

ACADEMIC: ORIGINAL RESEARCH

Hear me out: an audit of ventilation tube surgery wait times in paediatric patients with recurrent acute otitis media and/or otitis media with effusion at Christchurch Hospital

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Abstract

Background

Ventilation tube insertion is a common treatment for recurrent acute otitis media and otitis media with effusion. Over recent years, the Christchurch Ear, Nose and Throat (ENT) department has noticed prolonged ventilation tube surgery wait times.

The aim of this study was to investigate the wait times of children who received ventilation tubes for recurrent acute otitis media and/or otitis media with effusion at Christchurch Hospital. The secondary aims were to investigate ethnicity-based differences in wait times and provide recommendations for streamlining this pathway.

Materials and Methods

From a ScOPE report of ENT paediatric patients, demographics and clinical dates were collected for 119 patients who had ventilation tube surgeries between 2 December 2021 and 22 November 2022.

Results

The median wait time from general practice referral to the day of surgery was 43.3 weeks. Patients were waiting a median time of 9.8 weeks after general practice referral to be seen in clinic and were spending 26.3 weeks on the waitlist for ventilation tube surgery. Pacific patients had the shortest wait times of all ethnicities.

Conclusion

Most patients were reviewed at their first clinic within a reasonable timeframe, but patients waitlisted for surgery had waited longer than the recommended timeframes set by the Ministry of Health. Suggestions for improvement include having standardised referral and clinic pathways, having audiologists and general practitioners waitlist patients, and reducing the total number of clinics.

Introduction

Otitis media is a common paediatric condition. It frequently affects young children, who have shorter and more horizontal eustachian tubes and larger adenoids, which spread infection and impede middle ear drainage.¹ Ventilation tubes (VT), or grommets, are a well-recognised surgical treatment for children with recurrent acute otitis media (rAOM) and persistent otitis media with effusion (OME).¹ Annually,

approximately a quarter of New Zealand children aged 0-4 years are affected by acute otitis media (AOM), with 4% of these children developing recurrent acute otitis media.^{2,3} At some point, around 10% of all children will experience OME.²

Christchurch Hospital Ear Nose and Throat (ENT) staff have noticed increased paediatric VT surgery wait times in recent years. Reasons are multifactorial, but not helped by the COVID-19 pandemic, which created constraints in theatre and staffing resources. Increased wait times could result in worse health outcomes, along with higher costs to consumers and the healthcare system.⁴⁻⁷ While there are no best practice timeframes for inserting VTs, the Ministry of Health has five "Elective Services Patient Flow Indicators (ESPI)" that measure whether hospitals/DHBs are achieving performance standards.⁸ Specifically, ESPI 2 outlines that, "patients should have their first specialist appointment within 4 months (17.4 weeks) of referral" and ESPI 5 outlines that, "patients given commitment to treatment should be treated within 4 months (17.4 weeks)".⁸

Therefore, an audit was needed to investigate prolonged wait times and compare them against the two ESPI performance standards, which could aid future efforts in streamlining the ventilation tube surgery pathway.

Christchurch Hospital's current VT surgery pathway typically involves the following:

1. Patients present to a general practice (GP).
2. The GP refers the patient to the audiology department or ENT clinic: Patients are usually referred for an ENT review. They are also referred for VTs if they have had ≥ 6 episodes of AOM in 12 months, 3 months of persistent bilateral OME, 6 months of persistent unilateral OME, or OME with major hearing loss or failed audiometry and flat tympanogram. If the patient did not meet this criterion, then the patient was first seen by an audiologist.^{1,9}
3. The referral gets accepted and the patient is scheduled for the clinic, with audiometry/tympanometry testing.
4. If the initial referral was to the audiology department, audiologists must refer the patient to the ENT clinic for consideration of surgery.
5. The ENT team decide whether VTs are indicated, using evidence-based guidelines.¹
6. ENT surgeons add patients to the VT waitlist.
7. Patients attend a pre-admission clinic.
8. Myringotomy and ventilation tube insertion.

McCallum and colleagues have previously highlighted the inequities of access to ENT clinics and VT surgery for Māori and Pacific children.¹⁰ Although no official protocol has been established at Christchurch Hospital, ENT surgeons have aimed to prioritise these children for clinic assessments and surgeries to promote equitable health outcomes. No formal investigation has yet been done to assess the ethnic differences in wait times.

Aim

The aim of this audit was to investigate the wait times of children who received ventilation tubes for OME and/or rAOM at Christchurch Hospital over the past year. The secondary aims were to investigate ethnicity-based differences in wait times and provide a summary of relevant New Zealand and international initiatives that have improved patient flow for elective surgeries.

Materials and Methods

A report of ENT paediatric patients booked for “Myringotomy and ventilation tube insertion [+/- other procedures]” was produced from ScOPe, a Christchurch Hospital surgery database. Patients who had received VTs between 2 December 2021 and 22 November 2022 were imported onto an Excel document.

ELIGIBILITY CRITERIA

As Christchurch Hospital considers paediatric patients as those younger than 16 years old, audit patients were included if they were <16 years old at the time of VT surgery (with or without adenotonsillectomy), had rAOM or OME as the primary indication for surgery, and had gone through the public system, including outsourcing of surgery to private hospitals.

Patients were excluded if they saw ENT surgeons in private practice before being waitlisted for public surgery or if there was inadequate information on Health Connect South. Those booked for “myringotomy and ventilation tube insertion [+/- other procedures]” but did not ultimately receive ventilation tubes in theatre were excluded. Those who were still awaiting surgery as of 22 November 2022 were excluded as well.

DEFINITION AND TERMINOLOGY

For the purposes of this study, rAOM was defined as ≥ 3 episodes of acute otitis media (acute infection and inflammation of the middle ear) within six months, or ≥ 4 episodes within 12 months.² Otitis media with effusion was defined as the presence of effusion in the middle ear without an acute ear infection.² Pre-admission clinics were defined as clinics attended by the patient and family near the operation date. In these clinics, they met an ENT surgeon, repeated audiometry and tympanometry tests and their symptoms were re-reviewed to identify instances where surgery may no longer be required. If surgery was still indicated, the procedure was discussed and peri-operative plans were made.

DATA EXTRACTION

Each NHI was manually searched on Health Connect South. The following were collated: ethnicity; date of birth, date of being waitlisted; date of preadmission clinic; date of operation; number of clinics and audiometry/tympanometry performed; surgical indication; procedures done; and history of previous VTs. Eligibility was assessed simultaneously. Christchurch Hospital's research team provided approval for this audit and a Health and Disability Ethics Committee “out of scope form was signed off.

STATISTICAL ANALYSIS

Microsoft Excel was used for data analysis. Excel formulas were used to calculate the difference in weeks between two dates (i.e., referral to the pre-admission clinic and referral to waitlist), as well as the mean, median, minimum, and maximum ranges. Due to the skewed distribution of data and the small sample size, data were reported as

medians, with minimum and maximum ranges.

To examine the relationship between ethnicities (i.e., Pacific and NZ European, Māori and NZ European) and whether they met ESPI standard performances of less than 4 months, the chi-square test of independence was used to determine statistical significance (p-value <0.05). This was also used to compare patients first referred to ENT with those first referred to audiology against the ESPI standards.

Results

AUDIT PATIENT SELECTION

During the time period between 2 December 2021 and 22 November 2022, 145 paediatric patients were booked for “Myringotomy with Ventilation Tube Insertion”. After the exclusion criteria were applied, 119 patients were selected for analysis.

AUDIT POPULATION CHARACTERISTICS

Between 2 December 2021 and 22 November 2022, the median age of children at the time of GP referral was 2.8 years (0.1-15.1 years), while the median age of children at the time of VT surgery was 3.7 years (range 0.6-15.5 years). Of the 119 patients, over half were NZ European, while Māori and Pacific children only made up 32% of patients who received surgery. The rest were children from other ethnicities. 81 patients were initially referred to ENT, while 38 patients were initially referred to audiology (Table 1).

Table 1: Demographic characteristics of paediatric patients receiving myringotomy and ventilation tube insertion surgery at Christchurch Hospital between 02 December 2021 and 22 November 2022.

Patient total n (%)	119 (100%)
Ethnicity n (%)	
European	68 (57%)
Māori	32 (27%)
Pacific	6 (5%)
Other ^a	13 (11%)
Referral pathway n (%)	
ENT clinic	81 (68%)
Audiology department	38 (32%)
Received ventilation tubes previously n (%)	
Yes	32 (27%)
No	87 (73%)
Age at the time of GP referral in years	
Median (range)	2.8 (0.1 – 15.1)
Age at the time of ventilation tube surgery in years	
Median (range)	3.7 (0.6 – 15.5)

^a Other ethnicities: Asian, Southeast Asian, Indian, Fijian Indian, Latin American/Hispanic, African.

In terms of operative details, there were 82 (69%) bilateral VT surgeries, 33 (28%) bilateral VT with adenotonsillectomies, two unilateral VT surgeries, and two bilateral VTs and inferior turbinate reduction surgeries. OME was the most common indication for surgery (61%), followed by rAOM (20%), and a combination of OME/rAOM (19%) (Table 2).

Prior to their surgery, the majority (74%) of patients attended two or three clinics, including a pre-admission clinic (range 1-8 clinics), and 74% of patients had two or three audiometry tests (range 1-5 tests) (Table 2).

OVERALL WAIT TIME FROM GP REFERRAL TO THE DAY OF VT SURGERY

For all 119 patients, the median wait time between the initial GP referral and the day of ventilation tube surgery was 43.3 weeks (Table 3). The longest wait time was 1 year 11 months in a Trisomy 21 patient with a complex presentation of recurrent OME. The shortest duration was 1 month and 22 days in a mastoiditis patient.

Patients referred to the ENT clinic first had a median wait time of

Table 2: Surgery details of paediatric patients receiving myringotomy and ventilation tube insertion surgery at Christchurch Hospital between 02 December 2021 and 22 November 2022.

	Total n (%)	Median age in years (at VT insertion)	Age range in years (at VT insertion)
Number of clinics attended between referral and VT surgery (incl. ENT, audiology & pre-admission clinics):			
One	8 (7%)	4.3	1.0 – 12.9
Two	52 (44%)	4.4	0.6 – 15.5
Three	36 (30%)	4.7	0.6 – 11.0
Four or more	23 (19%)	5.0	1.3 – 10.2
Number of audiometry/tympanometry performed between GP referral and VT surgery:			
One	24 (20%)	5.4	1.2 – 15.5
Two	70 (59%)	4.1	0.6 – 12.3
Three	18 (15%)	4.0	1.4 – 11.0
Four or more	7 (6%)	5.3	1.3 – 10.2
Attended preadmission clinic:			
Yes	110 (92%)	4.5	0.6 – 15.5
No	9 (8%)	3.9	1.0 – 12.9
Indication for surgery:			
OME	73 (61%)	5.2	0.6 – 15.5
rAOM	24 (20%)	2.1	0.6 – 5.0
OME + RAOM	22 (19%)	3.8	1.2 – 12.1
Procedure:			
Bilateral ventilation tubes only	82 (69%)	4.3	0.6 – 15.5
Bilateral ventilation tubes + adeno-tonsillectomy	33 (28%)	4.6	1.4 – 11.0
Other ^a	4 (3%)	6.5	2.7 – 10.0

^a Other Procedures: Unilateral VTs, Bilateral VTs with inferior turbinate reduction.

42.3 weeks (range 7.6–93.7 weeks), which was shorter than the median wait time of 48.1 weeks (range 17.7–101 weeks) for those referred to audiology first (Table 3). In fact, three-quarters of all ENT patients had a shorter wait than over half of all audiology patients.

WAIT TIME FROM GP REFERRAL TO FIRST ENT OR AUDIOLOGY CLINIC ASSESSMENT

The median wait time for all 119 patients was 9.8 weeks (range 1.7–31.9 weeks) between GP referral and first clinic assessment.

For those referred to ENT initially, the median wait time to the first clinic was 10 weeks (range 1.9–31.9 weeks) (Table 3). In contrast, for those referred to the audiology department initially, the median wait time to their first clinic was 8.1 weeks (range 1.7–23.6 weeks) (Table 3).

TIME FROM WAITLIST ENTRY TO THE DAY OF VT SURGERY

The median wait time was 26.3 weeks (range 0.1–90.3 weeks) for all 119 patients (Table 3). There was no clear difference between the median wait times of audiology-referred patients (26.3 weeks) and ENT-referred patients (26.1 weeks) (Table 3).

WAIT TIMES FROM DIFFERENT ETHNICITIES

NZ European children made up 68 (57%) of patients, while 32 (27%) were Māori, six (5%) were Pacific, and 13 (11%) were of other ethnicities (Table 1).

From initial GP referral to the day of VT surgery, Pacific patients had the shortest median wait time of 28.4 weeks (range 11.3–84 weeks), while Māori patients had the longest median wait time of 44.8 weeks (range 7.6–101 weeks). NZ European patients had similar median wait times of 43.7 weeks (range 12–93.7 weeks), and patients of other ethnicities had a median of 43.4 weeks (range 17–69.6 weeks) (Table 4).

Table 3: Wait times (in weeks) of paediatric patients receiving myringotomy and ventilation tube insertion surgery at Christchurch Hospital between 02 December 2021 and 22 November 2022.

	Overall (n=199)	Referral to ENT clinic initially (n=81)	Referral to audiology dept initially (n=38)
Time from initial referral to the day of ventilation tube surgery (weeks):			
Median	43.4	42.3	48.1
Range	7.6 – 101.0	7.6 – 93.7	17.7 – 101.0
Time from initial referral to first clinic assessment at Christchurch Hospital (regardless of ENT or audiology referral) (weeks):			
Median	9.8	n/a	n/a
Range	1.7 – 31.9	n/a	n/a
Time from initial referral to first ENT clinic assessment (weeks):			
Median	12.0	10.0	15.6
Range	1.86 – 45.14	1.9 – 31.9	2.6 – 45.1
Time from initial referral to first audiology clinic assessment (weeks):			
Median	n/a	n/a	8.1
Range	n/a	n/a	1.7 – 23.6
Time from referral to being waitlisted for surgery (weeks):			
Median	15.0	11.9	20.0
Range	2.0 – 57.7	2.0 – 57.7	2.6 – 45.1
Time from being waitlisted for surgery, to the day of VT surgery (weeks):			
Median	26.3	26.1	26.3
Range	0.1 – 90.3	0.1 – 82.7	2.0 – 90.3

Table 4: Ethnicity-specific wait times of paediatric patients receiving myringotomy and ventilation tube insertion surgery at Christchurch Hospital between 02 December 2021 and 22 November 2022.

	Māori (n=32)	Pacific (n=6)	European (n=68)	Other ^a (n=13)
Time from initial referral to the day of VT surgery (weeks):				
Median	44.8	28.4	43.7	43.4
Range	7.6 – 101.0	11.3 – 58.4	12.0 – 93.7	17.0 – 69.6
Time from initial referral to first clinic assessment (weeks):				
Median	8.1	9.4	10.5	9.0
Range	2.0 – 31.9	8.0 – 12.57	1.7 – 25	4.1 – 25.1
Time from referral to being waitlisted for surgery (weeks):				
Median	13.9	13.8	15.6	11.0
Range	2.3 – 50.6	8.1 – 33.1	2.0 – 45.1	4.1 – 57.7
Time from being waitlisted for surgery, to the day of VT surgery (weeks):				
Median	25.7	12.9	26.7	31.7
Range	2.9 – 90.3	2.0 – 26.3	0.1 – 82.7	2.1 – 54.9

^a Other ethnicities: Asian, Southeast Asian, Indian, Fijian Indian, Latin American/Hispanic, African.

Similar trends were seen when looking at the time from when the patients were waitlisted to the day of surgery. Pacific patients had the shortest median wait time of 12.9 weeks, while Māori (25.7 weeks), NZ European (26.7 weeks) and other ethnicities had longer median wait times (31.7 weeks) (Table 4).

ESPI PERFORMANCE STANDARDS: OVERALL, ETHNICITIES, AND DEPARTMENT GPS REFERRED TO (TABLE 5)

According to the ESPI performance standards, referred patients should be seen within 4 months (174 weeks).^{8,9} Overall, 99 patients (83%) were seen in clinic within this timeframe. Over 80% of audiology and ENT referral patients achieved this performance standard. All Pacific patients, 88% of Māori patients, and 72% of NZ European patients also achieved this standard, and no statistically significant difference was found between these groups (Table 5).

Additionally, ESPI performance standards expect patients given a commitment to treatment should be treated within 4 months (174 weeks). In total, there were 89 patients (75%) waiting longer than this timeframe on the VT waitlist. When comparing patients referred

Table 5: Comparison of paediatric patient wait times for ventilation tube surgery at Christchurch Hospital (by referral pathway and ethnicity), against ESPI Performance Standards.

	ESPI 2: Time from initial referral to first clinic assessment.			ESPI 5: Time from being waitlisted for surgery, to the day of VT surgery.		
	<4 months	>4 months	p-value (if applicable)	<4 months	>4 months	p-value (if applicable)
Overall (n=119)	99 (83%)	20 (17%)	n/a	30 (25%)	89 (75%)	n/a
Referral pathway						
Audiology department (n= 81)	29 (88%)	4 (12%)	p=0.33	7 (21%)	26 (79%)	p=0.51
ENT clinic (n=38)	65 (81%)	16 (19%)		22 (27%)	59 (73%)	
Ethnicity						
European (n=68)	53 (78%)	15 (22%)	n/a	14 (21%)	54 (79%)	n/a
Māori (n=32)	28 (88%)	4 (12%)	p = 0.26 ^a	9 (28%)	23 (72%)	p=0.4 ^a
Pacific (n=6)	6 (100%)	0 (0%)	Could not calculate	4 (67%)	2 (33%)	p=0.012 ^a

^a compared to European data.
p values determined by the Chi-squared test of independence.

from audiology and ENT, 79% and 73%, respectively, were waiting longer than 4 months on the waitlist (p=0.51). Around one-third of Pacific children spent over 4 months on the waitlist, compared to 79% of NZ European children, and this difference was statistically significant (p=0.012). A slightly lower percentage of Māori children (72%) spent more than 4 months on the VT waitlist compared to NZ European children (79%) (p=0.40).

HISTORY OF SYMPTOMS THAT NECESSITATED ENT/AUDIOLOGY REFERRAL

Symptom severity or duration could not be formally quantified, due to widely variable information in referral/clinic letters. Most children seemed to have at least one episode of rAOM per month, or OME lasting three to six months, which were largely consistent with Health Pathway’s Non-Acute ORL Referral Guidelines.⁹ Children commonly had rAOM and/or OME episodes recurring over one year. Few children had four to six courses of antibiotics prescribed over one year. Other common referral reasons included failed B4 School checks (a free health and development check-up for four-year-olds), failed newborn hearing tests, hearing impairment and speech delay, (typically associated with OME).

Discussion

This audit investigated the wait times of patients referred for VT surgeries. Overall, patients were waiting a median of 43.4 weeks from GP referral to their VT surgery. Three-quarters of patients were waiting longer than the ESPI performance standard of 4 months on the VT waitlist.

Prolonged wait times for VT surgery pose multifactorial risks to children and whānau. Physical risks include hearing loss, speech and language delay, otorrhoea, perforation, and mastoiditis.¹¹ While Cochrane reviews have shown low-quality evidence of surgical benefits at six months and no significant differences at 12 months between those receiving VT surgery for OME/rAOM and those who did not, the social and developmental implications remain as key drivers for early intervention for many ENT surgeons.^{4,6,7,12} Extended waiting periods could hinder the return to school, learning, and social connections for children during critical years. Timely surgery alleviates caregiver anxiety, reduces GP visits and minimises financial and logistical burdens.¹³ The watch and wait method may be viable for some patients, but it is difficult for clinicians to predict which patients would benefit from waiting. Addressing delays in VT service delivery is essential to improve outcomes and reduce these impacts.

Key delays in the pathway were identified. Firstly, ENT patients had shorter wait times for surgery than audiology patients from the day of GP referral, despite audiology patients being seen sooner in clinics. Audiology referrals took eight weeks longer to be waitlisted for surgery, as these patients typically attended more clinics (an average of 3.5 clinics) than ENT patients (an average of 2.3 clinics).

Overt rAOM/OME were typically referred to the ENT department, whereas hearing and speech concerns were referred to audiologists as per the guidelines from Canterbury Hospital Health Pathways.^{9,14} Audiology patients often had non-specific presentations, such as failed B4 School checks, failed newborn hearing screens or speech delay, requiring additional follow-up and a watch-and-wait approach before being referred to ENT for further clinic assessments to list for surgery. Once in the ENT pathway, further delays arose from cancellations, theatre availability, and fluctuating symptoms, necessitating reassessments. Most patients listed for VT insertions had to attend a further pre-admission clinic before their surgery date. Christchurch patients typically attended two to three clinics before surgery, with some requiring up to eight. Minimising clinics and investigations through a streamlined pathway could reduce healthcare costs and challenges to patients and whānau.^{1,10,15,16}

Previous research suggests a higher prevalence of middle ear disease among Māori and Pacific children.^{2,10,17} Of note, McCallum and colleagues¹⁰ found that Māori and Pacific children aged 0–4 years had higher rates of acute hospital admissions for otitis media (RR 1.49 and 1.53, respectively; p<0.05) but lower elective VT surgery rates (RR 0.89 and 0.74, respectively; p<0.05) compared to NZ European children, reflecting the impact of socioeconomic factors, healthcare access barriers, and underdiagnosis.¹⁰ Additionally, Māori and Pacific children aged 5-14 years old were found to have higher acute admission rates.¹⁰ Findings from an audit of B4 school checks in Southern DHB reported Māori and Pacific children were more likely to fail B4 school checks and were less likely to be assessed by an audiologist or ENT surgeon compared to NZ European children.²² While this Christchurch audit did not investigate the rates of OME/rAOM, failed B4 school checks, or acute hospitalisations, Māori (27%) and Pacific (5%) children did comprise a smaller proportion undergoing elective VT surgeries than that of European children (57%) between December 2021 and November 2022. Further ethnicity-specific research could be done to investigate the inequities, under-diagnoses, or under-treatment of rAOM/OME that Māori or Pacific children are likely facing in Christchurch.

At the tertiary level, Christchurch ENT surgeons have prioritised Māori and Pacific patients for earlier reviews and surgeries, with Pacific children with the shortest wait times of all ethnic groups (Table 4). Māori had slightly shorter wait times than NZ European children, but the difference (<2 weeks) is unlikely to significantly reduce health disparities in Christchurch. Public health initiatives at a community and hospital level are needed to improve diagnosis, referrals, and specialist access for Māori and Pacific children.

Various models of streamlined pathways and initiatives have improved patient flow for elective surgeries.^{15,18-20} A Chicago study on a single visit surgery (SVS) initiative, where children with rAOM attended their first confirmatory ENT consultation on the day of the elective surgery.^{15,21} An England hospital successfully introduced “rapid

turnover lists" every two months for OME/rAOM.¹⁸ Bypassing traditional referrals, such as direct waitlisting of patients for surgery by audiologists or GPs, reduced overall wait times significantly, in one case by 62.5 days.^{19,20} Within New Zealand, of note, Counties Manukau DHB gave six GPs with a special interest in ENT extensive training to diagnose and manage simple ENT conditions, allowing them to place patients directly on the VT waiting list.²⁰ These initiatives were possible because of the straightforward diagnostic criteria for rAOM/OME and the guidelines from "The American Academy of Otolaryngology and Head and Neck Surgery Foundation's Clinical Practice Guideline: Tympanostomy Tubes in Children".¹

The ideas inspired by the audit and literature could be considered by Christchurch Hospital. One approach is to establish a standard pathway where GPs refer rAOM/OME patients to a single department, ensuring consistent clinic assessments. Another option is to expedite access to VT surgery by allowing hospital audiologists or GPs with specific ENT training to directly waitlist patients, bypassing an initial ENT specialist appointment. Alternatively, ENT surgeons could use GP or audiology referrals to place patients onto surgical waitlists, with patients attending only a pre-admission clinic. Same day assessments and surgeries could further streamline the process and reduce hospital visits. Lastly, implementing rapid-turnover VT lists could help reduce waitlist sizes, while more complex cases continue to follow traditional referral pathways.

Strengths and Limitations

A key strength of our study is that it is the first audit to our knowledge to examine paediatric VT surgery wait times at Christchurch Hospital, addressing a clinical question with the potential to improve service delivery. Notably, the initial findings prompt changes within the Christchurch ENT department to reduce waitlist times.

However, limitations include small sample sizes, particularly with Pacific and Māori data, which limited definitive and clinically relevant inferences on ethnic differences in wait times.

The results of this study were likely subject to selection bias given that 26 patients were excluded for the following reasons: if they were referred from a private hospital, if there was inadequate clinical information, if their surgery had not taken place by 22 November 2022, or if their surgery was cancelled. Future audits could investigate reasons for why cases were postponed or cancelled.

Additionally, this study was not able to capture data on those in the community who would have met the criteria for VT insertion but were not referred to audiology/ENT, or did not present to the clinic despite a community referral.

Conclusion

In conclusion, patients were waiting a median of 2.3 months (9.8 weeks) to be seen in clinic and were spending a median of 6.1 months (26.3 weeks) on the waitlist for VT surgery. The overall wait time from GP referral to the day of surgery was 10 months (43.4 weeks). Most patients were being reviewed at their first clinic within a reasonable timeframe, however; patients waitlisted for surgery were waiting much longer than the ESPI timeframes set by the Ministry of Health. Ethnicity data showed that Māori patients had similar wait times as European patients, while Pacific patients had the shortest average wait times.

Efforts to reduce wait times require input from health stakeholders, such as representatives from ENT and audiology departments, general practitioners, and Māori and Pacific health providers, with support from Te Whatu Ora. Services are constrained by resource allocation and funding. Developing a streamlined approach would not only allow ENT surgeons to deliver faster care to rAOM/OME patients but may also free up resources and clinic time for patients with other ENT conditions.

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