to do to face the future challenges.

**Key Learning Objectives:**
- To understand the role of the One Voice Council for healthcare scientists and how One Voice is supporting the workforce agenda and challenges we face
- To discuss and debate these challenges – how will this impact on Audiologists in the future
- To hear how Trusts are innovating in their approaches to workforce and share examples from service leads

**Biography: Wendy Farrington Chadd**
Wendy’s background is at Executive Board level within the NHS. This includes over 30 years working across hospital providers and in commissioning within different healthcare landscapes.

Most of her career has been spent within the NHS provider sector including Acute, Mental Health, Community, and Primary Care. She has spent over 20 years at Board level as a Chief Executive and Finance Director. Wendy is currently working as a Management Consultant.

Wendy has also undertaken several national and regional Chair and leadership roles including: Chairman of the West Midlands HFMA, a membership organisation representing healthcare finance professionals; lead Chief Executive for the National Specialist Orthopaedic Alliance; Chair of the Local Education and Training Committee informing workforce strategy for NHS providers.

Her experience within the healthcare sector at Board level brings a breadth and depth of expertise which will support the BAA in developing a strategy and forward plan, particularly in relation to health policy and the macro challenges we face as a sector going forward. As an experienced Board leader Wendy fully appreciate the importance of working collectively with health professionals to achieve results.

Wendy began her NHS career as a graduate trainee on the national FMTS and worked her way through to Director level. Her professional career has also included time as a professional examiner for CIPFA the national public service Accountancy body. She has actively and passionately supported staff development and training nationally through links with the GMTS and now undertake Executive Coaching as a qualified coach.

In working collaboratively with health professionals over many years she has been able to gain both rapport and respect across professional boundaries through an open and constructive personal style. As a coach Wendy understand perspective and she is able to argue persuasively and positively to support organisational success. She fully appreciates and understands the pressures and challenges clinicians face in their professional activities.

As Consultant to BAA, the Board and President would like her to focus on strategy, particularly in relation to the SYVF and the challenges as the future landscape developing through local STPs, as well as business and operational management. As a membership organisation the BAA can only continue and succeed through its membership and the views of members is crucial in developing our strategy and plans – She is fully committed to working in partnership to support BAA and very much look forward to working for you in supporting the future direction of travel.

**Biography: Prof Brendan Cooper**
Prof Brendan Cooper is a Consultant Clinical Scientist in Respiratory Physiology at Queen Elizabeth Hospital Birmingham and also a Hon. Professor in Respiratory & Sleep Physiology at the University of Birmingham. He is a respiratory physiologist with over 35 year’s experience in both clinical and research practice in the UK. He has published over 100 peer-reviewed papers on a broad range of respiratory physiology and he is a world leader in the drive for Quality Diagnostic Spirometry.

As the first President of the Academy for Healthcare Science, his role is to act as figurehead for the many professional bodies in healthcare science and to shout loudly the “One Voice” message around the burning issues emanating from all in healthcare science.

Prof Cooper’s clinical interests include evaluation of lung function equipment, development of new lung function tests, quality spirometry and sleep disordered breathing. His research includes a wide spectrum
of respiratory physiology from the resting state to exercise and sleep. His current research interests are in defining the acute effects of electronic cigarettes have on lung function and new ways of assessing breathing remotely.

He held posts in the European Respiratory Society including as Head of Assembly 9 (Allied Respiratory Professionals) and the Advisory Editor of the ERS Buyer’s Guide. He was the Co-Chair of the ERS European Spirometry Driving Licence Task Force which aims to deliver a standard of competence in spirometry across Europe and beyond. He has been a Scientific Advisor in Respiratory Physiology & Sleep to the Department of Health, UK for over 10 years and has also been the first President of the Association for Respiratory Technology & Physiology, the UK professional body for respiratory physiology.

Prof Cooper’s interest in respiration spills over into his scuba diving activities and his interest in sleep is tested on a nightly basis!

16:30–17:30 MAIN AUDITORIUM – HALL 1A
Moderator: Charlotte Rogers

16:30–17:30
Snowflakes and Millennials – Lazy Arrogant Selfish
The Challenge of Building an Engaged Future Workforce
Kevin Wyke
Director/Founder, Leap Further Ltd

Abstract:
“Millennials are spoilt, full of themselves, averse to hard work and expect ‘success on a plate’...” Daily Mail.

There are so many stories told and retold about the generations that will be making up our future workforce that it is easy to assume the Millennials and Generation Zers are a lost cause and that to be worthy of their precious time we will have to tip-toe into the shallow insta-snap mobile phone zombie pool, and pander to their every delicate need to even register in their precious filtered worlds.

But these are just the excuses we use to forgive our lack of effort, our lack of imagination and our lack of vision. There are both differences and similarities between all generations and we need to attract the best to Audiology for Audiology to be the best. That means us connecting with the workforce of the future, us reaching out, us providing an interesting, stretching, meaningful workplace and potential career.

This session will explore the challenges of attracting and retaining our future workforce, we will explore some of the intergenerational myths and truths that can help or hinder us and we will challenge participants to shape a fresh approach to engaging with our current and future workforce.

The session will be a participative call to action, prepare to get involved!!

Key Learning Objectives:
• Explore the challenges of attracting and retaining our future workforce
• Explore some of the intergenerational myths and truths that can help or hinder workforce engagement
• Help participants to shape a fresh approach to engaging with their current and future workplace

Biography:
Kevin is an Organisational and Leadership Development consultant, a facilitator, speaker and a coach working with public sector organisations to bring innovative thinking and creative collaborative approaches to getting work done. He does this by creating and facilitating opportunities for conversations, exploration, understanding, connection and collaboration, drawing on aspects of strengths, positive psychology, and principles of democracy, freedom and trust in the workplace. Kevin helps those working in systems to explore their future, unlock their resourcefulness and realise their potential including through large scale open space collaborations and whole organisation change programmes.

Kevin has extensive NHS experience in a variety of roles and organisations. He started his NHS career as an Audiologist, which led to heading up Hearing Services in a number of trusts and to leading organisation and workforce development at local, regional and national levels as Chair of the British Association of Audiologists and Associate Director of Workforce Development at NHS North West SHA. Kevin also spent time leading Learning and Development and Organisational Development teams in community trusts before setting up Leap Further Ltd.
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Collect your FREE audiology posters. Enjoy our Juice Bar. Experience our exciting Summit range.
## Friday 9th November

### Main Auditorium  Hall 1A  Moderator: Karen Shepherd

<table>
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<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>08:30</td>
<td>Exhibition Open – Hall 2 – Lower Level</td>
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<tr>
<td>09:00</td>
<td>Welcome to Day 2 of Conference</td>
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<tr>
<td></td>
<td>Karen Shepherd, Vice President, British Academy of Audiology</td>
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<tr>
<td>09:15</td>
<td>Bamford Lecture – Strategies and Interventions to enable Autism Friendly Audiology Clinics</td>
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<td></td>
<td>Andrew Whitehouse, Special Educational Needs and Disability Consultant and Training Provider, People First Education</td>
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<tr>
<td>09:45</td>
<td>Keynote Lecture – Family-Centred Hearing Rehabilitation: Evidence and Implementation</td>
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<td>Prof Louise Hickson, Head of School of Health and Rehabilitation Sciences and Co-Director of the Communication Disability Centre, University of Queensland</td>
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<tr>
<td>10:15</td>
<td>Award Presentations Part 2</td>
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<tr>
<td></td>
<td>BAA Paediatric Audiologist of the Year – Sponsored by Phonak</td>
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<td>BAA Student of the Year Award – Sponsored by Oticon</td>
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<td>Lisa Bayliss Award</td>
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<td>10:30</td>
<td>Refreshment Break and Exhibition Viewing – Hall 2 – Lower Level</td>
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<td>/ Poster Viewing – Lower Galleria</td>
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<td>11:20</td>
<td>Main Auditorium  Hall 1A  Moderator: David Maidment</td>
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<tr>
<td></td>
<td>11:20–11:40 Fitting Hearing Aids with Psychophysics</td>
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<td></td>
<td>William Whitmer, Senior Investigator Scientist, Hearing Sciences (Scottish Section), University Of Nottingham</td>
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<td></td>
<td>11:40–12:00 The Role of Cognition for Speech-in-Noise Listening and the Implications for Diagnosis and Treatment</td>
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<td>Dr Antje Heinrich, Senior Lecturer in Audiology, Manchester Centre for Audiology and Deafness (ManCAD), University of Manchester</td>
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<tr>
<td>12:00</td>
<td>Comfort Break</td>
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<td>12:10</td>
<td>GP Engagement Project</td>
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<td>Gemma Twitchen, Senior Audiology Specialist, Action On Hearing Loss</td>
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<tr>
<td>12:10</td>
<td>Free paper</td>
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<td></td>
<td>Streamlining Grommet</td>
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<td>Pathways for Glue-ear and Hearing Loss in Children</td>
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<td></td>
<td>Stuart Harris, Plymouth Hospitals</td>
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<tr>
<td>12:20</td>
<td>Free paper</td>
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<td></td>
<td>Key Stakeholders’ Perspectives on how eHealth can meet the Hearing and Communication Needs of Adults with Hearing Loss and Their Significant Other</td>
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<td>Dr Carly Meyer, The Hearing CRC And The University Of Queensland</td>
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### Hall 1B  Moderator: Sam Lear

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<tr>
<td></td>
<td>Kevin Hole, Advanced Audiologist, Nottingham University Hospital NHS Trust</td>
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<tr>
<td>11:40</td>
<td>Verification of Hearing Aid Fittings in Babies</td>
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<td></td>
<td>Dr Josephine Marriage, Clinical Scientist and Director of Cheer, Cheer Ltd</td>
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### Hall 1C  Sponsors Track  Moderator: Lizanne Steenkamp

<table>
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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>11:20</td>
<td>11:20–12:00 Telecare – Welcome to the Future</td>
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<tr>
<td></td>
<td>Alison Webb, Audiologist for the South West England, South Wales &amp; Channel Islands</td>
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<td>Natasha Porter, Audiologist for the South East England &amp; London, Sivantos</td>
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<tr>
<td>11:20</td>
<td>R.E.M. Practical Workshop</td>
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<td></td>
<td>Ann-Marie Hawkins, Principal Adult Audiologist, University Hospitals Coventry and Warwickshire NHS Trust</td>
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### Upper Level Room 4A  Professional Development Lounge

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<tr>
<td>11:20</td>
<td>11:20–12:05 R.E.M. Practical Workshop</td>
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<td>Gemma Twitchen, Senior Audiology Specialist, Action On Hearing Loss</td>
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<td>Stuart Harris, Plymouth Hospitals</td>
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<td></td>
<td>12:10–12:50 Person-Centred Care – Tips for your Clinic</td>
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<td></td>
<td>Alison Stone, Audiologist &amp; Training Manager, Oticon UK</td>
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### Day 2 Programme – Friday 9th November 2018

#### 11:20–12:50 continued

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<th>Time</th>
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<tbody>
<tr>
<td>12:30–12:50</td>
<td>Audiology in Primary Care: The Why, The How and Where Are We Now?</td>
<td>Sarah Canton, Principal Clinical Scientist/Audiology, Primary Care Area Lead (East BCU), Betsi Cadwaladr University Health Board</td>
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<tr>
<td>12:50–12:55</td>
<td>Free paper</td>
<td>How is Sensory Impairment Understood and Managed during Dementia Assessment in UK Memory Clinics?</td>
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<td>Dr Jenna Littlejohn, University of Manchester</td>
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<tr>
<td>12:55–13:00</td>
<td>Free paper</td>
<td>Optimising Hearing-Related Communication for Care Home Residents with Dementia (ORCHARD): A Realist Synthesis</td>
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<td>Dr Melanie Ferguson, Consultant Clinical Scientist/Associate Professor, NIHR Nottingham Biomedical Research Centre</td>
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#### 12:50–14:20 Lunch and Exhibition Viewing – Hall 2 – Lower Level / Poster Viewing – Lower Galleria

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<th>Session</th>
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<td>14:20–15:00</td>
<td>Main Auditorium Hall 1A, Moderator: Heather Dowber</td>
<td>“Action Learning” – A Tool for Leadership Development in Audiology</td>
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<td>Michelle Booth, Clinical Lead – Adult Audiology, Sherwood Forest Hospitals NHS Foundation Trust</td>
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<td>Prof Barbara E Weinstein, Professor and Founding Executive Officer Health Sciences, CUNY</td>
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#### 15:05–15:05 Comfort Break

### Day 2 Programme continued overleaf.
### CONFERENCE PROGRAMME

Below is a session key to allow you to make a more informed choice about which session to attend. The key is as follows:

- **Parallel Session** – Held in a theatre style setting, designed to be informative sessions.
- **Workshops** – Held in a more informal setting, designed to be interactive with some group discussions.
- **Sponsors Track** – A mixture of informative and interactive sessions hosted by our Platinum Sponsors.
- **All You Need To Know Sessions**

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**Main Auditorium Hall 1A**

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| 15:50–16:00 | **Best bits, Top Tips and Take Home Messages**  
Sue Falkingham, President, British Academy of Audiology |

*The BAA Scientific Programme Committee reserves the right to make changes to the conference programme and speakers without prior notice.*

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FRIDAY 9th NOVEMBER

09:00–10:30 MAIN AUDITORIUM – HALL 1A
Moderator: Karen Shepherd

Welcome to Day 2 of Conference
Karen Shepherd
Vice President, British Academy of Audiology

09:00–09:15

09:15–09:45

Bamford Lecture – Strategies and Interventions to enable Autism Friendly Audiology Clinics
Andrew Whitehouse
Special Educational Needs and Disability Consultant and Training Provider, People First Education

Abstract:
Where autism meets hearing loss. An investigation into the diverse neurological needs affecting Autistic people and how meeting these needs can help to make a visit to the audiology clinic less likely to cause anxiety and other difficulties.

This lecture will examine the four following areas:

Social and emotional needs: The social and emotional difficulties facing an Autistic person visiting an audiology clinic. How to avoid potentially uncomfortable social situations for the clinic staff and the patient.

Communication: The use of explicit visual communication, including preparation strategies built around the whole clinic experience, including transport, arriving at the clinic, appointment times and any tests being undertaken. Creating explicit Autism friendly visual communication interventions in and around the clinic.

Lack of flexible thought: Considering the need for structure and lack of flexible thought in Autism. How audiology clinics can effectively maintain a structured stress free visit for autistic people.

Sensory needs: Creating an Autism friendly sensory environment which better meets the needs of patients who may have hypersensitivity or hyposensitivity. How to avoid unnecessary and/or unpleasant noises, smells and visual overload.

Key Learning Objectives:

• To understand the need for explicit visual communication for Autistic patients
• To understand the need for a structured visit to the clinic for Autistic patients
• To adapt the clinic sensory environment to better meet the needs of Autistic patients

Biography:
Andrew Whitehouse is a specialist in neurological diversity and behaviour and provides interventions for professionals, parents and young people with Autism, ADHD, Dyslexia and related conditions. Andrew has a number of roles including training, strategies and therapies for education professionals in schools and colleges, observing learners in the learning environment and providing practical solutions to help them achieve their potential.

As well as running networking day courses across the UK for SEN, Andrew provides short courses for Bishop Grosseteste University and holds a number of UK and overseas contracts. Most recently, Andrew delivered a TEDx Talk “From Disability to Superpowers”.

09:45–10:15

Keynote Lecture – Family-Centred Hearing Rehabilitation: Evidence and Implementation
Professor Louise Hickson
Head of School of Health and Rehabilitation Sciences and Co-Director of the Communication Disability Centre, University of Queensland

Abstract:
Healthcare that is family-centred is associated with better treatment adherence, improved health outcomes for patients, and higher levels of satisfaction. In the same way, there is a growing body of evidence that family-centred hearing care has positive benefits for adult patients, their family members and for the clinical practice. However, implementation is challenging and our research suggests family members are typically not included in hearing rehabilitation – attending appointments less than 50% of the time and, when they do attend, not being included in audiological care. The purpose of this presentation is to provide participants with an in-depth understanding of a series of research studies exploring the evidence about family members’ involvement in hearing care, as well as to discuss strategies to effectively engage family members in everyday clinical audiological services. For example, reception staff reported that they did not feel comfortable inviting family members to appointments and clinical staff were generally positive about family member involvement although uncertain about the best ways to include them. Strategies such as coaching for reception staff, initially setting the scene for participation of both patient and family in the appointment and collaborative goal-setting will be presented.

Key Learning Objectives:

• Describe key benefits of family-centred hearing care for adult patients and their families
• Explain important barriers and facilitators to successful implementation of family-centred hearing care
• Use the evidence to develop strategies to implement family-centred hearing services for adult patients and their families

Biography:
Professor Louise Hickson is Head of School of Health and Rehabilitation Sciences, and Co-Director of the Communication Disability Centre at The University of Queensland and is recognized internationally as a leader in audiology. Her major research themes are the effects of hearing impairment on the communication abilities and quality of life of adults and family members, and the efficacy of different forms of intervention (e.g., hearing aid fitting, communication education). She has over 240 publications including 5 books and 20 book chapters and is committed to the transfer of knowledge into practice. The Active Communication Education (ACE) program that she developed and evaluated has been used in many countries around the world. She is an elected Fellow and past President of the International Collegium of Rehabilitative Audiology and a Fellow and immediate past President of Audiology Australia. She is also Chair of the Ida Institute Advisory Board in Denmark and an Editor of the International Journal of Audiology. In 2013 Prof Hickson received the International Research Award from the American Academy of Audiology.
11:20–12:50 **MAIN AUDITORIUM – HALL 1A**

**Moderator:** David Maidment

11:20–11:40

**Fitting Hearing Aids with Psychophysics**  
**William Whitmer**  
Senior Investigator Scientist, Hearing Sciences (Scottish Section), University Of Nottingham

**Abstract:**  
Fine-tuning the hearing-aid gain (i.e., adjusting the frequency-gain curve; FGC) to patient feedback is a routine and protracted practice, although its benefits are inconclusive. One fundamental piece of evidence missing from fitting practice is what a noticeable difference in gain is. Are we asking to comment on adjustments they cannot detect? Expert systems (e.g., fitting software guides) provide common descriptors and solutions for gain adjustments based on practitioner surveys (e.g., decrease high-frequency gain for “tinny” complaint). These systems have not, however, been validated nor quantified. We have therefore sought to provide a psychophysical evidence base for the fitting and troubleshooting of hearing-aid gain. The ability of hearing-aid wearers and candidates to detect incremental changes in the FGC was measured using both noise and speech stimuli. Participants were then asked to give preferences for variations in the FGC and then ascribe a descriptor to their preference. Results show that large initial gain adjustments of 6 dB are necessary to ensure patient focus, and then smaller subsequent steps to ensure gain targets and stability. The lack of agreement and reliability in patients’ labels of gain changes questions the use of descriptor-based expert systems and automated troubleshooting.

**Key Learning Objectives:**  
- Large (6 dB) initial hearing-aid gain adjustments are essential to achieve patient focus in fine-tuning  
- Caution should be taken when applying current adjustment guidelines to patients’ sound-quality complaints  
- Just-noticeable differences can make the difference in your clinic’s fitting effectiveness

**Biography:**  
Dr Whitmer is a Senior Investigator Scientist with the Scottish Section of Hearing Sciences (nee Institute of Hearing Research) in Glasgow. His current research ranges from unconventional hearing prostheses (redefining the transducer, receiver, and bits between) to ecological validations (surely there’s a better bridge between the lab and the field) and self-report improvements (esp., modernising and redefining benefit). He previously worked for GN Resound and the Parliamentary Hearing Institute.

11:40–12:00

**The Role of Cognition for Speech-in-Noise Listening and the Implications for Diagnosis and Treatment**  
**Dr Antje Heinrich**  
Senior Lecturer in Audiology, Manchester Centre for Audiology and Deafness (ManCAD), University of Manchester

**Abstract:**  
Age-related hearing loss explains some but not all of the difficulties older adults tend to experience when listening in noisy environments. Considerable individual differences in listening success remain between listeners with comparable hearing profiles. In recent years, the role of cognition in speech perception has received a lot of attention. Not only may a better understanding of its role improve our understanding of why some listeners with similar hearing profiles do perform much better than other but it may also suggest options for rehabilitation. I will discuss how cognitive abilities such as working memory, attention and linguistic knowledge, contribute to listening in a variety of situations and how their contributions are affected by both age and hearing loss. I will show data that suggest that younger and older listeners achieve the same level of intelligibility with the support of very different cognitive skills. Knowing which skills are employed by a listener in a particular situation may be a first step towards tailoring individual intervention.

**Key Learning Objectives:**  
- What types of cognitive abilities are connected to listening in noise  
- How these abilities interact with age and hearing loss in various listening situations  
- How this knowledge may improve diagnosis and intervention

**Biography:**  
Dr Heinrich research interest is to understand how different groups of listeners process speech – from the initial auditory signal to the final understanding of and response to the message. Dr Heinrich has worked on such different aspects as (1) how memory performance can be used as a measure of effortfulness of speech-in-noise perception, (2) how acoustic phonetic properties of speech affect listening, and (3) how auditory information and cognitive demands combine in BOLD response. Much of Dr Heinrich’s work focusses on younger and older native English listeners but also investigates listening in non-native English listeners, listeners with hearing loss and hearing aid wearers. Dr Heinrich’s current focus is two-fold: (1) A more theory-guided understanding of the importance of auditory and cognitive processes for speech perception  
(2) Working towards translating this understanding into clinical practice via targeted diagnostics of key parameters of listening and their training, as well as effective measurement of listening effort.

12:10–12:30

**GP Engagement Project**  
**Gemma Twitchen**  
Senior Audiology Specialist, Action On Hearing Loss

**Abstract:**  
Hearing loss affects 1 in 6 people in the UK and has significant impacts on communication, education, work and relationships. On average people take, ten years to take action on their hearing loss and many are not referred by their GP to Audiology to get the help they require. However, early diagnosis with timely intervention can dramatically improve quality of life.

During the development of 2013-2018 strategy, Taking Action, Action on Hearing Loss identified improving awareness of hearing loss and referral rates to audiology from GPs as one of the priority areas. A pilot project aimed at engaging with GPs to raise awareness of hearing loss and improve early diagnosis through piloting the use of handheld screeners in GP surgeries was established. The pilot ran over an 18-month period on the Isle of Wight, working in collaboration with 3 GP surgeries and relevant Action on Hearing Loss staff and volunteers. This presentation discusses the aims of the project, the methods that were successful in engaging and establishing hearing screening within GP surgeries and the outcomes of the project; including the impact on the local audiology service and the people that had their hearing screened and referred to audiology.
Key Learning Objectives:
- Provide an understanding of the evidence related to GP referrals for hearing loss
- Provide an awareness of implementing hearing screening for adults in GP surgeries- in terms of practical steps required, engagement with practice managers and evaluation of outcomes
- To raise awareness of the benefits of hearing screening in adults in primary care and consider impacts of increased referral rates on audiology services

Biography:
Gemma has fourteen years’ experience as an audiologist working in the NHS and at the charity Action on Hearing Loss, providing medical and technical expertise about audiology services, hearing loss and tinnitus; contributing towards service improvement, research and policy changes and prevention of cuts to audiology services.

Gemma also has a passion for improving ear and hearing health in the developing world. She has volunteered and worked in Zambia, Malawi and Pakistan to improve hearing loss services for deaf people in low and middle-income countries. She sits on the projects committee for Sound Seekers and chairs the Global Outreach Specialist Interest Group established by the British Society of Audiology (BSA) and co-organised the first ever-global health conference for hearing loss in the UK with ENT UK.

12:30–12:50  HALL 1B

Audiology in Primary Care; The Why, The How and Where Are We Now?  
Sarah Canton  
Principal Clinical Scientist/Audiology Primary Care Area Lead (East BCU), Betsi Cadwaladr University Health Board

Abstract:
Introduction:  
Primary Care Services in Wales are changing. A GP recruitment crisis has been the main driver alongside the Model of Prudent Healthcare. This model supports the need for a person to be seen ‘by the right professional, in the right place, at the right time’. Funding to support this change has allowed innovative services to develop and as a result, a Primary Care Audiology Service based in Betsi Cadwaladr University Health Board (BCUHB) started in August 2016. The aim is to directly see patients presenting in their GP surgery with hearing loss, bothersome tinnitus and Benign Paroxysmal Posional Vertigo.

Method:  
North Wales GP services are organised into clusters based on population size and locality. After initial discussion, Audiology services began in the practices where a suitable room was available. Service awareness training was provided to staff and ongoing data collection by the AAP allowed feedback to both stakeholders and the GP practice. Referrals to secondary care (Audiology Services / ENT) were monitored for appropriateness and outcome.

Results:  
The Audiology Primary Care Service is currently established in over 25% of the GP practices within BCUHB. There are six AAP’s in post of Primary Care Area Lead for East BCUHB covering Wrexham and Flintshire. Since this time Sarah has been working with colleagues to set up and develop the Primary Care Audiology Service. Over 60% are accessing the service without an initial GP appointment. Feedback has been excellent. There is a high level of satisfaction with service provision. BPPV has been treated effectively and wax management issues resolved through the use of micro-suction.

Discussion:  
The role of the AAP is developing. There is scope to see a wider range of patients, both in age and presenting conditions. As services become more devolved and patients more accustomed to seeing other health professionals, the AAPs will have even greater ability to release GP capacity, playing a key role in primary care service provision.

Key Learning Objectives:
- Developing an Audiology Primary Care Service  
- Ongoing monitoring and service evaluation  
- Future developments

Biography:
Sarah has worked in the field of Audiology for 15 years following a career change. After her MSc in Manchester she secured a Trainee Clinical Scientist Post at Wrexham Maelor Hospital in 2003 (now part of Betsi Cadwaladr University Healthboard – BCUH). In 2005 she completed her training and embarked on a career in Paediatric and Young Adult Audiology. Two years ago she successfully applied for the Post of Primary Care Area Lead for East BCUHB covering Wrexham and Flintshire. Since this time Sarah has been working with colleagues to set up and develop the Primary Care Audiology Service.

11:20–12:50  HALL 1B

Moderator: Sam Lear

11:20–11:40

Kevin Hole  
Advanced Audiologist, Nottingham University Hospital NHS Trust

Abstract:
Auditory neuropathy spectrum disorder is defined by the absence or grossly abnormal morphology of auditory brainstem responses with evidence of intact cochlear function. We describe a systematic review of our centres data, taken from our NHSP from 2002 to March 2018. During this time, 118925 babies our site was responsible for have been screened and 46 diagnosed with auditory neuropathy (39 bilateral, 7 unilateral, 0.4/1000 births). The ABR data was reviewed, categorised into groups and analysed for trends with the later PTA thresholds and outcomes. Amongst others, this showed;

- 25% of ears with ANSD had short latency components evident on ABR testing.
- 40% of ears with hair cell function diagnosis by cochlear microphonic testing but no ABR went on to have profound behavioural levels and required cochlear implantation vs 86.4% of ears with OAEs but absent ABR progressing well with hearing aids.
- All but one child (97.8%) went on to show a hearing loss on behavioural testing.
- ANSD was not confined to the NICU population with 3 bilateral and 5 unilateral cases (23%) in the well-baby population.

The implications of the data are discussed.

Key Learning Objectives:
- Delegates should have an overview of Auditory Neuropathy Spectrum Disorder
- Delegates should have an understanding of challenges facing the audiological management of children presenting with Auditory Neuropathy Spectrum Disorder
- Delegates will be able to discuss possible implications of management decisions in cases of children presenting with Auditory Neuropathy Spectrum Disorder

Biography:
Kevin completed his BSc Audiology at the University of Manchester in 2009, and Master of Philosophy (Human Communication Science) at the University of Sheffield in 2014. Clinically, he has specialised in Paediatric Audiology since completion of his BSc, working at Sheffield Children’s Hospital prior to his current role of Advanced Audiologist at Nottingham Audiology Services. Kevin’s interest lies in paediatric
11:40–12:00 Validation of Hearing Aid Fittings in Babies

Dr Josephine Marriage
Clinical Scientist and Director of Chear, Chear Ltd

Abstract:
The newborn hearing screening programme (NHSP) is working well in the UK for identifying infants with a high likelihood of hearing loss. The introduction of peer review (PR) to auditory brainstem response (ABR) assessment has improved the accuracy and efficiency of testing and interpretation of results for hearing aid fittings.

Clinicians generally feel confident in applying the ABR results for the initial hearing aid fitting in infancy. They may feel less confident in observing behavioural responses and interpreting these observations for fine-tuning the hearing aid fitting over the first year of life. Studies consistently show cases of under-amplification for the extent of hearing loss, partly due to clinician’s over-reliance on ABR results over time. There are recognised and predictable changes in hearing levels across the population of hearing impaired children, over the first two years of life.

In this presentation we look at different types of behavioural responses in infants from 1 to 7 months of age and ways that the test situation can be set up to observe hearing behaviours. For paediatric audiology clinicians, competence and scientific validity in observing behavioural responses are also important skills for children with complex needs and atypical developmental profiles.

Key Learning Objectives:
- Four different types of hearing responses observed in babies
- Criteria for deciding whether the behaviour change is a reliable indication of hearing
- Four different signal-types used to elicit listening behaviours for different purposes

Biography:
Josephine is Director of Chear, an independent centre for second opinion of hearing and amplification in infants and children in England, UK. She is a clinical paediatric audiologist and conducts research around amplification strategies and speech testing in children.

Chear offers appointments for children with hearing difficulties from two clinical bases in the UK, one based near Cambridge, and one in Bermondsey in London. The Bermondsey centre is a joint initiative with Auditory-Verbal UK, offering audiology assessment with auditory verbal therapy and supported by Phonak, where we see children from the UK and other countries.

Josephine has developed and run recent training courses in clinical testing in European countries, in China and in the Lebanon. Research into perception of speech through hearing aids and different amplification devices and features is carried out in collaboration with University of Cambridge. (Website is www.chears.co.uk).


Stuart Harris
Plymouth Hospitals

Abstract:
Introduction:
Grommet insertion is one of the most commonly performed surgical procedures in children. Long waiting times for grommet insertion are not unusual, which may risk breaching the national referral-to-treatment target of 18 weeks. This project aims to streamline the process and avoid unnecessary waiting for children undergoing grommet insertion.

Method:
To reduce treatment delays we have introduced a pathway whereby audiologists can directly list children for grommet insertion if they meet NICE CG60 guidelines. Following listing the patients would have an ENT outpatient appointment to be consented for the procedure.

Results:
A 7-month period between June and November in 2014 was retrospectively audited showing mean and median duration between first audiology appointment and day of surgery of 294.5 and 310 days (n=62, IQR 266-343) respectively. Following implementation of the direct-listing pathway, mean and median duration between first audiology appointment and day of surgery was 232 and 231 days (n=22, IQR 206-267) respectively. Since direct referral implementation there has been significant reduction in time from first audiology appointment and surgery with a mean difference of 62.5 days (p<0.024), also with a reduction in time between second audiology appointment and day of surgery (28 days, p<0.009).

Conclusion:
A streamlined pathway whereby children are directly listed for grommet insertion by audiology can reduce waiting times and expedite surgery for children requiring surgical treatment of glue-ear. It is a simple alteration to current practice, adhering to NICE guideline CG60 for surgery, and maintaining that ultimate decision over surgery rests with ENT specialists.

12:20 – 12:30 Free Paper: Key Stakeholders’ Perspectives on how eHealth can meet the Hearing and Communication Needs of Adults with Hearing Loss and Their Significant Other

Dr Carly Meyer
The Hearing CRC And The University Of Queensland

Abstract:
Introduction:
Despite a growing number of studies reporting benefits to clients, evidence-based eHealth approaches in hearing diagnostics and intervention have not achieved widespread implementation in adult hearing services [1]. Application of implementation science theory to new eHealth interventions could provide an avenue to ensure greater uptake [2]. Accordingly, this study aimed to identify and prioritize eHealth applications that could address the hearing and communication needs of adults with hearing loss and their significant others, from the perspectives of key stakeholders.

Methods:
Overall, 123 individuals participated in the study, including 39 adults with hearing loss, 28 significant others, and 56 hearing care professionals.

Group Concept Mapping methodology was used to: brainstorm possible applications of eHealth that could address the hearing and communication needs of adults with hearing loss and their families; sort the ideas into meaningful groups; and rate how helpful each idea would be.
Introduction:
Dementia assessment and diagnosis is complicated by i) the high prevalence of un- or under-treated hearing and vision impairment, ii) symptoms of untreated hearing and vision impairment which mimic those of cognitive impairment, and iii) with the impact of sensory impairment on cognitive assessments used to diagnose dementia. As such, NICE guidelines suggest ‘taking into account’ sensory impairment during dementia diagnosis, but it is unknown whether this recommendation is adopted in clinical practice. This study aimed to investigate if and how sensory impairment is taken into account in clinical practice. This means that people with hearing and/or vision impairment are at risk of improper diagnosis and sub-optimal care. Therefore, clear and more detailed guidelines for identifying and managing hearing and vision impairments are needed for clinicians involved in dementia assessment and care.

Key Learning Objectives:
• Understand why assessment of hearing and vision is important in dementia assessment and care
• Outline current practice regarding sensory impairment of clinicians working in UK dementia assessment and care
• Highlight the need for more detailed guidelines for identifying and managing sensory impairment in memory clinics

Discussion:
Despite a widespread understanding of the links between sensory impairment and cognition, how to take sensory impairment into account as part of the cognitive assessment is unknown and consequently uncommon in clinical practice. This means that people with hearing and/or vision impairment are at risk of improper diagnosis and sub-optimal care. Therefore, clear and more detailed guidelines for identifying and managing hearing and vision impairments are needed for clinicians involved in dementia assessment and care.

Method:
A two-part investigation involving (1) a wide-scale anonymous, self-administered knowledge, attitudes and practice survey amongst UK dementia professionals (n=344); and (2) a retrospective chart review of clinical notes from three memory clinics across Greater Manchester over a 6 month period. The survey would reveal the general beliefs and actions professionals report to undertaking, where the chart review would disclose more detail into what is routinely done in clinical practice.

Results:
The survey revealed that dementia professionals were aware of comorbidity of hearing and vision impairment and dementia, but exposed several gaps in knowledge regarding how this impacted on subsequent assessment and service provision. The retrospective analysis of clinical notes is ongoing. Preliminary findings suggest that hearing and vision impairment appears to be under recognised and therefore not accounted for.

Key Learning Objectives:
• To acquire knowledge about implementation science theory and how it applies to hearing healthcare
• To identify how key stakeholders perceive eHealth can help meet the hearing and communication needs of adults with hearing loss and their significant others
• To understand why key stakeholders differ in their perceptions of “helpfulness” of different eHealth applications

Biography:
Dr. Carly Meyer is a speech pathologist who is passionate about improving the uptake and effectiveness of allied health services for people of all ages living with a communication disability. Carly is specifically interested in the development, implementation, and evaluation of patient and family-centred models of care in audiology using an implementation science approach; and in the application of eHealth to promote patient- and family-centred hearing care. Carly currently holds a HEARing CRC Postdoctoral Research Fellowship and is affiliated with the Communication Disability Centre at The University of Queensland, Australia.

Abstract:
Dementia assessment and diagnosis is complicated by i) the high prevalence of un- or under-treated hearing and vision impairment, ii) symptoms of untreated hearing and vision impairment which mimic those of cognitive impairment, and iii) with the impact of sensory impairment on cognitive assessments used to diagnose dementia. As such, NICE guidelines suggest ‘taking into account’ sensory impairment during dementia diagnosis, but it is unknown whether this recommendation is adopted in clinical practice. This study aimed to investigate if and how sensory impairment is taken into account in memory clinics.

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Despite a widespread understanding of the links between sensory impairment and cognition, how to take sensory impairment into account as part of the cognitive assessment is unknown and consequently uncommon in clinical practice. This means that people with hearing and/or vision impairment are at risk of improper diagnosis and sub-optimal care. Therefore, clear and more detailed guidelines for identifying and managing hearing and vision impairments are needed for clinicians involved in dementia assessment and care.

Key Learning Objectives:
• Understand why assessment of hearing and vision is important in dementia assessment and care
• Outline current practice regarding sensory impairment of clinicians working in UK dementia assessment and care
• Highlight the need for more detailed guidelines for identifying and managing sensory impairment in memory clinics

Biography:
Jenna studied at the University of Sheffield, graduating in 2012 with a BSc degree in Biomedical Science. She went on to complete an MSc in Clinical Neurology (2013) and PhD in Translational Neuropsychology (2018), investigating the links between hearing loss and cognition in ageing and dementia. Jenna now works as a post-doctoral research fellow, funded by Deafness Support Network (DSN) at the University of Manchester, as part of the Manchester Centre for Audiology and Deafness. This DSN fellowship aims to increase awareness of sensory impairment within clinical practice, and identify the best screening tool to identify it.

Abstract:
Hearing impairment and dementia are common in care homes. Existing problems indicate that the communication needs of residents with dementia and hearing loss are largely unmet. This results in isolation and reduced quality of life for individuals. Research shows that hearing aids can enhance communication. However, individuals with dementia often do not tolerate them, resulting in loss or damage. In addition, there is little dementia-focused communication training provided for care home staff, nor hearing aid maintenance training. Moreover, staff often view hearing loss as the result of ageing, with low priority given to maintaining hearing communication. The aim of the ORCHARD study was to understand the issues that stand in the way of optimising hearing communication and offer solutions by way of informing practice guidelines.

Methods:
To address hearing communication, we conducted a realist synthesis to review available literature. We also used expert opinion to understand this complex health situation and develop a theory of how hearing communication could be better managed in care homes. We then searched the literature looking for data to help us confirm, refute or refine our understanding of how hearing communication could be improved.

Biography:
Dr. Melanie Ferguson is a consultant clinical scientist and assistant professor at the Nottingham Biomedical Research Centre. She has a background in hearing research and has conducted research in hearing loss and dementia, and their significant others.
Results:
Our preliminary explanation includes five areas of care home delivery, which enhance hearing communication for residents with dementia and hearing loss. They include: leadership towards positive regard for residents; communication training for staff; knowing the person & responsive awareness; maintaining hearing communication; managing the care home environment.

Discussion:
Positive leadership providing appropriate training and resources is likely to enhance staff skills, leading to staff feeling enabled to meet the communication needs of residents with dementia and hearing loss. The synthesis will be used to inform guidelines in hearing-related communication and identify research priorities with a focus on practical interventions.

Key Learning Objectives:
- To describe hearing-related difficulties that occur in care homes
- To briefly explain the methods of realist synthesis
- To describe one the themes relating to care homes

Biography:
Dr Melanie Ferguson is a Consultant Clinical Scientist (audiology) and Associate Professor in Hearing Sciences at the NIHR Nottingham Biomedical Research Centre, UK. Her research programme on Mild to Moderate Hearing Loss aims to promote healthy hearing by reducing activity limitations and participation restrictions. Her research focuses on (i) e-health and self-management, (ii) listening and cognition, and (iii) listening devices. She is currently the Vice-Chair for the British Society of Audiology and member of the NICE Quality Standards Advisory Committee for Hearing Loss.

SPONSORS TRACK
11:20–12:50  HALL 1C
Moderator: Lizanne Steenkamp

11:20–12:00
Telecare – Welcome to the Future
Alison Webb
Audiologist for the South West England, South Wales & Channel Islands, Sivantos

Natasha Porter
Audiologist for the South East England & London, Sivantos
Sponsored by Sivantos

Abstract:
From your computer or smart device to your patient’s smartphone: TeleCare saves time, increases the quality of care, and drives the conversion of patients with hearing loss to satisfied hearing aid wearer. Telecare removes the blind spots in care and reveals those ‘moments of truth’ that all our patients experience when away from the Audiology Department. Telecare highlights those in need of a follow up appointment more urgently, and is a remote control & user guide all in one.

Key Learning Objectives:
- To understand how Telecare can help streamline your Audiology Department
- How you can use Telecare to compare successful fittings and need for follow up at your different departments.
- The ease at which Telecare can be introduced to any Audiology Department

Biography: Natasha Porter
Natasha Porter graduated with a BSc in Audiology from Southampton University in 2010 and worked at the Epsom and St Helier NHS department for 3 years before moving to Specsavers. She joined Sivantos in early 2016 as the Audiologist for the South East.

Biography: Alison Webb
Alison Webb graduated with a BSc in Audiology from De Montfort University in 2009. She joined Sivantos as an Audiologist in September 2015 following a 6 year role in the NHS as an Audiologist/Senior Audiologist specialising in complex fittings and vestibular assessment.

12:10–12:50
Person-Centred Care – Tips for your Clinic
Alison Stone
Audiologist & Training Manager, Oticon UK
Sponsored by Oticon

Abstract:
Person-Centred Care (PCC) is based on the premise that understanding the whole person is key to successful hearing rehabilitation. In the climate of ever increasing pressure on resources, it can be challenging for Audiologists in NHS clinics to embrace a PCC approach. In this talk we will explore some of the tips, tools and information from the Ida Institute, which help hearing care professionals promote PCC in their clinics. A fun interactive exercise will get you reflecting on your own and your clinic’s work with patients.
Key Learning Objectives:
- Understand why Person-Centred Care is relevant to Audiology
- Discuss the benefits of PCC to both patients and Audiologists
- Identify tools from the Ida Institute that help promote a PCC approach

Biography:
Alison’s journey in Audiology began with an honours degree in Speech Pathology and Audiology at the University of the Witwatersrand. Her clinical roles have included audiology at a government community health centre, dispensing hearing aids in private practice, and electrophysiological & vestibular diagnostics for ENT practices. Alison joined Oticon South Africa in 2005, heading up the Customer Relations department. In 2008 she joined Oticon UK and currently leads all training and education activities. This self-confessed audiology geek is driven by a continuous quest for new knowledge and a passion for teaching.

PROFESSIONAL DEVELOPMENT LOUNGE
11:20–12:50 ROOM 4A – UPPER LEVEL

11:20–12:50 R.E.M. Practical Workshop
Ann-Marie Hawkins
Principal Adult Audiologist, University Hospitals Coventry and Warwickshire NHS Trust

Abstract:
Probe microphone measurements are now firmly embedded in routine clinical practice. Being 11 years since the last iteration, this practice guidance was in need of a review; cue an updated BSA practice guidance document, 2 years in the making. These sessions will introduce the main updates within the guidance followed by manufacturer practical sessions on equipment and software set-up to comply with the practice guidance.

Biography:
Ann-Marie is the Principal Adult Audiologist at University Hospitals Coventry and Warwickshire NHS Trust. A natural problem solver and investigator, Ann-Marie enjoys challenging the status quo leading to the development of ideas to streamline processes across the Department. Ann-Marie’s clinical role has a focus on adult hearing and vestibular assessment and rehabilitation. Ann-Marie is Vice Chair of the BAA Service Quality Committee and has helped to produce BSA guidance; all feeding back into supporting a quality, evidence based service, something she is passionate about.

14:20–15:45 MAIN AUDITORIUM – HALL 1A
Moderator: Heather Dowber
Moderator: Wendy Farrington Chadd (from 15:25)

14:20–14:40
“Action Learning” – A Tool for Leadership Development in Audiology
Michelle Booth
Clinical Lead – Adult Audiology, Sherwood Forest Hospitals NHS Foundation Trust

Abstract:
Action Learning has become a popular approach to leadership development and is used widely in the NHS. Learning is attributed to the process of finding solutions to real workplace issues. It has been defined as ‘a continuous process of learning and reflection, supported by colleagues, with the intention of getting things done’ (McGill and Beaty, 1995).

This session will hopefully enable you to understand the concept of action learning and the potential benefits of using it to develop our Audiology leaders of the future.


Key Learning Objectives:
- To be able to articulate the meaning and purpose of Action Learning
- To understand the potential benefits of Action Learning for leadership development
- Identify how we can use Action Learning to develop our future leaders in Audiology

Biography:
Michelle has worked in Audiology since 1987, training as the original MPPM student in Chesterfield. Michelle obtained her BHSc from Leeds University in 2002. She has worked at Sherwood Forest Hospitals NHS Foundation Trust since 1993. They were the first Audiology Department in the East Midlands to achieve IQIPS accreditation. Michelle’s specialist area of interest is tinnitus and she worked with the NHS Improvement team in 2009 to develop and implement a direct access service for patients with tinnitus. Michelle has been involved with BAA since 2009, initially as a regional representative, but she joined BAA Board in 2011 leading the Service Quality, Publicity and Communications and the Conference teams during her term, before becoming Vice President and President. Michelle is passionate about her profession and was immensely proud to represent Audiology as President of the BAA in 2016-17.

Michelle has recently obtained a Post Graduate Diploma in Healthcare Leadership studying with the NHS Leadership Academy. She is passionate about leadership development in Audiology and wants to be proactive in developing the future leaders within the profession.

14:40–15:00
NICE Guideline on Adult Hearing Loss: Where is the Evidence?
Professor Kevin J Munro
Ewing Professor of Audiology, University of Manchester

Abstract:
Our professional bodies and societies have published a plethora of good practice guidelines; however, there has always been an uneasy suspicion that much of our clinical practice lacks a solid foundation of high-quality research evidence. This suspicion was confirmed with the
Key Learning Objectives:
- The characteristics of high quality research
- There is a limited research base underpinning clinical practice
- The reputation of BAA and the profession will be enhanced if you engage in research activities

Biography:
Kevin Munro is Director of the Manchester Centre for Audiology and Deafness (ManCAD), a multidisciplinary team with a world-leading reputation in the discovery and delivery of research that leads to improved clinical outcomes. He is Deputy Director of the £28.5m NIHR Manchester Biomedical Research Centre (BRC) and is the BRC theme lead on Hearing Health. He is honorary Consultant Clinical Scientist in Central Manchester University Hospitals NHS Foundation Trust. He has the privilege of being an honorary life member of the British Society of Audiology, ‘in recognition of outstanding contribution to audiology education, research and leadership’

15:05–15:25
Hearing Loss and Social Isolation: Why the Connection?
Professor Barbara E Weinstein
Professor and Founding Executive Officer Health Sciences Doctoral Programs; Founding Executive Officer AuD Program, Graduate Center, CUNY

Abstract:
A hallmark of age related hearing loss is difficulty understanding in noisy environments. The difficulty requires significant listening effort on the listener’s part which when prolonged is associated with fatigue. Fatigue in combination with the listening effort and cognitive load often leads people to withdraw from social situations. The connections between social isolation/loneliness and age related hearing loss will be discussed as will the many downstream negative outcomes. The contribution of hearing care interventions to alleviating this modifiable correlate of aging will be discussed as will instruments for screening for social disengagement/loneliness.

Key Learning Objectives:
- Distinguish between the terms loneliness and social isolation and to identify consequences of loneliness/social isolation
- Distinguish between listening effort and fatigue, and correlates of each metric
- Will become familiar with tools which can be used to quantify loneliness, social isolation, and fatigue clinically

Biography:
Professor Barbara E Weinstein is a Professor of Audiology at the Graduate Center, CUNY in NYC and an Adjunct Professor of Medicine at NYU School of Medicine. Dr. Weinstein received her PhD from Columbia University where she began her academic career as a young faculty member. A recipient of numerous national and international awards, Professor Weinstein developed the Hearing Handicap Inventory, the world’s most widely used tools to identify patients with hearing loss which has been translated into 20+ different languages.

Dr. Weinstein’s primary research interests include hearing loss, dementia and social isolation, screening for age related hearing loss and quantification of patient reported outcomes. Dr. Weinstein has long advocated for the integration of hearing health care into the mainstream be it cultural, medical or religious institutions. Her research on hearing loss and dementia, and on the social consequences of hearing loss, have profound implications at the intersection of audiology, medicine and society.

15:25–15:45
Developing your Leadership Skills to Enable you to Make Real World Change in this Technical Environment
Alan Nobbs
Head of Programme Delivery and Framework, NHS Leadership Academy

Abstract:
Learn how the self-directive leadership model and logical levels can work together to help leaders find their power in leading and supporting change.

Key Learning Objectives:
- Delegates will understand how to take control of their leadership development and the outcomes that matter most to them
- They will learn how they can use the logical levels framework to effectively invest in their learning
- A chance to clarify the role of purpose, identity, values attitudes and beliefs in shaping the future of health and care

Biography:
Alan began his career as a registered general nurse in 1984, lasting 16 years. Alan has an MA in management learning from the University of Leicester and has worked at both a regional and national level. In his current role as senior programme lead for delivery and frameworks, Alan is responsible for leadership development of GMTS as well as being the senior lead for research, design and delivery of the leadership health model.
14:20–15:25 HALL 1B
Moderator: Tim Wilding

14:20–14:40

Real-World Implementation of Virtual Consultations in the NHS

Dr Joseph Wherton
Senior Researcher, University of Oxford

Abstract:
There is much interest in virtual consultations using video technology. However, this model has rarely been mainstreamed and sustained in real-world settings. The VOCAL study (Virtual Online Consultations: Advantages and Limitations) sought to define good practice and inform digital technology implementation in relation to remote consultations via Skype and similar technologies. Using ethnographic and action research approaches, the project sought to illuminate the complexity of remote video consultations and the system in which they are nested. The research was based in two contrasting clinical settings (diabetes and cancer) within a NHS acute trust in London, and included in-depth studies of real consultations (micro-level) embedded in an organisational case study (meso-level), and review of the national context (macro-level). The study revealed complex challenges to embedding virtual consultation services within routine practice, requiring support and collaboration across the organisation. This presentation will highlight some of the key challenges to the introduction and sustained use of virtual consultations in NHS settings and approaches to addressing these challenges.

Key Learning Objectives:
- Learn about our experience of developing virtual consultation services in an NHS setting
- Understand key challenges to setting up and running virtual clinics, and how to address these
- Understand the national-level context for the introduction of virtual consultations in the NHS

Biography:
Joseph Wherton is a Senior Researcher in the Nuffield Department of Primary Care Health Sciences at the University of Oxford, UK. He has a background in psychology and human-computer interaction and his research focuses on the participatory design of technology-supported services in health and social care. His research is strongly interdisciplinary, involving ethnographic and participatory design methods. Joe obtained his Psychology BSc at University of Bath (2004) and his Psychology PhD at University of York (2008).

14:40–15:00

How to get Started with IQIPS – A Practical Guide

Kathryn Lewis
BAA Board Director Service Quality, BAA

Melanie Lough
Research Audiologist, The University of Manchester

Dr Ann-Marie Dickinson
Specialist Healthcare Science Audiology Practitioner, Manchester University NHS Foundation Trust

Ann-Marie Hawkins
Principal Adult Audiologist, UHWC NHS Trust

Abstract:
Daunted by the thought of submitting an IQIPS application? Been asked to collect evidence for your service but don’t know where to start? Come to the BAA Service Quality Committee (SQC) led IQIPS workshop! There will be opportunity for discussion with those who have approached IQIPS from both sides at various stages of the process. We have tips and advice on how to evidence your compliance with the IQIPS standards including suggestions on how to streamline your processes. To ensure you get the most out of the session please submit specific questions prior to the session to Mel (melanie.lough@manchester.ac.uk) for consideration by the team. There will be additional supplementary documentation to take away for those who attend the session.

Key Learning Objectives:
- To offer guidance and support to professionals in the early stages of obtaining IQIPS accreditation
- To facilitate the sharing of ideas and knowledge from professionals who are experienced in the process of IQIPS accreditation
- To provide a take-home support document, which incorporates tips and advice on IQIPS accreditation

Biography: Kathryn Lewis
Kathryn started her career in Audiology 39 years ago and has worked within the North West region starting in Oldham, Tameside, Mid-Cheshire and for the past 9 years in Manchester. Main areas of current clinical work include tinnitus management, complex hearing and rehabilitation. She has been secretary of the NWASA for 25 years promoting the training and development of Audiology. Kathryn is an active member of the BAA and BSA arranging regional meetings and events. Board Director for Service Quality for the past year working with an amazing group of dedicated Audiologists on the SQC.

Biography: Melanie Lough
Melanie has been working for the NIHR BRC (Hearing Health theme) at the University of Manchester since May 2018. Prior to this, she worked at Salford Royal Foundation Trust for almost 14 years as an Audiologist and Specialist Audiologist. Her main interests are vestibular assessment and stroke-related hearing difficulties. She has been a member of the BAA Service Quality Committee since 2017.

Biography: Dr Ann-Marie Dickinson
Ann-Marie began working as an Audiologist in 2001 at Glan Clwyd Hospital in North Wales. In 2006 she became the North West Clinical Scientist Trainee at Withington Hospital and then a pre-reg Clinical Scientist at City Hospital in Birmingham. She studied for her PhD in Audiology between 2010-2015 and then worked as a Lecturer in Audiology at the University of Manchester. Ann-Marie has recently returned to clinical work with a focus on providing individualised care for hearing impaired adults.

Biography: Ann-Marie Hawkins
Ann-Marie is the Principal Adult Audiologist at University Hospitals Coventry and Warwickshire NHS Trust. A natural problem solver and investigator, Ann-Marie enjoys challenging the status quo leading to the development of ideas to streamline processes across the department. Ann-Marie’s clinical role has a focus on adult hearing and vestibular assessment and rehabilitation. Ann-Marie is vice Chair of the BAA Service Quality Committee and has helped to produce BSA guidance; all feeding back into supporting a quality, evidence based service, something she is passionate about.
Free Paper: Addressing the Low Uptake of Cochlear Implants amongst Adults; Audiologists’ Views of the Barriers and Facilitators for Referral

Sarah Allen
The Ear Foundation

Abstract:
Hearing is increasingly recognised as a significant factor in healthy ageing. Hearing enables people to remain in work and participate socially, whilst hearing difficulties are strongly linked with co-morbidities such as dementia and falls. Having a cochlear implant (CI) offers the potential for better hearing and improved quality of life, yet only an estimated 6.7% of people who meet current CI criteria actually proceed. The ageing population and potential changes to NICE guidance mean that there is likely to be an increase in CI candidates. By better understanding and addressing reasons for low referral and uptake, more people could maximise their hearing and benefit from the resulting impact on their health and well-being.

This mixed-methods study used semi-structured interviews and an online survey to explore with audiologists working in non-CI clinics the potential barriers to and facilitators for adult CI referral. Fifteen non-CI audiology clinics from across the UK were represented in the data, including a range of grades and experience. Results demonstrated differences in audiologist’s knowledge, experience and confidence, service delivery and relationship with the CI teams. Audiologists working with potential CI candidates described common patient concerns about age, surgery, practicalities of managing equipment and long-term commitment.

The findings identified examples of good practice and recommendations to improve CI uptake. These included both rational changes, such as to the NICE guidance, local improvements to process and relationships with the CI teams and audiologist training. Increasing awareness of CI and candidacy amongst health professionals and the public as well as access to user groups were also considered as fundamental requirements.

Key Learning Objectives:
- Acknowledge the barriers and facilitators to CI uptake perceived by non-CI audiologists
- Recognise local barriers & facilitators to CI referral
- Consider changes to local practice to improve CI uptake amongst adults

Biography:
Sarah Allen is Research & Public Engagement Lead for The Ear Foundation delivering a user-driven research programme with impact on both policy and practice for children and adults with hearing loss. Sarah is also a specialist Speech and Language Therapist with over 25 years of clinical experience with deaf children.

Free Paper: Nottingham (NAIP) Auditory Staircase: A Tool to Support Cochlear Implantation Expectation Counselling

Jayne Ramirez Inscoe
NAIP

Abstract:
Aim:
Many factors impact on outcomes in the paediatric and adult populations. Duration of deafness, and the amount of hearing aid benefit and use, are key predictors. Assessment patients need to be supported to make informed decisions based on their likely auditory benefit, according to their hearing history. A lack of materials was identified to share this information in a simple, accessible way.

Method:
The model allocates patients to three main groups, depending on their hearing history. The range of potential auditory benefits for each group are summarised visually. The predicted range of benefits for each group were audited by retrospectively reviewing the outcomes of a consecutive cohort of c100 paediatric patients at the pre, 1 year and 5 year intervals and c100 adult patients at the pre, 1 year and 2 year intervals post cochlear implantation.

Results:
The model visually represents the minimum predicted outcomes to the best possible outcomes for a particular group. All 200 patients audited achieved outcomes within the parameters set by the staircase for their group. Further analysis showed the percentage of patients who achieved the best possible outcomes and those who made the minimum expected progress.

Conclusion:
The potential benefits of cochlear implantation can be challenging for patients to understand and for clinicians to convey. This simple graphic provides an effective way to begin outcome discussions. The model helps to explain what can be achieved but also the impact of limiting factors, no matter how motivated the patients may be. The tool helps to explain why one patient’s potential may be very different from that of another and that cochlear implants cannot match the auditory sophistication of those who do not have a hearing loss.
Teleaudiology in Hearing Aids: “Like Having the Audiologist in Your Pocket”

Miguel Angel Aranda de Toro, PhD
Director of External Relations, Global Medical Affairs, GN Hearing
Sponsored by GN Hearing

Abstract:
With the fast development of telecommunications, and especially since the introduction of smartphones, teleaudiology has become one of the hot topics within the hearing industry. In this presentation we will focus on ReSound Assist – one of the options currently available in the market and developed by ReSound – to talk about the advantages, the challenges and the future of teleaudiology as part of the clinical practice. Among the main advantages we will focus on three that have a direct impact on customer satisfaction: 1) the possibility of doing remote fine tunings, which can save unnecessary trips to the clinic and transportation costs; 2) users can request adjustments directly from those environments that are part of their daily life and that would be difficult to simulate otherwise in the clinic; and 3) personalization of hearing care, as it is possible to support users remotely according to their needs and lifestyle.

Among the main challenges the most significant is probably the lack of experience of many professionals with this new tool, which raises many questions. The most common are: 1) how does it work and how does it impact the regular working flow of my clinic? 2) what happens with data protection of medical data? and 3) whether teleaudiology really saves consultation time or, on the contrary, adds unnecessary consultations.

During this session we will do a demonstration of ReSound Assist to show that, as many of our end users report, it is like having the audiologist in your pocket.

Biography:
Driven by his passion for music and rock and roll, Miguel studied acoustic engineering at the Polytechnic University of Madrid (Spain, 1985—1990) and played drums in probably the most terrible – and fortunately forgotten – rock band in the Spanish music scene. “We were so bad and played so loud that we were probably the only rock musicians who were worried about their hearing”, recalls Miguel. Because of this, Miguel became interested in the prevention of hearing loss, especially among musicians and he moved to Aalborg University (Denmark) to continue his education as MSc Electronic Engineer with special focus on the use of engineering methods for audiological purposes. In December 2010 Miguel completed his PhD in the topic of otoacoustic emissions and early detection of hearing loss.

Miguel joined GN Hearing (Denmark) in 2010 as International Audiologist and Product Trainer, providing audiological and technical support in more than 80 countries. Currently, Miguel works as Director of External Relations within the EMEA region, where he is responsible for communication with Key Opinion Leaders to continue the development of state-of-the-art hearing solutions as well as the execution of scientific studies to test the validity of current methods.

Miguel lives in Copenhagen, he is happily married (for most of the time) and has two children.

Audiology in a Connected World

Jeff Crukley
Manager of Audiology Research and Hearing Science, Starkey Hearing Technologies
Sponsored by Starkey

Abstract:
With the integration of hearing aids, sensors, artificial intelligence, and constant connectivity, audiological clinical practice is evolving. Long-term patient management requires personalization of services that cater to individuals and focus on patient benefits and satisfaction. Patient-driven healthcare is characterized by a collaborative approach that allows patients to receive support in even their most difficult environments. In this session, I will discuss the role of the audiologist in a connected clinic to improve outcomes throughout the patient journey.

Key Learning Objectives:
- The participant will be able to list clinical strategies for engaging with patients
- The participant will describe how to implement a remote programming in a hearing healthcare practice

Biography:
Jeff Crukley is the Manager of Audiology Research and Hearing Science at Starkey Hearing Technologies. He earned his MSc in audiology in 2007 and his PhD in Hearing Science in 2011. Jeff completed a post-doctoral fellowship at the Brain & Mind Institute at Western University and worked as a clinical audiologist in private practice. He engages in research on naturalistic approaches to understanding auditory ecology, and the relationships between hearing loss, cognition, and technological innovations. As an adjunct professor, Jeff enjoys mentoring students and teaching in the fields of audiology and hearing science.

Further Academic Study Mid-Career: You Can Do It!

Hannah Cooper
Lecturer/Clinical Scientist (Audiology), UCL Ear Institute/Royal Berkshire NHS Foundation Trust

Abstract:
This short talk is for anyone who is considering undertaking a masters’ course or PhD having worked for some time as a clinician and possibly been out of formal education for many years. It will examine reasons for undertaking further study and, in particular, consider common barriers (both practical and psychological) to undertaking further study and how to overcome them. The speaker will draw on her own recent experience as a mid-career, part-time PhD student and that of some of the Masters’ students she teaches.

Key Learning Objectives:
- Understand what types of further academic study are available to experienced clinicians and be able to identify which are suitable for you
- Understand what people gain from further academic study and advantages of pursuing this mid-career
• Be able to identify personal barriers to taking on further study and gain ideas for how to overcome these

Biography:
Hannah began her audiology career in 2004 as a regionally funded trainee Clinical Scientist at the Royal Berkshire Hospital in Reading. Hannah was awarded an NIHR/CSO Healthcare Science Doctoral Research Fellowship in 2013 to undertake a PhD at the UCL Great Ormond Street Institute of Child Health which she completed in 2017. Hannah is now a lecturer in audiology at the UCL Ear Institute and continues to work part time as an audiologist at the Royal Berkshire Hospital. Her research interests are in the neurodevelopment of children with hearing loss, in particular, children with auditory neuropathy spectrum disorder. Hannah also investigates how we can use assistive technologies to improve outcomes for children with hearing loss, and is part of a team testing a new drug treatment for the treatment of sensorineural hearing loss.

14:40–15:00
Onwards and Upwards: How to Progress Your Career
Helen Martin
Consultant Clinical Scientist, NHS

Abstract:
Having qualified as an Audiologist and worked for a few years, many people are keen to get involved in more specialist work and progress their career. This talk will first highlight the options available to those wanting to gain additional skills and knowledge to specialise clinically, both currently and in the future. This will include data from the recent BAA survey on training needs which was carried out as part of the BAA Higher Training Scheme review. Other options for career development and progression, to include leadership and management, education and research will also be covered.

With increasing financial pressures there are typically fewer opportunities for training and development, so the personal qualities which typically result in greater progression will be highlighted. This talk is aimed at individuals wanting to progress, as well as those who have responsibilities for staff development or supervision.

I would like to acknowledge the following people who have contributed to this work: Amanda Casey (Aston University), Leah Cooper (Norfolk and Norwich University Hospital), Lizanne Steenkamp (Queen Margaret’s University) & Kai Uus (Manchester University).

Key Learning Objectives:
- Raised awareness of different ways to increase clinical skills and knowledge in different specialist areas, plus options available to develop in other areas: leadership & management, education & research
- Understanding the priorities and views of the BAA membership with regard to post qualification training modules
- Raise awareness of the personal qualities which typically result in greater career progression, and how to get noticed

Biography:
Helen has been involved in Audiology for over 25 years, having worked in many different roles and worked in most sectors. Helen’s highlights and proud moments include being manager of the first department in the country to modernise under the MHAS programme (Winchester), making telephone follow-ups work (Hearing Direct Project), leading the team that developed and introduced the BAA Higher Training Scheme, and building a highly regarded paediatric service in Teesside. She is a registered Clinical Scientist, and has recently moved away from the front line to enable her to spend more time focused on developing evidence based practice & research across a range of disciplines, have more time to get involved with professional issues, and more time to spend with her family.
exploration with expert groups (with overseas input) to identify rationale for variation in priorities.

NHS England recently published a board paper on Supporting and Applying Research in the NHS with an action to set out research priorities for national NHS programmes. Our work is therefore very timely aligning with overall direction of travel. Consequentially a set of recommendations have been made to NHS England with an aim for outputs from this and further work to lead to more efficiency in hearing pathways and thus savings for these treatments. This current works reinforces the need for prioritising research on early identification and intervention leading to better outcomes.

Conflict of interest: Please note that this work was supported and commissioned by NHS England through a research agreement between The Ear Foundation and AD CAVE SOLUTIONS Limited (Professor Adrian Davis).

15:50–16:00 MAIN AUDITORIUM – HALL 1A

15:50–16:00

Best Bits, Top Tips and Take Home Messages & Closing Remarks

Sue Falkingham
President, British Academy of Audiology
# Oticon Guest Speakers at BAA 2018

## SPONSORS TRACK

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| **THURSDAY 8 NOV 12:05 - 12:25** | **Hearing loss, hearing aids and memory** | **Elaine Ng**
Senior Researcher
Oticon A/S |

Research has shown that hearing loss affects speech reception and has a negative impact on higher level cognitive processes. This presentation will review recent studies investigating the relationship between hearing loss and different types of memory, and will discuss the immediate and long-term effects of hearing aid use on memory.

## FRIDAY 9 NOV 12:10 - 12:50

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| **FRIDAY 9 NOV 12:10 - 12:50** | **Person-Centred Care - Tips for your clinic** | **Alison Stone**
Audiologist & Training Manager
Oticon UK |

Person-Centred Care (PCC) is based on the premise that understanding the whole person is key to successful hearing rehabilitation. In the climate of ever increasing pressure on resources, it can be challenging for Audiologists in NHS clinics to embrace a PCC approach. In this talk we will explore some of the tips, tools and information from the Ida Institute, which help hearing care professionals promote PCC in their clinics. A fun interactive exercise will get you reflecting on your own and your clinic’s work with patients.

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**Poster Presentation Times**

Odd numbered posters: Thursday 8th November 12:45–14:00

Even numbered posters: Friday 9th November 12:50–13:30
Encouragement, inspiration and guidance across Audiology

14-15 November 2019
ACC Liverpool

HIGHLIGHTS TO INCLUDE:

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• Awards programme to acknowledge individuals and teams who have excelled in the Audiology profession
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GN Making Life Sound Better
Ageing & Cognition

Poster: 12

Early Audiological Assessment and Aural Rehabilitation Outcomes in Stroke Survivors

Staikoudi S, NHS Lothian

Introduction:
Hearing loss can accelerate atrophy in the auditory areas of the brain, especially if left untreated. Hearing aids can help preserve a person’s perception, cognition and how the brain processes sounds, including speech. Given how the peripheral and higher auditory centres are structured, both ischaemic and haemorrhagic strokes may disturb any level of the auditory pathway and lead to hearing deficits and central auditory processing problems. A pilot of an Audiology Stroke pathway offering priority aural assessment and rehabilitation was designed and implemented. The results showed that 69% of patients referred had been misdiagnosed as having central problems such as aphasia and global impairment. Their performance at assessments post stroke had been exacerbated by hearing loss and/or central auditory problems.

Method:
The pathway has since been used as an official clinical protocol. We look at audiological manifestations from 141 stroke survivors with 28 different types of strokes and haemorrhages.

Results:
Clinical findings indicate a high prevalence of central auditory problems in stroke survivors. Bilateral, symmetrical SNHL and asymmetrical SNHL contra laterally to the site of lesion are the most prevalent types of hearing loss in this patient cohort. The vast majority of patients and family members report hearing deficits following stroke. 95.5% of stroke survivors referred were found to require aiding. Hearing aid uptake was higher in stroke survivors than in regular patients. Data analysis indicates it takes significantly longer for this patient group to acclimatise to wearing hearing aids.

Discussion:
Early aural investigation and intervention following stroke appears to be crucial not only for optimal aural rehabilitation but also for the stroke survivor’s optimal rehabilitation in general.

References:

Diagnostic and Medical Audiology

Poster: 16

An Investigation into the Audiological Testing Methods of Children with ASD (Autistic Spectrum Disorders)

McCabe E, University of Manchester

Introduction:
This project is an investigation into the sensory needs of children with autism spectrum disorders who present at Audiology clinics, and how these needs impact their Audiological care and management. This study aims to carry out qualitative research into specific sensory needs of children with ASD, with the hopes of generating a pre-assessment questionnaire which will assist in efficient testing and gaining accurate results. The finalised pre-assessment questionnaire aims to guide the clinician in generating an appropriate environment for the child, thus enabling accurate testing and potentially reducing stress from the appointment for the child and their family/caregivers.

Methods:
This research project will involve three sites; The Seashell Trust, Macclesfield District General Hospital and Sheffield Children’s Hospital. Children between the ages of 5 – 16 years with a confirmed diagnosis of autistic spectrum disorder are the group of interest, with parents/caregivers of the child acting as the participant. Participants will be involved in a trial questionnaire and associated feedback session in
which they will complete the proposed questionnaire, and engage in a discussion allowing them to give feedback and voice comments, concerns and personal experience.

Results:
Qualitative data from feedback session will undergo thematic analysis to allow identification of meaning across feedback data, providing crucial information on the importance and applicability of the proposed questionnaire.

Discussion:
Results of thematic analysis should allow clarification of the important aspects to include in the questionnaire. The trial questionnaire can then be adjusted appropriately in order ensure its usefulness and applicability in clinic.

The project aims to create a finalised questionnaire which will focus on the patient’s habits, ASD characteristics, triggers, daily routine etc. with the hopes of generating the most appropriate audiological environment. This hopes to bring care and wellbeing of the patient to the forefront, while ensuring efficient and accurate testing.

Poster: 23
The Explore Study of Characters of Wideband Tympanometry in Normal Hearing Newborns
Qi B, Beijing Tongren Hospital & Beijing Institute of Otolaryngology
Chen J, Beijing Tongren Hospital & Beijing Institute of Otolaryngology
Fu X, Beijing Tongren Hospital & Beijing Institute of Otolaryngology
Ma C, Beijing Tongren Hospital & Beijing Institute of Otolaryngology
Shi L, Haidian Maternal and Children Health Hospital
Ma Y, Haidian Maternal and Children Health Hospital

Objective:
To analyze the characters of wideband tympanometry in normal hearing newborns.

Methods:
Ninety well born nursery neonates (149 ears) who passed DPOAE and 1000Hz probe tympanometry tests participated in this study. Wideband tympanometry test was performed to get the characteristic data including ear canal volume, resonant frequency and wideband absorbance emittance in the same room.

Results:
1. Ear Canal Volume: The ear canal volume was 0.50±0.12 ml, while differences among genders and delivery mode were not statistically significant (p>0.05).
2. Resonance Frequency: The resonant frequency distributed from 125~642Hz(average 327.3±125.33Hz),while the differences among genders and delivery mode were not statistically significant(p>0.05).
3. Frequency- wideband absorbance function: The shape of the curve showed two peaks and two valleys. The three most values were located in 1296Hz, 2000Hz and 5339Hz. There was no significant correlation between gender, mode of delivery and wideband absorbance (p>0.05).

Conclusion:
There were different between newborns and adults in the resonance frequency and wideband absorbance curve. It is necessary to establish the normal reference value of WBT in China newborns in order to push this technique.

Poster: 24
An External Structured Peer Review System for Diagnostic ABR Tests on Newborns – The First 6 Years
Ferm I, Croydon Health Services NHS Trust

The external structured peer review (PR) of diagnostic ABR tests on newborns is an important component of clinical governance and quality assurance for this group.

In 2011, a structured, yet fairly simple, ABR PR system was established in South London using trained and accredited reviewers. It is carried out in a straightforward, effective way and has been accepted as routine practise by those carrying out the ABRs and was adopted by the English Newborn Hearing Screening Programme as their generic PR model. The system is managed by a co-ordinator and the system receives support from an external expert reviewer, who also provides the training, accreditation and moderation of the reviewers.

By the end of the 6th year 3898 reviews had been completed, each with an average turnaround time of 4 days (measured from date the test was competed to the date the review was returned).

A significant (p<0.0001) improvement in the quality of the ABR testing was seen in the first two years. Further improvements have been seen in subsequent years.

This presentation will outline the PR process, the results and will include a discussion of the additional benefits seen since this system was introduced.

Poster: 28
Interim Results from a Prospective Study of Tablet and Web-Based Audiometry to detect Otoxicity in Adults with Cystic Fibrosis
Frost E, Imperial College Healthcare NHS Trust
de Los Arcos P, Imperial College Healthcare NHS Trust
Singayasingam A, Adult Cystic Fibrosis Centre, Royal Brompton Hospital
Wilkins J, Imperial College Healthcare NHS Trust
Premachandra P, Guy’s & St. Thomas’ NHS Foundation Trust
Picinali, L, Imperial College London
Zhifang Ni M, Imperial College London
Eilston C, Kings College Hospital NHS Foundation Trust
Simmonds N, Imperial College Healthcare NHS Trust & Adult Cystic Fibrosis Centre, Royal Brompton Hospital
Shah A, Imperial College Healthcare NHS Trust & Adult Cystic Fibrosis Centre, Royal Brompton Hospital

Background:
Individuals with Cystic Fibrosis (CF) often receive prolonged courses of anti-infective therapy including aminoglycosides, which are known to have ototoxic effects. The exact prevalence of aminoglycoside-induced ototoxicity is variable but may be up to ~40% in adults with CF (Garinis et al., 2017). However, there are currently no recommendations to screen for ototoxicity. High-frequency audiometry has shown an increased sensitivity in early detection of ototoxic drug-induced hearing loss but formal departmental hearing tests require further outpatient visits. In this prospective multi-centre study, we aim to analyse the utility of a novel interactive iPad-based high-frequency audiometer (Shoebox MD, Clearwater Medical) that can be used by non-audiologists to test hearing in an outpatient setting, alongside an interactive web-based screening app for ototoxicity in an adult CF population.

Methods:
200 adults from the adult CF centre at the Royal Brompton and Harefield Foundation Trust and Kings College Hospital NHS Foundation Trust are being prospectively recruited to the study over an 8-month period. A web-based hearing test will be performed at home alongside tablet-based and formal sound-booth, high-frequency audiometry and validated ototoxicity screening questionnaire.
High-frequency audiometry at 10 and 12.5 kHz will be carried out in addition to standard audiometry, and will be used to determine cohort prevalence of ototoxicity in adults with CF with multi-variable logistic regression analysis used to identify risk factors. Inter-class correlation coefficient analysis will be performed to analyse the reliability of tablet-based audiometry compared to standard high-frequency audiometry performed by an audiologist. Validated questionnaires will additionally be used to analyse device usability.

Results:
The final participant activity is scheduled to take place in August 2018 after which results and analysis will be available.

References:

Poster: 39
Methionine Sulfoxide Reductase a Knockout Mice Show Progressive Hearing Loss and Sensitivity to Acoustic Trauma

Alqudah S, Jordan University of Science and Technology
Peppi M, University of Kansas Medical Center
Chertoff M, University of Kansas Medical Center
Moskovitz J, Jordan University of Science and Technology
Staecker H, University of Kansas Medical Center
Durham D, University of Kansas Medical Center

Introduction:
Methionine sulfoxide reductases (MsrA and MsrB) protect the biological activity of proteins from oxidative modifications to methionine residues and are important for protecting against the pathological effects of neurodegenerative diseases. In the current study, we characterized the auditory phenotype of the MsrA knockout mouse.

Methods:
We used 151 (74 males and 77 females) MsrA knockout and wild-type mice on a C57BL6 background during this study. By means of physiological, microbiological, and histological analyses, we were successfully able to define the potential role of MsrA gene in preventing the harmful effect of aging and noise exposure.

Results:
Young MsrA knockout mice showed small high-frequency threshold elevations for auditory brainstem response and distortion product otoacoustic emission compared to those of wild-type mice, which progressively worsened in older MsrA knockout mice. MsrA knockout mice showed an increased sensitivity to noise at young and older ages, suggesting that MsrA is part of a mechanism that protects the cochlea from acoustic damage. MsrA mRNA in the cochlea was increased following acoustic stimulation. Finally, expression of mRNA MsrB1 was compromised at 6 months old, but not in younger MsrA knockout mice (compared to controls).

Discussion:
The identification of MsrA in the cochlea as a protective mediator from both early onset hearing loss and acoustic trauma expands our understanding of the pathways that may induce protection from acoustic trauma and foster further studies on how to prevent the damaging effect of noise exposure through Msr-based therapy.

References:

Poster: 45
Hearing Loss Among High-Risk Newborns Admitted to a Tertiary Neonatal Intensive Care Unit, Cairo University Hospitals

Elfouly H, Cairo University Hospitals
Khairy M, Cairo University Hospitals
Abdulhamid W, Cairo University Hospitals
Sayeda R, Cairo University Hospitals
Elhawy I, Cairo University Hospitals

Purpose:
The aim of this work is to identify the most significant risk factors for hearing impairment in high risk neonates hospitalized at our Neonatal Intensive Care Unit (NICU) and to assess the sensitivity of hearing screening tests.

Methods:
This study involved 260 neonates admitted to a tertiary NICU; they were classified into two groups; 150 preterm and 110 full terms with risk factors for hearing loss. The hearing screening tests performed were transient evoked otoacoustic emissions (TEOAEs) and the automated auditory brainstem response (AABR).

Results:
Forty-eight preterm neonates (32%) and 30 full term neonates (27.3%) had pathological AABR. In preterm group, mechanical ventilation more than five days, sepsis, usage of aminoglycosides, loop diuretics, vancomycin alone or in combination with aminoglycosides and prolonged duration of admission were considered risk factors of hearing affection whereas in full term group mechanical ventilation more than five days was the risk factor of hearing affection (p<.05).

Conclusions:
The prevalence of hearing loss is highest among high risk neonates and TEOAE and AABR were found to be reliable screening tools. Use of ototoxic drugs and mechanical ventilation for more than five days were significant risk factors for hearing loss in our study population.

Keywords:
Risk factors, neonate, hearing loss screening, transient evoked otoacoustic emissions, automated auditory brainstem response.

Poster: 47
Implementation of Objective Audiometry Among Difficult to Test Adults

Elfouly H, Cairo University Hospitals
Shabana M, Cairo University Hospitals
Hosni N, Cairo University Hospitals

Verification of the hearing level in the difficult to test adults has always been a challenge. Audiologists are often called upon to evaluate the auditory thresholds of those patients. Although objective diagnostic methods tend to dominate modern medical science, behavioural pure-tone audiometry (PTA) remains the golden standard for identifying hearing threshold levels.

A number of auditory-evoked potential techniques have been implemented for this purpose over the past three decades. The most widely used of these techniques has been the auditory brainstem response (ABR) and more recently another auditory-evoked potential, the auditory steady-state response (ASSR). We also used old techniques such as postauricular myogenic potential and latencortical-evoked potential P100 as an alternative technique for objective audiometry.

Objectives:
To implement an objective protocol for assessing hearing in difficult to test patients.

Methodology:
A case–control study done from October 2016 to May 2018. Sixty
adult patients divided into two groups: normal hearing group, and sensorineural hearing loss (SNHL) patients group. All patients were submitted to: history taking, otologic examination; audiological evaluations, tone burst ABR; ASSR stimulus using carrier frequencies 500, 1000, 2000, and 4000 Hz; postauricular myogenic potential response using 1000 and 4000 Hz; late cortical-evoked P100.

**Results:**
ASSR and ABR thresholds are approximated to PTA thresholds but still the ASSR thresholds are closer to PTA than ABR (specially at higher frequencies), and PAM but much higher in the case of P100. In the SNHL group, ABR and ASSR show the best level of prediction of PTA thresholds. A statistically significant correlation was found only at 1000 Hz in PAM test and a statistically significant correlation was found only at 1000 and 20000Hz in P100 test.

**Conclusion:**
ASSR is more accurate at higher frequencies, making ASSR more suitable in accessing auditory thresholds in hard to test patients especially those with SNHL.

**Poster: 52**
**Socioeconomic Inequalities and Hearing Health: Findings from the English Longitudinal Study of Ageing (ELSA)**

Taimpida D, Manchester Centre for Audiology and Deafness (ManCAD), Division of Human Communication, Development & Hearing, School of Health Sciences, Faculty of Biological, Medical and Health Sciences, Manchester Academic Health Science Centre, The University of Manchester

Dawes P, Manchester Centre for Audiology and Deafness (ManCAD), Division of Human Communication, Development & Hearing, School of Health Sciences, Faculty of Biological, Medical and Health Sciences, Manchester Academic Health Science Centre, The University of Manchester

Pendleton N, Division of Neuroscience and Experimental Psychology, School of Biological Sciences, Faculty of Biological, Medical and Health Sciences, Manchester Academic Health Science Centre, The University of Manchester

**Introduction:**
Hearing loss (HL) is associated with negative physical, social, cognitive, economic and emotional consequences and its prevention requires understanding of its risk factors. Aim was to examine whether socioeconomic status (SES) is associated with HL among older adults, using data from the ELSA wave 7 (n=9,263 participants, aged 50-89).

**Methods:**
Hearing was measured using an audiometric screening device (HearCheck Screener). Hearing loss was defined as >35dB HL at 3.0 kHz in the better-hearing ear. Markers of SES were the net household income, the net financial wealth quintiles, the self-reported occupation (managerial and professional; intermediate; routine and manual occupations) and the educational status (degree/higher education; A level; O levels CSE; foreign/other; no qualifications). Using sex-specific logistic regression modelling, we evaluated the age-adjusted odds of HL. Data were analysed using Stata/SE v.14.

**Results:**
31.8% (1,158/3,646) of men and 21.5% (994/4,617) of women aged 50-89 years had HL. The odds of HL were largely increased for those in managerial and professional occupations (men: OR 0.60, 95% CI 0.49-0.72, women: OR 0.69, 95% CI 0.52-0.91).

**Discussion:**
The increase of life expectancy, the population ageing and the burden of HL, highlight the urgent need to investigate pathways that lead to hearing health inequalities, in order to inform strategies to minimise socioeconomic risks for HL, ensuring the wellbeing of older populations.

**Poster: 71**
**A Review of the Audiological Aspects of Mild Traumatic Brain Injuries**

Brooke R, University Of Leeds

Killan T, University Of Leeds

**Introduction:**
The incidence of traumatic brain injuries (TBIs) in industrialised countries is high and the majority of these injuries (up to 75 %) are likely to be mild (Mott et al., 2012). Although auditory symptoms such as hearing loss, tinnitus and hyperacusis have been reported post-TBI, the majority of studies have focused on moderate-severe injuries or have combined results from individuals with mild, moderate and severe TBIs. This has resulted in an incomplete picture of auditory symptoms specifically for mild TBIs (MTBIs). The aim of this study was to collate the available evidence regarding audiological symptoms associated with MTBIs, as well as provide information on the use of audiological assessment techniques in MTBI diagnosis.

**Methods:**
A scoping review was conducted using the Arksey and O’Malley framework (2005). Eight bibliographic databases and the grey literature were searched to identify articles related to head injuries and audiological factors. Article selection was performed by three reviewers using preselected inclusion/exclusion criteria forms and an iterative approach.

**Results:**
1748 articles were identified reporting auditory symptoms and/or the use of auditory assessment techniques in individuals with TBI. After applying the inclusion/exclusion criteria, 44 articles presenting information related to the audiological factors of MTBI were identified.

**Conclusions:**
Available evidence suggests that auditory symptoms are reported by individuals who have experienced a MTBI and post-MTBI deficits can be identified using audiological assessment techniques. Thus, MTBIs should be considered as a possible cause of an audiological impairment when no other cause is known and audiological assessment techniques are potentially useful in the evaluation of the extent and impact of MTBI.

**References:**

**Poster: 77**
**Study into the Incidence of Ototoxicity in Royal National Throat, Nose, and Ear Hospital**

Awad A, Ucl Ear Institute & University of Benghazi

Saeed S, Ucl Ear Institute

Al-malky G, Ucl Ear Institute

**Introduction:**
Cisplatin is an anticancer agent that is extensively used in the treatment of many solid tumours. The prevalence of ototoxicity due to ototoxic agents ranges from11-97% (Marshak et al., 2014). Despite the fact that cisplatin has ototoxic potential, there are groups of patients who receive cisplatin but do not undergo frequent hearing monitoring. Therefore, monitoring of the hearing through comprehensive audiological assessment is an essential step for early detection of hearing loss. The
Methods and patients:
Files of referred patients to adult audiology clinic were retrieved from 2010-February 2018. We collected data on patient demographics, treatments details, and audiological tests. Patients who had received an ototoxic drug other than cisplatin or have missing data are excluded.

Results:
From a total of 454 patients referred, 400 are included in this study. Most of the referred patients were adults 381 (95%) while children were 19 (5%). The commonest cancer was head & neck cancer (36.5%) followed by bone tumours (21.7%) then others (20%). In 62.5% of cases cisplatin was used as polytherapy while in 22% as monotherapy. 15.5% treatment was mentioned as platinum.

Only 87 patients (22%) have pre and post-treatment PTAs. The ototoxicity incidence after first cycle is 54 %. The percentage of only pre-treatment PTA is 87.8% while 34% of patients have two PTAs post treatment. Three or more PTAs were performed in 22%.

The data will be further analysed to study the relationship between cisplatin cumulative dose and incidence of ototoxicity after the first cycle.

Conclusion:
There is an urgent need of multidisciplinary team’s interaction to improve referral pathway to reduce the number of missed cases. The result of this study will increase physician awareness of the importance of the referral after the first cycle.

Poster: 79
Cisplatin-Induced Ototoxicity in Adult Cancer Survivors – A Systematic Review
Awad A, Ucl Ear Institute & University of Benghazi
Saeed S, Ucl Ear Institute
Al-malky G, Ucl Ear Institute

Introduction:
Cisplatin is an effective chemotherapeutic agent that is commonly used in the treatment of many cancers in children and adults (Rybak and Ramkumar, 2007). Cisplatin causes hearing loss in 20 – 90 % of treated patients (Landier, 2016). Early diagnosis of ototoxicity through hearing monitoring plays an essential role in early detection or even prevention of hearing loss. The aim of this review is to evaluate ototoxicity monitoring approaches that have been used in adult cancer patients who received cisplatin and to identify the cisplatin dosage that may induce ototoxic hearing loss in these patients.

Method:
MEDLINE/PubMed, Cochrane library, and Embase were searched from January 1980 to July 2017. Twenty-eight articles were selected according the inclusion criteria then being filtered by PRISMA and critically appraised by CASP 2017 for this review.

Results:
The timing of the audiological tests and follow ups was not the same among studies (ranged from 1 month to 8 years). Most of included studies assessed the hearing pre and post chemotherapy (22 of 28 articles). Six studies tested the hearing after each cisplatin cycle, surprisingly, all showed hearing loss occurred after the first cycle (25%–100% at frequencies 4kHz-8kHz). Studies that used low dose of cisplatin (8-50mg/m²) showed HL in the HF ranges while no HL was noticed in speech frequencies area. On contrast, studies that applied high dose cisplatin (200mg/m²) reported hearing impairment extended to involve the speech frequency area.

Conclusion:
There is no standardised hearing monitoring protocol for cancer patients. Any cisplatin doses could result in hearing loss at frequencies 1 kHz to 8 kHz. Ototoxicity mainly depends on the cisplatin accumulative dose rather than individual dose.

References:

Education, Preceptorship & Training
Poster: 10
Student Experiences of DMU Square Mile India – A Qualitative Study of Work-Based Learning Opportunities in Clinical Audiology
Davies J, De Montfort University

Whilst “traditional” UK-based NHS placements are routinely offered to all audiology students as part of their clinical training, opportunities for international work-based learning (WBL) experiences are considerably less common. De Montfort University (DMU) have recently launched DMU Square Mile India, part of a pioneering initiative which helps support Indian communities through the sharing of student and staff skills. Under this initiative, staff in the division of audiology set-up audiology outreach clinics in the state of Gujarat, India. The maiden trip took place in 2016 and saw two audiology staff and six students provide free audiology services to over 300 patients in one week. Up to now the experiences gained by students attending DMU global trips offer positive accounts of self-development and are thought to enhance employability. However, more empirical research methods have yet to be applied in the analysis of these student experiences.

This study aimed to survey BSc healthcare science (audiology) students’ experience of a global work-based learning (WBL) trip to India in an effort to better understand its impact on their clinical learning and development.

In recognition of the multi-dimensional impacts that WBL may offer individual students, a qualitative semi-structured interview approach was adopted to capture student experiences pre and post-trip. Verbal responses were recorded and a thematic analysis of the content was undertaken.

Overall, the thematic analysis elicited some clear and converging themes amongst students which changed favourably as a result of the trip. Pre-trip apprehensions concerning emotional readiness, extending beyond one’s comfort zone and having to clinically manage a large volume of patients were replaced with post-trip feelings of improved self-efficacy, accelerated clinical learning and a sense of self-reward. The study provided valuable insights, allowing staff to better understand the pre-trip needs of students as well as measure the benefits of taking part.

Poster: 68
Enhancing Male Recruitment into Audiology Practitioner Programmes
White P, University of Leeds

Introduction:
Male recruitment to UK Audiology Practitioner training programmes (Healthcare Science (Audiology) has seemingly reduced in recent years, to resemble the similar gender demographic seen in some other healthcare professions e.g. nursing (The Guardian 2017). The impact of an imbalanced gender workforce and potential work to enhance male recruitment, needs us first to understand where the fall off in interest occurs during the recruitment pathway.
Method:
Demographic data regarding candidates attending relevant University of Leeds Healthcare related outreach activities for scholars in Year 9 and Year 12 and from UCAS applications has been collected and analysed to identify at what points along the recruitment pathway prospective male candidate student numbers begin to decline.

Themed analysis (Silverman 2011) of focus group data from Final Year undergraduate audiology students is used to identify their views regarding audiology as a profession, what maintained their attraction to audiology during the recruitment phase and the point in the programme at which these attractions were affirmed.

Discussion of results:
The number of male audiology students has reduced in recent years. This study suggests that some attributes of audiology practice are particularly appealing to males but they are currently obscured in the recruitment information.

The collation of these findings positively informs our prospective recruitment and diversity activity content.

References:
Focus Groups. Sage.
The Guardian. 1 March 2017 Why are there so few male nurses?

Implantable Technologies

Poster: 5
An Audit of the Relationship between APDIP Questionnaire Score and Outcomes in a Cohort of Early-Deafened Adult CI Recipients
Townsend J, Betsi Cadwaladr University Health Board

Adult CI recipients with pre-lingual profound hearing loss are likely to have poorer outcomes from implantation than post-lingually deafened recipients. However the term ‘pre-lingual hearing loss’ covers a heterogeneous group including congenital total hearing loss, progressive loss with consistent use of hearing aids and early acquired deafness. The Adult Profoundly Deaf Implant Profile (APDIP) is designed to capture factors that may influence outcome and gives a crude ‘measure of concern’ for each patient. We examined the relationship between the APDIP scores of a cohort of early-deafened adult recipients and their open-set speech, benefit and usage outcomes to see if the APDIP may be a useful tool to predict outcome of implantation in this group.

The APDIP scores ranged from 0 to 15 with a mean of 6.4. APDIP score correlated strongly with post-op BKB score (r = 0.80). A higher APDIP score was related to greater likelihood of part-time or non-use. Recipients with an APDIP score of >6 predictably gained good benefit from CI. 43% of recipients with an APDIP score of 7-9 showed open-set benefit on BKB testing and good usage, and another 39% reported good subjective benefit despite BKB of 0%. The ten recipients with a score of 10+ did not obtain open-set speech benefit. Six reported both subjective benefit and good usage.

In conclusion, CI outcomes may be somewhat predictable from the APDIP score. An APDIP score of <10 is encouraging for a positive outcome from CI. Scores of 12+ are associated with a high likelihood of non-use and limited benefit. Age at implant was not predictive of outcome. There was a wide range of performance for each APDIP score which may relate to additional variables not captured by the questionnaire, or the broad scoring categories used. Our data may potentially be helpful for counselling outcomes expectations.

Poster: 34
Five Years of the National Bone Anchored Hearing Aid Programme at Our Ladys Childrens Hospital Crumlin
Fitzgerald F, Our Ladys Hospital For Sick Children
Hone S, Our Ladys Hospital For Sick Children

Background:
BAHA stands for Bone Anchored Hearing Aid. It is a hearing aid designed to directly access the cochlea and bypass the outer and middle ear portions of the auditory system. It is designed for patients who cannot wear conventional hearing aids either due to malformation of the outer and middle ear spaces or due to chronic otitis media or discharging infections.

The HSE funded BAHA Programme began in 2012 and since then nationally 590 BAHAs have been issued; 45% to Paediatric; 55% to Adults. OLOCH is one of 6 BAHA sites in the country. 121 referrals have been received into the Audiology Department for a trial of the BAHA and 54 of these patients have proceeded to surgical implantation.

Method:
An audit of the programmes patient data to date was carried out looking retrospectively at audiology, type of BAHA system implanted, number of BAHAs fitted, complexity of the patient and assessment of benefit.

Results:
The results presented will demonstrate the aetiology of patients referred. Predominantly patients were referred for chronic otitis media (49%). The complexity of the patients in the programme will be demonstrated with 60% of those undergoing surgical implantation having a syndrome. Assessment of benefit in unaided/aided condition is demonstrated using the CHILD questionnaire with average improvements from 3 to 6 on an 8 point scale.

Conclusion:
The programme continues to run with an annual allocation of 15 processors per year. Predominantly the Attract system is in use where appropriate in the paediatric population due to reduced post-surgical infection complications.

Poster: 50
Investigating Outcomes of Cochlear Implants in Congenitally, Pre- and Peri- Lingually Deafened Adults
Jones L, BCUIHB
Bentley K, BCUIHB
Bent S, BCUIHB

Introduction:
Longer duration of deafness has been associated with limited effectiveness of cochlear implantation1. In congenital, pre- and peri-lingually deafened adults who have been implanted, it is sometimes difficult to demonstrate benefit by using objective measures of speech perception2,3. This study aims to qualitatively investigate the outcomes of cochlear implants in congenitally, pre- and peri-lingually deafened adults implanted in adulthood.

Method:
Ten congenitally, pre- and peri-lingually deafened patients implanted as adults were recruited from the North Wales Cochlear Implant Program. Semi-structured interviews were carried out with participants exploring their experiences with their cochlear implant. All interviews were video recorded and the recordings transcribed. Transcripts were reviewed and analysed using an inductive thematic analysis approach to identify key themes and outcomes.

Results:
Three core themes and ten sub-themes were identified which capture
the outcomes of cochlear implantation described by participants: perception of sound (general improvements in hearing, environmental sounds and television, music and radio); social interaction and participation in society (social interaction, hearing on the telephone and work life); and impact on psychosocial wellbeing (confidence, independence, reduced psychological burden and ease of life).

Discussion:
This study shows that congenitally, pre- and peri-lingually deafened adults report a variety of outcomes regarding perception of sound, social interaction and participation, and impact on psychosocial wellbeing. Hopefully this study will contribute to the growing body of evidence regarding outcomes of cochlear implantation in adulthood in the congenitally, pre- and peri-lingually deafened population. The results may contribute to the development of appropriate outcome measures which would accurately reflect the benefit these patients receive from cochlear implants.

References:

Poster: 72
Cochlear Implants in South Wales (UK) – Estimating the Prevalence of Cochlear Implantation and the Unmet Need

Joseph J, ABMU Health Board, South Wales Cochlear Implant Programme (Bridgend), The Princess of Wales Hospital
Pocket R, Swansea Centre for Health Economics, College of Human and Health Sciences, Swansea University
Miah R, Swansea Centre for Health Economics, College of Human and Health Sciences, Swansea University
Meredeth R, ABMU Health Board, South Wales Cochlear Implant Programme (Bridgend), The Princess of Wales Hospital
George N, Cardiff and Vale NHS Trust, South Wales Cochlear Implant Programme (Cardiff), University Hospital of Wales Cardiff
Williams H, Cardiff and Vale NHS Trust, South Wales Cochlear Implant Programme (Cardiff), University Hospital of Wales Cardiff

Introduction:
The number of new adult cochlear implant (CI) recipients in the UK has grown year on year, from 600 in 2013/14 to just over 900 in 2016/17 (BCIG, 2017). However, it is estimated only 5% of the 900,000 people in the UK with severe-profound hearing loss have accessed cochlear implantation (Raine, 2013; AOHL, 2015); suggesting many potential candidates are either not identified or not going ahead with implantation. With expansion in criteria for CI expected, accurate planning for future service provision is essential.

The aim of this audit is to estimate the prevalence of severe-profound hearing loss amongst the South Wales adult population and the prevalence of cochlear implantation, so as to ascertain the level of unmet need. We also hope this project would provide feasibility for a broader UK prevalence study.

Methods:
Data will be extracted from Audiology Clinical Databases (Auditbase) using the following inclusion criteria:
- Aged 18 years + at the time of most recent audiological assessment
- Audiogram within last 36 months
- Thresholds at 2 &4 kHz > 90 dB, bilaterally
- Thresholds >80 dB at 2 frequencies between 0.5 and 4 kHz, bilaterally

Individual patient records will be reviewed to determine the current management options in order to establish the prevalence of CI usage. For patients meeting the current CI criteria, it will also be documented whether CI as an option was discussed and a referral made.

Results:
This audit will be run in audiology centres referring into the South Wales Cochlear Implant Programme and results of this will be presented.

Discussion:
The findings of this audit will provide a better understanding of the level of unmet need in severe-profound hearing loss patients and of the factors which influence CI referral rates. This understanding will subsequently help service providers estimate anticipated patient numbers and plan appropriately.

Poster: 74
The Effect of Surgical Approach on Hearing Preservation Using Modern Flexible Atraumatic Moderate Length Electrode Arrays – A Systematic Review

Bu Saad I, UCL Ear Institute & Imam Abdulrahman Bin Faisal University
Al-Maliky G, UCL Ear Institute
Saeed S, UCL Ear Institute

Introduction:
The inclusion criteria of cochlear implantation have widened to include patients with residual hearing. Preservation of residual hearing improves patients’ ability of sound discrimination. Many factors might affect hearing preservation such as the surgical approach, type of electrode, steroid induction and the usage of hyaluronic acid and antibiotic (Ramos et al., 2015). The aim of this systematic review is to study the effect of surgical approach on hearing preservation across patients who have atraumatic lateral wall (LW) electrodes.

Method:
Three databases (PubMed, Embase and Midline databases) have been searched for relevant articles published in the period 1980- 1st of April 2017. The inclusion criteria were strict for studies that used atraumatic LW electrodes. Articles were selected following Prisma model and assessed for quality using the CASP questionnaire.

Results:
The result of this search was 1306 unique articles, 12 of these studies fits our inclusion criteria, which includes 128patients.

The total number of patients who had 12 months follow up is 100 out of 128 patients. Partial hearing preservation was seen in 58% of patients, while 28% of participants had complete HP, according to Skarzynski’s (2013) formula, definition and classification system.

The results meta-analysis showed no significant difference in the level of HP between both surgical approaches (p=0.127). HP at apical frequencies (125 and 250 Hz) was significantly better than mid frequencies (500, 750 and 1000 Hz)(p< 0.05).

Conclusion:
The degree of HP at apical frequencies is significantly better than mid frequencies. There is no significant difference in the level of HP at low-frequency range (250-1000Hz) between both surgical approaches using atraumatic LW electrodes. It was not possible to exclude the effect of antibiotic, fascia graft and hyaluronic acid because of the lack in reporting these factors. There is a need for well-structured prospective studies that consider all factors and reach solid evidence.
Poster: 76
Assessment of Scalar Position of Electrode Array Using CBCT and its Correlation with the Surgical Approach, Cochlear Size and the Level of Hearing Preservation
Bu Saad I, UCL Ear Institute & Imam Abdulrahman Bin Faisal University Al-Malky G, UCL Ear Institute Saeed S, UCL Ear Institute

Introduction:
The aim of cochlear implant surgeons is to place all electrodes inside the scala tympani (ST). Electrodes dislocation form the ST associated with poor speech outcomes and loss of residual hearing (Skinner et al., 2007). Several factors might lead to electrode displacement from ST, like the depth of insertion, cochlear size (Escude et al., 2006) and surgical approach for electrode insertion.

CBCT is a reliable tool to assess electrode location. This study aims to find out if there is a relationship between electrode dislocation and surgical approach, cochlear size and the level of hearing preservation.

Method:
The study includes a cohort of three years of adult patients who had CI in RNTNEH. All include subject are post-lingual, with normal ear anatomy and received atraumatic lateral wall electrode. CBCT was used to assess the scalar position, measure the diameter of the basal turn and the depth of insertion.

Results:
The cohort includes 226 patients. After reviewing surgical and audiology notes, 37 patients 42 ears had post-operative CBCT and fit into our inclusion criteria, 12 males 25 females, 26 right ears and 15 left ears, the mean age of subjects is 51.78 (SD17.90). Six subjects had sudden hearing loss while 31 had progressive hearing loss. The mean duration of deafness is 25.74 (SD17.35). Electrode array was inserted through RW in 37 ears and through cochleostomy in 5 ears.

Data will be analysed to find out if there are correlations between electrode displacement and surgical approach, cochlear size and depth of insertion and audiological outcomes.

Conclusion:
Hearing preservation affects the outcomes of CI users. Identifying the proper depth of insertion based on the cochlear size will help in minimising the risk of cochlear trauma and increasing the possibility of hearing preservation.

Poster: 75
Experiences of the MED EL ADHEAR Bone Conduction System – Pushing the Boundaries of the Fitting Range
Rae C, NHS Tayside Hoskins P

Introduction:
In 2018 MED EL released ADHEAR to the UK market. This is a non-surgical system for patients with conductive or single sided deafness. This paper focuses on one particular patient, a pharmacy assistant who has been left with a moderate to severe mixed hearing loss on her right following cholesteatoma removal and radiation therapy. Initially she was trialled with a conventional hearing aid (unable to wear due to irritation/discharge), a CROS aid (rumb right temporal region meant she couldn’t feel the Receiver) and a BC hearing aid on a softband and SoundArc (found this uncomfortable).

MED EL advise BC values of 25dB or better for the ADHEAR and no defined limit for AC (this patient had average BC 40dB and AC 60dB). This system doesn’t put pressure on the skin was a possible solution for this patient.

Methods:
A casenote search of ENT and audiology assessments using the Clinical Portal and AuditBase patient management systems was carried out.

Results:
The ADHEAR was trialled in clinic and an improvement of speech recognition was noted instantly.

Aided soundfield warble tones were 20dB with ADHERE and soundfield AB wordlist SRT threshold were 21dB (comparable to 25dB with BCD on softband/SoundArc). QuickSIN results within normal limits with ADHEAR and more importantly the patient was delighted with sound quality.

Discussion:
Can we push the fitting range of ADHEAR? In this case it has been very successful, possibly due to normal BC levels on the Left, although the patient feels localisation to the Right. This case does not fit within the fitting range it has been life changing for this patient. The ADHEAR has been a good solution and should be used as an option as it can be easily trialled in clinic.

References:
MED EL ADHEAR – the new bone-conducting hearing aid innovation. www.medel-nordic.com

Poster: 98
A Review of Cochlear Implantation in Children with Significant Low Frequency Hearing

Introduction:
During cochlear implant (CI) assessment, children with partial hearing (PH) whose hearing thresholds are ≥65dB HL at low/mid frequencies are considered for electric-acoustic stimulation (EAS) fitting following CI surgery. Post-implantation hearing responses are recorded and the child is fitted with an acoustic component as appropriate. The reasons for not fitting an EAS device or changing to electrical stimulation over time are explored.

Methods:
Since October 2014, our two centres have worked collaboratively to review the outcomes of partially hearing children who have received CIs. Children with PH who received their CIs between 2008 and 2017 were included in the review. A comprehensive analysis of the data will be presented, including (1) overall rates of hearing preservation for the PH cohort, (2) numbers of children fitted with EAS, post-operatively, (3) numbers of children who are (a) continuing to use EAS and (b) who have changed to electrical stimulation only, (4) reasons for not using EAS or changing to electrical stimulation over time are explored.

Results:
This paper will illustrate the challenges involved in predicting, fitting and maintaining the optimal hearing device and the need for close monitoring of the child’s hearing, perceived preferences and issues with middle ear involvement.

Discussion:
Families should be carefully counselled on the possibility of CI and EAS. It is essential they are aware that hearing may not be preserved and equally important for them to understand that for a child receiving an implant at a young age, CIs outperform the child’s hearing aids even where there is minimal preservation or complete loss of hearing.
I. References:


II. Innovation & Service Development

Poster: 6

Historical First – Professional Registration for Educational Audiologists

Rosenberg J, Mary Hare

Introduction:
The first-ever professional registration for Educational Audiologists in the UK opened this year with the Registration Council for Clinical Physiologists (RCCP) whose focus on clinical physiology competencies which emphasizes the remit of the Educational Audiologist related to audiology.

Methods:
The creation of the register came about in tandem with a memorandum of agreement between the British Association of Educational Audiologists (BAAE) and the British Academy of Audiology (EAA) who provided oversight for RCCP accreditation of the Educational Audiology postgraduate course.

Results and Discussion:
Professional registration benefits children and young people who are deaf and their families. It improves jointed-up working between Health and Education, and promotes public recognition of the need for these links and the Educational Audiology role that best fulfills it. These issues have been evidenced empirically (2017 BATEOD conference presentation cited in 2017 Department for Education Future of the Sector report) and anecdotally (BAEA case studies, and MESH knowledge management Guides); and feature in a British Society of Audiology’s upcoming CPD module. Professional registration is timely news because of the threat of budget cuts to essential support services most often provided by the non-mandatory Educational Audiology role. Since the 1990s, Educational Audiologists have been trained at Mary Hare, now affiliated with University of Hertfordshire. New graduates are automatically eligible to register, and others can make equivalency applications. Efforts begun with the 1970s Education Act and fostered by leaders in the field since then, have now come to fruition.

Resources:

Poster: 18

Service Review Plan – How to Keep your Evidence Based Service up to Date

Hawkins A, UHCB NHS Trust

The Service Review Plan was developed in response to a requirement for our smaller department to stay up to date and evidence based. With staff working across a variety of specialties, specialty team meetings with their associated paperwork and tasks led to increased workload and a long to do list! Our requirement as a UKAS accredited service to stay up to date meant that evidence based clinical work was only the start – each clinical area needed associated clinical guidelines, clinical operating procedures, patient appointment letters, patient information sheets etc. all agreed by the whole team.

The plan started as a ‘back of an envelope’ idea that grew until it resembled a useful blueprint for updating our service. Each specialist team takes a whole day together. During this day, the team review, agree and update all the documentation associated with the service. Any particular areas requiring further work or research are reviewed at a shorter follow-up meeting 3 months later. Some prep-work could also be done instead if new documentation is known about prior to the main meeting – e.g. new national guidelines.

Our tinnitus team implemented this method – we now have completely updated clinical and supporting information for this service (all with the same review date) – another review planned for 2 years’ time. A big time commitment but very little work to do after the meeting and by the review meeting – all done. No agendas, minutes or objectives required! The tinnitus service, balance service and paediatric services have completed reviews to date.

We are up to date and well prepared for our UKAS submission – future meetings planned in 2 years - unless significant new evidence emerges. The whole process seems a lot less daunting. We are developing this as a blueprint for introducing new services.

Poster: 22

Establishment of the Reference Threshold for an Online Hearing Screening Test Based on Speech Audimetry

Qi B, Beijing Tongren Hospital & Beijing Institute of Otolaryngology
Zhang T, University of Southampton
Fu X, Beijing Tongren Hospital & Beijing Institute of Otolaryngology
Li G, University of Southampton

Objective:
To establish the reference threshold of a speech-audiometry-based Chinese version of digits-in-noise test (DIN test). To investigate the correlation between Chinese DIN test and the pure-tone audiometry threshold of participants with normal hearing and sensorineural hearing loss. To analyze its sensitivity and specificity in distinguishing sensorineural hearing loss from normal hearing.

Method:
A total of 50 participants were recruited, which consists of 34 people with normal hearing and 16 people with sensorineural hearing loss. Pure-tone audiometry and Acoustic Imittance was tested in a sound-proof booth. Successively, DIN tests were done in a quiet room. Pearson correlation coefficient between the groups of normal hearing and sensorineural hearing loss, receiver operating characteristic curve, the area under the curve as well as the sensitivity and specificity was analyzed by SPSS 19.0.

Results:
The correlation between the speech recognition threshold(SRTn) and pure-tone audiometry thresholds (average of 0.5, 1, 2 and 4KHz) was 0.85 (P<0.001), which was slightly higher than that in a Dutch version of DIN test. The omission or inclusion of 0.5kHz and 4kHz in calculating the average pure-tone audiometry threshold didn’t have
significant influence on the results; According to the receiver operating characteristic curve and the area under the curve, the optimal cut-off point was -9.5dB, which means any results over this value could lead to a conclusion of underlying hearing loss. And the sensitivity and specificity at this time was 0.938 and 0.941 respectively.

Conclusion:
The study results have shown the strong correlations between the Chinese version of DIN test and pure-tone audiometry. This DIN test has well-done performance as a hearing screening method with good sensitivity and specificity. Also it bears the merits of easily-conducting, little demanding of the testing environment and being easily-accepted by the public, which is worthy of being promoted as an adult hearing screening method.

Poster: 29
Using the 3D Tune-In Toolkit in a Clinical Pathway – A Feasibility Study

Frost E, Imperial College Healthcare NHS Trust & Dyson School of Design Engineering, Imperial College London
Walne S, NIHR London In Vitro Diagnostics Co-operative, Imperial College London
Borsci S, NIHR London In Vitro Diagnostics Co-operative, Imperial College London
Buckle P, NIHR London In Vitro Diagnostics Co-operative, Imperial College London
Sato M, NIHR London In Vitro Diagnostics Co-operative, Imperial College London
Picinali L, Dyson School of Design Engineering, Imperial College London

Introduction:
The 3D Tune-In (3DTI) project was a collaboration between academic institutions, industry and relevant stakeholders. The team created the 3DTI Toolkit, software based on a standard C++ library, to support audio spatialisation and simulation of hearing loss and hearing aids (www.3dtune-in.eu/toolkit-developers). The 3DTI toolkit offers great flexibility, enabling applications to use multiple configurations. This feasibility study investigated how the 3DTI toolkit could be used by audiologists or hearing aid users to facilitate better understanding, or improved management of hearing difficulties. The aims were to assess the feasibility of using the toolkit for three pre-defined clinical applications:
1) speech in noise test; 2) hearing loss demonstration; 3) simulation of complex sound fields and where in an NHS clinical pathway these applications would be utilised.

Methods:
Seven clinicians from key stakeholder groups of audiologists, ENT doctors and hearing therapists were interviewed. Six patient representatives attended a focus group. Participants were presented with a demonstration of the 3DTI toolkit and the pre-defined applications and asked about the potential impact, usability and barriers to adoption.

Results:
All participants positively rated the potential to make testing more realistic in applications 1 and 3. Application 2 had high approval ratings for the ability to create empathy among communication partners. The design of the interface received negative approval ratings. The reported key driver from clinicians and patient representatives was a desire for more realistic, practical tests.

Discussion:
The three pre-defined applications were amongst the most suggested uses and all received positive feedback regarding their potential to support clinical practice in the standard pathway and significantly improve patient experiences of audiology services. Further development of the toolkit interface is required to enable adoption and further research into developing and evaluating the pre-defined applications is now required.

References:

Poster: 33
Hearing Screening for People with Learning Disabilities in Community Settings – Is It Possible?

McShea L, City Hospitals Sunderland NHS Foundation Trust
Giles K, University of Sunderland
Murphy A, Northumberland, Tyne and Wear NHS Foundation Trust

People with learning disabilities (PwLD) are more likely to have hearing loss than the general population, but are less likely to have this diagnosed or managed. The reasons for this are complex and varied, but include:
1) Inadequate detection of hearing loss in primary care, with a reliance on subjective questioning (e.g. asking caregivers if the individual can hear well)
2) Fear of the hospital environment and a lack of reasonable adjustments to facilitate appointments
3) Misguided assumptions that PwLD will not be able to cope with / participate in hearing assessments

This study aimed to assess the feasibility of an alternative approach; using screening in community locations to provide an objective assessment of hearing in a sample of the population.

Hearing screening was carried out at three “Pop-Up Events” across Sunderland between January – May 2018 (2 Day Centres and a health promotion event specifically organised for PwLD). Non-audiologist support workers were trained to administer the hearing screen, under the supervision of a qualified Audiologist. The assessment consisted of otoscopy, tympanometry and TEOAE assessment.

48 PwLD (range 16-63 years) were screened during the three Pop-Up Events:
- 46% (22/48) failed the screen in one or both ears
- 33% (16/48) passed the screen
- 19% (9/48) had wax occlusion preventing screening

Community hearing screening for PwLD is feasible, and can be performed by non-audiologists with some element of support. The next stage of this study is already underway and involves organising diagnostic assessment in Audiology for those who failed the screen.

References:

Poster: 58
Can you hear me now? The impact of Lost Hearing Aids on One Audiology Department

King L, NHS Tayside

Introduction:
Continuing financial pressures on the NHS means working with reduced budgets whilst keeping high levels of patient care.

Lost hearing aids clearly impact Audiology budgets. This project aimed to find out the extent of this impact over the course of one year and implement strategies to reduce this financial cost.

Methods:
A 12-month retrospective audit was carried out using Auditbase (patient record system) collating the number of lost hearing aids, manufacturer and model, style of fitting and patient demographics on severity of hearing loss and age. This audit also recorded how many
Poster: 60

Vijayaiganesh S, Epsom and St Helier University Hospital

Abstract:
Reduce the patient waiting time and number of follow up appointments for vestibular rehabilitation.

Methodology:
70 patients out of which 51 patient’s data have been analysed. Eligible criteria: dizziness, imbalance, migraine related dizziness and complex dizziness. Patients were seen by Audiovestibular consultants had vestibular assessments and referred for group therapy session.

Exclusion BPPV.

Group size 6 -8 patients.

Duration of the session: 90 minutes.

Pre Dizziness Handicap Inventory questionnaire score.

Gestalt approach and holistic approach: Empowerment and education about how our balance system works. Different balance exercises, relaxation, anxiety and sleep management.

Feedback questionnaire, exercise leaflets and weekly planner as self-reflective practise for patients.

Individual follow up appointment after 6 to 8 weeks outcome measured using post DHI questionnaire score.

Results and Implications:
38.2%only dizziness, 21.8% imbalance, 18.2% migraine related dizziness, 12.7% complex, 9.1% both dizziness and imbalance.

Feedback questionnaire: 75% of patients were very satisfied with the session, 23% satisfied and 1% reported neither and 1% reported dissatisfied.

90% found the session was useful to manage their condition.

86% very confident to carry out all the exercises at home, 13% felt confident and 1% felt that they weren’t confident at all.

62.5% of patients showed improvement after group session on pre and post difference score.

68% were discharged after this session. 32% needed follow up.

Discharge OR appropriate onward referral /Follow up appointment as per patients need.

90.6% was the attendance and 9.4% was the DNA rate.

Implications:
Current waiting time to receive vestibular Rehabilitation is about three to four weeks.

Before starting group therapy session Average waiting was around three months.

More discharge criteria which in turn will generate more income to our department and created new slots to see more patients.

Empowering patients and reduced follow up appointments.

Cost effective and act as support group.

Poster: 64

Assessing the Ida Institute’s ‘Why Improve My Hearing’ Telecare Tool in Adults with Hearing Loss: A Qualitative Study

Maidment D, NIHR Nottingham Biomedical Research Centre & Hearing Sciences Section, Division of Clinical Neuroscience, School of Medicine, University of Nottingham
Heffernan E, NIHR Nottingham Biomedical Research Centre & Hearing Sciences Section, Division of Clinical Neuroscience, School of Medicine, University of Nottingham
Mehton D, NIHR Nottingham Biomedical Research Centre & Hearing Sciences Section, Division of Clinical Neuroscience, School of Medicine, University of Nottingham
Henschaw H, NIHR Nottingham Biomedical Research Centre & Hearing Sciences Section, Division of Clinical Neuroscience, School of Medicine, University of Nottingham
Gregory M, The Ear Foundation
Ferguson M, NIHR Nottingham Biomedical Research Centre & Hearing Sciences Section, Division of Clinical Neuroscience, School of Medicine, University of Nottingham & Nottingham University Hospitals NHS Trust

Introduction:
The Ida Institute’s ‘Why Improve My Hearing’ telecare tool is intended to be used online by patients prior to their hearing aid assessment and/or fitting appointments. The tool is centred on readiness to take action, and encourages the patient to think about how and why improving their hearing in different situations could affect their daily life.

Methods:
This study assessed the views and experiences of patients and audiologists toward the “Why Improve My Hearing” telecare tool when used within the publically-funded UK National Health Service. Patients completed the telecare tool online from home prior to their first hearing assessment appointment. Eight patients and five audiologists were recruited using a convenience sampling strategy. Individual semi-structured interviews were conducted with both patients and audiologists. The data were analysed using an established thematic analysis procedure.

Results:
Patients reported that the tool was easy to use and helped them to think about situations that they would like to improve and discuss with the audiologist during their appointment. In addition, using the tool reassured patients of what to expect during their first appointment. Similarly, audiologists commented that patients were better prepared for their appointment. Audiologists also felt that they were better able to identify specific difficulties experienced by the patient and tailor the audiological rehabilitation process to meet the patient’s needs.

Conclusion:
Encouraging patients to use the tool and reflect on their individual needs before they came to clinic can result in the patient being better
preparing to work with the audiologist on matters that were important and relevant to them. This research adds to the growing literature suggesting that provision of internet-delivered audiological rehabilitation is a means of extending services beyond the confines of the clinic to improve patient outcomes.

**Poster: 75**

**Complexity in Healthcare – What Does it mean for Audiology?**

Hall A, Aston University
Monk R, Aston University

**Introduction:**
"Complexity" is a term frequently used in healthcare, and can be applied to patients, interventions, pathways and healthcare services. Despite widespread use of the term, its meaning is often poorly defined, and recently there has been a drive within the academic literature to determine what constitutes complexity in a healthcare context. It is important to understand this generic definition of the term, so that we can apply it to audiology services.

**Method and results:**
We review the literature, drawing from a recent discussion series on complexity in health published in 2018 (Greenhalgh and Papoutsi, 2018), and present a narrative summary of the key concepts. We will discuss these concepts and draw on clinical examples to demonstrate the relevance within Audiology.

**Conclusions:**
Establishing an agreed definition of clinical complexity is the first stage to improving care for “complex” patients within Audiology.

**Reference:**

**Poster: 106**

**Exploring alternative service delivery models for self-management of hearing loss in adults: a Delphi review**

Ferguson M
Maidment D
Olsen A

**Introduction:**
Hearing aid users often become frustrated because they continue to experience difficulties in noisy situations, which can lead to non-use of hearing aids. Innovations in alternative devices that connect to smartphone technologies (e.g. made-for-smartphone hearing aids, personal sound amplification products, smartphone “hearing aid” apps) offer additional functionalities to conventional hearing aids.

This study aims to obtain consensus amongst NHS service providers on the facilitators and barriers to alternative listening devices, and how to best incorporate them into the clinical practice.

**Methods:**
We are currently completing an online Delphi review, which is a formal methodology that seeks agreement amongst experts through a series of iterative surveys. Round 1 is open-ended, whereby participants are asked to explain, in their own words, how alternative listening devices can be best implemented within the NHS to address patient and service needs. The results of Round 1 will be used to generate closed-ended statements for rounds 2 and 3, where participants will indicate their agreement using a 5-point Likert scale (strongly agree to strongly disagree). The review will be completed by 35 NHS service providers, and consensus will be defined as >90% agreement.

**Results:**
To date, there is little information available on the views and perceptions of audiologists working in the NHS. The results of this study will provide insights into how NHS audiology services can address changes to services arising from new technologies.

**Discussion:**
This review will highlight what is needed to ensure that UK audiology services are fully aware and prepared for changes arising from the proliferation of new technologies. In addition, the results will help inform the design of future high-quality evidence (i.e. randomised clinical-controlled trials) to assess alternative service delivery models. Such evidence will guide commissioners and policy makers when considering hearing health service delivery in the NHS.

**Paediatrics**

**Poster: 4**

**Bone Conduction Hearing Aids – the Practicability of Fitting them**

Scourfield J, St George’s University Hospitals NHS Foundation Trust
Benne J, St George’s University Hospitals NHS Foundation Trust

The NICE guideline for ‘Otitis media with effusion in under 12s: surgery’ (2006) recommends that hearing aids should be offered as an alternative to surgery for children with OME, where surgery is not acceptable or contraindicated, and for children with Down’s syndrome. The conductive hearing loss resulting from OME can be fluctuating which poses a challenge when fitting behind-the-ear (BTE) hearing aids, requiring frequent reviews and hearing aid reprogramming. An alternative fitting option is bone conduction (BC) aids but much uncertainty remains amongst clinicians about how to fit BC digital aids that generally do not have dedicated software to generate a prescription target and often comes with a hard band as the only retention option. The purpose of this presentation is to provide a guide of what aids are available, what retention options can be utilised, as well as to provide a fitting and validation protocol.

**Poster: 8**

**BPPV in Childhood**

Xie C, UCL Ear Institute & St George’s Hospital

**Introduction:**
Benign positional paroxysmal vertigo (BPPV) is characterised by brief vertigo attacks caused by lying down or turning over in the supine position. It is hypothesised to be due to free floating otoconia in the semicircular canals in canalolithiasis or adherent to the cupula in cupulolithiasis. BPPV is the most common cause of vertigo across the lifespan but is rarely diagnosed in children. In contrast, vestibular migraine and benign paroxysmal vertigo (BPV) are more common causes, occurring in 24% and 14% of children presenting with vertigo respectively. BPPV is diagnosed in only 2% of children presenting with vertigo whereas that percentage in adults is 17-42%.

**Methods:**
A literature review on BPPV in children was carried out. The features, investigations and management of BPPV in children are discussed and compared to BPV, a condition that can present similarly in children.

**Results:**
While BPPV is typically diagnosed in the teenage child, BPV is diagnosed in the much younger child and tends to disappear spontaneously with age. The prevalence of atypical and multiple canal involvement is higher in children with BPPV as compared to BPPV in adults. Diagnostic and
therapeutic manoeuvres for BPPV in children may require modification in the paediatric population.

**Poster: 19**

**Unilateral Cochleovestibular Failure in a Child with Proton Beam Therapy for Left External Auditory Canal Rhabdomyosarcoma**

Wroblewska K, Alder Hey
Vavda S, Alder Hey
Ratnayake S, Alder Hey
Dasgupta S, Alder Hey

**Introduction:**
External proton beam therapy is the latest technique to treat cancers with focussed and superior dosimetry avoiding healthy tissues. Audiovestibular complications following such therapy is hitherto unknown. We present a child with left sided external auditory canal (EAC) rhabdomyosarcoma who received proton beam radiation and developed a complete cochleovestibular failure on the same side.

**Case:**
A 4 year old child with an inoperable left EAC rhabdomyosarcoma was treated with external proton beam therapy on the left side. Her hearing was monitored during and after the treatment. 12 months after the conclusion of the treatment, she presented with acute dizziness, was admitted to the hospital and was diagnosed with sepsis for which she was treated with good recovery. A pure tone audiogram at that time indicated a complete loss of hearing on the left along with a complete loss of vestibular function on the same side quantified by videonystagmography, the video head impulse test and vestibular evoked myogenic potential tests. A high resolution CT scan showed a left labyrinthitis ossificans with a left superior semicircular canal dehiscence.

**Discussion:**
Audiovestibular complications following traditional cranial radiation is well known. However, this is the first time that a significant audiovestibular complication following a cranial proton beam therapy is reported. Proton beams can lead to intense bony labyrinth inflammation leading to ossification and arrest the development of normal temporal bone resulting in a dehiscence. Furthermore, a unilateral hearing loss may not be perceived by the child and a significant vestibular weakness may be well compensated for an asymptomatic state.

**Conclusion:**
The audiovestibular system can be affected in cranial external proton beam therapies this needs to be considered before embarking on such treatment and regular monitoring of cochleovestibular function is recommended.

**Poster: 20**

**Glue Ear and Hearing Loss in Children with Cleft Palate – Findings from the Cleft Care UK Study**

Hall A, Aston University
Wills A, University of Bristol
Mahmoud O, University of Bristol
Waylen A, University of Bristol
Grewal S, University of Bristol
Sandy J, University of Bristol
Ness A, University of Bristol

**Introduction:**
To explore centre-level variation in hearing aid and grommet treatment in children with unilateral cleft palate and to examine the association between otitis media with effusion (OME), hearing loss and developmental outcomes at 5 and 7 years.

**Methods:**
Two hundred and sixty-eight 5-year-old British children with non-syndromic unilateral cleft lip and palate (UCLP) were recruited to the Cleft Care UK cohort study. Children had air and bone conduction audiometry at age 5. Information on grommet and hearing aid treatment was obtained from parental questionnaire and medical notes. Hearing loss at age 5 was defined as >20 dB in the better ear and history of OME and hearing loss was determined from past treatment. Children with sensorineural hearing loss were excluded. Associations were examined with speech, behaviour and self-confidence at age 5 and educational attainment at age 7. Centre variation was examined using hierarchical models and associations between hearing variables and developmental outcomes were examined using logistic regression.

**Results:**
There was centre level variation in fitting of hearing aids. A history of OME and hearing loss was associated with poor intelligibility of speech (adjusted odds ratio=2.87, 95% CI 1.42–5.77) and aspects of educational attainment.

**Discussion:**
Hearing loss is an important determinant of poor speech for children with UCLP and treatment variation across centres suggest management of OME and hearing loss could be improved.

**Poster: 21**

**The use of the Pedamp Toolkit in a Regional Setting to Verify Paediatric Hearing Aid Fittings and Utilise it for a Peer Review**

Foster M, Leeds Teaching Hospital

**Introduction:**
The Paediatric Audiological Monitoring Protocol (Bagatto et al., 2011) was developed to allow monitoring of hearing aid Methods: 6 NHS Trusts within the Yorkshire and Humber region look at validating the international literature on paediatric hearing aid verification for UK children. Three questionnaires were used over a 6 month period starting April 2017; LittlEars for children aged 0-2 years, Peach for children 2-7 years and LSQ for children 7+. We completed the questionnaire before the fitting and three months later. The scores were collected; the SII index and the PTA average were also collated and plotted.

**Results:**
142 ear specific PTA thresholds and subsequent aided 65dB SII scores were collected across all sites for the six months 1/4/17 – 31/10/17. The overall PTA average of all 142 cases was:

- PTA Ave SII @ 65dB
- 48
- 75

The goodness of fit shown for the overall average of the aided SII score and PTA average yielded across the network is shown on the PedAMP fitting below:

All individual results obtained across all sites are shown below:

**Discussion:**
The Pedamp protocol is suitable for UK children as the outcomes obtained follow the population norms. Any fittings found to fall outside of the 95% confidence levels, can be peer reviewed to discuss best practice, alternative strategies and/or limitations to the fitting and its outcomes.

Details and hearing abilities of children aged 0-6 years. This was based on Canadian children. As a regional group we set to verify if the use of PEDAMP protocols was suitable for UK children and could it be used regionally to provide standardisation in the outcome measures utilised to verify our paediatric hearing aid assessments and fittings and obtain a consensus in the reporting.
**Poster: 26**

**Normative Data for a Hearing Test that Involves Listening to Speech**

Whiston H, University of Manchester  
Lough M, University of Manchester

The Digit Triplet test has been demonstrated to be an effective, quick method of testing auditory speech recognition abilities in background noise (Manning 2014; Kaandorp 2015; Smits 2016). Using loudspeakers, the speech and noise components can be presented in both co-located and spatially separated conditions. The participant's correct responses to the digit are recorded and scored. This data will then be collated into age groups to provide us with a normal range of expected speech reception thresholds scores (signal to noise ratio [dB] for 71% correct) for sequential age bands.

The aim of this preliminary study is to obtain normative data across a range of age groups in children in order to establish a useable data set for the Digit Triplet Test (DTT) in the UK which could be used diagnostically and clinically.

The preliminary research questions are:

1. What are the Speech Reception Thresholds (SRTs) for children with normal hearing when performing the Digit Triplet Test in noise?
2. How does this compare with an adult control group?
3. Test/retest reliability?

The study will use a between-subjects design when comparing age groups and test/retest data with the subjects.

The first group will consist of approximately 100 children between the ages of 4 and 12 years. These are children with normal hearing and no other significant health or learning difficulties.

The second group will be an adult control group numbering approximately 24, between the ages of 18-30, with normal hearing and no significant health or learning difficulties.

In both groups the participants first language is English.

The poster will present preliminary findings of the data collected from these two groups and possible implications for future studies.

**Poster: 38**

**The Implementation of Shared Decision Making in a New Pathway for Children Diagnosed with Otitis Media with Effusion**

Richardson V, NHS Audiology  
Willis K

The new pathway presented aims to introduce a more efficient service for the management of otitis media with effusion (OME) in children, incorporating Shared Decision Making (SDM) tools. At the Children’s Hearing Assessment Centre in Nottingham, glue ear is predominant among our patient population and it’s paramount that the patient pathways, treatment options and patient information work optimally for the service and the patient.

The current NICE recommended management for OME is watchful wait, grommet insertion or hearing aid(s). The previous departmental pathway for OME (glue ear) management allowed those diagnosed to be referred to the ENT clinic for medical assessment with very little early discussion and information provision about management options. According to the NICE guidelines there has to be a 3 month watchful wait period before grommets can be considered. The previous pathway would often involve ENT re-referring to audiology for further assessment whilst watchful waiting which would cause delays in managing the child's hearing loss.

In the new pathway, at the initial audiology assessment parents are given a Glue Ear diagnosis pack which includes information from the NDCS, information for teachers, audiogram results, information on treatment options (including the use of nasal balloons) and an NHS Shared Decision Making tool. The repeat audiology hearing assessment is then booked for 3 months and for moderate losses a referral to ENT for the medical consultation 4 weeks after the second audiology visit.

For those patients who choose hearing aids as a treatment option this wait, grommet insertion or hearing aid(s). The previous departmental pathway for OME (glue ear) management allowed those diagnosed to be referred to the ENT clinic for medical assessment with very little early discussion and information provision about management options. According to the NICE guidelines there has to be a 3 month watchful wait period before grommets can be considered. The previous pathway would often involve ENT re-referring to audiology for further assessment whilst watchful waiting which would cause delays in managing the child's hearing loss.

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The poster will discuss the importance of Shared Decision Making in the treatment of glue ear along with the requirement of offering timely treatment options.
Posters:

**Poster: 42**

The Use of FM Systems for Children with APD – Parents’ and Teachers’ Perspectives

O’Sullivan F, University College Cork
Laide Kemp S, University College Cork
Cromb M, Temple Street Children’s University Hospital
Melrose T, Ann Kelly Hearing
Brennan M, The Beacon Audiology Clinic

**Background:**
APD is a neurological difficulty in understanding, interpreting and processing sounds. The long-term goal of intervention for APD is to enhance communication, education and overall quality of life for the child and his/her family. Although there is no universally accepted “gold standard” for intervention for children with APD, the use of FM systems is widely recommended despite its limited research base.

**Aim:**
The primary purpose of this study is to evaluate parents’ and teachers’ perspectives of using FM systems as an intervention for children with APD within an Irish context.

**Method:**
A qualitative research methodology was chosen where open-ended online questionnaires were sent by co-investigators to parents and teachers of children with APD. Each response was subject to the six steps of thematic analysis as adapted from Braun and Clarke (2006).

**Results:**
Nine parents and one teacher responded to the online questionnaires using Survey Monkey. Following thematic analysis, three themes were identified. The first theme was frustration. This theme incorporated parents’ feelings regarding the lack of recognition and support services for children with APD. The second theme identified was the negative impact associated with having APD on the on the family. The third theme was the benefit of FM systems which directly alleviated the frustration and negative feelings associated with a diagnosis of APD. The first and second theme were derived from the parents’ responses. The final theme incorporated the teacher’s response.

**Conclusions and Implications:**
This is the first study of an Irish population with APD and identified that the diagnosis impacts the entire family. The results provide an insight into the lives of those impacted by APD and will inform clinical practice by highlighting the comprehensive benefits of utilising an FM system for APD.

**Poster: 43**

Audiovestibular Complications in Head Injuries in Children

Jesus E, Alder Hey Children's Hospital NHS Foundation Trust
Vavda S, Alder Hey Children's Hospital NHS Foundation Trust
Ratnayake S, Alder Hey Children's Hospital NHS Foundation Trust
Dasgupta S, Alder Hey Children's Hospital NHS Foundation Trust

**Introduction:**
Head injuries are known to cause audiovestibular damage. This has not been studied extensively in children. This study looks into 3 children with different intensities of head injury seen in a tertiary trauma centre who underwent extensive audiovestibular assessment.

**Case 1:**
A 3 year old boy with a trivial fall was admitted with vomiting; CT showed intracranial haematomata; follow ups revealed neurological sequelae; audiovestibular symptoms 3 years after the head injury included auditory processing problems, unsteady walking, frequent falling/tripping and difficult ambulation in the dark; peripheral hearing test battery normal; central balance integration deficits and a right sided vestibular weakness were observed.

**Case 2:**
A 13 year old boy in road traffic accident was unconscious and admitted with a left large temporal bone fracture involving the petrous part with temporal lobe haematoma, neurological symptoms and reasonable cognitive function were observed; audiovestibular manifestations included normal hearing but episodic dizziness 8 months post injury; left sided vestibular weakness quantified with central integration problems.

**Case 3:**
A 4.5 year old boy tried to reach something from the top of a fireplace fell on his head; seen in A and E by neurosurgery; concussion was diagnosed and imaging done which did not indicate any intracranial injury leading to discharge; audiovestibular symptoms presented with unilateral left hearing loss and balance problems 9 months post injury; PTA showed dead ear on the left and a significant vestibular weakness on the same side.

**Discussion:**
As the 3 cases above demonstrate that regardless of the intensity of head injury, children can develop serious and significant audiovestibular complications that can manifest late that need to be diagnosed.

**Conclusion:**
The audiovestibular system should be assessed in children in all cases of head injuries as they may remain undiagnosed.

**Poster: 44**

P1 Cortical Evoked Potential in Children with Specific Language Impairment

Elfouly H, Cairo University Hospitals
Hamdy M, Cairo University Hospitals
Elsayegh H, Cairo University Hospitals
Faraq H, Cairo University Hospitals

**Introduction:**
There is a high prevalence of auditory processing disorders in children diagnosed as specific language impairment (SLI). Auditory evoked potential is used to represent the neural activity generated at different levels along the auditory pathway.

**Study design:**
Case- control study.

**Aim:**
To assess primarily speech stimulation outcome objectively through Auditory Brainstem Response and Cortical Auditory Evoked Potential (P1) in children diagnosed with Specific Language Impairment, to identify any auditory processing disorders in this population for optimum early interventions.

**Methodology:**
Sixty children of both genders were enrolled in this study, 20 normal children , 20 children with SLI who received speech stimulation more than 6 months, and 20 children with SLI who did not receive speech stimulation. Their ages ranged from 3 to 7 years. All subjects were submitted to history taking, otologic examination, audiological examination, click ABR, tone burst (P1), psycho-social evaluation (IQ testing) and language evaluation.

**Results:**
The present study results revealed a highly statistically significant difference in wave V of ABR latency between the control group and SLI who received speech stimulation and SLI who did not receive speech stimulation. Their ages ranged from 3 to 7 years. All subjects were submitted to history taking, otologic examination, audiological examination, click ABR, tone burst (P1), psycho-social evaluation (IQ testing) and language evaluation.

- The present study results revealed a highly statistically significant difference in wave V of ABR latency between the control group and SLI who received speech stimulation and SLI who did not receive speech stimulation. Their ages ranged from 3 to 7 years. All subjects were submitted to history taking, otologic examination, audiological examination, click ABR, tone burst (P1), psycho-social evaluation (IQ testing) and language evaluation.

- The present study revealed that children with SLI who received speech stimulation had significantly lower ABR latencies compared to those who did not receive speech stimulation. Results revealed no statistically significant difference in comparing both groups with SLE except for P1 latency in left ear which is prolonged.
Conclusion: Children with SLI presented with deficits in auditory processing timing, incomplete myelination, and reduced synaptic efficiency as evidenced by prolonged P1 latencies and enlarged amplitudes.

Poster: 51
A Retrospective Evaluation of Real Ear to Coupler Difference (RECD) Measurements and the Effect of Middle Ear Status

Kavanagh C, St. George’s University Hospitals NHS Foundation Trust

Introduction: As previously noted by Bagatto (2001), multiple factors can affect the accuracy of the response obtained when measuring an RECD. The aim of this retrospective analysis was to investigate whether mean monthly and quarterly RECD measurements were affected by differing middle ear status.

Method: RECD measurements were retrospectively collated from Oct 2016 to Sep 2017. 152 RECD measurements were collected from 142 patients who had attended the Audiology clinic at St George’s Hospital, London. Middle ear status was assessed using tympanometry, and data were split into two groups based on tympanometry trace observed (Type A & Type B). RECD measurements were averaged by month and by seasonal quarters (Oct–Dec, Jan–Mar, Apr–Jun, Jul–Sep). Between-group means were compared.

Results: Mean monthly RECD measurements were similar across each month, with some increased mid-frequency values noted in July and September 2017. With type B tympanograms, there was increase in values noted at mid-frequency for all four quarterly means as compared to same quarterly means with type A tympanograms.

Discussion: Middle ear status was observed to have an effect on RECD measurements as previously discussed by Bagatto (2001). The data collected implies that mid-frequency values do increase in the presence of a Type B tympanogram. These findings suggest that tympanometry should always be performed on the day of the RECD measurement to be able to accurately predict how the measurement may be affected and validate responses.


Poster: 59
An Evaluation of the Clinical Usefulness of Wideband Absorbance Measures as a Predictor of Conductive Hearing Loss in Children

Singleton J, Aston University / Great Western Hospital
Richards S, Aston University / Great Western Hospital
Suleman S, Aston University / Great Western Hospital

Objectives: Primary objective – To evaluate the clinical usefulness of wideband absorbance (WBA) at both ambient and peak tympanic pressure as a predictor of conductive hearing loss that is secondary to otitis media with effusion (OME) in the childhood population at the Great Western Hospital, Swindon. Secondary objective – To compare ambient and pressurised absorbance levels in children with a conductive hearing loss that is secondary to OME to children without a conductive hearing loss.

Methods: This was a prospective study of 47 ears of children aged five to seven years who attended West Swindon Health Centre with suspected otitis media with effusion. A criteria of a 20 dB gap or higher at any frequency between 500 and 4000 Hz was used to allocate participants into ‘Air-bone gap’ (ABG) and ‘no ABG’ groups. This was 30 and 17 ears respectively. Wideband absorbance was recorded at both ambient and peak tympanic pressure over frequencies from 0.25 to 8 kHz. Clinical usefulness of WBA was assessed in terms of its ability to identify a conductive hearing loss that is secondary to OME in children, and its ability to predict the severity of this hearing loss.

Results: A strong inverse relationship between overall ABG and ambient absorbance was found. The overall ambient absorbance was found to be the best predictor of the presence of an ABG.

Conclusions: Ambient WBA is a good predictor of the presence of a conductive hearing loss that is secondary to OME in children. Further research is needed to determine whether WBA can be used to predict the severity of the hearing loss.

Poster: 62
Clinical Experiences of Providing a Tinnitus and Hyperacusis Clinic for Children in Nottingham

Thompson J, Nottingham Audiology Services
Benton C, Nottingham Audiology Services

The activity within the paediatric tinnitus and hyperacusis clinic in Nottingham has been reviewed for all of 2017 and the themes discovered will be discussed.

In Nottingham we have provided a service for children with tinnitus and hyperacusis since 2010. Around 1 in 30 children experience tinnitus, that’s at least one child in every class year at every school. For some children they are not troubled by their tinnitus but for others it can have a significant impact on their state of mind, their learning and friendship groups. (Humphriss et al. 2016) Often, children with hyperacusis have normal levels of hearing. Studies show that 3.2% of children may suffer with oversensitivity to noise although for certain groups of children particularly affected by hyperacusis this increases. (Coelho et al.2007).

The data collection covers all the patients seen in 2017 on the tinnitus and hyperacusis clinic, 78 patients were seen within 12 months and the following themes were explored where the referrals were received from, on average how many appointments are needed before discharge, and the typical age ranges of the children attending the clinic. The data shows a strong link between the presentation of social and communication difficulties and hyperacusis. The data shows the management advice and resources given to help the children.

The results give an indication of the activity and resources needed for an established tinnitus and hyperacusis service which may be of interest to those considering setting up their own.

Poster: 63
Smith R, Nottingham Audiology Services

Bone conduction (BC) direct measurements and audiometrically measured bone conduction hearing levels provide the basis for the gain prescription in the fitting of Cochlear bone anchored hearing aids (BAHA). It is therefore recommended an actual measurement of the BC direct responses for frequencies: 0.5 to 4kHz are measured when wearing the device. Due to the challenges of performing this measurement on babies and infants, a predicted level of BC direct is generally used. Now, with the benefits of wireless programming, it is the aim of this case review is to assess if measuring bone conduction through the BAHA (BC direct) using visual Reinforcement Audiometry (VRA) will result in a more accurate gain fitting and therefore better patient responses in the aided condition using soundfield VRA.

Children who were due their routine review appointment had their BC direct levels measured via VRA, their BAHA reprogrammed using these levels and then their aided thresholds measured. The differences between predicted and measured BC direct levels and between previous and current aided thresholds were investigated. Initial findings indicate that there were improvements in aided thresholds using measured BC direct, in particular at 4kHz. Early findings would show that where possible using measured BC Direct levels in programming leads to better outcomes for children wearing BAHA on a softband.

Poster: 69
The Diagnostic Triad – Transforming the Outcomes of Deaf Children with Complex Audiological Profiles and Additional Needs
Kenelly N, Auditory Verbal Uk

The high prevalence of complex needs (including visual and vestibular impairment) in deaf children has long been documented in the literature (Ching & Wong, 2017; NDCS, 2012). In light of the recent study by Hogan & Hitchins (2018) on the outcomes of early intervention for deaf children with additional needs, we now need to shift our attention to the role of having hearing technology that provides the best-possible access to speech to develop listening and spoken language.

This presentation will focus on a case study of a young girl, Mia, who has CHARGE syndrome. The triad of key observations from parental experience, audiological investigations and auditory verbal rehabilitation has led to ongoing diagnostic re-evaluation of the Mia’s auditory profile. It will highlight the functional evaluation of Mia’s auditory skills in conjunction with her complex audiological profile and how this information was used by the Hearing Implant Team at St Thomas’ to explore different alternatives to provide her with the best-possible access to the speech spectrum.

Mia’s hearing loss has been managed by the use of BTE hearing aids, then a soft band Bone Conduction Hearing Device (BCCHD), back to BTE hearing aids, cochlear implant assessment and more recently a surgically implanted percutaneous BCCHD. The commitment to providing Mia with access to all the speech sounds, whilst still an ongoing process of evaluation, has helped her develop age-appropriate language and attend her local mainstream school.

The complex needs associated with CHARGE have meant a challenging journey to provide her with the right amplification. CHARGE syndrome presents itself as a complex list of needs that, along with hearing loss, can have a significant impact on a child’s language and communication development.

This presentation will feature contributions by Mia’s mother, the Paediatric Hearing Implant Team at St Thomas’ Hospital and Dr Josephine Marriage.

Poster: 81
Receiver In The Canal Hearing Aids (RIC) In Disengaged Adolescent Hearing Aid Users
Joseph K, Guys And St Thomas’ NHS Foundation Trust
Bhabra P, Guys And St Thomas’ NHS Foundation Trust

Introduction:
It is well documented that engagement with hearing aids and audiology services reduces in some patients when they reach adolescence (Kent and Smith, 2008). The most common reasons reported by patients are the hearing aid appearance and poor sound quality or aided benefit. To try and increase engagement in this cohort we have trialled fitting RIC hearing aids given the potential for smaller hearing aid size, reduced whistling, more open fitting and better sound quality.

Method:
Adolescent hearing aid users attending the Paediatric Audiology Service with reduced engagement were invited to trial RIC hearing aids. For those who agreed to take part, pre and post fitting objective and subjective outcome measures including the GHADP, a custom patient satisfaction questionnaire, data logging and speech discrimination scores were recorded to assess the impact of the change in intervention.

Results:
Initial findings have been positive with the majority of patients reporting improved sound quality, satisfaction and usage and reduced self-reported disability. Match to target (REMs), speech scores and patient perception of hearing aid appearance was improved in around half of the patients and comparable in the remaining half.

Discussion:
RICs appear to be a good option for difficult to aid hearing losses where there has been a complaint of poor sound quality. RICs are aesthetically more acceptable than traditional BTEs and ITEs in some patients; phase two of the project will trial a smaller RIC model. There has not been the significant increase in repairs compared to traditional BTEs that was anticipated. Broader feedback from patients and families has been extremely positive with themes around less strain on relationships and increased confidence.

Poster: 82
The Kamplex KITE – An Alternative Amplification Option In Adolescents with Minimal/Mild Hearing Loss (MMHL)
Joseph K, Guys And St Thomas’ NHS Foundation Trust
Bhabra P, Guys And St Thomas’ NHS Foundation Trust

Introduction:
Historically patients with MMHL have not routinely been considered candidates for hearing aids. This has typically been due to possible problems with occlusion, aesthetics and perceived limited benefit. However, there is increasing evidence suggesting that patients with MMHL have significantly better speech and language outcomes when fitted with hearing aids (Tomblin et al, 2014). We explored the viability of the Kamplex KITE as an alternative amplification strategy in adolescents who are unaided or have low hearing aid compliance with MMHL.

Method:
Adolescents who are unaided or have low hearing aid compliance with MMHL attending review appointments were invited to trial the Kamplex KITE hearing aid. Pre and post fitting objective and subjective outcome measures including the GHADP and speech discrimination scores were recorded to assess the impact of the introduction of hearing aids. The ability of the hearing aids to meet prescription targets was also recorded.
Results:
Initial results have been extremely positive with the majority of patients using their devices daily, showing significant aided benefit on speech testing and reporting a reduction in self-perceived disability. Feedback from patients suggests aesthetics are better than BTE or traditional ITE hearing aids and there have not been significant issues with occlusion. Some patients reported mild discomfort after prolonged usage but did not feel this was sufficient to stop them using the devices. Match to prescription targets has been good for most hearing aid fittings at mid and high frequencies but variable at low frequencies; likely due to the open fitting nature of the device.

Discussion:
The Kamplex KITE appears to be a credible amplification option for MMHL as it overcomes the problems with aesthetics and occlusion that are often reported with traditional hearing aids. Our data supports the emerging research that patients with MMHL can benefit significantly from hearing aid usage.

Poster: 89
The Prevalence, Impact and Support Needs of Families and Children with Long-Term Otitis Media with Effusion and Hearing Loss
Rahman A, Aston University

Introduction:
Otitis media with effusion (OME) is common during childhood. It is usually present temporarily; however, it can be longer-lasting. Hearing loss associated with OME has been found to influence auditory signals (Whitton & Polley, 2011). This may hinder child development. My research aims to describe the prevalence of long-term OME and hearing loss in a large population study of children, to determine the impact on child well-being and development, and to determine the information and support needs of families and children living with long-term OME and hearing loss.

Methods:
Quantitative methods will be used to analyse data from the Avon Longitudinal Study of Parents and Children (ALSPAC) – a longitudinal birth cohort study which has collected measures of hearing as well as various other developmental measures. The prevalence of long-term OME and hearing loss in this cohort up to age 11 and the demographic factors involved will be studied. Associations between long-term OME and hearing loss with a range of developmental outcomes up to age 18 will be examined using regression analyses. Qualitative methods will be used to explore the information and support needs of families and children with long-term OME and hearing loss.

Discussion:
The project will provide new epidemiological information on the prevalence and risk factors of long-term OME and how the condition impacts families and children. Findings will be used to help improve NHS services in helping families and children manage long-term OME. They may also be used to improve other services that children are involved in.

References:

Poster: 94
An Evaluation of Hearing Aid Provision for Children with Otitis Media with Effusion and Hearing Loss at Birmingham Children’s Hospital
Ahmed R, Birmingham Children’s Hospital
Hall A, Aston University

Introduction:
Children with persistent otitis media with effusion (OME) and hearing loss can be managed with grommets, temporary hearing aids or active monitoring. We conducted an evaluation of hearing aid provision for children with OME at Birmingham Children’s Hospital. We aimed to describe the population of children that have hearing aids fitted for OME, identify the clinic resources required to support this group of children and determine the effectiveness of hearing aid fitting.

Methods:
Over the period 2015-2016, all children fitted with hearing aids for OME at Birmingham Children’s Hospital were identified from clinical records. Data were abstracted on age, sex, presence of disabilities, degree of hearing loss, length of time with the hearing aid, length of time to OME resolution, aided hearing results and qualitative reports of hearing aid benefit.

Results and conclusion:
57 children were fitted with bone conduction hearing aids between 2015-2016. We will present a descriptive summary of their characteristics and outcomes, and discuss the implications for service improvement.

Poster: 99
Perceived and Measured Benefit of Bone Conduction Hearing Devices for Single Sided Deafness in a Paediatric Population
Bergh B, Alder Hey Children’s NHS Foundation Trust
O’Hare M, Alder Hey Children’s NHS Foundation Trust
Mercer J, Alder Hey Children’s NHS Foundation Trust
Strachan L, Alder Hey Children’s NHS Foundation Trust

Introduction:
There is no standard accepted treatment for single sided deafness in children. Children may not be offered interventional solutions despite options being available. One such option is fitting a bone conduction hearing device, though the evidence for effectiveness in a paediatric cohort is limited. We sought to ascertain if bone conduction hearing devices were acceptable to a paediatric population and their perceived and objective effectiveness in improving speech perception in noise.

Methods:
In a large paediatric audiology referral centre we reviewed the case notes of children with single sided deafness, both acquired and congenital, and examined the records of those who had accepted bone conduction hearing device trials, in the period 2013-2018. Pre- and post-fitting speech testing in noise using a speaker array were assessed. The Children’s Home Inventory for Listening Difficulties (CHILD) questionnaire was used to collect self-reported measures (either parental or child assessed).

Results:
Of 22 children who took up the option of having a bone conduction hearing device trial, 19 had devices fitted and continue to wear them, either continuing on a softband or being referred through to surgical implantation. Preliminary data show improvements in both speech testing scores and perceived outcomes measures using CHILD scores.

Discussion:
Bone conduction hearing devices appear to be acceptable and clinically effective in single-sided deafness in a paediatric population in the short-medium term. Further research is necessary to examine the cost-effectiveness of such an intervention in the longer term.
Poster: 102
Otitis Media with Effusion in Children – Assessment and Outcomes
Philpott J, University College London, West Suffolk Hospital

The assessment of Otitis Media with Effusion (OME), according to NICE guidelines, should be documented over a 3-month period with a detailed history, clinical examination, hearing tests and tympanometry. Results from recent online surveys tell us how audiology and ENT departments are assessing children with OME, pathways for intervention and the outcomes measured currently. Are we routinely using more tools than the NICE recommendations, in the assessment and follow-up of this condition? Results are being analyzed. These surveys are part of a research proposal using more tools to assess the impact, development and outcomes of children with OME.

Poster: 103
Automatic Face Recognition – A New Method for the Behavioural Assessment of Hearing in Young Infants?
Jackson I, University of Manchester
Hunter L, Cincinnati Children’s Hospital Medical Center
Moore D, Cincinnati Children’s Hospital Medical Center
Munro K, University of Manchester

In contrast to objective methods of assessment – which offer information about the integrity of isolated sites along the hearing pathway – behavioural tests rely on infants’ actual perception of sound, and so can provide a measure of the functioning of the entire auditory system. However, reliable behavioural assessment of young infants represents a significant challenge. Responses are highly variable both within and across different individuals, infants can rapidly habituate to stimuli, judgments of observers are susceptible to bias, and response behaviours can be subtle and ambiguous. Despite these difficulties, new technologies may provide the opportunity to reconsider what kinds of responses can be reliably measured. Here we introduce a novel approach for the assessment of behavioural responses in infants, combining the use of automated recognition of facial features and machine learning methods. Open source facial recognition software, such as OpenFace (Baltrusaitis, Zadeh, Lim, & Morency, 2018), can detect and track a wide range of facial behaviours from broad, global features such as head-turns, down to more subtle, feature-based responses such as the raising of eyebrows, or widening and closing of the mouth, for example. In ongoing work, we aim to use the information provided by such software to detect differences in the patterns of behaviour which occur in the presence of sounds from the spontaneous movements and behaviours commonly found in the absence of sounds. The ability to reliably detect sound-evoked facial behaviours would provide a highly sensitive, automated, and affordable tool to complement common behavioural tests, and could potentially allow for the behavioural assessment of infants younger than is currently possible with existing methods.

References:

Rehabilitation
Poster: 9
Speech-Auditory Brainstem Responses in Individuals with Hearing Loss – Effects of Aiding and Background Noise
Binkhamis G, Manchester Centre for Audiology and Deafness, University of Manchester, Manchester Academic Health Science Centre & King Fahad Medical City
O’Driscoll M, Manchester Centre for Audiology and Deafness, University of Manchester, Manchester Academic Health Science Centre & Manchester Auditory Implant Centre, Manchester University Hospitals NHS Foundation Trust
Kluk K, Manchester Centre for Audiology and Deafness, University of Manchester, Manchester Academic Health Science Centre

Introduction:
The aim of the study was to investigate the effect of aiding (aided versus unaided) and background (quiet versus noise) on speech-ABR peak latencies and amplitudes in adults with a bilateral sensorineural hearing loss.

Methods:
Speech-ABRs evoked by a 40-ms [da] were recorded from 80 adults (data collection on-going) with acquired bilateral sensorineural hearing loss via loudspeaker stimulus presentation. Recordings were conducted with and without a hearing aid in quiet and in 2-talker babble background noise using a two-channel vertical electrode montage.

Results:
A statistically significant effect of aiding on speech-ABR peak latencies and amplitudes (p < 0.01) – with earlier latencies and larger amplitudes in the aided condition compared to unaided condition. A statistically significant effect of background on speech-ABR peak amplitudes (p < 0.01) in both the aided and unaided conditions – with smaller
amplitudes in background noise compared to in quiet. And no significant
effect of background on speech-ABR peak latencies in both the aided
and the unaided conditions.

Conclusions:
Speech-ABRs evoked by 40ms [da] may potentially have clinical
applications as an objective outcome measure to assess access to
speech with versus without hearing aids and to assess the effect of
background noise on individuals with hearing loss.

Acknowledgements:
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Poster: 37
Exploring a Categorisation Framework for the
Individual Management Plan – Outcome Score
(IMP-OS): Clinicians’ Perspectives

Jones A, Betsi Cadwaladr University Health Board
Wild J, Betsi Cadwaladr University Health Board
Fidler S, The University of Manchester

Objective:
To gain an insight into clinicians’ perspectives on relevant and
appropriate categories for the Individual Management Plan-Outcome
Score (IMP-OS), a new audiological self-report outcome measure.

Design:
Clinicians were recruited from the audiology service at Betsi Cadwaladr
University Health Board (BCUHB). Three focus groups were conducted,
exploring the opinions of clinicians on appropriate categorisation for
IMP-OS. The focus groups were audio recorded, transcribed and
analysed using a general inductive qualitative content analysis.

Sample:
Seventeen clinicians were recruited across three geographical locations
and allocated to a focus group based on their normal place of work
(i.e. East area n=6, Central area n=6, West area n=5).

Results:
Three main themes (and seven sub-themes) were identified in the
analysis, outlining the clinicians perspectives on suitable categories for
IMP-OS: Importance of exploring psycho-social needs with patients
(emotional impact, social participation and impact on relationships);
exploring general hearing needs (related to the use of technology,
different situation and the environment); and needs that are not
specifically related to hearing (tinnitus).

Conclusion:
This study provided an insight into clinicians’ perspectives on appropriate
category development for IMP-OS. The results from this study will be
used in the future development of the IMP-OS categorisation framework.

Poster: 66
Applying the COM-B Model to Assess the Usability
of Alternative Listening Devices to Conventional
Hearing Aids in Adults with Hearing Loss

Maidment D, NIHR Nottingham Biomedical Research Centre &
Hearing Sciences Section, Division of Clinical Neuroscience, School of
Medicine, University of Nottingham
Ali Y, NIHR Nottingham Biomedical Research Centre & Hearing
Sciences Section, Division of Clinical Neuroscience, School of
Medicine, University of Nottingham
Ferguson M, NIHR Nottingham Biomedical Research Centre, Hearing
Sciences Section, Division of Clinical Neuroscience, School of
Medicine, University of Nottingham & Nottingham University Hospitals
NHS Trust, Queens Medical Centre

Introduction:
This study assessed the usability of alternative listening devices to
conventional hearing aids using the COM-B model as a theoretical
framework. The primary components of the model, namely, capability,
opportunity, and motivation, were examined.

Methods:
Twenty adults with mild-moderate hearing loss from the UK were
recruited using a convenience sampling strategy. All participants owned
conventional hearing aids. Participants trialled one of the following
alternative listening devices for two-weeks in their everyday lives:
smartphone-connected hearing aids, personal sound amplification
product, smartphone ‘hearing aid’ app with wired earphones or wireless
hearable. Individual semi-structured interviews were conducted. The
data were analysed using an established thematic analysis procedure.
Themes were inductively generated and subsequently mapped onto
the COM-B model.

Results:
Capability: The importance of existing digital literacy skills influenced
the perceived usability of all of the alternative listening devices trialled.
One of the key advantages facilitating use and adherence was the
ability to make fine-tune adjustments in any listening situation.
Opportunity: Several participants commented that alternative listening
devices could address issues surrounding stigma, as smartphones are
a part of everyday life. However, some older participants expressed
concerns that they might be better suited to a younger demographic.
Motivation: Participants consistently reported that the ability to make
adjustments via a smartphone provided them with a greater sense of
autonomy and empowerment, as they felt more in control of their
hearing loss.

Conclusion:
All participants in this study reported that they wanted the ability to make
fine-tune adjustments to their listening devices to meet their individual
needs and preferences, resulting in less frustration, greater participation,
and more device use. Further high-quality evidence (i.e. randomised
controlled trials) is needed to assess the clinical- and cost-effectiveness
of user-adjustable alternative listening devices in adults with hearing loss.
Personalising Hearing Healthcare Education Delivered by m-health Technologies

Ferguson M, NIHR Nottingham Biomedical Research Centre, University of Nottingham & Nottingham University Hospital’s NHS trust
Maidment D, NIHR Nottingham Biomedical Research Centre, University of Nottingham
Gomez R, NIHR Nottingham Biomedical Research Centre & Nottingham University Hospital’s NHS trust
Wharrad H, University of Nottingham
Coulson N, University of Nottingham

Introduction:
Mobile phone-access to the internet showed a 50% increase (2014-2016) in the first-time hearing aid user age group. Therefore, opportunities for m-health technologies to deliver hearing healthcare are increasing year-on-year. The aims of this study were to (i) develop a theoretically-driven, user-centred personalised intervention to meet individuals’ specific informational needs, then assess (ii) usability, and (ii) the benefits to hearing aid users in the ‘real-world’.

Methods:
Short 30-60 second segments from C2Hear, a series of multimedia reusable learning objects (RLOs) for hearing aid users, were identified and classified according to the COM-B and the Theoretical Domains Framework (TDF). In addition, an ecological validity approach involved the labelling the segments using a Think Aloud analysis to obtain real-world perspectives from hearing aid users. Segments were combined into 1-2 minute clips (mRLOs; m2Hear), based on the COM-B model and developed for delivery via mobile-enabled technologies.

Results:
A total of 42 mRLOs were developed, each labelled with a specific question (e.g. how can I get used to wearing my hearing aids?), which
was associated with either capability, opportunity or motivation. Analysis of C2Hear RLOs and mini-mRLO segments showed each focused on different aspects of the TDF, with different “active ingredients” of health behaviour change. Key findings of the ongoing feasibility study (completion due August 2018) indicate that patients liked the short, concise mRLOs that provided key take-home messages they could apply in everyday life. They liked to return and visit mRLOs whenever they needed to, and found the questions valuable in identifying which mRLOs to watch. Additional activities, such as where to sit in a restaurant were reported as highly useful.

Discussion: This personalised m-health intervention to support the knowledge requirements of hearing aid users has shown numerous benefits. Once evaluated we will make m2Hear freely available to patients and audiology services.

Poster: 87
Reaching a Consensus on the Terminology for Emerging Hearing Technologies – A Delphi Review
Ferguson M, NIHR Nottingham Biomedical Research Centre, University of Nottingham & Nottingham University Hospital’s NHS Trust
Maidment D, NIHR Nottingham Biomedical Research Centre & University of Nottingham
Convery E, National Acoustic Laboratories

Introduction: There is a variety of emerging hearing technologies (e.g. personal sound amplification products) and service delivery models (e.g. over-the-counter) that relate to the management of hearing loss. Currently, there are no standardised terms for many of these, which can lead to confusion. The purpose of this Delphi review is to reach a consensus on the terminology for different hearing devices and service delivery models.

Methods: An international online e-Delphi review was conducted. A total of 22 participants who are experts in hearing technologies from 6 countries (USA, UK, South Africa, Australia, China, Switzerland) were invited to participate. Round 1 was open-ended, whereby a total of 15 hearing devices were listed. For each device, participants were asked to describe the device, service delivery model (SDM), and role of the hearing healthcare professional (HHCP). The results of Round 1 were then used to generate closed-ended statements for the rounds 2 and 3, where participants responded to a 5-point Likert scale (strongly agree to strongly disagree).

Results: The response rate for round 1 was 77%, and responses were categorised according to key themes for the device, SDM and HHCP. Device themes included fitting to a prescriptive target or pre-programmed, enabling user-adjustment of gain and/or frequency response, as well as whether it was considered a medical product for people with hearing loss. A variety of SDMs (e.g. hearing healthcare professional, online, retail settings, over-the-counter) were reported across the devices. Similarly, the role of the HHCP was extremely diverse, from no role to performing diagnostic assessments, device fitting and support. Anticipated review completion is August.

Discussion: Given the rapid changes in available hearing technologies, this review will provide a consensus towards a common international language for discussing devices, service delivery models and the role of the hearing healthcare professional.

Poster: 97
Managing Extreme Anxiety During Cochlear Implant Assessment – A Team Approach
Ambler M, Midlands Hearing Implant Programme, Birmingham Women’s and Children’s NHS Trust
Hanvey K, Midlands Hearing Implant Programme, Birmingham Women’s and Children’s NHS Trust
Turner M, Specialist Play Services, Birmingham Women’s and Children’s NHS Trust
Naylor A, Health In Mind, Birmingham Women’s and Children’s NHS Trust
Moriarty A, Anaesthetics Department, Birmingham Women’s and Children’s NHS Trust
Mason R, Midlands Hearing Implant Programme, Birmingham Women’s and Children’s NHS Trust

Introduction: Anxiety in children surrounding hospital procedures can, if not managed well, have life-long and even trans-generational consequences. We describe our first case of a 12 year old child who presented with extreme anxiety over any radiological or surgical procedure. We have never experienced such a case, despite operating on over 850 children and adolescents over the past 25 years.

Methods: This child displayed more than 17 symptoms of anxiety. We also felt his mother had her own anxieties which were additionally impacting on the child. Working as a team across 4 internal departments including ourselves, specialist play services, clinical psychology and anaesthetics, and also closely with the local education service we were able to support this child and his family through surgery.

Results: The child received four times as many appointments as would normally be required for a standard CI assessment for someone of the same age and time from referral to surgery took 9 months instead of 2 or 3 months. Appointments involved specialist play therapy, clinical psychology, cross-specialty joint appointments and a great deal of liaison. The hospital admission was adjusted from standard protocol to meet his needs. The child needed bilateral tympanoplasty and CI surgery. This would normally be staged over 3 surgeries over 6-12 months. Instead, we planned bilateral tympanoplasty and unilateral CI in one surgery as this might have been the only opportunity available.

Discussion: With extremely detailed planning and preparation, allowing more time than normal on the day of surgery, surgery went ahead as planned. The child gains significant benefit from his CI and, when he is calm, is considering having the second stage surgery – a CI for his contralateral ear. However remains significant underlying anxiety which resurfaces at any unexpected potential ear-related problem which might result in a need for surgery.
Poster: 100
Bimodal Hearing for Cochlear Implant Recipients – Capturing Experiences

Ambler M, Midlands Hearing Implant Programme, Birmingham Women’s and Children’s NHS Foundation Trust
Hanvey K, Midlands Hearing Implant Programme, Birmingham Women’s and Children’s NHS Foundation Trust
Maggs J, Midlands Hearing Implant Programme, Birmingham Women’s and Children’s NHS Foundation Trust
Pienaar L, Midlands Hearing Implant Programme, Birmingham Women’s and Children’s NHS Foundation Trust
Pretorius A, Midlands Hearing Implant Programme, Birmingham Women’s and Children’s NHS Foundation Trust
Saeed S, Midlands Hearing Implant Programme, Birmingham Women’s and Children’s NHS Foundation Trust
Zoolfqar S, Midlands Hearing Implant Programme, Birmingham Women’s and Children’s NHS Foundation Trust

Introduction:
All bilaterally profoundly deaf children now have the opportunity to benefit from two cochlear implants (CIs). However, for various reasons some children have only one CI. The Naida Bimodal Hearing Solution from Advanced Bionics allows the the Phonak Naida Link hearing aid to connect to the Naida CI (Q70 or Q90) sound processor to optimise binaural hearing. The Naida Link hearing aid is intended for unilateral AB recipients with aidable residual hearing in the non-implanted ear. For those recipients with no hearing in the contralateral ear, the Naida Link CROS aid is available. The Naida Link CROS picks up signals presented to the “non-hearing” ear and instantaneously transmits them to the Naida CI sound processor on the "hearing" ear. This paper describes our early experience of fitting this new feature of CI care.

Method:
4 children fitted with the Naida Link hearing aid and 4 children fitted with the Naida Link CROS aid will be included in the review. A sound quality ratings questionnaire will be administered to parents and carers of the children fitted with the devices asking them to rate their experiences before and after fitting.

Results:
The ratings questionnaire will capture the listening experiences and challenges of unilateral recipients in different environments, such as listening in quiet and noisy situations, listening on the ‘deaf’ side, and the amount of listening effort involved with unilateral recipients.

Discussion:
Listening with one ear presents great challenges for communications. For individuals relying on a single CI, the Naida Link hearing aid and the Naida Link CROS offer a great opportunity to provide a better overall hearing experience.

Poster: 104
An Investigation of the Usability and Feasibility of an Online Audiological Rehabilitation Program – The Eriksholm Guide to Better Hearing

Ferguson M
Gomez R
H B Tietz L
Hefernan E
Lystrup L
Maidment D

Introduction:
The Eriksholm Guide to Better Hearing is an online rehabilitation program for adults with hearing loss. It includes modules on understanding hearing loss, hearing aids, and coping strategies. It contains videos, written information, and reflection exercises. It was found to improve hearing-specific quality of life in a Swedish-speaking sample1. This study assessed the usability and feasibility of the program in an NHS clinical sample.

Methods:
Usability: Twenty adults with hearing loss were recruited from the NIHR Nottingham Biomedical Research Centre participant database. They completed the program and a feedback questionnaire. Eight participants provided additional feedback during a focus group.

Feasibility:
Forty adults with hearing loss were recruited from the participant database or their NHS audiology service. They completed a revised version of the program and a feedback questionnaire. They also completed outcome measures at baseline and 1-2 weeks after completing the program. Five participants provided further feedback during a focus group.

Usability:
Participants stated that the content of the program was useful and educational and that it exceeded the information typically provided by their audiologist. However, they recommended revising the program, as the language was too technical and there were various technical problems (e.g. videos not playing).

Feasibility:
Participants felt that the revised program was interesting, informative, and enjoyable. The hearing loss and coping strategies modules were particularly useful. Participants’ outcomes (e.g. participation, self-efficacy) improved following the program. There were some outstanding technical problems, which are now being resolved.

Discussion:
The results are being used to inform the design of a randomised controlled trial that will assess the clinical and cost effectiveness of the program in an NHS clinical sample.

References:

Poster: 105
Development of a Brief Measure of Social Isolation in Adults with Hearing Loss for Use in Research and Clinical Practice

Ferguson M
Habib A
Hefernan E

Introduction:
Objective social isolation (i.e. having a limited social network) and subjective social isolation (i.e. feelings of loneliness and exclusion) are amongst the major consequences of hearing loss. Therefore, one of the primary aims of aural rehabilitation is to reduce social isolation in adults with hearing loss. To determine whether aural rehabilitation successfully achieves this aim, a valid social isolation outcome measure is needed. In particular, there is a need for a brief measure, as time pressure is one of the main barriers to outcome measurement in clinical practice. Brief measures are also useful in many research contexts (e.g. telephone surveys, core outcome sets). This study aimed to evaluate the reliability and validity of a 5-item, hearing-specific outcome measure: the Social Isolation Measure (SIM).

Methods:
Phase 1: Adults with hearing loss were recruited from the NIHR Nottingham Biomedical Research Centre participant database and an online hearing loss discussion forum. The participants (N=116) completed an online survey that contained the SIM, a hearing-specific social participation questionnaire, a generic social participation questionnaire, and a generic loneliness questionnaire.

Phase 2: A sub-sample of the participants (N=66) completed the SIM for a second time 2-3 weeks following Phase 1.
Results:
Phase 1: In support of its construct validity, the SIM had a strong correlation with the hearing-specific questionnaire and moderate correlations with the generic questionnaires. It also had high internal consistency (Cronbach’s alpha=0.943).
Phase 2: The SIM displayed strong test-retest reliability (Intra-class correlation coefficient=0.77, 95% CI=0.829-0.932, F(74)=9.59, p<0.001).

Discussion: The results demonstrate that the SIM has strong psychometric properties. The primary advantage of the SIM is that it is a brief yet valid measure of social isolation that places minimal burden on patients and investigators alike.

Tinnitus
Poster: 49
The Association between Subjective Tinnitus and Cognitive Performance – Systematic Review and Meta-Analysis
Clarke N, Hearing Sciences, Division of Clinical Neurosciences, School of Medicine, The University of Nottingham, University Park
Hoare D, National Institute of Health Research Nottingham Biomedical Research Centre
Henshaw H, National Institute of Health Research Nottingham Biomedical Research Centre
Akeroyd M, Hearing Sciences, Division of Clinical Neurosciences, School of Medicine, The University of Nottingham, University Park

Introduction: Subjective tinnitus is very common and has a number of comorbid associations including depression, sleep disturbance and concentration difficulties (Hall et al., 2018). Concentration difficulties may be observable in people with tinnitus through poorer behavioural performance in tasks thought to measure specific cognitive domains such as attention and memory (i.e. cognitive performance). No previous reviews have investigated the association between tinnitus and cognitive performance through meta-analysis. Furthermore, they have included different sets of studies, potentially contributing to the differences they report.

Methods: This systematic review comprehensively reviews the literature using an established theoretical taxonomy and quantitatively synthesises relevant data. The review is reported according to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) standards. Searches were conducted in MEDLINE, EMBASE, PsyINFO, ASSIA, CINAHL, Scopus, PubMed, and Web of Science (Science and Social Science Citation Index). Keywords included: ‘tinnitus’, ‘memory’, ‘attention’ and ‘cognitive’. Eligible studies contained adult participants with subjective tinnitus, a behavioural measure of cognitive performance or subjective cognitive complaints.

Results: A total of 51 records are included in the review and subjected to either narrative or quantitative synthesis, depending on the data available (ongoing at time of submission). Most records reported studies using a quasi-experimental, between-groups design with participants typically aged 45 to 55-years-old. Studies display inconsistencies in their control for hearing loss or impairment. Studies typically only report a single behavioural measure per cognitive construct under investigation.

Discussion: This review facilitates an understanding of the impact of tinnitus on cognitive performance. Improved understanding of the relationship between tinnitus and cognitive performance will enable tinnitus sub-typing and inform therapeutic methods, for example, it may be possible to deliver cognitive training paradigms in a targeted manner (Ferguson & Henshaw, 2015; Hoare, Stacey, & Hall, 2010).

Poster: 57
The Relationship between Tinnitus, Hyperacusis and Anxiety in Children Aged 8-16 Years
Lear S, Sheffield Children’s NHS Foundation Trust

This study aimed to find out whether levels of anxiety are higher in children who report the more severe the tinnitus in children, and to compare the levels of anxiety in children with and without hyperacusis.

Data was collected from 145 children (8-16 years) attending Hearing Services at Sheffield Children’s Hospital, including children with and without tinnitus, and with and without hyperacusis. Data collected included various ratings of tinnitus severity (frequency, annoyance and influence on daily life), measures of anxiety (state and trait) and whether hyperacusis was present. Other factors measured were age, sex and hearing level.

Statistical analysis examined if there were differences between anxiety scores whether or not tinnitus was present, and whether or not hyperacusis was present. Correlations between the tinnitus measures and anxiety measures were examined. A regression model was then used to see the influence that tinnitus severity, age, sex and hearing level had on the anxiety scores. The results will be presented and their significance for management of children with tinnitus and hyperacusis will be discussed.

Poster: 91
A Scoping Review to Catalogue Tinnitus Problems in Children
Smith H, NIHR Nottingham Biomedical Research Centre & Hearing Sciences, Division of Clinical Neuroscience, School of Medicine, University of Nottingham
Fackrell K, NIHR Nottingham Biomedical Research Centre & Hearing Sciences, Division of Clinical Neuroscience, School of Medicine, University of Nottingham
Kennedy V, Bolton NHS Foundation Trust, Halliwell Health & Children’s Centre
Barry J, Nottingham University Hospitals NHS Trust
Hoare D, NIHR Nottingham Biomedical Research Centre & Hearing Sciences, Division of Clinical Neuroscience, School of Medicine, University of Nottingham

Introduction: Recent years have seen the generation of high-level scientific evidence on tinnitus in adults. Knowledge of the tinnitus-related problems experienced by adults has led to the development of numerous clinical questionnaires used by health professionals in assessment and management. In contrast, the evidence base on tinnitus in children is small. Slow progress is attributed to a lack of understanding of the tinnitus problems children experience; to date no child-specific questionnaire measure of tinnitus has been developed. To support the development of a questionnaire measure of tinnitus in children, this scoping review aimed to catalogue tinnitus problems reported in children 18 years or younger in scientific and grey literature.

Methods: A search of the literature was conducted. Reported tinnitus problems were extracted from the literature and categorised into problem themes.

Results: Thirty-two records met the inclusion criteria for this review. The number and range of problems reported varied widely across the records. Key problem themes identified were (1) Physical health, (2) Cognitive Health, (3) Hearing and Listening, (4) Emotional Health, (5) Quality of life, (6) Fears, and (7) Feelings of isolation.
Poster: 92
Establishing the Impact and Required Support for Aged Veterans with Tinnitus – Study Protocol

Burns-O’Connell G, British Tinnitus Association
Hoare D, Hearing Sciences, Division of Clinical Neuroscience, School of Medicine, University of Nottingham

Introduction:
Tinnitus is linked to depressive disorders and with such co-morbidities people can have worsened perceptions of tinnitus. Ex-military personnel are more likely to experience depressive disorders throughout their lives and it is thought many aged veterans may have experienced tinnitus for a number of years without receiving sufficient support or treatment. The impact of combat-related tinnitus and hearing loss is high (Gondusky 2005) but little is known about the impact of tinnitus on military veterans and most research in this area has been undertaken in the US (The Royal British Legion 2014). This project will address the lack of reliable information on the scale and impact of tinnitus on UK veterans.

Methods:
A mixed-method approach was used starting with a survey on the impact of tinnitus and associated healthcare use of veterans. Secondly, in-depth focus groups/interviews were conducted to gain more information about veterans’ lived experience of tinnitus. The sample consisted of military veterans who were; born before 1st January 1950, served at least one day in the British armed forces, and permanently resided in the UK. Data analysis included descriptive statistics, and thematic analysis to identify key themes from the interviews and open-ended questionnaire questions.

Results:
Based on anecdotal conversations with veterans, we predict military veterans with tinnitus require a programme of tailored support to help manage their tinnitus. This could include providing support and information which acknowledges and combines the veterans’ experiences of being in the armed forces. Preliminary findings from the questionnaire are presented.

Discussion:
Based on the findings from this project, tailored support and services which reduce tinnitus impact and meet the health and wellbeing needs of older UK veterans with tinnitus can be developed. To inform practitioners on how best to support aged veterans with tinnitus, recommendations will be made, and guidelines developed.

Discussion:
This scoping review found children with tinnitus to experience a wide range of problems that can cause a detrimental impact on their life and wellbeing. The current British Society of Audiology Tinnitus in Children Practice Guidance recommends assessment and management practices to address the most broadly reported problems identified in this review; sleep difficulties, concentration and hearing problems at school, and emotional difficulties. Given the finding of this review, problems associated with the child’s daily activities and feelings of isolation, also appear to be important problem domains to consider when assessing and planning management with a child who has tinnitus.

References:

Poster: 93
Veterans, Tinnitus, and Research – A Scoping Review

Burns-O’Connell G, British Tinnitus Association
Hoare D, Hearing Sciences, Division of Clinical Neuroscience, School of Medicine, University of Nottingham

Introduction:
Service in the military armed forces can involve exposure to high levels of noise. As such, many military veterans experience hearing loss and tinnitus (Gondusky 2005). However, little is known about the impact of tinnitus on military veterans with most research in this area being undertaken in the US (The Royal British Legion 2014). To support future projects exploring tinnitus within veteran populations, we conducted a scoping review to identify tinnitus problems in the veteran population within academic and grey literature.

Methods:
The search strategy included searching Google Scholar, PubMed and Web of Science. No records were excluded based on controls used, outcomes reached, timing, setting, or study design.

Results:
In this review, evidence from published literature relating to military veterans and tinnitus is identified. The initial literature search yielded 820 records. Several rounds of screening were conducted independently by the authors (Arksey & O’Malley 2005) and findings from this review are presented.

Discussion:
Collating the existing body of knowledge relating to ex-service personnel and tinnitus, and identifying any gaps in current knowledge will help to inform future directions in this area of research and practice.

References:

Poster: 96
Recommended Procedure for Fitting Combination Aids – Delphi Review

Sereda M, National Institute for Health Research (NIHR) Nottingham Biomedical Research Centre & Hearing Sciences, Division of Clinical Neuroscience, School of Medicine, University of Nottingham
Hoare D, National Institute for Health Research (NIHR) Nottingham Biomedical Research Centre & Hearing Sciences, Division of Clinical Neuroscience, School of Medicine, University of Nottingham
Zobay O, Hearing Sciences, Division of Clinical Neuroscience, School of Medicine, University of Nottingham
Brady J, Nottingham University Hospitals NHS Trust

Introduction:
Our recent UK wide survey of clinicians indicated that the number of tinnitus patients fitted with combination aids varies greatly between clinics, and fitting protocols are far from standardised. The British Society of Audiology (BSA) Tinnitus and Hyperacusis Special Interest Group is currently developing a recommended procedure for fitting combination aids for tinnitus with the view to support parity of clinical practice. This document will be based on available research, clinical expertise, individual patient preferences, and clinical consensus from a panel of expert UK hearing professionals.

Methods:
To identify clinical consensus we used a validated method for health research called a ‘Delphi review’. This systematic methodology seeks
consensus amongst experts using a series of iterative questionnaires. A three-round Delphi survey established clinical consensus among a panel of 32 UK hearing healthcare professionals. Panel agreement was sought on 319 statements covering: (i) candidacy, (ii) fitting procedures, (iii) safety, (iv) recommended use, (v) streaming options, (vi) information provided, and (vii) assessments.

Results:
Consensus was reached for 161 of the 319 statements. The panel agreed that combination aids can be offered to tinnitus patients with a wide range of hearing losses, including those who do not perceive hearing difficulties and those who suffer from hyperacusis. Experts agreed that protocol for fitting combination aids should be flexible to allow for individual patient preferences. The panel identified several aspects of combination aids fitting where patient’s preferences play an important role, including: (i) fitting laterality, (ii) programme options, (iii) choice of sound/noise, (iv) recommended use, and (v) sound/noise adjustments.

Discussion:
We identified those topics where there was consensus and where consensus was not reached. The areas where consensus was reached will inform BSA recommended procedure for fitting combination aids for tinnitus. The areas where there was no consensus will directly inform new research questions.

Poster: 3

**Vestibular Suppressants and Alcohol: Effect of Different Protocols on Balance Clinic Pathways**

*Premachandra P*, Guy’s And St Thomas’ Hospital  
*Gillen L*, Guy’s And St Thomas’ Hospital  
*Mc Kearney R*, Guy’s And St Thomas’ Hospital  
*Sriskandarajah B*, Guy’s And St Thomas’ Hospital  
*Thientosapol A*, Guy’s And St Thomas’ Hospital  
*Ubihi B*, Guy’s And St Thomas’ Hospital  
*Murdin L*, Guy’s And St Thomas’ Hospital

**Aim:**
To assess the effect of different vestibular suppressants and alcohol (VSA) consumption protocols for performing vestibular testing on patient pathways.

**Background:**
VSA can affect vestibular test results and so are ideally avoided before vestibular testing appointments (Jacobson et al, 1993 in BSA Recommended Procedure: Vestibular Assessment – Eye Movement Recordings, 2015). If patients have consumed VSA, clinicians can face a dilemma as to whether to proceed with testing (with the risk of needing to re-test) or not (with the inconvenience of another attendance on a later date).

**Methods:**
We compared two protocols. Protocol 1: patients were not tested if they had consumed VSA within 48 hours before the test appointment. Protocol 2: testing was carried out and consumption noted.

**Outcome measure:**
Number of additional testing appointments required per patient over a two month period.

**Results:**
Protocol 1: 12 patients had consumed VSA. 7 patients required another testing appointment (58%). Protocol 2: 15 patients had consumed VSA. None required repeated testing (0%). (Fisher’s exact test, p=0.002).

**Conclusion:**
Protocol 2 was significantly more efficient. In the majority of cases, patients who have consumed alcohol or vestibular suppressants can be managed without needing to retest after abstinence on another occasion. This finding has positive implications for patient experience with reduced need for additional appointments, and for efficient use of capacity and resources.

**References:**

**Poster: 11**

**Vestibulotoxicity Associated with Platinum-Based Chemotherapy in Survivors of Cancer**

*Prayuenyong P*, Hearing Sciences, Division of Clinical Neuroscience, School of Medicine, University of Nottingham, NIHR Nottingham Biomedical Research Centre, Nottingham University Hospitals NHS Trust & Department of Otologyngology, Head and Neck Surgery, Faculty of Medicine, Prince of Songkla University  
*Hall D*, Hearing Sciences, Division of Clinical Neuroscience, School of Medicine, University of Nottingham, NIHR Nottingham Biomedical Research Centre & Nottingham University Hospitals NHS Trust  
*Kasbekar A*, Hearing Sciences, Division of Clinical Neuroscience, School of Medicine, University of Nottingham, NIHR Nottingham Biomedical Research Centre & Nottingham University Hospitals NHS Trust  
*Baguley D*, Hearing Sciences, Division of Clinical Neuroscience, School of Medicine, University of Nottingham, NIHR Nottingham Biomedical Research Centre & Nottingham University Hospitals NHS Trust

**Background:**
Platinum-based chemotherapy is an effective antineoplastic agent that is used for a variety of human malignancies, but the drug is highly toxic to the inner ear. Cochleotoxicity following the treatment is well documented. The potential for vestibulotoxicity is still unclear. This scoping review examined the extent of current research literature, summarized research findings and identified research gaps regarding vestibular-related adverse effects associated with platinum-based chemotherapy in survivors of cancer.

**Methods:**
Inclusion criteria followed the PICO principles: Participants, cancer patients; Intervention, platinum-based chemotherapy; Control, none or any; Outcomes, vestibular-related adverse effects. Seventy-five eligible studies were identified from a systematic literature search, and relevant data were charted, collated, and summarized.

**Results:**
Testing for vestibulotoxicity predominately featured functional evaluation of the horizontal semicircular canal using the calorific and rotational tests. The rate of abnormal vestibular function test results after chemotherapy administration varied from 0-50%. The results of objective testing did not always correspond to patient symptoms. Most patients did not have intense symptoms due to the potential bilateral symmetrical insidious nature of ototoxic medication. Vestibular function loss may not be recognized until the patient loses other cues from vision and somatosensory such as when walking in the dark or develops concomitant peripheral neuropathy. There is tentative support for patients with pre-existing loss of vestibular function to be more likely to experience vestibulotoxicity after dosing with cisplatin.

**Conclusions:**
A number of studies reported significant evidence of vestibulotoxicity associated with platinum-based chemotherapy, especially cisplatin. This scoping review emphasizes that vestibulotoxicity warrants more attention. There is a need for comprehensive evaluation using a
Poster: 15
Understanding the Clinical Implication of Video Head Impulse Test in Routine Vestibular Evaluation

Ayas. M, University Of Sharjah & University Hospital Sharjah

The Video Head Impulse tests (Vhit) are used to assess the Semi-circular canal functions with respect to the eye to head velocity gain. Though the test was introduced 3 decades back, it quickly gained its momentum with the clinical audiologists and in the clinical practice with application of video recording of head impulse test. Since then a wide array of clinical utility was discussed with respect to the diagnostic and post therapeutic usage of Vhit. However, there are certain myths and reality to be understood about the usage of Vhit in clinical practice. The current presentation will highlight those points in which clinicians needs to pay attention in selecting the Vhit in routine vestibular evaluation. The do’s and don’ts of its usage with respect to the authors extensive clinical experience with the Vhit. The presentation will also shed light into the analysis method used by various commercially available Vhit instruments, which is a key factor in understanding the gain calculation method. Further, at the end of the presentation, the audience will be able to distinguish the myths and reality of Vhit vs caloric test and the utility of both in the clinical vestibular test battery.

Poster: 27
TRV Chair for Diagnosis and Management of BPPV – An Audit Study

Akram H, Royal National ENT & Eastman Dental Hospitals

Purpose:
We investigate the diagnostic yield and treatment success rate of the TRV Chair for BPPV, which is thought to be the most common cause of vertigo in adults. Although the TRV Chair is not a recent innovation, it is not widely used in the UK and is under-studied.

Methods:
We collected data from 150 patients reporting “positional vertigo” as a symptom by performing positional tests on the bedside directly followed by TRV Chair (and Video Frenzel) assessment. If indicated, subjects were treated with repositioning manoeuvres. Success was measured by complete resolution of symptoms and/or absence of nystagmus at follow up (2-4 weeks post-treatment). Treatment manoeuvres used were Epley, Semont and Lempert.

Results:
Preliminary normative data suggests up to 5% of subjects who do not have vertigo will have some degree of positional nystagmus. 90% of patients reporting positional vertigo as a symptom were found to have positional nystagmus (and therefore BPPV). We report an 91% success rate for all subjects with positional nystagmus, 97% success for subjects who were identified without Video Frenzel technology and subsequently treated in the TRV Chair, and 100% success for those identified to have lateral canal BPPV.

Conclusions:
The TRV Chair is a very effective method for treatment of BPPV, especially for the lateral canal form and recurrent, “treatment resistant” BPPV; further study requires comparison with Video Frenzel alone and comparison of long term recurrence rates compared to traditional methods. Preliminary data suggests BPPV may be even more common than previously documented.
cases, followed by general diseases, ocular diseases, and otitis media with effusion. Other causes like vestibular neuritis, head trauma, and perilymphatic fistula were less common. SOT was the most difficult test among all patients especially in younger children. Caloric test came second most difficult test. Rotary chair was the easiest yet didn’t give informative data as most children had compensated vestibular disorders.

Conclusion:
SOT and caloric testing were the most difficult especially younger children, yet both are important in assessment of dizzy child. Rotary chair was easily performed, but it is only informative in early stages of vestibular disorders, as the disease becomes chronic, it doesn’t give so much data. VEMP was easy to perform yet its results were not specific. Positional test was the easiest test done.

Poster: 78
Target Size and Age Influence Non-Pathological Saccades in the Horizontal Video Head Impulse Test (vHIT)
Jay D, Manchester Foundation Trust
Howe S, South Tees Hospitals NHS Foundation Trust
Cane D, Manchester University

Introduction:
This study sought to investigate whether the size of the target used in the horizontal vHIT has an effect on the saccade profile of healthy subjects, and to expand upon previous work linking age to the existence of non-pathological vHIT saccades.

Methods:
46 participants were recruited between 18 and 77 years of age, with no history of vestibular, oculomotor or neurological conditions and a visual acuity of at least 0.3 LogMAR. Participants underwent four consecutive horizontal vHIT trials using the standard target size and three smaller targets. Gain and metrics for saccadic incidence, peak eye velocity and latency were then extracted from results.

Results:
Target size was a statistically significant influence on saccade metrics. As target size increased, saccadic incidence decreased while peak eye velocity and latency increased. However, the effect size was small in comparison with the correlations between age and saccade metrics on all target sizes. Furthermore, when head velocity is controlled for, VOR gain appears to begin incrementally decreasing in the late fifties.

Discussion:
While this study suggests that target size is a statistically significant factor in the vHIT saccade profile of normal subjects, it is unlikely to have a clinically significant effect on vHIT saccade profiles. Age is a more clinically significant influence on non-pathological vHIT saccades. Such correlations have been shown in other studies. The novel finding in this study of decreasing VOR gain at an earlier age than previously thought may suggest that such non-pathological saccades may represent bilateral age-related vestibular decline, or presbystasis.

References:

Poster: 90
Introducing Ocular Vestibular Evoked Myogenic Potentials (oVEMPs) into Clinical Practice
Novis K, City Hospitals Sunderland NHS Foundation Trust

Introduction:
Vestibular evoked myogenic potentials (VEMPs) are short-latency electromyographic (EMG) responses elicited by high-level acoustic stimuli. Most research and clinical application of VEMPs has focused on responses recorded from cervical (cVEMPs) and, more recently, infracochlear sites (oVEMPs). On one hand, oVEMPs have come to be widely clinically used to assess the Sacculocollic pathway. Meanwhile oVEMPs, proposed to reflect activity from the Utricle and Superior Vestibular Nerve, are comparatively less well-characterised and less commonly clinically used.

Methods:
In the absence of a current recommended procedure for recording oVEMPs, this study used a clinically viable protocol to establish characteristics of the normative response, and examined how oVEMP abnormalities correlated with results of other established vestibular testing techniques. Recordings were made using an Otometrics ICS Chartr EP 200 system.

Results:
oVEMPs were successfully recorded within almost all otologically normal participants, with test time never exceeding 10 minutes per subject. Average latency values of N1/P1 response features were established, and asymmetry ratios (a normalised difference between Right and Left response amplitudes) were calculated for each individual to infer normative limits.

Discussion:
Based on the protocol used within this investigation, oVEMPs were recorded quickly, required no additional specialist equipment compared to cVEMP testing, and were well-tolerated and replicable across participants. They may therefore represent a useful addition to the vestibular test battery, potentially providing information relating to the function of the Utricle (an area not assessed by other vestibular test techniques). The normative values presented could be used to aid introduction of oVEMPs into routine clinical practice.

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A. T. Still University

Contact: Dr Ruotolo
Email: aruotolo@atsu.edu

A. T. Still University/Arizona School of Health Science Post-Professional Doctor of Audiology Program (online Au.D. program) This fully online program is a perfect option for working professionals. The Post-Professional Doctor of Audiology Program curriculum is customized for each student’s individual learning needs and interests as a practitioner. Visit our website for admission requirements, a curriculum guide, tuition rates, and our online application at: atsu.edu/online-aud. Our Program Director, Dr Ruotolo, can be reached via email at aruotolo@atsu.edu or 1-480-710-3968.

Adam,Rouilly

Contact: Emily Whitebread
Email: emily.whitebread@adam-rouilly.co.uk

Advanced Bionics

Contact: Paulina Iwanicka
Email: paulina.iwanicka@advancedbionics.com

Albert Waeschle

Contact: Martin Waeschle
Email: martin@albertwaeschle.com

Albert Waeschle has been supplying the Audiology market with premium quality diagnostic equipment for over 50 years. By engaging with specialists we have been key contributors in developing products that improve patient care and increase diagnosis accuracy. Our brand OPTICLAR was created to signify premium quality and high performance whilst maintaining competitive prices. Our unique insight gained from our extensive experience ensures features are incorporated to provide a superb user experience.

Amplifon

Contact: April Stevens
Email: april.stevens@amplifon.com

A global leader in providing specialist hearing healthcare, hearing is all we do. As pioneers in hearing health, we’ve been helping people rediscover better hearing for over 65 years. Why wait, when you can join us today – visit the stand to find out more!

Amplivox

Contact: Neil Court
Email: neco@amplivox.com
Website: www.amplivox.ltd.uk

Amplivox are pleased to announce Auditbase connectivity for the complete range of Otowave tympanometers from the newly updated Otowave 102 screening tympanometer to the recently introduced Otowave 302 Desk top high frequency tympanometer. Amplivox are a British company with over 80 years proven experience. All products combine technology, ease of use and reliability to ensure usage in both mobile and clinic environments. We look forward to seeing you at stand number 1 in Liverpool.

Anglian Ruskin University

Contact: Joanna Lemanska
Email: answers@anglia.ac.uk
Website: www.anglia.ac.uk

Anglia Ruskin University offers a range of courses at both undergraduate and postgraduate level. Come and speak with us about our courses in Hearing and Audiology to see how learning whilst you work can help to further careers. Tel: 01245 493131.
Arlington Laboratories

Stand No: 52

Contact: Chula Bishop
Email: info@arlingtonlabs.co.uk
Website: www.arlingtonlabs.co.uk

Arlington Laboratories is a specialist, independent earmould manufacturer that supplies both the NHS and the private sector. We have over 20 years’ experience of making earmoulds of all sizes – from newborns to adults. We work in unique partnership with Mary Hare, so by choosing one of our products you’re actively supporting Mary Hare School for deaf children as 50% of our profits go to the school. Find out more at: www.arlingtonlabs.co.uk, info@arlingtonlabs.co.uk, 01635 569346.

Aston University

Stand No: 22

Contact: Amanda Casey
Email: a.e.a.casey@aston.ac.uk
Website: www.aston.ac.uk

Our research led audiology programme provides a range of taught courses – ranging from an assistant course to a professional doctorate. We work closely with employers to ensure we meet their needs and have a Level 6 apprenticeship starting in September. We also provide continuing professional development courses and modules to help audiologists grow their career. Please visit our stand and website for more information (www.aston.ac.uk).

Auditdata A/S

Stand No: 33

Contact: Preben Lohse
Email: preben@auditdata.com

Auditdata strives to make the complicated easy with innovative clinic management and measurement solutions. AuditBase, the leading clinic management system in UK. Primus, the new standard in fitting. Spend your time right: The integrated clinic management software and measuring equipment solutions from Auditdata are built to improve your workflow in the clinic. Start your measurement in the Primus panel directly from AuditBase, saving you precious time through the day.

Auditory Verbal UK

Stand No: 17

Contact: Rebecca Cromblehome
Email: info@avuk.org
Website: www.avuk.org

It is Auditory Verbal UK’s mission to give all deaf babies and children the opportunity to listen and speak as equals alongside their hearing peers. The charity works to increase awareness, understanding and access to Auditory Verbal therapy by providing services directly to families and sharing expertise with health and education professions so that many more families can access Auditory Verbal therapy close to where they live. Tel: 01869 325000.

British Academy of Audiology

Stand No: 40

Email: admin@baaudiology.org
Website: www.baaudiology.org

This year’s BAA stand will allow you to come and find out about what your professional body has been doing for you over the past 12 months. Come and meet the members of the Board over the breaks each day. The stand will be manned by members of the Fitwise team at all other times. Find out how being a member of BAA can support you and what we are doing to secure and develop our profession.

This year we have a space dedicated to Early Professionals where you can come and experience the new work going on to support early career development. We are also launching our online tinnitus module, a collaboration with the British Tinnitus Association, come and see a preview of this exciting new resource.

During Friday lunchtime our President Sue Falkingham will be announcing the winners of the Passport competition live from the stand.

We will be keeping you up to date via Twitter and Facebook throughout the conference again, so please tweet us @BAAudiology or join the Facebook group. We look forward to seeing you on the stand over the two days.
Boots Hearing Care

Contact: Isabelle Rodriguez
Tel: 07785 476433

At Boots Hearingcare, we believe no one should live with untreated hearing loss. Through our network of nearly 500 practices, located in Boots Opticians and Boots health & beauty stores, we offer our customers personalised professional care, as well as a wide range of fantastic hearing aids to choose from.

British Tinnitus Association

Contact: Sue Pickett
Email: sue@tinnitus.org.uk

Cochlear Europe Ltd

Contact: Kate Melton
Email: kmelton@cochlear.com

As the global leader in implantable hearing solutions, Cochlear is dedicated to bringing the gift of sound to people with moderate to profound hearing loss. We have helped over 450,000 people live full and active lives by reconnecting them with family, friends and their community.
For our professional partners, our commitment to leading change together involves collaborating to deliver sustainable clinical models and solutions for growth, combined with an ongoing commitment to research and development.

Consult Search & Selection Ltd

Contact: Rob Wilson
Email: rob@consultsearch.co.uk

Consult Search & Selection are a leading commercial recruitment consultancy with a core focus on the UK audiology market. For many years, we have specialised in clinical, sales and marketing placements with a wide client customer base including industry manufacturers as well as national and independent clinics. We are keen to network with audiologists and customers throughout the duration of the BAA conference and look forward to discussing our services with you all.

ENT & Audiology News

Contact: Francesca McCabe
Email: francesca@pinpoint-scotland.com

Eckel Noise Control Technologies

Contact: Natalie Barker
Email: Booths.sales@eckeleurope.com
Website: www.audiologyrooms.com / www.eckeleurope.com

Eckel has been providing acoustic solutions since 1952. With in-house design, manufacturing and installation facilities, we offer a complete service when it comes to Audiology Test Rooms and Audiology. Tel: 01945 664790.
PLATINUM SPONSOR:

**GN Hearing**

**Stand No: 47**

Contact: Claire Hird
Email: customerserviceuk@gnresound.com
Website: www.danalogic.co.uk

Danalogic from GN works harder to drive positive outcomes across the whole patient journey, enabling the NHS to deliver better care where it really matters. Danalogic is part of the GN Group - pioneering great sound from worldleading hearing devices to Jabra office headsets and sportsheadphones. Founded in 1869 and employing over 5,000 people. GN makes life sound better.

Find out how you can help your patients get the most out of their hearing experience with Danalogic from GN at www.danalogic.co.uk, Tel: 01869 352800, Email: customerserviceuk@gnresound.com

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**Guymark**

**Stand No: 31**

Contact: Martin Lindon-jones
Email: mrl@guymark.com

Guymark UK has 27 years’ experience in supplying highest quality medical equipment to Audiology. Exclusive distribution, in the British Isles, for GSI, Maico, MedRX audiological/fitting equipment, Otopront micro suction/ENT products, and MicroMedical balance equipment. They also supply Welch Allyn equipment and visual reward apparatus. Guymark also supply a comprehensive range of accessories and consumables for audiology and micro suction. UKAS accredited for Audiometer calibration and can calibrate all audiological equipment to the highest standards.

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**IAC Acoustics UK Ltd**

**Stand No: 4**

Contact: Shaun Moore
Email: shaun.moore@iacl-uk.com

IAC have been designing and installing acoustically engineered and guaranteed noise control solutions to the audiology profession for over 60 years.

A complete range of rooms and booths of varying sizes and acoustic performances are available as well as bespoke solutions for the more complex of applications.

In addition, we can supply individual acoustic components including doors, windows, absorption systems as well as the relocation and refurbishment of existing facilities.

All IAC projects are managed by a dedicated and committed in-house team of designers, acousticians, engineers and project managers.

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**Interacoustics**

**Stand No: 30**

Contact: Karen Mackenzie
Email: Sales@interacoustics.co.uk
Website: www.interacoustics.co.uk

Interacoustics is part of the William Demant Group, one of the largest hearing healthcare providers in the world. Much more than just a manufacturer, our team of cutting-edge technology experts ensures that we will continue to be the leading supplier of reliable and innovative customer-focused products and solutions. We now have exceptional products across the fields of balance, audiometry, tympanometry, ABR/OAE and rehabilitation. Come and try out our exciting new rehabilitation range at stand 30. Tel: 01698208205.

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**Kestrel Medical Ltd**

**Stand No: 34b**

Contact: Maria Primmer
Email: info@otovent.co.uk
Website: www.otovent.co.uk

Otovent is a clinically effective, non surgical treatment for glue ear; as recommended in the NICE Medtech briefing of March 2016. Suitable for patients recommended in the NICE Medtech briefing of March 2016. Suitable for patients of all ages, Otovent can provide great savings to Audiology departments, whilst providing an efficient treatment solution for 1 in 2 patients. Otovent is distributed in the UK by Kestrel Medical Ltd. Tel: +44 1202 658444.
**Leightons Opticians & Hearing Care**

**Stand No: 39b**

**Contact:** Jayne Pearson  
**Email:** jaynepearson@leightons.co.uk  
**Website:** www.leightons.co.uk / www.thcp.co.uk/about-us/careers/

Leightons Opticians & Hearing Care, family owned since 1928, has the sole purpose of helping people to see, to hear and to live life to the full. Specialists in combining optical and hearing, with care at the heart of everything we do, we’re proud to be partnering with the UK’s most progressive independent opticians under The Hearing Care Partnership. Join us on Stand 39b to find out more about becoming part of our expert team of audiologists, visit www.leightons.co.uk and www.thcp.co.uk/about-us/careers/

**MED-EL UK LTD**

**Stand No: 39**

**Contact:** Clare Trueman  
**Email:** customerservice@medel.co.uk  
**Website:** www.medel.com

Hearing implants from MED-EL offer in-tact skin solutions for patients of all ages experiencing conductive, sensorineural, mixed, or a profound hearing loss. State-of-the-art technology within our bone conduction, middle ear, and cochlear implant systems are the result of almost 40 years of research and development. At BAA you can trial our non-implantable bone conduction device for patients with a conductive loss. Visit stand 39 to find out more. Tel: 0330 1235601.

**Mediplacements**

**Stand No: 53**

**Contact:** Simon Woodward  
**Email:** audiology@mediplacements.com  
**Website:** www.mediplacements.com

Mediplacements are experts in the field of Audiology recruitment, taking a personal interest in your profession and career. We are also delighted to be recognised as the leading supplier of audiology personnel throughout the UK, featuring on all national staffing frameworks. Whether you seek temporary or permanent employment, Mediplacements can offer you the best selection of work opportunities available. Visit stand 53 to discuss your personal requirements with Simon Woodward, Lui Sorrenti and the team. Call: 0345 250 6666.

**Minerva Hearing**

**Stand No: 45b**

**Contact:** Pernille Gallagher  
**Email:** info@minervahearing.co.uk  
**Website:** www.minervalabs.co.uk and www.minervahearing.co.uk

Minerva Hearing has been serving the healthcare sector since 1952. We are dedicated to providing quality Ear Moulds, Hearing Protection, In-Ear Monitoring and Audiological Accessories delivered quickly, reliably and to the highest standards. Minerva is the innovators of ear mould manufacturing, having pioneered in 3D scanning and manufacturing in the UK. We continue to invest in cutting edge technology. With over 65 years’ experience and excellent customer service that ensure your targets, budgets and patients are satisfied. Come and visit our stand for information on the products and services we provide! Tel: 02920 837 330.

**NHS Leadership Academy**

**Stand No: 23**

**Contact:** Ramima Khanam  
**Email:** Enquiries.NLA@hee.nhs.uk  
**Website:** www.leadershipacademy.nhs.uk

As part of Health Education England (HEE), our philosophy is simple – great leadership development improves leadership behaviours and skills. Better leadership leads to better patient care, experience and outcomes. Our purpose is to work with our partners to develop outstanding leadership across the NHS to have a direct impact on patient care. We offer a range of tools, models, programmes and expertise to support individuals, organisations and local partners to develop leaders, celebrating and sharing where outstanding leadership makes a real difference. @NHSLeadership, Tel: 0113 3225699.
Oticon Synergy Sense
The next generation of BrainHearing Technology in Synergy Sense gives the user a premium sound experience, and makes listening to speech in noise easier than ever.

BrainHearing is the Oticon philosophy. It is our DNA and we think “brain first” in whatever we do. We do this because we acknowledge that we don’t hear with our ears. We hear with our brain. It is in the brain that we make sense of sound.

Our audiological focus is to support the central processes in the brain to decode sound, that is, to make sense of sound. We need to understand these processes to meet the many unique demands of each individual. Rather than focusing on sound or the ears, we think “brain first.”

The family consists of several styles with flexible acoustic options. Additional tools in Genie mean more fitting flexibility for the audiologist, and full ConnectLine compatibility completes the picture. Oticon instruments are among the most reliable in the industry, thanks to quality design and build, and continual improvements.

A new earpiece option, the GripTip, is useful when domes do not provide enough retention, or where feedback is an issue. It can be fitted as the patient’s long term earpiece, or temporarily while moulds are being made.

The same miniFit earpiece system that you know from Spirit Synergy is used with Synergy Sense.

All styles are wireless – which supports binaural processing and ConnectLine. It also means that they can be fitted with the FittingLINK wireless programmer.

All Synergy Sense instruments are built on the Inium Sense platform, and carry IP58 classification.

For more information please talk to your Oticon Regional Manager or visit www.oticonnhs.co.uk

Otodynamics

OAE pioneers Otodynamics, celebrate 40 years of OAEs with their revolutionary new OtoNova wireless clinical OAE instrument with ABR screener. Wireless operation frees patient and screener, helping reduce noise. OtoNova compliments our range of Otoport handheld diagnostic and screening OAE+ABR devices and the powerful PC-based Echoports. Otodynamics offers more flexibility, more choice. Our innovative UK-based Support and R&D teams ensure quality, reliability and performance. Otodynamics stands out as the gold standard. Consistently the first choice. Tel: 01707 267540.

Otometrics

Otometrics, a division of Natus, is the audiology industry leader providing instrumentation and software solutions to hearing and balance care professionals worldwide. Otometrics help hearing and balance care professionals improve the quality of life for clients and patients by delivering expert knowledge, reliable solutions and trusted partnership. Otometrics is a strategic business unit of Natus Medical Incorporated (North America NASDAQ:BABY).
Path Medical GmbH
Contact: Russell Higgs
Email: higgs@pathme.de

PC Werth
Contact: Stuart Axon
Email: SAxon@pcwerth.co.uk

Opening of Conference by ‘Dee-Sign British Sign Language Choir’ – Sponsored by PC Werth.
‘CAN YOU HEAR ME – by BOB CHILCOTT’ The words of the last verse are from a Deaf persons perspective, whose first and preferred language is Sign Language, which they do not ‘HEAR, but RECEIVE through another person’s hands’. www.deesignchoir.co.uk

PLATINUM SPONSOR:

Phonak
Contact: Lauren Warburton
Email: lauren.warburton@phonak.com

As the industry’s leading provider, we offer the broadest portfolio of life-changing hearing solutions. From paediatric to profound hearing loss, we remain committed to creating hearing solutions that change people’s lives to thrive socially and emotionally. We believe in changing lives and creating a world where ‘Life is on’ for everyone.

Puretone Ltd
Contact: Deke Frickey
Email: deke@puretone.net

Puretone is the UK’s only independent hearing aid manufacturer and proud to support hearing care professionals in the UK for over 40 years. We offer high quality digital and analogue hearing aids, tinnitus management systems and a full range of state-of-the-art hearing accessories and equipment. British made and custom-built in our own factory in Kent. Puretone is the ideal choice for audiologists and your expert hearing care partner.

Quietstar Ltd
Contact: Jason Saunders
Email: jason@quietstar.co.uk

Roger
Contact: Lauren Warburton
Email: lauren.warburton@phonak.com

As the industry’s leading provider, we offer the broadest portfolio of life-changing hearing solutions. From pediatric to profound hearing loss, we remain committed to creating hearing solutions that change people’s lives to thrive socially and emotionally. We believe in changing lives and creating a world where ‘Life is on’ for everyone.
RSCH Audiology
Contact: Karen Kamaing
Email: rsctr.Audiology@nhs.net
Website: www.royalsurrey.nhs.uk/service-list/audiology

THE ROYAL SURREY IS RECRUITING AUDIOLOGISTS! The Royal Surrey County Hospital in Guildford provides Audiology services across 12 sites, offering diagnostics and rehabilitation for children and adults, vestibular, Baha, tinnitus and private hearing aid services. Benefit from taking part in: *Educational activities: Preceptorship program for newly qualified audiologists, monthly clinical training sessions, journal clubs, case study sessions, in-house training *Ongoing research *Opportunity to specialise *Making a difference! Tel: 01483 464108.

RSS Digital Ltd
Contact: Patrick Blake
Email: patrick@rssdigital.co.uk

Sivantos
Contact: Mark Laben
Email: mark.laben@sivantos.com
Website: www.signia-pro.co.uk

New Signia Contrast on NHS Contract!
• Separating speech from noise
• Reducing Listening Effort
Sivantos are delighted to announce the launch of Signia Contrast™. Contrast is a complete family of hearing aids; R+, S+, HP+, SP+ and Custom, plus a wireless solution for unilateral unaidable fittings; Contrast Wireless CROS.

With Contrast, we introduce true binaural processing with e2e 3.0 data transmission technology which enables the transmission of audio signals between the two Contrast in a binaural fitting. This means that Contrast can boast brand new features such as SpeechMaster, Narrow Directionality, eWindscreen™ bin-aural and Spatial Configurator which provide patients with outstanding speech understanding in difficult listening situations.

Add on new Tinnitus therapy signal options such as Tinnitus Ocean Waves and Tinnitus Notch Therapy, HD Music for a richer, fuller music experience, Telecare compatibility and extended connectivity options to external devices via easyTek™, or discreet remote control of the hearing aids via the touchControl App™. Contrast offers patients the natural ease of listening all day long.

Find out more at the Sivantos stand at BAA 2018 or please speak to your Sivantos NHS Audiologist for more details.

Sonic Laboratories
Contact: Fatima Pridmore
Email: Fatima@soniclabs.co.uk

Sonic is a specialist manufacturer and supplier of custom earmoulds for hospitals, private clinics and business customers across the UK. With a significant number of years’ experience supplying audiologists and hospitals, Sonic combines top quality earmould products and supportive after care.

Sonic possess an established production facility, employing the latest technology to provide a wide range of advanced earmoulds and materials. Sonic continually undertake and invest in new development projects to meet the changing demands of its customers.

Soundbyte Solutions (UK) Ltd
Contact: Julia Jepson
Email: julia@soundbytesolutions.co.uk

Soundbyte Solutions invented the original “Parrot” portable speech test device in 1995. Their unique stand-alone system made it easy to conduct consistent speech tests to assess hearing loss. The Parrotplus system now includes the BKB and foreign language tests in quiet and noise. Upgrades to existing systems are available.
Exhibitors

**PLATINUM SPONSOR:**

Starkey Hearing Technologies
Stand No: 36

**Contact:** Sarah Weir  
**Email:** sales@starkey.co.uk  
**Website:** www.starkey.co.uk

Every day you open up a world of sound for your patients. At Starkey we are proud to assist you – by providing your patients with the most technologically advanced hearing devices available – and by providing you unparalleled support, training and assistance. Everything we do helps people experience more: more communication, more participation, more of what they love to do.

Visit Starkey on stand 36 and in our breakout room experience during conference to learn more. Tel: 0800 042 0000.

**UKAS**
Stand No: 8

**Contact:** Olivia Barrett  
**Email:** olivia.barrett@ukas.com

IQIPS is a professionally-led accreditation scheme available across eight physiological science specialisms, including Audiology and pediatric Audiology. The scheme aims to improve the quality of service, care and safety for patients undergoing physiological tests, examinations and procedures. Accreditation for IQIPS is delivered by UKAS, the national accreditation body of the UK, is recognised by the CQC and is strongly supported by NHS England and the Royal College of Physicians (RCP). IQIPS accreditation gives confidence to patients, commissioners and staff about the safety, effectiveness and sustainability of a physiological science service.

**VARTA Microbattery GmbH**
Stand No: 32

**Contact:** Stuart Young  
**Email:** info@powerone-batteries.com  
**Website:** www.powerone-batteries.com

Power one hearing aid batteries are produced in the world’s largest and most advanced production facility > Made in Germany < and provide a perfect energy supply for each hearing aid system. Tel +49 (0)7961 / 921 790.

**Wake Medical Limited**
Stand No: 12

**Contact:** Gill McNulty  
**Email:** gill@wakemedical.co.uk

Ear Care Products was established to provide clinicians with a dedicated supplier for micro suction and irrigation products. Working exclusively in this field we are able to focus on providing a service that is both personal and professional. We aim to make ordering simple and tailored to preferences; guaranteed delivery of your products the next day.

**Your World Healthcare**
Stand No: 46

**Contact:** James Stanyer  
**Email:** james.stanyer@ywrec.com
Meet the British Academy of Audiology Board

Please come to the BAA stand to meet members of the Board and our CEO. Members of the Publications and Communications committee will also be on hand as will members of the Conference planning team.

Thursday 8th November 2018

10:30 – 11:00  Michelle Booth and Barbara Gregg  
12:45 – 13:15  Tim Wilding and Lizanne Steenkamp  
13:15 – 13:45  Heather Dowber and Kath Lewis  
16:00 – 16:25  Sue Falkingham and Wendy Farrington Chadd  

Friday 9th November 2018

10:30 – 11:00  Charlotte Rogers, Claire Benton and Sam Lear  
12:45 – 13:15  Karen Shepherd and Michelle Foster  
13:45  Passport Competition followed by poster winners  

Sue Falkingham  
President

Karen Shepherd  
Vice President

Michelle Booth  
Immediate Past President

Wendy Farrington Chadd  
Consultant Chief Executive Officer

Barbara Gregg  
Treasurer

Claire Benton  
Conference Lead

Lizanne Steenkamp  
Education, Accreditation & Registration incl. HTS.

Dr Tim Wilding  
Education, Accreditation & Registration incl. HTS.

Kath Lewis  
SQC incl. ASG

Michelle Foster  
Publicity and Communications, IT & Website

Sam Lear  
Membership Secretary

Heather Dowber  
Regional Groups

Charlotte Rogers  
Student Liaison
15th ANNUAL CONFERENCE
8-9 November 2018
ACC Liverpool

The British Academy of Audiology would like to thank the following sponsors for their significant contribution towards our 15th Annual BAA Conference:

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