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Dr Phua Chu Qin, Sengkang General Hospital
Dr Stephanie Yeap, Sengkang General Hospital
Ryan Loh Lye Yan, Sengkang General Hospital
Lee Heng Lun, Sengkang General Hospital
Fong Sin Lee, Sengkang General Hospital
William Yap, SingHealth IPSQ

Singhealth

Sengkang General Hospital
SingHealth

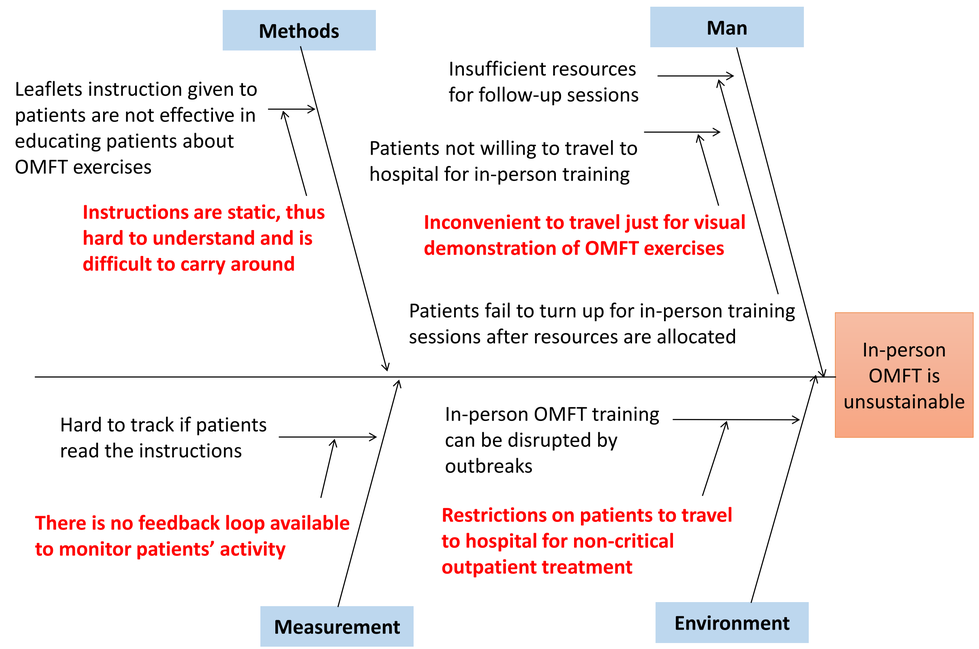
Tele-OMFT (Phase 1): An AgileQI™ Way to Improve the Orofacial Myofunctional Therapy (OMFT) Consultation Process for Obstructive Sleep Apnea (OSA)

Background

Obstructive Sleep Apnea (OSA) is a condition where a person experiences repeated blockage to breathing during sleep. **30.5% of Singaporeans** have moderate to severe OSA.

Orofacial Myofunctional Therapy (OMFT) is an evidence-based training exercise for the upper airway that has been shown in systematic reviews and meta-analyses to improve snoring and OSA. However, the current OMFT model of in-person training sessions and phone consultations, is unsustainable.

Root Cause Analysis



Aims

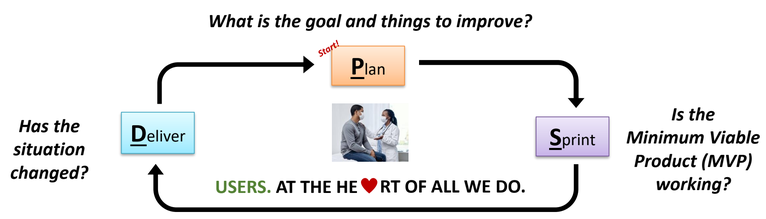
Develop a mobile application that allows staff to remotely educate and train patients on OMFT exercises (Tele-OMFT), with the same level of effectiveness as in-person sessions and improving the OSA consultation process.

Methodology

We developed the OMFT application iteratively using **AgileQI™** values and the **Plan-Sprint-Deliver (PSD) cycles**, incorporating user feedback after each "Sprint". Sleep Unit staff, outside the project team, were recruited as users to provide unbiased feedback and verification to optimise the application's functionality.

Values of AgileQI™

Individuals and interactions
Working solution
Customer collaboration
Responding to change



AgileQI™ is a quality improvement methodology that incorporates the Agile mindset and principles, focusing on the purpose, people and interactions; and brings value to the end user (customer), giving flexibility for the user's changing needs.

Sprint 1: Creation of OMFT Videos

Plan

User Stories from Project Backlog

a. Users can follow videos to perform OMFT exercises on their own.
b. Videos have audio and countdown timer.

Sprint

Tasks done to achieve User Stories

a. Film and edit exercise videos into suitable formats.
b. Overlay audio, instructions and timer.

Deliver

Gather user feedback

a. Users were able to follow videos and instructions to perform exercises.
b. Suggested improvements include:
   - Inclusion of subtitles
   - Positioning of countdown timer

Results: All users (N=6) successfully followed the videos and performed the exercises correctly

Sprint 2: Creation of Beta-Testing App

Plan

User Stories from Project Backlog

a. Users can access videos easily on mobile devices.
b. Users' progress can be monitored by Sleep Unit staff.

Sprint

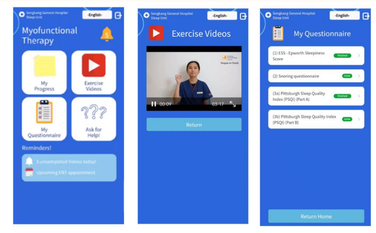
Tasks done to achieve User Stories

a. Develop platform for users to search and view videos on mobile devices.
b. Incorporate dashboard to track users' progress.

Deliver

Gather user feedback

a. Users were able to access and view all videos **within stipulated timeframe of 5 to 7 minutes** per video.
b. Suggested improvements include:
   - Improve readability
   - Improve user interface



Results: All users (N=6) successfully navigated the features in the app and completed viewing each video within **5 to 7 minutes**

Sprint 3: Administering Questionnaires

Plan

User Stories from Project Backlog

a. Users can access and answer clinical questionnaires easily.
b. Users' answers can be aggregated

Sprint

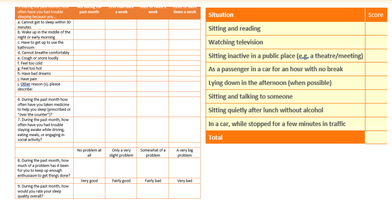
Tasks done to achieve User Stories

a. Add validated clinical questionnaires into application for patients to answer.
b. Add in function to aggregate results for further evaluation

Deliver

Gather user feedback

a. Users can access and answer all questionnaires **within the stipulated timeframe of 6 minutes.**
b. Gather insights to improve duration to complete questionnaires.



Results: All users (N=4) could complete the questionnaires **within 6 minutes.**

Conclusion

Tele-OMFT demonstrates **effectiveness** equivalent to traditional in-person sessions, as confirmed by Sleep Unit staff. This modality possesses **significant scalability and sustainability potential** due to:

1. **Eliminated patient travel time** and **reduced training disruptions** especially during pandemic outbreaks.
2. **Optimized staff utilization** by redirecting repetitive training resources **towards higher-value activities**.

Phase 2:

Features validated in the mobile beta-test application will be integrated into the Health Buddy platform. This integration will empower Sleep Unit staff to gather real-time data and feedback from recruited OSA patients, thereby enabling further Tele-OMFT functionality enhancements.