Introduction: The use of Bone-anchored hearing aids (BAHA) in patients with conductive or mixed hearing loss is well established, especially when chronic ear discharge prevents the use of conventional hearing aids. We aimed to investigate the uptake rate and reasons for refusal of BAHA as this has not been reported before.

Methods: A prospectively collated database was reviewed retrospectively to obtain study data. 113 patients were identified from the Greater Manchester BAHA Programme, between September 2008 and August 2011. Case notes were reviewed to obtain demographic and specific data including aetiology of hearing loss, results of BAHA trial and reasons for rejection.

Results: 98 of 113 patients were audiologically suitable for BAHA. 38 (38.78%) of the suitable patients had BAHA implanted. 60 patients (61.22%) declined BAHA. Out of those who declined, 27 (45%) were due to anxiety over surgery, 18 (30%) were due to cosmetic reasons, 16 (26.67%) perceived limited benefit from the device and 6 (10%) preferred conventional hearing aids. 6 patients (10%) eventually chose the wireless CROS system.

Conclusion: Our study highlights a 38.78% uptake rate in audiologically suitable patients. Early involvement of clinicians might help to reduce rejection on basis of anxiety over surgery and cosmetic appearance.

Introduction: Patient and Public Involvement (PPI) is increasingly used in health research, where the public provide information and expertise as a fundamental part of study design. PPI allows the public to act as ‘expert witnesses’ to a clinical condition, providing both clinical data and a more holistic approach to assessing disease impact. There is a long-established role for use of validated questionnaires in research. This study, as part of a larger-scale study into the effectiveness of tonsillectomy, describes the results of this vital qualitative component in developing clinical trials.

Methods: Patients were recruited as inpatients and from otolaryngology outpatient clinics, and participated in one-to-one discussions with investigators. The impact of tonsillitis, treatment expectations, acceptability of study designs and opinions on the validated T14 questionnaire were discussed.

Results: Eighteen patients (17-79 years old) were interviewed, four with recurrent tonsillitis, four awaiting tonsillectomy and ten acting as controls. Patients described that ‘total days of illness’, ‘impact on family’ and ‘time off work’ were more important indicators of illness severity than the ‘number of days with a sore throat’ or ‘visits to the doctor’ used in established questionnaires. Most contributors were happy to be involved in a ‘watch and wait’ study lasting between six and twelve months.
Conclusion: This study shows that establishing the opinions of the public is an important part of study design, particularly if the main outcome measure involves the patient’s perception of an intervention’s success. We recommend that PPI be regarded as an integral element of clinical research design.

**Quality vs. Quantity of Life in Laryngeal Cancer: a Time Trade-Off (TTO) Study**
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**Introduction:** McNeil’s landmark 1981 TTO study recruited 37 participants (firemen and managers) poorly matched to the head and neck cancer population. It was concluded that patients with locally advanced laryngeal cancer (LALC) would trade life years to avoid total laryngectomy (TL). Many centres now offer LALC patients primary non-surgical management.

We aimed to revisit LALC TTO process with more representative participants and modern treatment options.

**Methods:** Our four health state descriptors depicted total laryngectomy (TL) or chemoradiotherapy (CRT) with either optimal outcome, or complications. The 114 participants comprised 63 expert COPD patients and 51 demographically matched healthy controls, mean age 67.3 years. Participants ranked the outcome scenarios, then assigned utility values to each health state using TTO. Utility values lie between 0 and 1 where 0 = death and 1 = respondent’s current health.

**Results:** All but one ranked current health above the treatment outcomes:

<table>
<thead>
<tr>
<th>Health State</th>
<th>Utility value</th>
<th>Rank Ordering (%)</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
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</thead>
<tbody>
<tr>
<td>CRT optimal</td>
<td>0.64</td>
<td>61 23 14 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TL optimal</td>
<td>0.56</td>
<td>38 23 20 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TL optimal</td>
<td>0.33</td>
<td>0 14 47 37</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRT complications</td>
<td>0.32</td>
<td>1 18 19 63</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

The average survival advantage required for a participant to change their preferred choice was 2.1 years.

**Conclusion:** Utility values were more dependent on quality of outcome than treatment modality. Research is therefore required on the relative proportions of good and poor outcomes as this emerges as a key consideration for appropriate patient participation in decision making.

Developing intraoperative cochlear nerve monitoring during vestibular schwannoma surgery and improving hearing rehabilitation in Neurofibromatosis type 2
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**Introduction:** Neurofibromatosis 2 (NF2) is a debilitating condition where eventually the patient can be rendered deaf in both ears due to the presence of vestibular schwannoma (VS) or their treatment. The translabyrinthine approach to the VS in such patients will destroy residual hearing. The use of intraoperative cochlear nerve (CN) monitoring during VS surgery can help preserve the CN anatomically. A decision on whether to insert a cochlear implant can be made if there is objective evidence of CN function post tumour excision. We aimed to develop intraoperative cochlear nerve monitoring during VS surgery in order to help in the decision making process.

**Methods:** We describe our journey through initial experience with standard auditory brainstem responses (ABR) and cochlear implant ABR. The technique was then modified to perform middle ear electrically stimulated ABR using a custom made electrode intraoperatively during vestibular schwannoma surgery. The technique was trialed in an NF2 patient.

**Results:** Waveforms will be displayed from each stage of our testing and the difficulties encountered will be discussed. This resulted in successful cochlear implantation in an NF2 patient following VS removal at the same sitting.

**Conclusion:** Electrically evoked CN monitoring is challenging but possible. It has the ability to provide objective evidence of CN function after tumour excision and aid in the decision making process of hearing rehabilitation in patients who will be rendered totally deaf. This technique will improve the hearing outcomes in NF2 patients.

Cochlear Implantation in Patients with Bilateral Meniere’s Disease
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**Introduction:** Meniere’s disease results in a progressive dysfunction of the inner ear. Approximately 30% of patients develop the disease bilaterally and a small proportion progress to profound bilateral sensorineural hearing loss (SNHL). These patients may benefit from cochlear implantation but only a few small studies have been
Methods: Retrospective case series review of 26 adults with bilateral Meniere’s disease who received cochlear implantation at the Manchester Auditory Implant Centre. Outcomes measured included the 9 and 21 months postoperative score using Bench-Kowal-Bamford (BKB) sentences at 70dBHL in quiet and at 10dBHL signal-to-noise ratio. The performance of Meniere’s patients was compared with sex, device and age matched controls with idiopathic SNHL at 9 month follow up.

Results: 28 Ears in 26 patients were implanted between 1991 and 2009. The mean scores at 9 months in quiet were 83% (range 36 – 100%) and in noise were 66.7% (range 6 – 100%). The mean scores at 21 months in quiet were 87% (range 44 – 100%) and in noise were 71.91% (range 6 – 97%). Meniere’s patients significantly outperformed sex, device and age matched controls with idiopathic SNHL at 9 month follow up.

Conclusion: Patients with Meniere’s disease usually perform well with cochlear implants. On average they outperform sex, device and age matched controls that undergo cochlear implantation. In addition previous chemical or surgical labyrinthectomies should not be seen as a contraindication to implantation and these patients significantly benefit from implantation.

Introduction: Health care-associated infections (HCAIs) remain a major cause of morbidity, mortality and excess cost despite concerted infection control efforts. Infection control precautions are intended to protect the safety of patients and staff in the healthcare environment. We evaluated personal protective equipment (PPE) availability in clinical areas where high-risk emergency ENT care is provided.

Methods: Audit of regional NHS Trust policies and national guidelines. Availability of four key pieces of PPE audited in two designated clinical; a ward-based treatment room, and ENT cubicle of A&E. PPE for the purpose of this audit included disposable gloves (G), aprons (A), face masks (M) and eye protection (E) located at/close to the point of use. We also identified current systems of stock replenishment and points of system failure.

Results: Both clinical areas were initially found to be non-compliant. Disposable gloves and plastic aprons were universally available in both clinical areas, however, eye protection and face masks were largely unavailable. After instigating a raising awareness campaign and implementing changes, compliance improved to almost 100% in both clinical areas.

Conclusion: Risks to healthcare professionals dealing with ENT emergencies is well recognised in the literature and donning full PPE only takes a few minutes if readily available at the point-of-use. Poor PPE availability at the point-of-use exposes healthcare professionals to increase risk of HCAIs and delays patients’ management while appropriate equipment is sought. Our “It’s not a G.A.M.E.” campaign presents a novel, clear, and effective poster initiative which could be adopted nationally to improve PPE availability/compliance.

Availability of Personal Protective Equipment (PPE) during ENT Emergencies: An Audit of National Guidelines

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References