

## Saving lives with cardiac rehabilitation: why don't people attend outpatient cardiac rehabilitation programs?

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## Burden of Cardiovascular Disease

- Decrease in morbidity in recent years
- Heavy burden on Australia
  - Illness, poor quality of life, disability, premature death
- Associated costs exceed those of any other disease
- CHD largest single cause of death in Australia in 2004 (19% of all deaths)
- CHD 51% of cardiovascular deaths (AIHW 2006)

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## Cardiac Rehabilitation (CR)

- Benefits of CR programs are well documented (Taylor et al 2004)
- Participation rates
  - **Males 25% - 31%**
  - **Females 11% - 25%**
  - Female factors attributed to lower fitness, older age, greater disease severity, social isolation, depression (Jackson et al 2005)

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## Factors affecting attendance at CR

- Patient Factors
  - Non-recognition of seriousness of their disease or benefits of CR
  - Decreased motivation, particularly after short-hospital stays and immediate potential success associated with PCI (Gaw 1992)
- Service Factors
  - Distance to travel, strength of physician recommendations, availability & accessibility of programs (French et al 2005)

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## Background to the study

Outpatient CR attendance data were collected in 2 previous studies (Jones et al 2005, Jones 2003)

### Study 1—semi-structured telephone interviews (n=235)

Overall attendance was poor

- Only 14% (n=32/235) attended any session of the 6-week program
- More metropolitan than rural patients (p=0.008)
- More did not attend than those who did (p=0.0027) (Jones et al 2005)

### Study 2— in-depth qualitative interviews following PCI (n=14)

None had attended the outpatient CR program (Jones 2003)

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## Purpose of the study

- Determine the reasons patients did not attend the outpatient CR program following a cardiac event
  - ACS, MI, CABG, PCI
- Identify potential factors that may impact on non-attendance at the outpatient CR program

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## Methods

- Patients who agreed to be contacted for further follow-up evaluation from a previous study (Jones et al 2005) were contacted
- Of the 203 identified as non-CR attendee's, 126 had agreed to be contacted

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## Methods

### Inclusion criteria

- Agreed to follow-up evaluation
- Not attended an outpatient CR program
- Given informed consent
- Able to speak and understand English

### Exclusion criteria

- Cognitive impairment

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## Methods

- Institutional ethics approval prior to commencement

### Data collection

- Semi-structured telephone interview
- Questionnaire reviewed by key nursing and medical personnel
- Pilot tested
- Interview conducted by primary researcher over a 3 month period from July – Sept 2006

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## Methods

### Data analysis

- Data were entered into a purposefully designed Access database and analysed using SPSS
- Descriptive and non-parametric statistics

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## Results

126 met inclusion criteria  
44 responded to invitation letter (35% response rate)  
7 refused to take part  
5 attended another CR program  
2 not contactable  
**n=30**

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Characteristic	Frequency (n=30)	Percentage (%)
<b>Gender</b>		
Male	22	73
Female	8	27
<b>Age (years)*</b>		
	63 (42-79)	
	63 ± 9.46	
<b>Diagnostic Group</b>		
Interventional	17	57
Medical	7	23
Surgical	6	20
<b>Location<sup>^</sup></b>		
Metropolitan	22	73
Rural	8	27
<b>Drive</b>		
Yes	24	80
No	6	20
<b>Employment status</b>		
Retired	22	73
Employed	8	27

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<sup>^</sup> Rural, Remote & Metropolitan (RRMA) classification system (AIHW 2004)

### Background data

Characteristic	Frequency (n=30)	Percentage (%)
<b>Previous heart attack</b>		
Yes	17	57
No	13	43
<b>Current smoker</b>		
Yes	1	3
No	29	97
<b>Living arrangements</b>		
Spouse	21	70
Children	1	3.3
Friend	1	3.3
Alone	7	23.3
<b>Carer</b>		
Yes	3	10
No	27	90

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### Cardiac Rehabilitation Factors (n=30)

Characteristic	Frequency (n=30)	Percentage (%)
<b>CR referral source</b>		
Cardiac rehab nurse	21	70
Ward nurse	2	7
Ward doctor	0	0
Cardiologist	0	0
No-one	7	23
<b>Encouragement from Cardiologist to attend</b>		
Yes	0	10
No	30	100

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### Personal Factors (n=30)

Statement	Response % (n)		
	Yes	No	Not sure
I think I would benefit from attending CR	57% (17)	7% (23)	-
I need to attend CR	33% (10)	50% (15)	17% (5)
I am motivated to attend this program	43% (13)	57% (17)	-
I have received encouragement from family / friends to attend CR	67% (20)	33% (10)	-

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### Personal Factors (n=30)

Statement	Response % (n)	
	Yes	No
I feel uncomfortable about attending CR	27% (8)	73% (22)
I feel embarrassed about exercising in front of others	3% (1)	97% (29)
Do you see your age as an issue to prevent you from attending?	20% (6)*	80% (24)
I have difficulty with understanding the English language	-	100% (30)
My culture prohibits me from attending	-	100% (30)

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\* Age of these respondents – 42, 46, 53, 65, 70, 79 years

### Travel Factors (n=30)

Questions asked	Response % (n)	
	Yes	No
I do not have time to participate	30% (9)	70% (21)
The distance to travel to the program is too far	33% (10)*	67% (20)
I do not have a means of getting to the program	17% (5)	83% (25)
I cannot afford to travel to the program	7% (2)	93% (28)
I have difficulties traveling on public transport	-	100% (30)

\*Distance to travel for these respondents – 15, 31, 40 kms (Metro)

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48, 84, 92, 148, 209, 254, 395 kms (Rural) p=0.000

### Scheduling Factors (n=30)

Questions asked	Response % (n)	
	Yes	No
The program is conducted on a day that was inconvenient	27% (8)	73% (22)
The program is scheduled during working hours	17% (5)	83% (25)
I need family / friend to drive me but they are working that day	13% (4)	87% (26)

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## Major findings

- Poor motivation
- Not referred to an outpatient cardiac rehabilitation program
- Lack of physician/cardiologist encouragement
- Too far to travel to attend the program

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## Conclusion

- In order to increase attendance at outpatient CR programs strategies are required to increase
  - referral
  - motivation
  - physician encouragement
- Flexible scheduling and delivery modes that account for rural patients are required

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