

142

**RE-ADMISSION AND MORTALITY OUTCOMES AFTER CARDIAC REHABILITATION. SIZE MATTERS!**C L Lykidis,<sup>1</sup> J F Fisher,<sup>2</sup> D L Lane,<sup>2</sup> J B Burke<sup>1</sup> <sup>1</sup>*City Hospital;* <sup>2</sup>*University of Birmingham*

doi:10.1136/heartjnl-2013-304019.142

**Introduction** Sandwell and West Birmingham NHS Trust (SWBH) serves an ethnically and culturally diverse population of 500 000, which has high levels of coronary heart disease, and is considered to be among the most deprived areas in England. The Cardiac Rehabilitation (CR) service at SWBH has aimed to offer a comprehensive programme to cardiac patients that is tailored to meet individual needs and which adheres to all current national guidelines. With the growing need to ensure that commissioned CR services offer value for money and in light of recent data questioning the efficacy of CR interventions, the objective was to examine the effect of our hospital-based CR programme on mortality and re-admission rates and to determine the optimum 'dose' of CR.

**Methods** All patients admitted to SWBH with acute coronary syndrome (ACS) were offered the staged (in-patient and out-patient) CR intervention, incorporating supervised exercise training and support with symptom management, lifestyle risk factor modification and psycho-social well-being. We retrospectively identified a

cohort of 320 cardiac patients (Mean age±SD; 63±13, 46% White, 45% South-Asian, 8% other) that was offered CR in 2010. We reviewed all cause deaths and re-admissions due to ACS, stroke or non-cardiac chest pain until April 2012.

**Results** 4 main groups of patients were identified: patients who received advice only at the in-patient stage (n=87), patients who had in-patient intervention and only one session of lifestyle advice in an out-patient appointment but no organised exercise training (n=62), patients who completed less than 20 sessions of the out-patient programme (n=82) and finally patients who completed twenty out-patient sessions (n=90). Age (F(3,317)=1.400, p=0.243) and left ventricular function (F(2278)=0.880, p=0.452) were similar amongst groups. Patients who completed the 20-session exercise and lifestyle programme had the lowest mortality and re-admission rates compared to all other groups (See table).

**Conclusions** These preliminary findings indicate that a comprehensive, 20-session, face-to-face, hospital-based CR intervention that incorporates supervised exercise training and support with symptom management, lifestyle risk factor modification and psycho-social well-being, is associated with reduced re-admission rates and mortality.

Table 1

	Only in-patient advice	one session of out-patient advice	<20 sessions of out-patient CR	20 sessions of out-patient CR
Mean age±SD, years	64±14	62±11	62±14	64±12
Male, n (%)	59 (68)	47 (76)	57 (70)	69 (77)
Ethnicity, n (%)				
White	45 (54)	20 (32)	38 (48)	44 (49)
South-Asian	35 (40)	37 (60)	35 (43)	37 (41)
Other	7 (8)	5 (8)	8 (9)	9 (10)
Re-admission rates (episodes per patient)	0.52	0.45	0.39	0.18
Mortality rates (deaths per patient)	5.7	3.2	4.9	1.1