

Optimising SGH Specialist Outpatient Clinics' (SOCs) Session Utilisation



PROBLEM DEFINITION & OBJECTIVES

Problem Description: There are 22 Specialist Outpatient Clinics (SOCs) in SGH, offering specialised medical services to patients. In FY2013, SGH SOC attended to 687,242 patients (SGH, 2014). With such a large pool of patients, which is expected to increase in the future, it is imperative for SGH to improve the actual utilisation of the consultation rooms in the clinics. However, before analysing the utilisation situation in SOC, accurate utilisation figures must first be obtained. This project focused on studying 7 of the SOC in depth as a sample to propose solutions for all SOC.

Objective I: Obtain Accurate Utilisation Figures

- Identify discrepancies between punctuality reports and ground operations
- Propose solutions to obtain accurate utilisation figures

Objective II: Improve Utilisation of Sessions in SOC

- Identify root cause factors contributing to sub-optimal levels of utilisation
- Propose solutions to improve utilisation in SOC

Objective III: Determine the Maximum Utilisation Rate

- Derive the maximum utilisation rate
- Recommend measures to monitor utilisation rate and compare across SOC

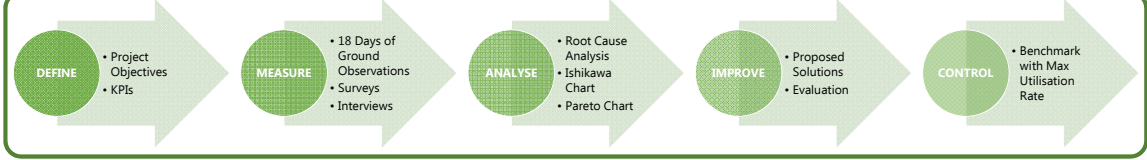
KPIs

$$1 \text{ Booked Utilisation} = \frac{\text{Booked Sessions}}{\text{Available Sessions}}$$

$$2 \text{ Actual Utilisation} = \frac{\text{Utilised Sessions}}{\text{Available Sessions}}$$

Actual utilisation is lower than booked utilisation due to various reasons such doctors on leave.

METHODOLOGY

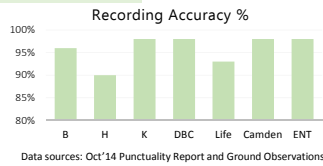


I – OBTAIN ACCURATE UTILISATION RATE

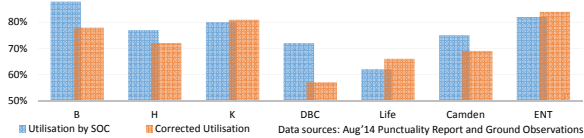
ANALYSIS: Causes of Inaccurate Utilisation Rate

Recording Errors:

- Last minute usage of rooms are not recorded in some SOC
- Rooms used by Medical Officers are not recorded in some SOC
- Varying definitions of start and end time
- Very common for doctors to use different rooms from booked, but such cases may not be recorded in some clinics



Discrepancy in Utilisation Rate



Calculation Errors:

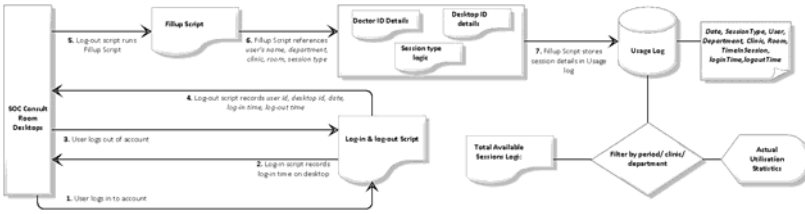
- Human errors when tabulating Punctuality Report
- Inaccurate assumptions made to utilisation rate calculation

RECOMMENDATIONS: Obtain Accurate Utilisation Rate

Two possible recommendations were made to the SOC management for their consideration.

1 Automated – Desktop Login/Logout System

Description: A windows script will be run when doctors log in the desktop in the consultation room. This script keeps track of user information and session utilisation details.



2 Manual – Poka Yoke Punctuality Report

Description: Improvements are made to the Punctuality Report template to address recording and calculation errors. Standard Operating Procedure (SOP) of the punctuality report is developed, including the standardised terms and recording practices

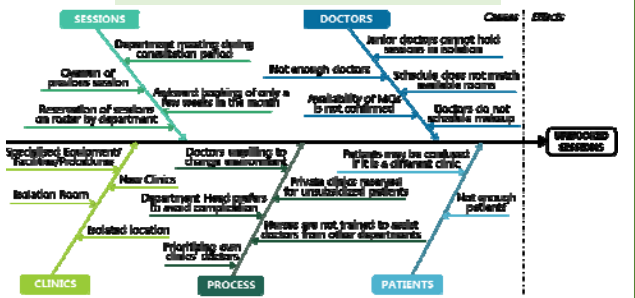
A weekly form placed in each room → For immediate recording
 Tabulated at the end of each week by Nurse Clinician to ensure that the total available sessions sum to 5.
 → Decreases human error when tabulating at the end of month

Clinic's Weekly Punctuality Report			
DATE/TIME	DOCTOR	SESSIONS	REMARKS
08:00-09:00	DR. [Name]	1	Planned Leave
09:00-10:00	DR. [Name]	1	Planned Leave
10:00-11:00	DR. [Name]	1	Planned Leave
11:00-12:00	DR. [Name]	1	Planned Leave
12:00-13:00	DR. [Name]	1	Planned Leave
13:00-14:00	DR. [Name]	1	Planned Leave
14:00-15:00	DR. [Name]	1	Planned Leave
15:00-16:00	DR. [Name]	1	Planned Leave
16:00-17:00	DR. [Name]	1	Planned Leave
17:00-18:00	DR. [Name]	1	Planned Leave
Summary		No. of Sessions Utilised (Total)	No. of Sessions Unutilised (Total)

Space allocated to entries that are different from roster.
 → Prevent messy or missing recordings due to no allocated space
 Catered to 2 possible room usages per session.
 → More accurate reflection of utilisation

II – IMPROVE UTILISATION

ANALYSIS: Causes of Unbooked Sessions

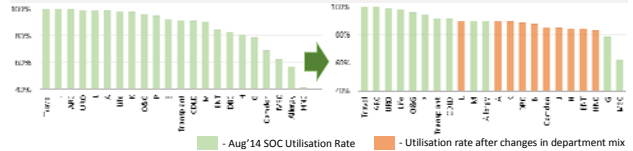


RECOMMENDATIONS: Improve Booked Utilisation

1 Change Department Mix

Description: Change the department mix within the clinics to smooth out the variations in booked utilisation across the clinics.

- Step 1: Shift sessions from mixed clinics to specialty clinics
- Step 2: Shift sessions from highly utilised mixed clinics back to home mixed clinics
- Step 3: Shift (partial or all) sessions of a specialty from highly utilised clinics to less utilised clinics

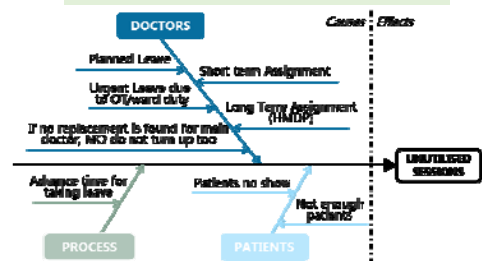


2 Set Up Cross Booking

Description: To improve planned utilisation by introducing coordination mechanisms to tackle silo mentalities and enabling doctors which are constrained by their home clinics to take up sessions in other clinics

- Standardised framework for HODs to forecast extra sessions for next year
- Easily accessible Excel dashboard for doctors to see locations of available sessions

ANALYSIS: Causes of Unutilised Sessions



RECOMMENDATION: Decrease Blocked Rate

1 Encourage Replacement of Planned Leave

Description: To reduce the frequency of wasted booked sessions due to planned leave (leave that can be planned ahead, e.g. annual/maternity/study leave)

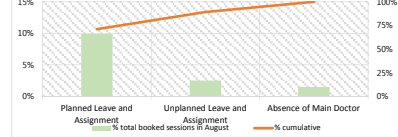
- Set up a reasonable replacement rate (sessions replaced by another doctor/sessions blocked due to planned leave), considering limiting factors like doctors' schedule.
- Strictly enforce the existing 4-8 weeks notice period for leave

III – DERIVE MAXIMUM UTILISATION RATE

Sessions Unbooked

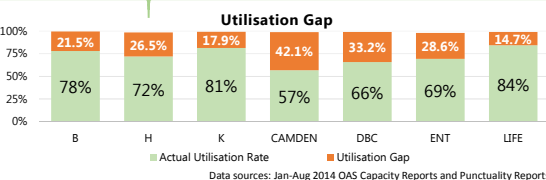


Sessions Unutilised When Booked



Maximum Utilisation Rate = 100% - % Unplanned Leave & Assignment

Utilisation Gap = Maximum Utilisation - Current Utilisation



Data sources: Jan-Aug 2014 OAS Capacity Reports and Punctuality Reports

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