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Project title
Early return to work program for young cardiac patients: the preliminary results

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Introduction
Myocardial infarction (MI) is increasingly common in young population. However, the process of return to work for post-MI patients is not well understood. Potential risks for safe return to work are expected in some patients due to impaired cardiac function, physical capacity or psychosocial function. Better strategies are needed to facilitate them to overcome barriers in resuming work.

Objectives
A pilot program, collaborated by Cardiac Team and Occupational Therapy Department of Princess Margaret Hospital, was implemented with the major aim to facilitate the process of return to work through a comprehensive work rehabilitation program for post-MI patients of working age.

Methodology
Patients were recruited from Cardiac Rehabilitation Phase I program. Target cases were post-MI patients who were gainfully employed prior to admission. A pre-work screening was carried out to identify medical factors, occupational and psychosocial barriers that might hinder the process of return to work. SF36 and HADS were used to assess the psychosocial functions. Reperfusion procedure by direct percutaneous coronary intervention (PCI) would be performed by cardiologists to minimize the risks of early work resumption. Echocardiogram (ECHO) and stress test would be conducted for further risk stratification. Early work capacity evaluation (WCE) and subsequent work training would be performed by occupational therapists under enhanced monitoring and emergency handling procedure.

Result
11 male and 1 female patients with mean age of 54.2 +/- 5.8 years old were recruited from June 2014 to February 2015. Their diagnoses included 7 STEMI, 2 NSTEMI, 2 unstable angina, 1 STEMI with sudden cardiac death and all with complete revascularization by PCI performed. Post-PCI ECHO results were satisfactory except for one patient (LVEF < 40%) whereas the stress test results attained mean METS value of 8.4 +/- 1.5 with THR reached at 82.2 +/- 10.9%. WCE was completed for all patients revealing 66.6% high physical demands characteristics (PDC) and 33.3% medium PDC at work. The overall results performed as 66.6% matched, 16.7% marginally-matched and 16.7% unmatched with their previous work demands. 33.3% of the patients were arranged for subsequent work training. At the time of program review, 11 patients were advised to resume same job directly or with some modifications and 1 patient had defaulted the training program. The mean total scores of HADS were consistently below cut-off of 7 (6.72 +/- 5.23 to 6.36 +/- 4.2, n=11) throughout the program. For SF36, despite not reaching significant level, improving trends in scoring were noted in the role-physical (34.09 +/- 43.67 to 54.54 +/- 38.43, p=0.07) and the role-emotional domains (54.54 +/- 42.87 to 66.64 +/- 39.47, p=0.15). One patient with persistently high score in HADS and below norms in the domain scores of SF36, who performed with unmatched physical performance in WCE, had defaulted the work training program. The mean time for patients who had

returned to work (n=11) after PCI and hospital discharge was 21.1 +/- 15.9 days and 17.1 +/- 13.8 days respectively. The development of work rehabilitation program for young cardiac patients in Princess Margaret Hospital had preliminary positive outcomes. Safe and early return to work for post-MI patients could be achieved by systematic procedure for improving medical factors, identifying and reducing risks as well as enhancing work capacity through comprehensive work rehabilitation. For young cardiac patients, the ability to return to work not only had potential to improve subjective well-being by fulfilling their physical and psychological role demands, the socio-economic benefits of early work resumption for these patients were also promising in curbing the overall disease burden by improving productivity.