

Appendix S1: Search string

Search string: Ovid MEDLINE(R) ALL <1946 to May 14, 2021>

Hip fracture. mp. OR exp Hip Fractures/ OR (fracture.mp. AND femur neck.mp. OR exp Femur Neck/) OR Femoral Neck Fractures.mp. OR exp Femoral Neck Fractures/ OR (Intertrochanteric.mp. AND fracture.mp) OR (Subtrochanteric.mp. AND fracture.mp) OR (pertrochanteric.mp. AND fracture.mp) OR ((exp Osteoporosis/ or Osteoporosis.mp. OR exp Osteoporotic Fractures/ OR Osteoporotic.mp.) AND fracture.mp) AND exp Rehabilitation/ or rehabilitation.mp. OR exp Exercise/ OR Exercise.mp. OR Recovery of Function.mp. OR exp "Recovery of Function"/ OR Multifactorial intervention.mp. OR activities of daily living.mp. OR exp "Activities of Daily Living"/ OR convalescence.mp. OR exp Convalescence/ AND quality adjusted life years.mp. OR exp Quality-Adjusted Life Years/ OR QALY.mp. OR exp Cost-Benefit Analysis/ or cost-utility.mp. OR cost.mp. or exp "Costs and Cost Analysis"/ OR cost-effectiveness.mp.

Search string ALL Embase Classic+Embase <1947 to 2021 May 14>

hip fracture.mp. OR exp hip fracture/ OR femoral neck fracture.mp. OR (exp femoral neck fracture/ OR fracture.mp. AND exp fracture/ OR femur neck.mp. OR exp femoral neck/) OR (interthrochanteric.mp. OR exp femur intertrochanteric fracture/ AND exp fracture/ OR femur neck.mp) OR (exp femur subtrochanteric fracture/ OR subtrochanteric.mp. AND exp fracture/ OR femur neck.mp) OR (exp femur pertrochanteric fracture/ OR pertrochanteric.mp. AND exp fracture/ OR femur neck.mp) OR (exp osteoporosis/ or osteoporosis.mp. OR osteoporotic.mp. OR exp fragility fracture/ AND exp fracture/ OR femur neck.mp) AND rehabilitation.mp. OR exp rehabilitation/ OR exercise.mp. OR exp exercise/ OR Recovery of Function.mp. OR exp convalescence/ OR functional recovery.mp. OR Multifactorial intervention.mp. OR activities of daily living.mp. OR exp daily life activity/ AND quality adjusted life years.mp. OR exp quality adjusted life year/ OR QALY.mp. OR cost-utility.mp. OR exp "cost utility analysis"/ OR cost-effectiveness.mp. OR exp "cost effectiveness analysis"/

Scopus

TITLE-ABS-KEY ("intertrochanteric fracture*") OR TITLE-ABS-KEY ("Hip fractur*") OR TITLE-ABS-KEY ("pertrochanteric fracture*") OR TITLE-ABS-KEY ("femoral neck fractur*") OR TITLE-ABS-KEY ("Osteoporotic fracture*" AND hip) OR TITLE-ABS-KEY ("osteoporosis fractur*" AND hip) AND TITLE-ABS-KEY (rehabilitation) OR TITLE-ABS-KEY (exercise) OR TITLE-ABS-KEY (recovery) OR TITLE-ABS-KEY (convalescence) OR TITLE-ABS-KEY ("Multifactorial intervention") OR TITLE-ABS-KEY ("Activities of daily living") OR TITLE-ABS-KEY (adl) AND TITLE-ABS-KEY (cost-benefit) OR TITLE-ABS-KEY (cost-utility) OR TITLE-ABS-KEY (cost-effectiveness) OR TITLE-ABS-KEY (qaly) OR TITLE-ABS-KEY ("quality adjusted life years")

HTA – Center for review and dissemination

((("Hip Fractures"[mh]) OR (Hip fracture) OR (femoral neck fractur*) OR (osteoporotic fractur* AND hip) OR (osteoporos* fractur* AND hip)) AND ((ADL) OR ("Activities of Daily Living"[mh]) OR (Multifactorial intervention) OR (Convalescence) OR (Recovery) OR ("Recovery of Function"[mh]) OR (Exercise) OR ("Exercise"[mh]) OR (Rehabilitation) OR ("Rehabilitation"[mh]))

International HTA database
(("Hip Fractures"[mh]) OR (Hip fracture) OR (femoral neck fractur*) OR (osteoporotic fractur* AND hip) OR (osteoporos* fractur* AND hip)) AND ((ADL) OR ("Activities of Daily Living"[mh]) OR (Multifactorial intervention) OR (Convalescence) OR (Recovery) OR ("Recovery of Function"[mh]) OR (Exercise) OR ("Exercise"[mh]) OR (Rehabilitation) OR ("Rehabilitation"[mh]))

Econlit via Proquest
Hip fracture OR "osteopor* fracture*"

Academic search premier: Ebsco
DE "HIP joint fractures" OR "Hip Fractures" OR "femoral neck fracture" OR "pertrochanteric OR "subtrochanteric fracture" OR "intertrochanteric fracture" OR ("osteoporotic fracture" AND Hip) OR ("osteoporosis fracture"AND HIP) AND DE "REHABILITATION" OR Rehabilitation OR DE "EXERCISE" OR exercise OR recovery OR convalescence OR DE "CONVALESCENCE" OR "Multifactorial intervention" OR "activities of daily living" OR DE "ACTIVITIES of daily living" OR DE "QUALITY-adjusted life years" OR "quality adjusted life year" OR "cost-effectiveness" OR DE "COST effectiveness"

Cochrane library: CDSR and Central
Hip fractures [Mesh] OR Hip fracture OR Femoral Neck Fractures [Mesh] OR Femoral neck fractures OR femur neck fracture* OR intertrochanteric fracture* OR pertrochanteric fracture* OR subtrochanteric fracture* OR Osteoporotic fractures [Mesh] OR Osteoporotic fracture* OR "osteoporosis fracture" AND Rehabilitation [Mesh] OR Rehabilitation OR Exercise [Mesh] OR Exercise OR Exercise OR Recovery of Function [Mesh] OR "recovery of function" OR "functional recovery" OR Convalescence OR "Multifactorial intervention" OR "activities of daily living" OR ADL AND quality adjusted life years [Mesh] OR "quality adjusted life year*" OR QALY OR Cost-utility OR Cost-benefit analysis [Mesh] OR Cost-effectiveness

Cinahl via Ebsco
(MH "Hip Fractures+") OR ""hip fracture"" OR "femoral neck fracture" OR "femur neck fracture" OR "intertrochanteric fracture" OR "pertrochanteric fracture" OR "subtrochanteric fracture" OR (MH "Osteoporotic Fractures") OR "osteoporotic fractures" AND (MH "Rehabilitation+") OR "Rehabilitation" OR (MH "Exercise+") OR "exercise" OR (MH "Recovery+") OR "functional recovery" OR "convalescence" OR "Multifactorial intervention" OR (MH "Activities of Daily Living+") OR "activities of daily living" AND (MH "Quality-Adjusted Life Years") OR "quality adjusted life year" OR QALY OR (MH "Costs and Cost Analysis") OR "cost effectiveness"

Appendix S2 –Dataextraction

Data extraction Milte, R.	
Study	Cost-effectiveness of individualized nutrition and exercise therapy for rehabilitation following hip fracture
General study characteristics	
First author and year of publication	Milte, R. 2016
Trial completion year	2010
Source of funding	National Health and Medical Research Council (426758). Australian Postgraduate Award and Flinders University Research Scholarship.
Competing interests	Not stated
Publication type	Journal paper
Setting	Three acute care settings and one rehabilitation setting in Australia
person characteristics	Home-dwelling persons' aged 70 years or above, absence of severe cognitive impairments and body mass index between 18 and 35 kg/m ² . No pathological fracture and not admitted from a residential aged care facility and able to ambulate, communicate with staff in English and medically stable within 14 days post-surgery.
Intervention type	A coordinated and individualized care plan for each participant, focusing on strength and balance exercises and nutritional therapy. The exercises were based on the Otago exercise programme, combining strength, balance, and walking training undertaken 3 times per week. Participants were visited by the trial physical therapist every 14 days to progress exercises. Dietary strategies included dietary counselling focusing on timing, size, and frequency of meals, recommendations of nutrient-rich foods and recipes, referral to community meal programmes, and provision of commercial oral nutritional supplements or commercial protein powders as deemed appropriate. Participants were visited by the trial dietitian every 14 days (alternately to physical therapist visits) to review dietary intake and modify strategies. For 10 weeks
usual physical rehabilitation and care	Usual rehabilitation programmes recommended during hospitalization, social visits weekly from trial staff and generic nutrition, exercise and falls prevention information.
Eligibility criteria	Same as trial population
Study perspective	healthcare sector perspective including use of community services such as residential care
Type of EE	Cost-utility analysis
Analytic method	Trial based
Study methods and outcome	
Time frame of EE	6 months
Discount rate costs	Not described due to timeframe
Discount rate effects	Not described due to timeframe
Inflation rate	Not described
Type and category of costs	Hospital and municipal resource use

Data source of resource use	Person reported and registries
Methods for identifying resource use	Healthcare utilization was collected with questionnaires provided to the person at weekly visits by trial staff for the duration of the 6-month intervention. Utilization of medical and pharmaceutical benefits items were requested from the Medical Benefits Scheme and the Pharmaceutical Benefits Scheme, which included claims for eligible pharmaceuticals, medical and other health worker consultations, laboratory and radiological procedures, and other medical procedures
Assumptions for measurement of resources	None stated
Methods used to calculate unit costs	Costs were adjusted to 2010 prices using a consumer price index and was valued by applying accepted unit costs to utilization of health care services recorded at individual level from National Hospital Cost Data Collection and Department of Veteran Affairs.
Costs reported or converted currency	Health resource cost 45.331 AUD (intervention) 44.764 AUD (control) diff=567 AUD (-6.166, 7.300)
Data source of effects	Effect was measured at baseline to give a retrospective analysis of HRQoL in the 6 months prior to fracture, and in the past week at 6-month follow-up. This was to determine the rate of return to pre-fracture HRQoL
Methods of measurement of effects	Health gain was assessed using the AQoL-4D questionnaire.
Methods of valuation of effects	Valuation was based on the preference weights of 350 members of the Australian general population.
Effects	QALY gain 0.155 (intervention) 0.139 (control) diff=0.02 (-0.027, 0.059)
Incremental cost–effectiveness ratios	The incremental cost-effectiveness ratio was \$AUD 28,350 per quality-adjusted life year gained.
Analyses of uncertainty (e.g. sensitivity analyses)	Probabilistic sensitivity analysis was used to assess uncertainty of ICER estimate, by re-sampling the original data to replicate the result of the ICER 1000 times. Giving an empirical estimate of the sampling distribution.
Outcome(s) of analyses of sensitivity analyses	ICER = 28.350 AUD intervention dominates to 51.768 AUD. The level of uncertainty indicates the true mean lies between less costs and higher health gain and just above the willingness-to-pay threshold on 50.000 AUD.
Authors' conclusions	A comprehensive 6-month programme of physical rehabilitation from dietitians and physical therapists could be provided at a relatively low additional cost in this group of home-dwelling persons after hip fracture. The incremental cost-effectiveness ratio indicates likely cost-effectiveness, although there was a very high level of uncertainty in the findings.

Data extraction Taraldsen, R.	
Study	Short and long-term clinical effectiveness and cost-effectiveness of a late-phase community based balance and gait exercise program following hip fracture. The EVA-hip randomized controlled trial

General study characteristics	
First author and year of publication	Taraldsen, R. 2019
Trial completion year	2014
Source of funding	Norwegian Women's Health Association and the Norwegian Extra Foundation for Health and Rehabilitation through the EXTRA funds, the Norwegian Fund for Postgraduate Training in Physiotherapy, and the Liaison Committee between the Central Norway Regional Health Authority (RHA), Trondheim Municipality, and the Norwegian University of Science and Technology (NTNU)
Competing interests	Authors declared no competing interests
Publication type	Journal paper
Setting	persons was recruited during admission at Trondheim Hospital and received the intervention in own home by physiotherapist from the Municipality of Trondheim
person characteristics	<p>Evaluation of eligibility was performed in two steps, first during hospitalization and at baseline registrations at 4 months.</p> <p>During hospitalization: eligible persons were home dwelling prior to the fracture, lived in the municipality of Trondheim, were 70 years or older, diagnosed and underwent surgery for intra-capsular or extra-capsular hip fractures (femur neck, pertrochanteric and suntrochanteric fractures (ICD-10 S72.0-S72.2)). persons were excluded if the fracture was pathological, life expectancies were less than 3 months, they were unable to walk 10 m (with or without walking aids) prior to the fracture or were participating in conflicting research projects.</p> <p>At baseline after 4 months: participants were excluded after a medical examination if they had contraindications for training (unstable medical conditions) or were bedridden.</p>
Intervention	<p>In addition to usual rehabilitation and health care intervention persons received a home-based programme starting 4 months post-surgery. Sessions was supervised by a physiotherapist twice weekly for 10 weeks, each session lasting approximately 45 minutes. The programme consisted of the following five weight-bearing exercises, all entailing change in base of support: 1) walking; 2) stepping in a grid pattern; 3) stepping up on a box; 4) sit-to-stand; and 5) lunge. Each exercise was described at five difficulty levels to allow for the standardized registration of individualization and progression. Progression was obtained by introducing variations in the task to challenge weight transfer, increasing movement speed, adding weight by using weight-vests, introducing more complex combinations of movements, and by adding secondary tasks (dual task condition). Exercises were meant to be performed without compensating strategies such as hand support or asymmetric weight bearing. Ten physiotherapists with varying background and experience were responsible for administering the exercise programme, as part of their ordinary work in the municipality.</p>

Usual physical rehabilitation and care	The control group received treatment as usual, which included a variety of different approaches, from no follow-up at all to quite extensive interdisciplinary rehabilitation in their homes or in an institution. persons in the intervention group were given a choice whether to continue the treatment they already received in addition to the exercise programme they were randomized to, or to postpone this too after completing the exercise intervention.
Eligibility criteria	Same as trial population
Study perspective	Broad healthcare sector perspective
Type of EE	Cost-utility analysis
Analytic method	Trial based
Study methods and outcome	
Time frame of EE	8 months measured from 4 month baseline to 12 month follow-up.
Discount rate costs	Not described
Discount rate effects	Not described
Inflation rate	Not described
Type and category of costs	Utility of healthcare sector services including physiotherapy, home-based services, nursing-home stays, general practitioner visits and hospital services
Data source of resource use	Resource use was collected from national and local registries including medical records from hospital and municipality.
Methods for identifying resource use	Hospital services (inpatient, day patient or outpatient services) and medications was collected from the patient hospital medical records. Data on use of health services delivered by the municipality units was collected from the patient municipality records, e.g., home-based services and short-term nursing home stay. The use of services from general practitioners and private physiotherapists was collected from the Norwegian Directorate of Health.
Assumptions for measurement of resources	None stated
Methods used to calculate unit costs	persons utilization of primary care and hospitalization was combined with unit costs to calculate cost per person. Valuation of cost was calculated from the fee-for-service information from Helfo and measured in 2012 euros.
Costs reported or converted currency	Mean total cost intervention 26219 euro (SD 25468) control 25976 (SD 2863 total costs difference 242.9 (-8.8, 8.6)
Data source of effects	Effect was measured as health-related quality of life by the EuroQol-5 dimension-3L (EQ-5D-3L).
Methods of measurement of effects	Health gain was assessed using the EQ-5D- 3L questionnaire at 4 month baseline and 12 month follow-up at an outpatient clinic and at the movement laboratory at the hospital. persons unable or reluctant to participate was offered home visits.
Methods of valuation of effects	The different health states generated from the EQ-5D-3L were assigned values from the UK time-trade-off tariff.
Effects	Intervention 0.73 (0.23) control 0.73 (0.33) no difference in effect
Incremental cost–effectiveness ratios	ICER can't when effects is 0

Analyses of uncertainty (e.g. sensitivity analyses)	The uncertainty of the ICER was assessed by bootstrapping, using 1000 bootstrap samples from the original data set (including the missing values) and performing MI for each bootstrap sample
Outcome(s) of analyses of sensitivity analyses	Of the 1000 replicates, 63% gave a negative QALY difference (points to the left of the vertical line, a gain in favor of control), and 51% of the replicates gave higher costs for the intervention group (points above the horizontal line). The probability that the intervention was cost-effective was below 39% for any ICER ceiling ratio below 150 000 EUR per QALY gained
Authors' conclusions	A relatively short home-based, supervised exercise program targeting balance and gait had an immediate and lasting small effect on gait speed and an effect on lower limb function without an increase in total health care costs. However, a tendency to include the fitter participants, a relatively high number of participants who were unable to complete the intervention and no apparent effect on daily life activities or self-reported health outcomes suggest that more comprehensive approaches are required to maximise recovery following hip-fracture

Data extraction Prestmo, A.	
Study	Comprehensive geriatric care for persons with hip fractures: a prospective, randomised, controlled trial
General study characteristics	
First author and year of publication	Prestmo, A. 2015
Trial completion year	2010
Source of funding	This study was funded by the Norwegian Research Council, the Central Norway Health Authority, the St Olav Hospital Trust, Department of Neuroscience at the Norwegian University of Science and Technology, the Foundation for Scientific and Industrial Research at the Norwegian Institute of Technology (SINTEF) and St Olav Hospital Fund for Research and Innovation, and the Municipality of Trondheim. Co-author SEL received support from the Oxford NIHR Musculoskeletal Biomedical Research Unit, Nuffield Orthopaedic Centre, University of Oxford and from the National Institute for Health Research (NIHR) Collaboration for Leadership in Applied Health
Competing interests	Authors declared no competing interests
Publication type	Journal paper
Setting	persons were recruited in the emergency ward and was allocated to an orthopaedic ward for orthopaedic care or a geriatric ward for comprehensive geriatric care.
Person characteristics	Home-dwelling people aged 70 years or older who had been able to walk 10 m before the fracture were eligible. (persons living in their homes or sheltered housing, or who were staying temporarily in any kind of institution were defined as home-dwelling.) We excluded persons with pathological fractures, multiple traumas, or a short life expectancy, or who were living permanently in nursing homes or already participating in the investigation.

Intervention	The clinical pathway for comprehensive geriatric care was organised both before and after the operation as a systematic and interdisciplinary process, with an emphasis on comprehensive medical assessment and treatment, initiation of rehabilitation through mobilisation, and planning of discharge started early. Individualised rehabilitation plans were developed for persons who were discharged directly home. The number of staff members per bed was higher in the comprehensive geriatric care unit than in the orthopaedic care unit (nurses 1·67 vs 1·48, doctors 0·13 vs 0·11, physiotherapist 0·13 vs 0·09, and occupational therapist 0·13 vs 0·00). The orthopaedic ward was relocated to a new hospital building on 1 Sept, 2009.
usual physical rehabilitation and care	Preoperative and postoperative care was undertaken in the two wards by separate teams. persons in both groups of the trial received care and physiotherapy in accordance with national and international guidelines. Geriatricians or other doctors with skills in the management of older people did not routinely visit the orthopaedic ward, and orthopaedic specialists did not routinely visit the geriatric ward. By request, for only a few persons, geriatricians briefly assessed persons receiving orthopaedic care; vice versa, the orthopaedic surgeon assessed a few persons receiving comprehensive geriatric care.
Eligibility criteria	Same as trial population
Study perspective	Broad healthcare sector perspective
Type of EE	Cost-utility analysis
Analytic method	Trial based
Study methods and outcome	
Time frame of EE	12 months from baseline to 12 month follow-up.
Discount rate costs	Not described
Discount rate effects	Not described
Inflation rate	Not described
Type and category of costs	use healthcare sector resources.
Data source of resource use	Utility of health services was collected in administrative systems, municipal persons records and registries.
Methods for identifying resource use	All information concerning the index stay was collected from St Olav Hospital's patient administrative system. Post discharge hospital service utilisation data was collected from St Olav Hospital's patient administrative system and institutional rehabilitation data from the Norwegian Patient Register, with supplementary information from the municipal patient records. Nursing home utilisation data and information on resource consumption of primary health and social care services were collected from municipal patient records, with two exceptions: visits to general practitioners (GPs) and visits to physiotherapist were collected from the Norwegian Health Economics Administration
Assumptions for measurement of resources	There was no missing data on the use of resources except for one person who withdrew consent for further collection of data during hospital treatment.
Methods used to calculate unit costs	Published unit costs were used if available; otherwise information from local experts and municipal web-sites was used to establish unit cost. All cost values are presented in 2010 Euro (EUR). The average exchange rate in 2010 was eight Norwegian kroner (NOK) to one EUR.

	<p>The unit cost of the index stay was calculated as the sum of surgical treatment cost and length of stay (LOS) multiplied by per diem cost. Surgical treatment cost was assumed equal across groups and calculated based on published data. The cost per diem of care in the orthogeriatric and the orthopaedic ward was calculated separately on the basis of staff level differences³ and wage cost information from the hospital accounting system multiplied by an over-head. The staff category specific wage costs per full time equivalent were equal across Comprehensive Geriatric Care (CGC) and Orthopaedic Care (OC), with staff category levels as the only difference. Staff level per person in CGC and OC groups respectively were: nurses 1.67/1.48, medical doctors 0.13/0.11, physiotherapists 0.13/0.09 and occupational therapists 0.13/0.00.</p> <p>The unit cost for institutional rehabilitation was gathered from the municipality and private care providers. The costs of nursing home services are calculated by using average per diem costs for these services, as they are reported to Statistics Norway. Other primary health and social care services include home nursing care, hour based rehabilitation, home care services, safety alarm, meals-on-wheels, visits to day centre and GP services, for which published unit costs were applied, except for safety alarm and meals-on-wheels.</p>
Costs reported or converted currency	Total cost of intervention was 54 332 euro (SD 38 048) total cost of control was 59.486 (SD 44301) Difference was -5154 euro (-13.311, 3007)
Data source of effects	Effect was measured as health-related quality of life by the EuroQol-5 dimension-3L (EQ-5D-3L).
Methods of measurement of effects	At baseline all persons were given an equal EQ-5D-3L baseline score based on a systematic review of osteoporosis-related utility values to 12 month follow-up. The twelve month follow-up was done at the hospital. For very sick persons the data collection was done wherever they resided.
Methods of valuation of effects	The different health states generated from the EQ-5D-3L were assigned values from the UK time-trade-off tariff.
Effects	QALY gain intervention 0.52 (SE 0.22) control 0.45 (SE 0.23) difference 0.09 (0.02, 0.16)
Incremental cost-effectiveness ratios	The ICER was calculated to €-71 751 per QALY gained favoring the intervention.
Analyses of uncertainty (e.g. sensitivity analyses)	Uncertainty about the incremental cost-effectiveness ratio (ICER) was estimated by bootstrapping the costs and effects 1000 times.
Outcome(s) of analyses of sensitivity analyses	Bootstrap results suggest that comprehensive geriatric care has a 99% probability of being cost effective compared with orthopaedic care, with the assumption of a threshold of €62 500 per QALY gained.
Authors' conclusions	This is the first trial to show benefit and cost effectiveness when persons aged 70 years or older with hip fractures are admitted directly to a geriatric ward for comprehensive geriatric care. Existing guidelines suggest that treatment of older persons with fragility fractures should be organised as orthogeriatric care. The present study supports these recommendations for older persons with hip fractures, and shows that preoperative and postoperative orthogeriatric management of these persons improves outcomes for 4 months, and for at least 1 year after surgery, compared with treatment in traditional orthopaedic trauma wards.

Appendix S3. Quality criteria.

Quality criteria. Checklist used for Risk of Bias assessment, using Drummonds Checklist (2)	
Question	Criteria for Yes
Research question well defined?	Was it clear what the authors was trying to do?
Comprehensive description of alternatives?	Was the physical rehabilitation and care intervention and its comparator explicitly described?
Effectiveness of program established?	Was the results based on a randomized trial and did it reflect what would happened in regular practice?
Important & relevant costs & consequences for each alternative identified?	Were all important cost and outcomes to the applied perspective identified
Costs & consequences measured accurately & appropriately?	Was the cost reported in appropriate units: the hours working time, number of visits, lost workdays, 'gained life years', and presented in a disaggregated form?
Costs & consequences valued credibly?	Were cost and outcomes valued correctly
Costs & consequences adjusted for differential timing?	Was outcome and cost reported in present value? Did the authors appropriately discount value from trial conduct year to year of publication?
Incremental analysis of costs & consequences performed?	Were the incremental costs analyzed in relation to the additional benefit it delivers, and was it appropriate?
Allowance made for uncertainty in estimates?	Were the main areas of uncertainty considered and described in uncertainty analysis?
Presentation & discussion of study results include all issues of concern to users?	Was the weaknesses of the analysis and how results was reached discussed? Helping readers interpret their results.

Appendix S4 costs included

Included cost to health care perspective.			
	Secondary sector		
Cost included +/-	Milte et al	Taraldsen et al	Prestmo et al
Somatic hospital stay	+	+	+
Psychiatric hospital stay	-	+	-
Outpatient visit somatic	+	+	+
Outpatient visit psychiatric	-	+	-
Surgery	-	-	+
Hospital stay post discharge	-	-	+
Ambulatory rehabilitation	+	-	-
	Primary sector		
Rehabilitation stay	+	+	+
Nursing home stay	+	+	+
Home care	+	+	+
Physical therapists	+	+	+
Private physical therapists	-	+	-
Occupational therapists	-	+	-
Other allied health visits	+	-	-
Home care services	+	+	+
Safety alarms	-	+	+
Meal on wheels	-	+	+
Daycenter visits	-	+	+
General practitioner	+	-	+
Dietetics visits	+	-	-
Protein supplements	+	-	-
Medication	+	-	-
Medical test claimed	+	-	-
Procedures claimed	+	-	-
Other claims	+	-	-

Appendix S5 – Transferability assessment

Transferability between Milte. R 2016 and Denmark		
General knockout criteria		
Countries	Australia	Denmark
The evaluated technology is not comparable to the one that shall be used in the decision country		Passed
The comparator is not comparable to the that is relevant to the decision country		Passed
The study does not poses an acceptable quality		Passed
	Correspondence between study (Australia) and decision country (3)	ICER of decision country based on ICER of study country is:
Methodological characteristics		
Perspective	Health care sector perspective including community costs	Medium to high
Discount rate	Not described due to timeframe	Unbiased (short)
Medical cost approach	High	unbiased
Productivity cost approach	Not relevant	
Medical system characteristics		
Absolute and relative prices in health care	High	High
Practice variation	Low (description of setting limited)	High
Technology assess	High	Unbiased
Population characteristics		
Disease incidence/prevalence	High	Unbiased
Case-mix	High	Unbiased
Life expectancy	High	Unbiased
Health status preferences	High	Unbiased
Acceptance, compliance and incentives to persons	High	Unbiased
Productivity and work-loss time	Not relevant	
Disease spread	High	Unbiased

Transferability between Taraldsen, R. 2019 and Denmark		
General knockout criteria		
Countries	Norway	Denmark
The evaluated technology is not comparable to the one that shall be used in the decision country		Passed
The comparator is not comparable to the that is relevant to the decision country		Passed
The study does not poses an acceptable quality		Passed
	Correspondence between study (Australia) and decision country (3)	ICER of decision country based on ICER of study country is:
Methodological characteristics		
Perspective	Broad health care sector perspective	High
Discount rate	Not described	Unbiased (short)
Medical cost approach	High	unbiased
Productivity cost approach	Not relevant	
Medical system characteristics		
Absolute and relative prices in health care	High	Unbiased
Practice variation	High	Unbiased
Technology assess	High	Unbiased
Population characteristics		
Disease incidence/prevalence	High	Unbiased
Case-mix	High	Unbiased
Life expectancy	High	Unbiased
Health status preferences	High	Unbiased

Acceptance, compliance and incentives to persons	High	Unbiased
Productivity and work-loss time	Not relevant	
Disease spread	High	Unbiased

Transferability between Prestmo, A. 2015 and Denmark		
General knockout criteria		
Countries	Norway	Denmark
The evaluated technology is not comparable to the one that shall be used in the decision country		Passed
The comparator is not comparable to the that is relevant to the decision country		Passed
The study does not poses an acceptable quality		Passed
	Correspondence between study (Australia) and decision country (3)	ICER of decision country based on ICER of study country is:
Methodological characteristics		
Perspective	Broad health care sector perspective	High
Discount rate	Not described	Unbiased (short)
Medical cost approach	High	unbiased
Productivity cost approach	Not relevant	
Medical system characteristics		
Absolute and relative prices in health care	High	Unbiased
Practice variation	High	Unbiased
Technology assess	High	Unbiased
Population characteristics		
Disease incidence/prevalence	High	Unbiased
Case-mix	High	Unbiased
Life expectancy	High	Unbiased
Health status preferences	High	Unbiased
Acceptance, compliance and incentives to persons	High	Unbiased
Productivity and work-loss time	Not relevant	
Disease spread	High	Unbiased

1. Milte R, Miller MD, Crotty M, Mackintosh S, Thomas S, Cameron ID, et al. Cost-effectiveness of individualized nutrition and exercise therapy for rehabilitation following hip fracture. *Journal of rehabilitation medicine*. 2016;48(4):378-85.
2. Drummond M, Sculpher MJ, Claxton K, Stoddart GL, Torrance GW. *Methods for the economic evaluation of health care programmes*. Fourth ed. Oxford: Oxford University Press; 2015.
3. Komadina R. Hip, Osteoporosis: New Paradigm. *European journal of trauma and emergency surgery* : official publication of the European Trauma Society. 2008;34(2):163-70.