

Quality improvement project to increase the referral rate to a Weight Management Clinic in Ang Mo Kio Polyclinic

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Mission Statement

To increase the referral rate to a hospital-based Weight Management Clinic (WMC) among identified Teamlet D obese patients* in Ang Mo Kio Polyclinic from 0 to 9 percent over 6 months. (July - December 2021).

* Empanelled Teamlet D base patients, aged 18 - 64 years old, who have at least 2 chronic visits in the past 1 year, and whose Body Mass Index (BMI) was last recorded to be $\geq 32.5\text{kg/m}^2$ in the preceding 12 months.

Team Members

	Name	Designation	Department
Team Leader	Dr Lee Jun Hwee, Benjamin	Resident	Medical
Team Members	Dr Kao Chin Yu	Senior Resident Physician	Medical
	Ms Wu Liqin	Care Manager (CM)	Nursing
	Ms Tan Li Fang	Care Coordinator (CC)	Operations
	Mr Muthiah Krishnasamy	Patient Care Assistant (PCAT)	Operations
	Ms Yap Ai Lin	Patient Service Associate (PSA)	Operations
Sponsor	Dr Chong Wern Siew, Christopher	Head, Ang Mo Kio Polyclinic	Medical
Facilitator	Dr Tan Hue Min	Associate Consultant	Medical

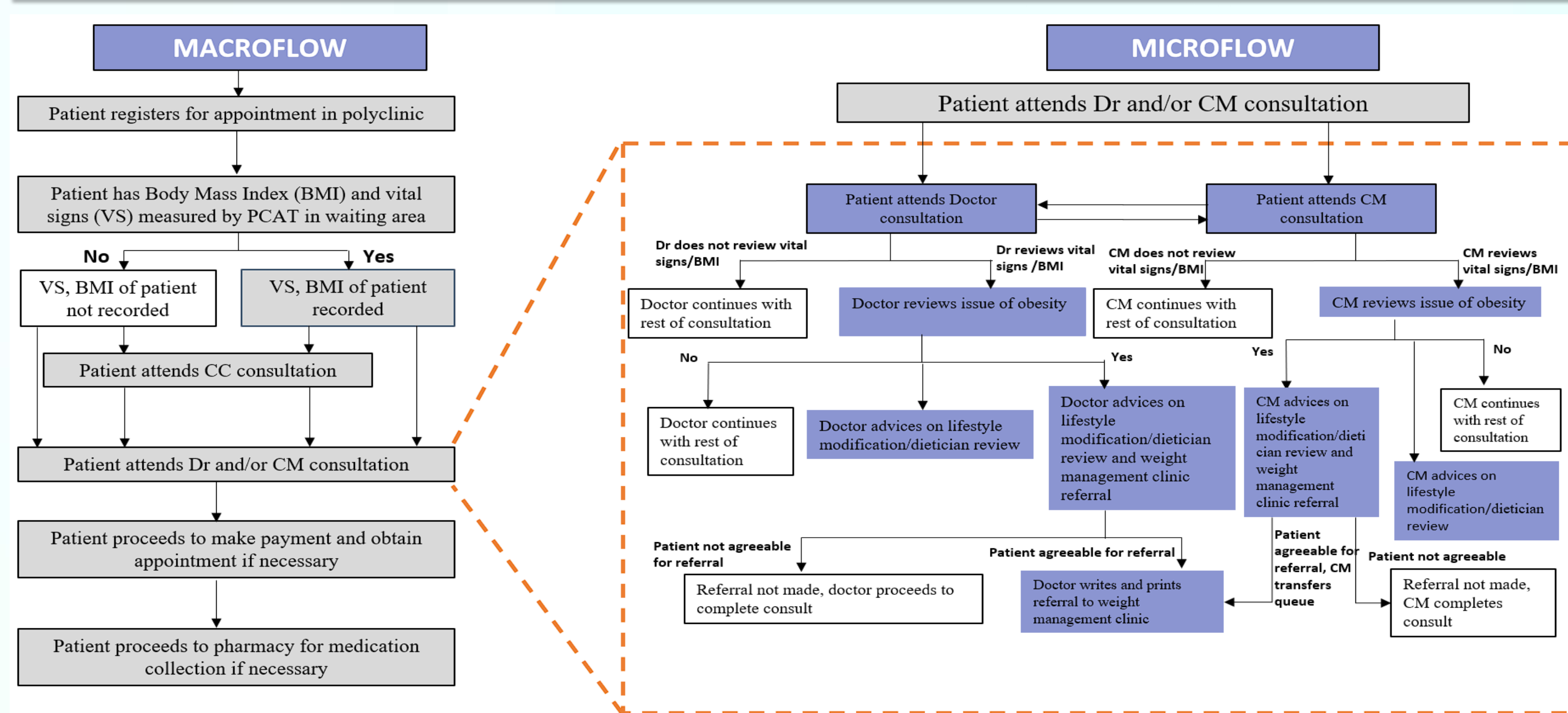
Evidence for a Problem Worth Solving

- The prevalence of obesity in Singapore has risen from 5.5% in 1992 to 10.5% in 2020 and is projected to increase even further in the next few decades.¹
- Lifestyle modification strategies remain the foundation of a long-term weight management plan. However, these interventions alone often only produce modest, short-term weight loss with diminishing returns.^{2,3}
- Intensive behavioural and pharmacotherapy-based interventions have shown to result in both clinically meaningful and sustainable weight loss.
- Hence, clinical practice guidelines by NHGP recommends patients who are $\text{BMI} \geq 32.5\text{kg/m}^2$ be referred to a WMC for management of their obesity.⁴

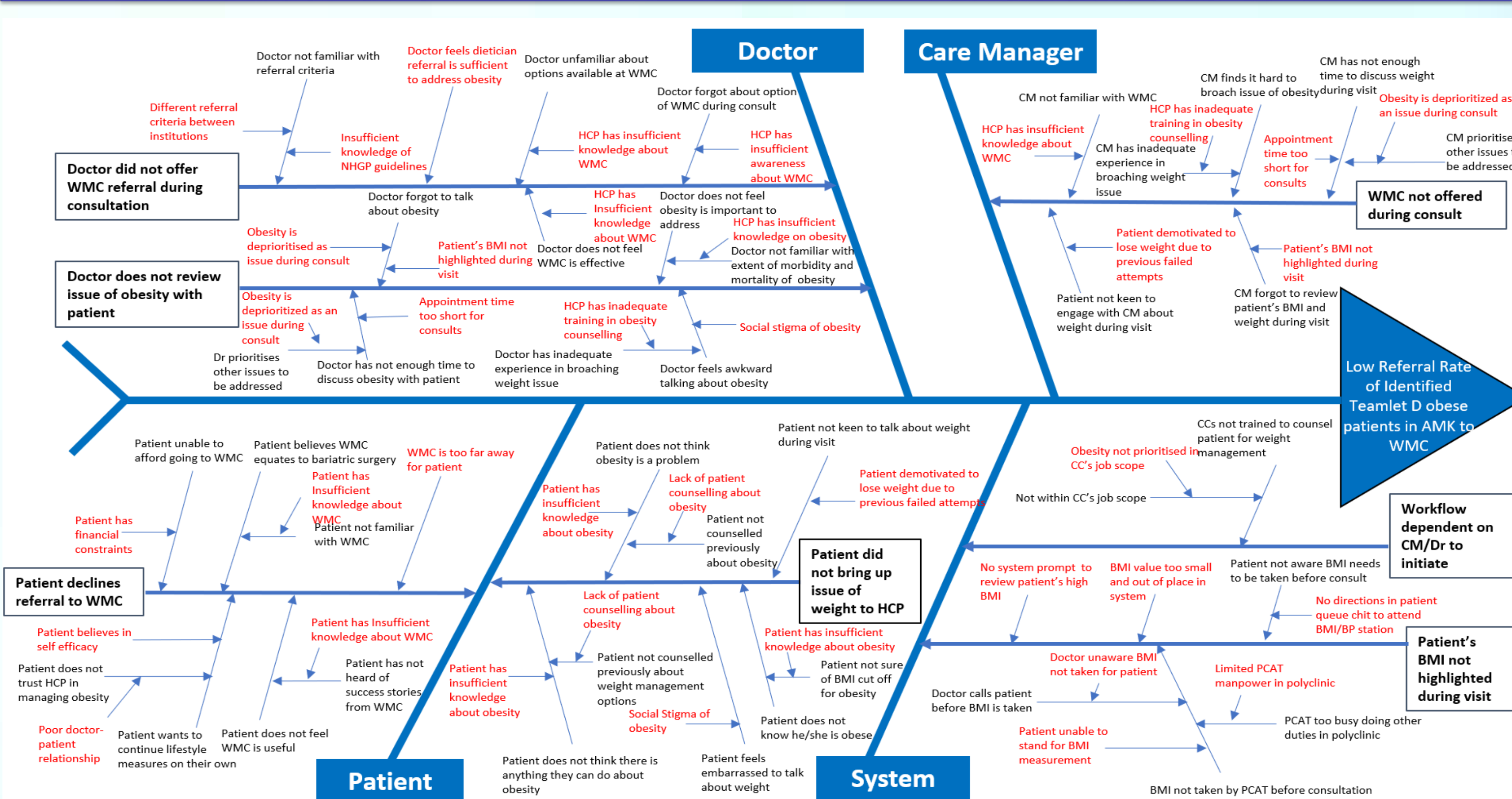
Current Performance of a Process

- The baseline referral rate of AMK Teamlet D to a WMC was persistently low at 0% during the reference period. The mean WMC counselling and obesity counselling rates were 2.4% and 13.2% respectively.
- In comparison, the mean referral rate to WMC of all NHGP teamlets except Geylang was 0.5% with the highest mean referral rate to WMC being 3.1%.

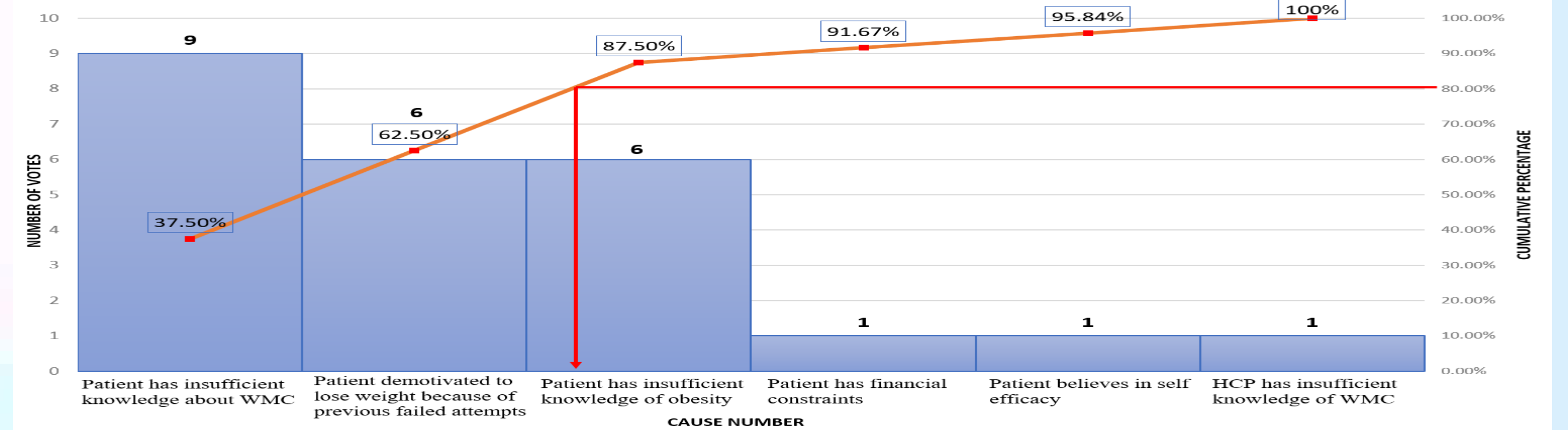
Flow Chart of Process



Cause and Effect Diagram



Pareto Chart

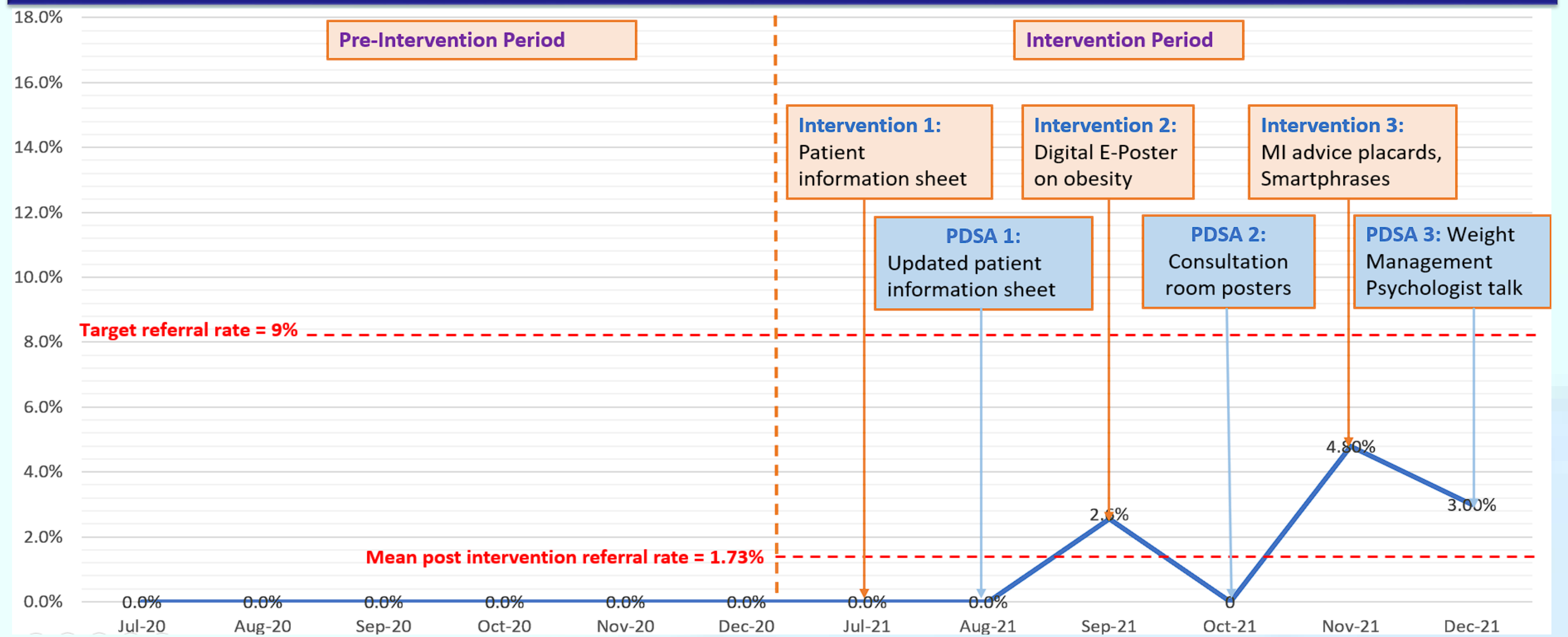


Implementation

Root Cause	Intervention	Implementation Date
1. Patient has insufficient knowledge about WMC	1. Patient information pamphlet on WMC placed in Teamlet D Doctor, CM, CC consultation rooms.	July 2021
2. Patient has insufficient knowledge of obesity	2. Digital E-Poster on obesity flashed regularly on television screens in Teamlet D patient waiting area.	September 2021
3. Patient demotivated to lose weight because of previous failed attempts	3. Motivational interviewing (MI) advice given to healthcare professionals via placards on Teamlet D consultation room computer monitors and EPIC Smartphrases.	November 2021

Plan	Do	Study	Act
1. Patient has insufficient knowledge about WMC	Patient information pamphlet on WMC.	(i) All patients surveyed felt the pamphlet was effective in improving knowledge about WMC. • Some preferred pamphlets in other languages as they were not proficient in English. (ii) Feedback from HCPs • Some felt pamphlets could be more concise and translated to other languages as well.	Updated pamphlets that were less cluttered, more reader friendly, and translated into 4 languages. Implementation date: 2/8/2021
2. Patient has insufficient knowledge of obesity	Digital E-Poster on obesity flashed regularly on screens in Teamlet D patient waiting area.	(i) Patient Survey • Reduction in percentage of patients rating their knowledge of obesity as poor from 58.6% to 20% • Some patients missed the posters due to shorter transition and waiting time before consultation. (ii) All HCPs felt that the poster was eye catching and helpful in increasing awareness of obesity.	Posters printed in colour and placed in Teamlet D Doctor, CM, and CC consultation rooms in front of the patient. Implementation date: 4/10/2021
3. Patient demotivated to lose weight because of previous failed attempts	Motivational interviewing (MI) advice via placards on consultation room monitors and EPIC smartphrases. Weight Management Psychologist talk.	(i) Patients surveyed felt that counselling was effective in motivating them to think about obesity. (ii) Feedback from HCPs • 80% of HCPs felt that advice given was useful. • However, most were not experienced in MI and were not confident in applying the techniques. (i) HCP Survey • Increase in percentage of HCPs confident in weight management counselling (20% to 80%)	HCP talk on Motivation in Weight Management given by a weight management psychologist from KTPH. Implementation date: 29/11/2021 Continued current intervention.

Results



- Overall, there was an increase in the referral rate from a baseline of 0% pre-intervention to 1.73% at the end of the observation period in December 2021.

Cost Savings

- It is envisioned that integration of measures into current initiatives can augment and streamline weight management efforts, allowing for a reduction in obesity-related costs, which are estimated exceed \$540 million yearly.

Problems Encountered

- The intervention period signalled several significant events in NHGP, including the recent implementation of the Next Generation Electronic Medical Record the relocation of staff from AMKP to Kallang Polyclinic, and the increased community transmission of the COVID-19 Delta and Omicron variants.
- Even though the target referral rate of 9% was not reached, the average obesity counselling rate increased from 13.2% to 52.3%, the offer rate to WMC increased from 2.4% to 23.4% during the intervention period, and there was a decrease in percentage of patients surveyed who had not heard about the WMC and would consider referral to the WMC.

Strategies to Sustain

- Building upon established relationships between AMKP and the hospital based WMC can result in continued collaboration in education and resource-sharing to help patients on their weight loss journey.
- Integrating current interventions into existing NHGP initiatives such as the Tiered-Risk Interventions for Managing Weight (TRIM) programme can augment weight management efforts as well for obese patients.