



Singapore Healthcare Management 2018

To Improve Hand Hygiene Compliance Rate of Doctors at Bukit Merah Polyclinic

Yap Sui Ling, Hwang Siew Wai, Wong Siew Hui,
Lim Sok Hoon, Ng Ah Mui, Yeo Chek Cheng,
Jonathan Wee Quanyao, Siti Hajar Binte Mohamad Arip

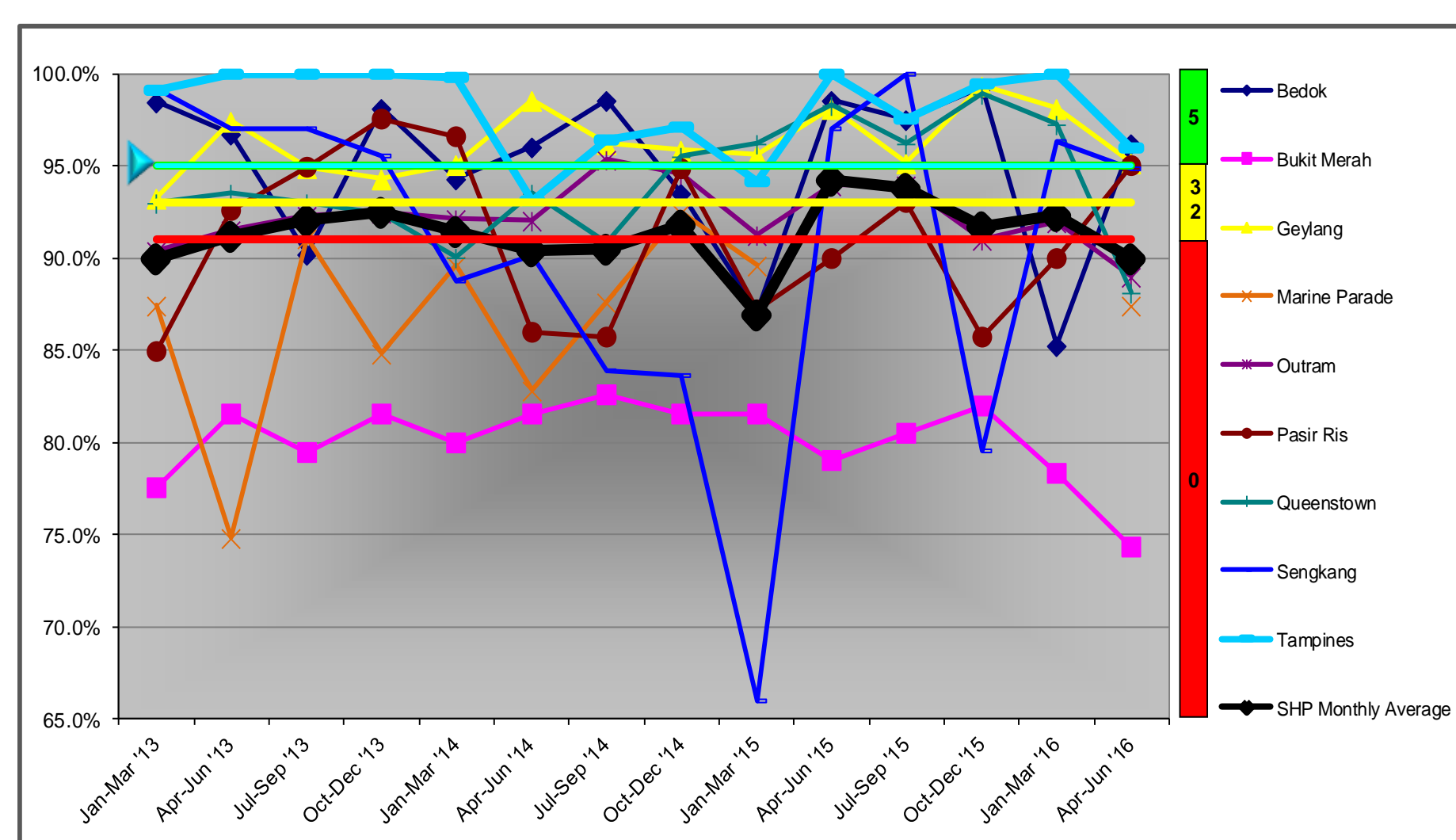


Polyclinics
SingHealth

Introduction

- Hundreds of millions of patients are affected by healthcare-associated infections worldwide each year, leading to significant mortality .
- Non-compliance with hand hygiene is one of the contributing factors to the transmission of infectious pathogens within outpatient clinics.
- Hand hygiene is the single most important measure to reduce transmission of microorganisms from one person to another or one site to another on the same patient.

Hand Hygiene Compliance



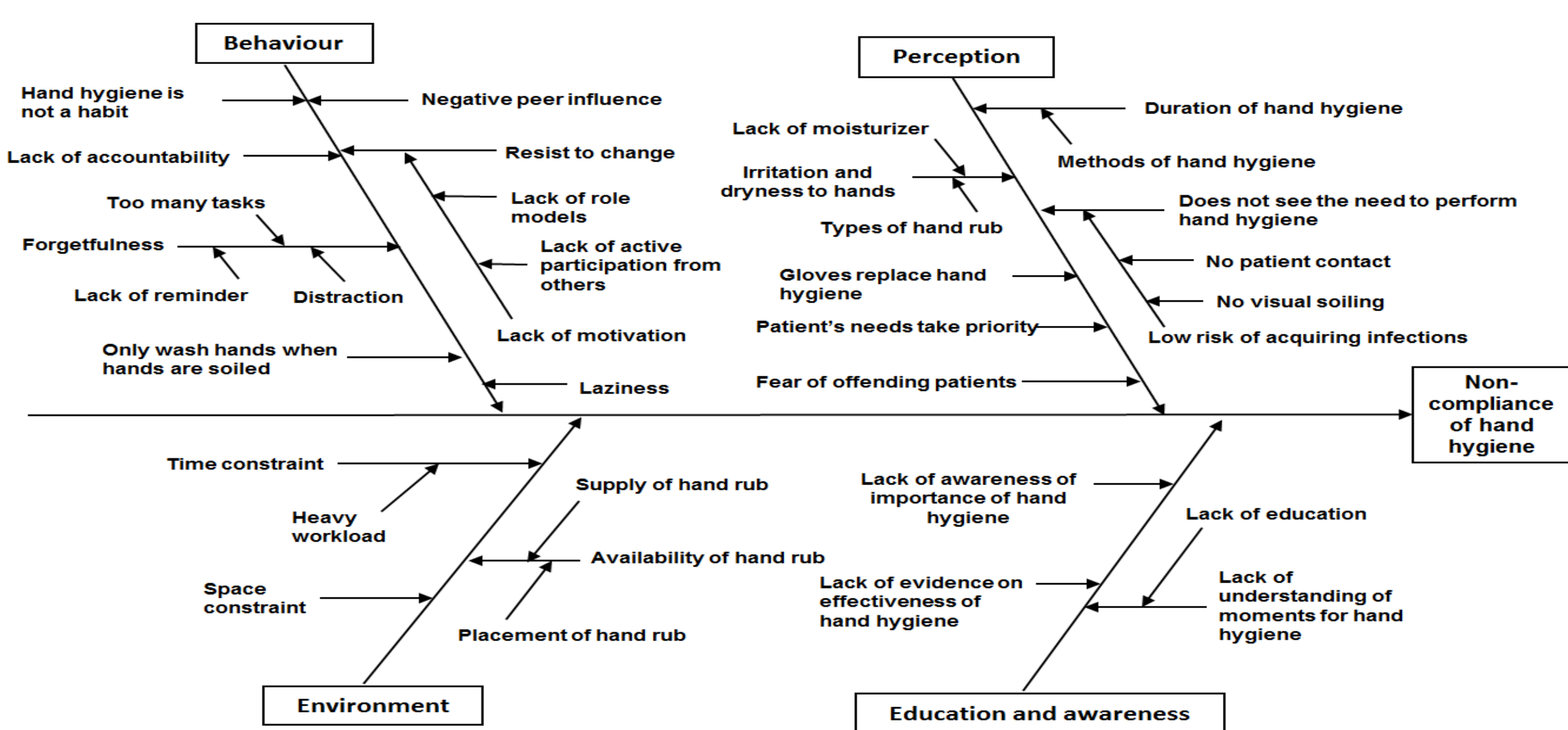
It was observed that Bukit Merah Polyclinic's hand hygiene compliance rates were ranging from 65% to 82% which were significantly lower as compared to the other Polyclinics that were achieving rates of 85% to 100%.

Mission Statement

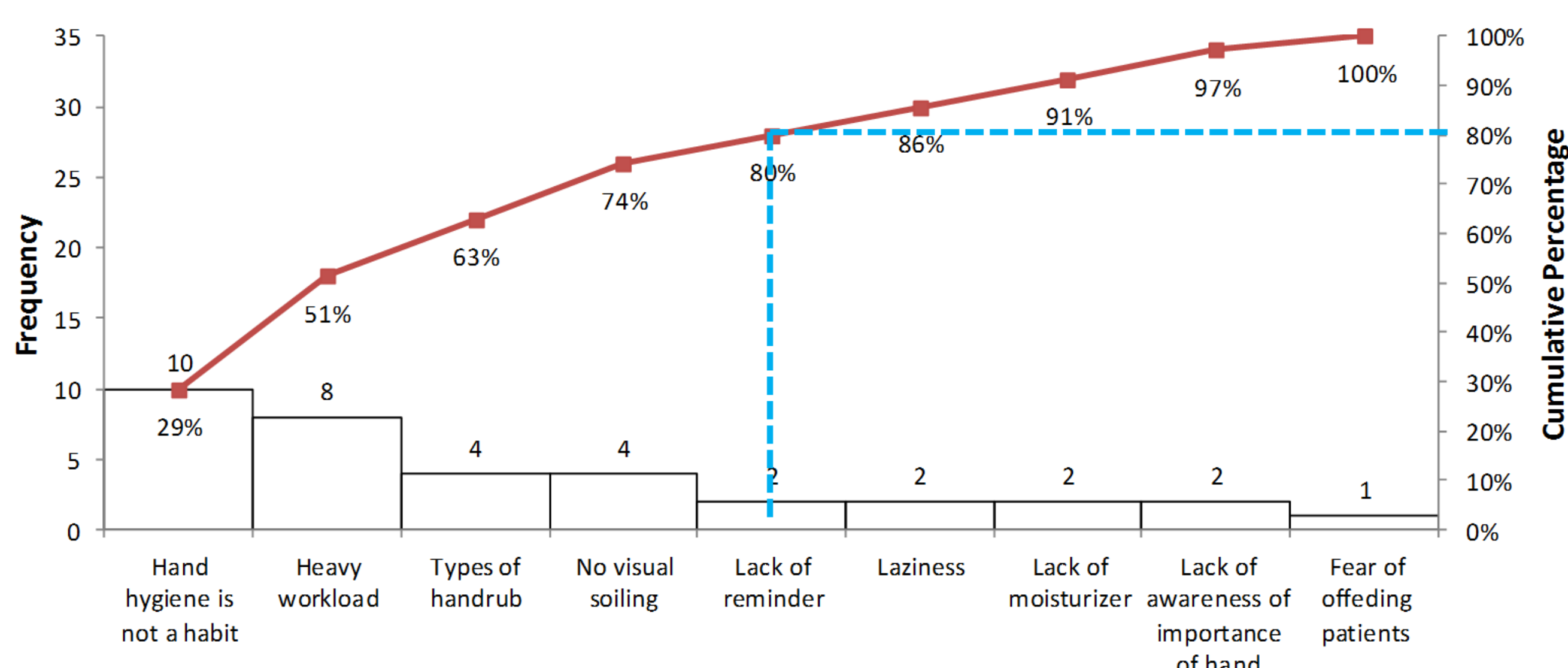
- To improve hand hygiene compliance rate of doctors at Bukit Merah Polyclinic from 65% to at least 95% within 6 months.

Methodology

- Cause and Effect Diagram



- Pareto Chart



- Based on the pareto chart, 3 main factors were worked on:
 1. Encourage doctors to create a habit of performing hand hygiene
 2. Providing routine reminders to doctors
 3. Types of hand rub that doctors prefer

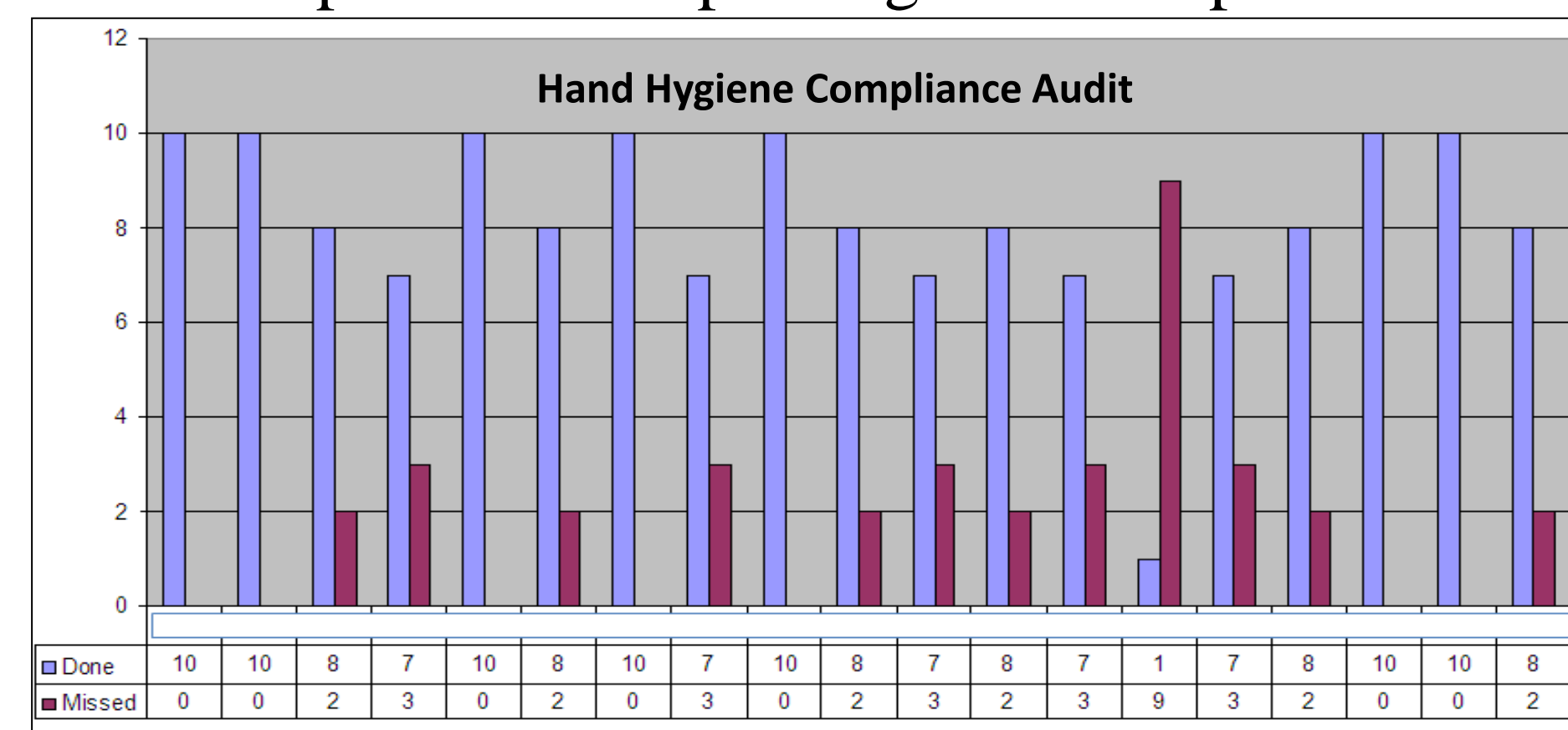
- The following formula was used for hand hygiene compliance rate:

$$\frac{\text{Number of hand hygiene performed by doctors at given opportunity}}{\text{Number of hand hygiene opportunities observed}} \times 100\%$$

Interventions

Intervention 1 – Reminders and forming habits

- Clinic director's reminder to staff at clinic meeting in June 2016
- Routine emails and verbal reminders
 - Create awareness on importance of hand hygiene.
 - Strengthen understanding on 5 moments for hand hygiene.
- Hand Hygiene Audit data collection
 - Points were given for every hand hygiene opportunity performed.
 - The compliance data was then shared bimonthly to all doctors via email.
 - Doctors were given initials to allow them to identify their own results for comparison with peers thus improving their compliance rates.



Intervention 2 – Visual reminder

- Yellow hand signs were pasted at doctors' computer screens to act as an active reminder for doctors.

Intervention 3 – Combination of hand hygiene audit and visual reminders

- At every hand hygiene opportunity, if a doctor does not perform hand hygiene required, he will receive a hand sign which will be placed in his consultation room for the whole day.
- Different colours represent the specific moment that was not performed.

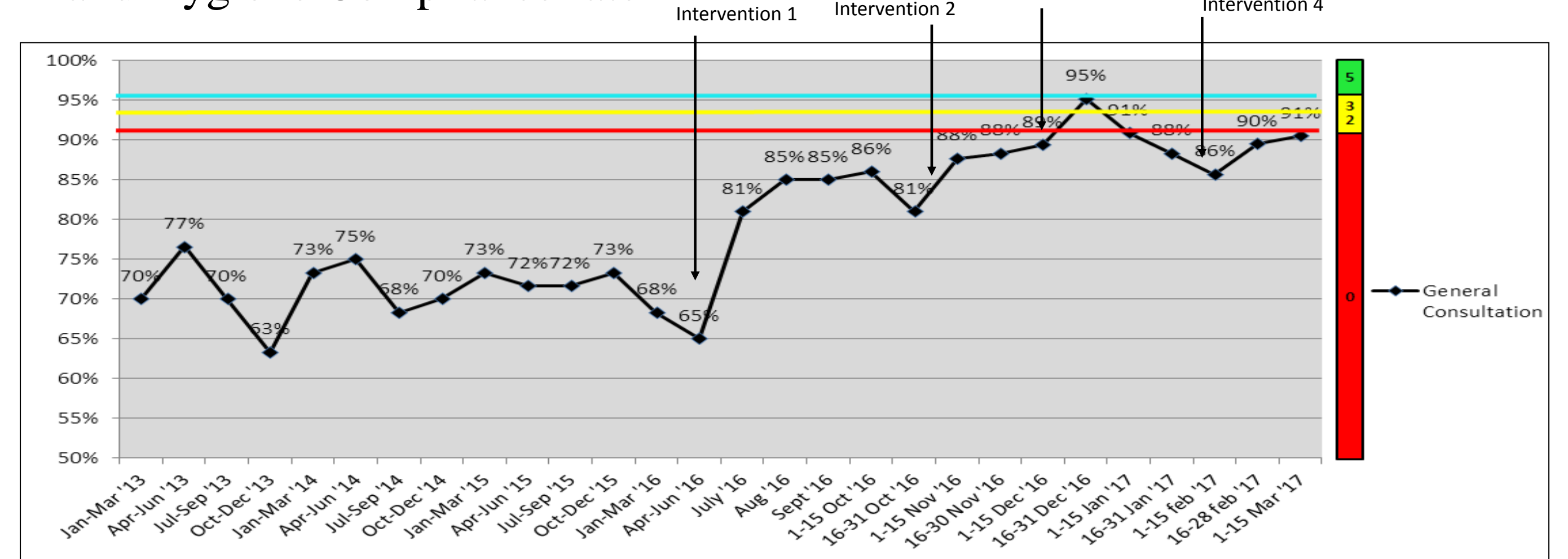


Intervention 4 – Hand rub preference

- A survey was conducted to identify the hand rub that doctors prefer. Results showed that 62% (13) preferred microshield while the rest preferred desderman gel.
- Given that the results were not lopsided, doctors were then given the opportunity to choose their preferred hand rubs which will encourage them to be more compliant.

Results

- Hand Hygiene Compliance rate



- Results showed that there is a shift in the data, and a steady trend is observed.
- Subsequent data collection from March 2017 onwards also showed improvement in overall hand hygiene compliance rates.

Spreading

- Doctors had shown significant improvement in their hand hygiene compliance rates with the interventions. This will be spread to the ancillary sections where hand hygiene compliance rate is similarly low.

Conclusion

- This Quality Improvement project has shown improvement in doctor's hand hygiene compliance rate after different interventions.
- Emails on their audit results, reinforcement by clinic director and placing hand signs for non-compliance have significant impact on hand hygiene compliance.
- This is especially when the audit results can be seen by all doctors allowing for comparison and motivation to do better.