Appendix C1 Economic evidence tables

Review question 1a: What is the effectiveness and cost effectiveness of home based intermediate care?

Study ID **Country** **Study type**	**Intervention details**	**Study population** **Study design** **Data sources**	**Costs: description and values** **Outcomes: description and values**	**Results: cost-effectiveness**	**Comments**
Parker et al. 2009 England, UK Cost minimisation	**Intervention** Home-based rehabilitation as provided in different localities; included stroke rehabilitation; falls assessment and rehabilitation; range of other services **Control** Day hospital rehabilitation provided in four day hospitals; included a range of assessment and rehabilitation services for stroke; TIA; Parkinson's; falls; movement	**Population** People referred for multidisciplinary rehabilitation (n=89) and their informal carers; any age; they needed to have permanent address and be able to provide informed consent, if necessary with the help of a carer or advocate **Study design** Two-arm RCT; IG: n=42; CG: n=42 **Setting** Participants recruited from 4 hospital trusts in England, which provided home-based and hospital rehabilitation:	**1. Outcomes** 1a. Description Primary outcomes: Nottingham Extended Activities of Daily Living (NEADL) scale at 6 months Secondary outcomes: EuroQol 5 dimensions (EQ-5D), Hospital Anxiety and Depression Scale (HADS), Therapy Outcome Measures (TOMs), hospital admissions and the General Health Questionnaire (GHQ-30) for carers 1b. Values Mean differences adjusted for baseline differences 3 months • Significant	Results not presented in cost-effectiveness terms; however, some conclusions might be drawn from findings: 1) EQ-5D at 6 and 12 months were not different between IG and CG; 2) Costs were also not significantly different.	**Applicability** Sufficiently applicable (+) **Quality** Overall good quality with minor limitations (++) **Perspective** Societal, including costs to patients and carers, costs to NHS and local authorities **Price year** 2005/6, UK pounds (£) sterling **Discounting** Not applicable **Summary** This UK study examined the

	disorders	Chippenham (Wiltshire), North Tyneside, Newcastle upon Tyne, Barnsley **Statistical analysis** Per protocol and intention-to-treat analysis; analysis of covariance (ANCOVA) to analyse differences in endpoints at follow-up with baseline scores serving as covariate; TOMs data analysed with non-parametric Mann Whitney U-test; binary logistic regression and Poisson regression model to account for effect of place of care; linear mixed models for repeated measures (MMRM) for continuous variables with interview follow-up point and patient treated as random effects **Source of effectiveness data** Outcomes collected at 3, 6 and 12 months **Source of resource use**	difference in EQ-5D in favour of CG (p=0.047) • Marginally significant difference in HADS in favour of IG (p=0.056) 6 months • NEADL scale not significantly different between the 2 groups: MD -2.139 (95% CI -6.870 to 2.592), p=0.37; • EQ-5D not significantly different between the 2 groups: MD 0.023 (95% CI -0.114 to 0.161), p value 0.735 • HADS for anxiety not significantly different between the two groups: MD -0.578 (95% CI -2.409 to 1.253), p value 0.530 • HADS for depression not significantly		cost-effectiveness of home-based versus day hospital rehabilitation. The authors conclude that compared with day hospital rehabilitation, providing rehabilitation in patients' own homes conferred no particular disadvantage for patients and carers. The study was of high quality but based on small numbers; findings can be used to inform recommendation, in the context of other evidence.

		data Log for each participant, which captured date, duration and nature of each care episode; rehabilitation staff recorded tasks; economic questionnaire administered to each participant at 1, 3, 6, 9 month(s) **Source of unit cost data** British National Formulary for drug costs; NHS reference costs for test and investigation costs; PSSRU Unit Costs Health and Social Care for home adaptations, inpatient stays, emergency transport, patient travel; prices for equipment from local supplier **Sensitivity analysis** Effect of different overhead and unpaid care estimates (values of unpaid care £0, £4, £8, £12 and £16)	different between the 2 groups: MD 1.033 (95% CI -0.441 to 2.507), p value 0.166 12 months • EQ-5D not significantly different between the 2 groups: MD 0.147 (95% CI, -0.051 to 0.3450), p value 0.141; • HADS for anxiety not significantly different between the 2 groups: MD 0.223 (95% CI -1.906 to 2.251), p value 0.834 • HADS for depression not significantly between the 2 groups: MD -0.167 (95% CI, -2.424 to 2.089), p value 0.882 • Non-significant difference in patients admitted to hospital between the 2 groups (IG vs. CG): 22 (52%)		

			versus 18 (43%); OR 0.75 (95% CI 0.62 to 3.47), p=0.383 • Non-significant difference in mean total length of hospital stay in favour of IG: 9.3 days (95% CI -12.5 to 31.1 days) Carers' outcomes No difference in psychological wellbeing (GHQ-30) of patients' carers, measured at 3, 6 and 12 months (p values 0.644; 0.857; 0.954) **2. Costs of service use (including costs of delivering intervention)** 2.a Description Costs at 6- and 12-month follow-up points; data collected with rehabilitation log and economic questionnaires 2.b Values Neither public sector costs		

			nor total costs at 6- or 12-month follow-up were significantly different between groups: Mean public sector costs 6 months • IG (n=25) £6,139 vs CG (n=21) £4,214; p values (Mann Whitney U-test) 0.18 and (2 sample t-test) 0.29 12 months • IG (n=23) £9,977 vs CG (n=13) £7,511; p values (Mann Whitney U-test) 0.43 and (2 sample t-test) 0.52 Mean total costs (including costs to patients and carers; based on value of unpaid care of £8 an hour) 6 months • IG (n=25) £14,330 vs CG (n=21) £10,102; p values (Mann Whitney U-test) 0.76 and (2 sample t-test) 0.66		

			12 months • IG (n=23) £16,105 vs CG (n=13) £23,105; p values (Mann Whitney U-test) 0.95 and (2 sample t-test) 0.91 **3. Subgroups** Participants with carer were around 7 times more likely to be followed up at 6 months than those without carers **4. Sensitivity analysis** Exclusion of unpaid care (valued with £0 an hour) did not significantly impact on the direction of differences in mean costs between the 2 groups; the exclusion of a single patient from the home-based rehabilitation arm reversed the trend of higher mean costs for the home-based rehabilitation patients		

Study ID	Intervention details	Study population	Costs: description and	Results: cost-	Comments

Country **Study type**		**Study design** **Data sources**	**values** **Outcomes: description and values**	**effectiveness**	
Mahomed et al. 2008 Canada Cost-effectiveness	**Intervention** Home-based rehabilitation; referral to Community Care Access Centre; multidisciplinary clinical pathway; home-care agency provided nursing, rehabilitation, and home support, plus early intervention programme (= access to physiotherapist within 48 hours of discharge) **Control** Inpatient rehabilitation; care pathways with target of a 14-day LoS; discharged from hospital when sufficient Functional improvement achieved to attend outpatient Physiotherapy clinic or	**Population** Patients (n=234) aged 18 years or above after primary total hip or knee replacement; patients requiring total or bilateral joint replacement were excluded **Study design** RCT; recruitment between 2000 and 2002 (IG: n=119, CG: n=119) **Setting** Recruited from a tertiary-care referral centre and community hospital in the same city **Statistical analysis** Intention-to-treat; univariate analysis for differences between groups	**1. Outcomes** 1a. Description Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) at 3 months after surgery; Short Form 36 (SF-36); patient satisfaction 1b. Values Both groups showed substantial improvements at 3 and 12 months, with no significant differences between the groups with respect to WOMAC, SF-36, or patient satisfaction scores ($p > 0.05$) Same prevalence of postoperative complications up to 12 months postoperatively in both groups, i.e. 2% rate of dislocation and 3% rate of clinically important deep venous thrombosis; no significant diff. in infection: IG: 0% vs CG: 2%	This study did not present combined cost-effectiveness findings; however, some conclusions about cost-effectiveness might be drawn from the following findings: 1) No significant difference in clinical outcomes and health-related quality of life between groups; 2) Total episode-of-care and rehabilitation costs were lower in intervention group Based on these findings, the authors concluded that home-based rehabilitation was the more cost-effective strategy	**Applicability** Sufficiently applicable (+) **Quality** Potentially serious limitations (+) **Perspective** Health system perspective **Discounting** Not applicable **Price year** 2006, Canadian dollar ($) **Summary** This Canadian study examined the cost-effectiveness of short-term, multidisciplinary home-based versus inpatient rehabilitation after primary hip or knee replacement. Findings suggest that there was no significant difference in outcomes and that costs were lower for

	maintain a self-directed programme Both groups: Physiotherapy protocol during hospital stay; all returned to acute care hospital at 3 and 12 months for follow-up evaluation by their treating surgeon	using Student t-test, chi square-test, Fisher exact-test; analysis of variance to evaluate differences in groups **Source of effectiveness data** From trial; prior to surgery and at 3, 12 months following surgery; validated outcome measures and patient satisfaction **Source of resource use data** Per diem costs from respective institutions were multiplied by actual length of stay; patient-level data for home care by centralised data system **Source of unit cost data** From health	**2. Costs** 2a. Description Healthcare costs for acute care hospitals, inpatient rehabilitation hospitals, home-based rehabilitation services; not included were physician fees, medications, costs to patients or carers 2b. Values • Total episode-of-care costs IG $11,082 (SD $7,747) vs CG $14,532 (SD $11,555); p<0.01 • Acute care hospital (excluding the day of surgery): IG: $10,191 vs CG: $9,411; p=0.18; possibly due to longer Los in CG: IG: 6.3 days vs CG: 7days • Rehabilitation costs: IG $891 (SD $1,316) vs CG: $5,120 (SD $7,552); p<0.001. • Hospital LoS: IG: 7 days (SD 3 days) vs CG: 6.3 days (SD		home-based rehabilitation. The home-based programme was thus considered the more cost-effective strategy. Since the study had a limited cost perspective, findings need to be interpreted with some caution.

		institutions; no further detail provided **Sensitivity analysis** Analysis on the basis of discharge destination rather than intention-to-treat	2.5 days); p=0.06 **3. Subgroups** None **4. Sensitivity analysis** Findings on the basis of discharge intention were identical with intention-to-treat analysis; the authors state that they were not presented separately for this reason		

Study ID **Country** **Study type**	**Intervention details**	**Study population** **Study design** **Data sources**	**Costs: description and values** **Outcomes: description and values**	**Results: cost-effectiveness**	**Comments**
Wong et al. 2012 International, with relevance to Singapore Systematic review, cost-effectiveness	**Intervention** Centre- or home-based cardiac rehabilitation (CR) in form of multidisciplinary programme consisting of exercise, risk factor modification and	**Population** Patients after myocardial infarction (MI), revascularisation surgery and percutaneous coronary interventions, as well as patients with heart failure (HF) **Study design** Systematic review of economic evaluations; electronic databases	**1. +2. Cost-effectiveness results presented in combined form** 1+2a. Description • Results are presented in different formats: costs saving per patient; cost per life year gained; cost per QALY; return on investment; reduction in cost or inpatient day (in %); in n=1	Findings were summarised by model of delivery Authors conclude that all studies supported the implementation of CR for MI and HF patients either centre- or home-based	**Applicability** Not sufficiently applicable (-) **Quality** Quality not assessed as study was of limited applicability **Perspective** Different perspectives described as payer;

	psychosocial intervention; centre-based CR consisted of 3 exercise sessions per week over 8 to 12 weeks; home-based CR varied in terms of visits at centre or home **Control** No cardiac rehabilitation (CR); centre-based CR in some studies in which intervention was home-based Aim to compare the following models of delivery: (a) centre-based CR vs no CR; (b) centre- vs home-based CR; (c)	searched: EMBASE, MEDLINE, NHS EED, PEDro, CINAHL; additional references identified through searching bibliographies of included studies; 2 independent reviewers selected studies based on inclusion/exclusion criteria; quality assessment through Drummond's checklist; cost-minimisation studies were excluded **Statistical analysis** None applied **Source of effectiveness data** Only reports cost-effectiveness results combined **Source of resource use data** No detail provided **Source of unit cost data** Not reported **Sensitivity analysis**	study outcomes specified only as 'better'; • The study only provides information about whether or not findings reached significance but does not report p values or confidence intervals (CI) 1+2b. Values Values summarised per model of delivery: a) n=9 studies; 7 studies from US or Canada; 3 studies carried out alongside RCTs; 3 modelling studies; all studies showed that centre-based CR compared to no CR was cost-saving and cost-effective; costs per QALY ranged widely from \$650 (n=204; government perspective; price year unknown) to \$9,200 (n=201; societal perspective; 1991 prices); cost per life year gained ranged widely from \$1,773 (n=99; societal; in 1999 prices) to \$21,800		government; societal; patients; health system; but no further explanation provided **Discounting** Not reported **Price year** Different price years **Summary** This systematic review examined (among other things) the cost-effectiveness of centre-based versus home-based cardiac rehabilitation. Findings indicated that home-based and centre-based rehabilitation strategies were equally cost-effective. The study was of limited applicability so that findings cannot directly inform the analysis. However, findings of the reviewed studies showed high consistency and could inform recommendations more broadly in the context of other evidence.

	inpatient vs outpatient CR; (d) home-based CR vs no CR	None	(n=201; societal, 1991 prices) b) n=10 studies; no significant differences in clinical outcomes between groups; • 2 studies reporting costs showed no significant differences in costs; details only reported for 1: costs for centre-based CR $5,132 vs $5,267 for home-based CR (n=392; health system perspective; in 2004 prices); • 1 study reporting costs showed costs to government higher for home-based CR due to frequent home visits by hospital staff (refers to UK study by Jolly et al. 2009; no detail reported); • 1 study reporting cost-effectiveness: -£644 per QALY in favour of centre-based CR (n=80; societal; 2002/3 prices); • 1 study reporting cost-		

			effectiveness: $11,400 per QALY in favour of home-based CR (n=392; health system perspective; in 2004 prices) c) n=1 study; European; n=147 MI patients; inpatient vs outpatient CR; no significant difference in cost-effectiveness (ICER = -€165,276; no further detail reported) d) n=4 studies; all US; it is reported that home-based CR more cost-effective; 2 studies showed cost-saving, 1 study (internet-based programme) showed that costs of home-based CR were £1,418 less than no CR (patients perspective; n=104; price year unknown) **3. Subgroups** Not reported; although studies were different in the way they targeted groups (MI, coronary artery disease and HF) no further analysis is carried out to examine		

			potential implications on findings		

Study ID Country Study type	Intervention details	Study population Study design Data sources	Costs: description and values Outcomes: description and values	Results: cost-effectiveness	Comments
Taylor et al. 2007 England, UK Cost–utility	**Intervention** Home-based cardiac rehabilitation; cardiac nurse-facilitated self-help package of 6 weeks (the 'Heart Manual') **Control** Hospital-based rehabilitation for 8 to 10 weeks; provided by MDT including specialist nurse, physiotherapist or exercise therapist; assistant clinical psychologist; group of 8 to 10 patients; 8 to 10 sessions, 2	**Population** Patients (n=104) with uncomplicated acute myocardial infarction and without major comorbidity **Study design** RCT with IG (n=60) and CG (n=44), 9 months follow up; study refers to clinical trial paper for further details (Dalal et al. 2007); after randomisation 12 patients crossed over from home group to hospital group and 6 patients crossed the other way; data analysed based on intention-to-treat **Statistical analysis** Students' t-test to compare differences in QALYs between groups; logistic regression for binary	**1. Outcomes** 1a. Description QALY measured via EQ-5D over 9 months; assumed is a linear change in utility between measurement points; deaths registered as zero in utility terms 1b. Values Full data available for n=48 (IG) and n=32 (CG) • No significant difference in mean health utility values (EQ-5D): at baseline 0.76 (SD 0.02) vs 0.74 (SD 0.03), p=0.351; at 9 months 0.74 (SD 0.04) vs 0.78 (SD 0.04), p=0.57 • No significant mean	Health gain and total healthcare costs of home- and hospital-based rehabilitation were similar but slightly in favour of hospital group ICER presented only in form of cost-effectiveness plane rather than point estimates Graph showed small, variable difference in QALYs and costs between both groups	**Applicability** Sufficiently applicable (+) **Quality** Overall good quality with minor limitations (++) **Perspective** NHS (public sector); and patient costs (societal) **Discounting** Not applicable **Price year** 2002-3, UK pound (£) sterling **Summary** This UK study examined the cost-effectiveness of home- vs centre-based

	hours each	outcomes; non-parametric bias corrected with bootstrapping for confidence intervals around cost differences **Source of effectiveness data** Trial; outcome questionnaire completed at baseline, 3 and 9 months **Source of resource use data** Patient reported data at each follow-up visit (3 and 9 months) via standard pro-forma; data on hospital readmission validated with hospital administration system **Source of unit cost data** National sources: PSSRU unit costs for health and social care 2003; NHS reference costs 2003; national tariff 2004; British National formulary (BNF) Costs for Heart Manual from Heart Manual office in Edinburgh; AA Motoring Trust for patient costs for	diff. (MD) in QALY at 9 months: -0.06 (-0.15 to 0.02) • No significant mean diff. (MD) in patients who died (p=0.58) **2. Costs** 2.1 Service use 2.1a. Description Use of healthcare included secondary prevention medication; hospital readmissions; visits to primary care; patient's travel time, parking costs and self-funded equipment 2.1b. Values Full data available for IG: n=48 and CG: n=32 • Mean total costs per patient IG £3,279 (SD £374) vs CG £3,201 (SD £443) • No significant diff at 9 months IG vs CG: £78 (95%CI, -£1,102 to £1,191), p=0.894 • Travel costs of hospital group (per protocol): £52 (SD		cardiac rehabilitation after acute myocardial infarction or coronary revascularisation. The authors conclude that both interventions were equally effective in improving outcomes and there was no evidence of difference in healthcare costs between the 2 groups. The study was well conducted and was generally well reported. Findings support the extension of home-based cardiac rehabilitation programmes such as the Heart Manual to give patients a choice in line with their preferences, which may have an impact on uptake of cardiac rehabilitation. It is not clear whether findings can be generalised to other areas of health.

		travel Local sources: local trust for hospital equipment and home staff travel costs; patient costs for hospital parking and exercise equipment from trial data **Sensitivity analysis** One-way sensitivity analysis to test robustness of ICER to changes in values: data imputation; top-down costing method; national cost estimate for hospital-based rehabilitation; per protocol analysis; inclusion of patient costs and adjustment for baseline age and sex; bootstrapping to determine confidence intervals around ICERs	£9); IG spent more money on equipment than CG: £33 (SD £19) vs £7 (SD £5), p=0.29 2.2 Cost of intervention 2.2a. Description For IG: cost diary applied by cardiac nurse collecting information about time spent per patient; telephone calls; home visits; distance travelled for home visits; for CG, 2 methods were applied alternatively: 1) bottom-up approach based on average time provided by staff for each session and summed across staff; and 2) top-down approach based on WTE staff annual salary divided by no. of patients treated over 1 year) 2.2b. Values Full data available for n=48 (IG) and n=32 (CG) Costs per patient for running rehabilitation programme were £40 lower in IG (95% CI, -£45 to -£12); cost difference mainly due to reduced		

			personal costs **3. Subgroups** No significant difference in age (p=0.634) or sex (p=0.410) between those with and without full economic data **4. Sensitivity analysis** Lack of significant difference remains after applying different costs and methods of analysis		

Study ID **Country** **Study type**	**Intervention details**	**Study population** **Study design** **Data sources**	**Costs: description and values** **Outcomes: description and values**	**Results: cost-effectiveness**	**Comments**
Jolly et al. 2007 England, UK Cost-effectiveness	**Intervention** Home-based programme of cardiac rehabilitation using a manual (the 'Heart Manual'); included home visits by nurse at approx. 1, 6, 12 weeks; call	**Population** Patients (n=525) after myocardial infarction (MI) or coronary revascularisation; excluded were patients with certain comorbidities and language needs **Study design** Individually randomised controlled trial; IG: n=263;	**1. Outcomes** 1a. Description Primary outcomes: smoking cessation, blood pressure (systolic and diastolic), total and high-density lipoprotein (HDL) cholesterol, exercise capacity (walking test), Hospital Anxiety and Depression Scale (HADS)	Results are not summarised in form of incremental cost-effectiveness ratios; however, some conclusions about cost-effectiveness might be drawn from:	**Applicability** Sufficiently applicable (+) **Quality** Overall good quality with minor limitations (++) **Perspective** NHS and societal perspective (i.e. employment, patients'

	at 3 weeks after recruitment; translation in Punjabi **Control** Four centre-based rehabilitation programmes; varied in length from 9 sessions at weekly intervals to 24 individualised sessions over 12 weeks **Both groups:** Rehabilitation in both groups included exercise, relaxation, education, lifestyle, counselling; cardiac nurse provided information about condition and counselling about risk factor modification	CG: n=262 **Setting** Four hospitals in predominantly inner-city, multi-ethnic, socioeconomically deprived areas of the West Midlands, for 2 years from 1 February 2002 **Statistical analysis** Baseline differences were accounted for **Source of effectiveness data** From trial, some outcomes collected at baseline and 6 months, others only collected at 6 months; health-related quality of life (via EQ-5D) measured at baseline, 6, 12 and 24 months **Source of resource use data** From trial, by self-report over trial duration for health services and at beginning and end of trial for drug use;	Secondary outcomes: self-reported diet, physical activity, cardiac symptoms, quality of life via Short Form with 12 items (SF-12) and EQ-5D; attendance measured at 6,9 and 12 weeks 1b. Values No clinically or statistically significant differences between IG and CG were found in any of the primary or secondary outcomes; both groups improved significantly between baseline and follow-up on total cholesterol, smoking prevalence, the HADS anxiety score, self-reported physical activity and diet At baseline (mean scores) • Systolic blood pressure IG 123.8 (SD 17.3) vs CG 123.8 (SD 18.6) • Diastolic blood pressure IG 72.3 (SD 11.1) vs CG 72.2 (SD 10.4) • Total cholesterol IG	1) No significant differences in QALY between IG and CG 2) Costs per patient from the perspective of the NHS higher in IG £41 (95% CI £26 to £55); however, no difference when a patient's travel and time off work costs were taken into account	travel costs) **Discounting** Not applicable **Price year** 2002/3, UK pounds (£) sterling **Summary** This UK study examined the cost-effectiveness of home-based versus centre-based cardiac rehabilitation after myocardial infarction or coronary revascularisation. The authors concluded that the home-based rehabilitation service was as effective and expensive as the centre-based programme in the UK. The study was well conducted and was generally well reported. This study would support extension of home-based cardiac rehabilitation programmes such as the Heart Manual.

	prior to discharge	travel costs and time were based on distances from patients' addresses to relevant centre **Source of unit cost data** PSSRU unit costs for health and social care except those for heart manual travel costs; costs for heart manual were taken from the Heart Manual website; for travel costs for staff NHS mileage rate was applied; patient travel costs were taken from AA Motoring Trust **Sensitivity analysis** Impact of different methods dealing with missing values were examined including non-random replacement; changes in service organisation were considered; mean changes in costs and EQ-5D scores in each trial arm were bootstrapped to generate confidence intervals; for IG, duration of all home visits was limited to 30 mins per visit and 3 visits	4.76 (1.26) vs CG 4.76 (SD 1.37) • HDL Cholesterol IG 1.2 (SD 0.56) vs CG 1.26 (SD 0.73) • Smoking prevalence IG 35.8% vs CG 32.4% • HADS anxiety score IG 7.82 (SD 4.5) vs CG 7.15 (SD 4.19) • HADS depression score IG 4.86 (SD 3.35) vs CG 4.68 (SD 3.22) At 6 months follow-up • Systolic blood pressure IG 133.34 (SD 18.86) vs CG 133.73 (SD 20.58), MD -39 (95% CI, -3.91 to 3.14) • Diastolic blood pressure IG 77.39 (SD 13.83) vs CG 77.35 (SD 15.95), MD 0.04 (95% CI -2.63 to 2.71) • Total cholesterol IG 3.91 (0.85) vs CG 3.87 (SD 0.88), MD 0.04 (95% CI -0.11 to		

			0.20) • HDL cholesterol IG 1.28 (SD 0.39) vs CG 1.31 (SD 0.39) MD 0.02 (95% CI, -0.09 to 0.05) • Smoking prevalence IG 23.9% vs CG 20.2%, MD 3.7% (95% CI -3.9 to 11.3%) • HADS anxiety score IG 6.76 (SD 4.27) vs CG 6.26 (SD 4.52), MD 0.51 (95% CI, -0.29 to 1.30) • HADS depression score IG 4.83 (SD 4.00) vs CG 4.65 (SD 3.58), MD 0.18 (95% CI -0.50 to 0.87) • Walking test (ISWT) IG 408.6 (SD 168.2) vs CG 417.4 (SD 175.4), MD -11.32 (95% CI -45.3 to 22.6) • Self-reported physical activity IG 6.96 (SD 3.81) vs CG 6.99 (SD 4.14) • Quality of life (SF-12 mental component score): IG 49.19 (SD		

			10.1) vs 50.33 (SD 9.6) • Quality of life (SF-12 physical component score): IG 42.28 (SD 10.9) vs 42.56 (SD 10.8) Note that results on diet are not presented here as the scores included many dimensions EQ-5D (for economic analysis) Slightly worse QALYs in IG at baseline which persisted at 6, 12 and 24 months but were not significant: • Baseline: IG 0.737 (SD 0.24) vs CG 0.757 (SD 0.21), MD -0.020 (95% CI -0.059 to 0.019) • 6 months: IG 0.742 (SD 0.26) vs CG 0.762 (SD 0.23), MD -0.020 (95% CI -0.064 to 0.025) • 12 months: IG 0.744 (SD 0.27) vs CG 0.759 (SD 0.23), MD -0.016 (95% CI -0.016		

			to 0.031) • 24 months: IG 0.731 (SD 0.29) vs CG 0.753 (SD 0.26), MD -0.022 (95% -0.072 to 0.028) Attendance: 96% vs. 56% of participants in IG vs CG attended 5 or rehabilitation classes (p<0.001) **2. Costs** 2.1 Service use 2.1a Description Health service resource use measured from health service and societal perspective; admission to hospital for all causes and cardiovascular causes; daycase admission; GP and practice nurse visits related to hear condition; time-off from work following cardiac event; return to paid employment at 2 years follow-up 2.1b Values • No significant differences in NHS non-rehabilitation		

			resource use from 0 to 24 months: e.g. admission to hospital for cardiovascular disease from 0 to 6 months IG 0.15 (SD 0.46), CG 0.18 (SD 0.52), p=0.5; from 6 to 12 months IG 0.17 (SD 0.48), CG 0.21 (SD 0.52), p=0.3; from 12 to 24 months IG 0.10 (SD 0.34) vs CG 0.13 (0.41), p=0.4 Note that results could not be not presented for all health services with their full details – those can be found in Table 49 (p46) in the paper • No significant changes in employment status, e.g. measured through 'in employment at two years' IG 31.9% vs CG 29.8%, p=0.3 • No significant differences in time off from work (mean, wks): IG 9.01 (SD 6.11), CG 8.96 (7.02), p=1.0 Note that results could not		

			presented for all employment data with their full details – those can be found in Table 50 (p47) in the paper 2.2 Costs of intervention 2.2a Description Cost of the rehabilitation programme from health service perspective included costs of staff, primary care and home visits, telephone contacts, hospital services, cardiac-related hospitalisations, drugs for secondary prevention, drug use; costs from society perspective included patients' travel costs and time 2.2b Values Significantly higher mean costs of rehabilitation programme in IG £198 (95% CI £189 to £208) vs CG £157 (95% CI £139 to 175); $p<0.05$; when patient costs were included, there was no significant difference between IG and CG; mean costs of CG £181.5 (95% CI, 159.6 to 203.4)		

			Costs of rehab programmes in CG at hospitals 1 to 4 varied significantly: NHS perspective • Hospital 1: £193,4 (95% CI, 138.6 to 174.8) • Hospital 2: £149.8 (95% CI, 131.4 to 168.1) • Hospitals 3, 4: £115 (95% CI, 87.3 to 114.7) Societal perspective (out-of-pocket expenditure to patients for travelling): • Hospital 1: £221.6 (95% CI, 173.4 to 269.9) • Hospital 2: £177.7 (95% CI, 150.4 to 205.1 • Hospitals 3, 4: £98.5 to 162.3 (95%, CI 98.5 to 163.2) **3. Subgroups** Significant difference ($p<0.01$) in SBP and DBP ($p=0.04$) at 12 months: • Post-MI patients had		

			lower scores in IG • Post-revascularisation patients had lower SBP in CG • No interactions for ethnic group, age group or gender for any of the primary outcomes **4. Sensitivity analysis** Cost differences were sensitive to variations in organisation of service (e.g. if telephone consultations replaced all nurse visits in IG, costs in IG were lower than in CG)		

Study ID **Country** **Study type**	**Intervention details**	**Study population** **Study design** **Data sources**	**Costs: description and values** **Outcomes: description and values**	**Results: cost-effectiveness**	**Comments**
Whittaker and Wade 2014 Australia (AUS)	**Intervention** Home-based telehealth cardiac rehabilitation programme ('Care Assessment	**Population** Not described; authors refer to another publication for full details **Study design** Economic analysis is mixed	**1. Outcomes** 1a. Description Outcomes (described as benefits) measured in terms of health (weight/BMI, waist circumference (MWT), depression anxiety, EQ-5D, fat/fibre/salt intake,	Findings are not presented in cost-effectiveness terms but in terms of cost savings	**Applicability** Not sufficiently applicable (-) **Quality** Not assessed because study was not sufficiently

Cost–benefit, mixed methods	Platform'); mobile phone, wellness diary and wellness web portal; daily text messaging **Control** Standard 6-week hospital-based outpatient cardiac rehabilitation programme Both groups: participants in both groups received clinical review and comprehensive rehabilitation including exercise, risk modification and mentoring	method and includes some form of modelling but method not well explained; partly based on RCT, 6 months follow-up; n=120 (IG: n=60; CG: n=60) **Statistical analysis** Not reported **Source of effectiveness data** Trial; outcomes measured at baseline, 6 weeks and 6 months **Source of resource use data** Not clear from the description; it is reported that 'cost and benefits data' are collected at assessment; semi-structured interviews with 6 staff involved in programme; model consultations; financial reports and system outputs **Source of unit cost data** Study reports that so called 'cost values' were obtained from the finance department	triglycerides); quality and safety (measured in form of reported incidences), participation (measured by completion rate) and effectiveness (measured in reduction in readmission) No further detail reported as to how outcomes were measured; sometimes methods were reported under findings section 1b. Values It is reported that there were no baseline differences between groups (but no further detail is provided) Health outcomes: it is reported that outcomes including weight BMI, 6 MWT, EQ-5D Index and VAS, fat/fibre/salt intake, triglycerides, depression and anxiety scores improved significantly in both groups (no p values reported); it is not reported whether there were (significant) differences between the two groups	It is reported that the intervention achieved cost savings of $2,375	applicable **Perspective** Provider's and patient perspective, no further detail provided **Discounting:** Not applicable **Price year** Not reported **Summary** Due to poor reporting quality findings cannot be used to inform recommendation

		of the Prince Charles Hospital and the Commonwealth Scientific and Industrial Research Organisation (CSIRO); however, it is not clear whether this refers to unit costs **Sensitivity analysis:** Alternative assumptions made of no treatment effect and impact on survival, 3 years of treatment effect and impact on survival and variations in utility	Quality and safety: it is reported that rates in terms of reportable incidents were similar in both groups Participation: completion rates were twice as high in IG: 80% vs CG: 47% (no significance reported) Effectiveness: based on published data on hospital readmission of people completing and not completing rehabilitation programme, the authors calculate a net present value of $4,008 and cost savings of $2,375; no further detail is provided and the approach is not explained **2. Costs** 2a. Description No clear distinction is made between intervention costs and other service use; the costs of the 2 programmes are reported, however, reported 2b. Values		

			It is reported that costs between the two groups were similar • Total costs IG $1,713 and CG $2,245; • Provider costs (without patient travel): IG: $1,633 vs CG: $1,845 Elements of provider costs • Education: IG $130 vs CG $35 • Assessment: IG $195 vs CG $195 • Coaching and mentoring: IG $225 vs CG $225 • Gymnasium: IG $0 vs CG: $85 • Communications: IG: $195 vs CG: $125 • Facility: IG: $120 vs CG: $595 • Technology: IG $283 vs CG: $40 • Administration: IG $ 485 vs CG $450 **3. Subgroups** None		

			4. Sensitivity analysis None		

Study ID **Country** **Study type**	**Intervention details**	**Study population** **Study design** **Data sources**	**Costs: description and values** **Outcomes: description and values**	**Results: cost-effectiveness**	**Comments**
Harris et al. 2005 New Zealand Cost–consequence	**Intervention** Hospital-at-home modelled on quick response team concept; nurse-led multidisciplinary team and care coordination at home supervised by hospital Service included: 10 hrs per day nursing availability; 24 hrs medical on-call by geriatrician; patient-centred planning; daily review of care	**Population** People of 55 years and above (mean age 80 years; n=841) treated for an acute medical problem; distinguished by 1) At admission (prevention) group (=people who presented at hospital in crisis but not admitted, n=294); 2) Early discharge group (people admitted to hospital, n=547) Excluded were people booked for major surgery within 36 days of randomisation, or without suitable living arrangements; 52.8% not eligible	**1. Outcomes** 1a. Description Primary outcomes: personal activities of daily living assessed with the functional independence measure (FIM); changes in cognitive function assessed with the mini mental status examination (MMSE); changes in instrumental activities of daily living (IADLs); Secondary outcomes: self-reported recovery; health status via SF-36 (acute form) at 90 days; falls, bladder and bowel problems; confusion; withdrawal from study; readmission to hospital; admission to an institution for permanent care; death	No summary measure as the approach was a cost-consequences analysis Authors conclude that a marginal gain in acceptability (i.e. satisfaction and carers' strain) was not justified by large additional costs (about NZD $3,000) However, they point out that if service operated to full capacity it	**Applicability** Sufficiently applicable (+) **Quality** Overall good quality with minor limitations (++) **Perspective** Not explicitly stated; included were healthcare costs (hospital, intervention, community services) **Price year** 1997, NZ sterling (NZ $1 = sterling £0.40) **Discounting** Not applicable

	plan by nurse; intensive home support with up to 24-hour live-in home care professional; MTD support (occupational therapy, physiotherapy, social work); rehabilitation in the patient's home; discharge handover to ongoing support services **Control** Acute hospital care	**Study design** RCT; n=285 included in study **Setting** Auckland hospital and people's homes, Australia **Statistical analysis** Repeated measures models for primary outcomes; analysis of variance for SF-36; t-test for FIM subscales; chi-square test for difference in proportions reporting recovery, or satisfaction; Wilcox-test for carers' strain; proportional hazard survival analysis for time-to-first readmission; t-test for differences in total costs between groups; generalised linear models to test difference in per-day costs between groups **Source of effectiveness data** Trial; method of sample selection and follow-up described in detail; baseline comparability between groups; analysis based on	Acceptability measured at 90 days using a structured satisfaction survey for patients and carers; carer strain index 1b. Values Overall, there were no significant differences between groups in any of the primary and secondary outcomes MMSE did not change over time; IADL scores improved in both groups from baseline over follow-up (7.0 to 9.6) At 90 days follow-up: • No significant difference in physical function (FIM) scores: diff. -1.17 (95% CI -5.06 to 2.73); but improvements in both groups of 13 points from baseline (99.5 to 113.2) over follow-up (IG n=134, CG n=134) • MMSE did not change over time (IG: n=117, CG: n=109): diff. 0.44 (95% CI -1.38 to 0.35)	could be cost neutral	**Summary** Hospital-at-home more acceptable and as effective and safe as inpatient care; hospital-at-home significantly more costly than standard inpatient care Hospital-at-home can be safe and effective in providing rehabilitation care. The authors stressed that further work should be performed to examine how costs might be reduced without reducing the safety and acceptability of these programmes, and to determine an appropriate method for selecting patients for such a scheme.

		treatment completers; outcomes assessed at baseline, 10, 30 and 90 days **Source of resource use data** Hospital databases; use of community services from public hospital system **Source of unit cost data** (1) Hospital unit costs from hospital administration data (2) Community unit costs provided by public hospital system (3) Private health services valued according to market price (4) For GP visits: patient charge plus a government subsidy **Sensitivity analysis** Impact of changes in throughput: a) higher level as observed post trial; b) estimated full capacity	• IADL improved in both groups (IG: n=214, CG: n=123): diff 0.2 (95% CI -0.65 to 1.04) • SF-36 physical (IG: n=121, CG: n=120): 34.8 (SD 10.7) vs 34.4 (SD 9.9) • SF-36 mental (IG: n=121 vs. CG: n=120): 53.4 (SD 10.5) vs 52.1 (SD 12.0) Acceptability in IG significantly better: • Patients' satisfaction: proportion with score 'very good' or 'excellent' significantly higher in IG: 83.0% vs 72.3%; p=0.05 • Carers' satisfaction: proportion with score 'very good' or 'excellent' significantly higher in IG: 66.7% vs 41.4% (p=0.004) • Carers' strain: significantly lower in IG vs CG: 4.6 (SD 6.2) vs 6.2 (SD 3.7); p=0.02		

			2. Costs 2.1 Service use 2.1a Description Direct costs of health care and support services in the 30 days following randomisation; hospital costs included costs of hospital readmissions; occupational therapy, physiotherapy, speech language therapy, laboratory and radiology services; pharmaceutical costs were excluded; community services covered general practice consultations; privately paid services; community nursing 2.1b Values • Average total cost per patient significantly higher in IG vs CG: NZ $6,524 vs NZ $3,525 (P<0.0001); • Cost per patient day of service higher in IG: NZ$570 vs NZ $538; • Longer length of stay in IG: 11.4 days vs 6.6 days;		

			• Readmission (at 30 days) higher in IG vs CG (2.6 days vs. 0.9 days); costs NZ $1,588; • No significant diff in costs of community care 2.2 Costs of intervention 2.2a Description Staff recorded the time spent with each patient plus travel, administration, etc.; non-attributable costs were averaged across total number of patients over 12-month period; it included time spent on administration and other duties (excluding research time), plus non-staff administration and overhead costs (stationery, telephone, vehicle maintenance, etc.) 2.2b Values Costs of hospital-at-home service: NZ $4,820 **3. Subgroups** None		

			4. Sensitivity analysis a) Average cost per patient declined from NZ $6524 to NZ $4489; but significantly greater than CG (p<0.002); b) Average per patient cost not significantly different IG vs CG: NZ $3,696 vs NZ$3,525; p=0.58		

Study ID **Country** **Study type**	**Intervention details**	**Study population** **Study design** **Data sources**	**Costs: description and values** **Outcomes: description and values**	**Results: cost-effectiveness**	**Comments**
Armstrong et al. 2008 Canada Cost-saving/ minimisation	**Intervention** Hospital-at-home; care plan by medical team; nurse visits; telephone contact; 9 hours/day availability during week days and 4 hours/day during weekends; after hours coverage by family medicine call group	**Population** Patients requiring hospitalisation for intermediate level care; excluded were patients requiring critical care with 24 hours surveillance; COPD (32%), cellulitis (11%), diabetes (9%), congestive heart failure (9%) **Study design** Single-arm (18 months beginning November 2003; n=43); matching with historical control (n=363)	**1. +2. Outcomes and costs** 1. +2a. Description The following outcomes, service and cost data were measured: • Total length of stay • Cost of the substituted components of hospitalisation • Likelihood of readmission within 3 months of discharge for any diagnosis • Likelihood of readmission within 3 months of discharge for any related	No cost-effectiveness results reported since cost-savings analysis was carried out There were no significant differences in total costs between the two groups The authors state that savings were	**Applicability** Not sufficiently applicable (-) **Quality:** Quality of study was not assessed because it was not sufficiently applicable; quality of reporting was low **Perspective** It is stated that the study aimed to follow a societal perspective but some important costs – such as those to patients – were

	Control Acute hospital care Both groups: access to Community Care Access Centre (CCAC) provides home support including nursing and physiotherapy, meal preparation, housekeeping, and other home support	**Setting** Department of Family Medicine at the Ottawa Hospital (Civic campus) in Ontario **Statistical analysis** Multivariate regression models to estimate effect of intervention on each outcome after adjusting for potential confounding variables; all regressions were estimated using linear probability and weighted by the number of controls; probit estimates for readmission regressions yielded quantitatively and qualitatively similar results **Source of effectiveness data** Five cost relevant outcomes were analysed in multivariate regression analysis **Source of resource use data** Actual programme cost; daily costs for CG; actual	diagnoses • Costs incurred by community home care services during the 3 months after discharge • Drug costs and physician's time excluded from both groups 1. +2b. Values Patients enrolled in the programme stayed longer in hospital (coefficient 3.3 days, p<0.001), used more community care services following discharge (coefficient $729, p=0.007), and were more likely to be readmitted to hospital within 3 months of discharge (coefficient 17%, p=0.012) than patients treated in hospital. Total substituted costs of home-based care were not significantly different from the costs of hospitalisation (coefficient -$501, p=0.11). **3. Subgroups** Findings were not presented	likely to be under-estimated; the programme was still in development and small and immature at the time of the research	not considered **Discounting** Not applicable **Price year** Not reported **Summary** This cost-saving study compared a hospital-at-home intervention with standard care in hospital; the study was not sufficiently applicable mainly due to the study type; the study presented a narrow perspective on costs and did not consider outcomes; findings cannot be used to inform recommendations.

		programme cost for IG **Source of unit cost data** Not reported **Sensitivity analysis** Not carried out	by subgroup		

Study ID **Country** **Study type**	**Intervention details**	**Study population** **Study design** **Data sources**	**Costs: description and values** **Outcomes: description and values**	**Results: cost-effectiveness**	**Comments**
Frick et al. 2009 USA Cost-minimisation/ saving	**Intervention** Hospital-at-home; care plan by medical team; nurse care one-on-one for mean of 16.9 hours; daily physician and nursing visits; lifeline medical alert device; medical equipment; oxygen therapy, skilled therapies; pharmacy support;	**Population** Patients 65 yrs and above who required acute hospital admission for COPD, chronic heart failure, community acquired pneumonia, or cellulitis; excluded were those with uncorrectable hypoxemia, suspected myocardial ischemia, and presence of an acute illness that required hospital admission other than target illness **Study design** Prospective, non-randomised clinical trial	**1. Outcomes** This study only measured costs **2. Costs** 2.1 Description Costs included charges, overheads ratios and what is described as step-down cost accounting approach; data were also gathered on hospitalisations, emergency department visits, skilled nursing facility admissions and home healthcare visits 2.2 Values	No cost-effectiveness results reported as cost-savings analysis was carried out	**Applicability** Not sufficiently applicable (-) **Quality** Quality of study was not assessed as it was not sufficiently applicable **Perspective** Third-party payer **Discounting** Not applicable **Price year**

	diagnostic services **Control** Acute hospital care Both groups: access to Community Care Access Centre (CCAC), which provides home support including nursing and physiotherapy, meal preparation, housekeeping, and other home support	conducted in 2 consecutive 11-month phases between 2000 and 2002; first phase without intervention and second phase with intervention; IG: n=169, CG: n=286 **Setting** Three medical sites in Buffalo (New York), Worcester (Massachusetts), Portland (Oregon) **Statistical analysis** Generalised linear model using log link and gamma family specification; a wide range of controlling variables were applied to account for personal characteristics; primary investigations were intent-to-treat analyses **Source of effectiveness data** The study was a cost minimisation (savings) study and did not apply outcome measures	• Significantly lower mean total costs in IG: $5,081; p <.001 • Significantly lower hospital costs in IG: $2,000; p<.001 • Significantly higher emergency department physician costs in IG: p<0.05 • Significantly lower non-emergency department physician costs in IG: p<.01 **3. Subgroups** Findings presented by sites. Only one site had significantly lower costs and other sites had lower cost but this was not significant. There was high variability between sites in regards to emergency department physician costs; this was the result of how different emergency departments were managed		2002, US dollar ($) **Summary** This US study compared the costs between hospital-at-home and acute hospital care for 4 common conditions. Findings suggest that hospital-at-home was provided cheaper than acute hospital care. The study was not sufficiently applicable mainly due the study type. It presented a narrow perspective on costs and did not consider outcomes; findings cannot be used to inform recommendations.

		Source of resource use data Each study site provided data on charges; no further detail was reported on how data were collected **Source of unit cost data** From charges, no further detail reported **Sensitivity analysis** Analyses carried out as per protocol (as treated)			

Completed methodology checklists: economic evaluations

Study identification: Parker SG, Oliver P, Pennington M, Bond J, Jagger C, Enderby PM et al. (2009) Rehabilitation of older patients: day hospital compared with rehabilitation at home. A randomised controlled trial. Health Technology Assessment 13(39)	
Guideline topic: Intermediate care	
Economic priority area: B	
Checklist: Section 1	
Yes/No/Partly/Not applicable	Detail
1.1 Is the study population appropriate for the review question?	

Partly	The population in this study covered all people referred to multidisciplinary rehabilitation in the given localities; the majority of those were older people. However, only a small proportion of people were randomised primarily because a large amount of referrals was instead made to other local intermediate care services representing a particular discipline.
1.2 Are the interventions appropriate for the review question?	
Yes	The intervention referred to a range of short-term, multidisciplinary home based rehabilitation programmes; the comparison group referred to different day hospital rehabilitation programmes provided in 4 localities.
1.3 Is the current social care system in which the study was conducted sufficiently similar to the current UK social care context?	
Yes	The study was carried out in 2005/6 in 4 English localities. Although parts of the UK health and social care system have changed since then, the interventions were still relevant to the current context.
1.4 Are the perspectives clearly stated and what are they?	
Yes	The perspective on costs was the one of the NHS, local authorities as well as of society (measured in form of patients' costs and unpaid care).
1.5 Are all direct effects on individuals included?	
Yes	The study measured a wide range of relevant individuals' health and wellbeing outcomes (such as functioning, health-related quality of life and psychological morbidity) as well as carers' outcomes.
1.6 Are all future costs and outcomes discounted appropriately?	
Not applicable	The study referred to a short time period of under a year so that discounting was not required.
1.7 How is the value of effects expressed?	
Yes	Values of effects were expressed in natural units and in health utility (EQ-5D).

1.8 Are costs and outcomes from other sectors (including the value of unpaid care, where relevant) fully and appropriately measured and valued?	
Yes	The study evaluated NHS and local authority costs as well costs to patients and carers.
General conclusion	
This study was sufficiently applicable (+).	
Section 2: Study limitations (the level of methodological quality) This checklist should be used once it has been decided that the study is sufficiently applicable to the context of the social care guidance	
2.1 Does the model structure adequately reflect the nature of the topic under evaluation?	
Not applicable	The study was an economic evaluation carried out alongside an RCT and did not apply modelling.
2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	
Yes	The RCT refers to a 9-month follow-up period, which seemed appropriate considering the short-term nature of the intervention. Neither costs nor outcomes were significantly different in both groups indicating that the time horizon was sufficiently long.
2.3 Are all important and relevant outcomes included?	
Yes	The study measured a wide range of individuals' health and wellbeing outcomes relevant to the review question. The study used standardised outcome measures.
2.4 Are the estimates of baseline outcomes from the best available source?	
Yes	Estimates for baseline outcomes were from the mother trial. Statistical analysis was carried out to adjust for baseline differences.
2.5 Are the estimates of relative intervention effects from the best available source?	

Yes	Estimates for baseline outcomes were from the mother trial. Analysis was carried out on per-protocol as well as intention-to-treat basis. A range of statistical analyses was carried out to analyse differences in endpoints.
2.6 Are all important and relevant costs included?	
Yes	Costs to the NHS and local authorities were included in the analysis as well as costs to patients and the impact of unpaid care.
2.7 Are the estimates of resource use from the best available source?	
Partly	Resource use was taken from the mother trial and evaluated in questionnaires to participants; there was a large proportion of missing data with resource use data only available for half of the sample.
2.8 Are the unit costs of resources from the best available source?	
Yes	Nationally recognised sources were used to value costs. Costs for equipment were taken from local supplier. A range of unit costs were applied for unpaid care ranging from £0 to £16 per hour but no further detail was reported about the source of these values. However, since those were tested in sensitivity analysis this did not have a negative impact on robustness of findings.
2.9 Is an appropriate incremental analysis presented or can it be calculated from the data?	
Not applicable	Authors reported that because there were no significant changes in health-related quality of life (measured with the EQ-5D) or in costs, they did nor calculate incremental cost-effectiveness ratios.
2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	
Yes	Sensitivity analysis was carried out, which considered the impact of different overhead costs and values for unpaid care on findings.
2.11 Is there any potential conflict of interest?	
No	The study was a health technology assessment. Researchers were employed by one NHS hospital and different national and international medical schools and universities.

2.12 Overall assessment
Overall good quality with minor limitations (++).

Study identification: Mahomed NN, Davis AM, Hawker G, Badley E, Davey J R, Syed KA, Coyte PC, Gandhi R, Wright JG (2008) Inpatient compared with home-based rehabilitation following primary unilateral total hip or knee replacement: a randomized controlled trial. Journal of Bone and Joint Surgery, American Volume 90(8): 1673–80	
Guideline topic: Intermediate care	
Economic priority area: B	
Checklist: Section 1	
Yes/No/Partly/Not applicable	Detail
1.1 Is the study population appropriate for the review question?	
Partly	The population in this study covered all people undergoing primary total hip or knee replacement from a community hospital and tertiary-care referral centre. Some groups were excluded such as those not fluent in English or in need of more complex treatment. Altogether the population is likely to be a small but appropriate subgroup of the population covered in the scope.
1.2 Are the interventions appropriate for the review question?	
Yes	The intervention referred to home-based rehabilitation; this included a multidisciplinary protocol developed for the trial and referral to the so called Community Care Access Centre; the comparison included inpatient rehabilitation with a target of 14 days length of stay; there was no target duration stated for the home-based rehabilitation programme; instead the end of rehabilitation was determined by the functioning status of the patient; however, it was reported that the mean number of postoperative home-based rehabilitation visits was 8.

1.3 Is the current social care system in which the study was conducted sufficiently similar to the current UK social care context?	
Partly	The study was carried out between 2000 and 2002 in Canada. The Canadian health system has some important similarities to the system in the UK. Although the study was dated, it still had some relevance in the current context.
1.4 Are the perspectives clearly stated and what are they?	
Yes	It was stated that the cost analysis was carried out from a health system perspective and that only direct costs of healthcare were evaluated. This excluded physician fees, medication or indirect costs to patients or their carers.
1.5 Are all direct effects on individuals included?	
Partly	The study applied a standardised clinical measure of functioning for people with osteoarthritis as well a standardised health-related quality of life measure. It also measured patient satisfaction. Not included were aspects of psychological wellbeing and carers' outcomes.
1.6 Are all future costs and outcomes discounted appropriately?	
Not applicable	The study referred to a time period of a year so that discounting was not required.
1.7 How is the value of effects expressed?	
Yes	Values of effects were expressed in natural units.
1.8 Are costs and outcomes from other sectors (including the value of unpaid care, where relevant) fully and appropriately measured and valued?	
No	The study only evaluated direct healthcare costs and not the impact on social care. Furthermore, patients' costs and the impact on carers (including in the form of unpaid care) were not included.
General conclusion	
This study was sufficiently applicable (+).	
Section 2: Study limitations (the level of methodological quality)	

This checklist should be used once it has been decided that the study is sufficiently applicable to the context of the social care guidance.	
2.1 Does the model structure adequately reflect the nature of the topic under evaluation?	
Not applicable	The study was an economic evaluation carried out alongside an RCT and did not apply modelling.
2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	
Yes	The RCT had a follow-up period of 1 year, which seemed appropriate considering the short-term nature of the intervention. Outcomes were not significantly different in both groups indicating that the time horizon was sufficiently long to capture all important effects.
2.3 Are all important and relevant outcomes included?	
Partly	The study measured patients' functioning and health-related quality of life as well as satisfaction. The study used standardised outcome measures. However, patients' psychological wellbeing and carers' outcomes were not captured.
2.4 Are the estimates of baseline outcomes from the best available source?	
Yes	Estimates were taken from the mother trial. There was no significant difference between the groups on any of the measured baseline variables so that no additional analysis needed to be carried out.
2.5 Are the estimates of relative intervention effects from the best available source?	
Yes	Estimates were from the mother trial. Analysis was carried out on intention-to-treat basis. No one was lost to 'follow-up' so that no additional analysis needed to be carried out to account for this type of missing data. A range of statistical analysis was carried out to analyse differences in endpoints.
2.6 Are all important and relevant costs included?	

No	The study did not include the impact on social care costs in the community. In addition, costs to patients and carers (in form of out-of-pocket expenditure) as well as the costs of unpaid care were not considered.
2.7 Are the estimates of resource use from the best available source?	
Partly	Health service use was collected from reported per diem costs, which were applied to average length of stay and patient-level costs for services provided by the home care agency; in addition data were taken from a centralised data system. There was no further detail reported so that no final conclusion could be drawn regarding the appropriateness of sources.
2.8 Are the unit costs of resources from the best available source?	
Partly	Unit costs were taken from institutions providing services as part of the trial; no further detail was reported.
2.9 Is an appropriate incremental analysis presented or can it be calculated from the data?	
Not applicable	Since there was no significant change in clinical outcomes and health-related quality of life, no incremental cost-effectiveness values were derived. The authors derived conclusions about cost-effectiveness from their findings on costs so that de facto a cost minimisation analysis was carried out.
2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	
Yes	Sensitivity analysis was carried out on the basis of discharge destination rather than intention-to-treat.
2.11 Is there any potential conflict of interest?	
No	The authors disclosed funding from Physician's Services Incorporated and declared that they did not benefit from any commercial funding.
2.12 Overall assessment	
The study had some potentially serious limitations (+).	

Study identification: Wong WP, Feng J, Pwee KH, Lim J (2012) A systematic review of economic evaluations of cardiac rehabilitation. BMC Health Services Research 12: 243	
Guideline topic: Intermediate care	
Economic priority area: B	
Checklist: Section 1	
Yes/No/Partly/Not applicable	Detail
1.1 Is the study population appropriate for the review question?	
Yes	The population in this study referred to patients with different types of cardiac rehabilitation needs after an acute event. Although this was a particular subgroup, it was an important one.
1.2 Are the interventions appropriate for the review question?	
Partly	The interventions included in the review referred to a wide range of multidisciplinary rehabilitation programmes: centre-based programmes referred to 3 exercise sessions over 8 to 12 weeks; home-based programmes varied and might have included longer-term ones that were not relevant to the review question; the comparison included 'no rehabilitation' and centre-based rehabilitation.
1.3 Is the current social care system in which the study was conducted sufficiently similar to the current UK social care context?	
Partly	The review was carried out in 2012 and was thus fairly recent; however, some reviewed studies were dated. The majority of studies were from the USA or Canada. Findings on relative effects and trends in costs still had relevance to current UK context.
1.4 Are the perspectives clearly stated and what are they?	
No	Authors named different perspectives (societal; government;

	health system; payer; patient) but did not provide any definition so that it was not clear what those perspectives referred to.
1.5 Are all direct effects on individuals included?	
Partly	The study presented findings on published cost-effectiveness values (e.g. cost per QALY); outcomes were sometimes considered in the form of pound values (as monetary benefits); some findings of studies referred only to costs savings and did not report on outcomes.
1.6 Are all future costs and outcomes discounted appropriately?	
No	Time periods and discounting was not reported.
1.7 How is the value of effects expressed?	
Partly	Values of effects (if measured) were expressed in pound values or in health utility (EQ-5D) but only reported in summarised cost-effectiveness values.
1.8 Are costs and outcomes from other sectors (including the value of unpaid care, where relevant) fully and appropriately measured and valued?	
No	The study did not report on this level of detail.
General conclusion	
This study was not sufficiently applicable (-).	

Study identification: Taylor RS, Watt A, Dalal HM et al. (2007) Home-based cardiac rehabilitation versus hospital-based rehabilitation: a cost effectiveness analysis. International Journal of Cardiology 119: 196–201	
Guideline topic: Intermediate care	
Economic priority area: B	
Checklist: Section 1	
Yes/No/Partly/Not applicable	Detail

1.1 Is the study population appropriate for the review question?	
Yes	The population in this study, i.e. patients with uncomplicated myocardial infarction and without major comorbidity, is an important subgroup covered by the scope.
1.2 Are the interventions appropriate for the review question?	
Yes	The intervention was a short-term home based cardiac rehabilitation programme that consists of a nurse facilitated self-help package; the comparison was hospital- (centre-) based multidisciplinary rehabilitation programmes. Because only the comparison arm was provided in a multidisciplinary manner, the study was reviewed under bed-based intermediate care.
1.3 Is the current social care system in which the study was conducted sufficiently similar to the current UK social care context?	
Partly	The study was carried out before 2002/3. The UK health and social care system has changed substantially since then but the intervention itself is still relevant.
1.4 Are the perspectives clearly stated and what are they?	
Yes	The perspective on costs was the one of the NHS as well as of society (measured in form of patient cost for travel, parking and equipment).
1.5 Are all direct effects on individuals included?	
Partly	The study only presents findings on health outcomes measured in form of EQ-5D and death. The study does not measure carers' outcomes. The intervention is likely to have an impact on carer's burden and so their stress levels and wellbeing would need to be considered.
1.6 Are all future costs and outcomes discounted appropriately?	
Not applicable	The study refers to a short time period of under a year, so that discounting was not required.
1.7 How is the value of effects expressed?	
Partly	Values of effects are expressed in natural units and in health utility

	(EQ-5D). EQ-5D results are presented and summarised to QALYs. Deaths were considered as zero value in utility terms.
1.8 Are costs and outcomes from other sectors (including the value of unpaid care, where relevant) fully and appropriately measured and valued?	
Partly	The study evaluated NHS and patients' costs but did not include the potential impact on social care and the value of unpaid care (including time taken off work).
General conclusion	
This study was sufficiently applicable (+).	
Section 2: Study limitations (the level of methodological quality) This checklist should be used once it has been decided that the study is sufficiently applicable to the context of the social care guidance.	
2.1 Does the model structure adequately reflect the nature of the topic under evaluation?	
Not applicable	The study was an economic evaluation carried out alongside an RCT and did not apply modelling.
2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	
Yes	The RCT refers to a 9-month follow-up period which seems appropriate considering the short-term nature of the intervention and the types of costs (NHS for delivery) measured. Outcomes measured were not significantly different in both groups, indicating that the time horizon was sufficiently long for the chosen outcome measures.
2.3 Are all important and relevant outcomes included?	
Partly	This study only presents health outcomes measured via EQ-5D to patients. In the discussion section it is indicated that the intervention was effective with regard to other outcomes not presented in this study but as part of the clinical report. This

	included anxiety and depression, quality of life, total serum cholesterol and exercise capacity. The study also did not consider patients' and carers' employment, satisfaction and wellbeing outcomes.
2.4 Are the estimates of baseline outcomes from the best available source?	
Yes	From trial. Statistical analysis was carried out to adjust for baseline differences.
2.5 Are the estimates of relative intervention effects from the best available source?	
Yes	From trial. Analysis was carried out on intention-to-treat basis first and sensitivity analysis impact on findings was carried out for per protocol analysis.
2.6 Are all important and relevant costs included?	
No	Only healthcare (NHS) costs and patients' costs (excluding those regarding their employment) are included. The impact on social care resources and on costs to carers was not included.
2.7 Are the estimates of resource use from the best available source?	
Partly	Patient reported data were collected at 3- and 9-month follow-up visits and data on hospital readmission are validated with administration database. Costs of intervention are derived from cost diaries with nurse (for home-based rehabilitation) and a mix of bottom-up and top-down approaches for interventions provided in the control group. It is reported that a large proportion of patients did not provide adequate data on resource use so that the study was likely to be underpowered.
2.8 Are the unit costs of resources from the best available source?	
Yes	Nationally recognised sources are used to value costs. In addition, a number of costs are derived locally, including on hospital equipment, staff travel and patients' costs.
2.9 Is an appropriate incremental analysis presented or can it be calculated from the data?	
Yes	ICER values were derived and presented in form of cost-effectiveness acceptability curves.

2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	
Yes	Extensive sensitivity analysis was carried out which considered the impact of different costing methods and missing data on findings.
2.11 Is there any potential conflict of interest?	
No	Funding was provided by the NHS Executive South West (Research and Development). Researchers were employed by one NHS hospital and different national and international medical schools and universities.
2.12 Overall assessment	
Overall good quality with minor limitations (+).	

Study identification: Jolly K, Taylor R, Lip GY, Greenfield S, Raftery J, Mant J, et al. (2007) The Birmingham Rehabilitation Uptake Maximisation Study (BRUM). Home-based compared with hospital-based cardiac rehabilitation in a multi-ethnic population: cost-effectiveness and patient adherence. Health Technol Assess 11(35)	
Guideline topic: Intermediate care	
Economic priority area: B	
Checklist: Section 1	
Yes/No/Partly/Not applicable	Detail
1.1 Is the study population appropriate for the review question?	
Yes	Patients who experienced a myocardial infarction or coronary revascularisation are an important subgroup covered by the scope.
1.2 Are the interventions appropriate for the review question?	
Yes	The intervention is a short-term, home-based rehabilitation

	programme, and the comparisons are different hospital- (centre-) based rehabilitation programmes. All programmes are time-limited. The intervention was a multicomponent one that included exercise, relaxation, education and lifestyle counselling.
1.3 Is the current social care system in which the study was conducted sufficiently similar to the current UK social care context?	
Partly	The study was carried out from 2002 to 2004 in England. The UK health and social care system has changed substantially since, although the intervention itself is still relevant.
1.4 Are the perspectives clearly stated and what are they?	
Yes	The perspective on costs was of the NHS as well as of society. The societal perspective includes costs for travelling and the impact on employment.
1.5 Are all direct effects on individuals included?	
Partly	The study measured a wide range of individuals' health and psychological morbidity outcomes. A number of cardiac risks were chosen as primary outcomes which seemed appropriate. The study did not measure carers' outcomes. The intervention was likely to have an impact on carer's burden and so their stress levels and wellbeing should have been considered.
1.6 Are all future costs and outcomes discounted appropriately?	
Not applicable	Non-rehabilitation resource use (i.e. NHS resources that were used other than those of the rehabilitation programme) is measured over 24 months but not transformed into monetary values. Costs of the rehabilitation programme did not need to be discounted because the intervention took place in the first year. QALY values are not calculated as such and thus discounting was not required; instead, the study only presents EQ-5D results at different time points up to 24 months (but not summarised in QALYs).
1.7 How is the value of effects expressed?	
Partly	Values of effects are expressed in natural units and in health utility

	(EQ-5D). EQ-5D results are presented but not summarized to QALYs.
1.8 Are costs and outcomes from other sectors (including the value of unpaid care, where relevant) fully and appropriately measured and valued?	
Partly	The study evaluated costs from an NHS perspective as well as from a societal perspective which included patients' travel costs and time taken off work (productivity). A wide range of individual outcomes were considered. However, the study did not measure the impact on social care and the value of unpaid care.
General conclusion	
This study was sufficiently applicable.	
Section 2: Study limitations (the level of methodological quality) This checklist should be used once it has been decided that the study is sufficiently applicable to the context of the social care guidance[a].	
2.1 Does the model structure adequately reflect the nature of the topic under evaluation?	
Not applicable	The study was based on a single study (RCT) and not a modelling study.
2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	
Yes	The intervention was short-term (12 weeks) and the time horizon of 1 year therefore seemed appropriate. There were no significant differences in outcomes which meant the time horizon was sufficiently long in regard to effectiveness.
2.3 Are all important and relevant outcomes included?	
Partly	A wide range of individual outcomes of patients were captured. Carers' outcomes were not included.
2.4 Are the estimates of baseline outcomes from the best available source?	
Yes	From trial data; potential impact of baseline differences is

	accounted for.
2.5 Are the estimates of relative intervention effects from the best available source?	
Yes	From trial data. Outcomes were measured at different time points at baseline, 6-month and 1-year follow-ups.
2.6 Are all important and relevant costs included?	
Partly	NHS costs and patients' costs (travel and time taken off work) were included, whereas social care costs and opportunity costs of unpaid care were not captured.
2.7 Are the estimates of resource use from the best available source?	
Partly	From trial via patients' self-report; there is not detail reported about the tool that was used to collect this information.
2.8 Are the unit costs of resources from the best available source?	
Yes	Details of sources are reported and they refer to nationally recognised sources.
2.9 Is an appropriate incremental analysis presented or can it be calculated from the data?	
No	Results are not summarised in the form of incremental cost-effectiveness ratios; this was appropriate since there were no significant differences in health utility; the economic study was de facto a cost minimisation study although this was not made explicit.
2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	
Yes	The impact of different methods of dealing with missing data and different assumptions about the organisation and capacity of the service are presented. Mean changes in costs and EQ-5D are bootstrapped to generate confidence intervals.
2.11 Is there any potential conflict of interest?	
No	The research was carried out as part of a health technology assessment. Researchers were employed by different universities and hospitals in the UK.

2.12 Overall assessment
The study was of overall good quality with minor limitations mainly due to the fact that the perspective of unpaid carers had not been captured. Findings can be used to inform the recommendations.

Study identification: Whittaker F and Wade V (2014) The costs and benefits of technology-enabled, home-based cardiac rehabilitation measured in a randomised controlled trial. J Telemed Telecare 20(7): 419–22	
Guideline topic: Intermediate care	
Economic priority area: B	
Checklist: Section 1	
Yes/No/Partly/Not applicable	Detail
1.1 Is the study population appropriate for the review question?	
No	The study population is not described.
1.2 Are the interventions appropriate for the review question?	
Yes	The intervention is a home-based telehealth rehabilitation programme, and the comparison is standard hospital-based rehabilitation; both groups also had clinical reviews and received comprehensive rehabilitation. This is similar to UK practice (e.g. described in Jolly et al. 2007).
1.3 Is the current social care system in which the study was conducted sufficiently similar to the current UK social care context?	
Partly	The study is of recent date and was carried out in Australia; healthcare systems the in UK and Australia follow similar principles (i.e. universal and tax-funded) and are thus broadly comparable.

1.4 Are the perspectives clearly stated and what are they?	
No	It is reported that a patient and provider perspective are employed but no further detail is provided. The perspectives did not appear to reflect a comprehensive perspective on public sector costs – i.e. the study did not evaluate the impact on all hospital costs and community care costs.
1.5 Are all direct effects on individuals included?	
No	Outcomes were poorly reported and were likely to include inappropriate measures (such as 'access', which is reported based on the project group's view). Based on this paper no conclusions could be drawn about effectiveness as there were no details (figures) reported. Satisfaction and carers' outcomes were not included, which were highly relevant to understand the acceptance of home-based telehealth.
1.6 Are all future costs and outcomes discounted appropriately?	
Not applicable	The intervention was evaluated over a short time period.
1.7 How is the value of effects expressed?	
No	No values of effects were reported. A net present value and cost savings are presented based on some modelling which is not described in the method section.
1.8 Are costs and outcomes from other sectors (including the value of unpaid care, where relevant) fully and appropriately measured and valued?	
No	The study evaluated the costs of rehabilitation and patient outcomes and costs. The study did not measure all relevant hospital costs; the impact on health and social care costs in the community and on unpaid care was not included. Patient satisfaction and carers' outcomes were also not captured.
General conclusion	
This study was not sufficiently applicable.	

Study identification: Harris R, Ashton T, Broad J, Connolly G, Richmond D (2005) The effectiveness, acceptability and costs of a hospital-at-home service compared with acute hospital care: a randomized controlled trial. Journal of Health Services Research and Policy 10(3): 158–66	
Guideline topic: Intermediate care	
Economic priority area: B	
Checklist: Section 1	
Yes/No/Partly/Not applicable	Detail
1.1 Is the study population appropriate for the review question?	
Yes	Population refers to people aged 55 years and above presenting to hospital with an acute problem; the mean age was 80 years; it is likely that this refers to a large proportion of people covered in the scope although only 52.8% were eligible for study (exclusion criteria were major surgery scheduled and appropriate living arrangements in order to provide the intervention at home).
1.2 Are the interventions appropriate for the review question?	
Yes	The intervention was a hospital-at-home intervention provided by a multidisciplinary, quick (rapid) response team with care coordination being supervised by the hospital; the comparison referred to what is described as ‘usual inpatient care’.
1.3 Is the current social care system in which the study was conducted sufficiently similar to the current UK social care context?	
Partly	The study was carried out in 1997 in New Zealand. While the context of health and social care provision at that time is unlikely to be similar to current UK context, the intervention itself is still relevant.
1.4 Are the perspectives clearly stated and what are they?	
Partly	The perspective on costs was not explicitly stated; however, included costs were clearly described and included direct hospital, hospital-at-home and community costs (including those paid

	privately).
1.5 Are all direct effects on individuals included?	
Yes	The study measured a wide range of clinical, health, quality of life, functioning and service outcomes; in addition it measured acceptability of intervention for patients and their carers.
1.6 Are all future costs and outcomes discounted appropriately?	
Not applicable	The study refers to a short time period of under a year, so that discounting was not required.
1.7 How is the value of effects expressed?	
Yes	Values were expressed in natural units as well as in health utility via the Short Form 36. Utility was not summarised for QALYs as cost-consequences analysis was carried out.
1.8 Are costs and outcomes from other sectors (including the value of unpaid care, where relevant) fully and appropriately measured and valued?	
Partly	The study evaluated a wide range of patients' and carers' outcomes, which were appropriately measured and valued. Costs included hospital and community services; the study did not include the value of unpaid care or productivity changes.
General conclusion	
This study was sufficiently applicable.	
Section 2: Study limitations (the level of methodological quality) This checklist should be used once it has been decided that the study is sufficiently applicable to the context of the social care guidance[a].	
2.1 Does the model structure adequately reflect the nature of the topic under evaluation?	
Not applicable	The study was an economic evaluation carried out alongside an RCT and did not apply modelling.
2.2 Is the time horizon sufficiently long to reflect all important differences in costs and	

outcomes?	
Yes	The RCT refers to a 3-month follow-up period which seems appropriate considering the short-term nature of the intervention and the types of costs (NHS for delivery) measured. Primary and secondary outcomes were not significantly different in both groups, indicating that the time horizon was sufficiently long.
2.3 Are all important and relevant outcomes included?	
Yes	The study measured a wide range of individual and service outcomes (see 1.5) as well as acceptability of the new service. Acceptability included patients' and carers' satisfaction and strain on carers.
2.4 Are the estimates of baseline outcomes from the best available source?	
Yes	From trial. Authors report that groups were similar in terms of their main clinical and demographic characteristics.
2.5 Are the estimates of relative intervention effects from the best available source?	
Partly	Estimates were from trial. Expected internal validity is good, based on detailed reporting of method of sample selection and details of follow-up. However, analysis was carried out for treatment completers only and it was not clear if sample was representative of study population.
2.6 Are all important and relevant costs included?	
No	Only healthcare (NHS) costs and patients' costs (excluding those regarding their employment) are included. The impact on social care resources and on costs to carers was not included.
2.7 Are the estimates of resource use from the best available source?	
Yes	Patient reported data were collected at 3- and 9-month follow-up visits and data on hospital readmission are validated with administration database. Costs of intervention are derived from cost diaries with nurse (for home-based rehabilitation) and a mix of bottom-up and top-down approaches for interventions provided in the control group.
2.8 Are the unit costs of resources from the best available source?	

Yes	Unit costs are not presented but a lot of detail is reported on their sources (all local) and resource use; the choice of sources was appropriate and the sources likely to be the best available at the time when the study was carried out (in the absence of national reference costs).
2.9 Is an appropriate incremental analysis presented or can it be calculated from the data?	
Not applicable	The analysis is a cost-consequences one; there were no significant changes in outcome measures so that incremental analysis would not have had any additional benefit.
2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	
No	The cost estimates were derived locally (thus specific to the study setting) and not varied in sensitivity analysis.
2.11 Is there any potential conflict of interest?	
No	Funding was provided by the Northern Regional Health Authority. Researchers were employed by local hospitals and universities.
2.12 Overall assessment	
Overall good quality with minor limitations due to lack of certainty regarding representativeness of the sample to study population and generalisability to other study settings.	

Study identification: Armstrong CD, Hogg WE, Lemelin J, Dahrouge S, Martin C, Viner GS, Saginur R (2008) Home-based intermediate care program vs hospitalization: cost comparison study. Canadian Family Physician 54(1): 66–73
Guideline topic: Intermediate care
Economic priority area: B
Checklist: Section 1

Yes/No/Partly/Not applicable	Detail
1.1 Is the study population appropriate for the review question?	
Yes	The study population, people requiring hospitalisation for acute care, covers a large proportion of the population covered in the scope including COPD, diabetes and heart failure patients. Excluded were only patients requiring critical care with 24-hour surveillance.
1.2 Are the interventions appropriate for the review question?	
Yes	The intervention was a hospital-at-home intervention provided by a medical team; the control group referred to acute hospital care; both groups also had access to multidisciplinary home support (so called 'Community Care Access Centre').
1.3 Is the current social care system in which the study was conducted sufficiently similar to the current UK social care context?	
Partly	The study was carried out in Canada in 2003/4, and is thus dated. However, the Canadian health and social care system has some important similarities to the UK system and the intervention itself is still relevant.
1.4 Are the perspectives clearly stated and what are they?	
Partly	The perspective was stated as aiming to be a societal one but that it was not feasible to capture costs incurred to patients and unpaid carers.
1.5 Are all direct effects on individuals included?	
No	The study only measured cost-relevant outcomes including length of stay in hospital, cost of care substituted for hospitalisation, readmission for a related diagnosis, readmission for any diagnosis and costs incurred by community home care services for patients following discharge from hospital.
1.6 Are all future costs and outcomes discounted appropriately?	
Not applicable	The study was a multivariate regression model referring to a time period of 3 months. Discounting was not relevant due to the short

	time period.
1.7 How is the value of effects expressed?	
Yes	Values of effects were expressed in costs and in natural units.
1.8 Are costs and outcomes from other sectors (including the value of unpaid care, where relevant) fully and appropriately measured and valued?	
No	The study did not evaluate individuals' and carers' health and wellbeing outcomes. Furthermore, it did not measure the impact on unpaid care and out-of-pocket expenditure. The study also did not capture the longer term impact on health and social care costs.
General conclusion	
This study was not sufficiently applicable.	

Study identification: Frick KD, Burton LC, Clark R, Mader SI, Naughton WB, Burl JB, Greenough WB, Steinwachs DM, Leff B (2009) Substitutive Hospital at Home for Older Persons: Effects on Costs. Am J Manag Care, 15(1), p.49–56	
Guideline topic: Intermediate care	
Economic priority area: B	
Checklist: Section 1	
Yes/No/Partly/Not applicable	Detail
1.1 Is the study population appropriate for the review question?	
Yes	The population in this study referred to patients of 65 years and above who required acute hospital admission for 4 common conditions: COPD, chronic heart failure, community acquired pneumonia and cellulitis. Excluded were those that had another acute illness that required hospital admission.
1.2 Are the interventions appropriate for the review question?	
Yes	The intervention was hospital-at-home under the care of

	multidisciplinary medical team; the intervention was time-limited. The comparison referred to acute hospital care.
1.3 Is the current social care system in which the study was conducted sufficiently similar to the current UK social care context?	
Partly	The study took place in the USA between 2000 and 2002.
1.4 Are the perspectives clearly stated and what are they?	
Partly	Perspective is not stated explicitly; it is reported that third-payer cost data were obtained.
1.5 Are all direct effects on individuals included?	
Partly	The study presents findings on outcomes summarised already in cost-effectiveness measures (i.e. cost per QALY); considered in form of pound values; or not all (i.e. findings only refer to costs savings).
1.6 Are all future costs and outcomes discounted appropriately?	
Not applicable	Time periods for observation and intervention were each under a year.
1.7 How is the value of effects expressed?	
Partly	Only costs relevant effects were captured, which were expressed in natural units (e.g. average length of stay) or in pound values.
1.8 Are costs and outcomes from other sectors (including the value of unpaid care, where relevant) fully and appropriately measured and valued?	
No	Only third-party payer costs were included which referred to the health system costs. Costs to patients, carers and social care costs were not included. The impact on carers was not captured.
General conclusion	
This study was not sufficiently applicable.	

Review question 2a: What is the effectiveness and cost-effectiveness of bed-based intermediate care?

Study ID **Country** **Study type**	**Intervention details**	**Study population** **Study design** **Data sources**	**Costs: description and values** **Outcomes: description and values**	**Results: cost-effectiveness**	**Comments**
Harris et al. 2005 England, (UK) Cost-effective-ness	**Intervention** Nurse-led inpatient unit, nurses responsible for planning and delivery of nursing care, discharge planning and coordination, and leadership of MDT; referral for medical input when required; routine medical input by primary care doctor (2–3 sessions) **Control** Standard care provided in medical wards	**Population** Stable post-acute medical patients (n=585; mean age 78), with no significant change in medical management anticipated, with nursing needs and potential for improvements; excluded were people with anticipated LoS of less than 4 days **Study design** RCT, 6-month follow-up, IG: n=175, CG: n=86 **Setting** Hospital **Statistical analysis** Intention-to-treat analysis **Source of effectiveness data** Derived from single trial	**1. Outcomes** 1a. Description Primary outcomes: Barthel Index for functional status ranging from 0 (maximum dependence) to 20 (maximum independence) Secondary outcomes: mortality, discharge destination and readmission 1b. Values The mean change (improvement) in Barthel Index was 3.6 in the treatment group and 2.6 in the control group. This difference did not reach statistical significance (p value not reported). No statistically significant difference was observed in regards to secondary outcomes, i.e. mortality, discharge destination, readmission.	An Incremental cost-effective-ness ratio (ICER) was calculated based on Barthel Index: the incremental cost per point improvement in Barthel Index was £1,044 (note that this was based on bottom-up approach to cost estimation)	**Applicability** Sufficiently applicable (+) **Quality** Overall good quality with minor limitations (++) **Perspective NHS** **Discounting** Not applicable **Price year** UK pounds sterling, 1997/8 Summary The study compared nurse-led intermediate care provided in a unit with standard care in medical wards. Authors concluded that the intervention was

		Source of resource use data Derived from medical records; length of stay and readmission were recorded prospectively and multidisciplinary inputs retrospectively; records of nursing activity; post-discharge resource use was estimated from expected resource use from discharge plan **Source of unit cost data** Unit costs from local finance department and national pay scales **Sensitivity analysis** Different costing approaches (top-down; bottom-up; mixed); and variation in length of hospital stay	**2. Costs** 2a. Description Costs included hospital stay, investigations, laboratory tests, personnel (e.g. nurses, physiotherapists, occupational therapists, social workers) and post-discharge accommodation and care 2b. Values Mean costs per hospital stay (using bottom-up costing approach) IG vs CG: £5,144 vs £4,100 (p=0.15) Mean costs of post-discharge care per week including discharge destination were lower in IG: £374.9 vs £402; this difference was not significant (p=0.25) Although the cost per day and mean post-discharge costs were lower for IG, the higher length of stay led to higher total inpatient costs in IG **3. Sensitivity analysis** Mean cost per hospital stay		safe and effective. It was not clear whether the intervention could be considered cost-effective because the outcome was not measured in QALYs (and thus not comparable with other interventions).

			under mixed method (top-down) costing approach: IG vs CG £4,938 vs £3,919; p=0.142 (IG vs CG £6,017 vs £4,410; p=0.05) Authors note that mean length of stay in IG would have to be reduced by 20.3% for the total costs to be equal between groups		

Study ID **Country** **Study type**	**Intervention details**	**Study population** **Study design** **Data sources**	**Costs: description and values** **Outcomes: description and values**	**Results: cost-effectiveness**	**Comments**
Walsh et al. 2005 England (UK) Cost-minimisation	**Intervention** Nurse-led intermediate care provided at a unit; 10 beds; 22 nursing staff (ratio 3:2 for qualified to unqualified nurses, no special training required; open visit policy; nurses dress informally; assessment	**Population** Stable post-acute medical patients not ready for discharge (n=238) Full details of inclusion/exclusion criteria and design of study not presented but published as part of parent clinical study (Steiner et al. 2001) **Study design** Multicentre RCT, 6-month follow-up	**1. Outcomes** 1a. Description Length of stay, physical functioning (measured with Barthel Index); destination after discharge 1b. Values Mean LoS significantly longer in IG: 41.1 days (SD=32) vs CG 39.5 days (SD=31) Other outcomes not presented in this study but in parent study (Steiner et al.	Combined cost-effective-ness results were not presented as this was a cost-minimisation analysis However, some conclusions about cost-effectiveness can be drawn: 1) Clinical outcomes did not differ between	**Applicability** Sufficiently applicable (+) **Quality** Overall good quality with minor limitations (++) **Perspective** NHS **Discounting** Not applicable

	and care planning; medical review if needed; access to medical emergency treatment; visits by physiotherapist 3 times a week; ancillary services available on request) **Control** Standard care in medical wards	**Setting** Nurse-led unit based near main Southampton teaching hospital site; tertiary care **Statistical analysis** Two-sample t-tests to compare means with 95% confidence intervals **Source of effectiveness data** Trial; telephone interviews with patients or their proxies (for people with cognitive impairment); data collected between July 1997 and September 2000 **Source of resource use data** Retrospective from hospital's patient administration system; departmental database for physiotherapy and radiology; interviews with patients for information on changes in residence; primary care data collected by GP staff with standard data extraction	2001); none were significantly different Possible differences between groups were examined in regression analysis controlling for referring ward and gender; results of the 2 analyses reported that groups were virtually identical, and the authors thus decided to not present regression results in the paper **2. Costs** 2.a. Description Costs data analysed over 2 periods, admission and readmission period; service use included attendances at outpatient clinics, day surgery, visits to A&E, community hospitals, contacts with GP and community nurses 2.b. Values Initial admission costs significantly higher in IG vs CG: £7,892 vs £4,810 (diff +£3,082, CI: £1,161 to £5,002) Readmission period costs	groups 2) Nurse-led care was associated with longer period of hospital stay Higher average costs of nurse-led intermediate care were explained by the small size of the unit and the location, which was distant from the main hospital site Effectiveness of nurse-led care could be improved by increasing the bed numbers in units, reducing length of stay	**Price year** 1988/9, UK pounds sterling, US dollar ($), Euro (€), conversion rate 1£=$1.9=€1.5 **Summary** The study compared nurse-led intermediate care provided in a unit with standard care medical wards. Authors concluded that acute hospitals may not be cost-effective settings for nurse-led intermediate care. Implementing the intervention in community hospitals may be more appropriate. The study was of high quality so findings are likely to be valid.

		form **Source of unit cost data** Costs per bed day from finance department; outpatient attendances data from national validated source, the unit costs of community care **Sensitivity analysis** One-way sensitivity analysis on inpatient and total costs (from the perspective of secondary care); ranges for cost per occupied bed day for IG based on observed variability within the directorate (15, 20, 25 per cent lower); value of 60% lower equivalent to GP-led community hospital	significantly lower in IG vs CG: £1,444 vs £1,879 (diff -435, CI: -£1,406 to -£536) Total 6-month costs significantly higher in IG vs CG: £10,529 vs £7,819 (diff +£2,710, CI: £518 to £4,903) **3. Sensitivity analysis** The sensitivity analyses showed nurse-led care maintained its higher cost, although the differences were not significant if a lower cost per occupied bed day of 60% was applied		

Study ID **Country** **Study type**	**Intervention details**	**Study population** **Study design** **Data sources**	**Costs: description and values** **Outcomes: description and values**	**Results: cost-effectiveness**	**Comments**
O'Reilly et al. 2008 England,	**Intervention** Multidisciplinary, post-acute care in community	**Population** Older people (n=490) assessed as medically stable and in need of post-	**1. Outcomes** 1a. Description Health-related quality of life measured via standardised	The boot-strapped mean incremental cost-effectiveness	**Applicability** Sufficiently applicable (+)

(UK) Cost–utility	hospital **Control** Multidisciplinary standard care in general hospital	acute rehabilitation care prior expected home discharge; excluded were medically unstable patients, those who were drowsy or unconscious, those requiring stroke unit rehabilitation, or treatment in other departments and patients who needed new residential or nursing home placement **Study design** RCT, 6-month follow-up; IG: n=280, CG: n=210 **Setting** Five community hospitals in the Midlands and North of England **Statistical analysis** Non-parametric bootstrapping for distribution of incremental costs and effects (utility); cost-effectiveness acceptability curves (CEAC) to assess uncertainty of incremental cost-effectiveness ratios (ICER); mean values were imputed for missing data	EQ-5D questionnaire at 1 week after hospital discharge, 3 and 6 months after recruitment 1b. Values Non-significant difference in QALYs from baseline to 6 months between the 2 interventions: mean QALY gain in IG of 0.048 (95% CI -0.028 to 0.123, p=0.214) • Mean (SD) QALYs at 3 months: IG (n=243) 0.359 (0.345) vs CG (n=188) 0.352 (0.340) • Mean (SD) QALYs at 6 months: IG (n=249) 0.340 (0.338) v. CG (n=185) 0.298 (0.324) No further outcomes reported in this paper; paper to parent clinical study reports: • No diff median length of stay: 15 days (IQR 9 to 24 and 25) • Independence (via Nottingham Scale for Extended Activities of Daily Living (NEADL)) greater in IG (adjusted mean diff 5.30, 95%	ratio (ICER) was £16,324 per QALY If the decision-maker was willing to pay £10,000 per QALY, then there was a 47% probability that the community hospital was cost-effective; this increased only slightly to 50% if the decision-maker was willing to pay £30,000 The authors concluded that the cost-effective-ness of post-acute rehabilitation for older people was similar in both community and general hospitals	**Quality** Overall good quality with minor limitations (++) **Perspective** NHS, personal social services (PSS) **Discounting** Not applicable **Price year** UK pounds sterling, 2001/2 **Summary** The study compared the cost-effectiveness of post-acute care for older people in community with care in general hospital. The authors concluded that the intervention was as cost-effective as standard care. The quality of the study was of overall high quality so that findings can be used to inform recommendation.

		Source of effectiveness data Trial; measured at baseline, 6 and 12 months, via standardised tools **Source of resource use data** Patient administration system of trusts; patient questionnaire administered at 1 week after hospital discharge, 3 and 6 months after recruitment **Source of unit cost data** National and local source including Chartered Institute of Public Finance and Accountancy database, trust-specific health resource groups (HRGs), PSSRU Unit Costs for health and social care; detailed costs were evaluated from 1 of the 7 community hospitals and applied to the other community hospitals **Sensitivity analysis** One-way sensitivity analysis	CI 0.64 to 9.96) • No significant diff in carer satisfaction and carer burden **2. Costs** 2.a Description Costs associated with hospital admissions included accident and emergency departments, day hospitals, day centres, general practitioners, outpatient departments, home visits by health or social care staff, residential and nursing care homes and aids and adaptations 2.b Values Mean cost per patient non-significantly higher in IG: £8,946 (SD £6,514) vs. £8,226 (SD £7,453); mean diff £720 (95% CI -£523 to £1,964) A wide range of cost values were reported; here only values that were at least 5% of total costs are presented: • Post-randomisation admission: -£179, 95% CI -£1,181 to		

		to examine impact of varying the unit costs and individual patients' payments for institutional care	£823 • Non-elective readmissions: £172, 95% CI -£299 to £642 • Institutional care: £149, 95% CI -£355 to £632 **3. Sensitivity analysis** • Using national rather than local costs for general hospitals, or excluding the costs of extended lengths of stay after readmission, did not alter the conclusions • Costs of care home were also robust to different assumptions about patient contributions to the cost of care homes • Mean cost per patient in the community hospital group became less than the general hospital group only when the per diem rate for the community hospital was reduced by over 30% (from £148 to		

			£100)		

Study ID **Country** **Study type**	**Intervention details**	**Study population** **Study design** **Data sources**	**Outcomes: description and values** **Costs: description and values**	**Results: cost-effectiveness**	**Comments**
Ellis et al. 2006 Cost-effectiveness England, (UK)	**Intervention** Short-term rehabilitation unit; 6 weeks intermediate care; rehabilitative services provided by therapists and care or rehab assistants **Control** Usual health and social care in the community; an outline of the types of health and social care services received by the control group is presented	**Population** Older people (n=194) 55 years or above identified 1 to 3 weeks before hospital discharge; with 'potential to improve', 'realistic and achievable goals', 'being motivated to participate'; excluded were those not manageable by a community nurse, medically unstable, severe mental health difficulties, disoriented, end-of-life, simply in need of rest, respite and convalescence **Study design** Multicentre RCT in Devon; interviews at baseline (t=0), 6 months (t=1) and 12 months (t=2); IG: n=88, CG: n=106 It is reported that at t=0,	**1. Outcomes** 1.a Description Primary outcomes: survival-at-home time was measured in number of days from t=0 until person went to care home, died or reached t=2 Secondary outcomes were not reported in this paper 1.b Values • Mean survival-at-home time was not significantly different between groups: IG 272 days (+/- 129 days) vs. CG 285 days (+/- 128 days) unadjusted mean 1.28 (95% CI 0.81 to 2.03) • IG was significantly older than CG (p=0.028)	Cost-effectiveness results were presented in costs per day living, which were higher in IG: £31.4 vs £29.9 Costs in IG fell more heavily on social services, whereas costs in the CG fell more heavily on the NHS Usual care was cheaper in most scenarios considered in SA	**Applicability** Sufficiently applicable (+) **Quality** Overall good quality with minor limitations (++) **Perspective** NHS and personal social services (PSS) **Discounting** Not necessary **Prices** In UK pounds sterling (£), 1999/2000 **Summary** This study compared a short-term rehabilitation unit with usual health and social care; it did not

		persons in IG and CG similar in terms of gender, carer, reason for being admitted to hospital, rehabilitation needs and level of dependency (Barthel Index) **Source of effectiveness data** From trial **Source of resource use data** Retrospectively from records; questionnaires sent to practitioners **Source of unit cost** PSSRU unit cost for health and social care 1999/2000; some unit costs for social care were taken from the local authority **Sensitivity analysis** Univariate sensitivity analysis assessed the impact of changes in costs of: hospital, rehabilitation unit, residential care (+/- 25%); home visits by social	**2. Costs** 2.a Description NHS resources included staff time (general practitioner, practice nurse, occupational therapist, physiotherapist, community nurse, continence nurse, speech and language therapist), hospital stay in different wards and travel; social services resources were staff time (home, telephone and personal care assistant), stays (rehabilitation unit, residential care, nursing care, day care and respite care), aids and adaptations, community meals and travel 2.b Values Mean costs per patient to the NHS IG £3,531 vs CG £5,147 Mean costs per patient to social services: IG £5,012 vs CG £3,364 Total mean costs per patient: IG £8,542 vs CG £8,511 **3. Sensitivity analysis** Costs in IG were only cheaper than costs in CG when rehabilitation unit costs		confirm that a short-term rehabilitation unit at hospital discharge was cost-effective; the study quality was high and findings can be used to inform recommendation in the context of other (cost-) effectiveness evidence.

		care (increase from 30 to 60 min); furthermore the analysis explored impact of inclusion of travel costs of personal care assistants; variations in the cost of aids and adaptations; impact of missing data on total costs	were reduced by 25%, when the cost of residential care was reduced by 25%, and when the hospital costs were increased by 25%. Missing data had a modest impact on the results of the cost analysis.		

Completed methodology checklists: economic evaluations

Study identification: Ellis A, Trappes Lomax T, Fox M, Taylor R, Power M, Stead J, Bainbridge I (2006) Buying time II: an economic evaluation of a joint NHS/social services residential rehabilitation unit for older people on discharge from hospital. Health and Social Care in the Community 14(2): 95–106	
Guideline topic: Transition, hospital and community or care settings	
Economic priority area: E	
Checklist: Section 1	
Yes/No/Partly/Not applicable	Detail
1.1 Is the study population appropriate for the review question?	
Yes	The population referred to people aged 55 years or older in hospital likely to be discharged within 1 to 3 weeks. The study employed a range of exclusion criteria, which sought to ensure that people were able to benefit from the intervention. Overall, the population was an important subgroup of the population covered in the scope.
1.2 Are the interventions appropriate for the review question?	
Yes	The intervention was a short-term residential rehabilitation unit and presented a form of intermediate care provided by a specialist

	team of therapists, care and rehabilitation assistants. The control group received usual health and social care and details on this was reported in the study. Overall, the interventions were appropriate for the review questions.
1.3 Is the current social care system in which the study was conducted sufficiently similar to the current UK social care context?	
Yes	This study was carried out in Devon (UK) in 1999/2000. Although the study was of an older date the interventions were still relevant to the current context; this form of intermediate care is still provided and systems still face similar challenges around integration.
1.4 Are the perspectives clearly stated and what are they?	
Yes	The perspective on costs was the one of the NHS and personal social services (PSS).
1.5 Are all direct effects on individuals included?	
No	Primary outcome was a service outcome, which presented the only effectiveness measure in this study. Carers' outcomes were not considered.
1.6 Are all future costs and outcomes discounted appropriately?	
Not applicable	Discounting was not necessary because of the short time horizon of 1 year.
1.7 How is the value of effects expressed?	
Partly	The value was expressed in natural units of the primary outcome, which was a service use outcome (survival-at-home). No standardised measure of health was used.
1.8 Are costs and outcomes from other sectors (including the value of unpaid care, where relevant) fully and appropriately measured and valued?	
Partly	The study did not include the costs of unpaid care and out-of-pocket expenditure. Only 1 primary outcome (survival-at-home) was measured and no wider health effects on individuals were incorporated. In addition, carers' outcomes were not considered.

General conclusion	
This study was sufficiently applicable (+).	
Section 2: Study limitations (the level of methodological quality) This checklist should be used once it has been decided that the study is sufficiently applicable to the context of the social care guidance[a].	
2.1 Does the model structure adequately reflect the nature of the topic under evaluation?	
Not applicable	This study was a cost-effectiveness analysis carried out alongside an RCT.
2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	
Partly	Costs and outcomes were measured over the period of a year only; there could have been a longer-term impact in terms of hospital readmissions, care home admission, mortality and unpaid care.
2.3 Are all important and relevant outcomes included?	
No	Service users' outcomes on health were included in the analysis; longer-term service user outcomes and carer outcomes were not included.
2.4 Are the estimates of baseline outcomes from the best available source?	
Yes	Estimates were taken from a single trial. At baseline, the study groups were well matched in terms of characteristics other than age; the intervention group was significantly older than the control group.
2.5 Are the estimates of relative intervention effects from the best available source?	
Yes	Estimates were taken from a single trial.
2.6 Are all important and relevant costs included?	
Partly	Relevant health and social care costs for the first year were included. Not included were longer-term costs, the costs of unpaid

	care and out-of-pocket expenditure.
2.7 Are the estimates of resource use from the best available source?	
Partly	Information on resource use were taken from varies appropriate sources including: NHS and social care records (retrospective); computerised records; questionnaires to practitioners; national source for travel time.
2.8 Are the unit costs of resources from the best available source?	
Yes	The unit costs were taken from an appropriate national source (PSSRU compendium); some unit costs for social care services were taken from the local authority.
2.9 Is an appropriate incremental analysis presented or can it be calculated from the data?	
Partly	Presented are the costs per day living for both groups; this was appropriate for the primary outcome in this study but meant that comparability with findings from other studies was limited.
2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	
Yes	Univariate sensitivity analyses assessed the impact of: changes in varies costs (+/-25%) including of hospital, rehabilitation unit, residential care, aids and adaptations longer home visits by social care (increased from 30 to 60 minutes) including travel costs of personal care assistants. In addition, the impact of missing data on total costs was assessed, substituting those with mean values.
2.11 Is there any potential conflict of interest?	
No	No indication of potential conflict of interest was identified; the funding source was not stated.
2.12 Overall assessment	
The study was of overall high quality with minor limitations (++).	

Study identification: Harris R, Richardson G, Griffiths P, Hallett N, Wilson Barnett J (2005) Economic evaluation of a nursing-led inpatient unit: the impact of findings on management decisions of service utility and sustainability. Journal of Nursing Management 13(5): 428–38	
Guideline topic: Intermediate care	
Economic priority area: C	
Checklist: Section 1	
Yes/No/Partly/Not applicable	Detail
1.1 Is the study population appropriate for the review question?	
Yes	The population referred to hospital patients recovering from an acute illness and requiring nursing care for rehabilitation purposes; it is likely that this covers a large group of the population in the scope.
1.2 Are the interventions appropriate for the review question?	
Yes	The intervention was a nurse-led bed based intermediate care intervention provided in a separate unit.
1.3 Is the current social care system in which the study was conducted sufficiently similar to the current UK social care context?	
Partly	The study was carried out in UK. In was not of recent date but interventions were still relevant to current context (although current models were therapist rather than nurse-led)
1.4 Are the perspectives clearly stated and what are they?	
Yes	The perspective on costs was the one of the NHS.
1.5 Are all direct effects on individuals included?	
Partly	Outcomes in functioning (measured with Bathel Index), mortality and service outcomes were considered. Wider health and wellbeing outcomes of service users and their carers were not included.

1.6 Are all future costs and outcomes discounted appropriately?	
Not applicable	The study refers to a short time period of under a year so that discounting was not required.
1.7 How is the value of effects expressed?	
Partly	Values of effects for the primary outcome were measured with Barthel Index and expressed in natural units. This is suitable for economic analysis but does not allow comparison with other studies. In addition, mortality and service use outcomes (discharge destination and hospital readmission) were measured and expressed in natural units.
1.8 Are costs and outcomes from other sectors (including the value of unpaid care, where relevant) fully and appropriately measured and valued?	
No	The study evaluated NHS costs only. Costs to local authorities for social care and the costs to individuals (patients and carers) were not included.
General conclusion	
The study was sufficiently applicable (+).	
Section 2: Study limitations (the level of methodological quality) This checklist should be used once it has been decided that the study is sufficiently applicable to the context of the social care guidance[a].	
2.1 Does the model structure adequately reflect the nature of the topic under evaluation?	
Not applicable	The study was an economic evaluation carried out alongside an RCT and did not apply modelling.
2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	
Yes	The RCT refers to a 6-month follow-up period, which was likely to be sufficiently long to capture important differences in measured outcomes and costs of this short-term intervention.

2.3 Are all important and relevant outcomes included?	
No	The study did not evaluate wider health and wellbeing outcomes to individuals and carers.
2.4 Are the estimates of baseline outcomes from the best available source?	
Yes	Outcomes were measured at baseline as part of the single trial. The study groups were comparable at baseline in terms of individuals' demographic and clinical characteristics.
2.5 Are the estimates of relative intervention effects from the best available source?	
Yes	Estimates were derived from a single trial. Analysis was carried out on an intention-to-treat basis. Standard statistical analysis was carried out to test the statistical significance of differences in effects.
2.6 Are all important and relevant costs included?	
No	Costs to the NHS were included in the analysis. Costs of publicly funded social care and costs to individuals were not included. Furthermore, the time period over which post-discharge costs were collected was not specified so that it was unclear if all relevant costs were included
2.7 Are the estimates of resource use from the best available source?	
Partly	Resource use data were collected as part of the clinical trial. Appropriate sources were used for inpatient resources such as medical records and time sheets, as well as detailed observations of nursing activities on the wards. However, post-discharge resource use was estimated based on expected resource use recorded on the discharge plan. As the authors admit, it is unclear how good this approach is in getting accurate estimates.
2.8 Are the unit costs of resources from the best available source?	
Yes	The unit costs were presented in a separate table. They were estimates from the finance department of the acute trust and from national pay scales. This represents typical NHS sources of costs and seemed an appropriate choice at the study's time.
2.9 Is an appropriate incremental analysis presented or can it be calculated from the	

data?	
Yes	An incremental cost-effectiveness ratio was calculated to combine the costs and benefits of the intervention over standard care.
2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	
Partly	In sensitivity analysis the authors assessed the impact of variations in key variables on the total costs; different costing approaches were applied to establish ranges in total costs. However, no sensitivity analysis was carried out for cost-effectiveness ratios.
2.11 Is there any potential conflict of interest?	
No	The study was funded by the Organisation and Management group, NHS Executive, North Thames Research and Development Programme. No conflict of interest was declared or could be identified.
2.12 Overall assessment	
The study was of overall high quality with minor limitations (++).	

Study identification: O'Reilly J, Lowson K, Green J, Young J B, Forster A (2008) Post-acute care for older people in community hospitals: a cost-effectiveness analysis within a multi-centre randomised controlled trial. Age and Ageing 37(5): 513–20	
Guideline topic: Intermediate care	
Economic priority area: C	
Checklist: Section 1	
Yes/No/Partly/Not applicable	Detail
1.1 Is the study population appropriate for the review question?	

Yes	The population referred to older people that were medically stable and in need of post-acute rehabilitation; a range of groups were excluded: those with stroke and those treated by surgery or coronary care departments. People with impaired capacity to consent were included (and consent was sought from a carer or relative). Overall, this study looked at an important population covered in the scope.
1.2 Are the interventions appropriate for the review question?	
Yes	The intervention was post-acute care, which was provided in a community hospital after discharge from general hospital. The alternative was to remain in the general hospital. No further detail was provided about the nature and type of service but the authors clarified in another paper (Young and Green 2010) that the intervention (community hospital) and standard care were both provided by multidisciplinary teams that consisted of doctors, nurses and therapists.
1.3 Is the current social care system in which the study was conducted sufficiently similar to the current UK social care context?	
Partly	The study was carried out between 2000 and 2002 in 5 general hospitals and 7 associated community hospitals in the Midlands and the North of England. Community hospitals are still a relevant concept in the current health and social care context. However, standard care in the current system would also include home-based intermediate care or support provided in a care home; so the comparison is less relevant.
1.4 Are the perspectives clearly stated and what are they?	
Partly	It is stated that the perspective is a whole-system perspective of health and social care costs. This appeared to include publicly funded as well as individuals' out-of-pocket expenditure for social care. The distinction between the perspective of the government and of individuals was not clear.
1.5 Are all direct effects on individuals included?	
Unclear	This study reported health utility expressed in quality-adjusted life

	years (QALYs). Further detail on other outcomes was provided in the parent clinical study (Green et al. 2006).
1.6 Are all future costs and outcomes discounted appropriately?	
Not applicable	The study referred to a short time period of 6 months so that discounting was not required.
1.7 How is the value of effects expressed?	
Yes	Values of effects were expressed in quality-adjusted life years (QALY) gained, measured with the European quality-of-life questionnaire (EQ-5D).
1.8 Are costs and outcomes from other sectors (including the value of unpaid care, where relevant) fully and appropriately measured and valued?	
Partly	The study evaluated costs of health and social care. Excluded were costs to unpaid carers. This study only reported the physical health outcomes of service users; wider wellbeing outcomes and carer's outcomes were not reported.
General conclusion	
The study was sufficiently applicable (+).	
Section 2: Study limitations (the level of methodological quality) This checklist should be used once it has been decided that the study is sufficiently applicable to the context of the social care guidance[a].	
2.1 Does the model structure adequately reflect the nature of the topic under evaluation?	
Not applicable	The study was an economic evaluation carried out alongside an RCT and did not apply modelling.
2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	
Partly	The RCT refers to a 6-month follow-up period only. There is no indication of significant impact on outcomes and costs during the follow-up time so that the time horizon appears sufficiently long.

2.3 Are all important and relevant outcomes included?	
Yes	This study only reports health-related quality of life (i.e. QALYs) measured in form of utilities via the EQ-5D. This is an important and comprehensive tool accepted as a single health economic outcome measure. Carers' outcomes and wider wellbeing outcomes were not reported in this study but are presented in the paper that refers to the parent clinical trial.
2.4 Are the estimates of baseline outcomes from the best available source?	
Unclear	There is no detail reported on whether groups differed at baseline in terms of patient characteristics. However, QALY values were different at baseline. However, QALY values were lower in the intervention group so that the findings are likely to be an underestimation (rather than overestimation) of differences between groups.
2.5 Are the estimates of relative intervention effects from the best available source?	
Yes	Estimates are from a single trial. Analysis was carried out on intention-to-treat basis. Non-parametric bootstrapping was applied to estimate the distribution of incremental costs and effects.
2.6 Are all important and relevant costs included?	
Partly	Costs to the NHS and to social care were included in the analysis. In addition – although that was not made explicit in the stated perspective – patients' financial contributions were included; this was based on assumptions that they incurred the total cost in the case of community services and 30% of the cost for institutional care.
2.7 Are the estimates of resource use from the best available source?	
Unclear	Resource use was evaluated from the administration system and a patient questionnaire; the tool was not standardised and it was unclear how questions about resource use were elicited.
2.8 Are the unit costs of resources from the best available source?	
Yes	Unit costs were derived from local and recognised national

	sources.
2.9 Is an appropriate incremental analysis presented or can it be calculated from the data?	
Yes	Cost-acceptability curves were derived and mean values presented.
2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	
Partly	One-way sensitivity analysis was applied for unit costs, extra length of hospital stay and on the proportion of costs paid by individuals for care home stays. No analysis was carried out for different assumptions about missing data.
2.11 Is there any potential conflict of interest?	
No	The authors stated that there were no conflicts of interest to declare.
2.12 Overall assessment	
The study was of overall good quality with minor limitations (++).	

Study identification: Walsh B, Steiner A, Pickering RM, Ward-Basu J (2005) Economic evaluation of nurse led intermediate care versus standard acute care for post-acute medical patients: cost minimisation analysis of data from a randomised controlled trial. BMJ 330: 699–702	
Guideline topic: Intermediate care	
Economic priority area: C	
Checklist: Section 1	
Yes/No/Partly/Not applicable	Detail
1.1 Is the study population appropriate for the review question?	

Yes	The population referred to hospital patients recovering from an acute illness and thus covers a large group of the population in the scope.
1.2 Are the interventions appropriate for the review question?	
Yes	The intervention was a nurse-led intermediate care intervention provided in a separate unit located close to a main hospital site. The length of the stay was not specified as part of the intervention; instead length of stay was treated as a primary outcome. However, the mean length of stay was about 32 days in the intervention group and 18 days in the control group so that the nature of the intervention can be considered short-term (under 6 weeks).
1.3 Is the current social care system in which the study was conducted sufficiently similar to the current UK social care context?	
Partly	The study was carried out in 1998 in Southampton, England. The study only included the perspective of the NHS and did not include the social care context; although the healthcare context has changed since then, the intervention is still of relevance to the current context.
1.4 Are the perspectives clearly stated and what are they?	
Yes	The perspective on costs was the one of the NHS and included primary, secondary and community healthcare.
1.5 Are all direct effects on individuals included?	
Unclear	This paper only presents findings on length of stay and all other outcomes were reported as of the clinical parent study. It is reported that none of those changed significantly but it is not reported which measures this included. For example, it is not clear whether this included carers' outcomes.
1.6 Are all future costs and outcomes discounted appropriately?	
Not applicable	The study refers to a short time period of under a year so that discounting was not required.
1.7 How is the value of effects expressed?	

Yes	Values of effects are expressed length of stay.
1.8 Are costs and outcomes from other sectors (including the value of unpaid care, where relevant) fully and appropriately measured and valued?	
Yes	The study evaluated NHS costs only. Costs to local authorities for social care and the costs to individuals (patients and carers) were not included.
General conclusion	
The study was sufficiently applicable (+).	
Section 2: Study limitations (the level of methodological quality) This checklist should be used once it has been decided that the study is sufficiently applicable to the context of the social care guidance[a].	
2.1 Does the model structure adequately reflect the nature of the topic under evaluation?	
Not applicable	The study was an economic evaluation carried out alongside an RCT and did not apply modelling.
2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	
No	The RCT refers to a 6-month follow-up period; since hospital readmission was significantly affected between the 2 groups it is less likely that it captured the impact on costs sufficiently.
2.3 Are all important and relevant outcomes included?	
Unclear	Apart from length of stay, outcomes were not reported as part of this study.
2.4 Are the estimates of baseline outcomes from the best available source?	
Unclear	The study did not report any detail on whether groups differed at baseline and whether statistical analysis would have needed to be carried out to adjust for any baseline differences.
2.5 Are the estimates of relative intervention effects from the best available source?	

Yes	Data on effects were from the trial. Analysis was carried out on intention-to-treat basis. A range of statistical analysis was carried out to analyse differences in endpoints.
2.6 Are all important and relevant costs included?	
No	Costs to the NHS were included in the analysis. Costs of publicly funded social care and costs to individuals were not included.
2.7 Are the estimates of resource use from the best available source?	
Yes	Data were taken from the hospital's administration system; accuracy of patient record identification was checked by the researchers; practice staff in primary care applied a standardised data extraction form; patients were asked about changes in residence; inter-reliability was checked which showed 100% agreement between 2 researchers for all data sources.
2.8 Are the unit costs of resources from the best available source?	
Yes	Costs per bed day were taken from the finance department; outpatient attendances data were taken from a national validated source, the Unit Costs of Community Care.
2.9 Is an appropriate incremental analysis presented or can it be calculated from the data?	
Not applicable	Cost minimisation analysis was carried out which was appropriate since no significant changes in outcomes between the intervention and control group were found.
2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	
Yes	A one-way sensitivity analysis was performed on the inpatient and total costs (from the perspective of secondary care). Different cost values were applied per occupied bed day in the nurse-led group. The value range was based on observed variability within the directorate and one GP-led community hospital.
2.11 Is there any potential conflict of interest?	
No	The authors stated that there were no competing interests.

2.12 Overall assessment
The study was of overall good quality with minor limitations (++).

Review question 4a: What is the effectiveness and cost effectiveness of reablement?

Study ID **Country** **Study type**	**Intervention details**	**Study population** **Study design** **Data sources**	**Costs: description and values** **Outcomes: description and values**	**Results: cost-effectiveness**	**Comments**
Lewin et al. 2013 Australia Cost saving/ minimisation analysis	**Intervention** Two types of home care reablement services: (1) targeted at older people referred from the community (HIP); (2) targeted at older people from hospital (Personal Enablement Program, PEP) Both programmes were: short-term; individualised; designed to support independence and minimise need for ongoing support; goal-oriented and promoting active engagement in daily living activities; using	**Population** Older people of 65 years or older (mean age 78 years), English speaking, needing personal care; excluded were people with diagnosis of dementia and those receiving palliative care **Study design** Retrospective cohort study; all individuals from client database referred to IG from 1 January 2004 to 31 December 2008; n=10,368: IG (HIP) n=2,586; IG (PEP) n=5,450; CG n=2,332 Demographic differences between IG and CG were reported: individuals from IG less likely to have carer, more often female and living alone, less likely to have high dependency, less likely to have previously used home care services;	**Outcomes + costs** a. Description Primary outcomes: use of home care services (adjusted for confounding factors) Secondary outcomes: cumulative cost of home care services compared at 3, 12, 24, 36, 48, and 57 months (adjusted for confounding factors) b. Values Service use IG (HIP+PEP) less likely than CG to use home care services of any type over the first 36 months Effect at 57 months only significant for IG (HIP) IG (HIP+PEP) less likely to use personal care services over first 36 months; effect at 57 months only significant for HIP	Results were not presented in cost-effectiveness terms but in savings as this was cost saving/ minimisation analysis Median saving per person: AU $9,001 (PEP) and $8,802 (HIP) at 36 months; AU $12,727 (PEP) and AU $12,513 (HIP) at 5 years The authors concluded that including reablement at the beginning of home care could increase the	**Applicability** Insufficiently applicable (-) **Quality** The study was insufficiently applicable so that no quality assessment was carried out **Perspective** Home care only **Price year** 2009, Australian dollars (AU $) **Discounting** Not reported **Summary** This Australian-based study compared 2 types of reablement with conventional home care.

	task analysis and redesign, work simplification, and assistive technology Additional elements included: • Strength, balance, and endurance programmes for improving or maintaining functioning and mobility • Chronic disease self-management • Falls prevention strategies • Medication, continence, or nutrition management	more likely to be younger (mean age IG HIP 79.33 years (SD 8.27 years) and IG PEP 75.83 years (SD 11.48yrs) vs CG 82.12 years (SD 7.34 years) years) **Setting** Perth metropolitan area and many of Western Australia's rural centres and surrounding areas **Statistical analysis** Generalised linear model and quantile regression; confounded for age at first visit, sex, informal carer (yes/no), living arrangement (alone/with others), previous use of home care services (yes/no), and dependency level (low, moderate, high) based on ADLs; a 5% level of significance was used, and all probability tests were 2-tailed Analyses and data management were performed in Stata 11	No p values or confidence intervals reported Costs IG (HIP+PEP) substantially less median cumulative cost over the whole follow-up: • At 3 months: IG (HIP) AU $1,119 and IG (PEP) AU $983 vs CG AUS $1,959 • At 12 months: IG (HIP) AU $1,696 and IG (PEP) AU $1,359 vs CG AUS$ 5,122 • At 24 months: IG (HIP) AU $2,205 and IG (PEP) AU $1,902 vs CG AU $8,410 • At 36 months: IG (HIP) AU $2,563 and IG (PEP) AU $2,364 vs CG AU $11,365 • At 48 months: IG (HIP) AU$3,651 and IG (PEP) AU$3,035 vs CG AU$13,240 • At 57 months: IG (HIP) AU $4,793 and IG (PEP) AU $4,579 vs CG AU $ 17,306	system's cost-effectiveness and peoples' independence as they age	The study was not sufficiently applicable as it had a limited perspective on costs and low reporting quality.

	• Strategies to assist the individual to reconnect socially HIP usually with 12 week time limit; PEP had 8 week time limit and provided post-acute nursing if required **Control** Conventional home and community care-(HACC) funded home care services; included nursing, personal care, respite and domestic assistance; most common care plan included 3 personal visits a week to assist with bathing/showering; domestic assistance every 2	(StataCorp, College Station, TX, USA) **Source of effectiveness data** This study only evaluated resource use and costs; see source of resource use data **Source of resource use data** IG: from client records by provider (Silver Chain) CG: Western Australia (WA) Data Linkage Branch including WA HACC Program, Aged Care Assessment Program, and WA Mortality Register **Source of unit cost data** Western Australia (WA) Department of Health, 2009 unit costs	No p values or confidence intervals reported		

	weeks; occasionally social support and respite care				

Study ID Country Study type	Intervention details	Study population Study design Data sources	Costs: description and values Outcomes: description and values	Results: cost-effectiveness	Comments
Lewin et al. 2014 Australia Cost saving/ minimisation	**Intervention** Home Independence Programme (HIP): short-term (12-week limit); individualised service designed to: promote independence and minimise the need for ongoing support services; achieve goals; promote active engagement in daily living activities using task analysis and redesign, work simplification and assistive technology	**Population** Older people of 65 years or older assessed as eligible for personal care; English speaking; excluded were people with diagnosis of dementia or terminal illness; people requiring complex care (15 hours or more of home care) **Study design** RCT; the intention-to-treat (ITT) analysis comprised n=375 in each group; the actual treatment (AT) analysis comprised n=310 in IG and n=395 in CG **Setting** Perth metropolitan area, Australia	**1. Outcomes** 1a. Description • Social care: home care, residential aged care (RAC) or home-based equivalent and (I) costs of home care • Health care: emergency department visits; unplanned inpatient admissions; (II) costs of health care and • Total health and home care costs (sum of I and II) 1b. Values All findings presented in this section refer to intention-to-treat (ITT); findings of actual treatment (AT) analysis are	This study was a cost savings study so that no cost-effectiveness results were presented Results are summarised as follows: IG had lower total home-care costs :AU $5,570 vs AU $8,541) IG had lower aggregated health and home-care costs by a factor of 0.83 (95% CI 0.72–0.96) over	**Applicability** Sufficiently applicable (+) **Quality** Overall good quality with minor limitations (++) **Perspective** Health and social care perspective **Discounting** Not reported **Price year** 2007/8, Australian dollars (AUS $) **Summary** This Australian-based

	Additional elements included: • Strength, balance and endurance programmes for mobility • Chronic disease self-management • Falls prevention • Medication, continence or nutrition management • Assistance with social support **Control** Standard home and community care services (HACC); included nursing, personal care, respite and	**Statistical analysis** Generalised linear model; t-test analysis for hours of home care; logistic regression and chi-squared tests for emergency department visits and hospital admissions; t-test for length of stay; generalised linear model using gamma Distribution: log link function used for regression of aggregated health and aged care costs; a significance level of 0.05 was adopted for all tests Analysis was performed using Stata Version 11 (StataCorp 2009) **Source of effectiveness data** This study only evaluated resource use and costs; see source of resource use data **Source of resource use data**	presented in sensitivity analysis Social care use: In summary • IG had fewer hours of home care (including personal care) at all time points • At 1 and 2 years: IG less likely to use ongoing personal care or to have (emergent) personal care service • At study end, a significantly higher proportion of clients in CG were approved of higher level of aged care (residential care or equivalent home care package) First year • Mean hours all home care: IG 83.6 (SD 81.9) vs 116.8 (SD 125.4); p<0.001 • Mean hours personal care: IG 19.1 (SD 27.6) vs 45.6 (SD	the 2-year follow-up: AU $19,090 vs AU $23,428)	RCT compared reablement referred from the community with conventional home care and found that reablement reduced the costs of home and healthcare. Overall the study was of good quality so that findings can be used to inform recommendations.

	domestic assistance; most care plans included 3 personal visits a week to assist with bathing/showering; domestic assistance every 2 weeks; occasionally social support and respite care	Western Australian (WA) Data Linkage System including: the emergency department data collection; the hospital morbidity data system; the Mortality Register; the HACC database; and the Aged Care Assessment Program (ACAP) database; the latter records approval for needing residential care or equivalent support package at home **Source of unit cost data** Western Australian (WA) unit cost data for home and community care services by the WA Department of Health National Hospital Cost Data Collection Cost Report Round 12 (2007–8) (Commonwealth of Australia 2009) for emergency dep visits Public Sector Estimated Round 12 (2007–8) AR-DRG 5.1 and Cost Report for Western Australia (Department of Health & Ageing, 2008) for inpatient	49.3); p<0.001 • Number of individuals needing ongoing personal care: IG n=63 (25.2%) vs CG n=160 (51.6%); p<0.001 • Number of individuals with emergent personal care: IG n=17 (13.6) vs CG n=18 (27.7); p=0.017 • Number of individuals assessed and approved for residential care (or similar support package at home): IG n=163 (43.5%) vs CG n=190 (50.7%); p=0.048 Second year • Mean hours all home and community care: IG 50.4 (SD 90.7) vs 92.5 (SD 137.9); p<0.001 • Mean hours personal care: IG 13.4 (SD 31.4) vs 36.2 (SD 51.5); p<0.001; • Number of individuals		

		unit costs **Sensitivity analysis** The analysis was performed on the basis of randomised allocation (i.e. intention-to-treat (ITT)), and then on the basis of the actual treatment received (as treated (AT))	needing ongoing personal care: IG n=23 (11.4%) vs CG n=84 (34.5%); p<0.001 • Number of individuals assessed and approved for residential care (or similar support package at home): IG n=92 (30.6%) vs CG n=104 (34.9%); p=0.258 First and second years • Mean hours all home and community care: IG 124.0 (SD 154.4) vs 190.3 (SD 230.4); p<0.001 • Mean hours personal care: IG 29.8 (SD 52.6) vs 74.4 (SD 86.6); p<0.001 • Number of individuals needing ongoing personal care: IG n=23 (11.4%) vs CG n=84 (34.5%); p<0.001 • Number of individuals assessed and		

			approved for residential care (or similar support package at home): IG n=210 (56%) vs CG n=241 (64.3%); p=0.021 Healthcare use Adjusted odds of emergency dep visits (IG vs CG): • First year (n=748): OR 0.83; CI 95% 0.62 to 1.11; p=0.206 • Second year (n=598): OR 0.72; CI 95% 0.52 to 1.01; p=0.056 • First and second years (n=748): OR 0.81; CI 95% 0.6 to 1.1; p=0.183 Adjusted odds of hospital admission (IG vs CG): • First year (n=748): OR 0.93; CI 95% 0.69 to 1.26; p=0.65 • Second year (n=598): OR 0.74; 95% CI		

			0.53 to 1.03; p=0.073 • First and second years (n=748): OR 0.85; 95% CI 0.62 to 1.17; p=0.316 **2. Costs** 2a. Description For each individual, average total costs were calculated; they include home and community care, emergency department visits and unplanned hospital admissions 2b. Values Costs of home and community care: • First year: IG AU $4,096 vs CG AU $5,270 • First and second years: IG: AU $5,833 vs CG AU $8,374 Costs of emergency visits: First and second years: IG AU $686 vs CG AU $708		

			Costs of all hospital admissions: First and second years: IG AU $13,369 vs CG AU $13,675 Significant lower total costs in IG over study period (first and second years): • First year (n=748): RR 0.93; 95% CI 0.80 to 1.06; p=0.276 • Second year (n=748): RR 0.85; 95% CI 0.68 to 1.06; p=0.155 • First and second years (n=748): RR 0.89; 95% CI 0.78 to 1.02; p=0.083 **3. Sensitivity analysis** Social care use: Results consistent between ITT and AT analysis Healthcare use: Adjusted odds of emergency dep visits (IG vs CG): • First year (n=704): OR 0.7;CI 95% 0.52 to 0.95; p=0.023		

			• Second year (n=562): OR 0.7; CI 95% 0.49 to 0.99; p=0.045 • First and second years (n=704): OR 0.69; CI 95; 0.5 to 0.94; p=0.021 Adjusted odds of hospital admission (IG vs CG): • First year (n=704); OR 0.79; CI 95% 0.58 to 1.07; p=0.13 • Second year (n=562); OR 0.66; CI 95% 0.46 to 0.94; p=0.020 • First and second years (n=704); OR 0.69; CI 95% 0.5 to 0.95; p=0.025 Greater difference in costs compared to ITT analysis, and total costs now significantly lower in IG: • Home and community care costs: IG AU $3938 (first year) and AU$ 5,570 (first and second years) vs CG AU $5,449 (first year) and AU $8,541 (first		

			and second years) • Costs of emergency visits (first and second years): IG AU $659 vs CG AU $726 • Costs of hospital admissions (first and second years): IG AU $12,860 vs AU $14,160 • Total costs IG vs CG: in the first year by a RR of 0.82 (p=0.007) and over the 2 years by a RR of 0.83 (P=0.010); IG AU $3,938 (first year) and IG AU$5,570 (first and second years) vs CG AU $5,449 (first year) and AU $8,541 (first and second years)		

Study ID **Country** **Study type**	**Intervention details**	**Study population** **Study design** **Data sources**	**Costs: description and values** **Outcomes: description and values**	**Results: cost-effectiveness**	**Comments**
Glendinning et al. 2010	**Intervention** Different service models of reablement as	**Population** Adults aged 18 and over; some sites focused only on older adults and across sites	**1. Outcomes** 1a. Description Standardised outcome	ICER findings were presented on EQ-5D as follows:	**Applicability** Sufficiently applicable (+)

England (UK) Cost–utility	implemented in 5 different sites; reablement described in general terms as an approach within home care that is focused on supporting people's independence; equipment as important part; duration of intervention up to 6 weeks; referrals taken from community and hospital teams (i.e. service is provided as so-called 'intake' or 'discharge' service) **Control** Standard home care **Both groups** Wide range of health and	the majority were older people; some sites excluded people with learning disabilities, dementia, and at the end-of-life **Study design** Prospective longitudinal study with latest follow-up at 12 months **Setting** England, 10 local authority sites (urban + rural); 5 sites offering reablement and 5 sites offering conventional home care **Statistical analysis** Paired t-tests, chi-squared tests and binomial tests; multivariate analyses with on xtreg estimator in Stata 10; using fixed and random-effects model; statistical models constructed with local authority dummy variables following established approach (Netten et al. 2007); Hausman specification (Hausman 1978); multiple imputation methods were	measures considered in cost-effectiveness analysis: • Health-related quality of life (EQ-5D – Euro-QoL) • Social care outcomes (ASCOT – Adult Social Care Outcomes Toolkit) 1b. Values EQ-5D (higher scores indicating better health-related quality of life): mean diff significantly higher in IG: 0.1, 95% CI 0.02 to 0.18 • T=1 (baseline; IG n=619; CG n=355) Mean scores: IG 0.35 vs CG 0.3 • T=2 (12 months; IG n=233; CG n=135) Mean scores: IG 0.47 vs CG 0.32 ASCOT (higher scores indicating better social care-related quality of life: mean diff higher in IG by 0.03, no confidence interval reported • T=1 (baseline; IG n=621; CG n=357)	At a £30,000 threshold, the probability of reablement being cost-effective was 99% for total costs and just under 100% if only social care costs were included At a lower £20,000 threshold, the probability of cost-effective-ness was 98% for total costs, and over 99% if only social care costs were considered Sensitivity analysis If health care costs for reablement were 10% higher than reported, the probability that reablement was	**Quality** Potentially serious limitations (+) **Perspective** NHS and personal social services **Discounting** Not applicable **Price year** 2008/9 for reablement and 2009/10 for health and social care, UK pounds (£) sterling **Summary** This English cost–utility study compared reablement as provided by 5 local authorities with standard home care and found that reablement had a very high probability to be cost-effective. However, the study had some potentially serious limitations so that findings could not be used to inform the recommendations.

	social care services (including hospital services which were more common in the intervention group as a higher proportion of individuals were discharged from hospital)	applied for missing data Bootstrapping was applied for cost-effectiveness results **Source of effectiveness data** Outcome data for individuals collected at service commencement (T1), between 9 and 12 months later (T2); post-intervention interviews with IG on discharge from reablement (T1+R); data collection between November 2008 and May 2010; interviews by local authority staff and researchers **Source of resource use data** Reablement and social care use • IG: questionnaires to participants asking about details, frequencies and durations of reablement and social care service use over past week at 2 time points	Mean scores: IG 0.77 vs CG 0.76 • T=2 (12 months; IG n=238; CG n=138) Mean scores: IG 0.8 vs CG 0.78 **2. Costs** 2a. Description Resource use data referred to social care provided by local authority; health services included all primary and secondary care 2b. Values Costs of reablement: • Mean cost per person: £2,088 (ranging from £1,609 to £3,575) • Mean cost per hour: £20 (ranging from £16 to £23) • Mean cost per hour of client contact: £40 (ranging from £36 to £45) Mean social services costs Initial 8-week period • Reablement: IG	cost-effective fell to 92% at the £20,000 threshold and to 97% at the £30,000 threshold If costs were 25% higher, then reablement was 70% likely to be cost-effective at £20,000 threshold and 90% likely to be cost-effective at £30,000 threshold	

		• CG: questionnaires to participants asking about details, frequencies and durations of social care service use over past week at 2 time points Healthcare use • Postal questionnaire to participants asking for information about use over past 2 months of healthcare, equipment and privately funded social care • Identical questionnaires on a monthly basis to subsample of service users **Source of unit cost data** For reablement: from study sites via short questionnaire; uprated to 2008/9 using the standard personal social services (PSS) inflators; included details of annual caseload, annual number of	£1,510 (n=435) vs CG £0 • In-house home care: IG £6 (n=438) vs CG £90 (n=285); p<0.001 • Independent home care: IG £4 (n=438) vs CG £510 (n=285); p<0.001 • Day care: IG £1 (n=438) vs CG £7 (n=286); p<0.05 • Meals on wheels: £30 (n=438) vs CG £8 (n=286); p<0.05 • Overall social care: £1,640 (n=435) vs CG £570 (n=336); p<0.001 10-month follow-up • Reablement: IG £0 vs CG £0 • In-house homecare: IG £270 vs. CG £590 (n=195); p<0.01 • Independent home care: IG £450 vs CG £1,660 (n=180); p<0.001 • Day care: IG £0 vs		

		clients, total number of hours worked by care staff and number of hours care staff spent with service users For health services: national unit costs were taken from Curtis (2009) inflated to 2009/10 prices For PSS: local authorities were asked to provide unit costs; if unit costs were not supplied locally, national data from the PSS EX1 2008/9 were used and inflated to 2009/10 prices. The data were sent to each local authority to confirm that they agreed with the prices **Subgroup analysis** Costs for health service use were analysed for individuals referred from hospital vs those referred from the community **Sensitivity analysis** The impact of higher reablement healthcare costs (between 5 and 25%) on cost-effectiveness was tested;	CG £60 (n=196); p<0.05 • Meals on wheels: IG £60 vs £70 (n=196); no p value reported • Overall social care: IG £790 vs CG £2,240; n=196; p<0.001 12 months, with imputed missing values • Overall social care costs: IG (n=438) £2,650 (SD £2,610) vs CG (n=250) £3,060 (SD £3,790) Mean health services costs Initial 8 weeks • GP: IG (n=399) £125 vs CG (n=253) £115; p>0.05 • Accident and emergency: IG (n=399) £77 vs CG (n=252) £63; p>0.05 • Hospital inpatient: IG (n=370) £954 vs CG (n=238) £550; p<0.001 • Hospital outpatient: IG		

		Bootstrapping was applied for cost-effectiveness results and probabilities of cost-effectiveness presented in the form of cost-effectiveness acceptability curves	(n=388) £201 vs CG (n=244) £148; p<0.01 • Nurse: IG (n=383) £278 vs CG (n=239) £214; p<0.01 • Therapist: IG (n=391) £64 vs CG (n=249) £42; p<0.001 • Chiropodist: IG (n=401) £14 vs CG (n=250) £25; p<0.001 • Overall health cost: IG £1,600 vs CG £1,095; p<0.05 Significantly higher overall health care costs in IG during the initial 8 weeks 10-month follow-up • GP: IG (n=241) £658 vs CG (n=140) £650; p>0.05 • Accident and emergency: IG (n=240) £101 vs CG (n=139) £154; p>0.05 • Hospital inpatient: IG (n=237) £1,445 vs CG (n=139) £970; p>0.05 • Hospital outpatient: IG (n=241) £539 vs CG (n=140) £678; p>0.05		

			• Nurse: IG (n=234) £533 vs CG (n=139) £548; p>0.05 • Therapist: IG (n=238) £124 vs CG (n=140) £146; p>0.05 • Chiropodist: IG (n=238) £85 vs CG (n=139) £122; p<0.01 • Overall health cost: £3,455 vs £3,235; p>0.05 No significantly higher health care costs in IG during 10-month follow-up 10 months, with imputed missing values: • Overall health costs IG (n=438) £3,710 (SD £3,770) vs CG (n=259) £3,420 (SD £3,750) Total costs (12 months), with imputed missing values • IG (n=438) £7,890 (SD £5,380) vs CG (n=259) £7,560 (SD £6,090) **3. Subgroup analysis**		

			At 8 weeks • Significantly higher overall health costs for individuals in IG referred from hospital (n=261; £1,850) compared with those referred from community (n=101; £1,020; p< 0.01); • Non-significantly higher overall health costs for individuals in CG referred from hospital (n=116; £1,030) vs those referred from community (n=130; £1,090; p>0.05) At 10 months • Non-significantly higher costs in IG and CG for individuals referred from hospital vs those referred from community: IG £3,000 (n=68) vs £3,790 (n=157); CG £2,930 (n=57) vs £3,520 (n=81)		

Study ID Country Study type	Intervention details	Study population Study design Data sources	Costs: description and values Outcomes: description and values	Results: cost-effectiveness	Comments
McLeod and Mair 2009 UK Cost-saving/ minimisation	**Intervention** Referrals from community or hospital Home care coordinator assesses individuals from the community while individuals from hospital assessed prior to leaving hospital; further assessment of suitability at screening meeting, involving social workers, community care assistants, occupational therapists (OTs) and the home care coordinator At the initial meeting between the	**Population** Individual characteristics not described; age profile is provided showing that majority of individuals were older people above 65 years; it is stated that some individuals with severe dementia or with particular mental health conditions were excluded from the intervention and the study **Study design** Prospective longitudinal study; IG: service users (n=90) who completed intervention between October 2008 and January 2009; this excluded n=25 individuals who did not complete reablement; matched control group from another district in the city (same proportions of service users from community and hospital; and of in-house and independent provision)	**1. Outcomes** 1a. Description • Data on hours of care at start and end of reablement (6 weeks); number of hours of care at 3 months after ending reablement; OT hours not recorded but no. of users • Questions were asked about experiences; no standardised health or wellbeing outcome measures were applied 1b. Values At 6 weeks IG (n=90): total hours of care reduced by 41% over the 6-week period CG (n=90): total hours slightly increased (1.6%) • User with no further service needed (IG vs. CG): n=34 vs.	This study was a cost-saving study so that no cost-effective-ness results were presented Average mean costs were £240 higher in IG than in CG	**Applicability** Insufficiently applicable (-) **Quality** The study was insufficiently applicable so that no quality assessment was carried out **Perspective** Costs reflected the hours of home care provided **Discounting** Not applicable **Price year** Not stated **Summary** This Scotland-based study compared reablement as newly introduced intervention in a particular city district versus conventional forms of home care provided in

	client and reablement staff, goals were discussed and agreed 6-week reablement service with an allocated number of care hours provided by social worker Additional support from OT, equipment and adaptations as required (from n=769 service users referred to reablement between October 2008 and mid-June 2009, n=301, 39% had OT input) **Control** Conventional home care as	**Setting** Edinburgh, Scotland **Statistical analysis** Independent paired sample t-test **Source of effectiveness data** Only data on hours of care provided (see next section on resource use for details) **Source of resource use data** For IG: from data set, set up by the local council For CG: from existing data set of local council; included data for all home care users including personal characteristics, age, route of referral and number of hours of care In addition, some resource data for IG and CG were extracted from a weekly domiciliary care monitoring summary	n=17 • Users with some service still required (n=20 vs. n= 8) • Users with same no. of hours (n=31 vs. n=36) • Users with increased no. hours (n=5 vs. n=29) Individuals from community routes showed a greater reduction in hours of care (45.5%) compared to those referred from hospital (38.6%) Reduction in hours of social care for hospital discharge group IG vs. CG: 38.6% vs. 8.1% Reduction in hours of social care for community group IG: 45.5% vs. increase in CG: 13.7% Mean (median) hours of social care IG vs. CG: At start, t=0 7.92 hours vs. 8.21 hours (7		another district. The study was not sufficiently applicable, mainly because of the limited perspective on costs, which only covered reablement and home care provided over a very short time period; in addition, the reporting quality of the study was very low. Findings can thus not be used to inform recommendations.

	provided in a particular district of the same city	**Source of unit cost data** Staff costs are presented with no further detail about data source **Sensitivity analysis** No sensitivity analysis was carried out	hours vs. 3 hours) At end of intervention at 6 weeks 4.67 hours vs. 8.35 hours (7 hours vs. 7 hours) It is reported that diff in mean end hours significant but no p values or confidence intervals were reported **2. Costs** 2a. Description Costs of reablement Data on costs: weekly care costs (social care worker/home help/independent sector); management/supervisory and administration costs; weekly OT costs; training costs Costs were derived by allocating social workers and OT to the reablement intervention; management structure costs derived from annual salaries of management and FTEs allocated to reablement Training costs were derived		

			from time costs for social workers to attend training, set-up costs, cost of trainer and cost of OT input to training Costs of conventional care in CG Derived from home helps and social workers time; and independent sector provision; costs of OT were not estimated 2b. Values Costs of reablement Costs per service user: for social work £126/week; for OT £15; total costs for social worker and OT time for period of 6 weeks: £850 Management and administration costs • Home care service manager: £45,777 per year; 0.5 FTE allocated to reablement • Home care coordinator: £30,716 per year; 3.5 FTE		

			allocated to reablement • Home care organiser: £23,868; 1.5 FTE allocated to reablement • Admin worker £19,790; 1.7 FTE allocated to reablement • Total management costs for 6 weeks reablement (allocated 78%) per user: £200 Training costs per social worker: • Time costs per social worker: £152 • Setup costs: £0.5 • OT training input: £2.4 • Trainer costs: £37 • Total training costs: £192 Total costs of reablement per user: £1,050 (without training; training costs were not allocated to reablement) Costs of conventional home		

			care in CG (over 6 weeks) • Home helps per person: £346 • Social worker per person: £199 • Costs of independent sector provision per person: £219 • Total costs per person: £764 Management and administration costs • Home care service manager: £45,777 per year; 0.5 FTE allocated to reablement • Home care coordinator: £30,716 per year; 4 FTE allocated to reablement • Home care organiser: £23,868; 3 FTE allocated to reablement • Admin worker £19,790; 1.5 FTE allocated to reablement • Total management		

			costs allocated for control group (13.3%) for 6 weeks per person: £5 • Total cost per person: £810 **3. Subgroups** IG: Reduction in hours of social care by level of dependency defined by numbers of hours of social care/week at start of reablement: • Up to 5 hours (30%): 34% • Between 5.1 and 10 hours (48%): -60% • Between 10.1 and 15 hours (11%): -33% • More than 15.1 hours (11%): -22% The group with the lowest reduction in hours of care were the highest dependency group and group with the low dependency of between 5.1 and 10 hours had the highest reduction		

Completed methodology checklists: economic evaluations

Study identification: Lewin G, Allan J, Patterson C, Knuiman M, Boldy D, Hendrie D (2014) A comparison of the home-care and healthcare service use and costs of older Australians randomised to receive a restorative or a conventional home-care services. Health and Social Care in the Community 22(3): 328–36	
Guideline topic: Intermediate care	
Economic priority area: D	
Checklist: Section 1	
Yes/No/Partly/Not applicable	Detail
1.1 Is the study population appropriate for the review question?	
Yes	The population referred to older people of 65 years and above who were assessed as eligible for personal care. Excluded were individuals who were not English speaking, required intensive home care, who had a diagnosis of dementia or a terminal illness. Despite such exclusions the study population presented an important and large group covered in the scope.
1.2 Are the interventions appropriate for the review question?	
Yes	The intervention was reablement for individuals referred from the community provided over a maximum period of 12 weeks; authors reported that the model followed a reablement approach based in the UK model. The comparison intervention was standard home care.
1.3 Is the current social care system in which the study was conducted sufficiently similar to the current UK social care context?	
Yes	The study was carried out in Australia in 2007/8. The Australian health and social care system was judged by the Guideline Committee to have sufficient similarities to the UK system.

1.4 Are the perspectives clearly stated and what are they?	
Yes	The perspective on costs was the one of health and social care.
1.5 Are all direct effects on individuals included?	
Partly	The study captured health and social care use and included as an outcome whether individuals were assessed as requiring residential care (or equivalent support package at home). No direct effects on individuals or carers' health and wellbeing were included.
1.6 Are all future costs and outcomes discounted appropriately?	
Partly	The study referred to a time period of 2 years. No details were provided as to whether costs that occurred in the second year were discounted. Because of the time horizon of 2 years, discounting would not change the results substantially.
1.7 How is the value of effects expressed?	
Yes	Values were expressed in monetary terms (in AUS $) and in natural units for service use and assessment of level of care required.
1.8 Are costs and outcomes from other sectors (including the value of unpaid care, where relevant) fully and appropriately measured and valued?	
Partly	The study evaluated costs of health and social care. Individual health and wellbeing outcomes were not included. Furthermore, the costs of unpaid care and out-of-pocket expenditure were not included.
General conclusion	
The study was sufficiently applicable (+).	
Section 2: Study limitations (the level of methodological quality) This checklist should be used once it has been decided that the study is sufficiently applicable to the context of the social care guidance[a].	
2.1 Does the model structure adequately reflect the nature of the topic under	

evaluation?	
Not applicable	The study was an evaluation of service use and costs using an RCT design.
2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	
Partly	The study included a follow up period of 2 years; it is possible that not important differences in costs were captured.
2.3 Are all important and relevant outcomes included?	
Not applicable	The study reported service use and costs.
2.4 Are the estimates of baseline outcomes from the best available source?	
Yes	Service use in intervention and comparison groups was measured at baseline as part of the mother trial.
2.5 Are the estimates of relative intervention effects from the best available source?	
Yes	Estimates of relative intervention effects (here: service use) were taken from the mother trial.
2.6 Are all important and relevant costs included?	
Partly	Costs referred to a range of important health and social care use. Costs of care home and community health care were, however, not included. Furthermore, the costs of unpaid care were not evaluated.
2.7 Are the estimates of resource use from the best available source?	
Yes	Data on service use were taken from a range of administration systems.
2.8 Are the unit costs of resources from the best available source?	
Yes	Unit costs were taken from recognised national and regional sources.
2.9 Is an appropriate incremental analysis presented or can it be calculated from the data?	
Yes	Incremental analysis referred to a comparison between costs, which was carried out appropriately.

2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	
Partly	Statistical analysis was carried out to present uncertainty in values. Additional analysis was performed on the basis of actual treatment.
2.11 Is there any potential conflict of interest?	
Partly	The study was funded by an Australian health authority. No conflict of interest was mentioned. One of the researchers was employed by the provider of the intervention suggesting a potential conflict of interest. All other researchers were employed by universities or government departments.
2.12 Overall assessment	
Overall the study quality was of good quality with minor limitations (++).	

Study identification: Lewin GF, Alfonso HS, Alan JJ (2013) Evidence for the long term cost effectiveness of home care reablement programs. Clinical Interventions in Aging 8: 1273–81	
Guideline topic: Intermediate care	
Economic priority area: D	
Checklist: Section 1	
Yes/No/Partly/Not applicable	Detail
1.1 Is the study population appropriate for the review question?	
Yes	The population in this study included older people of 65 years or more who required personal care. Excluded were non-English speaking individuals, those with dementia and those requiring palliative care. Overall, the study population presented an

	important group covered in the scope.
1.2 Are the interventions appropriate for the review question?	
Partly	The intervention included 2 types of reablement: 1 type of reablement was provided to persons referred from the community and the other provided to people referred from hospital. Interventions were largely similar with some differences in terms of duration and access to nursing care. The comparison intervention consisted of standard home and community care. It was likely that this was not an appropriate comparator for those in the intervention group who were discharged from hospital.
1.3 Is the current social care system in which the study was conducted sufficiently similar to the current UK social care context?	
Partly	The study was carried out in Australia and was based on data collected between 2004 and 2008. The Guideline Committee considered the context of the study sufficiently similar to the current English health and social care system.
1.4 Are the perspectives clearly stated and what are they?	
Partly	The perspective on costs was the perspective of home care. It was not clear which types of services this included. Overall, the perspective was very limited and excluded very relevant costs and outcomes. The rationale for this was not explained.
1.5 Are all direct effects on individuals included?	
No	The study only measured the use of home care and did not include individual health or wellbeing outcomes.
1.6 Are all future costs and outcomes discounted appropriately?	
No	No details were reported on whether costs were discounted. The study was carried out over a period of several years so that discounting would have been necessary.
1.7 How is the value of effects expressed?	
Partly	Only the use the home care services was measured and effects

	were presented by whether people used services at different time points (yes/no) as well as in form of costs (in AUS $).
1.8 Are costs and outcomes from other sectors (including the value of unpaid care, where relevant) fully and appropriately measured and valued?	
No	The study only measured the use (and costs) of home care services and no other costs or outcomes were included.
General conclusion	
The study was insufficiently applicable (-).	

Study identification: Glendinning C, Jones K, Baxter K, Rabiee P, Curtis LA, Wilde A, Arksey H, Forder JE (2010) Home care re-ablement services: investigating the longer-term impacts (prospective longitudinal study), Working Paper No. DHR 2438. York: Social Policy Research unit, University of York	
Guideline topic: Intermediate care	
Economic priority area: D	
Checklist: Section 1	
Yes/No/Partly/Not applicable	Detail
1.1 Is the study population appropriate for the review question?	
Yes	The population referred to adults, who were 18 years or older and were recruited from different local authority sites. Some sites had a focus on provision for older people; some sites excluded people with learning disability, dementia or end-of-life care needs. Altogether the study population was appropriate for the review question and was likely to include a large proportion of the population covered in the scope.
1.2 Are the interventions appropriate for the review question?	

Partly	The intervention referred to reablement as provided in different local authority sites; referrals came from the community as well as from hospital. The comparison group consisted of individuals using conventional home care; this did not specifically include individuals after hospital discharge. As a result, intervention and comparison group differed in the proportion of individuals being discharged from hospital and they were thus not directly comparable.
1.3 Is the current social care system in which the study was conducted sufficiently similar to the current UK social care context?	
Yes	The study was carried out in England during 2008 and 2009. The Guideline Committee considered the context sufficiently applicable to the current context.
1.4 Are the perspectives clearly stated and what are they?	
Yes	The perspective on costs was the one of the NHS and personal social services.
1.5 Are all direct effects on individuals included?	
Partly	The study employed suitable standardised outcome measures for capturing health- and social care-related quality of life. However, individuals' admissions to a care home and deaths as well as outcomes to carers were not captured.
1.6 Are all future costs and outcomes discounted appropriately?	
Yes	The study refers to a time period of 1 year so that discounting was not required.
1.7 How is the value of effects expressed?	
Yes	Values of effects were expressed in health utilities (measured via the EQ-5D) and in social-care related quality measured with the Adult Social Care Outcomes Toolkit (ASCOT).
1.8 Are costs and outcomes from other sectors (including the value of unpaid care, where relevant) fully and appropriately measured and valued?	
Partly	The study evaluated costs from a NHS and personal social services perspective only. This did not include the cost of unpaid care, self-funded care or other out-of-pocket expenditure. The

	study did not measure 2 important outcomes of individuals: admission to a care home and death. It also did not measure carers' outcomes.
General conclusion	
The study was sufficiently applicable (+).	
Section 2: Study limitations (the level of methodological quality) This checklist should be used once it has been decided that the study is sufficiently applicable to the context of the social care guidance[a].	
2.1 Does the model structure adequately reflect the nature of the topic under evaluation?	
Not applicable	The study was an economic evaluation carried out alongside a longitudinal study and did not apply modelling.
2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	
Partly	The study included a follow-up period of 12 months. This appeared to be an appropriate follow-up time for this type of short-term intervention in principle. However, other studies have shown an impact of reablement on some costs and outcomes beyond the first year (e.g. Lewin et al. 2013, 2014). It is thus possible that the study did not capture all relevant differences in costs and outcomes.
2.3 Are all important and relevant outcomes included?	
No	The study did not include individuals' admission to a care home, their death or outcomes to carers.
2.4 Are the estimates of baseline outcomes from the best available source?	
Partly	Baseline outcomes were presented for the intervention and control groups and showed differences in characteristics due to different proportions of people referred from the community versus hospital. A range of statistical methods was applied to account for baseline

	differences. Sometimes the reporting was not very transparent so that it was difficult to come to conclusions about whether all relevant factors had been controlled for.
2.5 Are the estimates of relative intervention effects from the best available source?	
No	Intervention effects were taken from comparisons between outcomes at 12 months in intervention and control groups; a range of statistical methods was applied to investigate differences in outcomes due to other factors than the intervention. The reporting of study findings was not very transparent, which made it difficult to derive final conclusions about their appropriateness. However, it was likely that relative interventions effects were influenced by different proportions of people discharged from hospital in intervention and control groups.
2.6 Are all important and relevant costs included?	
Partly	Costs include those to the NHS and personal social services. Not included were costs to self-funders and other out-of-pocket expenditure as well as costs of unpaid care.
2.7 Are the estimates of resource use from the best available source?	
Yes	Information about resource use was gathered by ways of questionnaires with study participants as well as from local authority records. Multiple imputation methods were used to account for missing data.
2.8 Are the unit costs of resources from the best available source?	
Yes	Unit costs for reablement intervention were established via questionnaires completed by local authorities. Local authorities were also asked to provide local unit costs and if those could not be provided, estimates were taken from national sources. Unit costs were also taken from recognised national sources.
2.9 Is an appropriate incremental analysis presented or can it be calculated from the data?	
Yes	Cost-effectiveness acceptability curves were produced and findings presented and explained in form of probabilities for cost-

	effectiveness at different willingness-to-pay thresholds.
2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	
Yes	The impact of different reablement costs was tested and bootstrapping was applied to present uncertainties around cost-effectiveness values.
2.11 Is there any potential conflict of interest?	
No	The study was funded by the Department of Health but carried out by independent researchers. It is declared in the acknowledgements that any views expressed in the study are those from the researchers only.
2.12 Overall assessment	
Overall the study quality had some potentially serious limitations (+).	

Study identification: McLeod B and Mair M (2009) Evaluation of City of Edinburgh Council home care re-ablement service. The Scottish Government Social Research	
Guideline topic: Intermediate care	
Economic priority area: D	
Checklist: Section 1	
Yes/No/Partly/Not applicable	Detail
1.1 Is the study population appropriate for the review question?	
Partly	A description of the study population was not provided. Some age-related characteristics were presented, which showed that the majority of individuals were above 65 years. It was reported that some individuals with severe dementia and certain mental health conditions were excluded from the study.
1.2 Are the interventions appropriate for the review question?	

Yes	The intervention was a 6-week reablement service that had been newly introduced in a particular district of Edinburgh. The comparison intervention referred to conventional home care and included the same proportions of people referred from hospital and from the community.
1.3 Is the current social care system in which the study was conducted sufficiently similar to the current UK social care context?	
Yes	The study was carried out in Scotland between 2008 and 2009. The Guideline Committee considered the context to be sufficiently applicable to the current system of health and social care in England.
1.4 Are the perspectives clearly stated and what are they?	
No	The perspective of the evaluation was not clearly stated. Included were the costs of hours of care provided as part of reablement and conventional home care. No other data were collected on health and social care.
1.5 Are all direct effects on individuals included?	
No	The study only measured the use of home care and did not include individual health or wellbeing outcomes.
1.6 Are all future costs and outcomes discounted appropriately?	
Yes	Discounting was not required as the only follow up was at 3 months.
1.7 How is the value of effects expressed?	
Partly	Only the use of home care services was measured and effects were presented in form of service use at different time points (yes/no) as well as in form of costs.
1.8 Are costs and outcomes from other sectors (including the value of unpaid care, where relevant) fully and appropriately measured and valued?	
No	The study only measured the use (and costs) of home care services and did not evaluate any other costs or outcomes.
General conclusion	

The study was insufficiently applicable (-).