



Effectiveness of Strategies in Improving Outpatient Cardiac Rehabilitation Program Recruitment in Changi General Hospital

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Introduction

Internationally, the Outpatient Cardiac Rehabilitation Program (CRP) has been strongly recommended for patients post-acute myocardial infarction (AMI) for its association in reducing mortality and readmission rates.^{1,2,3} In spite of the paramount importance of CRP, its enrolment rate remains low.^{2,3}

Aim

To evaluate effectiveness of strategies in improving the recruitment rate for outpatient Phase II Cardiac Rehabilitation Program (CRP).

Methodology

A prospective study of all patients admitted to Changi General Hospital Cardiology Department for acute myocardial infarction from January 2013 to December 2016. Eligible candidates were enrolled into the outpatient Phase II Cardiac Rehabilitation Program.

Table 1 lists the implemented multi-fold strategies to address the top five findings from a 2013 baseline study on the low enrolment rate.

Top Five Reasons for Declining CRP	Strategies
1) Financial constraints	Affordable subsidies for Outpatient CRP: - CGH Cardiologist Fund - Benefit cards (CHAS, Pioneer Generation) - Public assistance scheme and Medifund
2) Prefer exercising on their own	Emphasised the proven benefits of group by all healthcare professionals
3) Unable to decide during hospitalisation	Post-discharge follow-up call to - Emphasise benefits of CRP - Encouraged CRP enrolment - Confirm decision for CRP enrolment
4) Limited CRP afternoon time slots	Additional two morning CRP sessions
5) Work commitment	

Table 1: Multi-fold Strategies to Address Baseline Findings

Data Analysis

Patient demographics and enrolment were analysed using SPSS version 19.

References

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Results

A total of 273 patients from January to December 2013 and 701 patients from January 2014 to December 2016 were eligible for CRP, pre-intervention and post-intervention, respectively. Significant differences ($p < 0.05$) were noted between the two cohorts, namely, gender, and comorbidities (hypertension, diabetes mellitus, and hyperlipidaemia) (Table 2).

The various targeted strategies implemented had effectively improved outpatient CRP recruitment rate from 5.4% (pre-intervention in 2013) to 25.3% (post-intervention in 2016).

Variables	Pre Intervention (Jan 2013 - Dec 2013) n=273	Post Intervention (Jan 2014 - Dec 2016) n=701	P value
Age (mean)	56.6	55.8	0.339
Female n (%)	218 (79.9%)	260 (62.9%)	<0.01
Male n (%)	55 (20.1%)	441 (37.1%)	
Chinese n (%)	137 (50.2%)	375 (53.5%)	0.241
Malay n (%)	80 (29.3%)	162 (23.1%)	
Indian n (%)	33 (12.1%)	99 (14.1%)	
Others n (%)	23 (8.4%)	65 (9.3%)	
Smoker n (%)	121 (44.3%)	350 (49.9%)	
Hypertension n (%)	132 (48.4%)	234 (33.4%)	<0.01
Diabetic Mellitus n (%)	65 (23.8%)	491 (70%)	<0.01
Hyperlipidaemia n (%)	136 (49.8%)	418 (59.6%)	<0.01

Table 2: Comparison of patients' variables pre and post intervention group

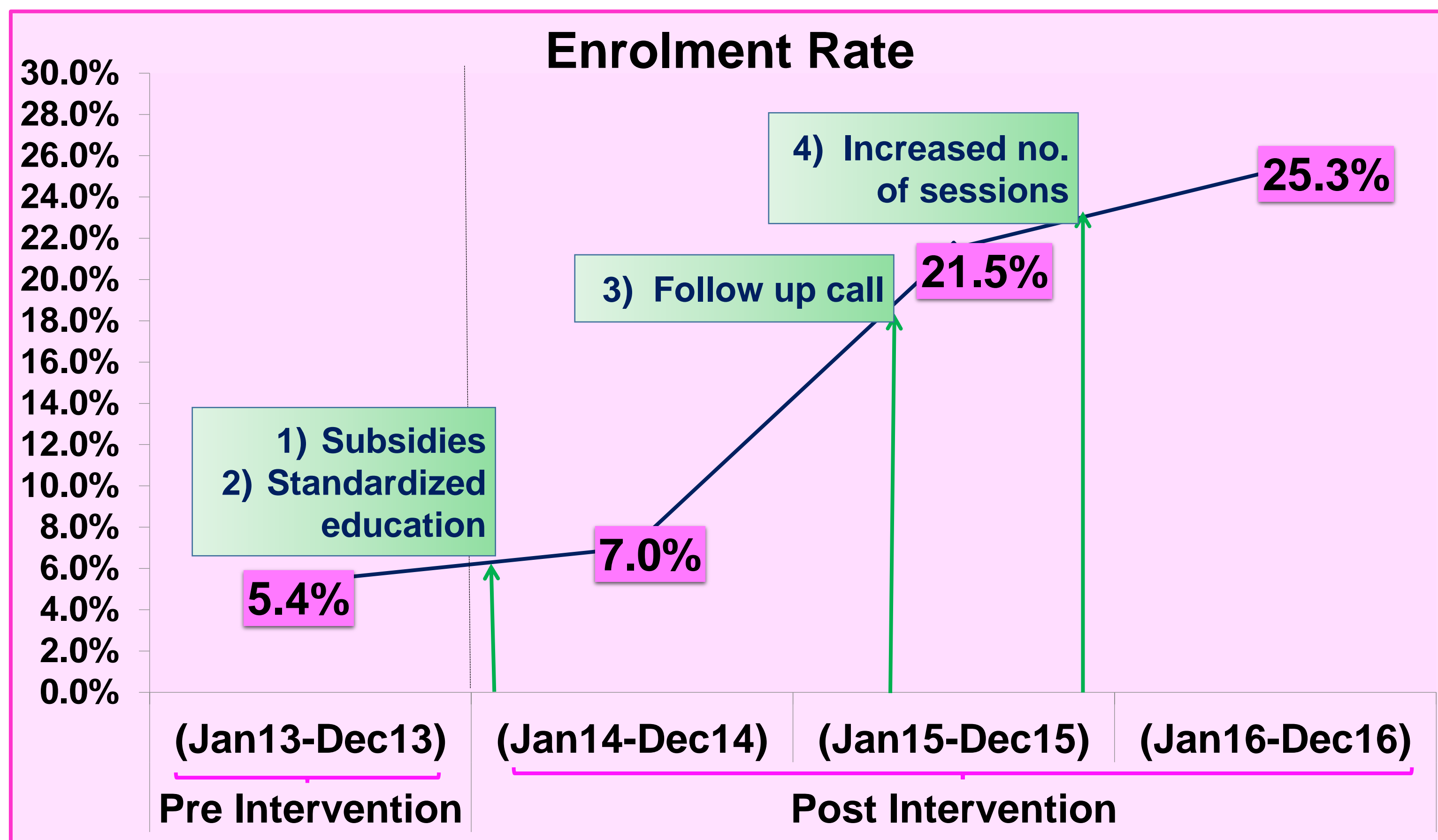


Chart 1: Enrolment Rates

Discussion

Based on the study findings, the multi-fold targeted strategies has shown significant improvements in the Outpatient CRP enrolment rates.

Limitations

The study was done in the single acute care setting and its findings cannot be generalised to other institutions.

Conclusion

A longitudinal study is recommended to identify effective and sustainable strategies to increase the current Outpatient CRP recruitment rates.