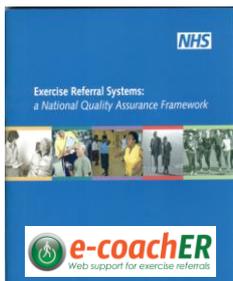


*Exercise on referral: past, present and the future*

Prof Adrian Taylor,  
 Chair in Health Service Research,  
 Associate Dean for Research



**Dr David Hanratty, initiated perhaps the first ERS in Hailsham, E. Sussex, 1988/9**

**U. of Brighton/E. Sussex CC first ERS training programme (accredited), 1992/3.**

*J Epidemiol Community Health* 1998;52:595-601

595

Randomised controlled trial to examine the effects of a GP exercise referral programme in Hailsham, East Sussex, on modifiable coronary heart disease risk factors

Adrian H Taylor, Jo Doust, Nick Webborn

**A guide to the talk:**

Where did ERS come from and are there similarities to current growth in interest in 'social prescribing' in primary care?

ERS evidence for effectiveness and cost effectiveness.

Rationale for e-coachER support and trial  
 Sample characteristics and timeline for trial output & dissemination.

Other primary care physical activity referral research

**30 min House of Lords debate (1996) on ERS (with reference to 1930's 'Peckham Project')**  
<https://publications.parliament.uk/pa/ld199697/ldhansrd/v0961119/text/61119-12.htm>

Husk et al. *Systematic Reviews* (2016) 5:93  
 DOI 10.1186/s13643-016-0269-6

Systematic Reviews

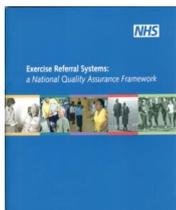
PROTOCOL

Open Access

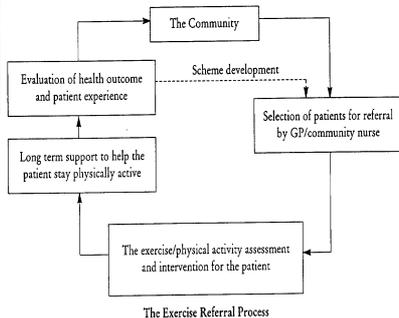


What approaches to social prescribing work, for whom, and in what circumstances? A protocol for a realist review

Kerryn Husk<sup>1\*</sup>, Kelly Blockley<sup>1</sup>, Rebecca Lovell<sup>2</sup>, Alison Bethel<sup>3</sup>, Dan Bloomfield<sup>4</sup>, Sara Warber<sup>5,2</sup>, Mark Pearson<sup>3</sup>, Iain Lang<sup>3</sup>, Richard Byng<sup>1</sup> and Ruth Garside<sup>2</sup>



**The NQAF for Primary Care Exercise Referrals Systems (2000)**



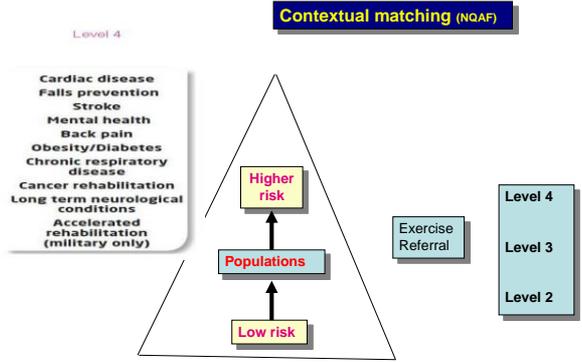
**ERS - definition**

- ERS was defined as comprising the following three core components:
  - referral by a primary-care health-care professional to a service designed to increase physical activity or exercise
  - Physical activity/exercise programme tailored to individual needs
  - initial assessment and monitoring throughout the programme.

**Professionalising the fitness industry (2000 - (aligned with old ACSM guidelines for exercise prescription, based on disease focus)**



**WRIGHT FOUNDATION**  
LEVEL 4 MENTAL HEALTH  
Advances in Exercise Referral Training



Morgan et al. BMC Public Health (2016) 16:227  
DOI 10.1186/s12889-016-2882-7

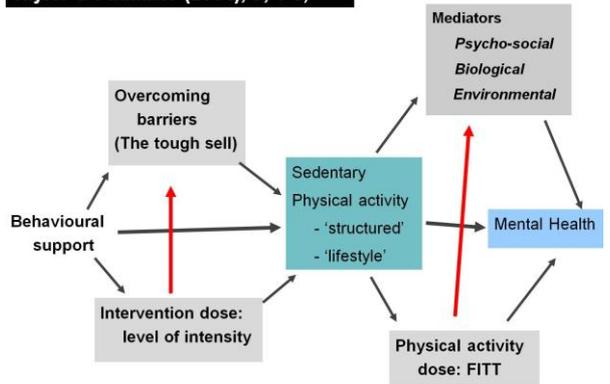
BMC Public Health

RESEARCH ARTICLE Open Access

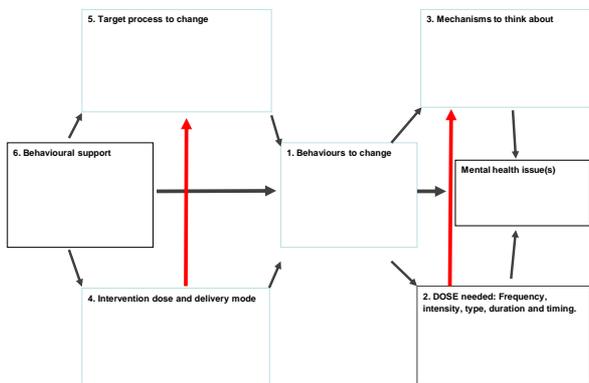
**Adherence to exercise referral schemes by participants – what do providers and commissioners need to know? A systematic review of barriers and facilitators**

Fiona Morgan<sup>1\*</sup>, Alysia Battersby<sup>1</sup>, Alison L. Weightman<sup>1</sup>, Lydia Searchfield<sup>1</sup>, Ruth Turley<sup>1</sup>, Helen Morgan<sup>1</sup>, James Jagroo<sup>2</sup> and Simon Ellis<sup>2</sup>

**Mental Health & Physical Activity, Taylor & Faulkner (2014), 7, 1-5,**



**A framework for designing PA interventions**



**ERS are much more client centred**



**gp referral classes**

monday	myrtle indoor cycling	9.15-10.15am	myrtle studio
monday	yoga	10.45-11.40am	studio 3
monday	virtual myrtle	1.00-2.00pm	myrtle studio
monday	line dancing	1.30-2.45pm	studio 1
monday	referral circuits	2.00-3.55pm	studio 1
tuesday	active 4 life	9.30-10.25am	studio 1
tuesday	littal	9.30-10.25am	studio 3
tuesday	drums alive	11.30-12.25pm	pool
wednesday	yoga beginners	9.30-10.25am	studio 3
wednesday	myrtle indoor cycling	9.15-10.15am	myrtle studio
wednesday	aqua rehab	11.00-12.00pm	pool
thursday	active 4 life	9.30-10.30am	studio 1
thursday	rehab plates	10.30-11.25am	studio 2
thursday	stroke rehab	12.00-1.00pm	studio 3
thursday	parkinson r-lab	1.00-2.00pm	studio 1
thursday	cardiac rehab	2.00-3.00pm	studio 3
friday	active 4 all	10.30-11.25am	studio 2
friday	aqua rehab	11.00-12.00am	pool
friday	balance and strength	12.00-1.00pm	studio 2
friday	cancer rehab	1.15-2.15pm	studio 3
friday	coxd class	2.00-3.00pm	gm



## The Clinical Effectiveness of Exercise Referral Schemes: Systematic Reviews



Adrian & Rod Taylor (Co-PIs)(Exeter) & collaborators

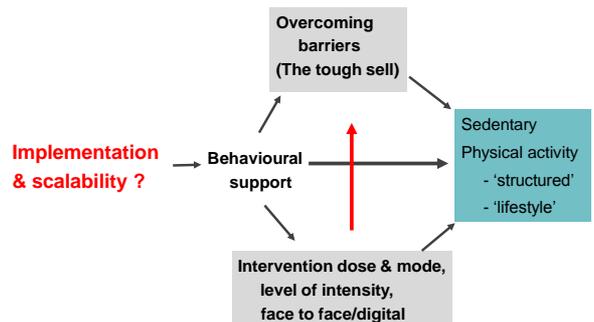
Weak evidence for any long-term effect

72% uptake  
48% adherence (≥75% sessions attended).

Women = high uptake & low adherence.  
Older people = high uptake & adherence.

## Predictors of uptake & adherence

- Women were more likely to begin an ERS but were less likely to adhere to it than men.
- Older people were more likely to begin and adhere to an ERS.
- No other clear predictors of uptake and adherence.



Delivery	Pros	Cons
Face to face or phone	Client focused? 'Hands on guidance'?	Training mobile workforce? Delivery fidelity? Receipt fidelity? Cost?
Web-based	Increasingly tailored? Consistent delivery? Low cost & accessible? Analytical tool? Broader PA emphasis Linked to Care / Scalable	Impersonal? Lacks sophistication? Digital divide? Data security? Sustainability of interest?
Face to face +web-base	Can be integrated to provide optimum support.	Some of barriers above remain.

A multi-centred RCT of an exercise referral scheme (ERS) with augmented web-based support for patients with one or more chronic conditions (ie, obesity, diabetes, hypertension, osteoarthritis, a history of depression).



- Funders: NIHR, HTA grant: (2015-2018) (£900k study)
- CI: Prof **Adrian Taylor**
  - Plymouth: Peninsula Clinical Trials Unit
  - Exeter: Rod Taylor, Green, Dean, Greaves, Campbell
  - Southampton: Lucy Yardley & Little
  - Birmingham: Kate Jolly
  - Edinburgh: Nanette Mutrie
  - Marjon: Ben Jane
  - Cornwall: Erwin & Woolf

PLYMOUTH UNIVERSITY PENINSULA CLINICAL TRIALS UNIT

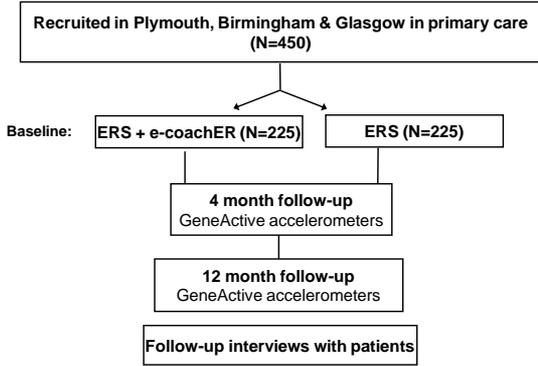
UNIVERSITY OF BIRMINGHAM

UNIVERSITY OF EXETER

UNIVERSITY OF SOUTHAMPTON

UNIVERSITY OF SOUTHAMPTON

Funded by NHS National Institute for Health Research



## The e-coachER support system (Using the LifeGuide platform – Southampton Uni)

### Aim 1: to maximise engagement with e-coacher

6 month development work & beta testing with target patients

Facilitator available and calls non-registrants

Once registered, automated e-mails sent to encourage use of e-coachER.

### Aim 2: to maximise changes in moderate intensity PA

**Theory driven:** Increase sense of competence, control and companionship (3 Cs) (Self-determination theory; Deci & Ryan, 2000).

Content targets the following **Behaviour Change Techniques** :

- \*Information about emotional & health consequences;
- \*using social support;
- \*self-monitoring of behaviour;
- \*goal setting (behaviour);
- \*action planning;
- \*review behavioural goals;
- \*restructuring the social & physical environment;
- \*prompts/cues.

## The e-coachER support system



## '7 Steps to Health'



## Example pages: Step 2



Users learn about setting SMART goals to increase moderate intensity physical activity

and have examples and stories linked to travel, leisure and domestic activities.





Users are reminded of their goals from the previous week and can *record their steps* or number of days they have achieved 30 mins of MVPA.

They are given *personalised feedback* based on whether or not they met their goals.



### Implementation learning

#### Recruitment

- \* Recruitment was a challenge, despite high prevalence of target patients in primary care, and £50 incentive per patient to recruit into the trial.
- \* Overall general GP referral rates across all 3 sites declined during trial due to challenging Public Health finances for subsidised services and competition with disease specific care pathways (eg, diabetes).
- \* 132 patients included with BMI 35-40, & 95 excluded > 40.
- \* Multi-morbidity very common (eg, 54% had low mood or depression, but only 19% felt that was the reason for referral)

### Summary of implementation issues



- \* Transcribed & coded interviews still to be completed.
- \* Effects of e-coacher engagement on PA at 12 months, and ERS uptake & adherence still to be analysed.
- \* If effective, then intervention likely to be cost-effective & scalable.
- \* Interest from others to explore e-coachER value for other conditions (eg, cancer survivors, those with BMI > 40)

### Implementation learning: sample characteristics

Total sample N =450	All sites
Age at baseline Mean (SD) [range]	50 (13) [18-74]
Number of females (%)	289 (64%)
BMI at baseline Mean (SD) [range]	33 (4) [19-41]
Self-reported reason for referral (Ranked as 1st where there are comorbidities)	n (% of sample)
Weight loss	227 (51)
Low mood or depression	83 (19)
Osteoarthritis	53 (12)
Type 2 diabetes	43 (10)
High blood pressure	37 (8)
Prediabetes	6 (2)
Self-reported clinical condition	n (% of total sample)
Weight loss	363 81
Low mood or depression	242 54
High blood pressure	147 33
Osteoarthritis	109 24
Type 2 diabetes / prediabetes	89 20
Prediabetes	23 5

### Implementation learning

#### Intervention engagement (generally good)

- \* 65% registered on e-coachER website
- \* 36% completed at least 1 goal review (ie, Step 5).
- \* Mean number of goal reviews = 2.5 (SD 4.5), range 0-24.
- \* Key intervention components to be determined from usage profiling.
- \* e-coachER facilitator little needed to access website support
- \* Only occasional centralised technical support needed.

### Summary of talk

- \* The nature of ERS has evolved to be more client centred, and in some places (eg, Glasgow) more of a sign-posting approach.
- \* Public health funding has been cut dramatically, with the potential to increase health inequalities (through loss of subsidies).
- \* The demand for supporting people with multiple chronic conditions is set to overwhelm the NHS.
- \* Next summer we will have a better idea if e-coachER can make usual ERS more effective. It will tell us more about what type of on-line support patients find useful. It will certainly be cost-effective.

Thank you for listening, and thanks to my collaborators, Pen CTU, patients, and funders – NIHR (HTA)

Adrian.Taylor@plymouth.ac.uk



Other primary care (exercise referral) interventions

The e-coachER study is funded by the NIHR Health Technology Assessment programme (ref: 132520). The views expressed are those of the author and not necessarily those of the NHS, the NIHR or the Department of Health.



Facilitated physical activity as a treatment for depressed adults: randomised controlled trial

Delivery of intervention:  
Physical Activity Facilitator

- Client-centred (tailored to patient needs) sessions
- Gatekeeper to engagement & resources
- Met in health care settings, and patient's homes.

**8 month Programme**



- Initial 1 hour face-to-face
- 2 telephone contacts
- 1 x 30 min face-to-face
- 6 telephone contacts
- 1 x 30 min face-to-face
- 2 telephone contacts

Farrand et al. *Trials* 2014, 15:196  
<http://www.trialsjournal.com/content/15/1/196>



STUDY PROTOCOL Open Access

A written self-help intervention for depressed adults comparing behavioural activation combined with physical activity promotion with a self-help intervention based upon behavioural activation alone: study protocol for a parallel group pilot randomised controlled trial (BACPac)

Paul Farrand<sup>1\*</sup>, Claire Pentecost<sup>1</sup>, Colin Greaves<sup>2</sup>, Rod S Taylor<sup>2</sup>, Fiona Warren<sup>2</sup>, Colin Green<sup>3</sup>, Melvyn Hilldon<sup>3</sup>, Phil Evans<sup>2</sup>, Jo Welsman<sup>4</sup> and Adrian H Taylor<sup>2</sup>

**Focus groups and intervention development (Mood Disorder Centre)**

**Main components:**

- Psychological Well-being Practitioner supports patient's with depression to use self-help guide and case study.



Health Technology Assessment Programme



A trial for smokers wishing to reduce but not quit (delivered by Health Trainers in Plymouth, Oxford, Nottingham & S. London). Managed by PenCTU. 2017-2021: £1.8m



RESEARCH

Open Access

## Effectiveness of a motivational interviewing intervention on weight loss, physical activity and cardiovascular disease risk factors: a randomised controlled trial with a 12-month post-intervention follow-up

Sarah J Hardcastle<sup>1\*</sup>, Adrian H Taylor<sup>2</sup>, Martin P Bailey<sup>3</sup>, Robert A Harley<sup>1</sup> and Martin S Hagger<sup>1†</sup>

Downloaded from [ijbnpa.bmj.com](http://ijbnpa.bmj.com) on May 31, 2013 - Published by group.bmj.com

Open Access

Research



## Exercise referral for drug users aged 40 and over: results of a pilot study in the UK

Caryl M Beynon,<sup>1</sup> Amy Luxton,<sup>1</sup> Rhiannon Whitaker,<sup>2</sup> N Tim Cable,<sup>3</sup> Lucy Frith,<sup>4</sup> Adrian H Taylor,<sup>5</sup> Lu Zou,<sup>2</sup> Peter Angell,<sup>3</sup> Scott Robinson,<sup>6</sup> Dave Holland,<sup>1</sup> Sharon Holland,<sup>1</sup> Mark Gabbay<sup>7</sup>