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Comprehensive Physiotherapy Management for COPD patients in Multidisciplinary Efficient and Superior quality program (MES COPD Program)

INTRODUCTION

Chronic obstructive pulmonary disease (COPD) is a common cause of hospital admission and unplanned re-admissions. There were 721 episodes of admissions, average 6.54 days length of stay (LOS) and 26.9% unplanned re-admission rate compared to 5.83 days and 15.7% of medical patients in TKOH 2008.

To enhance patient care and early safe discharge, multidisciplinary efficient and superior quality program for COPD (MES COPD program) have been started in TKOH since October 2009. To support the MES program, a comprehensive physiotherapy program was set up to meet the changing needs.

OBJECTIVE OF THE NEW PHYSIOTHERAPY PROGRAM

To provide comprehensive physiotherapy intervention and longitudinal care to COPD patients from in-patient phase, through ambulatory phase and community service by a designated physiotherapy respiratory team.

METHODOLOGY

Inpatient Phase

Acute exacerbation COPD clients with AED admission under MES program received auto screening. Timely intervention on dyspnoea management, bronchial hygiene and early rehabilitation were provided. Clients were triaged to convalescent hospital, discharge home with out patient PRP, community PT or Nurse Allied Health Clinic (NAHC) according to their conditions and compromised with other team members.

Ambulatory Phase

A 6 weeks ambulatory pulmonary rehabilitation program (PRP) program was arranged for motivated and potential clients to improve exercise tolerance and self empowerment. The program included individualized exercise training, education on disease pathology, self management and healthy lifestyles concepts.

Community Support

Timely community physiotherapy was arranged for those high risk clients to monitor their respiratory condition and prescribe exercise at home base environment.

Early respiratory specialist follow up was arranged for those clients with deteriorating condition.

Outcome measures included the hospital LOS, unplanned readmissions rate, exercise capacity measurement (6 minutes walk distance 6 MWD) and rate of perceived dyspnoea (RPD).

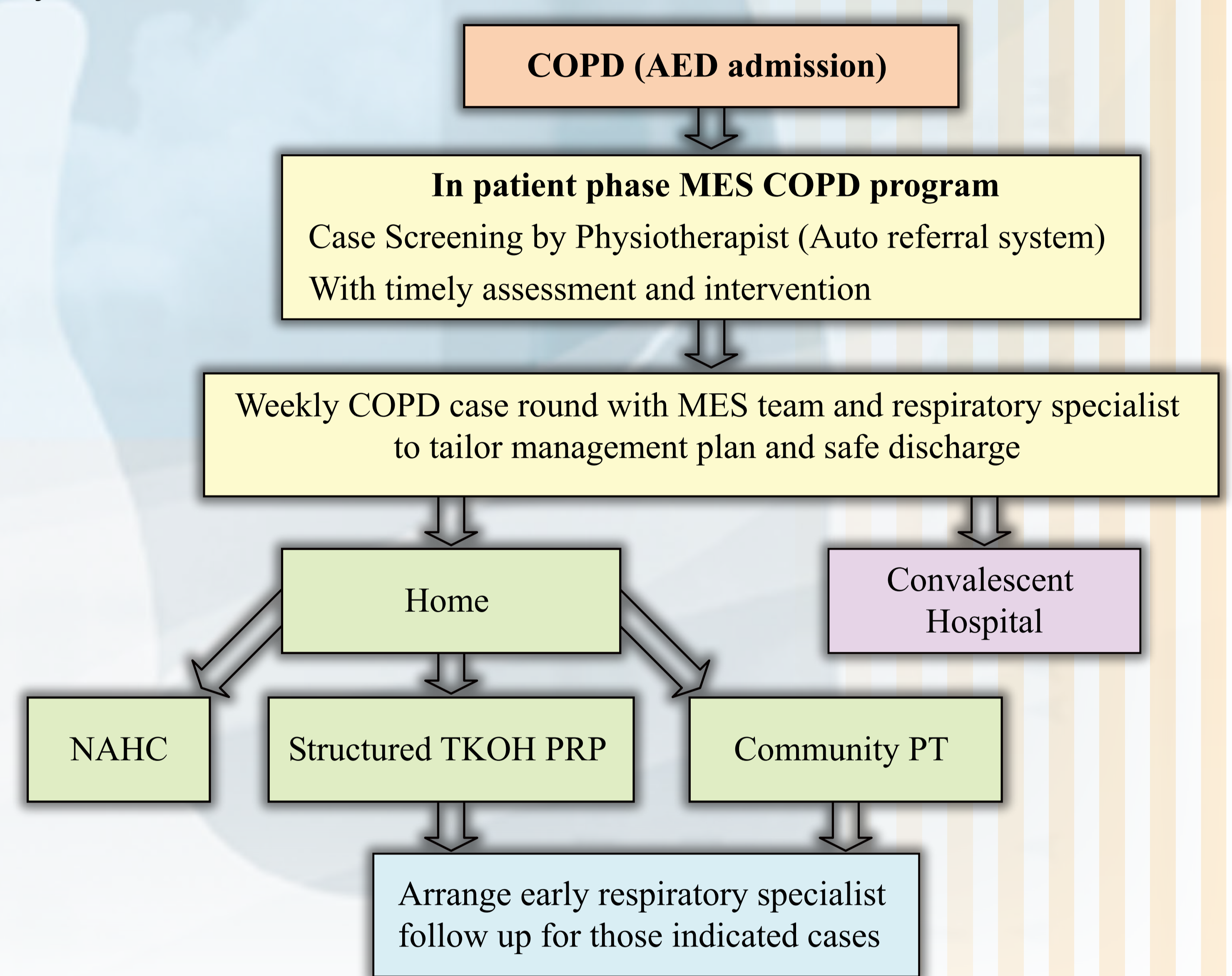
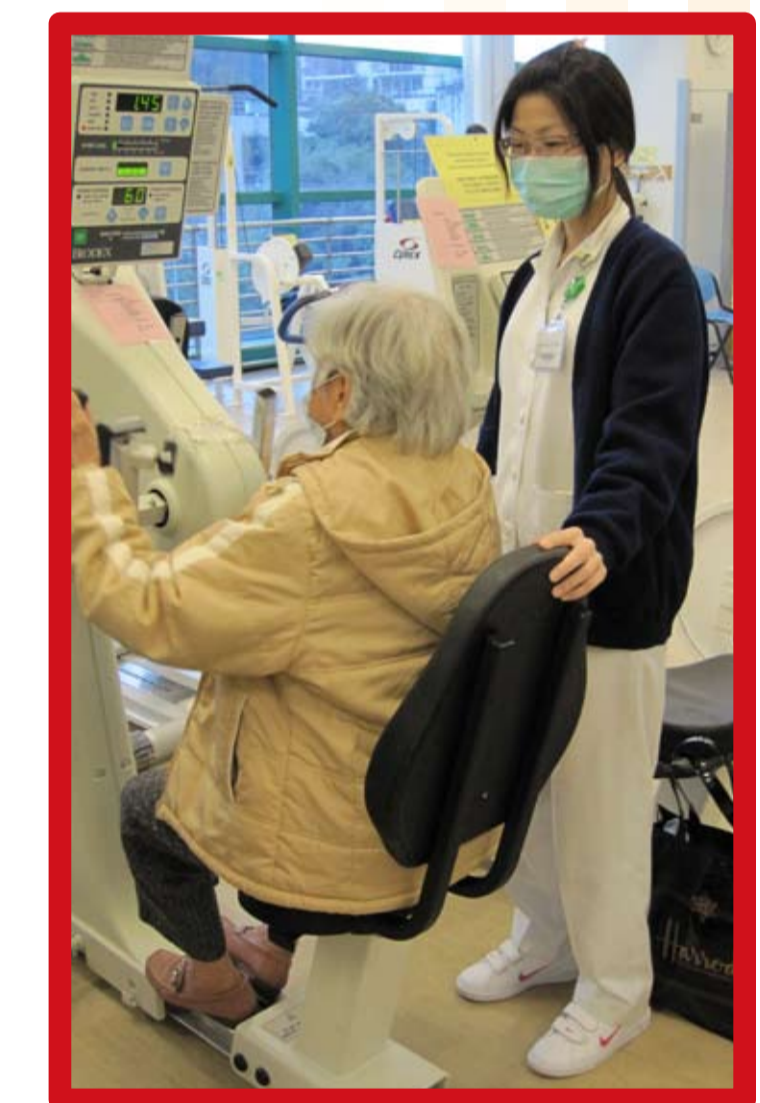


Figure 1 Physician support PT Led MES COPD program pathway



RESULTS

From October 2009 to January 2010, 133 COPD clients with mean age 77±9.35 (115 male and 18 female) received physiotherapy intervention during in-patient phase. Average LOS and unplanned readmission rate was reduced to 5.45 days and 26.1% respectively. Significant improvement was found in post exercise RPD ($p=0.034$) after the implementation of MES program. Around 27.4% clients continued rehabilitation in convalescent hospital and 69.86% clients were safely discharged home.

Sixteen clients with mean age 71±4 (15 male and 1 female) attended the PRP program in which 8 of them completed the program. After 6 weeks of training, 6 MWD (Figure 2) was significantly improved from 350±72m to 394±64m ($p=0.010$) and RPD (Figure 3) after walking test was also significantly reduced from 3.2±1.0 to 2.3±1.3 ($p=0.038$). No patient readmitted during the review period. Six patients were referred for community physiotherapy services.

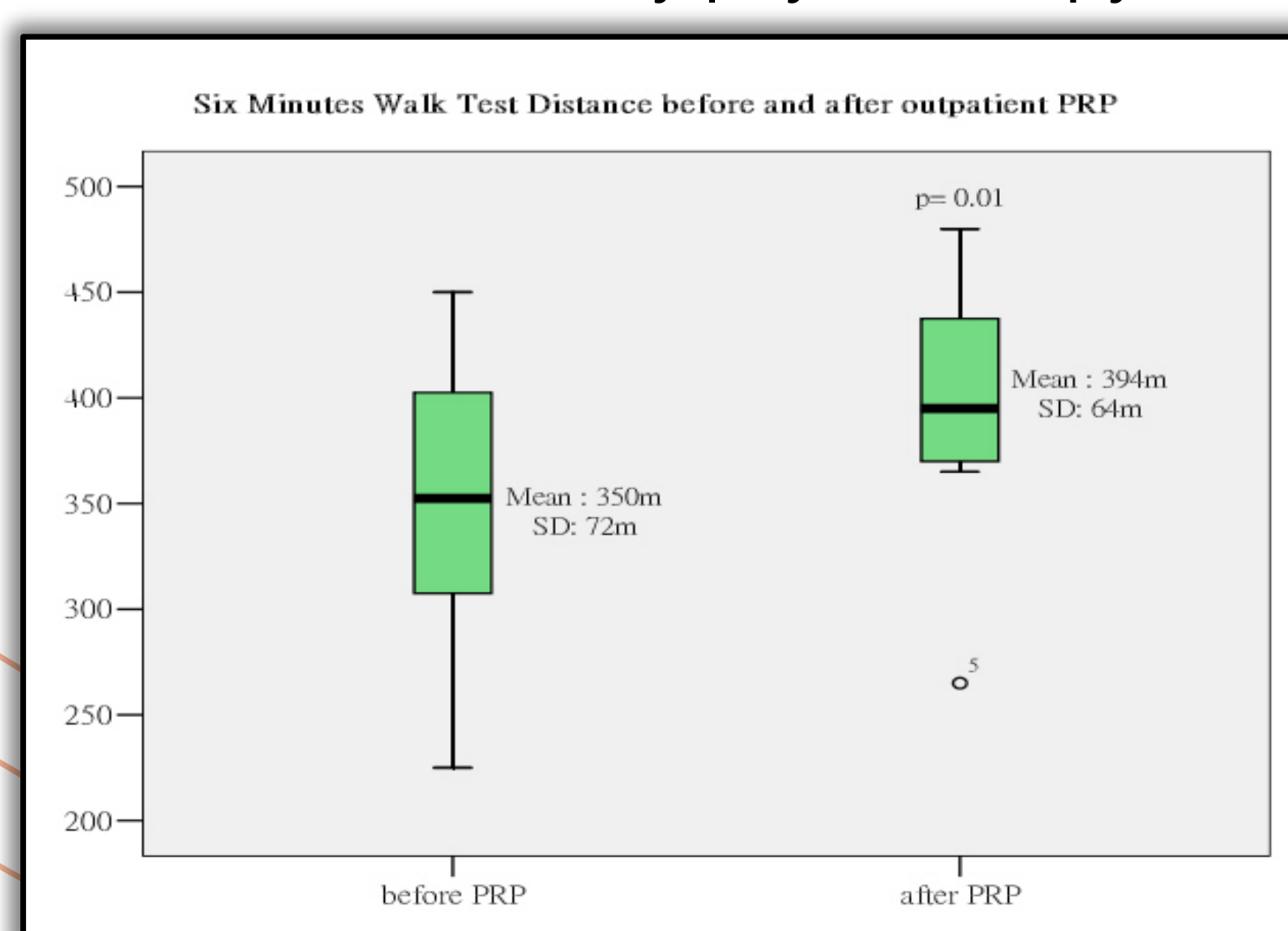


Figure 2 6MWD pre and post PRP program

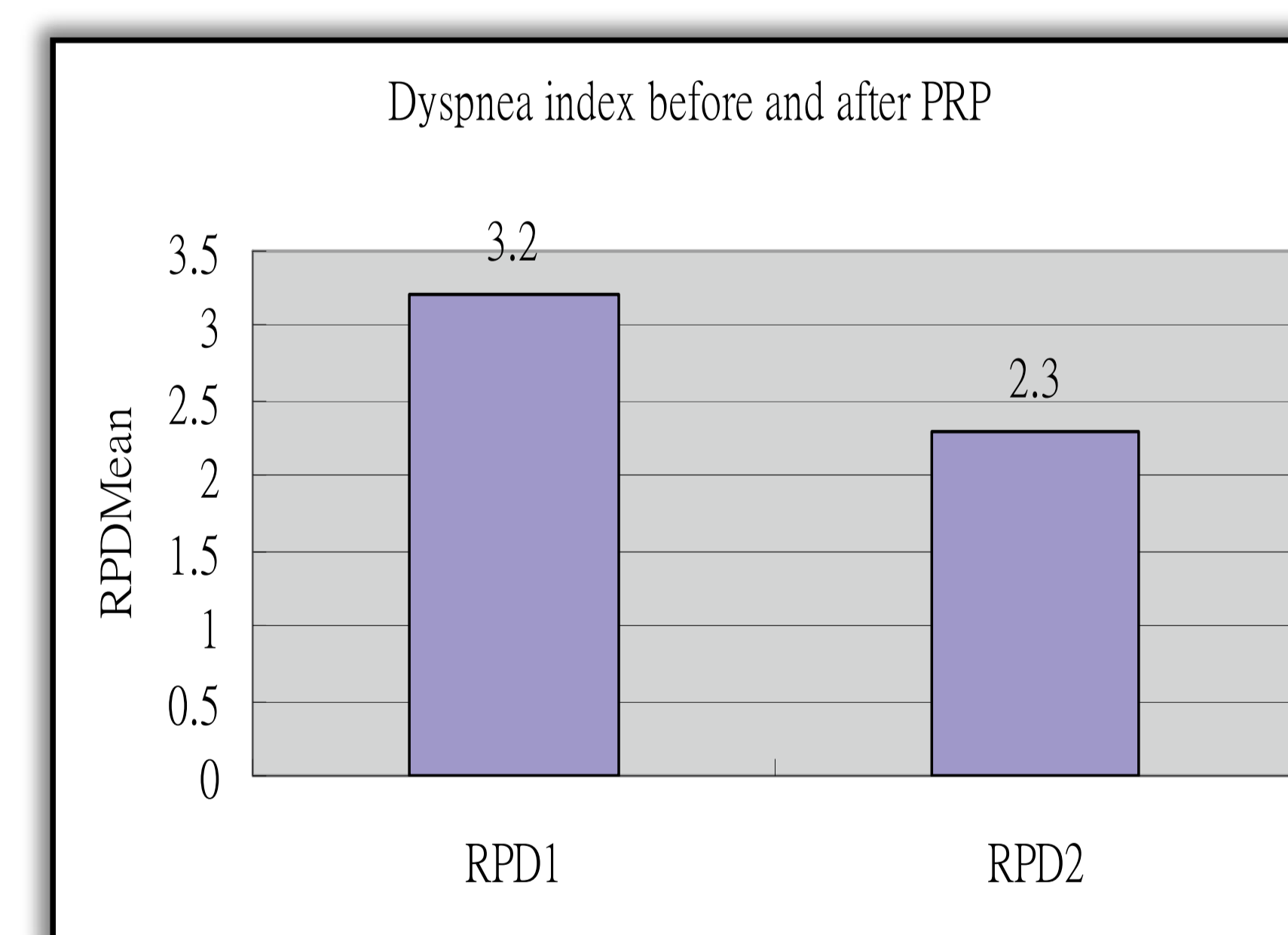


Figure 3 RPD pre and post PRP program

CONCLUSION

The comprehensive physiotherapy support MES program was not only effective in assisting reduction in patients' LOS and hospital readmissions, but also improved exercise capacity and empowered patient on dyspnoea management. As a preliminary study, further review on this ongoing program in the future was suggested.

