

Table 1: Search terms used

Key terms and Medical Subject Headings
Heart failure(exp), disease management program (exp), chf, manag(exp), educat(exp), chronic disease (exp), program(exp), coach, usual care, counsel(exp), directive, organization, managed care programs, patient education, disease management (exp), care management (exp), randomized trial, program evaluation, evaluat(exp), meta-anal(exp), metaanal(exp), review(exp)

Table 2: Meta-analyses included in review

Review (Reference number)	Number of trials	N of total sample	Sex (% males)	Mean Age	SD Age	Age Range (Years)	AMSTAR Score
Koshman et al. [35]	12	2060	NR	NR	NR	58-80	7
Clark et al. [25]	14	4264	NR	NR	NR	57-75	8
Gohler et al. [32]	36	8341	37-99%	NR	NR	56-79	5
Jovicic et al. [24]	6	857	53-76 %	NR	NR	56-76	7
Holland et al. [34]	30	NR	27-99%	NR	NR	56-80	4
Kim & Soeken [23]	4	NR	NR	NR	NR	NR to 64.0 to 81.6	6
Phillips et al. [31]	6	949	58%	73	NR	62-79	8
Roccaforte et al. [28]	33	3817	42%	73	NR	NR	8
Taylor et al. [27]	16	1627	23-86%	NR	NR	70-80	9
Whellan et al. [36]	19	5752	NR	NR	NR	56-80	2
Gonseth et al.[37]	54: 27 randomized and 27 non-randomized	3160	NR	Over 70 in most trials	NR	Not summarized	9
Gwadry-Sridhar et al. [33]	8	1239	37-58%	NR	NR	71 -80.3	6
McAlister et al. [30]	29	5039	NR	NR	NR	56-80	5
Phillips et al. [29]	18	3304	62%	NR	NR	NR	7
McAlister et al. [26]	11	2067	NR	NR	NR	63-80	5

Table 3: Select population characteristics

Reporting of population characteristics		
No information on co-morbidities	7/15	[24, 25, 29, 30, 32, 33, 35]
Incomplete or no data on NYHA Classification	10/15	[9, 23, 24, 26, 27, 29, 30, 33, 35-37]
No data on NYHA Classification	4/15	[23, 26, 27, 30]
Range of NYHA Classification only	6/15	[24, 25, 28, 31, 32, 37]
Information on LVEF	6/15	[25, 29, 31, 34, 36, 37]
Summaries of ACE-I and BB medication treatments	3/15	[32, 36, 37]

^aNYHA, New York Heart Association

^bLVEF, Left Ventricular Ejection Fraction

^cACE-I, Ace-Inhibitor

^dBB, Beta Blocker

Table 4: Definitions of trials and characteristics of interventions actually included

Definitions of interventions included in reviews		
No definition	1/15	[33]
Operationalized definition	11/15	[23-27, 30-32, 34, 36, 37]
Definitions incorporate approach, personnel, setting and content	3/15	[23, 26, 27]
Concept of a disease management program	5/15	[26, 28, 30, 31, 36]
Concept of comprehensive treatment approach	6/15	[23, 24, 27, 29, 34, 37]
Interventions provided in particular settings	4/15	[23, 25-27]
Intervention Settings		
Five settings/modes of provision	2/15	[29, 34]
Four settings	7/15	[27, 30, 31, 33, 35-37]
Three settings	4/15	[24, 26, 28, 32]
Single or comparable setting	2/15	[23, 25]
Type of setting		
All settings	2/15	[29, 34]
Hospital (Pre-discharge)	10/15	[23, 27-29, 31, 33-37]
Hospital and home-based components	9/15	[27-29, 31, 33-37]
Home and community	9/15	[27-29, 31, 33-37]
At home	13/15	[24, 26-37]
Out-patient	13/15	[24, 26-37]
Telephone	11/15	[24, 25, 27, 29-35, 37]
Remote provision	5/15	[25, 29, 30, 34, 36]
Professionals		
Nurse-led	11/15	[23, 24, 26, 28-32, 34, 36, 37]
'Multi-disciplinary teams'	10/15	[23, 25, 26, 28, 30, 32-35, 37]
Physician involvement via cardiologist or GP	9/15	[26, 28-32, 35-37]
Both cardiologist and GP	3/15	[26, 30, 36]
Pharmacist	6/15	[28-30, 32, 35, 37]

Table 5: Components of interventions included and trial quality

Number of components		
3-4	8/15	[23, 24, 27-29, 31, 32, 35]
>4	3/15	[26, 30, 37]
Educational components	13/15	[23, 24, 26-35, 37]
Monitoring via home visits or phone	13 / 15	[23, 24, 26-32, 34-37]
Support at hospital discharge	10/15	[23, 24, 26, 28-32, 36, 37]
Medication review	9/15	[24, 26-28, 30-32, 35, 37]
Social support	5/15	[26, 27, 29, 30, 37]
Comparison Groups		
No information	11/15	[23-26, 29-31, 33, 34, 36, 37]

Table 6: Effect sizes of primary outcomes of reviews (95% Confidence Intervals)

Review (reference number)	All cause mortality	All cause re-hospitalization	HF-related hospitalization
Koshman et al. [35]	OR 0.84 (0.61-1.15)	OR 0.71 (0.54-0.94)	OR 0.69 (0.51-0.94)
Clark et al. [25]	RR 0.80 (0.69-0.92)	RR 0.95 (0.89-1.02)	RR 0.79 (0.69-0.89)
Gohler et al. [32]	RD 0.03 (0.01-0.05)	RD 0.08 (0.05-0.11)	NA
Jovicic et al. [24]	OR 0.93 (0.57-1.51)	OR 0.59 (0.44-0.80)	OR 0.44 (0.27-0.71)
Holland et al. [34]	RR 0.79 (0.69-0.92)	RR 0.84 (0.79-0.95)	RR 0.70 (0.61-0.81)
Kim & Soeken [23]	NA	OR 0.87 (0.69-1.04)	NA
Phillips et al. [31]	RR 0.80 (0.57-1.13)	RR 0.91 (0.72-1.16)	NA
Roccaforte et al. [28]	OR 0.80 (0.69-0.93)	OR 0.76 (0.69-0.94)	OR 0.58 (0.50-0.67)
Taylor et al. [27]	OR 0.86 (0.67-1.10)	NA	OR 0.52 (0.39-0.70)
Whellan et al. [36]	NA	NA	NA
Gonseth et al. [37]	RR 0.75 (0.59-0.96)	RR 0.88 (0.79-0.97)	RR 0.70 (0.62-0.79)
Gwadry-Sridhar et al. [33]	RR 0.98 (0.72-1.34)	RR 0.79 (0.68-0.91)	NA
McAlister et al. [30]	RR 0.83 (0.70-0.99)	RR 0.84 (0.75-0.93)	RR 0.73 (0.66-0.82)
Phillips et al. [29]	RR 0.87(0.73-1.03)	RR 0.75 (0.64-0.88)	RR 0.65 (0.54-0.79)
McAlister et al. [26]	RR 0.94 (0.75-1.19)	RR 0.87 (0.79-0.96)	NA

RR: Risk Ratio; RD: Risk Difference; OR: Odds Ratio

Table 7 – Direction of effects Quality of Life

	Measures	Pooling (Y/N)	Result of pooling
Phillips et al. (2005) [31]	NHP MLHF HFSBS	Y (5/6 studies reported QOL)	+ Intervention: 30.6±20.7% VS. control: 19.3±12.6%, p=0.13
Gwadry-Sridhar et al. (2004) [33]	SF-36	N (4/8 studies reported HRQOL; precluded pooling)	RNPH
Koshman et al. (2008) [35]	MLHF COOP/WONCA SF-36 EQ-5D CHFQ	N (7/12 studies reported HRQOL; precluded pooling)	RNPH
Roccaforte et al. (2005) [28]	MLHF SF-36	N (16/33 studies reported QOL; varying presentation of results precluded pooling)	RNPH
Taylor et al. (2005) [27]	MLHF QLHFQ CHFQ Time trade off method (?)	N (8/16 studies reported HRQOL; varying results)	RNPH
Phillips et al. (2004) [29]	MLHF NHP HFSBS SF-36	Y (5/18 studies reported HRQOL)	+ Intervention: 25.7% [95% CI, 11.0%-40.4%] VS. control: 13.5% [95% CI, 5.1%-22.0%]
McAlister et al. (2001) [26]	NR	N (5/11 studies reported HRQOL)	Insufficient data

HRQOL = Health-related quality of life; QOL= Quality of life

MLHF = Minnesota Living with Heart Failure Questionnaire ; COOP/WONCA = Dartmouth Primary Care Cooperative Research Network/World Organization of National Colleges, Academics and Academic Associations of General Practitioners/Family Physicians ; SF-36 = 36-Item Short-Form Health Survey; EQ-5D = EuroQol-5 Dimensions form

NHP = Nottingham Health Profile; HFSBS = Heart Failure Self Care Behaviour Scale ; QLHFQ = Quality of Life in Heart Failure Questionnaire; CHFQ = Chronic Heart Failure Questionnaire

RNPH: Results not pooled due to heterogeneity

+= Non-significant trend favoring intervention

++= Significant trend favoring intervention

Table 8: Trial quality and heterogeneity

Conclusions	
Quality	
Trial quality taken into account	[35, 37]
Trial quality mentioned	[23, 24, 27, 33]
Heterogeneity	
Discussed	[27, 28, 30, 32, 34, 35, 37]
Statistical Assessment	[23-35, 37]
Cochran's Q test and I ² statistic	[23-35, 37]
Clinical acknowledged	[24, 25, 32]
Methodological acknowledged	[26, 33, 35]