

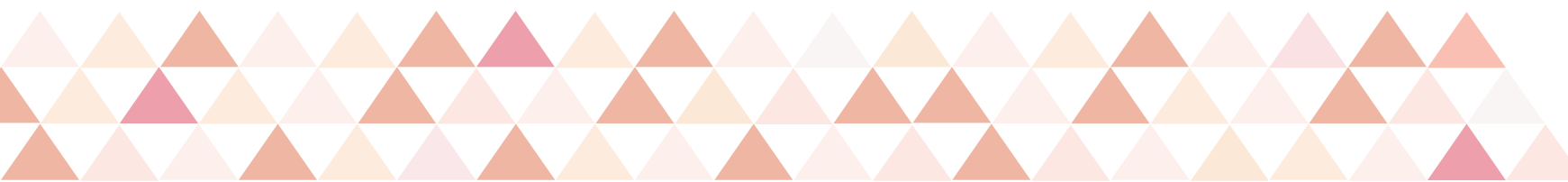
Life after cardiac
rehabilitation;
the benefits of a
community-based
physical activity
program



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The context of UK community-based physical activity programs

- In the UK over 30% of males and 40% of females do not meet government guidelines for physical activity
- Exercise referral schemes (ERS) are a widespread way of promoting physical activity in primary and secondary care.
- ERS provide an exit route for patients who have completed formal cardiac rehabilitation but little is known about effectiveness for cardiac participants



The ERS studied has received national recognition

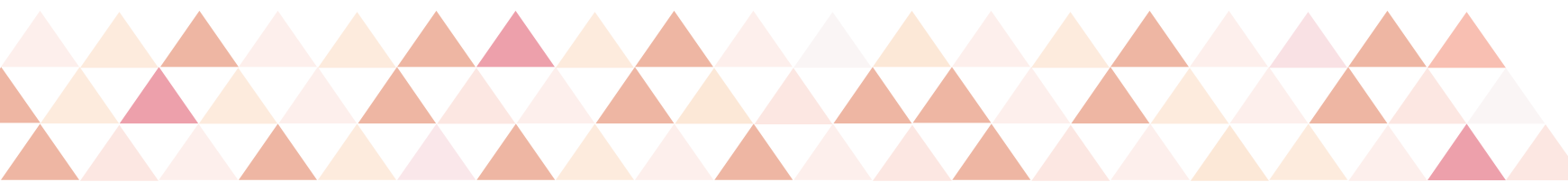


Aim of study

To evaluate participation in the ERS following completion of cardiac rehabilitation and examine whether it led to changes in:

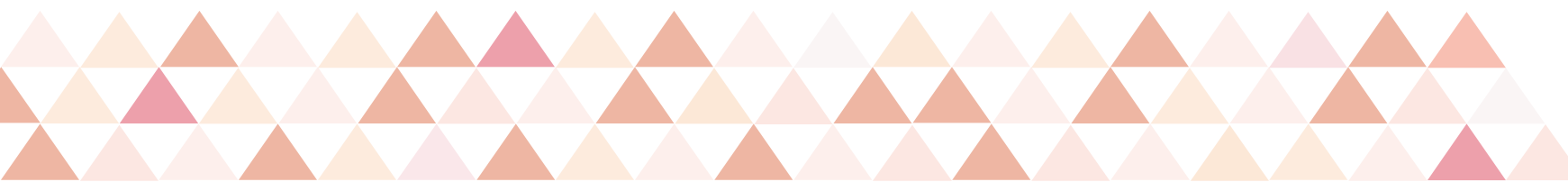
- Self reported physical activity (PA)
- Weight, Body Mass Index (BMI) and waist circumference (WC)

To explore facilitators and barriers to adherence



Background to the Northumberland ERS

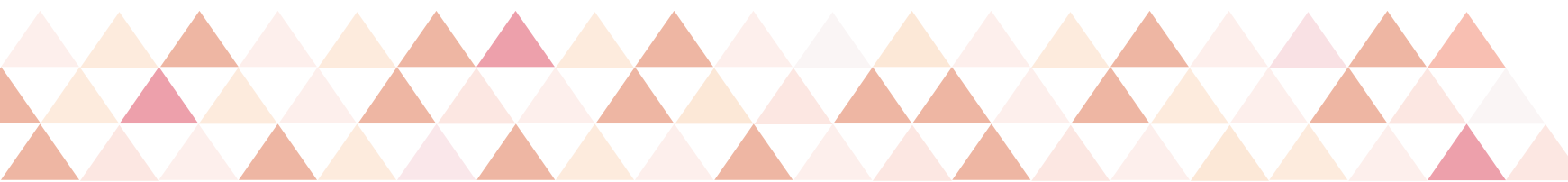
- 24 week community-based physical activity intervention delivered in nine local government leisure sites in Northumberland, UK
 - three 1-to-1 assessments (pre, mid and post scheme)
 - twice weekly group exercise sessions
- Referrals accepted from primary and secondary care



Method

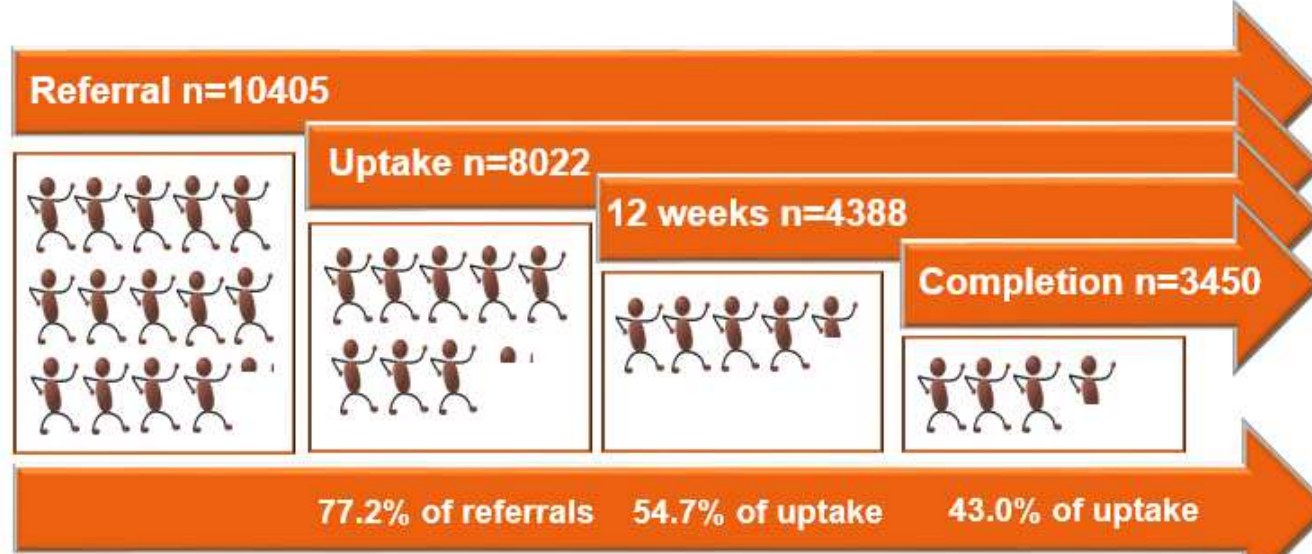
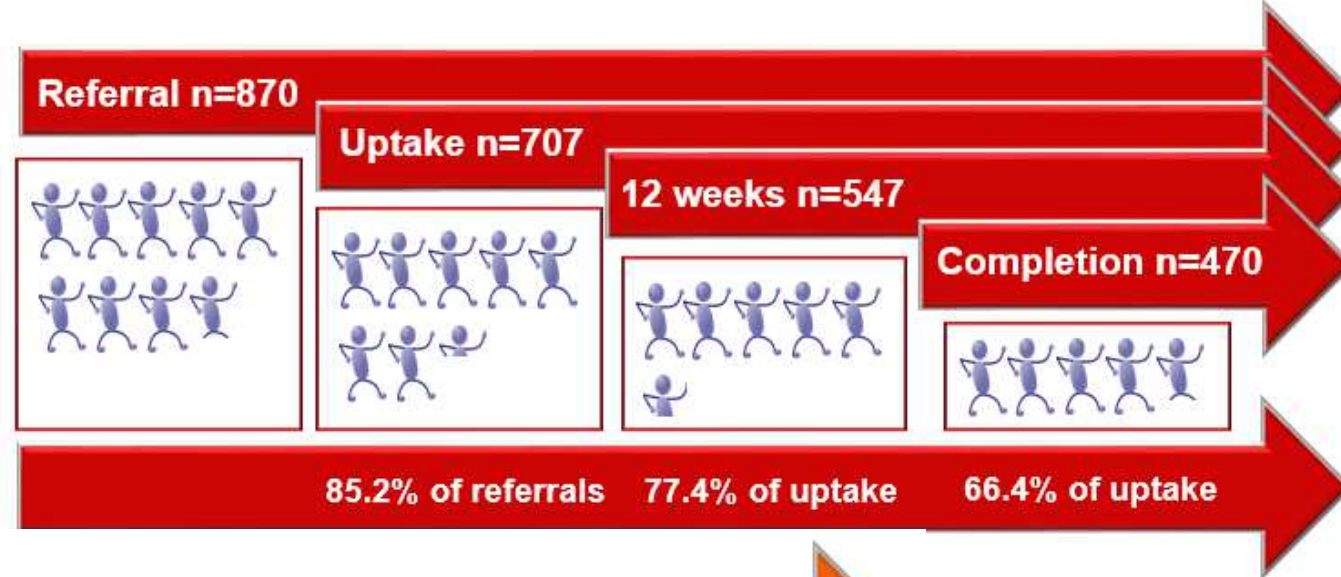
Analysis of routinely collected data (2009-2015):

- Uptake, 12-week adherence and 24-week completion
- Baseline v 24-week physical activity, weight, Body Mass Index and waist circumference
- Reasons for dropout and open responses from satisfaction questionnaires



Results: participation

Cardiac Rehabilitation referrals



All other referrals

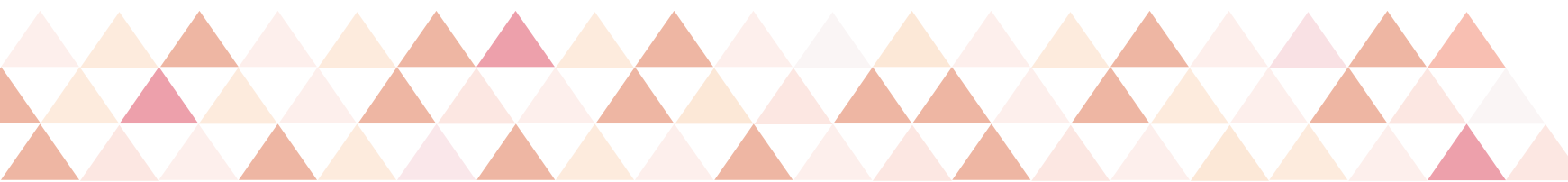
Sig. difference between CR and other referrals for uptake, 12-week adherence and 24-week completion ($p < 0.001$)

Results: change in physical activity

Godin mod / vig activity score	Baseline (median)	24-weeks (median)
Cardiac Rehab referrals (n=416)	12 (IQR 10-28)	24 (IQR 10-35)**
Other referrals (n=3070)	0 (IQR 0-10)	15 (IQR 5-29)**

** $p < 0.001$

Classified as 'active'	Baseline	24-weeks
Cardiac Rehab referrals (n=416)	30.6%	44.5%
Other referrals (n=3070)	14.0%	35.6%



Results: change in physiological measures

	Cardiac Rehab referrals (n=468)		Other referrals (n=3401)	
	Baseline median (IQR)	24-weeks median (IQR)	Baseline median (IQR)	24-weeks median (IQR)
Weight (kg)	80.5 (71.9-91.1)	80.0* (71.0-90.0)	86.8 (74.0-101.0)	85.0** (73.0-99.5)
BMI (kg/m²)	27.6 (24.8-30.7)	27.3* (24.8-30.3)	31.1 (27.5-31.8)	30.6** (26.9-35.2)
Waist Circumference (cm)	100.0 (93.0-108.0)	99.0** (91.0-107.0)	106.0 (97.0-117.0)	104.0** (94.0-115.0)

* $p < 0.05$ ** $p < 0.001$

Results: barriers and facilitators to attendance



'The staff are fantastic' (18.6%)
'I have increased my confidence to exercise' (16.4%)
'My fitness has really improved' (12.6%)
'My health is much better' (10.9%)
'The friends I have made encourage me to come' (7.6%)

'My health has prevented me from attending' (37.2%)

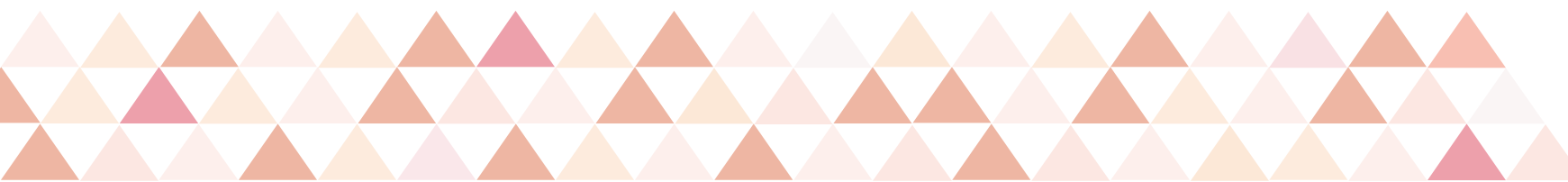
'I don't have time to attend' (30.8%)

'I can't find the enthusiasm to attend' (17.3%)



Conclusion

- The program led to significant positive changes in cardiovascular risk factors beyond those achieved on CR completion.
- To promote adherence, attention should be given to maximising staff support, building confidence and encouraging social interaction.
- Provision should consider how to re-engage with those who suffer from episodes of ill-health.



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