Introduction: A preliminary study that attempts to separate the effects of ethnicity from deprivation using the surgical intervention rates for some otological conditions, particularly cholesteatoma. Indigenous populations have a greater incidence of chronic ear conditions, however it is difficult to separate deprivation and ethnicity as factors. New Zealand's official bicultural society gives an opportunity to study this. An identification of either ethnicity or deprivation as a major factor is important as it enables more effective targeting of health resources.

Methods: Surgical intervention data from the six Central North Island District District Health Boards (DHB) was examined for the interventions of myringotomy with or without grommets; myringoplasty; cholesteatoma related surgery, also the patient demographic profile, including ethnicity and addresses. NZDep2013 is a deprivation index of 1–10 (1-least deprived), assigned to small local areas. Cross tabulation of the data enables preliminary analysis of four ethnic groups and 10 levels of deprivation within the three surgical interventions.

Results: Preliminary data extract: Myringotomy/grommet interventions increase substantially with deprivation score (9.2 to 17.7 per 1000 population; decile 1–10 respectively) although Maori have more than double the intervention rate per deprivation decile. Maori and Pacific Islanders have similar cholestatoma intervention rates (12–16 per 10,000) which is again more than double that of New Zealand Europeans. This pattern is consistent across the parameters described.

Conclusions: Consistent results have been obtained suggesting that ethnicity and deprivation are separate factors that increase the surgical intervention rates for grommet insertion, myringoplasty and cholesteatoma surgery.

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Free Papers (F664)

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Bone Conduction Implants in Pediatric Cholesteatoma Management

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Learning Objectives:

Introduction: The use of bone conduction hearing implants (BCI) to management hearing loss in children with cholesteatoma/CSOM has not been well studied. In particular, can the use of a BCI alter the surgical approach to cholesteatoma and result in better disease management? Are BCI-related complications in patients with cholesteatoma different than patients without cholesteatoma?

Methods: Following IRB approval, a 12 year retrospective chart review of our BCI population at a tertiary academic children's hospital was performed.

Results: 45 subjects were identified with mean age at implantation of 8.2 years (range 1.7 to 19.1 years). All subjects had a device implanted with a percutaneous abutment. In 8 subjects, a BCI was placed in conjunction with surgery for cholesteatoma or chronic suppurative OM.

In total, 58 BCI-related complications occurred in 29 subjects. The majority of the complications were related to skin infection or overgrowth: 18 events required oral antibiotic and/or office-based cauterization and 17 events required revision surgery (43% percent of patients). In the subjects with cholesteatoma, the mean age at implantation was 9 years (range 5–19 years). All 8 subjects with cholesteatoma were also syndromic (Down and Crouzon Syndrome). There was no difference in the complication rate found in subjects with or without cholesteatoma. The use of a BCI permitted alteration of the ear procedure (EAC closure or thick cartilage grafting) that resulted in dry/stable ears in all 8 subjects.

Conclusions: Children with recurrent cholesteatoma/CSOM and unfavorable clinical factors (syndromic) can benefit use of a BCI which then permits use of surgical procedures to better control their underlying ear disease. No postoperative complications occurred related to their ear disease and the rate of BCI-related complications was no different then in children without cholesteatoma.

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The Vibrant Soundbridge middle ear implant in radical cavities

Presenting Author: **Marek Porowski**

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Learning Objectives:

Introduction: Hearing results obtained after tympanoplasty surgeries in patients after radical operations are not always satisfactory. In these patients with chronic otitis media after radical operations and lack of the ossicles, hearing improvement may be achieved with stimulation of the round or oval windows using Vibrant Soundbridge MEI.

Aim: The objective of the study was to analyze hearing results obtained after surgical application of Vibrant Soundbridge in treatment of hearing impaired patients with chronic inflammation of the middle ear, especially after radical modified operations.

Material and Methods: The selected group of patients were adults with chronic inflammation of the middle ear, after radical modified operations with destruction of the elements of the middle ear - tympanic membrane and ossicles. Patients presented conductive or mixed type of hearing impairment. In these patients Vibrant Soundbridge was used as the method of