Reducing Unnecessary Follow Up of Common
Outpatient Ear, Nose And Throat Conditions Using
Presbycusis As Proof Of Concept

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Introduction
In view of the long waiting time for first visit patient at TTSH Otolaryngology outpatient clinic (median = 1 month, 95th percentile = 3 months), the team planned to improve the waiting time by reducing unnecessary follow up of a common benign condition: presbycusis (age-related hearing loss).

Between 1 May 2018 and 30 Jun 2018, 56 (36%) of 157 patients who had a single diagnosis of presbycusis were given TCU with doctor.

Aims
The project aimed to reduce unnecessary* follow up by ENT doctors in outpatient clinic for first visit presbycusis patients from baseline of 20% to less than 5% in 6 months.

This would allow us to:
1) Free up slots to see other needy patients thereby reducing waiting time for outpatient clinic appointments
2) Confer financial cost savings to patients

*Patients with no symptoms of vertigo/ severe tinnitus or other ENT diagnosis that require follow up, or patients with a bilateral bone conduction threshold of > 90dB who may be candidates for a cochlear implant

Methodology
Identify top root causes by Root Cause Analysis (RCA)

Implement interventions through PDSA cycles

<table>
<thead>
<tr>
<th>Cause/Problem (refer to Pareto Chart)</th>
<th>Intervention</th>
<th>Timeline (2018)</th>
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<tbody>
<tr>
<td>Fear of early discharge of patients</td>
<td>PDSA 1a: Education of Junior Medical Officers</td>
<td>3 Jul</td>
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<tr>
<td>Habitual custom to follow up presbycusis patients in 1 year</td>
<td>PDSA 1b: Reminder to Senior Doctors</td>
<td>3 Aug</td>
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<tr>
<td>(After Audit) Poor understanding as to what constitutes significant asymmetry in hearing leading to unnecessary MRIS</td>
<td>PDSA 2: Evidence based education of doctors regarding what constitutes significant asymmetry in hearing</td>
<td>4 Sep</td>
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<tr>
<td>Lack of formal clinic protocol visible in clinic to remind doctors and out-of-phase MOs</td>
<td>PDSA 3: Visible formal clinic protocol</td>
<td>2 Nov</td>
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Results

**Percentage of inappropriate follow up**

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<tr>
<th>% of inappropriate f/u</th>
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<tr>
<td>19</td>
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1) Average inappropriate follow up reduced from 20% to less than 5% in 6 months
2) Number of clinic slots saved in 1 year = 148
3) Cost avoidance for patients per year (based upon costs of appointments, scans and hearing tests) = $24,224

Balance measure – patient satisfaction:

30% happy 😞
70% very happy 😊

Based on questionnaire given to 10 randomly selected patients.

Sustainability:
Random check of 1 week in December 2018 showed an inappropriate follow up rate of 5% (sustained).

Conclusion

Unnecessary follow up of a common condition seen in outpatient clinic can be reduced definitively through education and a formal clinic protocol. This results in freeing up clinic slots, avoidance of unnecessary investigations, cost savings and ultimately a better patient experience.

The results of these implementation can be sustained through not only a formal clinic protocol but also the incorporation of education to junior doctors at the beginning of every Medical Officer posting.