



# Home or Centre Based Chronic Heart Failure Rehabilitation? A Systematic Review

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## Background

Chronic Heart Failure (CHF) is a rising epidemic with a high global economic cost<sup>1</sup>. Rehabilitation has been shown to be effective in improving patient and economic outcomes, yet reported engagement rates have been low world-wide<sup>2</sup>. It has been suggested that home based rehabilitation may remove some barriers to attendance including transportation and time flexibility, but there is limited evidence on the effectiveness of home based programs<sup>3</sup>.

## Objective

To investigate the effect of home based rehabilitation for people with CHF on quality of life (QOL), physical function, mortality and hospital re-admission rates.

## Methods

This review was conducted in adherence with the PRISMA 2009 checklist<sup>4</sup>. A search was conducted in six databases (Fig. 1). Key search terms were mapped to subject headings (Table 1) and searched in each database from 1998 to April 2018. Search results were screened by title and abstract and then full text articles were assessed for eligibility (Table 2).

Population	Intervention	Intervention
Heart Failure	Exercis*	Home
OR	OR	OR
Cardiac Failure	Physical Activity	Home based
	OR	OR
	Train*	Home-based

Table 1. Search strategy

Study: English Language, Full Text Available, RCT
Population: Adults with CHF, aged >18 years
Intervention: home-based structured exercise program
Control: any other intervention including usual care or centre-based exercise
Outcome measures: any QoL or physical function measure, mortality and hospital readmission rates

Table 2. Inclusion criteria

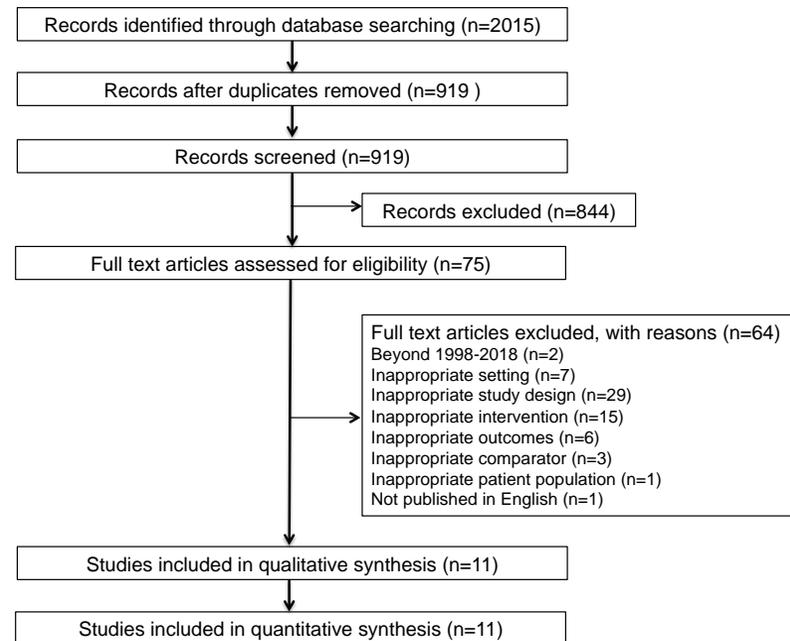


Figure 1. PRISMA flow diagram

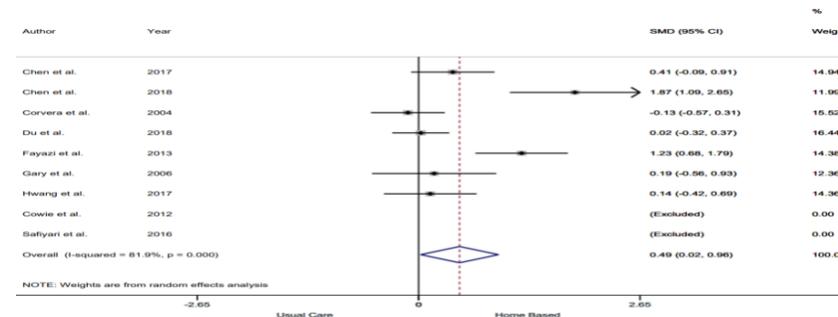


Figure 2. Meta-analysis: Quality of life

## Results

Eleven studies were included in the analysis.

### Home vs centre based rehabilitation: Quality of life

Nine studies measured QOL (Fig. 2). Pooled results favoured home based rehabilitation over centre based programs (SMD 0.49, 95%CI 0.02-0.96).

### Home vs centre based rehabilitation: Physical function

Ten studies measured physical function (Fig. 3). Home based rehabilitation was found to be more beneficial than centre based programs (SMD 0.43, 95%CI 0.12-0.73).

### Home vs centre based rehabilitation: Other outcomes

No studies evaluated the effect of home based rehabilitation on rates of hospital re-admission or mortality.

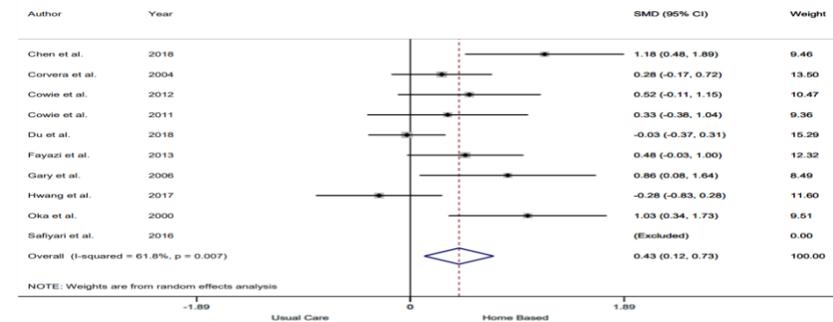


Figure 3. Meta-analysis: Physical function

## Conclusion

Home based rehabilitation significantly improved QOL and physical function in the CHF population compared to centre based programs. Home based rehabilitation programs should be offered as an effective alternative to traditional centre based programs to persons with CHF. Further research is needed to evaluate the impact of home based rehabilitation on hospital re-admission and mortality rates.

## References

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