

Cardiac Rehabilitation

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Learning Objectives

- What is cardiac rehabilitation?
- Efficacy of cardiac rehabilitation
- Structure of cardiac rehabilitation
- Ways of delivering cardiac rehabilitation
- The future of cardiac rehabilitation

Summary of Cardiac Rehabilitation

“A multidisciplinary, multifaceted approach with an overall aim of improving the short-term recovery of patients and encouraging long-term lifestyle changes in relation to adverse risk factors.”

(Horgan 1992)

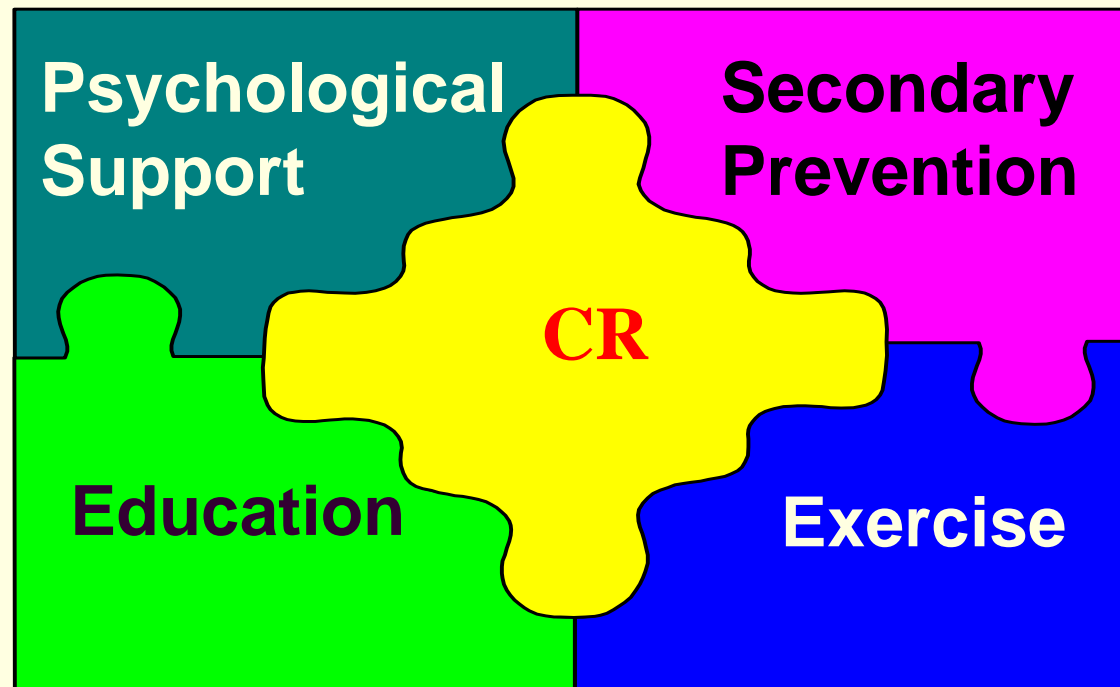
The Evidence

Comprehensive help with lifestyle modification involving education and psychological input as well as exercise training can reduce mortality by 20-25% over 3 years.

Oldridge et al 1988; O'Connor et al 1989

4 Key Elements of CR.

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Target Groups

Coronary heart disease (CHD)

- Exertional angina .
- ACS (unstable angina or NSTEMI or STEMI) following medical/surgical management.
- Revascularisation
- Stable heart failure and cardiomyopathy

Those at high risk of developing CVD: total CVD risk > 20% over 10 years or diabetes mellitus.

Professional Involvement

- Nurses
- Doctors
- Practice Staff
- Dieticians
- Physiotherapist
- Exercise Specialists
- OT
- Pharmacy
- Psychologists
- Social Services

Structure of Cardiac Rehabilitation

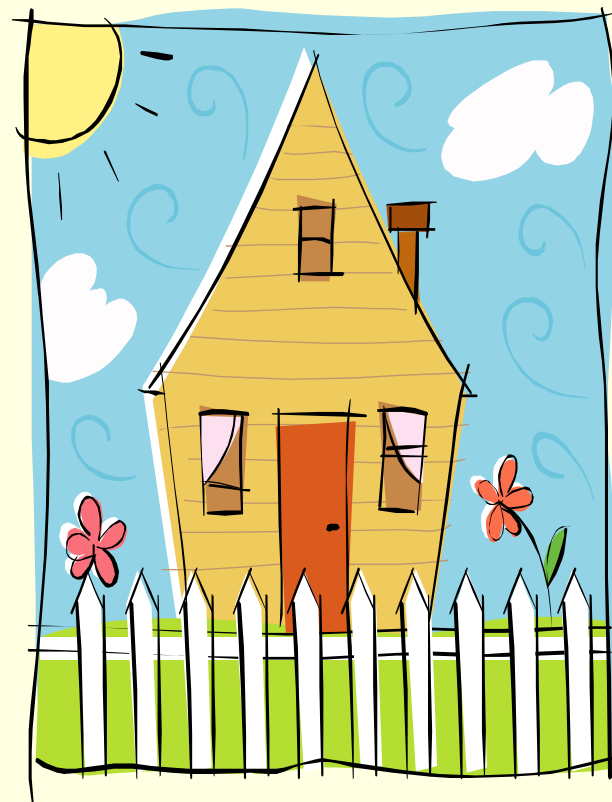
- Phase 1: In-patient (1st contact)
- Phase 2: Immediate post discharge
- Phase 3: 4-6 weeks post discharge
- Phase 4: Long-term, on-going

Phase 1

- Understanding of condition
- Information & education
- Risk factor assessment
- Personalised health plan
- Psychological assessment/support
- Referral
- Drug therapy

Phase 2

- Home visits.
- Telephone support.
- Community clinics



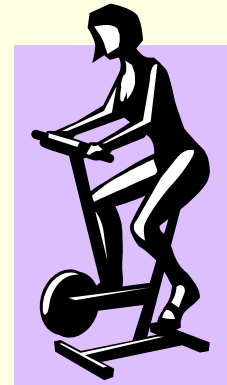
Phase 3

Reassess health & risk factors first.

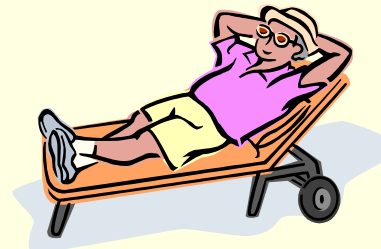
- Health Education



- Exercise



- Relaxation



Phase 4

- Maintenance of exercise/activity
- On-going lifestyle support

Challenges for the Pt and Family

Challenges for the Pt and Family

- Frightening, life threatening event (MI, major surgery)
- A chronic illness, reduced life expectancy, symptoms
- Altered identity - an invalid, walking time bomb
- Fears for family and partner being left alone
- Threat to employment and financial status
- Medication side effects (lethargy, impotence)
- Being treated differently by other people
- Neurological impairment (esp. cardiac arrest pats.)
- Making lifestyle changes, smoking, diet, activity

Educational Aims

- CHD as a disease
- Treatment including medication
- Recovery process
- CHD risk factors
- Symptom management
- Living with CHD

Psychological Aims

- Reduce fear and anxiety
- Assist with adjustment
- Promote positive attitude
- Facilitate behaviour change
- Identify need for further support

Physical Aims

- Assess and risk stratify
- Develop individual exercise plan
- Teach FITT principle
- Regain/develop physical fitness
- Regain confidence in physical activity
- Develop long-term activity plan
- Self monitoring

Delivering CR

Can be done individually or in a group

Venue: Home
 Community
 Clinics

Menu: Mixing up of all 4 phases to provide
 an individualised package of care.

Sample Cardiac Rehabilitation Menu

Activity / Fitness

- hosp exercise group
- home exercise programme
- advice on resumption of active life
- Age Concern Health Mentor
- Walk for Health
- Phase 4 exercise programme
- Tai Chi classes

Smoking

- Willpower alone
- smoking cessation clinic
- Nicotine replacement
- Referral for medication
- Internet programme

Diet / Weight loss

- Self-management of diet / medication
- dietetics referral
- Weight Watchers
- Internet programme
- Coach Programme

Education

- Hospital educational programme
- Home educational programme
- Mentor / volunteer / lay-worker
- Internet

Psychological adjustment

- Self help advice materials
- Stress management class
- Stress management on tape
- Counselling psychologist
- Clinical Psychology / Psychiatry

Social support

- Buddy system
- Patient support group
- Mentoring scheme

Other services / Professions

1. Sexual medicine clinic
2. Welfare rights bureau
3. Social worker
4. Marriage guidance services
5. Specialist heart failure nurse

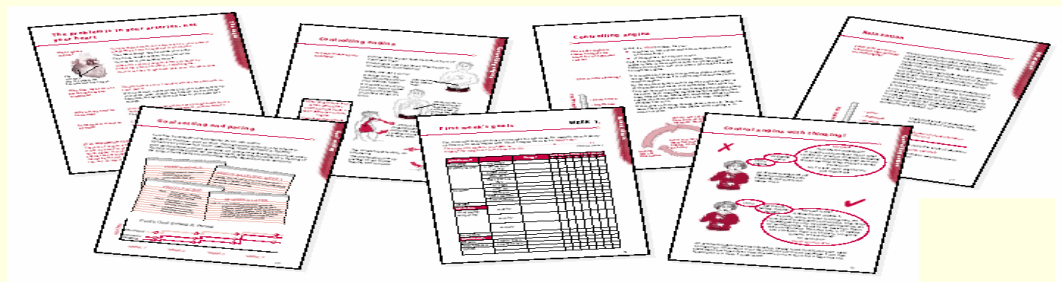
Angina Plan

WHAT?

- Self help package
- A CBT programme

WHO?

- Recent angina
- 1 year since diagnosis



www.anginaplan.org.uk

Using the Angina Plan

- Advice tape & information sheet
- 30 minute appointment
- 4 phone calls over 3 months (5-10 mins)

Pro & Cons of the Angina Plan

Restrictions

- Must be literate
- Must be motivated
- Cost
- Time commitment

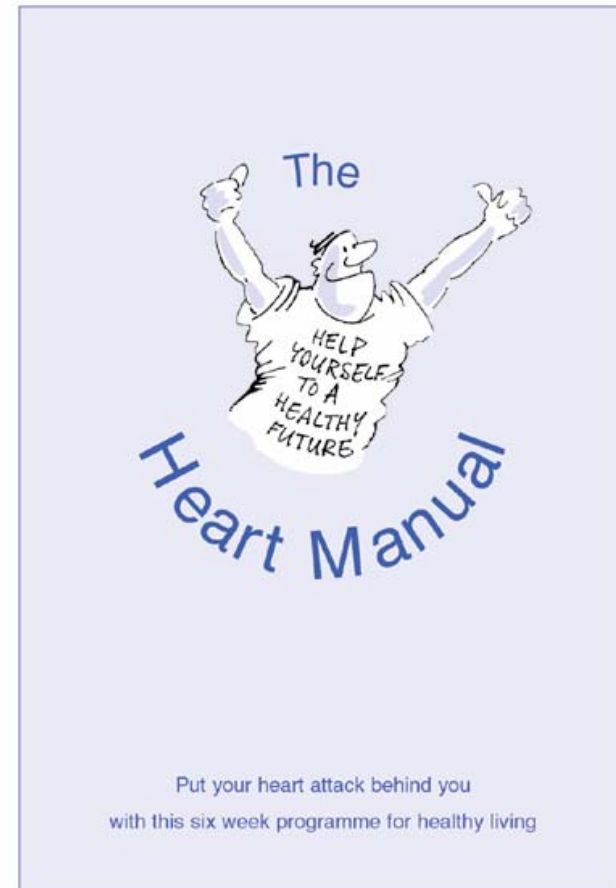
Advantages (RCT)

- Less medication
- Less GP/hospital visits
- ↓ anxiety/depression
- MI treated quickly
- ↓ incidence of CHD

Lewin R et al (2002) A Randomised controlled trial of a self management plan for patients with newly diagnosed angina. British Journal of General Practice 52: 476, 194-201

The Heart Manual ⁽¹⁾

- 6 week, home based post MI rehab programme
- A work book, diaries, record sheets and information
- 2 audio tapes, advice for family, a stress management course on tape
- A specially trained 'Facilitator'



The Heart Manual ⁽²⁾

- Exercise programme – walking
- Secondary prevention – written advice
- Cognitive behavioural techniques
 - Change patients **beliefs and attributions** (cardiac misconceptions)
 - Self help for psychological problems
 - Relaxation and stress management
- Initial face-to-face session, then phone calls or home/clinic visits at week 1, 4, 6 after discharge.

The Heart Manual: Evidence Base

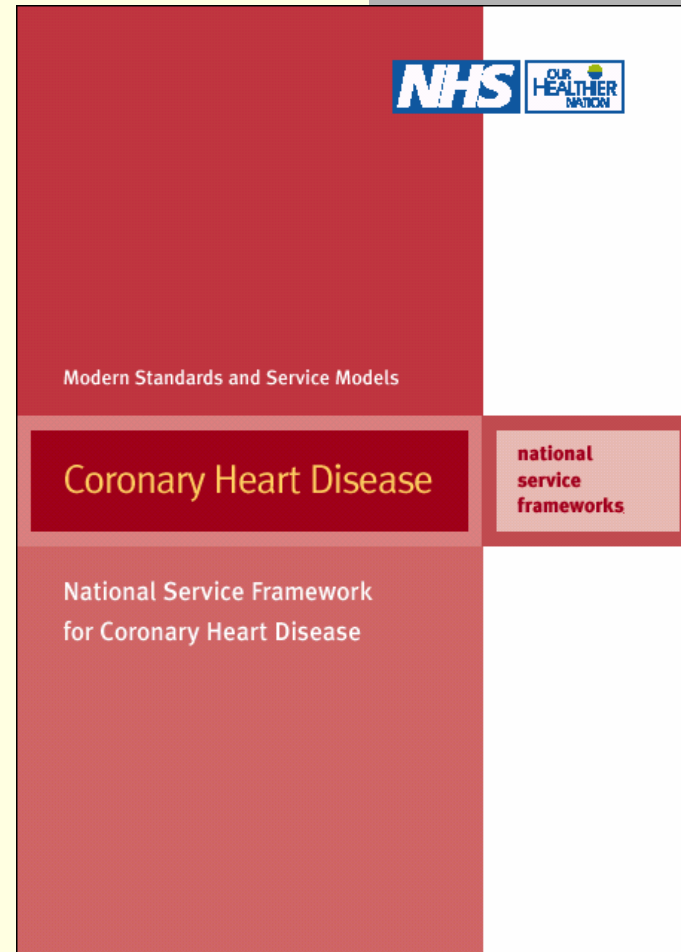
Multi-centred RCT of HM vs. Hospital based. Equal gain on all measures including 2 Met gain in fitness, HM fewer readmissions. *Andrew Coats, Jenny Bell*

Initial RCT - less anxiety & depression: better quality of life: fewer readmissions to hospital: less contact with GP. *Lewin B, Lancet, 1992.*

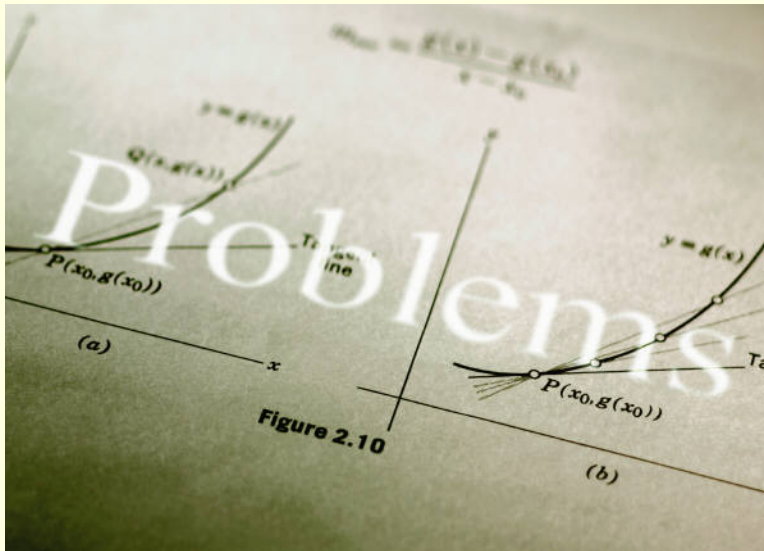
Recommended by - WHO: BHF: Department of Health: Scottish Office

CHD NSF

- By 2002 85% of MI and revasc patients will be offered cardiac rehabilitation
- After that all except unstable angina patients should receive CR.



The Reality



25-30% of patients getting cardiac rehab in 2005-6.

Problems

- **Inequalities** – women, poor, ethnic minorities, depressed, smokers, elderly, all believed to be under-represented, postcode lottery
- **Failure to invite all indicated in NSF** – angina, heart failure, ICD, arrhythmia
- **Dropout** – varies widely from programme to programme
- **Staffing** – from single-handed, part-time, coordinator for 600 patients to a full multi-disciplinary team. Only 50% of programmes have an identifiable budget.

Cost of Cardiac Rehabilitation

- The average cost per patient in 2005-6 was £413
- Single day in a CCU costs £1,400
- Angioplasty (does not reduce mortality) costs £3,000
- Bypass surgery costs £8,000.

Remember the Evidence!

Comprehensive help with lifestyle modification involving education and psychological input as well as exercise training can reduce mortality by 20-25% over 3 years.

Oldridge et al 1988; O'Connor et al 1989

Cardiac Rehabilitation Saves Lives!

- No treatment in cardiac disease has stronger scientific evidence or a significantly greater impact on survival.
- The scientific evidence has been reviewed by many scientific and expert bodies over the last 30 years. Every review has come to the same conclusion that cardiac rehabilitation is an essential treatment.
- CR is only form of chronic disease management with an evidence base.

The Solutions

- NACR
- National Campaign
- NICE Guidelines
- CR QoF
- Tariffs
- CDM Agenda