



Singapore Healthcare
Management 2019

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 \approx 1 month, 95th percentile \approx 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.

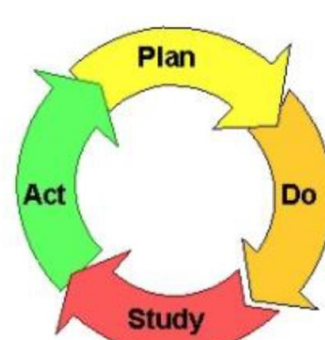
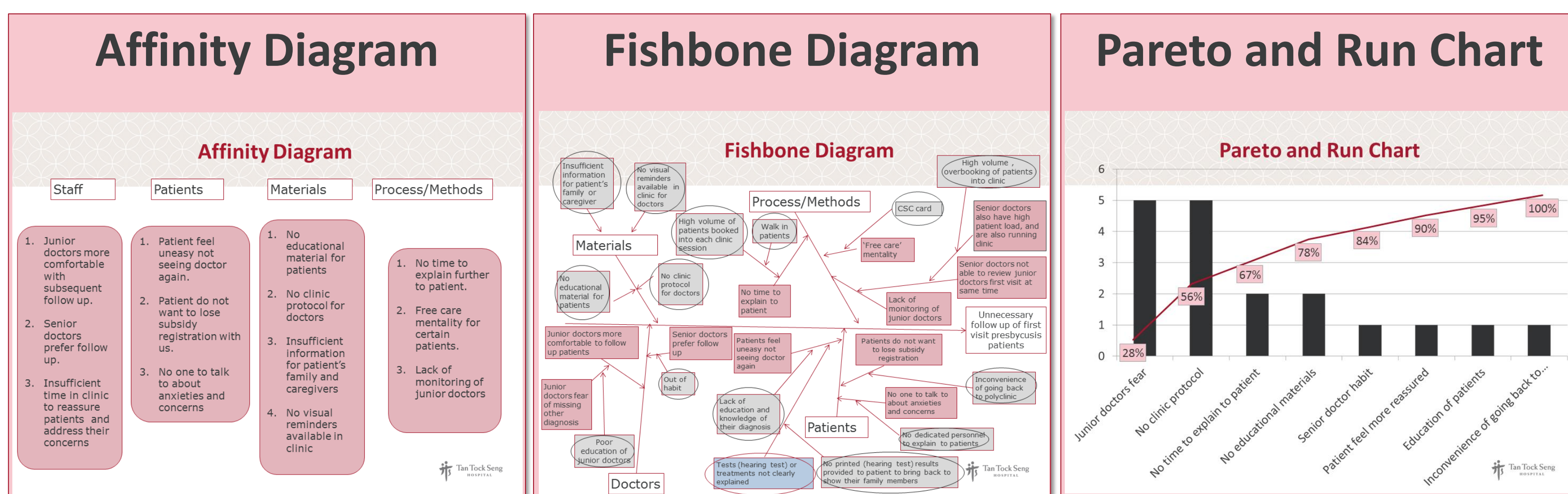
This would allow us to:

- 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)

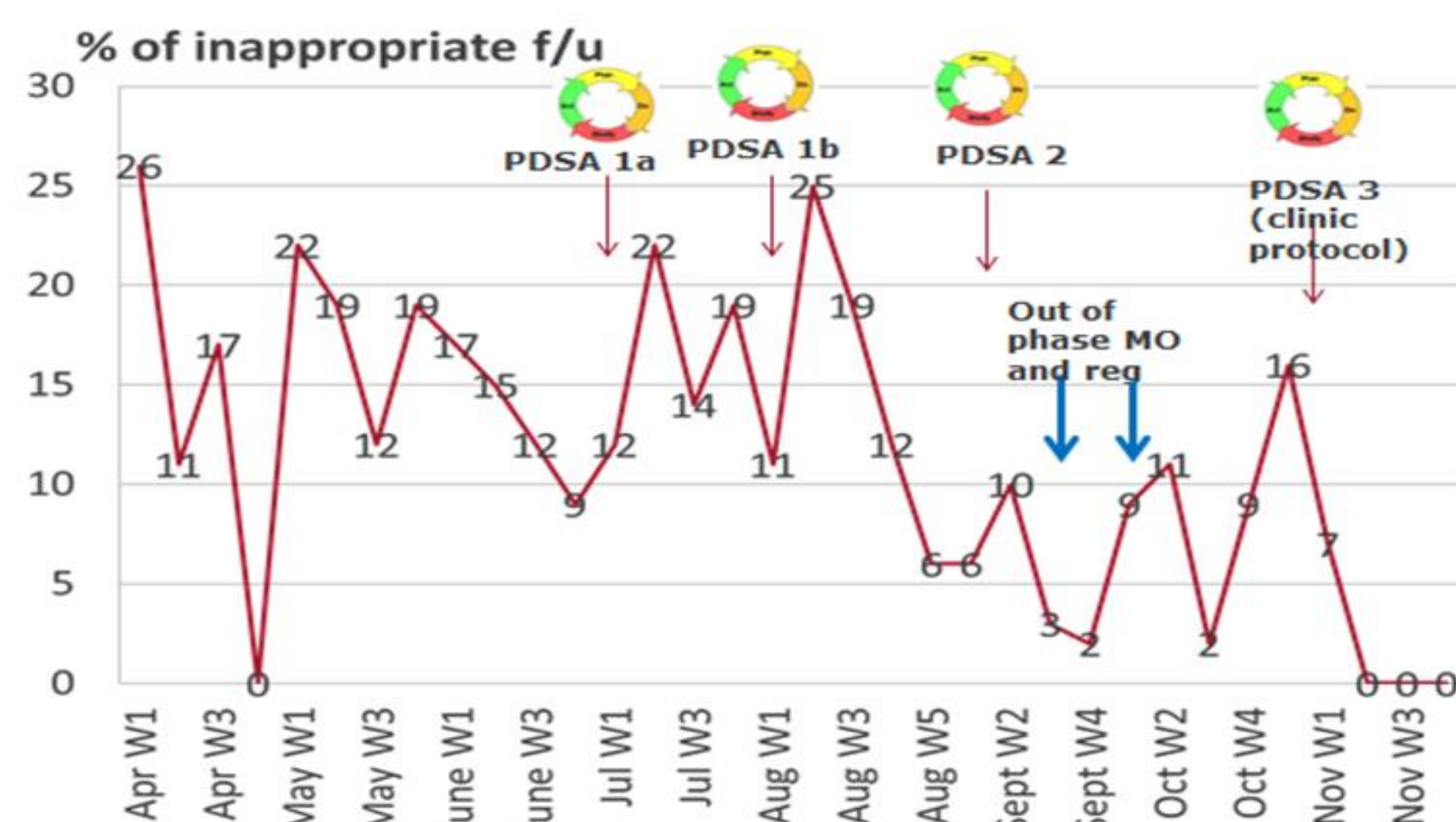


Implement interventions through PDSA cycles

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

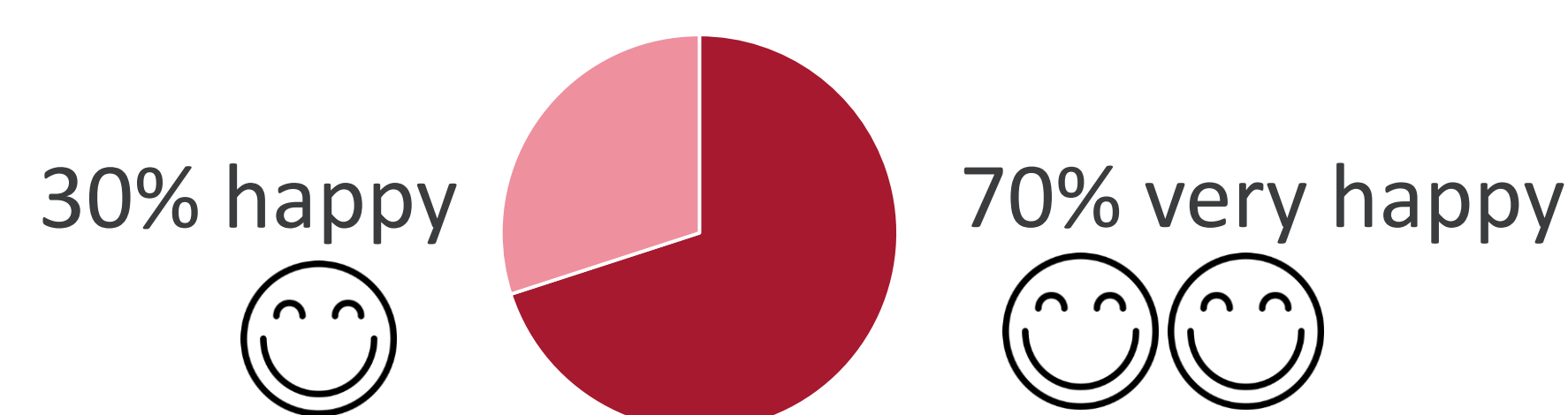
Results

Percentage of inappropriate follow up



- 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:



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.