

Introduction

With an increasing yet rapidly greying population and greater health awareness amongst the better educated, the burden of medical care falls heavily on the health institutions. One of the main challenges of healthcare has always been longer waiting time. In order to uphold an optimal caring environment for the patients, we strive to find ways to manage waiting time more efficiently.

Methodology

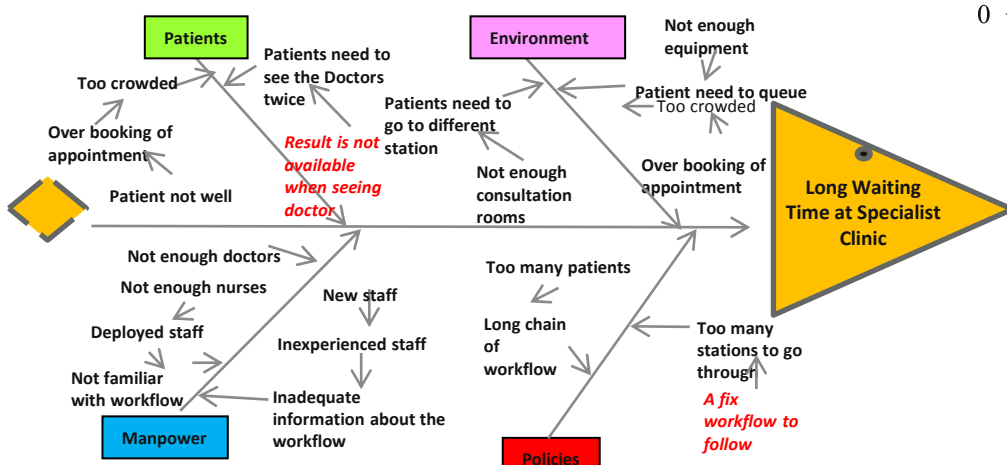
A survey was conducted on 20 patients who required audiogram test during their consultation at the ENT clinic. As shown in the flowchart, the estimated duration of a single ENT clinic visit was 45 minutes, with the audiogram included.

(This does not take into account, the individual waiting times at the various stations e.g. counter, consultation room.)

Station	Activities Before	Symbol	Total Time
A	Patient registered at counter	□	5 mins
B	Patient proceed to consultation room to see doctor	D	10 mins
C	Patient went to audiogram room for audiogram test	□	15 mins
D	Patient return to consultation room for audiogram results	□	10 mins
E	Patient proceed to counter for payment and appointment date.	□	5 mins
Total			Total: 45 minutes

Legend: Inspection/Operation □ Operation ○ Delay D Transport →

Our team used Cause & Analysis diagram to find out the root cause.



Identification of root causes

Fish bone analysis of root causes identified two root causes as **there is a fix workflow to follow** and **result is not available when seeing doctor**.

Staff involvement to solve the root causes :

<p>Doctors</p> <p>Meeting with ENT doctors and proper guidelines were given by the doctors. Patients with the following symptoms to do audiogram test before seeing the doctor:</p> <ul style="list-style-type: none"> Hearing loss Tinnitus Vertigo / Giddiness Bell's palsy BPPV (Benign Positional Paroxysmal Vertigo) 	<p>Audiogram Technician</p> <p>Meeting with audiogram technician on the improved workflow. A trial run of the change of workflow lasted for 1 months. (screening condition: 5 condition)</p>
<p>Nurses</p> <p>Nurses had to screen all cases prior to doctor consultation. Nurses will go according to the guidelines and send patient for audiogram test.</p>	<p>Patients</p> <p>Patients were informed of the audiogram test prior to doctor consultation.</p>

Results

Station	Activities Before Implementation	Symbol	Total Time	Activities After Implementation	Symbol	Total Time
A	Patient registered at counter	□	5 mins	Patient registered at counter	□	5 mins
B	Patient proceed to consultation room to see doctor	D	10 mins	This step will be eliminated		
C	Patient went to audiogram room for audiogram test	□	15 mins	Patient went to audiogram room for audiogram test	□	15 mins
D	Patient return to consultation room for audiogram results	□	10 mins	Patient return to consultation room for audiogram results	□	10 mins
E	Patient proceed to counter for payment and appointment date.	□	5 mins	Patient proceed to counter for payment and appointment date.	□	5 mins
Total			Total: 45 minutes	Total : 35mins		

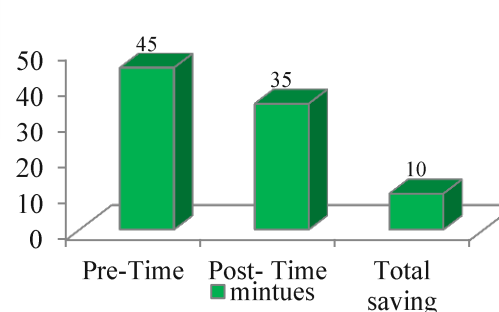
Workflow Time Saving:

Each patient can save up to 10 minutes of waiting time. An average of 20 patients undergoes the audiogram test at the ENT clinic daily.

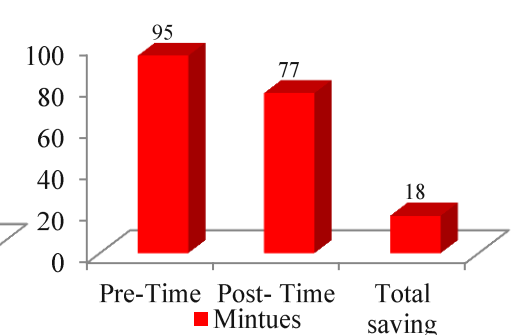
The total amount of time saved is thus 10 minutes x 20 patients = 200 minutes.

Extrapolating further, a total of 200 minutes x 365days = 73,000 minutes or 1216.6hrs may be saved in a year.

Workflow Time Saved



Overall Time saved



Overall Time saving:

After implementation, our team collated the data on patients whom required audiogram test, and the average waiting time they spent at different stations at the ENT clinic. It was discovered that the average time spent at the ENT clinic is **77 minutes**.

Pre-implementation Time: **95 minutes**

Post-implementation Time: **77 minutes**

Total time saved: **95 - 77 = 18minutes**

We have achieved by saving **18 minutes** for each patient.

Patient saved 18 mins.
A total of 1216.6 hours
were saved per year.

Conclusion

In line with our hospital's mission statement, we focus on 'Provide Service Excellence and Quality Health Care'. The hospital values and recognises the contribution of every staff and fosters a culture of innovation and lifelong learning. The newly-implemented workflow will be an all-win situation for the healthcare institution and stakeholders alike.