CRD summary
This review concluded that evidence strongly suggested that systematic referral systems with an in-patient bedside liaison element would increase enrolment to cardiac rehabilitation. Patient letters looked promising but evidence was sparse. Doubts about possible missing studies, the validity of included studies and the methods of combining and comparing data mean that the authors' conclusions may be unreliable.

Authors' objectives
To assess the effects of strategies to increase participant enrolment in cardiac rehabilitation programmes.

Searching
MEDLINE, CINAHL, PsycINFO, Scopus and The Cochrane Library were searched from inception to January 2009. Only studies published in English in peer reviewed journals were eligible for inclusion. The general structure of the search was reported, but search terms were not.

Study selection
Observational or comparative studies that assessed strategies to increase enrolment of eligible participants on cardiac rehabilitation programmes were eligible for inclusion. The outcome of interest was incidence of enrolment (attendance at intake session and participation in programme).

In the included studies programmes consisted of usual referral (dependent on physician), systematic strategies (standing referral orders, implemented generally through use of discharge order sets or electronic records), liaison strategies (health care provider or peer mentor speaks to patient at bedside) or other strategies (patient education or motivational letters) or a combination of these.

Two reviewers independently assessed studies for inclusion. Discrepancies were resolved by discussion or consensus with a third reviewer.

Assessment of study quality
Quality was assessed using the GRADE system.

The authors did not state how many reviewers performed the quality assessment.

Data extraction
Data were extracted in order to calculate enrolment rates and 95% confidence intervals (CI). Studies were grouped according to method of referral programme.

The authors did not state how many reviewers extracted data.

Methods of synthesis
Pooled enrolment rates and 95% CI were calculated using meta-analysis. The type of model used was not reported. Statistical heterogeneity was assessed using the Q test and I² statistic.

Results of the review
Fifteen studies (1,7091 participants) were included. The overall quality of included evidence was rated as low.

Pooled rates of enrolment grouped (according to strategy) were: other (patient letters) 73% (95% CI 39% to 92%; I²=90.95, two studies), combined systematic and liaison strategies 66% (95% CI 54% to 77%; I²=98.1, four studies),
systematic strategies alone 45% (95% CI 33% to 57%; I²=97.78, six trials), liaison strategies alone 44% (95% CI 35% to 53%, I²=93.28, six studies) and usual 24% (95% CI 18% to 31%; five studies).

Authors' conclusions
Evidence strongly suggested that systematic referral systems that included an in-patient bedside liaison element would increase enrolment to cardiac rehabilitation. Patient letters looked promising but evidence was sparse.

CRD commentary
The aims of the review were clearly stated in terms of the inclusion criteria. The search covered a number of relevant sources. The search was limited to studies in English and peer reviewed journals, so studies may have been missed and language and publication biases may have affected the review. The methods of study selection aimed at decreasing reviewer error and bias; methods for quality assessment and data extraction were not clear. Study quality was assessed but the results were not reported for individual studies so it was difficult to comment on the quality of included data.

The methods of synthesis were not entirely clear and appeared inappropriate given evident statistical heterogeneity between studies. Therefore, the reliability and meaning of the pooled estimates were questionable. Little information was given about the included studies and it was not clear what study designs were used in many of the individual studies. References for some of the included studies were missing. Data generally appeared to have come from observational studies. Randomised controlled trials were included but the data from these were analysed as though they were cohort studies. No direct comparisons between treatments were included in the review.

Doubts about possible missing studies, the validity of included studies and the methods of combining and comparing data mean that the authors' conclusions may be unreliable.

Implications of the review for practice and research
Practice: The authors stated that a systematic referral system that included in-patient bedside liaison should be used to increase enrolment in cardiac rehabilitation.

Research: The authors stated that further research was needed to directly compare strategies for improving enrolment in cardiac rehabilitation programmes.

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Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.