Appendix D: Clinical evidence tables

Study	Cole 2002 ¹⁵
Study type	RCT (Patient randomised; Parallel).
Number of studies (number of participants)	1 (n=227).
Countries and setting	Conducted in Canada; setting: university affiliated primary acute care facility.
Line of therapy	1st line.
Duration of study	Intervention + follow up: follow-up: 8 weeks.
Method of assessment of guideline condition	Adequate method of assessment/diagnosis.
Stratum	Overall.
Subgroup analysis within study	Not applicable.
Inclusion criteria	All patients aged 65 or more admitted to the 5 general medical units between March 15, 1996, and Jan, 31, 1999, were eligible.
Exclusion criteria	Excluded were patients who met 1 or more of the following exclusion criteria: primary diagnosis of stroke, duration of stay on the intensive care unit or cardiac monitoring unit of more than 48 hours, admission to geriatric or oncology service, inability to speak English or French or residence other than on the island of Montreal.
Recruitment/selection of patients	Not stated.
Age, gender and ethnicity	Age - Mean (SD): Intervention group: 66/47; Usual care group: 57/57. Gender (M: F): Intervention group: 82.7 (7.5); Usual care group: 82 (7.1). Ethnicity: Not stated.
Further population details	1. Frail elderly: Not applicable 2. Intensive care: not applicable 3. People with serious mental illness (comorbidity) plus AME: people with serious mental illness and AME (Delirium). 4. Stroke unit: not applicable.
Extra comments	To detect prevalent cases of delirium, eligible patients were screened within 24 hours after admission by the study nurse using the Sort Portable Mental Status Questionnaire. Those who scored 3 to 9 errors on this instrument or had symptoms of delirium recorded in the nursing notes were assessed by means of the Confusion Assessment method. To detect incident cases of delirium, all patients without prevalent delirium were rescreened during the week following admission. Those who scored 1 point higher on the Short Portable Mental Status Questionnaire than on admission or had symptoms of delirium recorded in the nursing notes were assessed with the Confusion Assessment Method. Patients with prevalent or incident delirium were enrolled in the study.
Indirectness of population	No indirectness.

Study	Cole 2002 ¹⁵
Interventions	(n=113) Intervention 1: MDT process - physicians, nurses, allied health professionals and, where appropriate, primary care and social work as determined by patient need. The intervention consisted of 2 parts: consultation and follow-up by a geriatric internist or psychiatrist, and follow-up in hospital by the study nurse. The consultation (within 24 hours after enrolment) determined the probable predisposing, precipitating and perpetuating factors of delirium (focusing on crucial factors associated with delirium, such as medication, infection and sensory deficits) and resulted in management recommendations (for example, changes in medications and investigations to be carried out), which were recorded on a regular hospital consultation form and signalled in the progress notes. The follow-up by the study nurse involved daily visits (mean duration 35.7 minutes (SD 2.8)) to conduct a brief structured mental status exam, monitor the completeness of the consultants reports, ensure that previous recommendations had been implemented, ensure implementation of the nursing intervention protocol by liaising with the primary care nurses and meet with the patients family to involve them in patient care. Duration: 8 weeks. Concurrent medication/care: not stated. (n=114) Intervention 2: No MDT process - no MDT (best practice). Usual care consisted of standard care services. Referrals for geriatric or psychiatric consultation were honoured consistent with usual practice, but patients in the usual care group did not receive systematic consultation by the geriatric specialists, or follow-up the study nurse or the nursing intervention protocol. Duration: 8 weeks. Concurrent medication/care: not stated.
Funding	Academic or government funding.

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PAPERS MUST STATE MDT. PHYSICIANS, NURSES, ALLIED HEALTH PROFESSIONALS AND, WHERE APPROPRIATE, PRIMARY CARE AND SOCIAL WORK AS DETERMINED BY PATIENT NEED versus NO MDT (BEST PRACTICE).

Protocol outcome 1: Mortality at End of follow-up.

- Actual outcome: Mortality at 8 weeks; Group 1: 25/112, Group 2: 22/106; Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness

Protocol outcome 2: Length of stay at end of follow-up.

- Actual outcome: Length of stay at 8 weeks; Group 1: mean 19.7 (SD 17.1); n=112, Group 2: mean 19.1 (SD 16.8); n=106; Risk of bias: All domain - Low, Selection - Low, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness

Protocol outcomes not reported by the study Avoidab

Avoidable adverse events; Quality of life; Patient and/or carer satisfaction; Readmission; Staff satisfaction.

Study	Cole 2006 ¹⁶
Study type	RCT (Patient randomised; Parallel).
Number of studies (number of participants)	1 (n=157).
Countries and setting	Conducted in Canada; setting: university-affiliated primary acute care hospital in Montreal.
Line of therapy	1st line.
Duration of study	Intervention + follow up: intervention: 24 weeks. Follow-up: 6 months.
Method of assessment of guideline condition	Adequate method of assessment/diagnosis.
Stratum	Overall.
Subgroup analysis within study	Not applicable.
Inclusion criteria	All patients aged 65 years and over admitted from the emergency department to medical services. Patients who were found to have major depression (as defined by DSM-IV criteria) and who consented to participate were enrolled.
Exclusion criteria	Patients were excluded if they were admitted to the intensive care unit or cardiac monitoring unit for more than 48 hours, had an immensely terminal illness, did not speak or understand English or French and did not live on the Island of Montreal.
Recruitment/selection of patients	All patients aged 65 years and over admitted from the emergency department to medical services between Oct 19, 1999 and Nov 1, 2002, were screened for eligibility by the research nurse.
Age, gender and ethnicity	Age - Mean (SD): Intervention group: 77.5 (6.7); usual care group: 78.5 (6.6). Gender (M: F): define. Ethnicity: not stated.
Further population details	1. Frail elderly: not applicable 2. Intensive care: not applicable 3. People with serious mental illness (comorbidity) plus AME: People with serious mental illness and AME (patients with major depression). 4. Stroke unit: not applicable.
Indirectness of population	No indirectness.
Interventions	(n=78) Intervention 1: MDT process - physicians, nurses, allied health professionals and, where appropriate, primary care and social work as determined by patient need. The intervention group received systematic treatment for 24 weeks. The treatment was provided in 3 parts: assessment and treatment by a psychiatrist in the hospitals geriatric service; follow-up by a research nurse and follow-up by the patients' physician. The psychiatrist assessed each patient and made management recommendations, all recorded on the regular hospital consultation form and signalled in the progress notes. Treatment involved supportive psychotherapy and drug therapy with an antidepressant, prescribed according to clinical practice guidelines. Patients were seen as often as necessary during their hospital stay and after discharge. When the patients were seen by their family physicians for follow-up, the psychiatrist was informed of their progress by the research nurse. The research nurse visited the patients at least weekly in hospital and visited or telephoned them weekly after discharge for 24 weeks to monitor their condition, provide supportive psychotherapy,

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ensure maximum compliance with their treatment and liaise with the family, psychiatrist and family physician. The intervention team comprising 2 psychiatrists from the geriatric service and the research nurse met regularly to assure consistency in the diagnosis and management of depression. Duration: 24 weeks. Concurrent medication/care: drug use; psychotropic: 46.2%; anti-depressant: 25.6%. (n=79) Intervention 2: No MDT process - no MDT (best practice). The patients in the control group received usual care before and after discharge. Subjects in the usual care were informed that they had major depression and advised to discuss treatment with their physician, but they received no systematic intervention or follow-up. Duration: 24 weeks.
Concurrent medication/care: drug use; psychotropic 53.2%; anti-depressant 27.9%.
Academic or government funding.

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PAPERS MUST STATE MDT. PHYSICIANS, NURSES, ALLIED HEALTH PROFESSIONALS AND, WHERE APPROPRIATE, PRIMARY CARE AND SOCIAL WORK AS DETERMINED BY PATIENT NEED versus NO MDT (BEST PRACTICE).

Protocol outcome 1: Mortality at end of follow-up

- Actual outcome: Mortality at 6 months; Group 1: 18/78, Group 2: 18/79; Risk of bias: All domain High, Selection Low, Blinding Low, Incomplete outcome data High, Outcome reporting Low, Measurement Low, Crossover Low, Subgroups Low; Indirectness of outcome: No indirectness Protocol outcome 2: Quality of life at end of follow-up [difference in mean score from baseline to 6 month follow-up] (no SD)].
- Actual outcome: SF-36, mental component at 6 months; SF-36, mental component (mean): Intervention group: 9.4; control group: 9.2; Risk of bias: All domain High, Selection Low, Blinding High, Incomplete outcome data High, Outcome reporting Low, Measurement Low, Crossover Low, Subgroups Low; Indirectness of outcome: No indirectness
- Actual outcome: SF-36, physical component (mean): Intervention group: -2.9; control group: -2.7; Risk of bias: All domain High, Selection Low, Blinding High, Incomplete outcome data High, Outcome reporting Low, Measurement Low, Crossover Low, Subgroups Low; Indirectness of outcome: No indirectness

Protocol outcome 3: Readmission up to 30 days

- Actual outcome: Re-admission (all-cause) at 6 months; Group 1: 13/33, Group 2: 9/31; Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness

Protocol outcome 4: Length of stay at end of follow-up

- Actual outcome: (median, days) (No SD or IQR reported); Intervention group: 12.0; control group: 10.0; Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - High, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness

Study	Cole 2006 ¹⁶
Protocol outcomes not reported by the study	Avoidable adverse events; Patient and/or carer satisfaction; Length of stay; Staff satisfaction.

Study	Curley 1998 ²⁰
Study type	RCT (Patient randomised; Parallel).
Number of studies (number of participants)	1 (n=1,102).
Countries and setting	Conducted in USA; setting: acute care county hospital.
Line of therapy	1st line.
Duration of study	Intervention + follow up: 6 months.
Method of assessment of guideline condition	Adequate method of assessment/diagnosis.
Stratum	Overall.
Subgroup analysis within study	Not applicable.
Inclusion criteria	Patients admitted to inpatient medical services.
Exclusion criteria	Patients were excluded from the trial if they were transferred from medicine to another service (for example, surgery) or if less than 50% of their stay occurred on the medical floor (for example, a patient transferred from the critical care unit to the floor, who spent 10 days in the critical care unit and 1 day on floor).
Recruitment/selection of patients	Study patients included all patients admitted to the medical inpatient units between November 8, 1993 and May 31, 1994, who spent at least 50% of their hospital stay on that unit and were discharged from that unit. Patients were admitted to the medical service from a variety of locations: emergency department, clinic, intensive care units and other services such as orthopaedics or surgery.
Age, gender and ethnicity	Age - Mean (SD): Traditional rounds: 53.9 (18.6) years; Multi-disciplinary rounds: 52.7 (18.8) years. Gender (M: F): Females (%): Traditional rounds (51.4%); Interdisciplinary rounds (52%). Ethnicity: black: traditional rounds (27.7%); interdisciplinary rounds (31.4%).
Further population details	1. Frail elderly: not applicable 2. Intensive care: not applicable 3. People with serious mental illness (comorbidity) plus AME: 4. Stroke unit: not applicable.
Indirectness of population	No indirectness.
Interventions	(n=567) Intervention 1: MDT process - physicians, nurses, allied health professionals and, where appropriate, primary care and social work as determined by patient need. Multidisciplinary rounds: MDs, RN (patient care coordinator),

Study	Curley 1998 ²⁰
	pharmacist, nutritionist and social worker. Orders written during rounds with RN and pharmacist present. Chart rack to take patient charts on rounds. Weekly social service, 'multidisciplinary' rounds with social work, nutrition and interns. Duration: 6 months. Concurrent medication/care: not stated.
	(n=535) Intervention 2: No MDT process - no MDT (best practice). MDs only. Orders written throughout the day. Charts left at nursing station. No weekly social service rounds needed as all team members present daily. Duration: 6 months. Concurrent medication/care: not stated.
Funding	Funding not stated.

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PAPERS MUST STATE MDT. PHYSICIANS, NURSES, ALLIED HEALTH PROFESSIONALS AND, WHERE APPROPRIATE, PRIMARY CARE AND SOCIAL WORK AS DETERMINED BY PATIENT NEED versus NO MDT (BEST PRACTICE).

Protocol outcome 1: Mortality at end of follow-up.

- Actual outcome: Mortality (in-hospital) at 6 months; Group 1: 10/567, Group 2: 10/535; Risk of bias: All domain - High, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness

Protocol outcome 2: Length of stay at end of follow-up.

- Actual outcome: Length of hospital stay at 6 months; Group 1: mean 5.46 (SD 7.26); n=567, Group 2: mean 6.06 (SD 7.65); n=535; Risk of bias: All domain - High, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low, Other 1 - Low, Other 2 - Low, Other 3 - Low; Indirectness of outcome: No indirectness

Protocol outcomes not reported by the study Avoidable adverse events; Quality of life; Patient and/or carer satisfaction; Readmission; Staff satisfaction.

Study	Davison 2005 ²¹
Study type	RCT (Patient randomised; Parallel).
Number of studies (number of participants)	1 (n=313).
Countries and setting	Conducted in United Kingdom; setting: A&E departments in a university teaching hospital and associated district general hospital.
Line of therapy	Unclear.
Duration of study	Intervention + follow up: In-hospital+1 year follow-up.

Study	Davison 2005 ²¹
Method of assessment of guideline condition	Adequate method of assessment/diagnosis.
Stratum	Overall.
Subgroup analysis within study	Not applicable.
Inclusion criteria	Subjects were included if they had sustained at least 1 additional fall in the preceding year.
Exclusion criteria	If the patients were cognitively impaired, had>1 previous episode of syncope, were immobile, lived >15 miles from A&E, were registered blind, aphasic, had a clear medical explanation for their fall, that is, acute MI, stroke, or epilepsy or were enrolled in another study.
Recruitment/selection of patients	The study population was recruited from subjects aged over 65 years presenting to A&E with a fall or a fall related injury. A&E records were screened daily and eligible subjects contacted by postal questionnaire to determine fall history.
Age, gender and ethnicity	Age - Mean (SD): control: 77 (7) years; Intervention 77 (7) years. Gender (M: F): Females: control 112 (73%); Intervention 114 (72%). Ethnicity: not reported.
Further population details	1. Frail elderly: Frail elderly 2. Intensive care: not applicable 3. People with serious mental illness (comorbidity) plus AME: not applicable 4. Stroke unit: not applicable.
Indirectness of population	No indirectness.
Interventions	(n=159) Intervention 1: MDT process - physicians, nurses, allied health professionals and where, appropriate, primary care and social work as determined by patient need. Multifactorial intervention including hospital based medical assessment and home based physiotherapy and occupational therapy assessment followed by a prioritised individualised intervention for fall risk factors. Medical assessment: an initial fall and medical history was taken, followed by full clinical examination, including vision, neurological examination and cardiovascular assessment. Physiotherapy assessment: gait and balance were assessed using a modified Performance Orientated Mobility Score in conjunction with review of feet, footwear and assistive devices. Occupational Therapy Assessment and Intervention: a room-by-room environmental fall hazard checklist (USER) was used to identify home environmental hazards. Duration: in-hospital and home. Concurrent medication/care: not stated.
	(n=154) Intervention 2: No MDT process - no MDT (best practice). Patients in the control group did not undergo medical or therapy assessment. Duration: in-hospital and home. Concurrent medication/care: not stated.
Funding	Academic or government funding.
RESULTS (NUMBERS ANALYSED) AND RISK OF B	IAS FOR COMPARISON: PAPERS MUST STATE MDT. PHYSICIANS, NURSES, ALLIED HEALTH PROFESSIONALS AND, WHERE

Study Davison 2005²¹

APPROPRIATE, PRIMARY CARE AND SOCIAL WORK AS DETERMINED BY PATIENT NEED versus NO MDT (BEST PRACTICE).

Protocol outcome 1: Mortality at end of follow-up.

- Actual outcome: Mortality at 1 year; Group 1: 3/141, Group 2: 5/141; Risk of bias: All domain High, Selection High, Blinding High, Incomplete outcome data Low, Outcome reporting Low, Measurement Low, Crossover Low, Subgroups Low; Indirectness of outcome: No indirectness Protocol outcome 2: Length of stay at end of follow-up.
- Actual outcome: Length of hospital stay (number of days) at 1 year; Group 1: mean 0.8 (SD 3.4); n=141, Group 2: mean 4.5 (SD 22); n=141; Risk of bias: All domain High, Blinding High, Incomplete outcome data Low, Outcome reporting Low, Measurement Low, Crossover Low, Subgroups Low; Indirectness of outcome: No indirectness

Protocol outcomes not reported by the study

Avoidable adverse events; Quality of life; Patient and/or carer satisfaction; Readmission; Staff satisfaction.

Study	Gwadry-sridhar 2005 ³⁰
Study type	RCT (Patient randomised; Parallel).
Number of studies (number of participants)	1 (n=134).
Countries and setting	Conducted in Canada; setting: acute medical and surgical units at a teaching hospital.
Line of therapy	1st line.
Duration of study	Intervention + follow up: follow-up: 1 year.
Method of assessment of guideline condition	Adequate method of assessment/diagnosis.
Stratum	Overall.
Subgroup analysis within study	Not applicable.
Inclusion criteria	Patients eligible if they had HF documented with a low left ventricular ejection fraction (LVEF <40%), had indications for long term medical treatment of HF or low LVEF and provided informed consent.
Exclusion criteria	Patients were excluded if they were <18 years old, were receiving dialysis, had dementia or psychiatric illness, suffered from another illness that would result in a life expectancy of <6 months, had a planned discharge to long-term residential care, had a language barrier to teaching for themselves or their caregivers, resided outside Southwestern Ontario or had extensive travel planned within the following year.
Recruitment/selection of patients	Patients entered the study between November 1998 and April 2000 and were followed up for 1 year after

Study	Gwadry-sridhar 2005 ³⁰
	randomisation.
Age, gender and ethnicity	Age - Mean (SD): Gender (M: F): Men: control 45/66 (69%); intervention 51/68 (76%). Ethnicity: white: 91% in control and 96% in intervention.
Further population details	1. Frail elderly: not applicable 2. Intensive care: not applicable 3. People with serious mental illness (comorbidity) plus AME: not applicable 4. Stroke unit: not applicable.
Indirectness of population	No indirectness.
Interventions	(n=68) Intervention 1: MDT process - physicians, nurses, allied health professionals and, where appropriate, primary care and social work as determined by patient need. Patients received 2 HF information booklets and watched a video entitled 'Congestive Heart Failure' and received education delivered through a multidisciplinary team consisting of a nurse or educator and a hospital pharmacist. A certified pharmacist accredited in patient counselling trained the research team to deliver the intervention. The teaching used personalised feedback to incorporate the patient's own life circumstances, lifestyle knowledge and medical therapy, and was planned to be reinforced by contact over 2 days. Four specific multifaceted components were oral, written, visual props and media videos. The nurse, educator and pharmacist delivered the intervention within 48 to 96 hours while the patient was in hospital for their index admission. This was planned for the last few days before discharge but, where necessary, was occasionally completed shortly after discharge. In total, this intervention involved 2.5 hours of educator interaction with the patient. No further education was given by the research team during long-term follow-up. Duration: in-hospital. Concurrent medication/care: not stated. (n=66) Intervention 2: No MDT process - no MDT (best practice). Patients in the control arm received booklets and videos. The research team had no input in to information presented as part of usual clinical care to patients by their physicians, nurses, pharmacists, or other healthcare professionals and did not provide any advice to the clinical care team about drug therapy in either group. Duration: in-hospital. Concurrent medication/care: not stated.
Funding	Funding not stated.

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: MDT PROCESS versus NO MDT (BEST PRACTICE).

Protocol outcome 1: Quality of life at end of follow-up (mean, No SD).

- Actual outcome: Quality of life (SF-36) at 9 weeks, PCS (physical) summary scores (mean): Intervention group: Improved from 30.52 to 37.15; Risk of bias: All domain High, Selection Low, Blinding High, Incomplete outcome data Low, Outcome reporting Low, Measurement Low, Crossover Low, Subgroups Low; Indirectness of outcome: No indirectness
- -Actual outcome: Quality of life (SF-36) at 9 weeks, SF-36, MCS (mental) summary scores (mean): Intervention group: Improved from 29.13 to 37.38; Risk of bias: All domain High, Selection Low, Blinding High, Incomplete outcome data Low, Outcome reporting Low, Measurement Low, Crossover Low, Subgroups Low;

Study	Gwadry-sridhar 2005 ³⁰
Indirectness of outcome: No indirectness	
Protocol outcomes not reported by the study	Mortality; Avoidable adverse events; Patient and/or carer satisfaction; Length of stay; Readmission; Staff satisfaction.

Study	Jitapunkul 1995 ³⁸
Study type	RCT (Patient randomised; Parallel).
Number of studies (number of participants)	1 (n=416).
Countries and setting	Conducted in Thailand; setting: female ward in acute care hospital.
Line of therapy	1st line.
Duration of study	Intervention + follow up: 8 weeks.
Method of assessment of guideline condition	Adequate method of assessment/diagnosis.
Stratum	Overall.
Subgroup analysis within study	Not applicable.
Inclusion criteria	All medical patients regardless of age, staying in the female ward.
Exclusion criteria	Not stated.
Recruitment/selection of patients	All patients were randomly admitted from the admission unit or the emergency department depending on the availability of beds at that time.
Age, gender and ethnicity	Age - Mean (SD): Intervention- 48.1 (19.1); control-48.8 (18.5). Gender (M:F): All females. Ethnicity: not stated.
Further population details	1. Frail elderly: 2. Intensive care: 3. People with serious mental illness (comorbidity) plus AME: 4. Stroke unit.
Indirectness of population	No indirectness.
Interventions	(n=199) Intervention 1: MDT process - papers must state MDT. Physicians, nurses, allied health professionals and, where appropriate, primary care and social work as determined by patient need. Multidisciplinary team approach. Multidisciplinary team consisted of a medical consultant, primary nurses, physiatrists and a rehabilitation team, social workers and medical house officers. Multidisciplinary team approach - physician nurse coloration was strengthened by regular ward rounds (4 days a week). Discussion of patient problems including medical problems, critical review of medication, nursing problems, rehabilitation and social issues and plans of management were conducted during the ward rounds. A team meeting was arranged once a week. Duration: 8 weeks. Concurrent medication/care: not stated.

Study	Jitapunkul 1995 ³⁸
	(n=218) Intervention 2: No MDT process - no MDT (best practice). No multidisciplinary team approach. The control group included patients who were staying in other female ward. Duration: 8 weeks. Concurrent medication/care: not stated.
Funding	Funding not stated.
APPROPRIATE, PRIMARY CARE AND SOCIAL WORD Protocol outcome 1: Mortality at define Actual outcome: Mortality (all-cause) at 8 week outcome data - Low, Outcome reporting - Low, North Protocol outcome 2: Length of stay at define Actual outcome: Length of stay at 8 weeks; Great outcome and stay at 8 weeks; Great outcome.	AS FOR COMPARISON: PAPERS MUST STATE MDT. PHYSICIANS, NURSES, ALLIED HEALTH PROFESSIONALS AND, WHERE RK AS DETERMINED BY PATIENT NEED versus NO MDT (BEST PRACTICE). As; Group 1: 21/199, Group 2: 16/218; Risk of bias: All domain - High, Selection - High, Blinding - Low, Incomplete Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness; Dup 1: mean 11.7 (SD 12.2); n=199, Group 2: mean 11.6 (SD 10.6); n=218; Risk of bias: All domain - High, Selection - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No
Protocol outcomes not reported by the study	Avoidable adverse events at end of follow-up; Quality of life at end of follow-up; Patient and/or carer satisfaction at end of follow-up; Readmission; Staff satisfaction at end of follow-up.

Study	Mcdonald 2001 ⁵⁸
Study type	RCT (Patient randomised; Parallel).
Number of studies (number of participants)	1 (n=70).
Countries and setting	Conducted in Irish Republic; setting: university hospital.
Line of therapy	1st line.
Duration of study	Intervention + follow up: follow-up: 1 month.
Method of assessment of guideline condition	Adequate method of assessment/diagnosis.
Stratum	Overall.
Subgroup analysis within study	Not applicable.

Study	Mcdonald 2001 ⁵⁸
Inclusion criteria	All patients over 18 years admitted to the hospital through casualty with an initial diagnosis of CHF. Diagnosis of CHF was confirmed or refuted by a cardiologist based on the presence of all of the following 4 criteria: history and examination compatible with CHF, chest x-ray appearance of congestion, echocardiography evidenced left ventricular dysfunction and response to initial therapy.
Exclusion criteria	Patients presenting with CHF in the setting of myocardial infarction or unstable angina, or where failure was not thought to be the primary problem were excluded. Also not considered were those with illnesses that could compromise survival over the duration of the study or with cognitive impairment.
Age, gender and ethnicity	Age - Mean (SD): Intervention group: 69.9 (11.3); control group: 67.9 (12.0). Gender (M: F): Male: Female: Intervention group: 25:10; control group: 22:13. Ethnicity: Not stated.
Further population details	1. Frail elderly: not applicable 2. Intensive care: not applicable 3. People with serious mental illness (comorbidity) plus AME: not applicable 4. Stroke unit: not applicable.
Extra comments	Once stable and when informed consent was obtained, all eligible patients were randomised to multidisciplinary care or routine care.
Indirectness of population	No indirectness.
Interventions	(n=35) Intervention 1: MDT process - physicians, nurses, allied health professionals and, where appropriate, primary care and social work as determined by patient need. Patients underwent investigations and treatment as for the routine care group. In addition, patients systematically received specialist nurse-led education and dietetic consults on 3 or more occasions. The education programme focused on daily weight monitoring, disease and medication understanding and salt restriction. Similar advice was given to the patients' carer/next of kin where applicable. Patients were discharged from the hospital with a letter to the referring physician explaining the nature of the study and when the management of CHF related issues should be referred to the clinic or the nurse. Telephone contact was made at 3 days following discharge and weekly thereafter until 12 weeks with the exception of week 2 and week 6 where patients attended the clinic to check clinical status. Duration: in-hospital + home (out-patient care). Concurrent medication/care: diuretic and digoxin was prescribed in appropriate doses. Additionally ACE inhibitor therapy was prescribed at maximally tolerated doses. Perindropil was selected because it may be better tolerated on initiation and can be easily titrated to target doses. Beta blockade was not initiated for management at this stage in view of the, as yet, unproven benefit in NYHA class IV CHF.
	(n=35) Intervention 2: No MDT process - no MDT (best practice). Patients underwent investigations for CHF including echocardiography and right and left catheterisation where indicated. Appropriate medical therapy was administered. Ancillary services such as dietary and social work consultation were provided as requested by the attending cardiologist. Patients were referred back to their primary physician with a letter stating participation in the study and that routine management of their condition can carry on as they see fit, including review by the hospital cardiology

Study	Mcdonald 2001 ⁵⁸
	service, if required. All the patients were reviewed at 3 months at the cardiology clinic as per protocol. Duration: inhospital. Concurrent medication/care: diuretic and digoxin was prescribed in appropriate doses. Additionally ACE inhibitor therapy was prescribed at maximally tolerated doses. Perindropil was selected because it may be better tolerated on initiation and can be easily titrated to target doses. Beta blockade was not initiated for management at this stage in view of the as yet unproven benefit in NYHA class IV CHF.
Funding	Academic or government funding.

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PAPERS MUST STATE MDT. PHYSICIANS, NURSES, ALLIED HEALTH PROFESSIONALS AND, WHERE APPROPRIATE, PRIMARY CARE AND SOCIAL WORK AS DETERMINED BY PATIENT NEED versus NO MDT (BEST PRACTICE).

Protocol outcome 1: Mortality at end of follow-up.

- Actual outcome: Mortality at 90 days; Group 1: 0/35, Group 2: 0/35; Risk of bias: All domain High, Selection High, Blinding High, Incomplete outcome data Low, Outcome reporting Low, Measurement Low, Crossover Low, Subgroups Low; Indirectness of outcome: No indirectness Protocol outcome 2: Length of stay at end of follow-up.
- Actual outcome: Length of hospital stay at end of follow-up; Group 1: mean 9.8 (SD 3.9); n=35, Group 2: mean 11.2 (SD 5.9); n=35; Risk of bias: All domain High, Selection High, Blinding High, Incomplete outcome data Low, Outcome reporting Low, Measurement Low, Crossover Low, Subgroups Low; Indirectness of outcome: No indirectness

Protocol outcome 3: Readmission up to 30 days.

- Actual outcome: Readmission for CHF at 90 days; Group 1: 0/35, Group 2: 0/35; Risk of bias: All domain - High, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness

Protocol outcomes not reported by the study Avoidable adverse events; Quality of life; Patient and/or carer satisfaction; Staff satisfaction.

Mcdonald 2002 ⁵⁹
RCT (Patient randomised; Parallel).
1 (n=98).
Conducted in Irish Republic; setting: secondary care.
Unclear.
Intervention time: 3 months; Follow-up= 3 months.
Adequate method of assessment/diagnosis: diagnosis of heart failure confirmed by cardiologist on the basis of history, examination, chest x-ray appearance of congestion, echocardiography evidenced left ventricular systolic or diastolic dysfunction and response to initial therapy.
Overall.
Not applicable.
Diagnosis of heart failure confirmed by cardiologist on the basis of history, examination, chest x-ray appearance of congestion, echocardiography evidenced left ventricular systolic or diastolic dysfunction and response to initial therapy.
Heart failure in the context of myocardial infarction or unstable angina or in whom heart failure was not the primary problem; those with illnesses that could compromise survival over the duration of the study, or cognitive impairment.
Diagnosis of heart failure confirmed by cardiologist on the basis of history, examination, chest x-ray appearance of congestion, echocardiography evidenced left ventricular systolic or diastolic dysfunction and response to initial therapy.
Age - Mean (SD): 70.8 (10.5) years. Gender (M: F): 65:33. Ethnicity: not stated.
Not stated.
No indirectness.
(n=51) Intervention 1: MDT process - physicians, nurses, allied health professionals and, where appropriate, primary care and social work as determined by patient need. In addition to routine care, patients systematically received specialist nurse-led education and specialist dietitian consults on 3 or more occasions during index admission; similar advice given to next of kin. After discharge, letter sent to referring physician explaining that the management of HF-related issues should be referred to the clinic or nurse; telephone contact with nurse specialist 3 days after discharge and weekly thereafter for 12 weeks. At weeks 2 and 6, patients and next of kin attended HF clinic; also asked to contact clinic if patients noticed deterioration, leading to full clinical review. Duration: 12 weeks. Concurrent medication/care: optimal medical therapy. Further details: 1. Frequency of meeting: weekly.

	(n=47) Intervention 2: No MDT process - no MDT (best practice). Routine care in hospital; referred back to primary care physician; all patient reviewed at 3 months clinic. Duration: 12 weeks. Concurrent medication/care: optimal medical therapy.
Funding	Study funded by industry (Irish Heart Foundation and Servier Laboratories Ireland).

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PAPERS MUST STATE MDT. PHYSICIANS, NURSES, ALLIED HEALTH PROFESSIONALS AND WHERE APPROPRIATE, PRIMARY CARE AND SOCIAL WORK AS DETERMINED BY PATIENT NEED versus NO MDT (BEST PRACTICE).

Protocol outcome 1: Mortality at end of follow-up.

- Actual outcome: Mortality 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, Subgroups - Low; Indirectness of outcome: No indirectness 0

Protocol outcome 2: Quality of life at end of follow-up (scale not specified in the study so not included in the analysis).

- Actual outcome: Quality of life at 3 months; Group 1: mean 28.8 (SD 23); n=51, Group 2: mean 39 (SD 29.5); n=47; Risk of bias: All domain - Very high, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness

Protocol outcome 3: Length of stay at end of follow-up.

- Actual outcome: Length of stay at 3 months; Group 1: mean 13.7 Days (SD 7.8); n=51, Group 2: mean 14.6 Days (SD 8.1); n=47; Risk of bias: All domain - High, Selection - High, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness

Protocol outcome 4: Readmission up to 30 days.

- Actual outcome: Readmission at 3 months; Group 1: 2/48, Group 2: 12/44; Risk of bias: All domain - High, Selection - High, Blinding - Low, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness

Protocol outcomes not reported by the study Avoidable adverse events; Patient and/or carer satisfaction; Staff satisfaction.

Study	Rich 1993 ⁸⁴
Study type	RCT (Patient randomised; Parallel).
Number of studies (number of participants)	1 (n=98).
Countries and setting	Conducted in USA; setting: hospital.

1
Rich 1993 ⁸⁴
1st line.
Intervention + follow up: follow-up: 90 days after discharge.
Adequate method of assessment/diagnosis.
Overall.
Not applicable.
Elderly patients (70 years or older) with CHF.
Patients deemed to be at low risk were excluded because they would be unlikely to benefit significantly from a programme designed to reduce readmission frequency. Additional exclusion criteria were: residence outside catchment area, planned discharge to a nursing home or other chronic care facility, non-cardiac illness likely to result in non-preventable re-admission, severe mental incapacity or psychiatric disturbance, patient or physician refusal and logistic and discretionary reasons.
All patients 70 years or older admitted to the medical ward between April 1988 and March 1999 were prospectively screened for the presence of CHF. The diagnosis was established by the presence of definite radiographic evidence of pulmonary congestion, as determined independently by both a staff radiologist and a staff cardiologist or by the presence of typical historical and physical findings of CHF in conjunction with symptomatic improvement following diuresis.
Age - Mean (SD): Intervention group: 80 (6.3) years; control group: 77.3 (6.1) years. Gender (M: F): Male- Intervention group: n=25 (39.7%); control group: n=15 (42.9%). Ethnicity: white 46% in intervention group and 57% in control group.
1. Frail elderly: not applicable 2. Intensive care: not applicable 3. People with serious mental illness (comorbidity) plus AME: not applicable 4. Stroke unit: not applicable.
No indirectness.
(n=63) Intervention 1: MDT process - physicians, nurses, allied health professionals and, where appropriate, primary care and social work as determined by patient need. The study intervention consisted of 4 components: intensive education about CHF and its treatment, a detailed analysis of medications with specific recommendations designed to improve compliance and reduce adverse effects, early discharge planning and enhanced follow-up through the home care and telephone contacts. Individualised patient education included daily visits during hospitalisation by an experienced cardiovascular research nurse to discuss the diagnosis, symptoms, treatment, follow-up and prognosis of CHF using a 15 page book entitled 'CHF: a patients guide', specifically developed by the investigators for the elderly CHF patient. A detailed dietary history was obtained by a registered dietician, and dietary teaching was performed by and reinforced by the study nurse. All medications were carefully reviewed with the patient. Several days prior to

Study	Rich 1993 ⁸⁴
	anticipate discharge, a careful medication review was performed by a geriatric cardiologist; and the doses, frequency and total number of dosing intervals for all medications was recorded. The patients were also seen early in the hospital course by a social worker and a member of the home care team to facilitate discharge planning and to ease the transition from the hospital to the home environment. At the time of discharge, a discharge summary form was completed by the study nurse detailing medications, dietary and activity restrictions, and any anticipated problem areas identified by the social worker, hospital home care representative or study personnel. The home care nurse again reinforced the teaching materials, reviewed medications, diet and activity guidelines, assisted with initiating the daily weight chart and performed a general physical assessment and cardiovascular examination. The patients were seen 3 times in the first week, during which time the above functions were repeated, and they were subsequently seen at regular intervals. The study nurse contacted all patients by telephone to assess their progress, answer any questions and keep communication lines open. Duration: in-hospital + at home after discharge. Concurrent medication/care: not stated.
	(n=35) Intervention 2: No MDT process - no MDT (best practice). Patients in standard care group received all conventional treatment as requested by the patients attending physician. Such measures included social service evaluation, dietary and medication teaching, home care and all other available hospital services. Because these patients were not seen regularly by the study nurse and did not receive the study educational materials or the formal medication analysis, the intensity of teaching was lower for the usual care group. Also, social-service consultations and home-care referrals were markedly reduced among the usual care patients. Duration: hospital + home care. Concurrent medication/care: not stated.
Funding	Academic or government funding.

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PAPERS MUST STATE MDT. PHYSICIANS, NURSES, ALLIED HEALTH PROFESSIONALS AND, WHERE APPROPRIATE, PRIMARY CARE AND SOCIAL WORK AS DETERMINED BY PATIENT NEED versus NO MDT (BEST PRACTICE).

Protocol outcome 1: Length of stay at end of follow-up.

- Actual outcome: Length of hospital stay at 90 days; Group 1: mean 4.3 (SD 8.7); n=63, Group 2: mean 5.7 (SD 11.8); n=35; Risk of bias: All domain High, Selection -High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness Protocol outcome 2: Readmission up to 30 days.
- Actual outcome: Re-admission (all cause) at 90 days; Group 1: 21/63, Group 2: 16/35; Risk of bias: All domain High, Selection High, Blinding High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness:

Protocol outcomes not reported by the study Mortality; Avoidable adverse events; Quality of life; Patient and/or carer satisfaction; Staff satisfaction.

Study	Rich 1995 ⁸³
Study type	RCT (Patient randomised; Parallel).
Number of studies (number of participants)	1 (n=282).
Countries and setting	Conducted in USA; setting: hospital.
Line of therapy	1st line.
Duration of study	Intervention + follow up 90 days.
Method of assessment of guideline condition	Adequate method of assessment/diagnosis.
Stratum	Overall.
Subgroup analysis within study	Not applicable.
Inclusion criteria	Patients with confirmed heart failure were eligible to participate in the study if they had at least 1 of the following risk factors for early readmission: prior history of heart failure, 4 or more hospitalisations for any reason in the preceding 5 years, or congestive heart failure precipitated by either an acute myocardial infarction or uncontrolled hypertension (systolic blood pressure 200 mm Hg or diastolic blood pressure 105 mm Hg).
Exclusion criteria	The criteria for exclusion from the study included residence outside the catchment area of Jewish Hospital Home Care, planned discharge to a long-term-care facility, severe dementia or other serious psychiatric illness, anticipated survival of less than 3 months, refusal to participate by either the patient or the physician and logistic or discretionary reasons.
Recruitment/selection of patients	All patients 70 years of age or older who were admitted to the medical wards of Jewish Hospital at Washington University Medical Centre were screened for congestive heart failure. For a diagnosis of heart failure, either definite radiographic evidence of pulmonary congestion or typical symptoms and signs of heart failure in conjunction with definite clinical improvement in response to diuresis were required.
Age, gender and ethnicity	Age - Mean (SD): control: 78.4 (6.1); 80.1 (5.9). Gender (M:F): Female- control n=83 (59%); MDT n=96 (68%). Ethnicity: not stated.
Further population details	1. Frail elderly: not applicable 2. Intensive care: not applicable 3. People with serious mental illness (comorbidity) plus AME: not applicable 4. Stroke unit: not applicable.
Extra comments	A total of 1306 patients 70 or more years of age met the criteria for congestive heart failure from July 1990 through June 1994.
Indirectness of population	No indirectness.
Interventions	(n=142) Intervention 1: MDT process - physicians, nurses, allied health professionals and, where appropriate, primary care and social work as determined by patient need. The study treatment consisted of intensive education about

Study	Rich 1995 ⁸³
	congestive heart failure and its treatment by an experienced cardiovascular research nurse, using a teaching booklet developed by the study investigators for geriatric patients with heart failure; individualised dietary assessment and instruction given by a registered dietitian with reinforcement by the study nurse; consultation with social-service personnel to facilitate discharge planning and care after discharge; an analysis of medications by a geriatric cardiologist who made specific recommendations to eliminate unnecessary medications and simplify the overall regimen; and intensive follow-up after discharge through the hospital's home care services, supplemented by individualised home visits and telephone contact with the members of the study team. The principal goals of follow-up were to reinforce the patient's education, ensure compliance with medications and diet and identify recurrent symptoms amenable to treatment on an outpatient basis. Duration: 90 days. Concurrent medication/care: medications taken; Digoxin, Diuretic, ACE inhibitors, Nitrates, Beta-Blocker, Calcium antagonist. (n=140) Intervention 2: No MDT process - no MDT (best practice). Patients assigned to conventional care (the control group) were eligible to receive all standard treatments and services ordered by their primary physicians. Duration: 90 days. Concurrent medication/care: medications taken; Digoxin, Diuretic, ACE inhibitors, Nitrates, Beta-Blocker, Calcium antagonist.
Funding	Academic or government funding.

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PAPERS MUST STATE MDT. PHYSICIANS, NURSES, ALLIED HEALTH PROFESSIONALS AND, WHERE APPROPRIATE, PRIMARY CARE AND SOCIAL WORK AS DETERMINED BY PATIENT NEED versus NO MDT (BEST PRACTICE).

Protocol outcome 1: Mortality at end of follow-up.

- Actual outcome: Mortality at 90 days; Group 1: 13/142, Group 2: 17/140; Risk of bias: All domain High, Selection High, Blinding High, Incomplete outcome data Low, Outcome reporting Low, Measurement Low, Crossover Low, Subgroups Low; Indirectness of outcome: No indirectness Protocol outcome 2: Quality of life at end of follow-up.
- Actual outcome: Quality of life (Chronic Heart Failure Questionnaire) at 90 days; Group 1: mean 22.1 (SD 20.8); n=142, Group 2: mean 11.3 (SD 16.4); n=140; Risk of bias: All domain High, Selection High, Blinding High, Incomplete outcome data Low, Outcome reporting Low, Measurement Low, Crossover Low, Subgroups Low; Indirectness of outcome: No indirectness

Protocol outcome 3: Length of stay at end of follow-up.

- Actual outcome: Length of hospital stay at 90 days; Group 1: mean 3.9 (SD 10); n=142, Group 2: mean 6.2 (SD 11.4); n=140; Risk of bias: All domain - High, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness

Study	Rich 1995 ⁸³
Study	Rich 1995 ⁸

Protocol outcome 4: Readmission.

- Actual outcome: Re-admission (all) at 90 days; Group 1: 53/142, Group 2: 94/140; Risk of bias: All domain - High, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness - Actual outcome: Re-admission for CHF at 90 days; Group 1: 24/140, Group 2: 54/140; Risk of bias: All domain - High, Selection - High, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness .

Protocol outcomes not reported by the study Avoidable adverse events; Patient and/or carer satisfaction; Staff satisfaction.

Study	Wild 2004 ¹⁰¹
Study type	RCT (Patient randomised; Parallel).
Number of studies (number of participants)	1 (n=84).
Countries and setting	Conducted in USA; setting: community hospital.
Line of therapy	1st line.
Duration of study	Intervention + follow up: 2 months.
Method of assessment of guideline condition	Adequate method of assessment/diagnosis.
Stratum	Overall.
Subgroup analysis within study	Not applicable.
Inclusion criteria	Patients admitted to the telemetry ward of the community hospital with the most common diagnoses (for example, chest pain, atrial fibrillation/flutter, stroke/TIA, congestive heart failure and syncope).
Exclusion criteria	Patients who were at any point in the interdisciplinary rounds stay transferred to the intensive care unit or to the general medical ward due to other conditions were excluded, as were patients who died during the interdisciplinary rounds stay. Patients who were re-admitted within the study period and who had already been randomised on a previous visit were also excluded.
Recruitment/selection of patients	Not stated.
Age, gender and ethnicity	Age - Mean (SD): Intervention-71.3 (13.5); control- 69.8 (14.9). Gender (M:F): Define. Ethnicity: not stated.
Further population details	1. Frail elderly: 2. Intensive care: 3. People with serious mental illness (comorbidity) plus AME: 4. Stroke unit.
Indirectness of population	No indirectness.
Interventions	(n=42) Intervention 1: MDT process - papers must state MDT, physicians, nurses, allied health professionals and, where appropriate, primary care and social work as determined by patient need. Interdisciplinary ward rounds. Daily

Protocol outcomes not reported by the study

Chapter 29 Multidisciplinary team meetings

Study	Wild 2004 ¹⁰¹	
	ward rounds, in which resident physicians, nurses, a case manager, pharmacist, dietician and physical therapist met to discuss patients on the team and to identify and address possible discharge problems. Interdisciplinary ward rounds were held for 30-45 mins with 2 to 5 mins per patient. Duration: 2 months. Concurrent medication/care: number of medications; intervention-7.0 (3.4); control- 6.2 (2.8).	
	(n=42) Intervention 2: No MDT process - no MDT (best practice). No interdisciplinary rounds. No further details reported. Duration: 2 months. Concurrent medication/care: number of medications; intervention-7.0 (3.4); control-6.2 (2.8).	
Funding	Funding not stated.	
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: PAPERS MUST STATE MDT. PHYSICIANS, NURSES, ALLIED HEALTH PROFESSIONALS AND, WHERE APPROPRIATE, PRIMARY CARE AND SOCIAL WORK AS DETERMINED BY PATIENT NEED versus NO MDT (BEST PRACTICE)		
Protocol outcome 1: Length of stay at define Actual outcome: Length of stay at end of hospital stay; Group 1: mean 3.04 (SD 1.8); n=42, Group 2: mean 2.7 (SD 1.8); n=42; Risk of bias: All domain - High, Selection - Low, Blinding - High, Incomplete outcome data - Low, Outcome reporting - Low, Measurement - Low, Crossover - Low, Subgroups - Low; Indirectness of outcome: No indirectness		

Mortality at end of follow-up; Avoidable adverse events at end of follow-up; Quality of life at end of follow-up; Patient

and/or carer satisfaction at end of follow-up; Readmission; Staff satisfaction end of follow-up.