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	<1year; participation in another trial; on-going or planned hospitalisation; undergoing kidney function replacement therapy
Recruitment/selection of patients	Those meeting the inclusion criteria who gave informed consent
Age, gender and ethnicity	Age - Range of means: 70-71. Gender (M:F): 174:66. Ethnicity: not reported
Further population details	1. Critical illness: Not applicable/Not stated Unclear. 2. Frail Elderly: Not applicable/Not stated Unclear.
Indirectness of population	No indirectness: not applicable
Interventions	(n=118) Intervention 1: Attendance at a post discharge follow up clinic – post discharge clinic. intensive follow up at a heart failure physician and cardiovascular nurse-led heart failure outpatient clinic - telephone call at 1 week, visit to clinic at 1 and 3 weeks, including verbal and written education, individualised lifestyle advice, patient diary, easy access to clinic, appointment with dietician, tailored treatment regimen, regular follow up visits at weeks 5 and 7 and months 3, 6, 9 and 12. Duration: 1 year. Concurrent medication/care: not applicable.  (n=122) Intervention 2: No post discharge or early follow up clinic - As defined by study. Usual care - largely according to the guideline of the European Society of Cardiology (version 2001). Duration: 1 year. Concurrent medication/care: not applicable.
Funding	Funding not stated
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: POST DISCHARGE CLINIC versus AS DEFINED BY STUDY	
<p>Protocol outcome 1: Mortality - Actual outcome: death (all cause) at 1 year; Group 1: 12/118, Group 2: 23/122; Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness, Comments: not applicable; Baseline details: well balanced for all baseline characteristics apart from sex</p> <p>Protocol outcome 2: Readmission - Actual outcome: hospitalisation for congestive heart failure at 1 year; Group 1: 11/118, Group 2: 24/122; Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness, Comments: not applicable; Baseline details: well balanced for all baseline characteristics apart from sex</p>	
Protocol outcomes not reported by the study	Quality of life; Avoidable adverse effects; Patient satisfaction; Return to work; ED Attendance; Carer satisfaction/burden

Study	Dhalla 2014 <sup>8</sup>
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=1932)
Countries and setting	Conducted in Canada; setting: 4 hospitals in Toronto
Line of therapy	Not applicable
Duration of study	Intervention + follow up: 12 months
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: discharged from the internal medicine ward
Stratum	Overall: not applicable
Subgroup analysis within study	Not applicable: not applicable
Inclusion criteria	18 years or older; being discharged from the general medicine ward of the participating hospitals; at high risk of readmission (determined by length of stay, acuity of the admission, comorbidities, ED visits in the previous 6 months); residing within the boundaries of the Toronto Central Local Health Integration Network
Exclusion criteria	being discharged to a rehabilitation or complex continuing care facility; non English speaking; previous enrolment in the study; did not wish to participate
Recruitment/selection of patients	Consecutive patients meeting the inclusion criteria during the recruitment period
Age, gender and ethnicity	Age - Range of means: 71.2-71.3. Gender (M:F): 995:937. Ethnicity: not reported
Further population details	1. Critical illness: Not applicable/Not stated Unclear. 2. Frail Elderly: Not applicable/Not stated Unclear.
Indirectness of population	No indirectness: not applicable
Interventions	(n=963) Intervention 1: Attendance at a post discharge follow up clinic - post discharge clinic. virtual ward - written information about services with telephone number to call, virtual ward team meeting each morning to design and execute individualised care plans (beginning the day after discharge), telephone communication between virtual ward physician and primary care physician, home visit from care coordinator within a few days of discharge, patients assessed by telephone, at home or in the virtual ward clinic as needed. Duration: mean 35.5 days (SD 27 days). Concurrent medication/care: not applicable.  (n=960) Intervention 2: No post discharge or early follow up clinic - As defined by study. Usual care - typewritten structured discharge summary, prescription when indicated, counselling, arrangements for home care as needed, recommendations/appointments for follow up care with primary care and specialist physicians, follow up clinic only at the discretion of the discharging physician. Duration: 1 year. Concurrent medication/care: not applicable.
Funding	Academic or government funding (Canadian Institutes of Health Research, Ontario Ministry of Health and Long-term Care, Green Shield Canada Foundation, University of Toronto Department of Medicine, Academic Funding Plan

Study	Dhalla 2014 <sup>8</sup>
	Innovation Fund)
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: POST DISCHARGE CLINIC versus AS DEFINED BY STUDY	
Protocol outcome 1: Mortality - Actual outcome: death at 12 months; Group 1: 244/947, Group 2: 251/949; Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness, Comments: not applicable	
Protocol outcome 2: Readmission - Actual outcome: readmission at 12 months; Group 1: 535/903, Group 2: 524/897; Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness, Comments: not applicable	
Protocol outcome 3: ED Attendance - Actual outcome: ED visit at 12 months; Group 1: 657/915, Group 2: 641/908; Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness, Comments: not applicable	
Protocol outcomes not reported by the study	Quality of life; Avoidable adverse effects; Patient satisfaction; Return to work; Carer satisfaction/burden

Study	Ekman 1998 <sup>10</sup>
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=158)
Countries and setting	Conducted in Sweden; setting: Sahlgrenska University Hospital
Line of therapy	Not applicable
Duration of study	Intervention + follow up: 6 months
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: heart failure patients in the medical wards at the hospital
Stratum	Overall: not applicable
Subgroup analysis within study	Not applicable: not applicable
Inclusion criteria	65 years; Boston criteria score 8; New York Heart Association classification 3 or 4 at last hospitalisation; residence within the catchment area
Exclusion criteria	Large MI during the preceding 8 weeks (new Q wave or serum CK-MB >100mcgkat.L-1); need of specialist treatment; serum creatinine >300mcgmol.L-1; need of permanent nursing home care; serious or life threatening other disease; communication problems

Study	Ekman 1998 <sup>10</sup>
Recruitment/selection of patients	Consecutive patients meeting the inclusion criteria during the recruitment period
Age, gender and ethnicity	Age - Mean (SD): 80.3 (6.8). Gender (M:F): 91:67. Ethnicity: not reported
Further population details	1. Critical illness: Not applicable/Not stated Unclear. 2. Frail Elderly: Not applicable/Not stated Unclear.
Indirectness of population	No indirectness: not applicable
Interventions	(n=79) Intervention 1: Attendance at a post discharge follow up clinic - post discharge clinic. structured care programme - nurse monitored outpatient clinic in cooperation with study doctors, nurses available by telephone during working hours, visit to the clinic offered at 1 week, patient education, tailored care and goal setting, notebook for weight monitoring, medication calendars, guidelines and information, regular nurse telephone contact. Duration: 6 months. Concurrent medication/care: not applicable.  (n=79) Intervention 2: No post discharge or early follow up clinic - As defined by study. Usual care - treated and followed by a GP and visited the ED if symptoms worsened. Duration: 6 months. Concurrent medication/care: not applicable.
Funding	Other (Swedish Medical Research Council, Swedish Foundation for Health Care Sciences and Allergy Research, Merck Sharp & Dohme)
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: POST DISCHARGE CLINIC versus AS DEFINED BY STUDY	
<p>Protocol outcome 1: Mortality - Actual outcome: number of deaths (at least 1 visit to nurse) at 6 months; Group 1: 9/56, Group 2: 17/79; Risk of bias: All domain - High, Selection - High, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness, Comments: not applicable; Baseline details: greater prevalence of atrial fibrillation in the usual care group</p> <p>Protocol outcome 2: Readmission - Actual outcome: readmissions for heart failure (at least 1 visit to nurse) at 6 months; Group 1: 28/56, Group 2: 38/79; Risk of bias: All domain - High, Selection - High, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness, Comments: not applicable; Baseline details: greater prevalence of atrial fibrillation in the usual care group</p>	
Protocol outcomes not reported by the study	Quality of life; Avoidable adverse effects; Patient satisfaction; Return to work; ED Attendance; Carer satisfaction/burden

Study	Kasper 2002 <sup>15</sup>
Study type	RCT (Patient randomised; Parallel)

Study	Kasper 2002 <sup>15</sup>
Number of studies (number of participants)	1 (n=200)
Countries and setting	Conducted in USA; setting: the Johns Hopkins Hospital, Maryland, USA
Line of therapy	Not applicable
Duration of study	Intervention + follow up: 6 months
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: New York Heart Association functional class 3 or 4 CHF
Stratum	Overall: not applicable
Subgroup analysis within study	Not applicable: not applicable
Inclusion criteria	English-speaking; primary diagnosis of NYHA functional class 3/4; judged to be at high risk of CHF readmission (1 or more of the following criteria: >70 years; LVEF<35%; at least 1 additional CHF hospital admission in the previous year; ischemic cardiomyopathy; peripheral oedema at discharge; <3kg weight loss in hospital; peripheral vascular disease or hemodynamic findings of pulmonary capillary wedge pressure >25mm Hg; cardiac index <2.0l/min/m <sup>2</sup> ; systolic BP >180mm Hg/diastolic BP >100mm Hg)
Exclusion criteria	Valvular heart disease requiring surgical correction; active substance abuse; peripartum cardiomyopathy; hypertrophic cardiomyopathy with LV outflow tract obstruction; restrictive cardiomyopathy; constrictive pericarditis; psychiatric disease/dementia; concurrent non-cardiac illness; heart transplantation likely within 6 months; uncorrected thyroid disease; serum creatinine >265 mcgmol/l; long term intravenous inotropic therapy at home; cardiac surgery or myocardial infarction during index admission; participation in another trial; unwillingness to consent; residence in a nursing home/rehabilitation facility/outside catchment area
Recruitment/selection of patients	Consecutive patients meeting the inclusion criteria during the recruitment period
Age, gender and ethnicity	Age - Range of means: 60.2-63.7. Gender (M:F): 121:79. Ethnicity: not reported
Further population details	1. Critical illness: Not applicable/Not stated Unclear. 2. Frail Elderly: Not applicable/Not stated Unclear.
Indirectness of population	No indirectness: not applicable
Interventions	(n=102) Intervention 1: Attendance at a post discharge follow up clinic - post discharge clinic. telephone calls with nurse coordinator within 72 hours of discharge then weekly for a month, twice in the second month and then monthly, monthly follow up visits with CHF nurses in CHF clinics or at home, diet restriction, exercise advice, pill sorter, patient education materials, contact number 24 hours a day. Duration: 6 months. Concurrent medication/care: not applicable.  (n=98) Intervention 2: No post discharge or early follow up clinic - As defined by study. Usual care - care from primary physicians. Duration: 6 months. Concurrent medication/care: not applicable.

Study	Kasper 2002 <sup>15</sup>
Funding	Funding not stated
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: POST DISCHARGE CLINIC versus AS DEFINED BY STUDY	
<p>Protocol outcome 1: Mortality            - Actual outcome: number of deaths at 6 months; Group 1: 7/102, Group 2: 13/98; Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness, Comments: not applicable</p> <p>Protocol outcome 2: Readmission            - Actual outcome: no. of patients admitted for chronic heart failure at 6 months; Group 1: 26/102, Group 2: 35/98; Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness, Comments: not applicable</p>	
Protocol outcomes not reported by the study	Quality of life; Avoidable adverse effects; Patient satisfaction; Return to work; ED Attendance; Carer satisfaction/burden

Study (subsidiary papers)	Mcdonald 2002 <sup>17</sup> (Ledwidge 2003 <sup>16</sup> )
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=98)
Countries and setting	Conducted in Irish Republic; setting: St. Vincent's University Hospital, Dublin, Ireland
Line of therapy	Not applicable
Duration of study	Intervention time + follow up: 3 months
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: diagnosis of heart failure confirmed by a cardiologist
Stratum	Overall: not applicable
Subgroup analysis within study	Not applicable: not applicable
Inclusion criteria	>18 years; admitted through injury with a diagnosis of heart failure; diagnosis confirmed by a cardiologist based on history and examination compatible with HF, chest x-ray appearance of congestion, echocardiography evidenced left ventricular systolic or diastolic dysfunction and response to initial therapy
Exclusion criteria	Heart failure in the setting of myocardial infarction or unstable angina; failure not thought to be the primary problem; illnesses that could compromise survival over the duration of the study; cognitive impairment
Recruitment/selection of patients	Consecutive patients meeting the inclusion criteria during the recruitment period (November 1998 to April 2000)

Study (subsidiary papers)	Mcdonald 2002 <sup>17</sup> (Ledwidge 2003 <sup>16</sup> )
Age, gender and ethnicity	Age - Mean (SD): 70.8 (10.47). Gender (M:F): 65:33. Ethnicity: not reported
Further population details	1. Critical illness: Not applicable/Not stated Unclear. 2. Frail Elderly: Not applicable/Not stated Unclear.
Indirectness of population	No indirectness: not applicable
Interventions	(n=51) Intervention 1: Attendance at a post discharge follow up clinic – post discharge clinic. Nurse-led education and dietetic consultations on 3 or more occasions, telephone call 3 days after discharge and weekly until 12 weeks, 2 HF outpatient visits (week 2 and 6), patients advised to contact clinic for medication adjustment if weight increased by 2kg or more. Duration: 3 months. Concurrent medication/care: not applicable.  (n=47) Intervention 2: No post discharge or early follow up clinic - As defined by study. Routine care - patients referred back to primary care physician. Duration: 3 months. Concurrent medication/care: not applicable.
Funding	Other (Irish Heart Foundation and Servier Laboratories, Ireland)
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: POST DISCHARGE CLINIC versus AS DEFINED BY STUDY	
<p>Protocol outcome 1: Quality of life - Actual outcome: Minnesota Living with Heart Failure score at 3 months; Group 1: mean 29 (SD 19); n=51, Group 2: mean 40 (SD 23); n=47, Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - High, Measurement - High, Crossover - Low; Indirectness of outcome: No indirectness, Comments: not applicable</p> <p>Protocol outcome 2: Mortality - Actual outcome: deaths at 3 months; Group 1: 3/51, Group 2: 3/47; Risk of bias: All domain - High, Selection - High, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness, Comments: not applicable</p> <p>Protocol outcome 3: Readmission - Actual outcome: readmissions for heart failure at 3 months; Group 1: 2/51, Group 2: 12/47; Risk of bias: All domain - High, Selection - High, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness, Comments: not applicable; Blinding details: decision to admit patients in RC group was responsibility of their primary care physician and not influenced by persons involved in the study; charts were subsequently reviewed and diagnosis accepted. Decision to readmit patients in the intervention group was based on specific pre-defined criteria</p>	
Protocol outcomes not reported by the study	Avoidable adverse effects; Patient satisfaction; Return to work; ED Attendance; Carer satisfaction/burden
Study	Stromberg 2003 <sup>25</sup>
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=106)

Study	Stromberg 2003 <sup>25</sup>
Countries and setting	Conducted in Sweden; setting: 1 university hospital and 2 county hospitals
Line of therapy	Not applicable
Duration of study	Intervention time + follow up: 12 months
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: New York Heart Association Classification 2-4
Stratum	Overall: not applicable
Subgroup analysis within study	Not applicable: not applicable
Inclusion criteria	Diagnosed heart failure (by echocardiography, radiographic evidence of pulmonary congestion or typical symptoms and signs of heart failure)
Exclusion criteria	Severe chronic pulmonary disease; dementia; psychiatric illness; short anticipated survival; discharge to a geriatric clinic/home care; already receiving follow up at the nurse-led HF clinic
Recruitment/selection of patients	Consecutive patients meeting the inclusion criteria during the recruitment period (June 1997 to December 1999)
Age, gender and ethnicity	Age - Range of means: 77-78. Gender (M:F): 65:41. Ethnicity: not reported
Further population details	1. Critical illness: Critically ill (heart failure). 2. Frail Elderly: Not applicable/Not stated Unclear.
Indirectness of population	No indirectness: not applicable
Interventions	(n=52) Intervention 1: Attendance at a post discharge follow up clinic – post discharge clinic. Nurse-led heart failure clinic 2-3 weeks after discharge, patient and family education, dietary & lifestyle changes, nurses available by telephone during working hours. Duration: 1 year. Concurrent medication/care: not applicable.  (n=54) Intervention 2: No post discharge or early follow up clinic - As defined by study. Current clinical practice - conventional follow up in primary health care. Duration: 1 year. Concurrent medication/care: not applicable.
Funding	Academic or government funding (The Health Research Council (South East Sweden), Swedish Foundation for Healthcare Science and Allergy Research, Swedish Heart and Lung Foundation, Research Foundation of the University Hospital of Linköping )
<b>RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: POST DISCHARGE CLINIC versus AS DEFINED BY STUDY</b>	
<p>Protocol outcome 1: Mortality</p> <p>- Actual outcome: no. of deaths at 1 year; Group 1: 7/52, Group 2: 20/54; Risk of bias: All domain - High, Selection - High, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness, Comments: not applicable ; Baseline details: more patients with hypertension in the intervention group; more patients with diabetes in the control group</p>	

Study	Stromberg 2003 <sup>25</sup>
Protocol outcome 2: Readmission - Actual outcome: all-cause admissions at 1 year; Group 1: 82/52, Group 2: 92/54; Risk of bias: All domain - High, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness, Comments: not applicable ; Baseline details: more patients with hypertension in the intervention group; more patients with diabetes in the control group Hospital admissions/patient/months after 12 months: Group 1: 0.18, Group 2: 0.40	
Protocol outcomes not reported by the study	Quality of life; Avoidable adverse effects; Patient satisfaction; Return to work; ED Attendance; Carer satisfaction/burden

Study	The Auckland Heart Failure Management Study trial: Doughty 2002 <sup>9</sup>
Study type	RCT ( randomised; Parallel)
Number of studies (number of participants)	1 (n=197)
Countries and setting	Conducted in New Zealand; setting: Auckland hospital
Line of therapy	Not applicable
Duration of study	Intervention + follow up: 12 months
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: heart failure diagnosed on the basis of typical symptoms and signs, with review of chest radiograph, ECG and echocardiogram
Stratum	Overall
Subgroup analysis within study	Not applicable
Inclusion criteria	Patients admitted to the general medical wards at Auckland Hospital with a primary diagnosis of heart failure on the basis of typical signs and symptoms with review of chest radiograph, ECG and echocardiogram
Exclusion criteria	A surgically remediable cause for heart failure, such as severe aortic stenosis; consideration for heart transplantation; inability to provide informed consent; terminal cancer; participation in any other clinical trial
Recruitment/selection of patients	GPs randomly allocated to intervention or control groups
Age, gender and ethnicity	Age - Range: 34-92 years. Gender (M:F): 118:79. Ethnicity: not reported
Further population details	1. Critical illness: Not applicable/Not stated Unclear. 2. Frail Elderly: Not applicable/Not stated Unclear.
Indirectness of population	No indirectness: not applicable
Interventions	(n=100) Intervention 1: Attendance at a post discharge follow up clinic - early follow up clinic. outpatient clinical review at a hospital-based heart failure clinic within 2 weeks of discharge, patient education, patient diary and

<b>Study</b>	<b>The Auckland Heart Failure Management Study trial: Doughty 2002<sup>9</sup></b>
	information booklet, 6-weekly visits alternating between GP and HF clinic, group education sessions, team available by telephone during working hours. Duration: 1 year. Concurrent medication/care: not applicable.  (n=97) Intervention 2: No post discharge or early follow up clinic - As defined by study. Usual care - care of GP with additional follow up measures as usually recommended by the medical team. Duration: 1 year. Concurrent medication/care: not applicable.
Funding	Other (project grant from National Heart of Zealand and unrestricted educational grant from Merck Sharp Dohme (NZ))
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: POST DISCHARGE CLINIC versus AS DEFINED BY STUDY	
<p>Protocol outcome 1: Mortality - Actual outcome: deaths (all cause) at 1 year; Group 1: 19/100, Group 2: 24/97; Risk of bias: All domain - High, Selection - High, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness, Comments: not applicable; Baseline details: group differences in ischaemic HF patients, patients living alone, patients treated for hypertension and patients with diabetes (differences not statistically significant;</p> <p>Protocol outcome 2: Readmission - Actual outcome: no. of patients readmitted for heart failure at 1 year; Group 1: 21/100, Group 2: 23/97; Risk of bias: All domain - High, Selection - High, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness, Comments: not applicable; Baseline details: group differences in ischaemic patients, patients living alone, patients treated for hypertension and patients with diabetes</p>	
Protocol outcomes not reported by the study	Quality of life; Avoidable adverse effects; Patient and/or carer satisfaction; Return to work; ED Attendance; Carer satisfaction/burden

<b>Study</b>	<b>Thompson 2005<sup>26</sup></b>
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=106)
Countries and setting	Conducted in United Kingdom; setting: York District Hospital and Scunthorpe General Hospital
Line of therapy	Not applicable
Duration of study	Intervention + follow up: 6 months
Method of assessment of guideline condition	Adequate method of assessment/diagnosis: diagnosis of chronic heart failure with objective evidence of impaired left ventricular systolic fraction

Study	Thompson 2005 <sup>26</sup>
Stratum	Overall: not applicable
Subgroup analysis within study	Not applicable: not applicable
Inclusion criteria	Acute hospital admission with a diagnosis of CHF; objective evidence of impaired left ventricular ejection fraction of 45% or less immediately prior to study recruitment; discharge to home
Exclusion criteria	Patients awaiting an elective cardiac procedure to reverse the cause of underlying heart failure; terminal illness other than CHF
Recruitment/selection of patients	Consecutive patients meeting the inclusion criteria during the recruitment period (20 months)
Age, gender and ethnicity	Age - Range of means: 72-73. Gender (M:F): 77:29. Ethnicity: not reported
Further population details	1. Critical illness: Not applicable/Not stated Unclear. 2. Frail Elderly: Not applicable/Not stated Unclear.
Indirectness of population	No indirectness: no indirectness
Interventions	(n=58) Intervention 1: Attendance at a post discharge follow up clinic - post discharge clinic. Information before discharge, home visits within 10 days of discharge including education and clinical examination, telephone access to nurses during working hours, monthly nurse-led outpatient HF clinic for at least 6 months. Duration: 6 months. Concurrent medication/care: not applicable.  (n=48) Intervention 2: No post discharge or early follow up clinic - As defined by study. Standard care - explanation of condition and medication by ward nurse and referral to appropriate post-discharge support, outpatient appointment 6-8 weeks after discharge. Duration: 6 months. Concurrent medication/care: not applicable.
Funding	Other (1 author supported by the National Heart Foundation and the National Health and Medical Research Council of Australia. Study supported by a grant from Merck Pharmaceuticals UK)

#### RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: POST DISCHARGE CLINIC versus AS DEFINED BY STUDY

##### Protocol outcome 1: Mortality

- Actual outcome: mortality at 6 months; Group 1: 5/58, Group 2: 7/48; Risk of bias: All domain - High, Selection - High, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness, Comments: not applicable; Baseline details: intervention group had fewer prior admissions and were more likely to be prescribed an ACE inhibitor)

##### Protocol outcome 2: Readmission

- Actual outcome: no. of patients readmitted at 6 months; Group 1: 13/58, Group 2: 21/48; Risk of bias: All domain - High, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low; Indirectness of outcome: No indirectness, Comments: not applicable; Baseline details: intervention group had fewer prior admissions and were more likely to be prescribed an ACE inhibitor)

Study	Thompson 2005 <sup>26</sup>
Protocol outcomes not reported by the study	Quality of life; Avoidable adverse effects; Patient and/or carer satisfaction; Return to work; ED Attendance; Carer satisfaction/burden

## Appendix E: Economic evidence tables

Study	De la Porte 2007 <sup>7</sup>			
Study details	Population & interventions	Costs	Health outcomes	Cost effectiveness
<p><b>Economic analysis:</b> CCA (health outcomes: mortality and quality of life)</p> <p><b>Study design:</b> Within-trial analysis (RCT)</p> <p><b>Approach to analysis:</b> Prospective costing of hospitalisation and outpatient clinic attendances.</p> <p><b>Perspective:</b> Netherlands hospital provider.</p> <p><b>Follow-up:</b> 12 months.</p> <p><b>Treatment effect duration:</b> n/a</p> <p><b>Discounting:</b> n/a</p>	<p><b>Population:</b> NYHA class 3 or 4 heart failure.</p> <p><b>Cohort settings:</b> N: 240, Mean age: 70-71, Male: 72.5%</p> <p><b>Intervention 1:</b> No post discharge or early follow up clinic.</p> <p><b>Intervention 2:</b> Attendance at a post discharge follow up clinic. Intensive follow up at a heart failure physician and cardiovascular nurse-led heart failure outpatient clinic - telephone call at 1 week, visit to clinic at 1 and 3 weeks, including verbal and written education, individualised lifestyle advice, patient diary, easy access to clinic, appointment with dietician, tailored treatment regimen.</p>	<p><b>Total costs (mean per patient):</b> Intervention 1: £1,125 Intervention 2: £662 Incremental (2-1): Saves £463 (95% CI: NR; p=NR)</p> <p><b>Currency &amp; cost year:</b> Assumed to be 2003 UK pounds.<sup>(a)</sup></p> <p><b>Cost components incorporated:</b> Daily hospitalisation cost. Outpatient clinic visit including nurse, dietician and doctor's salaries.</p>	<p><b>Mortality (1-year risk):</b> Intervention 1: 0.19 Intervention 2: 0.10 RR (2 versus 1): 0.54 (95% CI: NR; p=NR)</p> <p><b>Re-admission (1-year risk):</b> Intervention 1: 0.20 Intervention 2: 0.09 RR (2 versus 1): 0.47 (95% CI: NR; p=NR)</p>	<p>Intervention 2 dominates</p> <p><b>Analysis of uncertainty:</b> After adjusting for baseline differences in sex there was no change in the results.</p>
<b>Data sources</b>				
<b>Cost sources:</b> NR.				
<b>Comments</b>				
<b>Source of funding:</b> Novartis, AstraZeneca, Bristol-Myers Squibb and Roche. <b>Applicability and limitations:</b> Not a UK NHS perspective and health outcomes not measured in QALYs. The details and source of costs were not fully reported. The time horizon is only 1 year, which may not capture all costs and health effects.				
<b>Overall applicability:</b> Partially applicable <sup>(b)</sup> <b>Overall quality:</b> Potentially serious limitations <sup>(c)</sup>				

Abbreviations: CCA: cost-consequence analysis; ICER: incremental cost effectiveness ratio; n/a: not applicable; NR: not reported; QALYs: quality-adjusted life years; RR: relative risk.

(a) Data collection was completed in 2003 and so this was the assumed date for the costs.

(b) Directly applicable/Partially applicable/Not applicable.

(c) Minor limitations/Potentially serious limitations/Very serious limitations.

## Appendix F: GRADE tables

Table 6: Clinical evidence profile: post discharge clinics versus no post discharge clinics

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Attendance at a post discharge early follow up clinic versus no post discharge early follow up clinic	Control	Relative (95% CI)	Absolute		
<b>Mortality (follow-up 3-12 months; assessed with: number of deaths)</b>												
8	randomised trials	serious <sup>1</sup>	no serious inconsistency	serious <sup>2</sup>	no serious imprecision	none	65/649 (10%)	18%	RR 0.53 (0.4 to 0.7)	85 fewer per 1000 (from 54 fewer to 108 fewer)	⊕⊕⊕⊕ LOW	CRITICAL
<b>Mortality (follow-up 12 months; assessed with: number of deaths)</b>												
1	randomised trials	no serious risk of bias	no serious inconsistency	serious <sup>2</sup>	no serious imprecision	none	244/947 (25.8%)	26.5%	RR 0.97 (0.84 to 1.13)	8 fewer per 1000 (from 42 fewer to 34 more)	⊕⊕⊕⊕ MODERATE	CRITICAL
<b>Avoidable adverse events (follow-up 12 months; assessed with: urgent transplantations)</b>												
1	randomised trials	serious <sup>1</sup>	no serious inconsistency	serious <sup>2</sup>	serious <sup>3</sup>	none	1/112 (0.89%)	0%	OR 8.08 (0.16 to 408.63)	-	⊕⊕⊕⊕ VERY LOW	CRITICAL
<b>ED attendance (follow-up 12 months; assessed with: number of ED visits)</b>												
1	randomised trials	serious <sup>1</sup>	no serious inconsistency	serious <sup>2</sup>	no serious imprecision	none	657/915 (71.8%)	70.6%	RR 1.02 (0.96 to 1.08)	14 more per 1000 (from 28 fewer to 56 more)	⊕⊕⊕⊕ LOW	CRITICAL
<b>Quality of life (follow-up 3 months; measured with: Minnesota Living With Heart Failure Questionnaire; Better indicated by lower values)</b>												

1	randomised trials	very serious <sup>1</sup>	no serious inconsistency	serious <sup>2</sup>	serious <sup>3</sup>	none	51	47	-	MD 11 lower (19.39 to 2.61 lower)	⊕○○○ VERY LOW	CRITICAL
<b>Quality of life (follow-up 12 months; measured with: time trade-off; Better indicated by lower values)</b>												
1	randomised trials	serious <sup>1</sup>	no serious inconsistency	serious <sup>2</sup>	serious <sup>3</sup>	none	112	122	-	MD 0.09 higher (0.04 to 0.14 higher)	⊕○○○ VERY LOW	CRITICAL
<b>Readmission (assessed with: number of heart failure patients readmitted for any cause)</b>												
2	randomised trials	serious <sup>1</sup>	no serious inconsistency	serious <sup>2</sup>	no serious imprecision	none	22/170 (12.9%)	37%	RR 0.38 (0.2 to 0.73)	229 fewer per 1000 (from 100 fewer to 296 fewer)	⊕⊕○○ LOW	CRITICAL
<b>Readmission (follow-up 12 months; assessed with: number of general medical patients readmitted)</b>												
1	randomised trials	no serious risk of bias	no serious inconsistency	serious <sup>2</sup>	no serious imprecision	none	535/903 (59.2%)	58.4%	RR 1.01 (0.94 to 1.1)	6 more per 1000 (from 35 fewer to 58 more)	⊕⊕⊕○ MODERATE	CRITICAL
<b>Readmission due to heart failure (follow-up 3-12 months; assessed with: number of patients readmitted due to heart failure)</b>												
5	randomised trials	serious <sup>1</sup>	serious <sup>4</sup>	serious <sup>2</sup>	serious <sup>3</sup>	none	88/427 (20.6%)	25.5%	RR 0.7 (0.47 to 1.05)	76 fewer per 1000 (from 135 fewer to 13 more)	⊕○○○ VERY LOW	CRITICAL

<sup>1</sup> Downgraded by 1 increment if the majority of the evidence was at high risk of bias, and downgraded by 2 increments if the majority of the evidence was at very high risk of bias.

<sup>2</sup> Downgraded by 1 or 2 increments because the majority of the evidence was based on indirect comparisons.

<sup>3</sup> Downgraded by 1 increment if the confidence interval crossed 1 MID or by 2 increments if the confidence interval crossed both MIDs.

<sup>4</sup> Downgraded by 1 or 2 increments because Heterogeneity, I<sup>2</sup>=50%, p=0.04, unexplained by subgroup analysis.

## Appendix G: Excluded clinical studies

**Table 7: Studies excluded from the clinical review**

Study	Exclusion reason
Angaran 2015 <sup>1</sup>	Not review population (patients were discharged from the ED, patients requiring hospitalisation were excluded); Inappropriate comparison (no comparator)
Batterham 2014 <sup>2</sup>	Incorrect interventions. supervised aerobic exercise rehabilitation
Broomhead 2002 <sup>3</sup>	Narrative review
Cline 1998 <sup>5</sup>	Inappropriate comparison (usual care involved follow up at an outpatient clinic in a cardiology department)
Cuthbertson 2007 <sup>6</sup>	Study protocol (no data)
Gonseth 2004 <sup>11</sup>	Systematic review is not relevant to review question or unclear PICO
Gorthi 2014 <sup>12</sup>	Systematic review is not relevant to review question or unclear PICO
Harrison 2002 <sup>13</sup>	Incorrect interventions (no post discharge clinic)
Jaarsma 1999 <sup>14</sup>	Incorrect interventions (no post discharge clinic)
Mehlhorn 2014 <sup>18</sup>	Systematic review is not relevant to review question or unclear PICO
Paratz 2014 <sup>21</sup>	Study protocol (no data)
Powell 2010 <sup>22</sup>	Incorrect interventions (1 year patient education program)
Rainville 1999 <sup>23</sup>	Incorrect interventions (no post discharge clinic)
Schandl 2012 <sup>24</sup>	Inappropriate study design (cohort study)

## Appendix H: Excluded health economic studies

No relevant studies identified.