Characteristics of included studies

Table 1. Alegria 2019[1-3] study characteristics

Methods	Aims: To test the acceptability and effectiveness of a disability prevention intervention, Positive Minds-Strong Bodies (PMSB), offered by paraprofessionals to mostly immigrant elders in four languages. Design: Randomised Controlled Trial
Participants	Characterisation: Minority and immigrant elders eligible for disability prevention services but not seeking it Country: USA Setting: Community-based organizations in Massachusetts, New York, Florida, and Puerto Rico serving minority elders. Enrolment started in 2015 Participants assigned: 307 Inclusion criteria: 1. 60+ years of age

	2. Fluent in English, Spanish, Cantonese, or Mandarin 3. Scored 5 or more on the Patient Health Questionnaire (PHQ-9), the Generalized Anxiety Disorder 7-item Scale (GAD-7), or the Geriatric Depression Scale (GDS-15) 4. Also scored between 3 and 11, representing minor to moderate disability, on the Short Physical Performance Battery Exclusion criteria: 1. Current substance use disorders 2. Received mental health treatment within the prior 3 months or had an appointment within the next month 3. Lacked capacity to consent 4. Homebound 5. Had a neuromusculoskeletal impairment 6. Their physician did not provide medical clearance for exercise or advised against it. 7. If potential participants scored 4 or 5 on the Paykel suicide questionnaire, whereby they were referred to emergency services. Female: 81% Age: 60–64: n= 21 (6.8%) 65-74: n= 133 (43.3% 75+: n= 153 (49.8%) Has informal carer: not reported. Living alone: not reported. Ethnicity: White/Caucasian: n= 31 (10.2%) Black/African/African American: n= 24 (7.9%) American Indian: n= 1 (0.3%) Asian or Pacific Islander: n= 102 (33.7%) Hispanic: n= 136 (44.9%) Other: n= 9 (3.0%) Dependence and disabilities: World Health Organization Disability Assessment Schedule (WHODAS 2.0), mean (SD): IG 21.97 (7.09); CG 22.40 (7.86) Late life function and disability instrument (LLFDI): Function component (LLF), mean (SD): IG 118.42 (25.96); CG 116.75 (26.20) Disability component - limitation, mean (SD): IG 31.28 (11.30); CG 32.24 (12.33) Significant comorbidities: Any chronic conditions (unspecified): n= 268 (87.3%) Health status: Self-rated physical health: Excellent: n= 7 (2.3%) Very good: n= 22 (7.2%) Good: n= 101 (33.0%) Fair: n= 143 (46.7%) Poor: n= 33 (10.8%) Cognitive status:

	Not mentioned Mood status: 1. Self-rated mental health Excellent: n= 11 (3.6%) Very good: n= 35 (11.4%) Good: n= 115 (37.5%) Fair: n= 126 (41.0%) Poor: n= 20 (6.5%) 2. Suicidal risk: n= 20 (6.5%) 3. Suicidal attempt: n= 1 (0.3%) 4. Hopkins symptom checklist (HSCL-25) mean(SD): 1.62 (0.44) 5. Geriatric depression (GDS) mean (SD): 5.51 (3.29) 6. Generalized anxiety (GAD-7) mean (SD): 5.99 (4.59) 7. Depression (PHQ-9) mean (SD): 7.98 (4.84) Frailty status: pre-frail Based on characteristics and criteria: 3-11 on SPPB
Interventions	2 groups Intervention 1: Experimental intervention. 153 participants. Positive Minds Strong Bodies (PMSB). A psychosocial intervention including individual cognitive behavioral therapy and group strength exercise training. Grouped as: Exercise and psychology Intervention 2: Control intervention. 154 participants. Enhanced usual care. Usual care, as accessed through the community-based organisation, plus suicide screening and written material from the NIH on depression, anxiety, and physical health for elders. Grouped as: Available care
Outcomes	Outcomes included in NMA: Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Personal and instrumental activities of daily living: LLFDI: Function component overall score (Jette *et al.*, 2002; Sayers *et al.*, 2004) (Raw score - range 32-160) Outcomes not included in this review because insufficient data were reported: Health status: 12-item short form survey (SF-12): Physical component summary, SF-12: mental component summary Depression: PHQ-9, Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986) Other outcomes not specified as of interest for this review: LLFDI: Disability component - limitation total dimension (Jette *et al.*, 2002) (Raw score - range 16-80) (WHODAS 2.0) (2010 version) (12-items, score range 12-60) Short physical performance battery (SPPB= chair stands, balance, gait)

	Fidelity of intervention delivery Acceptability (Satisfaction, attendance) Satisfaction with treatment Generalized Anxiety Disorder 7-item scale (GAD-7) Hopkins symptom checklist (HSCL-25): first 10 questions on anxiety, second 15 on depression Paykel Suicide Risk Questionnaire Pharmacotherapy for Depression & Anxiety Health Literacy National Latino and American Asian Study (Chronic conditions and health services use) Working Alliance Inventory (WAI) & Kim Alliance Scale: Communication Sub-Scale (KAS) (Community Health Workers and participant interaction)
Timepoints	Outcomes were measured at 2 months, 6 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: National Institute on Aging, and the National Institute of Mental Health Conflicts of interest: No disclosures to report.
Notes	Sensitivity analyses on ITT analysis of intervention effect at 6m - by language, by site, by race/ ethnicity, and by baseline mental health/ fitness service used.

Table 2. Arthanat 2019[4-6] study characteristics

Methods	Aims: To measure the effect of the Individualized Community and Home-Based Access to Technology Training program - i-CHATT in facilitating ICT use and adoption, and self-reported independence among the older adult trainees. Design: Randomised Controlled Trial
Participants	Characterisation: Older adults in demographic cohorts known to under-utilise information communication technology Country: USA Setting: Home-based Enrolment started after 2005 Participants assigned: 97 Inclusion criteria: 65 years and older, met at least one of the following characteristics: 1. 75 years of age or above, 2. living alone 3. below high school education 4. combined household income less than $29,000 5. admittance to the hospital within the last 6 months 6. a physical or sensory disability 7. providing care to a family member with a chronic medical condition 8. belonging to a minority ethnicity group. Exclusion criteria: 1. Self-reported cognitive impairment 2. In long-term care facilities Female: 80%

	Age: Mean (SD) = 76.3 (6.9) Has informal carer: not reported. Living alone: 74% Ethnicity: White ethnicity = 97.7% Dependence and disabilities: Not mentioned. Significant comorbidities: Not mentioned Health status: Not mentioned. Cognitive status: No self-reported cognitive impairment (implied from exclusion criteria). Mood status: Not mentioned Frailty status: unclassifiable.
Interventions	2 groups Intervention 1: Experimental intervention. 48 participants. Individualized Community and Home-Based Access to Technology Training (i-CHATT). A novel home-based individualized inter-generational information communication technology (ICT) training program. Grouped as: Telecoms Intervention 2: Control intervention. 49 participants. Control. The arm was not provided any ICT training from the study. Grouped as: Available care
Outcomes	Outcomes not included in this review because insufficient data were reported: Mortality: Deaths (reported as loss to follow-up) Other outcomes not specified as of interest for this review: Range of Information Community Technology (ICT) Activities Performed per month Information Community Technology (ICT) Frequency of Use Per Month Attitude Toward Technology (Survey of Technology Use) Self-reported Independence
Timepoints	Outcomes were measured at 6 months, 18 months, 1 years and 2 years
Funding and conflicts of interest	Funding: Non-commercial Sources: National Institute on Aging of the National Institutes of Health, USA Conflicts of interest: The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.
Notes	Imputation was used in data analysis.

Table 3. Auvinen 2020[7-10] study characteristics

Methods	Aims: Investigate effects of interprofessional medication assessment on medication, functional capacity, quality of life & use of health & home care services in home care patients Design: Randomised Controlled Trial
Participants	Characterisation: Receiving regular home care services Country: Finland Setting: Home care services Enrolment started in 2015 Participants assigned: 512 Inclusion criteria: age at least 65 years and registration with public home care services, and at least one of the following: currently taking ≥ 6 medicines daily, currently having dizziness, orthostatic hypotension, or experienced a fall in previous 12 months. Exclusion criteria: Patients whose medication was not managed by home care and patients with active cancer therapy. Female: 72% Age: Mean (SD) = 83.5 (6.5) Has informal carer: not reported. Living alone: 76% Ethnicity: Not reported Dependence and disabilities: Katz Index of Independence in Activities of Daily Living (Katz ADL) mean (SD): intervention arm 5.0 (1.3) control arm 4.9 (1.2) p=0.145 IADL (Lawton and Brody) mean (SD): intervention arm 4.1 (2.0) control arm 4.2 (2.1) p=0.986 Significant comorbidities: Chronic diseases, n (%) Cardiovascular diseases IG n=234 (92%) CG n=237 (92%) Diseases of musculoskeletal system IG n=158 (62%) CG n=155 (61%) Diabetes IG n=91 (35%) CG n=92 (36%) Cerebrovascular diseases IG n=79 (31%) CG n=81 (32%) Dementia IG n=84 (33%) CG n=73 (29%) Respiratory diseases IG n=52 (20%) CG n=43 (17%) Psychiatric diseases IG n=49 (19%) CG n=39 (15%) Cancer IG n=46 (18%) CG n=33 (13%) Gastrointestinal diseases IG n=41 (16%) CG n=36 (14%) Neurological diseases IG n=36 (14%) CG n=32 (13%) Charlson comorbidity index mean (SD) IG 2.6 (1.6) CG 2.4 (1.6) Health status: Charlson comorbidity index mean (SD) Intervention arm 2.6 (1.6) control arm 2.4 (1.6) p=0.130 Euroqol-5D (EQ-5D) score mean (SD) Intervention arm 0.58 (0.25) control arm 0.59 (0.25) p=0.813

	EQ-5D visual analogue scale (VAS) mean (SD) Intervention arm 58 (17) control arm 56 (18) p=0.455 Cognitive status: MMSE mean (SD) Intervention arm 22.9 (4.1) Control arm 23.1 (4.6) P=0.469 Mood status: Geriatric Depression Scale-15 (GDS-15) mean (SD) Intervention arm 5.4 (3.2) Control arm 5.0 (3.1) P=0.085 Frailty status: frail Based on characteristics and criteria: homecare and geriatric conditions
Interventions	2 groups Intervention 1: Experimental intervention. 258 participants. Finnish Interprofessional Medication Assessment (FIMA), plus usual home care services. Grouped as: Homecare and medication-review Intervention 2: Control intervention. 254 participants. Usual public home care services. Grouped as: Homecare
Outcomes	Outcomes included in network meta-analysis (NMA): Personal activities of daily living: Katz ADL Scale (Katz *et al.*, 1963) (Reverse scoring, 6 questions) Instrumental activities of daily living: Lawton IADL scale (0-8) (Lawton & Brody 1969) Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Hospitalisation: Hospitalisation (admissions/ last 6 months) Health status: EQ-5D EQ-VAS (Health today 0-100), EQ-5D-3L (self-completion) Depression: GDS 15 (Sheikh & Yesavage, 1986) Other outcomes not specified as of interest for this review: Home care (visits / last 6 months) Timed up and go (TUG) test Mini mental state examination (MMSE) Orthostatic hypotension (by blood pressure and heart rate measurements) Renal function: Glomerular filtration rate (GFR) Number of medicines Anatomical Therapeutic Chemical Classification System (ATC) classification Use of health care services (visits to physician, nursing care at home) Needs of services delivered to home Individual costs of medicines, visits (doctor / nurse), hospital, health centre, domiciliary care (total costs of healthcare or experimental intervention not reported).

Timepoints	Outcomes were measured at 6 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Ministry of Social Affairs and Health, Finland Conflicts of interest: No competing interests.
Notes	EQ5D utility scores not reported at follow-ups, only reported VAS.

Table 4. Balaban 1988[11] study characteristics

Methods	Aims: Primary question for this follow-up study was, can differences between experimental and control arm patients relating to functional status, psychosocial status and well being, mortality, and utilization of health services be identified? Design: Randomised Controlled Trial
Participants	Characterisation: Patients who potentially could benefit from home visits. Country: USA Setting: an urban family practice in an academic setting Enrolment started in 1981 Participants assigned: 198 Inclusion criteria: (1) partial or total disability to the extent that mobility is seriously impaired, (2) living alone and aged over 65 years, (3) not likely to maintain contact with physician, (4) major expenditure of energy and resources required to get to physician, (5) chronic debilitating disease, (6) contact with social support network desirable but difficult to obtain through office visits, or (7) critical aspects of the patient database obtainable only through home visits. In June of 1981, before the home visit program formally began, all residents and faculty were asked to consider which patients would meet any one of these criteria. Exclusion criteria: None stated Female: 76% Age: Mean = 68.4; Range: 17 to 99 Has informal carer: not reported. Living alone: not reported. Ethnicity: Black: n= 137 (70%) Dependence and disabilities: Not mentioned. Significant comorbidities: (Collected from general practitioner records at follow-up) Hypertension: n= 112(57%) Arthritis: n= 61 (31%)

	Diabetes: n= 62 (31%) Arteriosclerotic heart disease: n= 38(19%) Depression: n= 41 (21%) Congestive heart failure: n= 42 (21%) Health status: Not mentioned. Cognitive status: Not mentioned. Mood status: Not mentioned. Frailty status: frail Based on characteristics and criteria: Barthel Index: partial or total disability to extent that mobility seriously impaired & chronic debilitating disease
Interventions	2 groups Intervention 1: Experimental intervention. 103 participants. Home visit program and usual office-based care. Grouped as: Multifactorial-action with medication review Intervention 2: Control intervention. 95 participants. Office-based care with family physician. Grouped as: Available care
Outcomes	Outcomes included in NMA: Personal activities of daily living: Barthel index (0-100 scale) (Mahoney & Barthel, 1965) Tabulated outcomes: Hospitalisation: Hospitalisation (days or nights/ last 12 mth), Hospitalisation (days or nights / only admitted participants / last 12 mth), Hospitalisation (admissions/ last 12 mth) Health status: Quality of Well-being (QWB) Scale Depression: Beck Depression Inventory-Short Form (BDI-SF) Mortality: Deaths (from routine data) Outcomes of interest with bespoke measures: Health status Outcomes not included in this review because insufficient data were reported: Care home admission: Care Home (long-term) (participants) Other outcomes not specified as of interest for this review: A questionnaire on utilization of health services (inpatient, outpatient, and long-term care) for the 365 days prior to the interview (developed by the investigators)

	A questionnaire on patient characteristics and attitudes that may influence health outcomes, developed by the investigators based on methods developed at the National Center for Health Services Research The Patient Satisfaction Questionnaire, the humaneness of care, continuity of care, and general satisfaction with health care subscales The Philadelphia Geriatric Center Morale Scale, a measure of patient mood and motivation A global health status visual analog scale developed by the investigators for this study Utilization of family medicine physician services (office and home visits) Major diagnoses
Timepoint	Outcomes were measured at 2 years
Funding and conflicts of interest	Funding: Non-commercial Sources: Robert Wood Johnson Foundation Conflicts of interest: Not mentioned.
Notes	Because of the lack of prior research experience of the home visit team and the limited availability of resources for research, neither baseline nor follow-up data were collected. In August 1983, following the formation of a research division in the department, funding was obtained to collect health outcome and utilization information on all randomized patients. 1. At 2yr follow-up, total n used in report = 143 (IG n= 69, CG n= 74) who were alive and in all types of interviews; in-person interview total n= 86 (IG n= 40 CG n= 46). 2. Because of the limited research experience and availability of resources for research, baseline data were not collected.

Table 5. Barenfeld 2018[12-16] study characteristics

Methods	Aims: To implement and evaluate a linguistically adapted, evidence-based, health-promoting intervention with a person-centred approach for ageing persons migrated to Sweden from Finland or Balkan Peninsula. Design: Randomised Controlled Trial
Participants	Characterisation: Persons 70+ who have migrated to Sweden Country: Sweden Setting: Community (for meetings) and participant's residence (home visit) Enrolment started in 2012 Participants assigned: 131 Inclusion criteria: - migrated to Sweden from Finland or the Balkan Peninsula - ≥ 70 years old - community-dwelling and independent of help from another person in activities of daily living (ADL), as measured by the ADL-staircase - living in an urban district in a medium-sized city - living in ordinary housing Exclusion criteria: Impaired cognition [Mini Mental State Examination (MMSE) below 80% of administered items].

	Female: 50% Age: Mean (SD) = 74.1 (3.4); Range: 70 to 84 Has informal carer: not reported. Living alone: 48% Ethnicity: (Not ethnicity) Migrated from, n (%): Western Balkan region: n= 60 (46%) Finland: n= 71 (54%) Dependence and disabilities: Independent in ADL (ADL Staircase): n=131 (100%) Significant comorbidities: Not mentioned. Health status: Health rated as good or excellent (36-Item Short Form Survey (SF-36) [SF-36] EVGFP question): n= 89 (68%) Cognitive status: Measured, not reported. Mood status: Measured, not reported Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: unselected (migrants)
Interventions	2 groups Intervention 1: Experimental intervention. 56 participants. Promoting Aging Migrants Capabilities (PAMC). Weekly group-sessions and an individual follow-up home visit. Linguistically adapted, evidence-based, person-centered group-based health-promoting intervention. Grouped as: Education Intervention 2: Control intervention. 75 participants. Conventional care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Mortality: Deaths (reported as loss to follow-up) Outcomes not included in this review because insufficient data were reported: Health status: Health Perception (EVGFP / 1-5, SF-36) Depression: Geriatric Depression Scale (GDS 20, Swedish version) Falls: Falls incidents (Instrument and results not reported) Other outcomes not specified as of interest for this review: Loneliness (improved) (Gustafsson 2015 and Dahlin-Ivanoff 2010) ADL Staircase (categorised as independent) (9 items) Fatigue (Mobility-tiredness scale) Grip strength (North Coast-dynamometer)

	Physical activity (Physical and domestic activity scale) Participation/leisure activities Balance (Berg balance scale) Gait speed (Four-meter walking test) Weight loss and symptoms (The Göteborg Quality of life Instrument) Cognition (MMSE) Visual impairment (KM-visual acuity chart) Fear of falls Life satisfaction (Fugl-Meyer – Life-Satisfaction Questionnaire-11) Assistive technology Social support Healthcare consumption Depression (instrument details unclear, no results)
Timepoints	Outcomes were measured at 6 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Swedish Institute for Health Sciences (Vårdalinstitutet), the Swedish research council for Health, Working life and Welfare (AGECAP 2013-2300); and Hjalmar Svensson Foundation. Conflicts of interest: No financial or other competing interests.
Notes	ADL outcome only reported from PAMC intervention (131 participants). Used median change of deterioration for imputation.

Table 6. Bernabei 1998[17-19] study characteristics

Methods	Aims: To evaluate the impact of a programme of integrated social and medical care among frail elderly people living in the community. Design: Randomised Controlled Trial
Participants	Characterisation: >65 years old, received home health services or home assistance programmes Country: Italy Setting: Town in northern Italy (Rovereto): participant's residence (intervention provided by community geriatric evaluation unit, and GPs) Enrolment started in 1995 Participants assigned: 200 Inclusion criteria: all people aged 65 and over [in the town of Rovereto] who were recipients of home health services or home assistance programmes Exclusion criteria: none stated Female: 71% Age: Mean (SD) = 81 (7.2) Has informal carer: 72% Living alone: 50% Ethnicity: Not specified. Dependence and disabilities: Activities of daily living (ADL) (0-6) 2.0 (2.1) 2.3 (2.3) Instrumental activities of daily living (IADL) (0-7) 3.8 (2.2) 4.4 (2.2)

	Significant comorbidities: Mean (SD) number of medical conditions: IG (n=99) 4.7 (2.1); CG (n=100) 4.8 (1.7) Health status: Mean (SD) No. of medical conditions: IG= 4.7 (2.1) CG= 4.8 (1.7) Mean (SD) No. of medications: IG= 4.5 (2.2) CG= 4.3 (2.2) Cognitive status: Short portable mental status questionnaire (0-10), mean (SD): IG (n=99) 2.7 (3.0); CG (n=100) 3.1 (3.3) Mood status: The mean and standard deviation for the Geriatric Depression Scale (0-30) was 10.1 (5.3) for the intervention arm and 11.2 (6.5) for the control arm. Frailty status: frail Based on characteristics and criteria: Homecare
Interventions	2 groups Intervention 1: Experimental intervention. 100 participants. Integrated care, including social and medical care and case management. Grouped as: Homecare, multifactorial-action and review with medication review Intervention 2: Control intervention. 100 participants. Standard care. Grouped as: Homecare
Outcomes	Outcomes included in network meta-analysis (NM)A: Personal activities of daily living: ADLs (0-6), British Columbia Long-Term Care programme application and assessment, modified validated version (Abate 1992) Instrumental activities of daily living: IADLs (0-7), British Columbia Long-Term Care programme application and assessment, modified validated verison (Abate 1992) Depression: Geriatric Depression Scale (GDS) (Long version, 30 questions) (Yesavage *et al.*, 1983) Mortality: Deaths (from routine data) Tabulated outcomes: Homecare services usage: Home care (hours/ person/ year) Hospitalisation: Hospitalisation (days or nights/ last 12 months), Hospitalisation (pts hospitalised once or more) Care home admission: Nursing home (long-term) (days per year), Nursing home (long-term) (patients) Outcomes not included in this review because insufficient data were reported: Costs: Costs to health care and social services

	Other outcomes not specified as of interest for this review: Hospital emergency department (pts visited once or more) Nursing home or hospital admissions (hazard ratio) Short Portable Mental Status Questionnaire Use of Health services (including number of home visits provided by general practitioners) Complete list of diagnoses and drug treatments Mean number of medications IADL (7-item, score 0-7, higher = worse) - unclear what scale/ questions used ADL (6-item, 0 = independence, 6 = total dependence) - unclear what scale/ questions used Nursing care at home (hours/ person/ year)
Timepoint	Outcomes were measured at 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Progetto Finalizzato Invecchiamento, National Research Council. Conflicts of interest: "Conflict of interest: None."
Notes	In the event of admission to hospital or a nursing home patients remained in the study. Other than deaths, no other loss of follow-up information reported.

Table 7. Bleijenberg 2016[20-29] study charactistics

Methods	Aims: To determine the effectiveness of a proactive primary care program on the daily functioning of older people in primary care Design: Cluster RCT Clustering accounted for. Details: 3 arm cluster RCT
Participants	Characterisation: Potentially frail, community-dwelling people aged 60 and older Country: Netherlands Setting: Community / general practices Enrolment started in 2010 Clusters assigned: 39 Participants assigned: 3092 Inclusion criteria: The target group of this project is made up of potentially frail older people in general practice setting, who are defined as persons of 60 years and older with: 1. Multimorbidity (defined as a moderate-to-high frailty index score, which is a reflection of the proportion of health deficits present.), AND / OR; 2. Polypharmacy (defined as the actual chronic use of 4 or more different medications), AND / OR; 3. A care gap in primary care of > 3 years, except for the yearly influenza vaccination. Exclusion criteria:

	1. Terminally ill patients; 2. Patients living in or on a waiting list for an elderly home or nursing home. Female: 55% Age: Mean (SD) = 74.2 (8.4) Has informal carer: not reported. Living alone: 28% Ethnicity: Native Dutch, n (%): Group 1 n=669 (91.8%) Group 2 n=1223 (93.1%) Group 3 n=757 (94.3%) Dependence and disabilities: Katz-ADL)-15 score, mean (SD): screening arm: 1.60 (2.29); screening plus nurse-led care arm: 1.73 (2.22); control arm: 1.74 (2.36) Significant comorbidities: Not mentioned. Health status: EQ-5D, Dutch version score, mean (SD): screening arm: 0.75 (0.23); screening plus nurse-led care arm: 0.73 (0.24); control arm: 0.75 (0.22) Cognitive status: Not mentioned. Mood status: SFS-36 mental health subscale: screening arm: 68.5 (19.5); screening plus nurse-led care arm: 69.2 (19.1); control arm: 71.6 (17.9) Frailty status: pre-frail and frail Validated measure: An electronic FI and Groningen
Interventions	3 groups Intervention 1: Experimental intervention. 14 clusters, 790 participants. Utrecht Periodic Risk Identification and Monitoring system (U-PRIM) using routine healthcare data. Grouped as: Risk-screening Intervention 2: Experimental intervention. 13 clusters, 1446 participants. Utrecht Periodic Risk Identification and Monitoring system (U-PRIM) using routine healthcare data plus U-CARE Nurse-led multidisciplinary intervention program. Grouped as: Risk-screening Intervention 3: Control intervention. 12 clusters, 856 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA:

	Personal activities of daily living: Katz ADL Scale (Katz *et al.*, 1963) (Range 0-6, 6 questions) Depression: SF-36: Mental Health Mortality: Deaths (from routine data) Tabulated outcomes: Personal and instrumental activities of daily living: Katz ADL-15 (0-15) Hospitalisation: Hospitalisation (admissions/ last 12 months) Health status: EQ-5D-3L (self-completion) Outcomes not included in this review because insufficient data were reported: Care home admission: Nursing home (long-term) (pts) Costs: Costs to health care services Cost effectiveness: incremental cost-effectiveness ratio (ICER) (used in Bleijenberg 2012) Other outcomes not specified as of interest for this review: Hospital emergency department (visits) Qualitative study: Expectation, experiences, barriers and facilitators of GP and Practice Nurses; Treatment fidelity delivered by the nurses; Patient satisfaction with changes in primary healthcare and data collection methods Healthcare consumption (no. of contacts with general practitioner (GP), GP assistant, practice nurse, healthcare assistant; medication use; consultation with General Social Work, elderly care, physical therapy, homecare Frailty index score Time spent on informal caring and burden of care for informal carer; health status and quality of life of informal carer (Caregiver burden measured with Self-Rated Burden (visual analogue scale [VAS]) and Carer-quality of life) Perceived QoL score (range 0–10) (scale details not reported) RAND-36 (physical, social, vitality subscales)
Timepoints	Outcomes were measured at 6 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: National Programme of Elderly Care (ZonMw); Netherlands Organisation for Health Research & Development Conflicts of interest: None of the authors have declared any conflict of interest.
Notes	39 GP practices randomised, 4 dropout (1 closedown, 3 technical UPRIM failure).

Table 8. Blom 2016[28, 30-32] study characteristics

Methods	Aims: To assess the effectiveness and cost-effectiveness of a structural monitoring system to detect the deterioration in somatic, functional, mental or social health of individuals aged 75+ followed by a care plan for those people with multiple complex problem Design: Cluster randomised controlled trial Clustering accounted for.
Participants	Characterisation: persons aged ≥75

Country: Netherlands
Setting: General practices in region of Neiden
Enrolment started in 2009
Clusters assigned: 59
Participants assigned: 1379

Inclusion criteria:
Inclusion criteria for screening:
1. People aged 75 years and over;
2. Enlisted in general practices.
Inclusion criteria for general practitioner (GP) care plan in

intervention practices:
1. Poor performance on =>3 out of 4 domains on screening questionnaire.

Exclusion criteria:
Terminal illness
Life expectancy of ≤3 months.
Admitted to nursing home
non-Dutch speaking

Exclusion criteria for GP care plan: None.

Female: 72%
Age: Intervention arm: (n=288): median 82.0 (IQR 78.8; 86.9)
Control arm (n=1091): median 83.7 (IQR 79.8;88.0)
Has informal carer: not reported.
Living alone: not reported.
Ethnicity: Not mentioned.

Dependence and disabilities:
Groningen Activity Restriction scale (GARS) score:
Intervention arm (n=288): median 36 (IQR 27;45)
Control arm (n=1091): median 37 (IQR 29;46)

Significant comorbidities:
Not mentioned.

Health status:
Cantril's ladder (quality of life): median (IQR) Intervention arm 7 (6–8); control arm 7 (6–8)

Cognitive status:
Median (IQR) Intervention arm 28 (26; 29), control arm 27 (25; 29)

Mood status:
Geriatric Depression Scale (GDS):
Intervention arm (n=288): median 2 (IQR 1;4)
Control arm (n=1091): median 3 (IQR 1;5)

De Jong-Gierveld Loneliness scale:
Intervention arm (n=288): median 3 (IQR 1;5)
Control arm (n=1091): median 4 (IQR 1;6)

	Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: GP vulnerability rating
Interventions	2 groups Intervention 1: Experimental intervention. 288 participants. Integrated Systematic Care for Older PEople (ISCOPE). A monitoring system to detect the deterioration in somatic, functional, mental or social health followed by the elaboration of a care plan executed by the GP Grouped as: Multifactorial-action with medication review and self-management strategies Intervention 2: Control intervention. 1091 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in network meta-analysis (NMA): Living at home: Living at home (calculated, from losses to follow up) Personal activities of daily living (ADL): Groningen Activity Restriction Scale (GARS) Instrumental activities of daily living (IADL): Groningen Activity Restriction Scale (GARS) Care home admission: Care-home placement (survivors/follow-up) Health status: Health Perception (EVGFP / 1-5, SF-36) Depression: Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986) Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Personal and instrumental activities of daily living: Groningen Activity Restriction Scale (GARS) (overall) Homecare services usage: Home care (pts), Home care (hours) Hospitalisation: Hospitalisation (days or nights) Care home admission: Residential care home (long-term) (days), Nursing home (long-term) (days) Loneliness: Loneliness (de Jong-Gierveld Scale) (0-11) Outcomes not included in this review because insufficient data were reported: Costs: Costs to health care and social services Health status: EQ-5D EQ-VAS (Health today 0-100) Other outcomes not specified as of interest for this review: EQ-5D-3L + C QALY from EQ-5D-3L + C QALY from EQ-5D EQ-VAS (0-100) Quality of life (Cantril's ladder) Percentage home visits during evenings, nights and weekends Satisfaction of participants, GPs and caregivers with delivered care Total score ISCOPE screening (quantity of complex problems) Caregiver's burden of care and quality of life (The Older Persons and Informal Caregivers Survey Minimum DataSet [TOPICS-MDS]) Informal caregiver's time spent on care for the older person

	Mini-mental state examination (MMSE) SF-36 2nd question- 'How do you rate your health compared to one year ago?' Process evaluation and content of care plan
Timepoints	Outcomes were measured at 6 months, 12 months and 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: ZonMw (the Netherlands Organisation for Health Research and Development) Conflicts of interest: No competing interests.
Notes	1. EVGFP and home care results provided by the author, Dr Blom, directly. 2. Because of time limit, participants in the intervention group (IG) practices were further randomly selected to receive the intervention. Those pts (in the IG practices) not selected to receive the intervention were not included in the final analysis. 3. A sensitivity analysis for effectiveness was performed in the group of participants with problems in four domains. 4. Imputed data only used in economic analyses.

Table 9. Borrows 2013[33] study characteristics

Methods	Aims: To determine whether the occupational therapy (OT) service from an independent living centre (ILC) was more or less effective than the routine community occupational therapy service. Design: Randomised Controlled Trial
Participants	Characterisation: Adults living at home. Lower priority referrals for Community OT Country: UK Setting: occupational therapy service from an independent living centre (ILC), Great Yarmouth Borough Enrolment started in 2008 Participants assigned: 36 Inclusion criteria: 1. Clients referred to Great Yarmouth Borough Community OT service, who were screened as being a lower priority referral, e.g., an individual who is finding it difficult to negotiate their stairs. Exclusion criteria: 1. Clients who required an urgent review 2. who were unable to provide consent themselves 3. Children under the age of 16 years Female: 69% Age: Mean (SD) = 70.4 (13.8) Has informal carer: 56% Living alone: 56% Ethnicity: not stated Dependence and disabilities: Community Dependence Index (CDI) overall score, mean (SD): IG = 66.7 (20.1), CG = 66.4 (11.0) Significant comorbidities:

	Not reported Health status: EQ-5D scores, mean (SD): IG = 0.23 (0.36), CG = 0.28 (0.31) Cognitive status: Not reported Mood status: Not reported Frailty status: unclassifiable
Interventions	2 groups Intervention 1: Experimental intervention. 18 participants. Occupational therapy (OT) from an independent living centre (ILC) . Grouped as: Aids Intervention 2: Control intervention. 18 participants. Routine community occupational therapy (OT) services. Grouped as: Multifactorial-action
Outcomes	Outcomes included in NMA: Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Personal activities of daily living: Community Dependence Index (CDI) Health status: EQ-5D-3L (self-completion) Other outcomes not specified as of interest for this review: Equipment for daily living in use by pts (19 items + any other)
Timepoints	Outcomes were measured at 3 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: The British Red Cross provided transport to intervention arm participants to attend the ILC Conflicts of interest: no conflicts of interest. The British Red Cross played no role in the design or analysis of the study
Notes	

Table 10. Botjes 2013[34-36] study characteristics

Methods	Aims: whether completing the Eigen Kracht Wijzer (EKW) [google translate: 'own strengthe pointer'] does indeed lead to older people gaining more insight in their ability to activate various resources themselves Design: Randomised Controlled Trial
Participants	Characterisation: community-dwelling people over 65-years-old with multiple physical, social or functional problems

	Country: Netherlands Setting: City of Almere: participants' homes Enrolment started in 2011 Participants assigned: 218 Inclusion criteria: 1. Being over 65 years of age 2. Being able to speak and understand Dutch 3. Experiencing multiple problems (physical/ social/ functional) 4. Living in the community of Almere, the Netherlands 5. Being registered to one of the participating organizations Exclusion criteria: 1. Being terminally ill 2. Having filled in the 'Eigen Kracht Wijzer' before Female: 63% Age: Mean (SD) = 77.4 (7.2) Has informal carer: not reported. Living alone: 50% Ethnicity: Not reported Dependence and disabilities: KATZ ADL-15 (median, IQR)): IG 1 (0-3); CG 1 (0-3) Significant comorbidities: Not reported Health status: Health status assessment, n (%): [IG n= 109; CG n=109] Excellent: IG 1 (0.9%); CG 2 (1.8%) Very good: IG 5 (4.6%); CG 4 (3.7%) Good: IG 34 (31.2%); CG 31 (28.4%) Reasonable: IG 55 (50.5%); CG 49 (45.0%) Bad: IG 14 (12.8%); CG 23 (21.1%) EQ-5D + C (median, IQR): IG 0.69 (0.35-0.81); CG 0.73 (0.35-0.81) Cognitive status: Not reported Mood status: Loneliness (median, range): -Loneliness: IG 6 (0-11); CG 6 (0-11) -Emotional loneliness: IG 3 (0-6); CG 3 (0-6) -Social loneliness: IG 3 (0-5); CG 3 (0-5) Frailty status: unclassifiable
Interventions	2 groups Intervention 1: Experimental intervention. 109 participants.

	EigenKrachtWijzer (EKW). A digital instrument in the form of a questionnaire and solution suggestions for improving the living situation Grouped as: Multifactorial-action Intervention 2: Control intervention. 109 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes not included in this review because insufficient data were reported: Personal and instrumental activities of daily living: Katz-15 (0-15) Health status: EQ-5D (unclear of version, no result) Loneliness: Loneliness (de Jong-Gierveld Scale) (0-11) Other outcomes not specified as of interest for this review: Impact on Participation and Autonomy (IPA)
Timepoints	Outcomes were measured at 4 weeks and 6 months
Funding and conflicts of interest	Funding: Non-commercial Sources: The Netherlands Organisation for Health Research and Development Conflicts of interest: None stated
Notes	

Table 11. Bouman 2008[37-42] study characteristics

Methods	Aims: To investigate the effects of systematic home visits by home nurses to elderly people with (perceived) health problems in terms of their health status, the use of care services and the cost-effectiveness. Design: Randomised Controlled Trial
Participants	Characterisation: Country: Netherlands Setting: local home care organisation (participants living at home) Enrolment started in 2002 Participants assigned: 330 Inclusion criteria: -age between 70 and 84 years -still living at home -living in 14 districts in the research area -self-reported mark for health < 6/10 Exclusion criteria: -Persons who reported their health status as moderate to good (a score of >=6 on a scale of 1–10), -who already received home nursing care on a regular basis, -or who were on a waiting list for admission to a nursing home or home for older people -on advice of general practitioner (GP) (severely or terminally ill and would probably die within 6 months) Female: not reported. Age: Mean (SD) = 75.7 (3.8)

	Has informal carer: not reported. Living alone: 35% Ethnicity: Not stated Dependence and disabilities: No. activities of daily living (ADL) dependencies intervention 0 73 (46%) 1-11 86 (54%) Control 0 81 (48%) 1-11 (52%) No. insstrumental activities of daily living (IADL) dependencies intervention 0-1 76 (49%) 2-7 79 (51%) Control 0-1 83 (50%) 2-7 (50%) Significant comorbidities: Not reported Health status: Self-reported health score (scale 1-10 higher is better, score < 6 included) Intervention 1-4 62 (39%) 5 98 (61%) Control 1-4 67 (39%) 5 103 (61%) Cognitive status: Not reported Mood status: Medical Outcomes Study 20 item short form survey mental health baseline score (reported for those who completed follow up) mean (SD) intervention 54 (20.3) control 51 (21.4) Frailty status: pre-frail and frail Based on characteristics and criteria: poor self-rated health
Interventions	2 groups Intervention 1: Experimental intervention. 160 participants. Systematic home visits. Visits to elderly people with (perceived) health problems by home nurses. Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 170 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in network meta-analysis (NMA): Personal ADL: Groningen Activity Restriction Scale (GARS) (ADL) IADL: GARS Hospitalisation: Hospitalisation (pts hospitalised once or more) Health status: Self-rated Health (Dutch educational system) Depression: Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986) Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Homecare services usage: Home care - domestic care only (hours), Home care - personal care only (hours) Hospitalisation: Hospitalisation (days or nights), Hospitalisation (admissions)

	Care home admission: Care-home placement (including deaths), Nursing home (long-term) (days) Depression: 20-Item Short Form Survey (SF-20): Mental Health Loneliness: Loneliness (de Jong-Gierveld Scale) (0-11) Outcomes not included in this review because insufficient data were reported: Personal and IADL: GARS (overall) Homecare services usage: Home care - personal care only (patients), Home care - domestic care only (patients) Costs: Costs to health care and social services Other outcomes not specified as of interest for this review: SF-20 social functioning 36-Item Short Form Survey change in health (modified period) Changes in three self-reported problems Symptom Checklist-90 (2 subscales) Mini-mental state examination-12 Mastery Scale Social Support List (SSL)12-1 Volume of medication Frequency and duration of care from the following services: domestic and community nursing care, GP, physiotherapy, day care in institutional care settings, hospital outpatient clinics, hospital, nursing home, home for the elderly, use of aids and modifications to the home. RAND-36 health change question Process evaluation of the content of the visits, patient's compliance with the given recommendations , and experiences of the participants and nurses in the intervention programme.
Timepoints	Outcomes were measured at 12 months, 18 months and 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Netherlands Organisation for Health Research and Development (ZonMw) Conflicts of interest: No competing interests.
Notes	1. The unadjusted values (not reported) and their confidence intervals (CI) are similar to the adjusted values. 2. Imputation: last observation carried forward. 3. Sub-group analysis and per-protocol analysis also conducted.

Table 12. Brettschneider 2015[43-47] study characteristics

Methods	Aims: To determine whether preventive home visits for people aged 80 and over are effective in the prevention of nursing home admission in Germany. Design: Randomised Controlled Trial
Participants	Characterisation: People aged 80 and over living at home Country: Germany Setting: GP practices Enrolment started in 2007 Participants assigned: 336 Inclusion criteria: - older than 80

	- fluent German speaker - resident of Leipzig or Halle - living at home (i.e., no nursing home resident), or discharging to home (hospital patients) - have to be impaired in at least 3 activities of daily living. Exclusion criteria: -cognitively impaired -not able to give informed consent -have a care level higher than I (according to German long term care insurance). This means that patients were excluded if they needed assistance in more than two activities of basic nursing (e.g., personal hygiene, feeding, mobility) more than once a day. To be eligible for care level 1 the maximum amount of care must not exceed 3 hours a day. Female: 69% Age: Mean (SD) = 85.3 (3.5) Has informal carer: not reported. Living alone: 65% Ethnicity: Not mentioned. Dependence and disabilities: Instrumental activities of daily living (IADL) and Barthel Index follow-up data only Significant comorbidities: Not mentioned. Health status: Euroqol-5 Dimension 3 Level (EQ-5D-3L) (mean (SD)): IG= 0.59 (0.28) CG= 0.60 (0.28) EQ visual analogue scale (VAS) (mean (SD)): IG= 58.41 (19.27) CG= 59.36 (16.50) Cognitive status: Not reported. Mood status: Not mentioned. Frailty status: frail Based on characteristics and criteria: disabled
Interventions	2 groups Intervention 1: Experimental intervention. 150 participants. Preventive home visits. Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 155 participants. Usual care. Grouped as: Available care

Outcomes	Outcomes included in network meta-analysis (NMA): Personal activities of daily living: Barthel index (0-100 scale) (Mahoney & Barthel, 1965) Instrumental activities of daily living: Lawton IADL scale (0-8) (Lawton & Brody 1969) Health status: EQ-5D EQ-VAS (Health today 0-100) Mortality: Deaths (from routine data) Tabulated outcomes: Care home admission: Care-home placement (including deaths) Health status: Quality-adjusted life year (QALY) from EQ-5D-3L, EQ-5D-3L (self-completion) Falls: Falls (incidents / last 12 months) Outcomes not included in this review because insufficient data were reported: Costs: Costs to health services + social services + participant/carer Cost effectiveness: Incremental cost-effectiveness ratio (ICER) - QALY (EQ-5D-3L) Depression: Geriatric Depression Scale 5-item version Other outcomes not specified as of interest for this review: Cognitive function (mini-mental state examination [MMSE]) SoS – Social Situation Questionnaire of Service Utilization and Costs (Health care service utilization and costs) Chronic Disease Score
Timepoint	Outcomes were measured at 18 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Federal Ministry of Education and Research (BMBF grant 01GT0601 and 01GT0604) as project T5 of the German Nursing Research Network "Mitte-Süd". Conflicts of interest: The authors declare that they have no competing interests.
Notes	Health economic analyses: base case analysis (n=304; 1 excluded) and sensitive analysis (n=279) completed.

Table 13. Cameron 2013[48-58] study characteristics

Methods	Aims: Evaluate whether a multifactorial intervention reduces frailty, improves functioning and is cost-effective in older people who are frail. Design: Randomised Controlled Trial
Participants	Characterisation: Adults over the age of 70 years, with 3 or more Fried Frailty Criteria Country: Australia Setting: Home/usual residence Enrolment started in 2008 Participants assigned: 241 Inclusion criteria: 1. Completed treatment at the Division of Rehabilitation and Aged Care Services;

	2. Aged 70 years or older ; 3. defined as frail according to the Cardiovascular Health Study (CHS) Frailty Phenotype - i.e. 3 or more factors 4. Without Moderate/ severe cognitive impairment (i.e. mini-mental state examination [MMSE]>18); 5. Without an illness likely to be associated with a life expectancy of <12 months (estimated by a score of >3 on a modified version of the Implicit Illness Severeity Scale); 6. Not participating in another physical intervention research project; 7. Resident in the Hornsby or Ku-ring-gai local government areas. Exclusion criteria: 1. Declined consent 2. Did not meet all of the inclusion criteria listed above. 3. Residents of nursing care facilities because one of the outcomes of interest is residence in a nursing care facility. Female: 68% Age: Mean (SD) = 83.3 (5.9) Has informal carer: not reported. Living alone: 46% Ethnicity: Not mentioned. Dependence and disabilities: Barthel Index, mean (SD): IG 93.9 (11.1); CG 92.5 (14.3) Significant comorbidities: N coexisting conditions, mean (SD): IG 5.87 (2.33); CG 5.75 (2.24) Health status: Euroqol-5 Dimension (EQ-5D), mean (SD): IG 7.67 (1.47); CG 7.83 (1.50) EQ-5D visual analogue scale (VAS), mean (SD): IG 58.2 (15.8): CG 57.9 (18.4) Cognitive status: MMSE score (mean, SD): IG= 26.6 (2.28) CG= 25.9 (3.14) Mood status: Geriatric Depression Scale-15 (GDS 15) (mean, SD): IG= 4.76 (3.18) CG= 5.06 (3.19) Frailty status: frail Validated measure: Phenotype model
Interventions	2 groups Intervention 1: Experimental intervention. 120 participants. Multifactorial, multidisciplinary frailty intervention. Grouped as: Exercise, multifactorial-action and review with medication review and self-management strategies Intervention 2: Control intervention.

	121 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in network meta-analysis (NMA): Personal activities of daily living: Barthel index (0-100 scale) (Mahoney & Barthel, 1965) Hospitalisation: Hospitalisation (pts hospitalised once or more/ last 12 months) Health status: EQ-5D EQ-VAS (Health today 0-100) Depression: GDS 15 (Sheikh & Yesavage, 1986) Mortality: Deaths (from routine data) Tabulated outcomes: Hospitalisation: Hospitalisation (days or nights/ last 12 months), Hospitalisation (admissions/ last 12 months) Care home admission: Care-home placement (including deaths) Health status: EQ-5D-3L (self-completion), quality-adjusted life year (QALY) from EQ-5D-3L Falls: Falls (incidents) Outcomes not included in this review because insufficient data were reported: Care home admission: Residential care home (long-term) (pts), Nursing home (long-term) (pts), Residential care home (long-term) (days), Nursing home (long-term) (days) Costs: Costs to health care and social services Cost effectiveness: incremental cost-effectiveness ratio (ICER) - per Additional Patient Experiencing Transition from Frailty Falls: Falls (patients fell once or more / last 12 months) Other outcomes not specified as of interest for this review: Residential care home (short-term) (days) Residential care home (short-term) (patients) Home care (visits, ever used) Home care (patients ever used) Timed Up and Go test Short Physical Performance Battery Score Frailty assessment score (Fried *et al.*, 2001) Satisfaction with service provision via a questionnaire Reintegration into Normal Living Index Goal Attainment Scale Life Space Assessment Question: 'Do you get out as much as you would like?' Maximal muscle strength of knee extensors Timed four-meter walk test Activity Measure for Post Acute Care Step Test (balance and mobility) Co-ordinated stability test (balance and mobility) Falls risk assessment Nottingham Extended Activities of Daily Living Index (0-18, mobility components only, not the whole scale) -- previously included in meta-analysis and extracted data, deleted on 12-08-2021. Home care use over 12 months.

	Impact of a frailty intervention on informal carers. A substudy of the Frailty Intervention Trial - FIT (ACTRN12608000565347, nominated unpaid, informal carer of FIT's pts): Caregiver Reaction Assessment Hospital Anxiety Depression Scale Bakas Caregiving Outcomes Scale Caregiving experience in a semi-structured interview
Timepoints	Outcomes were measured at 3 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Australian National Health; Medical Research Council Health Services Research Grant Conflicts of interest: No competing interests.
Notes	Secondary analyses were also carried out to explore the effect of different at of adherence on the outcomes in the intervention arm at the 12-months follow-up.

Table 14. Carpenter 1990[59] study characteristics

Methods	Aims: To test the benefits of regular surveillance of the elderly at home using an activities of daily living questionnaire administered by volunteers. Design: Randomised Controlled Trial.
Participants	Characterisation: the elderly in the community Country: United Kingdom Setting: two general practices Enrolment started before 2006 Participants assigned: 539 Inclusion criteria: -aged 75 years or more at the start of the project -who were living in Andover town, including the surrounding housing estates but excluding the villages Exclusion criteria: 1. Living in residential care. 2. Moved out of the area. 3. could not be traced. Female: 65% Age: 75-84yrs: n= 467 (165 men, 302 women) >=85yrs: n= 72 (23 men, 49 women). Has informal carer: not reported. Living alone: not reported. Ethnicity: Not mentioned. Dependence and disabilities: Winchester disability rating scale (Carpenter 1991): No disability (score 15-20): n= 317 Some disability (score 21-33): n= 187 Considerable disability (score >33): n= 35 Significant comorbidities: Not mentioned.

	Health status: Number of falls in last 1 months: IG: 12; CG: 17 Cognitive status: Not mentioned. Mood status: Not mentioned. Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: unselected
Interventions	2 groups Intervention 1: Experimental intervention. 272 participants. Dependency surveillance. Surveillance using a questionnaire administered by volunteers Grouped as: Risk-screening Intervention 2: Control intervention. 267 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in network meta-analysis (NMA): Living at home: Living at home (calculated, from losses to follow up) Care home admission: Care-home placement (survivors/follow-up) Tabulated outcomes: Hospitalisation: Hospitalisation (days or nights), Hospitalisation (admissions) Care home admission: Care-home placement (including deaths) Falls: Falls (incidents / last 1 month) Mortality: Deaths (reported as loss to follow-up) Outcomes not included in this review because insufficient data were reported: Hospitalisation: Hospitalisation (pts hospitalised once or more) Care home admission: Residential care home (mixed short and long term) (admissions), Residential care home (mixed short and long term) (days) Other outcomes not specified as of interest for this review: Winchester disability rating scale Referrals to meals on wheel Referrals to home helps Number of people received aids to daily living The type and number of aids provided Referrals for day centre attendance Referrals to social services Referrals to occupational therapist Referrals to community support services Contacts with general practitioners

	Referrals to district nurses Referral for domiciliary visits from the geriatric or psychogeriatric services Referral to the psvchogeriatric day hospital Referral to community psychiatric nursing service Referrals to the geriatric day hospital Residential care home (mixed short and long term) (admissions) Residential care home (mixed short and long term) (days) Residential care home (mixed short and long term) (pts)
Timepoint	Outcomes were measured at 3 years
Funding and conflicts of interest	Funding: Non-commercial Sources: Wessex Regional Health Authority. Conflicts of interest: Not mentioned.
Notes	

Table 15. Cesari 2014[60-66] study characteristics

Methods	Aims: To obtain data to accurately project the sample size of a subsequent full-scale study (to be designed) by using the incidence rates of the mobility disability outcome, as well as the drop-in, drop-out, and loss to follow-up rates. Design: Randomised Controlled Trial
Participants	Characterisation: Community-dwelling frail elders Country: France Setting: Community: the area of Labastide-Murat (Lot Department, France) Enrolment started after 2005 Participants assigned: Inclusion criteria: 1) Age of 60 years and older 2) Pre-frailty status (i.e., presence of one or two frailty criteria) or frailty status (i.e. presence of three or more frailty criteria) according to the phenotype described by Fried *et al.* Exclusion criteria: 1) Failure to provide informed consent 2) Inability to complete a 400-meter walk test (primary outcome of the study) 3) Living in nursing home 4) Living outside of Labastide-Murat area, or planning to move out of the area in next 3 years, or planning to leave the area for more than 3 months during the next year 5) Relevant cognitive impairment (defined as a known diagnosis of dementia) 6) Severe progressive, degenerative neurologic disease (e.g., multiple sclerosis) 7) Severe rheumatologic or orthopedic diseases (e.g., awaiting joint replacement); 8) Terminal illness with life expectancy less than 12 months 9) Severe pulmonary disease (e.g., oxygen therapy or chronic use of steroids)

	10) Severe cardiac disease (e.g., NYHA Class III or IV heart failure, clinically significant aortic stenosis, history of cardiac arrest, uncontrolled angina) 11) Recent (past 6 months) overnight hospitalization for one (or more) of the following conditions: heart attack, stroke, cancer, arthritis, diabetes mellitus, and hip fracture 12) Other significant comorbid conditions that would impair the ability to participate in the multidomain intervention (e.g., renal failure on hemodialysis, severe psychiatric disorder, excessive alcohol use) Female: not reported. Age: not reported Has informal carer: not reported. Living alone: not reported. Ethnicity: not reported. Dependence and disabilities: not reported Significant comorbidities: not reported Health status: not reported Cognitive status: not reported Mood status: not reported Frailty status: unclassifiable
Interventions	2 groups Intervention 1: Experimental intervention. Multidomain Intervention to preveNt Disability in ElDers (MINDED). A multidomain person-tailored preventive intervention based on physical activity, cognitive training, and nutritional modification. Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. Usual care. Grouped as: Available care
Outcomes	Outcomes not included in this review because insufficient data were reported: Personal and instrumental activities of daily living: Pepper Assessment Tool for Disability (PAT-D) Health status: EQ-5D (unclear of version, no result) Depression: Geriatric Depression Scale 10-item version Other outcomes not specified as of interest for this review: 4-meter walk Hand grip strength test 400-meter walk test

	Socio-demographic characteristics (age, gender, race, income, marital status) Anthropometric measures (height, weight, waist, hip, and calf circumferences) Behaviors (smoking, alcohol consumption) Clinical conditions (with a pre-defined check-list of self-reported diseases) Pain (using a visuo-analogic scale) Medications use Mini Mental State Examination (MMSE) Mini Nutritional Assessment—Short Form (MNA-SF) Brief Fatigue Inventory (BFI) Blood and urine sample (for the constitution of an ad hoc bio-bank) Estimation of body composition by bioelectrical impedance analysis
Timepoints	Outcomes were measured at 6 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Agence Nationale de Recherche Conflicts of interest: None stated
Notes	Pilot RCT aimed at obtaining the statistical data required for the sample size analysis of the subsequent full-scale study. No results. Unclear planned sample size.

Table 16. Challis 2004[67, 68] study characteristics

Methods	Aims: To ascertain the value of employing a specialist clinician's contribution to the assessment of older people prior to care home entry. Design: Randomised Controlled Trial
Participants	Characterisation: Older people requiring assessment for substantial levels of care, viz. at risk of care admission Country: UK Setting: Social services teams of 2 local authorities Enrolment started in 1998 Participants assigned: 256 Inclusion criteria: • Resident within the catchment areas of the social services elderly teams. • Over the age of 60 years in Manchester and over 65 years in east Cheshire. • Living at home in the community, either in their own home or that of a relative. • Experiencing any physical or mental deterioration that leads the social services care manager to consider the older person for admission to a nursing or residential care home. This might include a recent unexplained history of falling, not eating, immobility, incontinence, symptoms of depression, social withdrawal, confusion or wandering. • Actively discussed as a potential care home admission by the care manager with their team leader. Exclusion criteria: • Self-funding entrants to a care home, not having been assessed by a care manager under the community care legislation.

	• Emergency admissions to a care home, in whose circumstance there would have been insufficient time to mobilise a research clinician if required. However, care managers were encouraged to make referrals of individuals who they considered to be of 'emergency' status, as this was a common social services' perception of an individual's situation. • Given the diagnosis of a terminal illness. This would not have permitted the collation of outcome data or have been appropriate for the type of medical assessment on offer. • Examined by a hospital-based geriatrician or old age psychiatrist within the last 14 days, either at home or as part of a period of stay or attendance at hospital. • Having a medical condition which was being monitored by a specialist other than a geriatrician or old age psychiatrist and which was responsible for the deterioration in health. Female: 73% Age: Mean (SD) = 82 (7.5) Has informal carer: 84% Living alone: 60% Ethnicity: White ethnicity: IG n= 127 (98%), CG n= 127 (100%) Dependence and disabilities: Barthel Index, mean (SD): IG 78.1 (16.6); CG 76.6 (15.2) Significant comorbidities: Data only reported for IG; no complete data for both arms. Health status: Health and functioning sub-scales in 36-Item Short Form Survey (SF-36) not reported at baseline. Cognitive status: Cognitive impairment (mini-mental state examination [MMSE] <24) case, n (%): IG 84 (67%); CG 62 (54%) Mood status: Depression (Geriatric Depression scale [GDS]>5), case (%): IG 49 (39%); CG 42 (35%) Frailty status: frail Based on characteristics and criteria: At risk of care home
Interventions	2 groups Intervention 1: Experimental intervention. 129 participants. Integrated assessment. Care management with additional clinical assessment by old age psychiatrist or geriatrician, for older people at risk of care-home admission. Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 127 participants. Care management for older people at risk of care-home admission.

	Grouped as: Multifactorial-action and review
Outcomes	Outcomes included in network meta-analysis (NMA): Living at home: Living at home (patients) Tabulated outcomes: Personal activities of daily living: Barthel index (0-100 scale) (Mahoney & Barthel, 1965) Hospitalisation: Hospitalisation (patients hospitalised once or more) Care home admission: Care-home placement (including deaths) Depression: GDS (Long version, 30 questions) (Yesavage *et al.*, 1983) Mortality: Deaths (from routine data) Outcomes not included in this review because insufficient data were reported: Homecare services usage: Home care (patients, over a period) Homecare services usage: Home care (hours) Hospitalisation: Hospitalisation (days or nights) Care home admission: Nursing home (long-term) (days), Residential care home (long-term) (days), Nursing home (long-term) (patients), Residential care home (long-term) (patients) Costs: Costs to health services + social services + participant/carer (Costs per week alive), Costs to health services (Costs per week alive) Depression: SF-36: Mental Health Other outcomes not specified as of interest for this review: Hospital emergency department (patients visited once or more) Nursing home (short-term) (patients) Nursing home (short-term) (days) Hospital emergency department (visits) 1. Standardised MMSE (Folstein *et al.*, 1975) 2. Need Shortfall Rating (quality of care) (Challis 2004, 1995; Challis 1981) 3. Social networks (Lubben 1988) 4.SF 36 – Short Form (Change in health) (Ware *et al.*, 1993) 5. Client satisfaction questionnaire-8 (Service satisfaction (Larsen *et al.*, 1979) 6. Life Experiences Checklist (Quality of life) (Ager 1993): BILD Life Experiences Checklist is widely used in a range of service settings to evaluate and measure improvements in home life, leisure, relationships, freedom and opportunities. Each assessment takes around 10 minutes to complete and no special expertise is needed. The measures administered to carers included: 7. Social Behaviour Assessment Schedule (Platt 1983) modified for use with the carers of older people (Challis 1995) 8. General Health Questionnaire-12 (Goldberg 1978) 9. Relative satisfaction scale based upon the CSQ-8 (Larsen 1979) Staff opinions collected by postal questionnaire: 10. Care managers and general practitioners the questionnaire was specific to each older person who was assessed enquiring about its specific utility 11. Clinicians about an overview of the intervention assessment model 12. Costs to social services 13. Adult Placement Scheme (no. of participants, and mean number of days of service users only) 14. Clifton Assessment Procedures for the Elderly (CAPE) Behaviour Rating Scale (Pattie & Gilleard, 1979)

Timepoints	Outcomes were measured at 6 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Department of Health, Community Health Services Research Initiative. Conflicts of interest: Declared none.
Notes	Total number. of participants interviewed at 6 months follow-up: n=196 (IG n=103; CG n=93), number included in 6 months follow-up measures varied: GDS n=180; Barthel Index n=194; GHQ-12 n=110.

Table 17. Clark 1997[69-74] study characteristics

Methods	Aims: To evaluate the effectiveness of preventive occupational therapy (OT) services specifically tailored for multi-ethnic, independent-living older adults. Design: Randomised Controlled Trial Details: 3-arm trial, both 'control' arms combined for analysis
Participants	Characterisation: multi-ethnic, independent-living older adults Country: USA Setting: Community: Government subsidised apartment complexes for independent living older adults Enrolment started in 1994 Participants assigned: 361 Inclusion criteria: aged 60 years or older had the capacity to benefit in multiple outcome areas from involvement with OT Exclusion criteria: unable to live independently exhibited marked dementia Female: 65% Age: Mean (SD) = 74.4 (7.4) Has informal carer: not reported. Living alone: 73% Ethnicity: Asian= 47% (66% of this were Mandarin-speaking) white= 23% African American= 17% Hispanic= 11% Dependence and disabilities: Disabled: IG n= 34 (28%) Social prog CG n= 35 (30%) Non-treatment CG n= 30 (25%) 77% had good or excellent balance on the Tinetti Significant comorbidities: Not reported Health status: La Rue Global Assessment of Overall Health (1-4), n (%): 1 (Poor): nontreatment control 30 (25%); social control 22 (19%); intervention 20 (16%)

	2 (Fair): nontreatment control 54 (46%); social control 58 (49%); intervention 63 (52%) 3 (Good): nontreatment control 21 (18%); social control 23 (20%); intervention 24 (20%) 4 (Excellent): nontreatment control 13 (11%); social control 15 (12%); intervention 15 (12%) Cognitive status: Mini-mental state examination (MMSE)>23 101 (86%) in nontreatment control, 106 (89%) in social control, 111 (92%) in intervention Mood status: Depression 28(24%) in nontreatment control, 33 (27%)in social control, 29 (24%) in intervention Frailty status: robust and pre-frail Based on characteristics and criteria: Disability, Tinnetti
Interventions	3 groups, but all results presented as 2 groups with the control groups combined. Intervention 1: Experimental intervention. 122 participants. Well Elderly Treatment Program. A preventive occupational therapy intervention for multi-ethnic, independent-living older adults. Grouped as: Meaningful-activities and education Intervention 2 (and 3): Combined control intervention. 239 participants. Usual Care and Social activity control results presented together. Grouped as: Available care
Outcomes	Outcomes included in network meta-analysis (NMA): Personal activities of daily living (ADL): Functional Status Questionnaire (ADL subscale) (0-100%) Instrumental activities of daily living: Functional Status Questionnaire (IADL subscale) (0-100%) Depression: Center for Epidemiological Studies-Depression (CES-D) depression scale (20 items; Radloff 1977) Tabulated outcomes: Depression: 36-Item Short Form Survey (SF-36): Mental Health Outcomes not included in this review because insufficient data were reported: Costs: Costs to health services + social services + participant/carer, Costs of intervention Cost effectiveness: incremental cost-effectiveness ratio (ICER) quality-adjusted life year (QALY) (health utilities index [HUI] from SF-36) Mortality: Deaths (reported as loss to follow-up) Other outcomes not specified as of interest for this review: Health Utility Index (from SF-36) QALY from HUI from SF-36 Social activities

	Quality of interaction Life Satisfaction Index-Z RAND SF-36 (all sub-scales, except general mental health)
Timepoints	Outcomes were measured at 9 months and 15 months
Funding and conflicts of interest	Funding: Mixed Sources: National Institute on Aging, the National Center for Medical Rehabilitation Research, the Agency for Health Care Policy and Research; the American Occupational Therapy Foundation Center at the University of Southern California for the Study of Occupation and Its Relation to Adaptation; the RGK Foundation; Lumex, Inc; and Smith & Nephew Rolyan. Conflicts of interest: Not reported
Notes	1. Because there were no statistically significant differences between the two control arms in either post-test (Clark *et al.*, 1997) or follow-up outcomes, the control arms were combined for all analyses. Also, because no cohort main effect was found (Clark *et al.*, 1997), data were analyzed for both cohorts combined. 2. Baseline/6 months: value computed by published algorithms based on the responses to the subject's completed questions or assigned the average value of the questions answered by the subject if such algorithms were unavailable.

Table 18. Clark 2012[75-81] study characteristics

Methods	Aims: Determine the effectiveness and cost-effectiveness of a preventive lifestyle-base occupational therapy (OT) intervention, conducted in a variety of community-based sites, in improving mental and physical well-being, and cognitive functioning in ethnically diverse older people. Design: Randomised Controlled Trial Details: Participants randomised individually within sites (not cluster randomised trial) Crossover design - control participants undertook the intervention during the 6-month period immediately after the main experimental phase
Participants	Characterisation: Independently living older people Country: USA Setting: Community: 9 senior activity centres, 11 senior housing residences and 1 graduated care retirement community. Enrolment started in 2004 Participants assigned: 460 Inclusion criteria: From Trial Record: Aged 60+ Fluent speaker of English or Spanish Living in the community Exclusion criteria: From Trial Record: Hospitalised Living in a nursing home Mental confusion/dementia Participation in the first Well Elderly Study

	Female: 66% Age: Mean (SD) = 74.8 (7.7); Range: 60 to 95 Has informal carer: not reported. Living alone: 82% Ethnicity: 172 (37.4%) White 149 (32.4%) Black/African American 92 (20.0%) Hispanic or Latino 18 (3.9%) Asian 29 (6.3%) Other Dependence and disabilities: 36-item short form survey (SF-36), mean (SD): Physical function: 38.51 (12.14) Role physical: 41.03 (10.87) Significant comorbidities: Not mentioned. Health status: SF-36, mean (SD): Physical composite: 41.26 (10.32) Mental composite: 47.47 (11.29) Cognitive status: Consortium to Establish a Registry for Alzheimer's Disease (CERAD)-memory, mean (SD): Immediate recall 4.08 (1.60) Delayed recall (4.90) 2.23 Recognition 18.42 (2.26) Mood status: Center for Epidemiological Studies-Depression (CES-D), mean (SD): 13.73 (10.91) SF-36 mental health, mean (SD): 47.47 (11.54) Frailty status: unclassifiable
Interventions	2 groups Intervention 1: Experimental intervention. 232 participants. Preventive lifestyle-based occupational therapy. Grouped as: Meaningful-activities and education Intervention 2: Control intervention. 228 participants. No treatment. Grouped as: Available care
Outcomes	Tabulated outcomes: Health status: SF-36: Mental Component Summary (MCS) score, SF-36: Physical Component Summary (PCS) score Depression: CES-D depression scale (20 items; Radloff 1977), SF-36: Mental Health Mortality: Deaths (reported as loss to follow-up) Outcomes not included in this review because insufficient data were reported:

	Costs: Costs of intervention Cost effectiveness: incremental cost-effectiveness ratio (ICER) – quality-adjusted life year (QALY) (health utilities index [HUI] from SF-36) Other outcomes not specified as of interest for this review: QALY from HUI from SF-36 Life satisfaction was measured by the Life Satisfaction Index-Z (LSI-Z) Immediate recall, delayed recall, recognition (The word list procedure by Consortium to Establish a Registry of Alzheimer's Disease) SF-36 (reported as individual sub-scales) Multidimensional coping inventory (MCI) Interpersonal support evaluation list (ISEL) Adaptation of Eizenman *et al.*'s scale Psychomotor speed (Digit Symbol Substitution Task of the Weschler Adult Intelligence Scale-Revised) Costs analysis: -Cost per QALY methodology - SF-36 to calculate utility scores -Intervention costs
Timepoint	Outcomes were measured at 6 months
Funding and conflicts of interest	Funding: Non-commercial Sources: National Institute on Aging Conflicts of interest: No competing interests.
Notes	1. Crossed over at 6 months. 2. Standard procedures were used to impute missing responses.

Table 19. Coleman 1999[82] study characteristics

Methods	Aims: To determine whether a new model of primary care, Chronic Care Clinics, can improve outcomes of common geriatric syndromes (urinary incontinence, falls, depressive symptoms, high risk medications, functional impairment) in frail older adults. Design: Cluster Randomised Controlled Trial Clustering accounted for.
Participants	Characterisation: > or =aged 65 with the highest risk for being hospitalized or experiencing functional decline Country: USA Setting: Nine primary care physician practices that comprise an ambulatory clinic in a large staff-model HMO [health maintenance organization] in western Washington State. Enrolment started before 2006 Clusters assigned: 9 Participants assigned: 169 Inclusion criteria: Frail older adults at high risk for hospitalization and functional decline. A computer-based predictive index, developed a validated previously, was used to identify potential subjects who were at high risk for hospitalization and functional decline in the subsequent 4 years. Automated data regarding age, gender, presence in system-wide disease registries for diabetes and heart disease, history of hospitalization or more than six outpatient visits in the prior 12 months, and the Chronic Disease Score (a pharmacy-based comorbidity index)

	comprised the individual predictive variables used to identify frail potential participants. These Risk Scores were computed for all patients 65 years of age and older. For each practice, the 36 patients with the highest Risk Scores were selected Exclusion criteria: 1. For each practice, the 36 patients with the highest Risk Scores were selected and physicians were then asked, using their unique knowledge of their patients and clinical judgment, to remove those patients who were too ill to participate or who had moderate to severe dementia. 2. Residence in a nursing home, terminal illness, and those who had disenrolled. Female: 49% Age: IG (n= 96): 77.3 yrs CG (n=73): 77.4 yrs Has informal carer: not reported. Living alone: not reported. Ethnicity: Non-white: IG (n=96) = 2.8%; CG (n=73) = 4.1% Dependence and disabilities: 36-item short form survey (SF-36) Physical function domain: IG= 47.7 CG= 43.7 Significant comorbidities: Incontinence frequency measure on an ordinal scale of 1-6 (1= daily incontinence, 6= never incontinence): IG= 3.54 CG=3.71 Diabetes: IG= 53.2% CG= 48.6% Health status: Falls past 12 months: IG (n=96) = 44.2%; CG (n=73) = 48.6% Cognitive status: Not reported. Mood status: Center for Epidemiological Studies-Depression (CES-D) Depression: IG= 11.4 CG= 15.9 Frailty status: frail Based on characteristics and criteria: Risk score
Interventions	2 groups Intervention 1: Experimental intervention. 5 clusters, 96 participants. Chronic Care Clinics (CCC). A new model of primary care, a package rather than a discrete intervention Grouped as: Education, multifactorial-action and review with medication review and self-management strategies Intervention 2: Control intervention.

	4 clusters, 73 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in network meta-analysis (NMA): Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Hospitalisation: Hospitalisation (participants hospitalised once or more/ last 12 months), Hospitalisation (days or nights / only admitted participants / last 12 months), Hospitalisation (admissions/ last 12 months) Depression: CES-D depression scale (20 items; Radloff 1977) Falls: Falls (participants fell once or more / last 12 months) Outcomes not included in this review because insufficient data were reported: Costs: Costs to health care services (per year) Health status: Health Perception (excellent-very good-good-fair-poor [EVGFP] / 100-0, SF-36) Other outcomes not specified as of interest for this review: SF-36 Overall score Hospital emergency department (visits/ last 12 months) Urinary incontinence Use of high risk medications (potential to threaten functional status in older adults) Prescribed medications Qualitative methodology: IG physicians' impressions of how the intervention enhanced or detracted their providing comprehensive primary care to frail older pts. Chart abstraction at 12m: examining physicians' efforts around improving the selected geriatric syndromes. SF-36 (data reported for the 10 questions in physical function domain, and summary reported for the EVGFP health status question)
Timepoints	Outcomes were measured at 12 months and 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Supported by the Robert Wood Johnson Foundation Chronic Care Initiative, Grant No. 024739. Dr Coleman was a Veteran's Affairs Robert Wood Johnson Clinical Scholar during his participation in this study. Conflicts of interest: Not mentioned.
Notes	

Table 20. Counsell 2007[83-88] study characteristics

Methods	Aims: To test the effectiveness of a geriatric care management model on improving the quality of care for low-income seniors in primary care. Design: Cluster Randomised Controlled Trial Clustering accounted for.
Participants	Characterisation: Community-dwelling, low income adults aged 65 and older Country: USA Setting: community-based health centers affiliated with Wishard Health Services, a

	university-affiliated urban health care system serving medically indigent patients in Indianapolis, Indiana Enrolment started in 2002 Clusters assigned: 164 Participants assigned: 951 Inclusion criteria: -age 65 years or older -an established patient (defined as at least 1 visit to a primary care clinician at the same site within the past 12 months) -with an income less than 200% of the federal poverty level (defined as qualifying for Indiana Medicaid coverage or being enrolled in the county medical assistance plan) Exclusion criteria: -residence in a nursing home or living with a study participant already enrolled in the trial -enrolled in another research study -receiving dialysis -severe hearing loss -English language barrier -no access to a telephone -severe cognitive impairment (defined by Short Portable Mental Status Questionnaire (SPMSQ) score<=5) -without an available caregiver to consent to participate Female: 76% Age: Mean (SD) = 71.7 (5.7) Has informal carer: 24% Living alone: 47% Ethnicity: Black (n, %): IG (n = 474) 272 (57.6%): UCG 292 (62.4%) Dependence and disabilities: Difficulty walking 1 block (limited a little/a lot): IG n= 177 (37.7%) UCG n=168 (35.7%) Significant comorbidities: Comorbid conditions (n, %) IG (n = 474); UCG (n=477) Hypertension: IG 383 (81.1); UCG 390 (82.3) Angina pectoris or coronary artery disease: IG 61 (13.1); UCG 51 (11.0) Congestive heart failure: IG 58 (12.5); UCG 68 (14.4) Heart attack: IG 81 (17.3); UCG 75 (15.9) Stroke: IG 85 (18.1); UCG 68 (14.4) Chronic lung disease: IG 111 (23.6); UCG 106 (22.5) Arthritis of hip or knee: IG 261 (55.4); UCG 245 (51.6) Diabetes mellitus: IG 158 (33.5); UCG 168 (35.4) Cancer (other than skin): IG 66 (13.9); UCG 59 (12.5) Hypertension: IG 383 (81.1); UCG 390 (82.3) Angina pectoris or coronary artery disease: IG 61 (13.1); UCG 51 (11.0) Congestive heart failure: IG 58 (12.5); UCG 68 (14.4) Heart attack: IG 81 (17.3); UCG 75 (15.9) Stroke: IG 85 (18.1); UCG 68 (14.4)

	Chronic lung disease: IG 111 (23.6); UCG 106 (22.5) Arthritis of hip or knee: IG 261 (55.4); UCG 245 (51.6) Diabetes mellitus: IG 158 (33.5); UCG 168 (35.4) Cancer (other than skin): IG 66 (13.9); UCG 59 (12.5) Health status: Pain (moderate/severe/very severe): IG n= 231 (48.9%) UCG n= 224 (47.1%) Cognitive status: Dementia (SPMSQ score <=5)(n, %): IG (n=474) 4 (0.8%); UCG (n=477) 4 (0.8%) Mood status: Depressed or sad (n, %): IG (n = 474)125 (26.4%); UCG (n = 477) 119 (25.0%) Depression (PHQ-9 score >=10) (n, %) IG (n = 474) 54 (11.7%); UCG (n = 477) 53 (11.4%) Frailty status: unclassifiable
Interventions	2 groups Intervention 1: Experimental intervention. 78 clusters, 474 participants. Geriatric Resources for Assessment and Care of Elders (GRACE). A collaborative model of care, involving a geriatric nurse practitioner and a geriatric social worker caring for the vulnerable older adult in collaboration with the patient's primary care physician Grouped as: Education, multifactorial-action and review with medication review and self-management strategies Intervention 2: Control intervention. 86 clusters, 477 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in netword meta-analysis (NMA): Mortality: Deaths (pre-specified outcome, method of ascertainment unspecified) Tabulated outcomes: Personal activities of daily living: Assets and Health dynamics of the Oldest-Old (AHEAD) survey activities of daily living (ADL) (6 items) (0-18) Instrumental activities of daily living: AHEAD survey instrumental activities of daily living (IADL) (7 items) (0-21) Hospitalisation: Hospitalisation (days or nights / per 1000 persons / last 12 months), Hospitalisation (admissions / per 1000 persons/ last 12 months) Health status: 36-item short form survey (SF-36): Physical Component Summary (PCS) score, SF-36: Mental Component Summary (MCS) score Depression: SF-36: Mental Health Outcomes not included in this review because insufficient data were reported:

	Costs: Costs to health care services (per year) Depression: Patient Health Questionnaire (PHQ-9) Mortality: Survival time / Time to death Other outcomes not specified as of interest for this review: Hospital emergency department (visits / per 1000 persons / last 12 months) Nursing home (short-term) (pts) Process of care data specific to the implementation of the GRACE model Assessing Care of Vulnerable Elders (Assessing Care of Vulnerable Elders [ACOVE]) quality indicators SF-36 (subscales except mental health) Days in bed due to illness or injury over the prior 6 months (more than half the day) not counting hospital and nursing home stays Patients' overall satisfaction with the care received
Timepoints	Outcomes were measured at 6 months, 12 months, 18 months, 24 months and 36 months
Funding and conflicts of interest	Funding: Non-commercial Sources: National Institute on Aging and the Nina Mason Pulliam Charitable Trust, Indianapolis, Indiana and Wishard Health Services, Indianapolis, Indiana. Conflicts of interest: No financial or any other kind of personal conflicts. The authors may copyright the GRACE Protocols and Training Manual and sell materials to interested health plans for use in geriatric patient care management, but have no specific plans at this time.
Notes	Missing outcomes: during the follow-up period were imputed using the last-observation carried-forward method.

Table 21. Cutchin 2009[89, 90] study characteristics

Methods	Aims: To determine if the preventative home visit (PHV) intervention used in the proposed project is feasible in the USA context; estimate the effect of the intervention on functional ability; ascertain if it improves psychosocial outcomes; estimate effects on health outcomes. Design: Randomised Controlled Trial
Participants	Characterisation: community-dwelling older adults Country: USA Setting: Participants' residences in three central North Carolina counties Enrolment started in 2008 Participants assigned: 110 Inclusion criteria: - 75 years or older - lives in community (not in nursing home or assisted living) - not currently receiving home health services - Vulnerable Elders Survey score of 3 or higher (found to be at-risk for functional decline) Exclusion criteria:

	Not specified. Female: 70% Age: Mean (SD) = 82.1 (5.1) Has informal carer: not reported. Living alone: 42% Ethnicity: White: n= 101 (91.%) African American: n= 8 (7.3%) Asian: n= 1 (0.9%) Dependence and disabilities: Late Life Function & Disability Instrument (LLFDI), disability component - limitation dimension, mean: IG 65.5 ; CG 65.1 LLFDI, disability component - frequency dimension, mean: IG 50.7 ; CG 51.4 LLFDI, function component overall score, mean: IG 55.4 ; CG 53.8 Significant comorbidities: None specified. Health status: 1. Vulnerable Elders Survey (VES): Score 3: n= 56 (50.9%); Score 4 or higher n= 54 (49.1%) 2. 12-item short form survey (SF-12) physical component summary, mean: IG 34.7; CG 34.1 SF-12 mental component summary, mean: IG 55.9; CG 56.4 Cognitive status: Mild dementia (6-item Cognitive Impairment Test [6CIT] score >= 7): n=24 (21.8%) Mood status: Center for Epidemiological Studies – Depression (CES-D), mean: IG 5.8; CG 6.7 Frailty status: unclassifiable
Interventions	2 groups Intervention 1: Experimental intervention. 56 participants. Preventive home visit by occupational therapist. Grouped as: Multifactorial-action and review Intervention 2: Control intervention. 54 participants. Non-specific attention by provision of information. Grouped as: Available care
Outcomes	Outcomes included in network meta-analysis (NMA): Depression: CES-D depression scale (10 items; Andresen *et al.*, 1994 & Irwin *et al.*, 1999) Tabulated outcomes:

	Personal and instrumental activities of daily living: LLFDI: Function component overall score (Haley *et al.*, 2002; Jette *et al.*, 2002; Sayers *et al.*, 2004) (re-calculated score - range 0-100) Health status: SF-12: Physical component summary, SF-12: mental component summary Outcomes not included in this review because insufficient data were reported: Hospitalisation: Hospitalisation (admissions) Care home admission: Care Home (patients) Other outcomes not specified as of interest for this review: LLFDI: Disability component - limitation total dimension (Jette *et al.*, 2002) (Transformed to scaled range 0-100) Hospital emergency department (visits) Cognitive Impairment Test (6CIT) score Satisfaction with Life Scale (SWLS) Occupational performance data are collected regarding type of occupations desired by the older person as well as frequency of performance
Timepoints	Outcomes were measured at 7 months and 15 months
Funding and conflicts of interest	Funding: Non-commercial Sources: 1. U.S. National Institute on Aging. Additional support from two continuing care retirement communities in the study area, Carol Woods and Carolina Meadows. Conflicts of interest: No competing interests.
Notes	1. Results were provided by author, M. Cutchin, directly. 2. Time points not specified in trial registration record or protocol, but stated 5 times across approx. 15 months and 4 times over a 12-month follow-up period respectively. Only 3 timepoints measured both arms, namely baseline, 7m, 15m.

Table 22. Dalby 2000[91, 92] study characteristics

Methods	Aims: To determine whether follow-up care by a visiting primary care nurse could favourably affect the combined rate of deaths and admissions to an institution and the rate of health services utilization among frail elderly people living in the community. Design: Randomised Controlled Trial Details: Eligible subjects in the same household were assigned to the same study arm.
Participants	Characterisation: Frail elderly people living in the community Country: Canada Setting: family practice and participant's residence Enrolment started before 2006 Participants assigned: 142 Inclusion criteria: A survey was mailed to people 70 years of age or more on the roster of 2 physicians affiliated with an Health Service Organisation in Stoney Creek, Ontario. Respondents were considered eligible if they reported functional impairment, or admission to hospital or bereavement in the previous 6 months.

	Exclusion criteria: 1. Living in a nursing home; 2. Involved in another research study; 3. Had previously been visited by the nurse in their home; 4. Had participated in the pretest of the survey were excluded. Female: 67% Age: Mean (SD) = 78.6 (5.6) Has informal carer: 69% Living alone: 39% Ethnicity: Not reported Dependence and disabilities: On the basis of the nurse's clinical assessment, 91.0% of the group members had functional impairment. Significant comorbidities: Top 3 health conditions reported: Arthritis: IG n= 37 (50.7%) CG n= 35 (50.7%) p= 1.00 Hypertension: IG n= 27 (37.0%) CG n= 24 (34.8%) p= 0.92 Heart condition: IG n= 22 (30.1%) CG n= 19 (27.5%) p= 0.88 At baseline the top three conditions reported were arthritis, hypertension and heart condition. The most common problems were urinary tract infections (27.4%), gastroenteritis (27.4%), chest infections (24.7%), depression (15.1%) viral illnesses (15.1%), insomnia (6.8%) and hearing impairment (6.8%). Health status: Health status in past month: Very good/good: IG n= 35 (47.9%) CG= 31 (44.9%) p= 0.54 Fair: IG n= 22 (30.1%) CG n= 30 (43.5%) p= 0.13 Poor/very poor: IG n= 12 (16.4%) CG n= 7 (10.1%) p= 0.32 Cognitive status: Not reported Mood status: Not reported Frailty status: frail Based on characteristics and criteria: At risk of decline
Interventions	2 groups Intervention 1: Experimental intervention. 73 participants. Preventive home visits. Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 69 participants. Usual care.

	Grouped as: Available care
Outcomes	Outcomes included in network meta-analysis (NMA): Living at home: Living at home (calculated, from losses to follow up) Mortality: Deaths (from routine data) Tabulated outcomes: Living at home: Care home and mortality (inverse of living at home) Hospitalisation: Hospitalisation (days or nights), Hospitalisation (admissions) Care home admission: Care-home placement (survivors/follow-up) Other outcomes not specified as of interest for this review: Hospital emergency department (visits) Influenza and pneumonia vaccination rates
Timepoint	Outcomes were measured at 14 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Ontario Ministry of Health, Community Health Branch. Conflicts of interest: None declared.
Notes	Recruitment fell short and the trial only had a power of 50% for the primary outcome.

Table 23. de Craen 2006[93-96] study characteristics

Methods	Aims: To assess whether unsolicited occupational therapy (OT), compared to no therapy, can decelerate the increase in disability in a group of high-risk community-dwelling elderly people Design: Randomised Controlled Trial
Participants	Characterisation: Community-dwelling 85-year-old people Country: Netherlands Setting: Community, municipality of Leiden in the Netherlands: participant's residence Enrolment started in 2000 Participants assigned: 402 Inclusion criteria: 1. inhabitants of the city of Leiden living in their own home, and participants of the Leiden 85-Plus Study. 2. reaching the age of 85 during the recruitment period - March 2000 and May 2002. 3. informed consent for the observational part of the study. Exclusion criteria: a score of 18 or less on the Mini Mental State Examination (MMSE). Female: 66% Age: Mean IG: 85yr CG: 85yr Has informal carer: not reported. Living alone: 62% Ethnicity: Not mentioned.

	Dependence and disabilities: Median (IQR) GARS score: IG= 16 (14–22) CG= 17 (14–22) Mobility score: IG= 7 (5–10) CG= 6 (5–10) Meal preparation score: IG= 4 (4–6) CG= 4 (4–5) Personal care score: IG= 5 (4–7) CG= 5 (4–7) Significant comorbidities: Not mentioned. Health status: Cantril's ladder well-being, median (IQR): IG= 7 (7–8) CG= 8 (7–8) Cognitive status: Not mentioned. Mood status: Median loneliness score (IQR): IG= 1 (0–3) CG= 1 (0–4) Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: All >85
Interventions	2 groups Intervention 1: Experimental intervention. 202 participants. Unsolicited OT. Including the development of an individual support trajectory which included the implementation of assistive devices in daily activities Grouped as: Multifactorial-action Intervention 2: Control intervention. 200 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in network meta-analysis (NMA): Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Personal and instrumental activities of daily living: Groningen Activity Restriction Scale (GARS) (overall) Loneliness: Loneliness (de Jong-Gierveld Scale) (0-11) Outcomes not included in this review because insufficient data were reported: Homecare services usage: Home care (pts) Depression: Geriatric Depression Scale (in Claus 2003) Other outcomes not specified as of interest for this review: Well-being (Cantrill's ladder) Social functioning (Time Spending Pattern questionnaire) Volume of informal help (interview of participant and/or relatives)

	Indication for institutionalised care (information from care givers) (institutionalisation data not reported, thus unsure whether this mean actual institutionalisation or the needs (indication).
Timepoints	Outcomes were measured at 6 months, 12 months, 18 months and 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Netherlands Organization for Health Research and Development (ZonMw), The Hague, and the Leiden University Medical Centre. Conflicts of interest: No completing interests.
Notes	

Table 24. Dorresteijn 2016[97-101] study characteristics

Methods	Aims: To assess the effectiveness, cost-effectiveness, feasibility of a home-based cognitive behavioural program on concerns about falls, in frail, older people living in the community. Design: Randomised Controlled Trial
Participants	Characterisation: Frail older people living in the community Country: Netherlands Setting: Three communities, Maastricht, Sittard-Geleen, and Heerlen, situated in the southeast of The Netherlands Enrolment started in 2009 Participants assigned: 389 Inclusion criteria: From trial reg: Aged 70 years or over At least some concerns about falling At least some associated avoidance of activity Fair or poor perceived general health Living independently in the community Written informed consent Exclusion criteria: From trial reg: Cognitive impairment (a score of less than 4 on the Abbreviated Mental Test 4) Language or hearing problems that impede completing an interview by telephone Sight problems that impede completing the intervention Confinement to bed Waiting for nursing home admission Permanent use of a wheelchair Female: 70% Age: Mean (SD) = 78.3 (5.3) Has informal carer: not reported. Living alone: 59% Ethnicity: Ethnicity not reported Dependence and disabilities:

	Groningen activity restriction scale (GARS) (total score and activities of daily living [ADL] and instrumental activities of daily living [IADL] subscores): mean (SD) [control arm n = 171; intervention arm n = 141]: Total score: control arm 33.73 (9.3); intervention arm 34.11 (9.4) ADL subscore: control arm 18.70 (4.9); intervention arm 18.47 (4.9) IADL subscore: control arm 15.03 (4.9); intervention arm 15.64 (5.1) Significant comorbidities: Mean number of active chronic diseases (SD) control arm (n=195) 1.62 (1.0); intervention arm (n=194)1.57 (1.0) Health status: Perceived general health: n (%) Fair: control arm (n=195): 176 (90.3%); intervention arm (n=194): 166 (85.6%) Poor: control arm (n=195): 19 (9.7%); intervention arm (n=194): 28 (14.4%) Cognitive status: Not reported Mood status: Not reported Frailty status: unclassifiable
Interventions	2 groups Intervention 1: Experimental intervention. 194 participants. In-home cognitive behavioral program. A nurse-led in-home cognitive behavioral program to deal with concerns about falls and related activity avoidance Grouped as: ADL Intervention 2: Control intervention. 195 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in network meta-analysis (NMA): Personal activities of daily living: GARS (ADL) Instrumental activities of daily living: GARS (IADL) Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Personal and instrumental activities of daily living: GARS (overall) Health status: Short-form 6SF-6D (QOL from SF-12) Falls: Falls (pts fell once or more / last 12 months), Falls (incidents / last 12 months) Outcomes not included in this review because insufficient data were reported:

	Costs: Costs to health services + social services + participant/carer, Costs of intervention Cost effectiveness: ICER - QALY (SF-12) Health status: QALY from SF-12 Depression: Hospital Anxiety and Depression Scale (depression subscore) (HADS-D) Other outcomes not specified as of interest for this review: SF-12 Health Survey (overall score) Falls Efficacy Scale International (FES-I) Falls Efficacy Scale International Avoidance Behaviour (FES-IAB) Catastrophic beliefs about falling (CAFS) CoF - loss of functional independence subscale and damage to identity subscale Perceived control over falling (PCOF) Personal Mastery Scale Anxiety subscale of the Hospital Anxiety and Depression Scale (HADS-A) Social support interactions (SSL 12-I) Process evaluation on feasibility (reach, fidelity, dose exposure, dose satisfaction, barriers) Intervention costs Cost-effectiveness and cost-utility, incremental cost-effectiveness ratios (ICERs) and incremental cost-utility ratios (ICURs) in concerns about falls.
Timepoints	Outcomes were measured at 5 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: ZonMw, The Netherlands Organisation for Health Research and Development (grant 120610001). Conflicts of interest: The authors declare that they have no competing interests.
Notes	1. Cost analysis: sensitivity analyses the basis of pts' exposure to the intervention (per-protocol), from a healthcare perspective, and after deleting extreme outliers. 2. For the SF-12, missing data (i.e., ≤25%) was replaced by the mean of the treatment arm (i.e., intervention or usual care arm). Missing values for the cost data were imputed by linear interpolation (i.e., imputation with participants' mean score on the previous and next measurement).

Table 25. Dupuy 2017[102, 103] study characteristics

Methods	Aims: To assess the benefits of a multi-task ambient assisted living technologies (AAL) platform for both frail older Individuals and professional caregivers with respect to everyday functioning and caregiver burden. Design: Randomised Controlled Trial
Participants	Characterisation: Older adults, living alone, had a formal caregiver from home care services Country: France Setting: Public home care services Enrolment started after 2005 Participants assigned: 32 Inclusion criteria: 1. Cognitively healthy older adults (MMSE >25) 2. Living alone

	3. Aged 70-90 Exclusion criteria: Not specified. Female: 75% Age: Mean (SD) = 81.6 (2) Has informal carer: not reported. Living alone: 100% Ethnicity: Not specified. Dependence and disabilities: Bespoke IADL Scale, mean (SD): IG 11.44 (2.19); CG 17.56 (3.41) IHVA Scale, mean (SD): IG 309.63 (6.78); CG 319.01 (8.93) Significant comorbidities: None specified. Health status: SF-36 physical (0-100), mean (SD): IG= 58.78 (5.86) CG= 52.84 (5.42) GHQ-28 (0-84), mean (SD): IG= 19.87 (3.42) CG= 20.69 (2.61) Cognitive status: MMSE (0-30), mean (SD): IG= 27.81 (0.38) CG= 27.56 (0.55) Cognitive Difficulties Scale (CDS, 0-148), mean (SD): IG= 30.97 (3.85) CG= 43.93 (6.66) Mood status: SF-36 mental (0-100), mean (SD): IG= 68.12 (5.06) CG= 66.30 (4.80) Frailty status: pre-frail and frail Based on characteristics and criteria: Phenotype model but no classification. In need, or receipt, of care.
Interventions	2 groups Intervention 1: Experimental intervention. 16 participants. Equipped with HomeAssist, an ambient-assisted living (AAL) platform. HomeAssist consisted of assistive applications belonging to 3 domains of assistance: everyday activities, safety, and social participation; in addition to usual home care services. Grouped as: Homecare, aids and telecoms Intervention 2: Control intervention. 16 participants. Control arm. Participants were equipped of paper-based fake assisted living technology sensors; in addition to usual home care services. Grouped as: Homecare
Outcomes	Tabulated outcomes: Personal and instrumental activities of daily living: Inventaire des Habiletés for pour la Vie en Appartement (IHVA Scale, Corbeil *et al.*, 2009) - proxy (completed by caregivers)

	Outcomes of interest with bespoke measures: Instrumental activities of daily living Other outcomes not specified as of interest for this review: Maslach Burnout Inventory (MBI Scale, Maslach *et al.*, 199, for professional caregivers) IADL Support scale (adaption of Lawton 1982, caregiver's burden for IADL support) Time-based usage scenario test(on assistive technology) Attrakdif questionnaire (Hassenzahl, 2004) QUEST questionnaire (Demers *et al.*, 2002
Timepoint	Outcomes were measured at 6 months
Funding and conflicts of interest	Funding: Non-commercial Sources: National French Institute of Informatics and Mathematics (Inria), and the Public fund from Conseil Régional d'Aquitain Conflicts of interest: Authors declared no conflicts.
Notes	1. Date of enrolment not specified, but should took place after 2005. 2. 32 dyads recruited, each comprising 1 older adult and the professional caregiver.

Table 26. Fabacher 1994[104] study characteristics

Methods	Aims: To evaluate the effectiveness of in-home geriatric assessments as a means of providing preventive health care and improving health and functional status of community living elderly veterans. Design: Randomised Controlled Trial
Participants	Characterisation: Community-living veterans 70 years and older Country: USA Setting: Sepulveda VA Medical Center, and participant's residence Enrolment started before 2006 Participants assigned: 254 Inclusion criteria: Residents of the San Fernando Valley. Eligible to receive care in the VA health care system but who were not currently enrolled. Veterans of the US armed services Age 70 years or older. Not suffering from a known terminal disease or dementia. Exclusion criteria: Too young Not veterans Suffering from dementia or terminal illness Were planning a move. Were already receiving care from a VA outpatient clinic. Female: 2% Age: Mean (SD) = 72.7 (5.8) Has informal carer: not reported. Living alone: 20% Ethnicity: % Caucasian Intervention 96.2 Control94.3

	Dependence and disabilities: ADL scale" (range, 0-6) mean (SD) Intervention arm 5.8 (0.5) Control arm 5.8 (0.4) IADL scale" (range, 0-8) mean (SD) Intervention arm 7.2 (1.6) Control arm 7.2 (1.1) % Fallen in past 6 months Intervention arm 16.8 Control arm 13.8 Significant comorbidities: % Recorded medical problems Arthritis Intervention arm 45.4 control arm 41.0 Heart disease Intervention arm 36.2 control arm 36.4 Hypertension Intervention arm 36.2 control arm 34.4 Cancer Intervention arm 23.1 control arm 18.9 Respiratory disease Intervention arm 16.9 control arm 13.9 Diabetes Intervention arm 10.8 control arm 9.0 Stroke Intervention arm 6.9 control arm 4.1 Health status: Not stated Cognitive status: 3% had mini-mental state scores suggestive of meaningful cognitive impairment (score =<24) (Intervention arm only) Mood status: 7% had scores on the geriatric depression scale indicating probable depression (Intervention arm only) Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: All eligible for VA care
Interventions	2 groups Intervention 1: Experimental intervention. 131 participants. The Home Assessment Program for Successful Aging (HAPSA). Program of in-home geriatric assessments as a means of providing preventive health care and improving health and functional status of community-living elderly veterans. Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 123 participants. Usual care. Available usual care but not from the VA health care system. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Personal activities of daily living: Katz ADL Scale (Katz *et al.*, 1963) (Range 0-6, 6 questions) Instrumental activities of daily living: Lawton IADL scale (0-8) (Lawton & Brody 1969) Care home admission: Care-home placement (survivors/follow-up)

	Mortality: Deaths (pre-specified outcome, method of ascertainment unspecified) Tabulated outcomes: Hospitalisation: Hospitalisation (pts hospitalised once or more) Falls: Falls (pts fell once or more) Outcomes not included in this review because insufficient data were reported: Depression: Geriatric Depression Scale (GDS) (Long version, 30 questions) (Yesavage *et al.*, 1983) Other outcomes not specified as of interest for this review: Compliance with Recommendations During the Follow-up Year Information on compliance with recommendations No. of prescribed drugs Immunisation rate Quality of life Mental status examination (Mini-mental state)
Timepoint	Outcomes were measured at 1 year
Funding and conflicts of interest	Funding: Non-commercial Sources: Disabled American Veterans Charities of Greater Los Angeles and the Disabled American Veterans California Rehabilitation Foundation, Inc. Conflicts of interest: None stated
Notes	

Table 27. Fairhall 2015[105-107] study characteristics

Methods	Aims: To evaluate the effectiveness of a multifactorial intervention on development of frailty in older people who are pre-frail. Design: Randomised Controlled Trial
Participants	Characterisation: older people who are pre frail Country: Australia Setting: Sydney. Primarily in participants' homes, with additional community exercise programmes and outpatient appointments (e.g., podiatrist, memory clinic, continence clinic) offered when indicated. Enrolment started in 2013 Participants assigned: 230 Inclusion criteria: Have one or two of the Cardiovascular Health Study frailty criteria, and thus are considered pre-frail. Mild or no cognitive impairment (defined as a Mini Mental State Examination score of more than 23). 70 Years plus Exclusion criteria: 1. Live in a residential aged care facility; 2. Have an estimated life expectancy of less than 12 months (estimated by a score of ≤3 on a modified version of the Implicit Illness Severity Scale);

	3. Currently receive a treatment programme from a rehabilitation facility. Female: 62% Age: Mean (SD) = 81.5 (5.3) Has informal carer: not reported. Living alone: not reported. Ethnicity: Not reported Dependence and disabilities: Not reported Significant comorbidities: Not reported Health status: Not reported Cognitive status: Not reported Mood status: Not reported Frailty status: pre-frail Validated measure: Phenotype model
Interventions	2 groups Intervention 1: Experimental intervention. A multifactorial interdisciplinary treatment program for pre-frail older people (Pre-FIT). Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. Usual care. Grouped as: Available care
Outcomes	Outcomes not included in this review because insufficient data were reported: Personal activities of daily living: Health Assessment Questionnaire Disability Index (HAQ-DI), Barthel index (0-100 scale) (Mahoney & Barthel, 1965) Personal and instrumental activities of daily living: Activity Measure for Post-Acute Care (AM-PAC) daily activity scale (self-care and IADL) Hospitalisation: Hospitalisation (admissions) Care home admission: Residential care home (admissions) Health status: QALY from EQ-5D, EQ-5D (unclear of version, no result) Depression: Geriatric Depression Scale 5-item version, General Health Questionnaire 12 items (GHQ-12) Falls: Falls incidents (Instrument and results not reported) Mortality: Deaths (pre-specified outcome, method of ascertainment unspecified)

	Other outcomes not specified as of interest for this review: Health and community service use Mini-Mental State Examination Frailty using the CHS frailty phenotype Gait speed using the 4 m walk test Short Physical Performance Battery Health and community service use
Timepoints	Outcomes were measured at 4 months, 8 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Doris Whiting Special Purpose and Trust Fund. IDC's salary is supported by an Australian National Health and Medical Research Council Practitioner Fellowship Conflicts of interest: None
Notes	Main report not published. Information extracted from trial registry, protocol and a conference abstract.

Table 28. Faul 2009[108, 109] study characteristics

Methods	Aims: To assess the effectiveness of interdisciplinary geriatric home-based assessment and self-management support services to community-dwelling older adults. Design: Randomised Controlled Trial Details: Quasi-experimental, pre-/post-test design tested two types of service delivery models. The first protocol included geriatric assessment services, with a brief self-management care plan intervention. The second protocol added a telephone support intervention.
Participants	Characterisation: Community-Dwelling Older Adults with Chronic Illnesses Country: USA Setting: Community It is unclear when enrolment started. Participants assigned: 81 Inclusion criteria: 65 years or older. Literate. Had a permanent address. Had a primary care physician. No acute medical or mental health needs. No recent (past 6 months) major medical event (e.g., heart attack, stroke, major surgery). Not involved in ongoing home health care. Exclusion criteria: Nursing homes as permanent address Female: 82% Age: Mean (SD) = 76.6 (6.8) Has informal carer: not reported. Living alone: 44% Ethnicity: White 66 (90.41%) Black 7 (9.59%)

	Dependence and disabilities: Use mobility aids (cane, walker, wheelchair) 23% Independent activities of daily living (smaller is better) 0.18 (0.04) Functional reach (larger is better) 1.10 (0.02) Timed sit to stand (larger is better) 10.88 (0.61) Get up and go (smaller is better) 0.99 (0.03) Significant comorbidities: Arthritis 55% High BP 50% Heart disease 23% Diabetes (19%) Health status: Self-rated health (1-5, lower better) 2.66 (0.81) Mean (SD) number of chronic conditions 1.95 (1.27) Cognitive status: Not stated Mood status: Depression (smaller is better) 0.84 (0.10) Frailty status: robust and pre-frail Based on characteristics and criteria: By advert
Interventions	2 groups Intervention 1: Experimental intervention. 44 participants. Assessment and Brief Intervention Group (ABIG). Geriatric assessment services, with a brief self-management care plan intervention Grouped as: Exercise and multifactorial-action with medication review and self-management strategies Intervention 2: Experimental intervention. 37 participants. Assessment and Telehealth Intervention Group (ATIG). geriatric assessment services, brief self-management care plan intervention, telephone support Grouped as: Education, exercise, multifactorial-action and review with medication review and self-management strategies
Outcomes	Outcomes not included in this review because insufficient data were reported: Instrumental activities of daily living: Lawton IADL (8 items, range 0-16) Health status: Self-Rated Health (Lorig *et al.*, 1996; Stanford Patient Education Research Center, 2005) Depression: Geriatric Depression Scale 5-item version Other outcomes not specified as of interest for this review: Self-Efficacy for Managing Chronic Disease 6-Item Scale (Lorig, Sobel, Ritter, Laurent, & Hobbs, 2001) Functional Reach Test (Duncan, Weiner, Chandler, & Studenski, 1990)

	Timed Sit to Stand test (Jones, Rikli, & Beam, 1999) Timed Get Up and Go (TUG) (Podsiadlo & Richardson, 1991) Lubben Social Network Scale-Revised (Lubben & Gironda, 2003) Fall hazards checklist (Tideiksaar, 1987)
Timepoints	Outcomes were measured at 12 weeks and 6 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Department of Health and Human Services, Health Resources and Services Administration, Allied Health Special Projects under Grant D37HP02904. Conflicts of interest: Not reported
Notes	1. 81 randomised; 8 dropped out. Results presented for remaining 73 2. Only the results from 12 weeks are available.

Table 29. Fernandez-Barres 2017[110-112] study characteristics

Methods	Aims: To assess the effect of an educational intervention for caregivers on the nutritional status of dependent patients at risk of malnutrition. Design: Randomised Controlled Trial Details: The allocation ratio was 3:2 in each stratum favouring the intervention arm
articipants	Characterisation: Patients of the Home Care Program Country: Spain Setting: 10 Primary Care Centers, Spain. Enrolment started in 2010 Participants assigned: 173 Inclusion criteria: 1. Be included in the program ATDOM, 2. 65 years or more, 3. have an MNA between 17 and 23.5 points, 4. have a caregiver. 1) participation in the Home Care Program-Atenció Domiciliària (ATDOM), 2) aged 65 years or older, 3) Mini Nutritional Assessment score between 17–23.5 points (range for “at risk of malnutrition”) (Guigoz *et al.*, 1996), and 4) have difficulties to perform Activities of Daily Living, be caregiver-dependent and must have a caregiver. Exclusion criteria: 1. have a MNA outside the range of 17 to 23.5 points, 2. conducting enteral feeding 3. have severe dysphagia, 4. have any serious illness that progresses to malnutrition, 5. take vitamin supplements and / or dietary supplements. 1) Mini Nutritional Assessment score outside the range of 17–23.5 points, 2) enteral feeding required, 3) severe dysphagia, 4) any serious illness that progresses to malnutrition (such as “cancer” or “severe Chronic obstructive pulmonary disease”), and 5) consumption of vitamin and/or dietary supplements. Female: 68%

	Age: Mean (SD) = 84.8 (7.1) Has informal carer: not reported. Living alone: not reported. Ethnicity: Not mentioned. Dependence and disabilities: Limited mobility: IG= 24.8% CG= 23.6% p= 0.982 Feeding with difficulties: IG= 39.5% CG= 40.0% p= 0.974 Dependence, mild – severe: IG= 64.4% –17.8 CG= 63.4% –19.7% p= 0.948 Barthel Index, mean (SD): IG 61.7 (23.9); CG 60.8 (25.7) Significant comorbidities: Chronic diseases: 1. COPD: IG= 12.9% CG= 14.1% p= 0.824 2. Hypertension: IG= 65.3% CG= 62% p= 0.747 3. Dyslipemia: IG= 19.7% CG= 31.7% p= 0.115 4. Diabetes Mellitus: IG= 23.8% CG= 32.4% p= 0.228 Health status: Mini Nutritional Assessment Health Status Score, mean (SD): IG= 13.2 (1.8) CG= 12.0 (2.3) Cognitive status: Cognitive impairment, mild –severe: IG= 36.4% –14.1% CG= 37.5% –18.1% p= 0.725 Mood status: Risk of depression: IG= 59.4% CG= 60.3% p= 0.906 Geriatric Depression Scale 5-item version, mean (SD): IG 1.9 (1.1); CG 2.0 (1.3) Frailty status: frail Based on characteristics and criteria: Homecare, MNA
Interventions	2 groups Intervention 1: Experimental intervention. 101 participants. Nutrition education intervention included in the Home Care Program. Grouped as: Homecare and nutrition Intervention 2: Control intervention. 72 participants. Home care program. Grouped as: Homecare
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up), Living at home (calculated, from losses to follow up) Personal activities of daily living: Barthel index (0-100 scale) (Mahoney & Barthel, 1965) Care home admission: Care-home placement (survivors/follow-up) Depression: Geriatric Depression Scale 5-item version Mortality: Deaths (reported as loss to follow-up)

	Other outcomes not specified as of interest for this review: For the intervention arm there is a questionnaire on adherence to the diet. Medical history Nutritional status variables Anthropometric measurements Daily consumption of food: food frequency questionnaire (FFQ) Biochemical markers Cognitive function: assessment of cognitive impairment by Pfeiffer's test Caregiver variables: knowledge acquisition - an 11-item questionnaire on basic concepts explained in the nutritional education intervention, designed by researchers
Timepoints	Outcomes were measured at 6 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Instituto de Salud Carlos III, Evaluación de Tecnologías Sanitarias, Ministerio de Sanidad y Consumo, Madrid, Spain [PI09/90340]; and the Generalitat de Catalunya, Agència d'Informació, Avaluació I Qualitat en Salut, Barcelona, Spain [315/03/08]. Conflicts of interest: None.
Notes	Sensitive analyses were performed with imputed data, and the estimates were similar, except for protein, PUFA and vitamin E intakes that were attenuated.

Table 30. Fischer 2009[113, 114] study characteristics

Methods	Aims: To improve the health status and quality of life of older people by raising their morbidity threshold, maintaining their independence, giving them interventions to meet their real needs and increasing their individual health resources via their activation. Design: Randomised Controlled Trial Details: Couple randomised together
Participants	Characterisation: Insured people aged 68-79 Country: Germany Setting: Participant's residence Enrolment started in 2004 Participants assigned: 4224 Inclusion criteria: 1. between 68 and 79 years old 2. not in need of care 3. living in certain selected districts of Hanover 4. Sufficient knowledge of German. Exclusion criteria: Having serious, threatening diseases. Female: 64% Age: IG= 72.83 (range 67-79) CG= 72.82 (range 68-80); Range: 67 to 80 Has informal carer: not reported. Living alone: not reported. Ethnicity: Not reported.

	Dependence and disabilities: (Only reported for IG participants who received the intervention) WONCA COOP chart "everyday tasks" (n=365): no trouble at all= 43.6%, little trouble= 23.3%, some difficulties= 22.5%, many difficulties= 7.4%, did nothing= 3.3% Also reported the proportion of people reporting difficulties/problems in each item of the WONCA maximum physical performance, mobility, personal care. Significant comorbidities: (Only reported for IG participants who received the intervention) History of myocardial infarction (n=365): 9.9% History of stroke/ brief loss of consciousness (n=365): 12.6% Diabetes (n=364): 17.6% Not reaching the toilet in time (n=366): Never= 70.8% Health status: (Only reported for IG participants who received the intervention) Can you still do everything you could a year ago? (n=445): No= 33.9% 306/446 had health concerns 108/440 were taking more than 5 medications 185/443 had sensory problems 106/445 had a fall in the previous year Cognitive status: (Only reported for IG participants who received the intervention) A total of 204 of the people tested (55.7%) with at least one abnormality in the clock or memory test would be considered as the target group for a more detailed examination of cognitive abilities. Mood status: (Only reported for IG participants who received the intervention) Dejection / depression / hopelessness: 24.7% The counselors gained the impression that the client was depressed in 6.2% of the cases (N = 354) Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: Described as "not in need of care" (preventative home visits) so likely to include some prefrail and perhaps a few frail but not severe frailty (ie with disability)
Interventions	2 groups Intervention 1: Experimental intervention. 1300 participants. Preventive home visits counseling service. Grouped as: Meaningful-activities and multifactorial-action with self-management strategies Intervention 2: Control intervention. 2924 participants.

	Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Care home and mortality (inverse of living at home) Care home admission: Care-home placement (survivors/follow-up) Tabulated outcomes: Living at home: Remaining at home/ community time (days) Hospitalisation: Hospitalisation (days or nights), Hospitalisation (admissions) Care home admission: Nursing home (long-term) (months) Mortality: Survival time / Time to death, Deaths (from routine data) Outcomes not included in this review because insufficient data were reported: Costs: Costs to health care and social services Other outcomes not specified as of interest for this review: IG only: WHOQOL-BREF Outpatient medical services Medicines (number of prescriptions, costs for pharmaceuticals) Life satisfaction Mobility (STEP assessment) Health status Fall events Dependency (care level, cash or non-cash benefit) Both arms: Occurrence of stroke, myocardial infarction, fractures Home nursing
Timepoint	Outcomes were measured at 43 months
Funding and conflicts of interest	Funding: Unclear Sources: Appears to be: AOK Niedersachsen (AOKN) and WHO Conflicts of interest: Not reported.
Notes	1. According to the flowchart, there is only 1 FU for the control. The control arm was not contacted for data collection, and described as “virtual control group”. It seems they were asked for consent to use their insurance data. The comparison outcomes data seem all collected from the insurance claim records. The observation period for all these comparison outcomes is 23 March 2004 to 31 October 2007 (45 months long). 2. Baseline data were only reported for IG participants who received the intervention. 3. March 23, 2004 is the date of the first visit of a health advisor to a client (intervention arm). Up to and including October 2007, data on care and mortality were available at the time of the analyses (45 months) 4. Although the inclusion criteria state a minimum age of 68 years, the reported lower age range is 67 years.

Table 31. Ford 1971[115, 116] study characteristics

Methods	Aims: To evaluate home care provided by public health nurses for chronically ill patients with varying degrees of disability

	Design: Randomised Controlled Trial
Participants	Characterisation: patients discharged from a chronic disease rehabilitation hospital Country: USA Setting: Community: pts' residence Enrolment started in 1963 Participants assigned: 300 Inclusion criteria: Discharge to own home Residence within the area served by the Visiting Nurse Association 50+ years old Recent hospital stay Did not self-discharge Exclusion criteria: Aged under 50 Non-whites Left hospital against medical advice Female: 67% Age: Mean = 72; Range: 50 to 94 Has informal carer: not reported. Living alone: 34% Ethnicity: 100% white. Not explicitly stated, but "non-whites" were excluded because "The study design called for the elimination of certain small groups of patients who were atypical of the population under study and not numerous enough to comprise a sub-sample" Dependence and disabilities: Dependent in 3 or more of 6 activities of daily living (Index of Independence in Activities of Daily Living) 81.3% Not walking, or needing personal assistance 72.4% Unable to leave the house 32.7% Significant comorbidities: Principal diagnoses (%) Disease of nervous system: 34.7% Fracture of lower extremity: 23.7% Bones and organs of movement: 14.3% Circulatory system: 9.0% Other: 18.3% Health status: not reported Cognitive status: Clear orientation and mental control: 78.3% Average to good observation and thinking: 81.0% Average to good psychosocial adjustment: 77.3% Mood status: not reported

	Frailty status: pre-frail and frail Based on characteristics and criteria: disabled in hospital
Interventions	2 groups Intervention 1: Experimental intervention. 150 participants. Home nursing care for chronically ill patients. Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 150 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (pts) Care home admission: Care-home placement (survivors/follow-up) Tabulated outcomes: Hospitalisation: Hospitalisation (admissions) Mortality: Deaths (from routine data) Outcomes not included in this review because insufficient data were reported: Personal activities of daily living: Katz ADL Scale (Katz *et al.*, 1963) (Range 0-6, 6 questions) Other outcomes not specified as of interest for this review: Intellectual function (Raven test) Memory and mental control (adapted Wechsler memory scale) Scale of psychosocial adjustment (Highland View) Walking Test on a range of movement and strength House confinement Occurrence of fracture (as a measure of injury) Q-sort items on patient's psychosocial adjustment (observer rated) Health care use (dentists, optometrists, podiatrists , social workers, and physical therapists)
Timepoint	Outcomes were measured at 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: US Public Health Service Conflicts of interest: Not reported
Notes	Timepoints: n= 75 each from IG and CG (total n=150) were observed every 3m. N= 75 each from IG and CG (total n=150) were observed at 0d and 24m only.

Table 32. Fox 1997[117] study characteristics

Methods	Aims: To evaluate the effectiveness of individualized assessment and counseling coupled with the receipt of a written health plan on client adherence to health behaviour recommendations.

	Design: Randomised Controlled Trial
Participants	Characterisation: ethnically diverse and predominantly low-income adults 60 and over Country: USA Setting: State-wide [California] public health prevention program: 4 California counties Enrolment started in 1994 Participants assigned: 237 Inclusion criteria: Not stated Exclusion criteria: Not stated Female: 70% Age: 50-59 Treatment 3.7% Control 0% 60-69 Treatment 45.9% Control 55.8% 70-79 Treatment 37.6% Control 27.9% 80-89 Treatment 12.8% Control 12.5% 90+ Treatment 0% Control 3.8% Has informal carer: not reported. Living alone: not reported. Ethnicity: Hispanic Treatment Control African American Treatment 8.3% Control 13.4% Caucasian Treatment 84.2% Control 82.7% Filipino Treatment 4.6% Control 3.8% Asian and other Treatment 1.8% Control 0.0% Dependence and disabilities: "Over 80% in both groups reported needing no assistance with ADLs and IADLs" Significant comorbidities: Not stated Health status: "Over 80% in both groups reported having no hospitalisations in the prior year" Cognitive status: Not stated Mood status: Not stated Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: unselected
Interventions	2 groups Intervention 1: Experimental intervention. 118 participants. Standard comprehensive health assessment, with extensive health plan counseling and written health plan. Standard comprehensive health

	assessment as part of the Preventive Health Care for the Aging (PHCA) program Grouped as: Multifactorial-action and review with medication review and self-management strategies Intervention 2: Control intervention. 119 participants. Standard comprehensive health assessment, with limited verbal health plan counseling and without written health plan. Standard comprehensive health assessment as part of the Preventive Health Care for the Aging (PHCA) program Grouped as: Multifactorial-action and review with medication review
Outcomes	Other outcomes not specified as of interest for this review: One year differences in health plan adherence among the two arms examined -New hospitalisations -Accidents -Surgeries -Diagnoses -Self-rated health status -Review of systems (i.e., vision, hearing, dental/oral, skin, respiratory, cardiovascular, musculoskeletal, gastrointestinal, endocrine, genito/urinary, neurological, and gynaecologic/breast examination) -Health-related behaviours and functional limitations (i.e., changes in family situation, depression, insomnia, sexual problems, exercise, energy level, seatbelt use, smoking, alcohol and caffeine consumption, ADL/IADL limitations, and changes in health behaviours
Timepoint	Outcomes were measured at 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: State of California Dept of Health Services and the Centers for Disease Control and Prevention Conflicts of interest: Not stated
Notes	Baseline details are only given for the 213 participants who remained in the study at follow up.

Table 33. Fristedt 2019[118, 119] study characteristics

Methods	Aims: To perform a mixed methods analysis, including a prospective, controlled and randomized quantitative evaluation, in combination with an interview-based qualitative assessment, to measure the effectiveness and user satisfaction of Mobile Geriatric Team. Design: Randomised Controlled Trial
Participants	Characterisation: Community-dwelling, frail elderly Country: Sweden Setting: Community: mainly at participant's residence Enrolment started in 2015 Participants assigned: 62 Inclusion criteria: 1. community-dwelling persons aged 75 years and older; 2. having more than three chronic diagnoses; 3. prescribed six or more pharmaceutical drugs for continuous use and;

	4. with at least three hospital stays (> 24 hours in hospital) during the last six months. Exclusion criteria: 1. Persons not able to take part in qualitative interviews. 2. Lived in a nursing home or had a hospital admission not relevant to the MGT concept (e.g., repeated hospital admissions due to surgery not indicating multi-morbidity); if an MGT would be redundant and non-relevant to offer since the patient had similar and extensive help from another caregiver; or if hospitalizations had decreased recently and the situation had been stabilized. Female: 55% Age: Mean (SD) = 85 (5.5) Has informal carer: not reported. Living alone: 53% Ethnicity: Not mentioned. Dependence and disabilities: Katz ADL Median (IQR): IG= 2.10 (1.42) CG= 2 (1.21) Significant comorbidities: All participants had cardiovascular conditions. Health status: Not mentioned. Cognitive status: MMSE Median (IQR): IG= 25.61 (3.3) CG= 26.87 (2.86) Mood status: Not mentioned. Frailty status: frail Based on characteristics and criteria: Descibed as frail by authors but not using a phenotype
Interventions	2 groups Intervention 1: Experimental intervention. 31 participants. Mobile Geriatric Team. A person-centred intervention based on comprehensive geriatric assessment and delivered at home Grouped as: Homecare, multifactorial-action and review with medication review Intervention 2: Control intervention. 31 participants. Usual care. Grouped as: Homecare
Outcomes	Outcomes included in NMA: Mortality: Deaths (from routine data) Tabulated outcomes:

	Hospitalisation: Hospitalisation (days or nights/ last 12 months), Hospitalisation (admissions/ last 12 months) Outcomes not included in this review because insufficient data were reported: Personal activities of daily living: Katz ADL Scale (Katz *et al.*, 1963) (Range 1-7, 6 questions) Homecare services usage: Home care (hours) Costs: Costs to health care and social services Other outcomes not specified as of interest for this review: Hospital emergency department (visits/ last 12 months) Out-patient visits to hospital Primary care visits (Non-MGT primary care utilization (physician), Non-MGT primary care utilization (nurse)) Patient and next-of-kin satisfaction assessed by Qualitative interviews Use of home care MMSE
Timepoints	Outcomes were measured at 15 weeks and 1 years
Funding and conflicts of interest	Funding: Non-commercial Sources: Futurum – the Academy for Healthcare, and Region County council Jönköping, Sweden Conflicts of interest: No conflicts of interest.
Notes	

Table 34. Gene Huguet 2018[120] study characteristics

Methods	Aims: To evaluate a multifactorial, interdisciplinary primary care intervention in community-dwelling pre-frail elderly patients aged ≥ 80 years. Design: Randomised Controlled Trial
Participants	Characterisation: community-dwelling pre-frail elderly patients aged ≥ 80 years Country: Spain Setting: Barcelona primary healthcare centre. Enrolment started in 2016 Participants assigned: 200 Inclusion criteria: 1. non-institutionalized males or females 2. aged ≥ 80 years 3. attended by the Borrell PHC, Barcelona (assigned population 32,621) who fulfilled one or two Fried criteria Exclusion criteria: 1. diagnosis of advanced dementia 2. patients on palliative care/ life expectancy < 6 months 3. clinically-unstable patients (e.g., uncontrolled angina) 4. patients already considered frail with home-only care 5. patients with chronic complex diseases, in wheelchairs or totally-blind 6. included in other programs for the elderly, other studies or clinical trials.

	Female: 65% Age: Mean (SD) = 84.5 (5.3) Has informal carer: 8% Living alone: not reported. Ethnicity: Not specified. Dependence and disabilities: Immobility: n= 2 (1%) Significant comorbidities: IG+CG: Diabetes mellitus n=51 (25.5%) Hypertension n=146 (73%) Dyslipidaemia n=102 (51%) COPD n=24 (12%) Asthma n=8 (4%) Osteoporosis n=70 (35%) Osteoarthritis n=86 (43%) Heart failure n=4 (2%) Ischemic heart disease n=19 (9.5%) Arrhythmia n=33 (16.5%) Liver disease n=6 (3%) Fractures n=38 (19% Health status: Barthel index, mean (SD: IG 94.9 (5.4); CG 95.2 (6.4) Lawton IADL scale: IG 6.5 (1.6); CG 6.4 (1.6) Cognitive status: Cognitive impairment: n= 11 (5.5%) Mood status: Depression: n= 36 (18%) Frailty status: pre-frail Validated measure: Phenotype model
Interventions	2 groups Intervention 1: Experimental intervention. 100 participants. Interdisciplinary intervention. Multifactorial and interdisciplinary intervention based on physical exercise, Mediterranean diet advice, assessment of inadequate prescribing in polypharmacy patients and social assessment Grouped as: Medication-review, nutrition and exercise Intervention 2: Control intervention. 100 participants. Standard primary healthcare treatment. Grouped as: Available care
Outcomes	Outcomes included in NMA: Personal activities of daily living: Barthel index (0-100 scale) (Mahoney & Barthel, 1965)

	Instrumental activities of daily living: Lawton IADL scale (0-8) (Lawton & Brody 1969) Other outcomes not specified as of interest for this review: EQ-5D-3L (used in Gene Huguet 2018) Pfeiffer cognitive status test Mini Nutritional Assessment Adherence to Mediterranean diet Charlson comorbidity Gijón social assessment Timed Up and Go test (TUG) Walking speed Five Times Sit to Stand Test (FTSST) Risk of falls
Timepoint	Outcomes were measured at 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: 7th Residency Fellowship of Family and Community Medicine) from the Consorci d'Atencio Primària de Salut Barcelona Esquerra (CAPSBE). Conflicts of interest: no conflicts of interest to disclose
Notes	

Table 35. Gill 2002[121-125] study characteristics

Methods	Aims: To determine whether the intervention improved the ability of physically frail elderly people to perform essential ADLs; and to identify the subgroups of this elderly population that benefited most. Design: Randomised Controlled Trial.
Participants	Characterisation: Physically frail, elderly persons Country: USA Setting: Participants' residence Enrolment started before 2006 Participants assigned: 188 Inclusion criteria: 1. Age 75 years or older 2. Physically frail (Persons were considered physically frail if they required more than 10 seconds to perform a rapid-gait test (i.e., to walk along a 10-ft [3.0-m] course and back as quickly as possible) or if they could not stand up from a seated position in a hardback chair with their arms folded. Persons meeting one of these criteria were considered moderately frail, and those meeting both criteria were considered severely frail.) Exclusion criteria: Permanent exclusion: 1. Non-ambulatory without personal assistance 2. Non-English-speaking 3. Nursing home resident 4. Lives outside of greater Bridgeport area or planning to move 5. Enrolled in Wellness Program or participated in pilot-testing 6. Member of household already enrolled 7. Diagnosis of dementia or MMSE score <20

	8. Severe visual impairment or hearing loss 9. Progressive, degenerative neurologic disease (Includes severe Parkinson's Disease) 10. Terminal illness with life expectancy <12 months 11. Exercises or too physically active Temporary exclusion: 1. Receiving physical therapy 2. Stroke, hip fracture, or hip or knee replacement within 6 months 3. Myocardial infarction within 6 months Female: 80% Age: Mean (SD) = 83.2 (5.1) Has informal carer: not reported. Living alone: 47% Ethnicity: white race: 171 non-white: 17 Dependence and disabilities: Summary disability score, mean (SD): IG 2.3 (2.2); CG 2.8 (2.8) IADL (Lawton & Brody 1969), mean: IG 3.2; CG 3.7 Significant comorbidities: Mean (SD) no. of chronic conditions: intervention 2.1 (±1.1); control 2.0 (±1.3) Health status: Not reported Cognitive status: Mini–Mental State Examination Mean (SD) score: intervention 26.7 (±2.6); control 26.3 (±2.4) Mood status: Not reported Frailty status: pre-frail and frail Based on characteristics and criteria: Gait speed, sit to stand
Interventions	2 groups Intervention 1: Experimental intervention. 94 participants. Prehabilitation program (PREHAB). A preventive, home-based individualized multicomponent physical therapy program. Grouped as: ADL and exercise Intervention 2: Control intervention. 94 participants. Educational control (EDUCATE). A program designed to provide attention and health education. Grouped as: Available care
Outcomes	Outcomes included in NMA: Mortality: Deaths (from routine data)

	Tabulated outcomes: Personal activities of daily living: Summary Disability ADL score (Gill 2002) Instrumental activities of daily living: IADL (Lawton & Brody 1969) (5 items, 0-10) Falls: Falls (pts fell once or more) Outcomes not included in this review because insufficient data were reported: Care home admission: Care Home (days), Care Home (pts) Costs: Costs of intervention Other outcomes not specified as of interest for this review: 1. Modified version of the Established Population for Epidemiologic Studies of the Elderly (EPESE) battery: using Timed rapid gait and Timed chair stands instead of the 3 standard tasks of standing balance 2. Modified Performance-Oriented Mobility Assessment (POMA) (0–12) 3. Modified Physical Performance Test (PPT) (0–12)
Timepoints	Outcomes were measured at 3 months, 7 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Claude D. Pepper Older Americans Independence Center, the National Institute on Aging, and the Gaylord Rehabilitation Research Institute. Conflicts of interest: No apparent conflicts (No commercial party having a direct financial interest in the results of the research supporting this article has or will confer a benefit on the author(s) or on any organization with which the author(s) is/are associated.)
Notes	

Table 36. Giné-Garriga 2020[126-137] study characteristics

Methods	Aims: To assess the long-term effectiveness (18-month follow-up) of a complex intervention on sedentary behaviour (SB) in an elderly population, based on existing exercise referral schemes (ERS) enhanced by self-management strategies (SMS). Design: Randomised Controlled Trial Clustering accounted for. Details: three-armed pragmatic randomized controlled trial (RCT)
Participants	Characterisation: Community-dwelling older adults Country: Europe (multinational) Setting: study centers in Denmark, Spain, United Kingdom, and Germany Enrolment started in 2016 Participants assigned: 1360 Inclusion criteria: (1) aged 65 years or above; (2) community-dwelling; (3) able to walk without the help of another person for at least 2 min with or without a walking aid; (4) have no major physical limitations as shown by a score on the Short Physical Performance Battery (SPPB) of 4 or above; (5) insufficiently active as determined by the following screening question: 'Do you perform regular physical activity (PA) for at least 30 minutes five or more days of the week (referring only to PA that makes the participant

	become out of breath while doing it or such that it doesn't allow him/her to maintain a conversation while doing the activity) (do not count regular walking)'; and/or (6) report spending long periods of time in SB by answering affirmatively to the question: 'For most days, do you feel you sit for too long (6–8 hours or more a day)? Some examples might include when watching TV, working at the computer / laptop or when doing sitting-based hobbies such as sewing' Exclusion criteria: (1) have moderate or severe dementia when screened with the six-item screener to identify cognitive impairment, using a cutoff of three or more errors; (2) have a medical condition which may interfere with the study design; (3) have unstable medical conditions (e.g., elevated blood pressure after medication, uncontrolled hypertension) or symptomatic cardiovascular diseases that contraindicates participation in PA; (4) expect not to be able to attend 75% of the ERS sessions throughout the intervention; and (5) have participated in an exercise referral scheme in the six months prior to their entry into the study. Female: 62% Age: Mean (SD) = 75.3 (6.3) Has informal carer: not reported. Living alone: not reported. Ethnicity: Not reported Dependence and disabilities: Not reported Significant comorbidities: Not reported Health status: Mean (SD) number of self-reported health conditions 2.9 (2.1) Mean (SD) SF12-physical score 44.96 (9.10) Mean (SD) SPPB score 9.4 (2.30 Cognitive status: Not reported Mood status: Hospital Anxiety and Depression Scale, anxiety score, mean (SD): 4.96 (3.65) Hospital Anxiety and Depression Scale, depression score, mean (SD): 4.05 (3.29) Frailty status: robust Based on characteristics and criteria: SPPB
Interventions	2 groups

	Intervention 1: Experimental intervention. Exercise referral schemes enhanced by self-management strategies (ERS+SMS). Grouped as: Exercise Intervention 2: Control intervention. Educational control sessions. Grouped as: Available care
Outcomes	Outcomes not included in this review because insufficient data were reported: Health status: SF-12: Physical component summary, EQ-5D (unclear of version, no result), SF-12: mental component summary Depression: Hospital Anxiety and Depression Scale (depression subscore) (HADS-D) Loneliness: Loneliness (de Jong-Gierveld Scale) (short form) Falls: Falls (incidents) Other outcomes not specified as of interest for this review: Health service utilization ADL (6 items, Saliba et al, 2000, details unclear) ICECAP capability index for older people (ICECAP-O) Late Life Function and Disability Instrument (LLFDI) Sedentary behaviour: sitting time and the number of minutes spent at ≤ 1.5 Metabolic Equivalent Tasks. (device and perception) Physical activity: daily counts per minute and intensity of exercise, and daily step counts. (Actigraph®) Physical function: SPPB, 2-minutes' walk test, unipedal stance Muscle function: handgrip strength (dynamometer); mean strength and power performing: (a) 30-s chair stand rise; (b) 5 repetitions of arm curl with both hands using a 2-kg and 4-kg weight; (c) 4 counter-movement jumps. Health economics : use of sport, health and social services; medications. Anthropometry: weight, height, body mass index, waist and hip circumference. Bioimpedance: % fat; % muscle Blood pressure: systolic and diastolic blood pressure; heart rate. Social network: Lubben Social Network Scale-6 Physical activity self-regulation: 12-item Physical Activity Self-Regulation Scale Self-efficacy for exercise: Marcus's Self-Efficacy Questionnaire Fear of falling: Short Falls Efficacy Scale – International Executive function: Trail Making Test Physical fatigue: Pittsburg Fatigability Scale IN A SUBSAMPLE: Level of frailty-associated biomarkers and inflammation: IL-6, hsCRP, TNF-alpha, IGF-1. (Blood sample) Sarcopenia-associated markers of muscle quality Myostatin, IL-6, IL-8, IL-15, VEGF, BDNF, FGF21, irisin, myostatin, Type 2/Type 1 fibre ratio, Wnt and Notch signaling, CDC42 (muscle biopsy)
Timepoints	Outcomes were measured at 4 months, 16 months and 22 months

Funding and conflicts of interest	Funding: Non-commercial Sources: European Union program Horizon 2020 (H2020-Grant 634270). Conflicts of interest: The authors declare that they have no competing interests.
Notes	

Table 37. Gitlin 2006[138-149] study characteristics

Methods	Aims: To test the cost-/effectiveness of a home-based intervention to improve home safety, fall efficacy and functional performance; if the use of environmental strategies results in less negative health events; compare types of environmental strategies. Design: Randomised Controlled Trial
Participants	Characterisation: Frail elderly 70 or older living in urban community Country: USA Setting: Community: participant's residence Enrolment started in 2003 Participants assigned: 319 Inclusion criteria: 70+ English speaking Not receiving home care Need for help with 2+ IADLs or 1+ ADL Exclusion criteria: Mini-Mental Status Examination (MMSE) score of less than or equal to 23 legal blindness bed bound nursing home placement or relocation expected within 12 months of study eligibility Female: 82% Age: Mean (SD) = 79 (5.9) Has informal carer: not reported. Living alone: 62% Ethnicity: White 52.7% African American 45.5% Other 1.8% Dependence and disabilities: Mean (SD): Some to a lot of difficulty: Ambulating= 2.5 (0.8); Carrying out self-care= 1.8 (1.6); with IADLs= 2.1 (0.6) Significant comorbidities: most common: Arthritis (84%), hypertension (71%), cataracts or macular degeneration (43%), cardiovascular problems (39%), and diabetes (23%) Health status: 69.6% health as fair to poor 51% health was not as good as one year ago.

	Number of health conditions (mean(SD)): 6.9 (2.7) Cognitive status: Mini-Mental State Examination score (n=319) (mean (SD): 26.9 (1.8) Mood status: GES-D 20 (Mean (SD)): African American (n = 129)=12.2 (9.9) White (n = 151)=16.6 (11.3) Frailty status: pre-frail and frail Based on characteristics and criteria: ADLs
Interventions	2 groups Intervention 1: Experimental intervention. 160 participants. Advancing Better Living for Elders (ABLE) home-based occupational and physical therapy and home modification. Grouped as: ADL, aids and exercise Intervention 2: Control intervention. 159 participants. No-treatment control arm. Grouped as: Available care
Outcomes	Outcomes included in NMA: Personal activities of daily living: ADL (Gitlin 2006) Instrumental activities of daily living: IADL (Gitlin 2006) Mortality: Deaths (from routine data) Outcomes not included in this review because insufficient data were reported: Care home admission: Care-home placement (survivors/follow-up) Costs: Costs of intervention Cost effectiveness: ICER - Life Years Saved Depression: CES-D depression scale (20 items; Radloff 1977) Other outcomes not specified as of interest for this review: Home hazards observed Fear of falling Self-efficacy (self-rated self-efficacy or confidence managing difficulties performing 17 tasks (IADLs, ADLs, and mobility)) Control oriented strategy use Intervention cost (ABLE) Compensatory Strategy Use (IG only) Social support (8 items from the NIH Resources for Enhancing Alzheimer's Caregivers Health (REACH) trial (Belle *et al.*, 2006) Control-Oriented Strategy Use/index Mobility/transfer index (mean difficulty across six items (getting in/out of car, walking indoors, walking one block, climbing one flight of stairs, moving in/out of chair, and moving in/out of bed) Balance confidence scale
Timepoints	Outcomes were measured at 6 months, 12 months, 24 months, 36 months and 4 years

Funding and conflicts of interest	Funding: Non-commercial Sources: National Institute on Aging Grant R01 AG13687 Conflicts of interest: "Financial Disclosures: None."
Notes	

Table 38. Grimmer 2013[150, 151] study characteristics

Methods	Aims: 1. To determine whether an individualized early intervention reduces the likelihood and/or rate, of functional decline (FD) 2. To demonstrate that incipient FD can be identified within four weeks of discharge from an emergency department Design: Randomised Controlled Trial
Participants	Characterisation: older adults living independently in the community Country: Australia Setting: Home-based Enrolment started in 2014 Participants assigned: Inclusion criteria: 65 years old or older. Presented to ED with non-catastrophic health conditions which do not result in admission to hospital for further care- must be discharged directly to home from ED. Lower than median SF12-MCS score (median calculated for all participants in main observational study). Exclusion criteria: Suffering communicable diseases requiring isolation. Current mental health crisis. Under detention. Diagnosis of dementia. Unable to communicate in English. Profoundly deaf (such as would limit telephone communication at follow-up). Female: not reported. Age: not reported Has informal carer: not reported. Living alone: not reported. Ethnicity: not reported. Dependence and disabilities: not reported Significant comorbidities: not reported Health status: not reported Cognitive status: not reported Mood status: not reported Frailty status: unclassifiable
Interventions	2 groups

	Intervention 1: Experimental intervention. Person-focused home-based personalized program. Grouped as: Multifactorial-action Intervention 2: Control intervention. Usual care. Grouped as: Available care
Outcomes	Outcomes of interest with bespoke measures: Personal activities of daily living Outcomes not included in this review because insufficient data were reported: Hospitalisation: Hospitalisation (admissions) Health status: SF-12: Physical component summary, SF-12: mental component summary Falls: Falls (incidents) Other outcomes not specified as of interest for this review: Lawton IADL (Lawton & Brody, 1969, details unclear) Australian Quality of Life (AQoL 4D) ED presentations in the past six months Living arrangements Requiring a carer Receiving formal community services Type and use of gait aid Cognition with the Mini Mental State Examination (MMSE) HARP score determined from age IADLs & MMSE scores GP visits Informal community supports Carer engagement Organized (formal) community services Satisfaction with community supports Hospitals Admission Risk Profile (HARP) Australian Quality of Life (AQoL 4D)
Timepoints	Outcomes were measured at 1 months, 4 months, 7 months and 13 months
Funding and conflicts of interest	Funding: Unclear Sources: Self-funded/Unfunded - "A competitive national grant application has been made to support project funding for two years from 2014." Conflicts of interest: The authors declare that they have no competing interests.
Notes	1. Only protocol and trial registry records are available for data extraction. 2. This RCT (Study 2) was nested within a longitudinal observational study (Study 1). All participants in longitudinal observational study would be stratified at one-month telephone follow-up into low and high scores on the MCS domain of the SF-12, (SF12-MCS), using the median cut point. The nested RCT would be conducted involving only the subjects with lower than median SF12-MCS scores at this time point.

Table 39. Gustafson 2021[152-154] study characteristics

Methods	Aims: Evaluate whether use of an information and communication technology (Elder Tree) designed for older adults and their informal caregivers improves older adult quality of life and addresses challenges older adults face in maintaining their independence. Design: Randomised Controlled Trial
Participants	Characterisation: Older adults who are at risk for losing their independence Country: USA Setting: three Wisconsin communities (one urban, one suburban, one rural) Enrolment started in 2013 Participants assigned: 390 Inclusion criteria: • Age 65 or older • Live in one of three Wisconsin regions: Milwaukee County; Waukesha County; or Richland, Juneau, or Sauk Counties • In the last 12 months, has experienced one or more of the following: - Fallen once or more - Felt sad or depressed - Received home-health services - Stayed in a skilled nursing facility - Gone to the emergency room - Been admitted to the hospital Exclusion criteria: • Is currently homeless or living in a hospice center, assisted living facility without access to a stove, or nursing home • Needs help getting into or out of a bed or a chair Female: 75% Age: Mean (SD) = 76.5 (7.4) Has informal carer: not reported. Living alone: 64% Ethnicity: White: 342 (87.7%) Black: 43 (11.0%) Other: 11 (2.8%) ["Numbers may exceed arm totals and 100% because participants could report more than one race/ethnicity"] Dependence and disabilities: IADL dependence (1–4 [lower is better]), mean (SD) 1.35 (0.54) Significant comorbidities: Not reported Health status: not reported Cognitive status: Not reported Mood status: Depression (1–4 [lower is better]) (8 item PHQ), mean (SD): 0.55 (0.57) Frailty status: all (robust, pre-frail and frail)

	Based on characteristics and criteria: admission,falls, sad
Interventions	2 groups Intervention 1: Experimental intervention. 197 participants. Elder Tree. Low-cost web-based information and communication technology. Grouped as: Aids, education and telecoms Intervention 2: Control intervention. 193 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Depression: Patient Health Questionnaire 8 (PHQ-8) [1-4] Tabulated outcomes: Personal and instrumental activities of daily living: 6-item independence in ADLs scale (Gustafson 2021) Health status: PROMIS Global Physical Health (GPH) [Patient-Reported Outcomes Measurement Information System Global Health scale Physical Health summary score], PROMIS Global Mental Health (GMH) [Patient-Reported Outcomes Measurement Information System Global Health scale Mental Health summary score] Outcomes not included in this review because insufficient data were reported: Hospitalisation: Hospitalisation (admissions) Care home admission: Care Home (long-term) (pts) Costs: Costs of intervention Cost effectiveness: ICER - QALY (PROMIS global health via EQ-5D) Health status: QALY from PROMIS Global Health via EQ-5D (Patient-Reported Outcomes Measurement Information System Global Health scale) Loneliness: UCLA Loneliness Scale (version 3) Falls: Falls (incidents) Mortality: Deaths (reported as loss to follow-up) Other outcomes not specified as of interest for this review: Cost per QALY Hospital emergency department (visits) Healthcare utilization: patient survey using modified medical services utilization form [43] Falls requiring medical attention. Falls risk: Falls Behavioral Scale for the Older Person (FaB) (modified) Presence of risky medication Medication adherence (self-assessed) Medication side effects: presence or absence of common side effects of antiplatelets/anticoagulants and insulin/oral hypoglycemics. Ease of/comfort with transportation; # of crashes and near-misses Lawton Caregiving Appraisal Scale Caregiver Coping Strategies Autonomy Competence Relatedness

	Living arrangement Comfort with technology Physical limitations to technology use CHESS Bonding Scale Size of social network Types of therapy or support groups Satisfaction with service delivery
Timepoints	Outcomes were measured at 6 months, 12 months and 18 months
Funding and conflicts of interest	Funding: Mixed Sources: US Department of Health and Human Services, Agency for Healthcare Research and Quality is the primary funder of the study (5P50HS019917-04). Epic Systems Corporation is a secondary funder. Conflicts of interest: Authors Gustafson Sr., McTavish, Johnson, Quanbeck, and Isham have a shareholder interest in CHESS Mobile Health, a small business that develops web-based healthcare technology for patients and family members. This relationship is extensively managed by the authors and the University of Wisconsin. All other authors declare that they have no competing interests.
Notes	Informal caregivers also recruited.

Table 40. Gustafsson 2013[13, 155-163] study characteristics

Methods	Aims: To evaluate if multi-dimensional and multi-professional educational senior meetings are more effective than preventive home visits, and if it is possible to prevent or delay deterioration if an intervention is made when the persons are not so frail. Design: Randomised Controlled Trial
Participants	Characterisation: pre-frail 80-year-old persons still living at home Country: Sweden Setting: Participant's residence (home visits), unclear location of meetings/representative sample of pre-frail 80-year-old persons still Living at home in two municipalities of Gothenburg. Enrolment started in 2007 Participants assigned: 491 Inclusion criteria: Pre-frail 80-year-old persons still living at home in two municipalities of Gothenburg. Should live in their ordinary housing and not be dependent on the municipal home help service or care. Further, they should be independent of help from another person in activities of daily living and be cognitively intact, having a score of 25 or higher as assessed with the Mini Mental State Examination (MMSE). Exclusion criteria: Not meeting inclusion criteria. Female: 64% Age: Median (range): PHV (n=174): 86 (80-94) Meeting (n=171): 85 (80-94)

	CG (n=114): 86 (80-97); Range: 80 to 97 Has informal carer: not reported. Living alone: 56% Ethnicity: Not mentioned. Dependence and disabilities: Not mentioned. Significant comorbidities: Not mentioned. Health status: Self-rated health (excellent/very good/good): CG= 79% PHV= 80% Meetings= 83% Moderate illness: CG n=102 (90%) PHV n=163 (94%) Meetings n=160 (94%) Physical health (satisfied): CG n=107 (94%) PHV n=159 (91%) Meetings n=163 (95%) Cognitive status: Having a score of 25 or higher as assessed with the Mini Mental State Examination (MMSE) to be eligible. Mood status: Psychological health (satisfied): CG n=114 (100%) PHV n=171 (98%) Meetings n=165 (96%) Frailty status: all (robust, pre-frail and frail) Validated measure: Modified phenotype, but not for selection. Range 0-6; fit= 13%, pre-frail= 69%, frail = 18%
Interventions	3 groups Intervention 1: Experimental intervention. 199 participants. Senior meetings and home visit. Health-promoting and disease-prevention intervention, including multi-dimensional and multi-professional educational senior meetings and one follow-up home visit. Grouped as: Education Intervention 2: Experimental intervention. 178 participants. Preventive home visits. Health-promoting and disease-prevention intervention based on preventive home visits. Grouped as: Education and multifactorial-action Intervention 3: Control intervention. 114 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Mortality: Deaths (reported as loss to follow-up)

	Outcomes not included in this review because insufficient data were reported: Cost effectiveness: ICER - QALY (EQ-5D) (Dahlin-Ivanoff 2010) Health status: EQ-5D (unclear of version, no result), Health Perception (EVGFP / 1-5, SF-36) Depression: Geriatric Depression Scale (GDS 20, Swedish version) Falls: Falls incidents (Instrument and results not reported) Other outcomes not specified as of interest for this review: ADL Staircase (categorised as independent) (9 items) Loneliness (improved) (Gustafsson 2015 and Dahlin-Ivanoff 2010) Fatigue (Questionnaire/tiredness scale) Grip strength (North Coast dynamometer) Endurance/physical activity (Questionnaire/physical and activity scale) Balance (The Berg Balance Scale) Gait speed four-meter walking test Weight loss (The Göteborg Quality of Life Instrument) Cognition Mini Mental State Exam (MMSE) Visual impairment (KM visual acuity chart) Morbidity (CIRS-G) Symptoms (The Göteborg Quality of Life Instrument(Life satisfaction (Fugl-Meyer -- LiSat) Assistive technology and accessibility (questionnnaire) Social interaction/ support (questionnnaire) Participation/ Leisure activities (questionnnaire) Fear of falling (FES-I) Health care consumption (register data, not reported) Qualitative approach to gain an understanding of the elderly person's experiences of the intervention and its effects. ADL staircase (reported categories: independent, dependent in > =2 ADLs, dependent in > =3 ADLs, dependent in > =4 ADLs)
Timepoints	Outcomes were measured at 3 months, 1 year and 2 years
Funding and conflicts of interest	Funding: Non-commercial Sources: The Vårdal institute, The Swedish Institute for Health Sciences health sciences Conflicts of interest: The authors declare that they have no competing interests.
Notes	1. Other than mortality rate, all other outcomes, e.g., ADLs, are dichotomous. 2. Replacement of missing values with a value based on the median change of deterioration (MCD) between two measuring points (baseline and the 3-month follow-up or between 2 follow-ups) of all who participated at both measuring points. 3. Participants who declined intervention (on initial invitation) recorded as withdrew consent and not included in analysis. Thereafter those that withdrew included in an ITT analysis.

Table 41. Hall 1992[164] study characteristics

Methods	Aims: Evaluation of health promotion project to assist frail elderly people to live at home Design: Randomised Controlled Trial

Participants	Characterisation: Frail elders Country: Canada Setting: Community Enrolment started in 1986 Participants assigned: 167 Inclusion criteria: People aged 65+ living at home requiring help with personal cares Exclusion criteria: couples where both members had become new long term care (LTC) clients. Female: 78% Age: Mean (SD) = 77.9 (6.5) Has informal carer: not reported. Living alone: 75% Ethnicity: Not reported Dependence and disabilities: N, % Difficult to: -walk a mile: IG 46 (56.8%); CG 59 (68.6%) -climb stairs: IG 80 (37.0%0; CG 39 (45.3%) -stand up from a chair: IG 2 (2.5%); CG 5 (5.8%) -feed self: IG 0 (0.0%); CG 0 (0.0%) -get dressed: IG 0 (0.0%); CG 1 (1.2%) -wash hands or face: CG 1 (1.2%); CG 0 (0.0%) -shop: IG 15 (18.5%); CG 14 (16.3%) -cook: IG 7 (8.6%); CG 10 (11.6%) -do light housework: IG 32 (39.5%); CG 38 (44.2%) -clean floors: IG 61 (75.3%); CG 68 (79.1%) Significant comorbidities: n, % Heart Disease: IG 34 (42.0%); CG 38 (44.2%) High Blood Pressure: IG 28 (34.6%); CG 35 (40.5%) Arthritis: IG 50 (61.7%); CG 49 (57.0%) Health status: Self-Rating of Health (fair to poor), N %: IG 44 (54.3%); CG 46 (53.5%) Self-rating 'fair or poor' 90/167 Macmillan Health Opinion Index mean (SD) Intervention arm 9.7 (6.0) Control arm 11.4 (5.3) Cognitive status: not reported Mood status: Memorial University of Newfoundland Happiness Scale (mean, SD): IG 9.5 (10.9); CG 8.9 (10.0) Frailty status: frail Based on characteristics and criteria: in need of care

Interventions	2 groups Intervention 1: Experimental intervention. 81 participants. Frail Elders Personalised Program (FEPP) plus British Columbia long term care program. FEPP- personalized nurse-delivered health promotion intervention, including multidomain assessment, personalized care plan, care and regular reviews regularly. Long term care program- needs' assessment to determine level of care, regular reviewing and access to professional home care services and other community services. Grouped as: Homecare, multifactorial-action and review with self-management strategies Intervention 2: Control intervention. 86 participants. The British Columbia long term care program. The British Columbia long term care program includes needs' assessment to determine level of care, regular reviewing and access to professional home care services and other community services Grouped as: Homecare, multifactorial-action and review
Outcomes	Outcomes included in NMA: Living at home: Living at home (pts) Care home admission: Care-home placement (survivors/follow-up) Mortality: Deaths (from routine data) Tabulated outcomes: Outcomes not included in this review because insufficient data were reported: Loneliness: UCLA Loneliness Scale (revised) (Russell *et al.*, 1980) Other outcomes not specified as of interest for this review: Home care package (increased level of care) Memorial University Happiness Scale Health Locus of Control MacMillan Health Opinion Index Social Readjustment Rating Scale
Timepoints	Outcomes were measured at 12 months, 24 months and 36 months
Funding and conflicts of interest	Funding: Unclear Sources: supported in part by a grant from the British Columbia Health Research Foundation Conflicts of interest: Not reported
Notes	The group in Coquitlam is not included. n=201 initially randomised; "after the study enrolment had been completed, it was decided to exclude all couples where both members had become new LTC clients. This was done in order to avoid potential contamination, especially for those couples in which one member received the intervention and the other did not. This exclusion reduced the sample to 81 subjects in the New Westminster Treatment group and 86 subjects in the Control group."

Table 42. Harari 2008[165-180] study characteristics

Methods	Aims: A trial using Healt Risk Appraisal to evaluate the effect on health behaviour and preventative-care uptake in older people in NHS primary care. Design: Randomised Controlled Trial Details: 4 GP practices randomised, then only the 3 practices assigned to receive training would recruit participants for participant-level randomisation. To allow for within-household clustering, generalised estimating equations (assuming an exchangeable correlation structure) were used to analyse all outcomes.
Participants	Characterisation: Community-dwelling people aged 65+ without functional dependencies Country: UK Setting: London GP practices Enrolment started in 2000 Participants assigned: 2503 Inclusion criteria: all registered patients [in participating GP practices] aged 65 years and older Exclusion criteria: -nursing home resident -needing help in basic activities of daily living -dementia -terminal disease -non-English speaking Female: 55% Age: Mean (SD) = 74.5 (6.3) Has informal carer: 86% Living alone: 32% Ethnicity: Not reported Dependence and disabilities: Not reported Significant comorbidities: not reported Health status: Fair or poor general health perception (n, %): IG (n=1240) 304 (24.5%); CG (n=1263) 343 (27.%) Cognitive status: Not reported Mood status: Not reported Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: unselected
Interventions	2 groups

	Intervention 1: Experimental intervention. 1240 participants. Health Risk Appraisal for Older Persons (HRA-O). A self-administered questionnaire, leading to computer-generated individualised written health promotional feedback, and clinical information integrated into general practice information-technology systems. Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 1263 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Hospitalisation: Hospitalisation (pts hospitalised once or more/ last 12 months) Care home admission: Care-home placement (survivors/follow-up) Mortality: Deaths (reported as loss to follow-up) Outcomes not included in this review because insufficient data were reported: Health status: Health status (5 items) (Human Population Laboratory, 1965) Depression: Mental Health Index-5 (MHI-5) Falls: Falls (incidents / last 12 months) Other outcomes not specified as of interest for this review: ADL (dichotomous) IADL (dichotomous) Health Risk Appraisal Older (HRA–O) people instrument: -Health behaviour (accident prevention, alcohol use, nutrition intake, physical activity, tobacco use); and -Preventative care use (blood pressure, breast cancer screening, cholesterol level, colon cancer screening, dental care, diabetes screening, hearing examination, influenza immunisation, pneumococcal immunisation, vision examination) Short (6-item) version of the Lubben Social Network Scale Activity limitation due to fear of falling Hearing Handicap Inventory for the Elderly (and hearing exam history) Visual Functioning Questionnaire (and vision exam history) Multiple medication use (>3 prescribed medications) 24-item Geriatric Pain Measure Medical history of diagnosed chronic conditions Geriatric Oral Health Assessment Index (GOHAI) Perceived Efficacy in Patient–Physician Interactions Questionnaire Use of health services over the previous 12 months (primary care or outpatient appointments) Availability of a carer in an emergency Qualitative study: To explore the perspectives of both professionals and older people on modifiable health behaviours and risks in later life.
Timepoint	Outcomes were measured at 1 year

Funding and conflicts of interest	Funding: Non-commercial Sources: European Union grant (Brussels, QLKK6-CT-1999-02205) and the Federal Education and Science Ministry (Bern, Switzerland, BBW 990311.1). Conflicts of interest: No competing interests.
Notes	1. PRO-AGE London: linked to Stuck 2015[181] (PRO-AGE Solothurn) - same intervention but different location. 2. For calculating imputed measures, missing outcome information was substituted with values derived from regression analyses based on available baseline information.

Table 43. Hattori 2019[182, 183] study characteristics

Methods	Aims: To assess the efficacy of a reablement program (CoMMIT program plus standard care) in improving the independence from long-term care services of older adults with mild disability, compared to standard care. Design: Randomised Controlled Trial
Participants	Characterisation: community-dwelling older adults aged 65 years or older with mild disability. Community-dwelling older adults aged 65 years with mild disability. Country: Japan Setting: Neyagawa, a local government area in Osaka. Public long-term care insurance system for people with mild to severe disability and no gatekeeping system in the choice of service providers. Enrolment started in 2018 Participants assigned: 375 Inclusion criteria: - community-dwelling older adults aged 65 years or older - certified as support-required level - reported current (i.e., prevalent or new) use of long-term care services Exclusion criteria: - a physician's diagnosis of dementia with a score of III or more on the Dementia Scale - physician's diagnosis of end-stage cancer - receipt of financial aid for treatment of an intractable disease - (in the trial register only) those who are being judged that short-term intensive rehabilitation program is not suitable due to their physical and mental conditions based on the initial assessments by professional care managers Female: 67% Age: Median (IQR) ITT Population (the one being extracted here) Intervention arm : 80.0 (76.3–84.0) Control arm : 80.0 (76.0–84.0 FAS Population Intervention arm : 80.0 (76.0–83.3) Control Arm : 80.0 (76.0–84.0

	PPS Population Intervention Arm : 80.0 (76.0–84.0) Control Arm: 80.0 (76.0–84.0) Has informal carer: not reported. Living alone: not reported. Ethnicity: Not provided. Dependence and disabilities: Use of long term care insurance: Prevalent user, n = 340 (91%); New user, n = 35 (9%) Support/required level: Level 1, n = 204 (54%); Level 2, n = 171 (46%) Number of impaired ADL: None, n = 90 (24%); One, n = 118 (31%); Two or more, n = 167(45%) Number of impaired IADL: None, n = 109 (29%); One, n = 80 (21%); Two or more, n = 186 (50%) Significant comorbidities: Not provided. Health status: Not Provided Cognitive status: Dementia: Without, n = 224 (60%) I, n = 100 (27%) II, n = 51 (13%) Mood status: Not reported. Depression was measured at 4 months since baseline but not reported. Frailty status: pre-frail and frail Based on characteristics and criteria: Mild disability
Interventions	2 groups Intervention 1: Experimental intervention. 190 participants. Community-based, multicomponent, multidisciplinary, individualized goal-directed, and time-limited intervention (CoMMIT) program plus standard care. Grouped as: Education, multifactorial-action and review with self-management strategies Intervention 2: Control intervention. 185 participants. Standard care. Grouped as: Multifactorial-action and review

Outcomes	Tabulated outcomes: Hospitalisation: Hospitalisation (pts hospitalised once or more) Mortality: Deaths (pre-specified outcome, method of ascertainment unspecified) Outcomes not included in this review because insufficient data were reported: Instrumental activities of daily living: Tokyo Metropolitan Institute of Gerontology (TMIG) Index of Competence (Koyano *et al.*, 1991) (Score range 0-13) Health status: EQ-5D-5L (self-completion) Depression: Geriatric Depression Scale (GDS) (in Hattori 2019) Other outcomes not specified as of interest for this review: Grip Strength Time Up & Go Test 5-Meter Walking Test Berg Balance Scale - BBS
Timepoints	Outcomes were measured at 4 months and 8 months
Funding and conflicts of interest	Funding: Non-commercial Sources: This research was funded by the Japanese Physical Therapy Association, grant number H29-1 Conflicts of interest: For the previous three years, S.H. has been receiving personal fees from Takeda Pharmaceutical Co., Ltd.; NTT DOCOMO Inc.; TOTEC AMENITY Ltd.; Koureisha Jutaku Shimbun Co., Ltd.; Health Care Managing Service Co., Ltd.; Japan Research Institute for New Systems of Society Co., Ltd.; T.Y. is an employee of the NTT Data Institute of Management Consulting, Inc.; Y.O. has been receiving personal fees from Merck & Co., Inc.; Otsuka Pharmaceutical Co., Ltd.; Cando, Inc.; the Japan Medical Data Center; and the Japan Medical Research Institute Co., Ltd.; K.K. declares no competing interests. The funding organization had no role in the design and conduct of the study; collection, management, analysis, and interpretation of data; preparation, review, or approval of the manuscript; and decision to submit the manuscript for publication.
Notes	Two sets of sensitivity analyses were performed by focusing on the participants who had received the allocated interventions at least once, that is, the full analysis set (FAS), and who had received more than half of the allocated interventions, that is, the per-protocol set (PPS).

Table 44. Hay 1998[184, 185] study characteristics

Methods	Aims: To evaluate cost and benefits of screening for and treating health and lifestyle risks among community-dwelling elderly. Design: Randomised Controlled Trial Details: Seniors who screened positive and whose spouses had previously been allocated were placed in the same arm.
Participants	Characterisation: elderly patients in family practice Country: Canada Setting: primary care practice Enrolment started before 2006 Participants assigned: 619 Inclusion criteria:

	- Rostered patients completed the 28-item screening and case finding questionnaire, and were screened positive, as identified with any of the 28 items. Exclusion criteria: 1. Demented, unstable, or institutionalized 2. Disoriented and confused participants were excluded because they were unable to fill out the questionnaire that relied on subjective experiences, such as pain, loss, and other concerns; using a proxy could not produce valid and reliable answers. Female: 58% Age: Mean (SD) = 74.5 (6.4) Has informal carer: not reported. Living alone: not reported. Ethnicity: Not mentioned. Dependence and disabilities: Not mentioned. Significant comorbidities: Not mentioned. Health status: Not mentioned. Cognitive status: Not mentioned. Mood status: Not mentioned. Frailty status: unclassifiable
Interventions	3 groups Intervention 1: Experimental intervention. 209 participants. Prospective care. Prospective care in family practice, including screening for and treating health and lifestyle risks Grouped as: Multifactorial-action Intervention 2: Control intervention. 203 participants. Usual on-demand care with assessment. Grouped as: Available care Intervention 3: Control intervention. 207 participants. Usual on-demand care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up), Living at home (calculated, from losses to follow up)

	Care home admission: Care-home placement (survivors/follow-up) Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Personal and instrumental activities of daily living: Older Americans Research and Services Center Instrument (OARS) - ADL domain Outcomes not included in this review because insufficient data were reported: Hospitalisation: Hospitalisation (pts hospitalised once or more/ last 12 months) Costs: Costs to health services + society + patient (Health Service Utilization Inventory) (last 12 months) Other outcomes not specified as of interest for this review: Compliance was assessed by chart review. Patients were deemed "treatment compliant" if they attended the clinic within 6 weeks of referral. Health professional compliance was calculated by the number of treatments provided divided by the number of treatable problems discovered. Social support was assessed using the Duke-UNC functional support questionnaire Purpose-in-life was assessed using the purpose-in-life questionnaire OARS functional capacity in domains: social and economic resources, mental health, physical health, self-care
Timepoints	Outcomes were measured at 12 months and 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Canadian National Health Research Development Grant. Conflicts of interest: Not mentioned.
Notes	The "Screened negative" arm is ineligible because it was not randomised to the allocation.

Table 45. Hebert 2001[186] study characteristics

Methods	Aims: To verify the efficacy of a multidimensional preventive programme on functional decline of older people. Design: Randomised Controlled Trial
Participants	Characterisation: aged over 75 living at home, identified to be at risk of functional decline by postal questionnaire Country: Canada Setting: Community of Sherbrooke City, Canada Enrolment started before 2006 Participants assigned: 503 Inclusion criteria: - Aged over 75, born between 1 December and 30 April. - Living at home in Metropolitan Sherbrooke - Form the list of Quebec Health Insurance Plan. - Identified to be at risk of functional decline by the Sherbrooke Postal Questionnaire) - more than 1 risk factors - Spoke either French or English - Agree to participate

	Exclusion criteria: - Admitted to an institution or in hospital. - Died; moved out of the region; could not be contacted. Female: 64% Age: Mean (SD) = 80.3 (4.3) Has informal carer: not reported. Living alone: not reported. Ethnicity: Not mentioned Dependence and disabilities: mean (SD) score for SMAF (functional autonomy measurement system) Experimental arm: 9.6 (8.4) Control arm 10.1 (9.2) Significant comorbidities: Not mentioned Health status: General Well-being Schedule (6 dimensions: anxiety, depression, positive well-being, self-control, vitality, and general health) (Mean (SD)): IG =75.1 (15.7) CG =75.3 (17.4) Cognitive status: Not mentioned Mood status: Not mentioned Frailty status: pre-frail and frail Based on characteristics and criteria: At risk of decline (Sherbrook)
Interventions	2 groups Intervention 1: Experimental intervention. 250 participants. Multidimensional preventive programme. For older people at risk of functional decline, including nurse-led assessment and referrals. Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 253 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Care home admission: Care-home placement (survivors/follow-up) Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Personal and instrumental activities of daily living: Functional Autonomy Measurement System (SMAF) (Hebert et al., 1984)

	Other outcomes not specified as of interest for this review: General Well-being Schedule (6 dimensions: anxiety, depression, positive well-being, self-control, vitality, and general health) (Dupuy 1978) Social Provisions Scale (6 dimensions: attachment, social integration, reassurance of worth, reliable alliance, guidance, opportunity for nurturing) (Cultrona and Russell, 1987) Questionnaire on health services use every month Number of recommendations made for each identified health problem and compliance with the recommendations
Timepoints	Outcomes were measured at 1 year
Funding and conflicts of interest	Funding: Non-commercial Sources: The Quebec Health Research Fund. Conflicts of interest: Not mentioned, appears none.
Notes	

Table 46. Henderson 2005[187, 188] study characteristics

Methods	Aims: To evaluate the effectiveness of in-home health assessment and case management by telephone as a means of providing preventive health care to prevent deterioration in health status in a population of people aged 75 years and over, living alone in ILU. Design: Cluster RCT Clustering not accounted for.
Participants	Characterisation: older people, residents of Independent Living Units Country: Australia Setting: Independent Living Units (ILUs) managed by Blue Care (a community and aged care service provider in Queensland), some in metropolitan areas and others in fringe areas. Case management was carried out by phone rather than the standard face-to-face visit. Enrolment started in 2002 Clusters assigned: 16 Participants assigned: 167 Inclusion criteria: 1. 75 years of age or over 2. Living alone 3. Able to speak and understand English 4. Able to use a telephone in their residence. Exclusion criteria: Potential participants were excluded from the study if they were receiving: 1. Community services related to Activities of Daily Living deficits, such as personal care 2. Greater than two community services related to Instrumental Activities of Daily Living deficits. 3. Significant amounts of informal care (for instance a daughter performing most of the housework). Female: 88% Age: Mean (SD) = 81.6 (4.6); Range: 75 to 94 Has informal carer: not reported. Living alone: 100%

	Ethnicity: The author states that: 'The sample was generally representative of the Australian population of people aged 75 years and over as described by the Office for an Ageing Australia (2002) and AIHW (2002)'. However, no specific details are provided with regards to ethnic backgrounds. Dependence and disabilities: Scores for both arms for ADL and IADL were close to ceiling of full independence. Significant comorbidities: Number of major health problems areas: Exp arm M=2.1, SD=1.2; Control arm M=1.8, SD=1.1. The types of major health problem areas that were being experienced by participants in the Experimental and the Control Arm at baseline were: heart trouble, circulation problems, paralysis, arthritis or rheumatism, tumour, growth or cancer and other (diabetes, ulcers, etc.). Heart trouble: Exp arm, N= 20, 33%; Control arm, N= 9, 14%. Circulation problems: Exp arm, N=22, 36%; Control arm, N=16, 25%. Paralysis: Exp arm, N=3, 5%; Control arm, N=0, 0%. Arthritis and Rheumatism: Exp arm, N=29, 48%; Control arm, N=40, 64%. Tumour, Growth or Cancer: Exp arm, N=8, 13%; Control arm, N=3,5%. Other (diabetes, ulcers, etc): Exp arm, N=43, 71%; Control arm, N=41, 65%. Health status: Health perception 3-10 scale, higher score represents a perception of a higher level of health Exp arm M=7.0, SD=1.6 Control arm M=6.9, SD=1.4 61% Experimental and 62% Control participants rated their health as good or better, and 39% Experimental and 38% Control participants rated their health as fair or poor. Cognitive status: Psychiatric or cognition need was identified at baseline for 1 participant (2%) in the Experimental Arm and 4 participants (6%) in the Control Arm. Mood status: GHQ-12: Experimental Arm x = 11.5 (SD = 2.9) and the Control Arm x = 11.8 (SD = 3.0). The scores for both arms were approaching the recommended threshold for risk of psychiatric illness, but this conclusion is clinically questionable. Frailty status: robust Based on characteristics and criteria: highly independent
Interventions	2 groups Intervention 1: Experimental intervention. 8 clusters, 88 participants. Community Preventive Health Model for over 75s living alone. Community-nurse-based comprehensive assessment and case management. Grouped as: Multifactorial-action and review

	Intervention 2: Control intervention. 8 clusters, 79 participants. Control. Community-nurse-based comprehensive assessment and provision of summary of identified needs but no further action taken. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Personal activities of daily living: Comprehensive Assessment Tool - Activities of Daily Living Scale (CAT ADL) Instrumental activities of daily living: Older Americans Research and Services Center Instrument (OARS) - IADL scale Hospitalisation: Hospitalisation (pts hospitalised once or more) Care home admission: Care-home placement (survivors/follow-up) Depression: General Health Questionnaire 12 items (GHQ-12) Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Hospitalisation: Hospitalisation (days or nights) Health status: Health Perception Scale (Henderson, 2005) Falls: Falls (incidents), Falls (pts fell once or more) Other outcomes not specified as of interest for this review: Hospital emergency department (pts visited once or more) Hospital emergency department (visits) Philadelphia Geriatric Centre Morale Scale (Lawton, 1975) Medical Outcomes Study Social Support Scale (Sherbourne and Stewart, 1991) Client Satisfaction Questionnaire (Larsen *et al.*, 1979) Case Management Outcomes Tool (CMOT). For the experimental arm only: types of needs identified, stage when needs were identified, type of interventions made, client follow-through and client outcome GP Health Assessments Comprehensive Assessment Tool - (pilot study)
Timepoints	Outcomes were measured at 3 months, 6 months, 9 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: 1. Australian Postgraduate Award (Industry) Scholarship from the National Health and Medical Research Council Strategic Partnerships with Industry - Research and Training Scheme (SPIRT). 2. Royal College of Nursing Australia (Queensland Chapter), Queensland Conflicts of interest: The author thanks Blue Care Brisbane Central Region for the opportunity to apply for the APA (I) scholarship and part-time work during the scholarship period.
Notes	1. Those lost to follow up included 6 participants that were found ineligible after randomization. 2. Only those participants who completed all of the phases of data collection were included in the final sample. Participants who withdrew from the study had only partially completed the major research activities (health assessments and surveys). For the final analysis, all their data were removed from the database before all arm comparisons were performed. 3. Missing data were dealt with by performing computation for individual participants' data. Computation involved calculating a mean score of the

	existing data for each variable, and inserting the mean score into the missing item cells for that variable.

Table 47. Hendriksen 1984[189-192] study characteristics

Methods	Aims: to evaluate the effect of preventive community measures for elderly people, gauged by mortality, number of admissions to hospitals and nursing homes, and number of contacts to general practitioners. Design: Randomised Controlled Trial
Participants	Characterisation: Aged 75 years or more, living in suburb of Copenhagen. Country: Denmark Setting: Community: participant's home Enrolment started in 1980 Participants assigned: 600 Inclusion criteria: Living in Roedovre, Copenhagen. Aged 75+ Living in their own homes Exclusion criteria: none reported Female: not reported. Age: Median = 78; Range: 75 to 96 Has informal carer: not reported. Living alone: not reported. Ethnicity: Not stated Dependence and disabilities: Not stated Significant comorbidities: Not stated Health status: Not stated Cognitive status: Not stated Mood status: Not stated Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: unselected
Interventions	2 groups Intervention 1: Experimental intervention. 285 participants. Scheduled medical and social preventive home visits. Grouped as: Multifactorial-action and review

	Intervention 2: Control intervention. 287 participants. Usual community social and medical support. Grouped as: Available care
Outcomes	Outcomes included in NMA: Hospitalisation: Hospitalisation (pts hospitalised once or more/ last 6 months) Mortality: Deaths (from routine data) Tabulated outcomes: Hospitalisation: Hospitalisation (days or nights), Hospitalisation (admissions) Care home admission: Care-home placement (including deaths) Other outcomes not specified as of interest for this review: Home care (pts ever used) Home care (hours, ever used) Intervention cost estimation (expenditure in running an intervention scheme over 3 years, but unclear of calculation, e.g. no. of pts included) Contacts general practitioners Home nursing care
Timepoints	Outcomes were measured at 6 months, 12 months, 18 months, 24 months, 30 months and 36 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Grants from Helsefonden (11/50-80, 11/14-81, and 11/38-82) and Roedovre municipality. Conflicts of interest: None stated
Notes	No baseline data collected for control arm.

Table 48. Hogg 2009[193-198] study characteristics

Methods	Aims: To compare the effectiveness of home-based model of care including nurse practitioners and pharmacist against standard care in physical function, cost implication, acceptability of this model for adults aged 50 years and over Design: Randomised Controlled Trial Details: Where more than 1 individual in a household was enrolled, all were randomized together to the same arm: 241 randomised (206 individuals, 16 pairs, 1 household of 3 persons).
Participants	Characterisation: 50 years of age and older at risk of experiencing adverse health outcomes Country: Canada Setting: A semirural family health network (a type of group family practice providing primary care services) Enrolment started in 2004 Participants assigned: 241 Inclusion criteria: 1. 50 years of age or older

	2. Rostered in the practice, and considered by their family physicians to be good candidates to benefit from additional medical resources and at risk of functional decline, physical deterioration, or experiencing an event requiring emergency services. 3. No restrictions on diagnoses. 4. At Risk' by having one or more of the following: a. Visits to emergency dept within the past 6 months; b. Admission to hospital for a medical problem in past 6 months; c. High service use profiles; d. Polypharmacy; e. Other high risk factors 5. Capable of giving informed consent 6. Able to use the Care Companion technology Exclusion criteria: 1. Substantial cognitive impairment 2. Language or cultural barriers 3. Life expectancy less than 6 months, or having unstable conditions on entry 4. Plans to move or to be away for more than 6 weeks during the study period Female: 57% Age: Mean (yrs): IG (n=120) 69.6, CG (n=121) 72.8 Has informal carer: not reported. Living alone: 29% Ethnicity: Not reported Dependence and disabilities: 1. IADL (Lawton and Brody, 1969) (mean score out of 31): IG = 10.3, CG = 10.3 2. Home care services client: IG = 9%, CG = 8% Significant comorbidities: Diabetes = 79 (32.8%) Coronary artery disease = 71 (29.5%) COPD = 42 (17.4%) Congestive heart = 20 (8.3%) Health status: 1. SF-36 Physical component (mean score out of 100): IG = 41.6, CG = 40.4 2. HRQoL Selt-assessed poor or fair health (% participant): IG = 26.8%, CG = 36.2% 3. HRQoL No. of unhealthy days in last 30 days: IG = 8.6, CG = 9.5 Cognitive status: not reported Mood status: SF-36 Mental component (mean score out of 100): IG = 53.6, CG = 52.3 Frailty status: unclassifiable
Interventions	2 groups Intervention 1: Experimental intervention. 120 participants.

	Anticipatory and Preventive Team Care (APTCare). Anticipatory and preventive care from a collaborative team: family physicians, 1 nurse practitioner, and a pharmacist. Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 121 participants. Usual care. Usual family physician care only. Grouped as: Available care
Outcomes	Outcomes included in NMA: Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Instrumental activities of daily living: Lawton IADL scale (0-8) (Lawton & Brody 1969) Hospitalisation: Hospitalisation (admissions), Hospitalisation (pts hospitalised once or more) Health status: SF-36: Physical Component Summary (PCS) score, SF-36: Mental Component Summary (MCS) score Outcomes not included in this review because insufficient data were reported: Costs: Costs to health care services Cost effectiveness: Cost-effectiveness ratio (Quality of Care) Other outcomes not specified as of interest for this review: CDC HRQOL-4: Summary of physically and mentally unhealthy days in last 30 days Hospital emergency department (pts visited once or more) Hospital emergency department (visits) Composite QOC score of disease management for 4 chronic conditions (only evaluated in the subset of pts with at least 1 of 4 named chronic diseases) Zarit Burden Scare (Caregiver burden questionnaire) Mean HbA1c (diabetes) Blood pressure Composite score of preventive care management (QOC) (Adherence to the Canadian Task Force on Preventive Health Care recommendations) Medication appropriateness Use of primary care services Use of allied health services
Timepoint	Outcomes were measured at 15 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Funding for this research was provided by the Ontario Ministry of Health and Long-Term Care Primary Health Care Transition Fund. Conflicts of interest: None declared
Notes	

Table 49. Holland 2005[199-201] study characteristics

Methods	Aims: To evaluate the California Public Employees Retirement System (CalPERS) Health Matters program (a community-based health coaching program) in a randomized controlled trial Design: Randomised Controlled Trial
Participants	Characterisation: CalPERS members who also had qualified and purchased CalPERS long-term care insurance Country: USA Setting: 1 senior center and 2 community centers Enrolment started in 2001 Participants assigned: 504 Inclusion criteria: 1. CalPERS members live in an area served by a participating senior or community center 2. Have one or more qualifying chronic health conditions (e.g., arthritis, hypertension, diabetes mellitus, cardiovascular disease, pulmonary disease) 3. Be healthy enough to be considered a reasonable long-term care insurance risk 4. Aged 65 and older, and 5. Be a member of Kaiser's, Health Net's, or PacificCare's senior managed care program. Exclusion criteria: 1. Being cognitively impaired as measured by the Mini-Mental State Examination, 6 as defined by a score of 24 or less, or 2. Qualifying for long-term care benefits due to deficiencies in two or more activities of daily living (ADLs). Female: 55% Age: Mean (SD) = 73 (4.9) Has informal carer: not reported. Living alone: not reported. Ethnicity: Race or ethnicity (White)= 80% Dependence and disabilities: Mean (SD) # IADL (Lawton) or ADL (Katz)limitations (0 to 3 = unable): IG (n=255) 0.2 (0.3); CG (n=248) 0.2 (0.4) Health limitations (0 to 4 = almost total): IG (n=255) 0.6 (0.8); CG (n=248) 0.5 (0.8) Significant comorbidities: Heart disease: IG 21% vs. CG 34% Mean (SD) # serious chronic conditions: IG (n=255) 0.8 (0.9); CG (n=249) 0.9 (0.9) Health status: Mean (SD)

	Health status (Idelr and Angel, 1990)(1 = poor to 5 = excellent): IG (n=252) 3.5 (0.8); CG (n=249) 3.4 (0.8) Health distress (0 to 5 = always): IG (n=255) 0.8 (0.8); CG (n=248) 0.8 (0.7) Fair or poor health: IG 8% vs. CG 21% Cognitive status: Not reported. Mood status: GDS, mean (SD): IG 1.9 (2.1); CG 2.0 (1.9) Goldberg anxiety scale, mean (SD): IG 2.5 (1.9); CG 2.4 (1.9) Frailty status: unclassifiable
Interventions	2 groups Intervention 1: Experimental intervention. 255 participants. Health Matters- community-based health coaching program. A menu of disability-prevention strategies, with health coaching, patient education on self-management of chronic illness, and fitness Grouped as: Education, exercise, multifactorial-action and review with self-management strategies Intervention 2: Control intervention. 249 participants. Usual care. Including access to medical care and community resources Grouped as: Available care
Outcomes	Outcomes included in NMA: Mortality: Deaths (from routine data) Tabulated outcomes: Depression: Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986) Outcomes of interest with bespoke measures: Personal activities of daily living Outcomes not included in this review because insufficient data were reported: Hospitalisation: Hospitalisation (pts hospitalised once or more/ last 12 months) Health status: Health Perception (EVGFP / 5-1) - RAND Medical Outcome Study (MOS) Other outcomes not specified as of interest for this review: Hospital emergency department (pts visited once or more/ last 12 months) Health distress in past 2 weeks (scored none to all the time, summed and averaged for four items: discouraged by health problems, fearful about future health, health is a worry in life, and frustrated with health problems) Pain in past 2 weeks (0 to 10 on a visual analogue scale from none to severe)

	Fatigue in past 2 weeks (0 to 10 on a visual analogue scale from none to severe), shortness of breath in past 2 weeks (0 to 10 on a visual analogue scale from none to severe; Stewart, Hays, & Ware, 1992). Anxiety (Goldberg *et al.*, 1988) Communication with physicians was scored never to always, summed and averaged for three items ("prepare a list of questions," "ask about things want to know," "discuss personal problems related to illness"; Lorig *et al.*, 1996). Medications listings (including dosage and frequency) were obtained by the nurse during the participant interviews by recording information from prescription labels. Change was scored by whether a particular class of drugs was completely stopped between baseline and 12 months. An administrative system tracked attendance at Health-Matters-sponsored health education and fitness classes and also identified whether other community resources (such as community center physical activities) were used. Specific encounter rates for activities not provided by Health Matters were not available. Self-reported chronic health conditions Minutes of aerobic activity in the past week Minutes spent stretching Social or role activities Telephone contacts Formal meetings Health social or role limitations in past 4 weeks Body mass index
Timepoint	Outcomes were measured at 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: California HealthCare Foundation Conflicts of interest: Not mentioned.
Notes	

Table 50. Howel 2019[202-205] study characteristics

Methods	Aims: To establish the acceptability, cost-effectiveness and effect on health of a domiciliary welfare rights advice service targeting older people, compared with usual practice. Design: Randomised Controlled Trial
Participants	Characterisation: independent living, socio-economically disadvantaged people aged 60 years and over Country: UK Setting: Community: participants' homes Enrolment started in 2011 Participants assigned: 755 Inclusion criteria: GP: - ranked according to deprivation score (2010 English Index of Multiple Deprivation calculated at Middle Super Output Area level for practice postcodes). Those practices in the lower two fifths of the deprivation ranking distribution without existing dedicated or targeted welfare rights advice services will be eligible for inclusion.

	Patients: - Volunteer men and women registered with a general practice in one of 10 social services areas (1 individual per household) - Aged ≥60 years - Providing informed consent Exclusion criteria: Patients: - Resident in social care (residential) or nursing homes or hospitals at the time of identification and recruitment - Diagnosed with terminal illness - Cannot participate in the research by virtue of current physical/mental health - Lack of fluency in written and spoken English Female: 53% Age: Mean (SD) = 70.6 (7.3) Has informal carer: not reported. Living alone: 47% Ethnicity: White: 749 (99.2%) Dependence and disabilities: Modified Townsend ADL (range 0-16, mean (SD)): IG= 10.9 (4.8) CG= 10.7 (5.0) Receiving home care (hours/week, mean (SD)): IG n=85 48.1 (56.1) CG n=100 53.6 (57.5) Significant comorbidities: Not mentioned. Health status: EQ-5D-3L score (mean (SD)): IG= 0.589 (0.332) CG= 0.583 (0.356) CASP-19 (mean (SD)): IG= 41.4 (10.5) CG= 40.7 (10.9) Cognitive status: Not mentioned. Mood status: PHQ-9 depression (mean (SD)): IG= 4.4 (5.3) CG= 4.6 (5.2) Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: unselected
Interventions	2 groups Intervention 1: Experimental intervention. 381 participants. Domiciliary welfare rights advice and active assistance. Grouped as: Welfare-advice Intervention 2: Control intervention. 374 participants. Usual care.

	Grouped as: Available care
Outcomes	Outcomes included in NMA: Mortality: Deaths (from routine data) Tabulated outcomes: Homecare services usage: Home care (pts) Health status: QALY from EQ-5D-3L, EQ-5D-3L (self-completion) Depression: Patient Heath Questionnaire (PHQ-9) Outcomes not included in this review because insufficient data were reported: Care home admission: Care Home (pts) Costs: Costs of intervention Cost effectiveness: ICER - QALY (EQ-5D-3L) Other outcomes not specified as of interest for this review: CASP-19 (0-57) Home care (Only pts receiving care/ hours per week) Modified Townsend ADL scale (8 items, 0-16) (in Haighton 2012) Process evaluation: explore the intervention's acceptability and its perceived impacts Key health related behaviours (diet score (15-75), alcohol consumption, smoking status, Physical Activity Scale for the Elderly (PASE) (0-400)) Changes in financial status (including welfare benefits or not) Index of Multiple deprivation Life events score (0–32) Standard of living index (0-24) Affordability index (4-20) (perceived financial well-being) Fuel poverty (achievement of household temperature sufficient to maintain health for expenditure of <10% of household income) Living independently (Dependent on others) Social support and participation (Social Support Questionnaire) Material (dis)advantage Proportion of pts living dependently on others Proportion of pts with health problem limiting daily activities Newly received non-financial benefits (inc. services, aids and adaptations) Costs of the intervention, from public sector and treasury perspectives
Timepoints	Outcomes were measured at 12 months and 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: UK National Institute of Health Research Public Health Research Programme; North East Strategic Health Authority. Conflicts of interest: All authors received a grant of £28,000 from the North East Strategic Health Authority in 2012 to cover the costs of delivering the intervention, associated training and other non-research costs of this study. Elaine McColl has been a subpanel member of National Institute for Health Research (NIHR) Programme Grants for Applied Research and Programme Development Grants since June 2008. She was also an editor for the NIHR Journals Library Programme Grants for Applied Research programme from July 2013 to March 2016. Luke Vale has been a panel member of the NIHR Health Technology Assessment Clinical Trials Board since 2014, a panel member for NIHR Programme Grants for Applied Research from March 2008 to June 2016, and Director of the NIHR Research Design Service for the North East of England since April 2012. Martin White is a member of

	the NIHR Journals Library Editorial Board. He is Programme Director of the NIHR Public Health Research programme and Editor-in-Chief of the NIHR Public Health Research journal (he has held both roles since October 2014).
Notes	Multiple imputation used for CASP-19, using chained equations and predictive mean matching to obtain a complete data set for the primary outcome at 12 and 24 months. Imputation model included baseline characteristics age, sex, education and living alone as well as CASP-19 score at baseline. The model for 24 months was additionally adjusted for CASP-19 score at 12 months after imputation.

Table 51. Imhof 2012[29, 206] study characteristics

Methods	Aims: To evaluate the effects of an advanced practice nurse (APN) in-home health consultation program (HCP) on quality of life, health indicators (falls, acute events), and healthcare utilization. Design: Randomised Controlled Trial
Participants	Characterisation: community-dwelling persons aged 80 and older who were cognitively able Country: Switzerland Setting: One urban area in the German-speaking part of Switzerland: participant's residence Enrolment started in 2008 Participants assigned: 461 Inclusion criteria: German-speaking, aged 80 and older, living at home, cognitively able to understand and consent to the study. Exclusion criteria: at the end of life, with a major psychiatric diagnosis, or severe cognitive impairment, as measured using the Clinical Dementia Rating Scale. Female: 73% Age: Mean (SD) = 85 (4) Has informal carer: not reported. Living alone: 67% Ethnicity: all Caucasian Dependence and disabilities: Activities of daily living (Older Americans Resources and Services): (mean± SD) IG= 24.5± 3.3, CG= 24.4± 3.5 34% of participants were able to manage their household independently. 57% needed regular support from informal caregivers or home care services 9% were completely dependent on daily support from family members or community nurses Significant comorbidities: Cardiological and pulmonary problems, n (%): 95 (41.1); 99 (43.0)

	Daily pain, n (%): 70 (30.3); 70 (30.4) Sleeping problems, n (%): 102 (44.2); 104 (45.2) Incontinence, n (%): 61 (26.4); 79 (34.3) Amsler-Gitter vision test normal, n (%): 136 (65.1); 135 (66.5) Increase in forgetfulness within previous 3 months, n (%): 66 (28.6); 75 (32.6) Effect of forgetfulness on activities of daily living, mean ± SD (0-100 [most]): 24.4 ± 18.1; 29.3 ± 22.1 Health status: WHOQOL-BREF (mean± SD): IG+CG= 69.2 ± 17.3 Self-rated health good to excellent (n): IG= 143 (61.9%), CG= 139 (60.5%) Cognitive status: Increase in forgetfulness within previous 3 months (n): IG= 66 (28.6%) CG= 75 (32.6%) Mood status: Geriatric Depression Scale score <1 (n): IG= 185 (80.4%) CG= 182 (79.1%) Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: unselected and representative in this case
Interventions	2 groups Intervention 1: Experimental intervention. 231 participants. Advanced Practice Nurse In-Home Health Consultation Program. Grouped as: Multifactorial-action and review Intervention 2: Control intervention. 230 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Care home admission: Care-home placement (survivors/follow-up) Tabulated outcomes: Hospitalisation: Hospitalisation (pts hospitalised once or more/ last 3 months) Mortality: Deaths (reported as loss to follow-up) Outcomes of interest with bespoke measures: Depression Outcomes not included in this review because insufficient data were reported: Instrumental activities of daily living: Older Americans Research and Services Center Instrument (OARS) - IADL scale Personal and instrumental activities of daily living: Older Americans Research and Services Center Instrument (OARS) ADL+IADL, Older

	Americans Research and Services Center Instrument (OARS) - ADL domain Homecare services usage: Home care (pts/ last 3 months) Falls: Falls (pts fell once or more / last 3 months) Other outcomes not specified as of interest for this review: WHOQOL-BREF domains—physical, psychological, social, and environmental Incidence of acute events (cardiovascular, orthopedic, gastrointestinal, pulmonary, rheumatic, nephrological, neurological, urological, ophthalmological, dermatological, endocrinological, oncological, and other problems) Healthcare use Social support Self-efficacy Family functioning Timed Up and Go Test Mini Nutritional Assessment score Walk daily >30 minutes Tandem stand Timed 5-chair-rise test
Timepoints	Outcomes were measured at 3 months, 6 months and 9 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Age Foundation Zurich, Ebnet Foundation Teufen, Heinrich und Erna Walder Foundation Zurich, and the City of Winterthur Conflicts of interest: "The sponsors were not involved in the design; recruitment; collection, analysis, or interpretation of the data; or the writing of this article."
Notes	

Table 52. Jing 2018[207] study characteristics

Methods	Aims: To investigate the effectiveness of Baduanjin qigong combined with cognitive-behavior therapy (CBT) on the physical fitness and psychological health of elderly housebound. Design: Randomised Controlled Trial Details: 120 participants randomised to 3 intervention arms.
Participants	Characterisation: Housebound elderly people Country: China Setting: A selected community in Tangshan, China (as a research site) Enrolment started in 2016 Participants assigned: 80 Inclusion criteria: 1. 60 years or older 2. Meets the international criteria for being housebound (left the house once per week or fewer over a period of at least 6 months) 3. Did not receive prior Baduanjin training or Cognitive-behavioural therapy (CBT) intervention 4. Voluntarily participated in this study and signed the informed consent form.

	Exclusion criteria: 1. Could not speak well or answer the questionnaire 2. Had serious impaired hearing; bedridden elderly 3. Had received prior Baduanjin training or CBT Female: 71% Age: Mean (SD) = 74.9 (5.7); Range: 60 to 85 Has informal carer: not reported. Living alone: not reported. Ethnicity: Not reported. Dependence and disabilities: The ADL scale comprised 2 parts: ADL and instrumental activities of daily living scale (IADL), 14 items, rated on a scale of 1 to 4, total score 14 - 56. A score of 14 indicated completely normal function and independence, 15 - 21 indicated moderate degrees of dysfunction, ≥ 22 indicated severe dysfunction. M±SD 26.82±8.18, n=40, CBT arm 25.67±7.65, n=39, CBT & Baduanjin arm Significant comorbidities: Not mentioned. Health status: Quality of Life based on the Short-Form 36 Health Survey (SF-36) overall score 344.12±103.36, n=40, CBT arm 351.82±130.94, n=39, CBT & Baduanjin arm Health self-evaluation, 4 to 1 from more to less healthy 2.20±1.24, n=40, CBT arm 2.46±1.17, n=39, CBT & Baduanjin arm Cognitive status: Not mentioned. Mood status: Loneliness, self-assessed from 3 (often lonely) to 1 (not lonely) M±SD 2.05±0.71, n=40, CBT arm 2.00±0.69, n=39, CBT & Baduanjin arm Depression based on GDS 15, higher more depression symptoms 5.90±1.93, n=40, CBT arm 5.90±2.43, n=39, CBT & Baduanjin arm Frailty status: frail Based on characteristics and criteria: Housebound
Interventions	2 groups

	Intervention 1: Experimental intervention. 40 participants. Baduanjin qigong plus cognitive-behavioral therapy (CBT). Combined functional therapy and progressive psychological intervention. Grouped as: Exercise and psychology Intervention 2: Experimental intervention. 40 participants. Cognitive-behavioral therapy (CBT). Short-term psycho-social approach. Grouped as: Psychology
Outcomes	Tabulated outcomes: Personal and instrumental activities of daily living: ADL scale (Jing 2018) Health status: Health self-evaluation (Jing 2018) Depression: Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986) Loneliness: Loneliness (Jing 2018) Mortality: Deaths (reported as loss to follow-up) Outcomes not included in this review because insufficient data were reported: Depression: SF-36: Mental Health Other outcomes not specified as of interest for this review: Forced vital capacity (FVC) Maximum voluntary ventilation (MVV) Housebound status assessed via questionnaire SF-36: the 8 sub-scales
Timepoints	Outcomes were measured at 3 months and 6 months
Funding and conflicts of interest	Funding: Unclear Sources: Not reported. Conflicts of interest: None declared by authors.
Notes	Ineligible arm: Baduanjin training arm (recorded in "Participants" tab as "Excluded other reason = 40)

Table 53. Jitapunkul 1998[208] study characteristics

Methods	Aims: To test the benefits of regular surveillance of Thai elderly at home using a short questionnaire designed for the home visiting programme in Klong Toey slum. Design: Randomised Controlled Trial
Participants	Characterisation: aged 70 years or over and living in a slum area of Bangkok Country: Thailand Setting: Klong Toey district, Bangkok Enrolment started in 1993 Participants assigned: 160 Inclusion criteria: Resident in Klong Toey Slum Aged 70 and more Interviewed in the previous survey (Jitapunkel, 1995)

	Exclusion criteria: None stated Female: 65% Age: Mean (SD) = 75.6 (5.8) Has informal carer: not reported. Living alone: 4% Ethnicity: Not stated Dependence and disabilities: Mean Barthel AOL Index score (SD) cases 18.5 (3.5) controls 18.8 (2.1) Mean Chula AOL Index score (SD) cases 6.5 (2.7) controls 6.8 (2.4) Significant comorbidities: Serious chronic diseases (%) Diabetes cases 7.1 controls 4.2 Hypertension cases 10 controls 12.5 Obstructive airway diseases cases 5.6 controls 5.6 Major stroke cases 2.9 controls 4.2 Dementia cases 0 controls 0 Health status: Visit physician during the past three months cases 35.7% controls 30.6% Use medication at present cases 41.4% controls 45.8% Can recognise person at the opposite site of the road = 64.79% Can hear people talking without problem = 80.28% Cognitive status: Not stated Mood status: Not stated Frailty status: unclassifiable
Interventions	2 groups Intervention 1: Experimental intervention. 80 participants. Regular surveillance with a simple questionnaire and then referral to Health Care Professional. Grouped as: Risk-screening Intervention 2: Control intervention. 80 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Personal activities of daily living: Barthel Index (0-20 scale) Instrumental activities of daily living: Chula ADL Index (CAI) Tabulated outcomes: Hospitalisation: Hospitalisation (pts hospitalised once or more) Falls: Falls (pts fell once or more / last 3 months)

	Mortality: Deaths (pre-specified outcome, method of ascertainment unspecified) Other outcomes not specified as of interest for this review: Physician visits during the last three months Rehabilitation received during the last three years Social services received in the last six months
Timepoint	Outcomes were measured at 3 years
Funding and conflicts of interest	Funding: Non-commercial Sources: Rachada-Piseksompoj, China medical Board research Funds for a generous grant towards this research. The Care for the Elderly in Klong Toey Slum (CES project) was funded by the HelpAge International Conflicts of interest: Not mentioned.
Notes	Baseline characteristics and all results data only reported for: IG n=70/80, CG n= 72/80, excluded 18 moved to other areas.

Table 54. Kerse 2014[209-214] study characteristics

Methods	Aims: To assess whether case finding reduces disability among older primary care patients. Design: Cluster RCT clustering accounted for.
Participants	Characterisation: community dwelling adults aged 75 years and over (or 65 years and over for Māori) Country: New Zealand Setting: Primary care practices Enrolment started in 2008 Clusters assigned: 60 Participants assigned: 3893 Inclusion criteria: Pts: Community-dwelling older people aged 75 years and over (if Māori aged 65 years and over) enrolled in participating general practices were eligible to participate. Those who were not able to communicate in English were eligible if family members were available to translate for researchers. Clusters: Eligible: District Health Boards using the InterRAI home care assessment process in their Older People's Health Services; all Primary Health Organisations; all general practices and GPs with enrolled patients aged 75 years or more. Exclusion criteria: Those living in residential care, undergoing palliative care, or who were terminally ill were not eligible. Female: 55% Age: Mean (SD) = 80.3 (4.6) Has informal carer: 4% Living alone: 41% Ethnicity: Euro: 3510/3728 (94.15%) Māori: 181/3728 (4.86%) Pacific: 8/3728 (0.21%)

	Asian: 29/3728 (0.78%) Dependence and disabilities: Needing personal care [n (%)]: intervention arm 92 (5%); control arm 49 (3%) Disabled group (based on answers to 2 NEADL questions) [n (%)]: intervention arm 95 (64.19%); control arm 53 (35.81%) Significant comorbidities: n (%) Hypertension: intervention arm 1,054 (57); control arm 930 (55) Myocardial infarction: intervention arm 497 (27); control arm 459 (28) Cerebrovascular accident: intervention arm 213 (12); control arm 172 (11) COPD: intervention arm 126 (7); control arm 124 (7) Health status: NEADL mean (SD): intervention arm 19.6 (2.4); control arm 19.8 (2.1) Cognitive status: AMTS, mean (SD): intervention arm 9.31 (1.02); control arm 9.4 (0.89) Mood status: GDS-15, mean (SD): intervention arm 1.8 (1.8); control arm 1.7 (1.9) Frailty status: pre-frail and frail Based on characteristics and criteria: Risk tool
Interventions	2 groups Intervention 1: Experimental intervention. 31 clusters, 2049 participants. Brief Risk Identification Geriatric Health Tool (BRIGHT). A proactive case finding strategy with usual care, including primary care and access to other medical and community services Grouped as: Risk-screening Intervention 2: Control intervention. 29 clusters, 1844 participants. Usual care. Including primary care and access to other medical and community services. This includes the use of CGA upon referral from primary care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Care home admission: Care-home placement (survivors/follow-up) Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Instrumental activities of daily living: Nottingham Extended Activities of Daily Living (NEADL) (0-22) Personal and instrumental activities of daily living: Activity Measure for Post-Acute Care (AM-PAC) daily activity scale (self-care and IADL) Homecare services usage: Home care - personal care only (pts), Home care - domestic care only (pts)

	Depression: Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986) Outcomes not included in this review because insufficient data were reported: Hospitalisation: Hospitalisation (admissions / per person-year), Hospitalisation (pts hospitalised once or more/ last 12 months) Other outcomes not specified as of interest for this review: Use of services Satisfaction with your last consultation with the primary care physician Short Physical Performance Battery (measures physical performance, a combination of balance, gait speed, and chair stands) WHOQOL-BREF
Timepoints	Outcomes were measured at 18 months, 1 year, 2 years and 3 years
Funding and conflicts of interest	Funding: Non-commercial Sources: Health Research Council of New Zealand Conflicts of interest: No apparent conflicts.
Notes	Intraclass correlation coefficients for the change in NEADL scores, AM-PAC scores, hospitalization, and residential care placement were all less than 0.001.

Table 55. King 2012[215-218] study characteristics

Methods	Aims: To evaluate the impact of a restorative home care service for community-dwelling older people. Design: Cluster RCT Clustering accounted for. Details: - 10 clusters of approximately 20 older people, clusters are then randomly assigned to IG or CG. - 80% of pts within one cluster are chosen for participation. Thus allowing for each older person within a cluster to have equal chance of being chosen for participation. This also allows for a 25% refusal rate.
Participants	Characterisation: community-dwelling older people who received assistance from a home care agency Country: New Zealand Setting: Home care agency, participant's residence Enrolment started in 2006 Clusters assigned: 21 Participants assigned: 186 Inclusion criteria: All older people (65+ years) who received assistance from the home care agency were eligible for participation. Exclusion criteria: - Older people or support workers who have or who are currently recovering from a serious illness/injury, which could be physical or mental. - an inability to participate in interviews due to poor health. Poor health included severe physical or mental health, which impeded the older person from being able to answer interview questions.

	Female: 74% Age: Mean (SD) = 79.4 (6.5) Has informal carer: not reported. Living alone: not reported. Ethnicity: n (%) New Zealand European: control arm: 92 (98.9%): intervention arm 91 (97.8%) Māori: control arm: 0 (0%); intervention arm 1 (1.1%) Pacific peoples: control arm 1 (1.1%); intervention arm 1 (1.1%) Dependence and disabilities: Barthel index, SD: IG 18.4 (0.2); CG 18.4 (0.2) NEADL, mean, SE: IG 44.8 (0.9); CG 45.2 (1.1) Significant comorbidities: Co-morbidities, n (%) Neoplasms: CG 1 (1.1%); IG 4 (4.3%) Diseases of the blood and blood forming organs and certain disorders involving the immune mechanism: CG 2 (2.2%); IG 1 (1.1%) Endocrine, nutritional and metabolic diseases: CG 35 (37.6%); IG 16 (17.2%) Mental and behavioural disorders: CG 8 (8.6%); IG 7 (7.5%) Diseases of the nervous system: CG 10 (10.8%); IG 14 (15.1%) Diseases of the eye and adnexa: CG 13 (14.0%); IG 16 (17.2%) Diseases of the ear and mastoid process: CG 9 (9.7%); IG 6 (6.5%) Diseases of the circulatory system: CG 60 (64.5%); IG 72 (77.4%) Diseases of the respiratory system: CG 21 (22.6%); IG 19 (20.4%) Diseases of the digestive system: CG 11 (11.8%); IG 13 (14.0%) Diseases of the skin and subcutaneous tissue: CG 1 (1.1%); IG 1 (1.1%) Diseases of the musculoskeletal system and connective tissue: CG 58 (62.4%); IG 66 (71.0%) Diseases of the genitourinary system: CG 11 (11.8%); IG 6 (6.5%) Injury, poisoning and certain other consequences of external causes: CG 3 (3.2%); IG 6 (6.5%) Missing: CG 2 (2.2%); IG 2 (2.2%) Health status: SF-36 overall score, mean (SE): IG 52.4 (1.4); CG 54.6 (1.3) SF-36 physical component, mean (SE): IG 42.1 (1.4); CG 43.4 (1.3) Cognitive status: AMT score, mean (SD): control arm 9.2 (1.2); intervention arm 9.0 (1.2) Mood status: SF-36 mental component, mean (SE): IG 59.7 (1.5); CG 62.9 (1.4) Frailty status: pre-frail and frail Based on characteristics and criteria: Homecare
Interventions	2 groups Intervention 1: Experimental intervention. 10 clusters, 93 participants.

	Restorative home care. A multifaceted approach to improve home care services Grouped as: Homecare, ADL, multifactorial-action and review with self-management strategies Intervention 2: Control intervention. 11 clusters, 93 participants. Usual home care. Grouped as: Homecare
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Personal activities of daily living: Barthel Index (0-20 scale) Instrumental activities of daily living: Nottingham Extended Activities of Daily Living (NEADL) (0-66) Tabulated outcomes: Homecare services usage: Home care (hours per visit) Hospitalisation: Hospitalisation (pts hospitalised once or more/ last 3 months) Care home admission: Care-home placement (survivors/follow-up) Health status: EQ-5D EQ-VAS (0-10), SF-36: Physical Component Summary (PCS) score, SF-36: Mental Component Summary (MCS) score Depression: SF-36: Mental Health Falls: Falls (pts fell once or more / last 3 months) Mortality: Deaths (reported as loss to follow-up) Outcomes not included in this review because insufficient data were reported: Health status: EQ-5D-3L (self-completion) Other outcomes not specified as of interest for this review: Hospital emergency department (pts visited once or more/ last 3 months) Home care (visits per month) Perceptions and opinions of the services of staff (qualitative findings from support workers and coordinator) Timed Up and Go test Mastery scale (sense of control) Duke Social Support Index (social support network) Carer Reaction Assessment (informal carer stress) Abbreviated Mental Test Score (AMTS, cognitive impairment indication) Number (%) of most recent needs and home care agency assessments Support plans: Type of activity Financial analysis hypothesised three scenarios (costs of each arm) 'Qualitative question' Adverse events (GP visits) SF-36 subscales Falls in the last 3 months: 1 fall, 2 falls, 3 or more falls Time since last hospitalisation discharge in last 3 months 1,2,3+ hospitalisations or emergency department visits in last 3 months EQ-5D-3L but 5-15 not utility Not convinced that the PCS and MCS are those
Timepoints	Outcomes were measured at 4 months and 7 months

Funding and conflicts of interest	Funding: Non-commercial Sources: University of Auckland Doctoral Scholarship. Conflicts of interest: Appears none.
Notes	Intracluster correlation (ICC) used is 0.1, in sample size calculation.

Table 56. Kono 2016[219-221] study characteristics

Methods	Aims: To determine the effects on functional parameters of an updated preventive home visit program for frail older adults in the Japanese Long-term Care Insurance (LTCI) system. Design: Randomised Controlled Trial
Participants	Characterisation: Ambulatory frail older adults in the Japanese Long-term Care Insurance (LTCI) system Country: Japan Setting: Participant's residence Enrolment started in 2011 Participants assigned: 360 Inclusion criteria: Ambulatory frail elders were defined operationally as being in the two lowest care-need levels (Support Levels 1 and 2) out of the seven levels in the LTCI system. Eligibility criteria included: (1) aged 65 years and older; (2) certified as Support by the Japanese Long-Term Care Insurance System; and (3) living at home at the baseline survey. Exclusion criteria: receiving care under other agencies, expired certification, institutionalized individuals moved out of the area or died Female: 74% Age: Mean (SD) = 79.2 (6.1) Has informal carer: not reported. Living alone: 44% Ethnicity: Not reported, assuming 100% Japanese. Dependence and disabilities: Table 1: Care-need level 1 less frail: intervention arm 89 (49.7%) control arm 89 (49.2%) Care-need level 2 more frail: intervention arm 90 (50.3%) control arm 92 (50.8%) Table 2: ADL Barthel (0-100) mean (SD) Intervention arm 91.9 (10.9) control arm 92.7 (10.4) IADL Index of Competence (0-13) mean (SD) Intervention arm 8.3 (3.4) control arm 8.2 (3.2) Significant comorbidities: Not mentioned.

	Health status: Table 1: Subjective health (seems not validated scale) Intervention arm very good 3 (1.7%) good 60 (34.5%) bad 86 (49.4%) very bad 25 (14.4%) Control arm very good 4 (2.3%) good 74 (41.6%) bad 80 (44.9%) very bad 20 (11.2%) About half of the study population was in each Support Levels 1 and 2. Persons in Support Levels 1 and 2 were typically ambulatory, without serious cognitive disorder, with little difficulty in IADLs in general, and ineligible for facility-based care in the LTCI.) Cognitive status: Table 2: Cognitive capacity Metamemory in Adulthood Questionnaire (5-35) Mean (SD) Intervention arm 18.9 (5.9) control arm (18.5 (5.9) Mood status: Table 2: Depression GDS (15-1) Mean (SD) Intervention arm 2.1 (1.6) control arm 2.2 (1.6) Frailty status: pre-frail Based on characteristics and criteria: "ambulatory frail" service level 1
Interventions	2 groups Intervention 1: Experimental intervention. 179 participants. Preventive home visit programme. A unique structured assessment with treatment recommendations tied to an ongoing programme for quality assurance. Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 181 participants. Usual care. Home-visits and preventive benefit care management Grouped as: Multifactorial-action and review
Outcomes	Outcomes included in NMA: Living at home: Living at home (pts) Personal activities of daily living: Barthel index (0-100 scale) (Mahoney & Barthel, 1965) Hospitalisation: Hospitalisation (pts hospitalised once or more/ last 12 month) Care home admission: Care-home placement (survivors/follow-up) Depression: Geriatric Depression Scale 5-item version Mortality: Deaths (pre-specified outcome, method of ascertainment unspecified) Tabulated outcomes: Instrumental activities of daily living: Tokyo Metropolitan Institute of Gerontology (TMIG) Index of Competence (Koyano *et al.*, 1991) (Score range 0-13) Falls: Falls (pts fell once or more / last 12 months)

	Outcomes not included in this review because insufficient data were reported: Costs: Costs of public long-term care costs Other outcomes not specified as of interest for this review: Care-need levels in Long-term Care Insurance (LTCI) Change of Mean of Long-term Care Service Utilization (List of LTC services: https://www.mhlw.go.jp/english/topics/elderly/care/2.html) Frequency of going outdoors is investigated with the question 'How often do you usually go outside the house?' Cognitive capacity is measured by the capacity subscale of the Japanese short version (Kinjyo *et al.* 2013) of the Metamemory in Adulthood Questionnaire (Dixon & Hultsch 1983a,b, Bakitas *et al.* 2013) Daily-life satisfaction related to social activities is measured by the Social Activities-Related Daily Life Satisfaction scale Self-efficacy for health promotion is assessed by the Self-Efficacy for Health Promotion scale (Yokokawa *et al.* 1999) How the PHV programme is conducted among participants in the visit arm, we also collect data regarding the contents of assessments or recommendations from the forms recorded by home visitors during PHV The occurrence of any health-related events in the past year which could affect functional parameters, including falls, hospitalizations, or death of a family member
Timepoints	Outcomes were measured at 12 months, 24 months and 36 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Japan Society for the promotion of science: Kiban-B Conflicts of interest: No conflict of interest.
Notes	Sensitivity subgroup analysis on the basis of support level and Barthel Index, including participants (n = 280) who were living at home, hospitalized, or institutionalized at 24-month follow-up in the same way.

Table 57. Kono 2004[222] study characteristics

Methods	Aims: The aim of this randomized pilot study was to investigate the effects of preventive home visits for ambulatory housebound elders by public health nurses in Japan. Design: Randomised Controlled Trial
Participants	Characterisation: ambulatory housebound elders Country: Japan Setting: Rural farming community in small Japanese agricultural town: participant's residence Enrolment started in 2000 Participants assigned: 119 Inclusion criteria: 1. Aged 65 or over 2. Living at home 3. Needing assistance by the Welfare Department of the city government 4. Ambulatory housebound elders who could walk independently, but still needed some assistance to live in their own community and went outdoors less than three times a week Exclusion criteria:

	1. Staying In hospital 2. Living in nursing homes 3. Severely disabled elders who needed assistance to walk 4. Who went outdoors more than four times a week 5. Who did not answer questions about the frequency of going outdoors or about need for walking assistance. Female: 79% Age: Mean (SD) = 82.7 (7) Has informal carer: not reported. Living alone: not reported. Ethnicity: Not mentioned Dependence and disabilities: Barthel Index (modified) (Kono, 2004), mean (SD): IG 14.5 (4.2); CG 14.1 (3.9) Self-efficacy for daily activities - Modified Falls Efficacy Scale (MFES): IG =32.6 (9.7) CG =30.9 (9.1) Tokyo Metropolitan Institute of Gerontology (TMIG): IG =6.4 (3.5) CG =6.1 (3.2) Significant comorbidities: Not mentioned. Health status: Not mentioned. Cognitive status: Not mentioned. Mood status: Geriatric Depression Scale, mean (SD): IG 7.0 (3.5); CG 7.7 (3.3) Frailty status: pre-frail and frail Based on characteristics and criteria: did not go out much
Interventions	2 groups Intervention 1: Experimental intervention. 59 participants. Preventive home visits. Visits to ambulatory housebound elders by public health nurses. Grouped as: Multifactorial-action and review Intervention 2: Control intervention. 60 participants. Usual primary and community care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Care home admission: Care-home placement (survivors/follow-up) Mortality: Deaths (reported as loss to follow-up)

	Outcomes not included in this review because insufficient data were reported: Personal activities of daily living: ADLs score (Barthel Index modified in Kono 2004) Instrumental activities of daily living: Tokyo Metropolitan Institute of Gerontology (TMIG) Index of Competence (Koyano *et al.*, 1991) (Score range 0-13) Depression: Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986) Other outcomes not specified as of interest for this review: Self-efficacy for daily activities was measured by the Modified Falls Efficacy Scale (MFES) (Hill *et al.*, 1996) Social Support Scale of Noguchi (Noguchi 1989) In acute hospital at time of 18m FU (reported as lost to FU) Self-efficacy for health promotion measured by the 15-item Self Efficacy for Health Promotion scale (SEHP) developed by Yokokawa *et al.* Remaining at home (randomised - lost to FU)
Timepoint	Outcomes were measured at 18 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Japan Ministry of Health, Labour Welfare, Kimura Foundation for Nursing Education, Mitsubishi Foundation and Pfizer Health Research Foundation. Conflicts of interest: Not mentioned.
Notes	

Table 58. Kono 2012[223-226] study characteristics

Methods	Aims: To evaluate the effects of preventive home visits for frail ambulator y elders living at home. Design: Randomised Controlled Trial
Participants	Characterisation: Ambulatory frail elders Country: Japan Setting: Participant's residences in suburban municipalities in the southern part of the Osaka Provenance. Enrolment started in 2008 Participants assigned: 323 Inclusion criteria: Eligibility criteria included: 1. Age 65 years or over 2. Certified as being in the two lowest care need levels in the LTCI system (i.e., Levels 1 and 2 – needing the lowest levels of external support according to the national standardized examination and computer-based system and being generally independent in most ADLs but having some difficulty in IADLs) 3. Living at home at the baseline survey 4. Not utilizing long-term care services, including homecare nursing or aides, or adult day care for the past three months. Exclusion criteria: Utilizing the LTCI services in last 3 months

	Female: 74% Age: Mean (SD) = 79.9 (6.6) Has informal carer: not reported. Living alone: 28% Ethnicity: Not reported. Dependence and disabilities: Barthel index, mean (SD): IG 90.2 (11.7) CG 91.4 (12.2) IADLs (Index of competence), mean (SD): IG 7.3 (3.5) CG 7.2 (3.7) Significant comorbidities: Not reported Health status: Not reported Cognitive status: Not reported Mood status: GDS-15, mean (SD): IG 7.1 (4.0); CG 7.0 (4.0) Frailty status: pre-frail Based on characteristics and criteria: "ambulatory frail" service level 1
Interventions	2 groups Intervention 1: Experimental intervention. 161 participants. Preventive home visits. Program composed of regular structured assessments and individualized care recommendations Grouped as: Multifactorial-action and review Intervention 2: Control intervention. 162 participants. Usual care. System of mandatory public long-term care insurance, including a need assessment and access to facility and community-based care Grouped as: Multifactorial-action and review
Outcomes	Tabulated outcomes: Living at home: Living at home (pts) Personal activities of daily living: Barthel index (0-100 scale) (Mahoney & Barthel, 1965) Instrumental activities of daily living: Tokyo Metropolitan Institute of Gerontology (TMIG) Index of Competence (Koyano *et al.*, 1991) (Score range 0-13) Care home admission: Care-home placement (survivors/follow-up) Depression: Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986) Mortality: Deaths (pre-specified outcome, method of ascertainment unspecified) Outcomes not included in this review because insufficient data were reported:

	Costs: Costs to health care services, Costs of public long-term care costs, Costs of intervention Other outcomes not specified as of interest for this review: Social support [Social Support Scale of Noguchi, assessing emotional and instrumental support for elders from family members or friends]. Long Term Care Utilization Costs Hospitalisation (pts hospitalised once or more/ last month)
Timepoints	Outcomes were measured at 6 months, 12 months, 18 months and 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Japan Society for the Promotion of Science Conflicts of interest: The authors have no conflict of interest to disclose related to the present article.
Notes	Subgroup analysis: study participants whose ADL scores were 100 at baseline, indicating ADLs were independent, were classified as high ADL participants and those whose ADL scores were less than 100 at baseline, indicating ADLs were dependent, were classified as low ADL participants. The two arms were compared by ADLs scores (100 scores at baseline vs less than 100 scores at baseline) on each baseline value using t test. According to each subgroup, two-way repeated measures analysis of covariance were performed to detect the effect on functional and psychosocial parameters as well as an original sample.

Table 59. Kukkonen-Harjula 2017[227-232] study characteristics

Methods	Aims: To evaluate a long-term physical exercise intervention for people with frailty Design: Randomised Controlled Trial
Participants	Characterisation: Older persons with signs of frailty Country: Finland Setting: Community: participant's residence Enrolment started in 2014 Participants assigned: 300 Inclusion criteria: a person needed to score at least 1 point in the FRAIL questionnaire and fulfil at least 1 of the frailty phenotype criteria. Two of the phenotype criteria were slightly modified. To define “low physical activity,” we used 30 minutes per week as a cutoff value. For the slowness criterion, we used a common gait speed cutoff value of 0.46 m/s for both genders, which was based on the lowest quartile in the Short Physical Performance Battery. Participants were classified as pre-frail if they met 1 to 2 phenotype criteria and frail if they met 3 to 5. Other eligibility criteria were as follows: age 65 years, home-dwelling (with or without homecare services), able to walk with or without aid when indoors, a Mini-Mental State Examination (MMSE) score of > =17, and no severe illnesses that prevented them taking part in exercise training. Exclusion criteria: living in nursing home or institutional care facility severe neurological diseases (Parkinson, MS, stroke)

	severe heart diseases with physical capacities significantly impaired (NYHA class III or IV) severe musculoskeletal diseases which prevent from participating in long-term physiotherapy terminal illnesses (e.g., cancer) that diminish the estimated home-dwelling time to less than two years severe mental problems (severe depression, psychosis or schizophrenia) severe alcohol or drug abuse severe problems with hearing or eyesight Female: 75% Age: Mean (SD) = 82.5 (6.3) Has informal carer: not reported. Living alone: 59% Ethnicity: Not mentioned. Dependence and disabilities: Functional Independence Measure total score, mean (SD): 108.8 (10.6) Significant comorbidities: Coronary heart disease: 43% Stroke or TIA: 23% Hypertension: 74% Musculoskeletal diseases: 85% Respiratory diseases (COPD, asthma): 12% Depressive symptoms: 17% Alzheimer's disease or other dementias: 14% Health status: HRQoL 15D, mean (SD): 0.712 (0.091) Prefrail: n=182 (61%); Frail: 117 (39%) Short Physical Performance Battery: mean 6.2 (SD 2.6) points Functional Independence Measure: mean 108.8 (SD 10.6) points Cognitive status: MMSE, mean (SD): 24.4 (3.1) Intervention 19 (13%) dementia Control 22 (15%) Mood status: GDS-15, mean (SD): 4.8 (2.7) Physician diagnosed depressive symptoms: IG 25 (17%); CG 25 (17%) Frailty status: pre-frail and frail Validated measure: Phenotype model
Interventions	2 groups Intervention 1: Experimental intervention. 150 participants. Individualized, multicomponent, long-term and supervised home-based physiotherapy. Grouped as: ADL, nutrition and exercise

	Intervention 2: Control intervention. 150 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up), Living at home (calculated, from losses to follow up), Living at home (pts) Care home admission: Care-home placement (survivors/follow-up) Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Hospitalisation: Hospitalisation (days per person-year) Care home admission: Nursing home (long-term) (days per person-years) Home care (visits/ per person-years) Outcomes not included in this review because insufficient data were reported: Instrumental activities of daily living: Lawton IADL (8-31) (Lawton & Brody, 1969) Costs: Costs to health care and social services (per person-year) Cost effectiveness: ICER - QALY (D15 score) Health status: QALY from 15D, 15D HRQoL (15-75) Depression: Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986) Falls: Falls (pts fell once or more / last 3 months) Other outcomes not specified as of interest for this review: Home care (visits/ per person-years) Hospital emergency department (visits per person-years) Short Physical Performance Battery Hand grip strength Modified Fried's frailty criteria Amount of use of social and health services (register information, the amount of primary and secondary healthcare and social services used: GP visits Nurse visits, Rehab visits, Home health care visits, Primary care ward, Emergency department visits, Hospital ward days) Mini Nutritional Assessment (MNA) Falls Efficacy Scale - International (FES-I) Social Provision Scale (SPS) Mini Mental State Examination (MMSE) Health status (BMI, diseases diagnosed, medication Pain (Visual Analogue Scale) Perceived health, mobility and physical fitness Physical activity Alcohol consumption (AUDIT-C) Smoking Type of dwelling and housing
Timepoints	Outcomes were measured at 3 months, 6 months, 12 months and 24 months

Funding and conflicts of interest	Funding: Non-commercial Sources: The Social Insurance Institution of Finland, South Karelia Social and Health Care District, State Research Funding for Academic Health Research (Ministry of Social Affairs and Health), Social Insurance Institution of Finland Conflicts of interest: The authors declare that they have no competing interests.
Notes	1. Hip fracture patients not eligible, thus excluded from this review. 2. Only available results report is Suikkanen 2020 for cost analysis. Authors replied to data request that the details are in peer-review thus cannot be shared yet (for falls, GDS, IADL, FIM results).

Table 60. Lambotte 2018[233-241] study characteristics

Methods	Aims: to detect frail community-dwelling older adults who previously went unnoticed & improve their access to care and support. To increase their frailty-balance, quality of life, meaning in life, life satisfaction, mastery, community inclusion & ageing well Design: Randomised Controlled Trial Details: four-armed controlled trial.
Participants	Characterisation: frail community dwelling older adults Country: Belgium Setting: Three municipalities in Flanders (Belgium): Knokke-Heist, Ghent and Tienen (N= 900, 300 in each municipality). Enrolment started in 2017 Participants assigned: 871 Inclusion criteria: Two stratified samples will be based on previous research on risk profiles for frailty. Risk characteristics for frailty are gender, age, marital status, moved in the past 10 years and migration background. In the first sample (n = 450) older participants will need to fulfil at least one criterion. This implies that the participants will be women or aged 70 years and over or not have a partner or have moved in the past 10 years or will have a migration background. In the second sample (n = 450) all older participants will need to fulfil all selection criteria. This implies that older participants will be aged 70 years and over, have no partner, and moved last 10 years. The second sample will exclude the variable migration background due to too small samples within the three selected municipalities. Older adults will be included in the RCT if they are at least mild frail on one of the 5 domains of the CFAI-plus (i.e., ≥ 25 for physical frailty, ≥ 12.52 for cognitive frailty, ≥ 20 for psychological frailty, ≥ 37.5 for social frailty and ≥ 5 for environmental frailty) or feel frail based on the subjective assessment of frailty (i.e. at least agree with the statement), and accept to participate in the intervention Exclusion criteria: Current hospitalization. Institutionalization. Older participant himself or his/her informal caregiver indicates that the older participant is not able to participate.

	Interviewer notes that the older participant is cognitively not capable to provide adequate answers. Female: 49% Age: Mean (SD) = 75.2 (0.3) Has informal carer: not reported. Living alone: not reported. Ethnicity: Not stated Dependence and disabilities: Physical functioning (0-4) mean (SD) 1.38 (0.05) physical subscale of the comprehensive frailty assessment instrument (De Roeck *et al.*, 2018) Significant comorbidities: Not stated Health status: Not stated Cognitive status: Not stated Mood status: Mental health (5-25) mean (SD) 7.32 (0.11) psychological subscale of the comprehensive frailty assessment instrument (De Roeck *et al.*, 2018) Frailty status: pre-frail and frail Validated measure: CKAIplus
Interventions	2 groups Intervention 1: Experimental intervention. Detection, Support and Care of Older people: Prevention and Empowerment (D-SCOPE). A multidimensional detection and prevention program for frail community-dwelling older adults providing tailored care and follow-up. Grouped as: Multifactorial-action and review Intervention 2: Control intervention. Usual care. Grouped as: Available care
Outcomes	Outcomes of interest with bespoke measures: Personal activities of daily living Outcomes not included in this review because insufficient data were reported: Hospitalisation: Hospitalisation (admissions/ last 6 months) Care home admission: Care Home (pts) Other outcomes not specified as of interest for this review:

	WHOQOL-BREF- abbreviated World Health Organization Quality of Life Scale (1 to 100) Meaning in Life Questionnaire (MLQ) Life satisfaction: Satisfaction with Life Scale WHOQOL-BREF- abbreviated World Health Organization Quality of Life Scale (1 to 100) Life circumstances mastery Community inclusion: 1 item from the Community Integration Measure (CIM) Older participants will also be asked to rate the outcomes quality of life, meaning in life, autonomy and community inclusion on a scale from 0 to 10. Multidimensional frailty: Comprehensive Frailty Assessment Instrument (CFAI-plus) Physical phenotype of frailty: Fried's phenotype of frailty Feeling frail: self-constructed question which explores to what extent the participant agrees with the statement 'I feel frail'. Resilience: Connor-Davidson Resilience Scale (CD-RISC2) Coping: 6 items from BRIEF Cope Carver scale Help needed for activities in daily li (adapted from the questionnaire of the Belgian Ageing Studies (BAS)) Satisfaction in Informal and formal care Medical car usage Leisure time activities and low-key social participation Neighburhood social cohesion dimension of the Neighborhood Scale; physical environment (4 items from the BAS-questionnaire, Neighborhood Environment Walkability Scale)
Timepoint	Outcomes were measured at 6 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Flemish government agency for Innovation by Science and Technology [IWT-140027 SBO]. Conflicts of interest: The authors declare that they have no competing interests.
Notes	1. All available results were not reported according to participants' assignments by randomisation. 2. Data were extracted from the protocol except baseline characteristics taken from Domènech-Abella *et al.* 2020 report.

Table 61. Leung 2004[242, 243] study characteristics

Methods	Aims: To evaluate the effects and cost-benefits of a case management project for community-dwelling frail older persons discharge from hospitals. Design: Randomised Controlled Trial
Participants	Characterisation: Aged 60 and older, discharged from a rehabilitative hospital Country: Hong Kong Setting: Mainly participant's residence Enrolment started in 2000 Participants assigned: 260 Inclusion criteria: hospital-discharged patients aged 60 and older from a rehabilitative hospital.

	Exclusion criteria: Not reported. Female: 45% Age: Mean (SD) = 74.8 (7.2) Has informal carer: not reported. Living alone: not reported. Ethnicity: Not reported. Dependence and disabilities: MDS-HC Informal support (0-4) (mean (SD)): IG= 0.3 (0.7) CG= 0.4 (0.7) MDS-HS ADL+IADL (0-5) (mean (SD)): IG= 0.8 (1.3) CG= 0.8 (1.3) Significant comorbidities: MDS-HC Continence (0-3) (mean (SD)): IG= 0.12 (0.5) CG= 0.08 (0.3) Health status: Number of chronic illness (mean (SD)): IG= 2.7 (1.4) CG= 2.9 (1.5) MDS-HC Number of health problems (range 0-10) (mean (SD)): IG= 2.0 (1.9) CG= 1.9 (1.4) Cognitive status: MDS-HC Mental functioning (0-5) (mean (SD)): IG= 1.3 (1.1) CG= 1.5 (1.1) Mood status: MDS-HC Mood symptoms (0-4) (mean (SD)): IG= 1.7 (1.9) CG= 1.8 (1.9) Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: Described as discharged from hospital and most having chronic conditions. But also included a group described as "no impairments".
Interventions	2 groups Intervention 1: Experimental intervention. 130 participants. Case Management Project for the Community Dwelling Frail Elderly. Including assessment, care planning, coordination of care and tailored recommendations Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 130 participants. Usual care. Grouped as: Available care
Outcomes	Tabulated outcomes: Hospitalisation: Hospitalisation (days or nights/ last 6 months) Outcomes of interest with bespoke measures: Personal and instrumental activities of daily living Outcomes not included in this review because insufficient data were reported:

	Care home admission: Care-home placement (survivors/follow-up) Costs: Costs to health care services Mortality: Deaths (reported as loss to follow-up) Other outcomes not specified as of interest for this review: Total no. of unplanned admissions to hospitals Total no. of attending emergency rooms Total use of community nursing service Total attendance at geriatric day hospital Chinese version of the MDS-HC (including number of health problems, mood symptoms, mental functioning, ADL and IADL, continence, behavioural symptoms, informal support)
Timepoint	Outcomes were measured at 6 months
Funding and conflicts of interest	Funding: Unclear Sources: Not reported. Conflicts of interest: Not reported.
Notes	Description of the analysis methods not reported.

Table 62. Leveille 1998[244-246] study characteristics

Methods	Aims: Evaluate the impact of a 1-year, senior center-based, chronic illness self-management and disability prevention program on health, functioning, and healthcare utilization in chronically ill older adults Design: Randomised Controlled Trial
Participants	Characterisation: chronically ill older adults seniors aged 70 and older Country: USA Setting: A large senior center located in a northeast Seattle suburb. Enrolment started in 1995 Participants assigned: 201 Inclusion criteria: - receiving treatment for at least one chronic condition; - aged 70 years and older; - non-participation in the senior center; and - self-reported ability to walk and perform activities of daily living without help. Exclusion criteria: - Plans to be away for more than 1 month in the coming year; - Evidence of significant cognitive impairment by a score of 18 or lower on the Mini-Mental Status Examination or by a score of 19-26 with evidence of cognitive impairment noted in a gerontologic nurse practitioner (GNP) assessment. Female: 56% Age: Mean (SD) = 77.1 (5.2) Has informal carer: not reported. Living alone: 32% Ethnicity: Not stated but states the senior center serves a predominantly white suburban area Dependence and disabilities: No bed disability days (%) Intervention 74.3 Control 84.0

	No restricted activity days (%) Intervention 53.1 Control 72.9 Physical function mean (SD) Intervention 66.4 (22.7)Control 62.9 (22.7) Role limitations Physical mean (SD) Intervention 53.2 (40.9) Control 50.0 (42.2) Role limitations Emotional mean (SD) Intervention 70.6 (40.1) Control 76.1 (36.6) Significant comorbidities: Self-reported medical conditions (%) Heart disease: IG (n=101); 33.7; CG (n=100) 41.0 High blood pressure: IG (n=101) 55.5; CG (n=100) 57.0 Arthritis or rheumatism: IG (n=101) 62.4; CG (n=100) 64.7 Cancer: IG (n=101) 17.8; CG (n=100) 25.0 Stroke: IG (n=101) 8.1; CG (n=100) 9.2 Diabetes: IG (n=101) 16.0; CG (n=100) 7.0 Health status: Fair/poor self-rated health (%) Intervention 20.8 Control 21.0 Hospitalised in past 12 months (%) Intervention 21.0 Control 13.0 Health Assessment Q mean (SD) Intervention 0.24 (0.32) Control 0.23 (0.34) Cognitive status: Not reported Mood status: Depression CES-D mean (SD) Intervention 10.1 (8.0) Control 8.7 (7.3) Frailty status: unclassifiable
Interventions	2 groups Intervention 1: Experimental intervention. 101 participants. Health Enhancement Program. A community-based disability prevention, chronic disease self-management program, designed to promote the health and functioning of community-dwelling elderly persons Grouped as: Education, exercise, multifactorial-action and review with medication review and self-management strategies Intervention 2: Control intervention. 100 participants. Senior center activities. Grouped as: Available care
Outcomes	Outcomes included in NMA: Hospitalisation: Hospitalisation (pts hospitalised once or more/ last 12 months) Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Personal activities of daily living: Health Assessment Questionnaire Disability Index (HAQ-DI)

	Hospitalisation: Hospitalisation (days or nights / only admitted pts / last 12 months) Depression: CES-D depression scale (20 items; Radloff 1977) Outcomes not included in this review because insufficient data were reported: Costs: Costs of intervention Other outcomes not specified as of interest for this review: Hospital emergency department (visits/ last 12 months) Physical Activity Scale for the Elderly Chronic conditions Battery of physical performance tests Medication information Alcohol and nutrition information Outpatient utilization SF-36: Physical functioning SF-36: Role limitations - emotional SF-36: Role limitations - emotional Bed and restricted activity days SF-36: General Health
Timepoints	Outcomes were measured at 6 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Retirement Research Foundation, Chicago, IL (#94-759), the Group Health Foundation, and SAFECO, Seattle, Washington. Conflicts of interest: Not reported
Notes	

Table 63. Lewin 2013[247-250] study characteristics

Methods	Aims: To test the effectiveness of the Home Independence Program (HIP), a restorative home-care programme for older adults, in reducing the need for ongoing services. Design: Randomised Controlled Trial
Participants	Characterisation: Older adults referred to a homecare service for assistance with their personal care Country: Australia Setting: Perth metropolitan area: Silver Chain home-care provider Enrolment started in 2005 Participants assigned: 750 Inclusion criteria: Study participants comprised older persons living in Perth suburbs who were referred for home-care services, were found on assessment to be eligible to receive HACC-funded home care, and met the RCT inclusion criteria. Eligibility for the HACC programme (defined, by the funder): needing assistance with one or more tasks of daily living because of an ongoing disability, rather than needing acute or post-acute care. The RCT inclusion criteria: -were over 65 years of age -referred for personal care

	-not having a diagnosis of dementia or other progressive neurological disorders, or receiving palliative care -able to communicate in English Exclusion criteria: Clients with complex care needs requiring 15 hours or more of HACC per week Female: 67% Age: Mean (SD) = 82.3 (7.5) Has informal carer: 63% Living alone: 47% Ethnicity: Only country of birth reported, not ethnicity. Dependence and disabilities: ADL, mean SD: -HACC (CG)(n=349) 12.21 (3.18) -HIP (IG) (n=354) 12.76 (2.75) IADL, mean SD: -HACC (CG)(n=375) 7.19 (3.61) -HIP (IG) (n=375) 8.14 (3.23) Proportions of pts (n=198) having dependency/ difficulty in each of the 17 ADL and IADL items listed in Table 5 of Lewin 2013 results report. In both arms in primary assessment form, over 90% pts having dependency on walking, transfers, continence, toileting. Significant comorbidities: Not mentioned. Health status: Not reported Cognitive status: Not mentioned. Mood status: Not mentioned. Frailty status: frail Based on characteristics and criteria: homecare
Interventions	2 groups Intervention 1: Experimental intervention. 375 participants. Home Independence Program (HIP), a restorative home-care programme. Grouped as: Homecare, education, multifactorial-action and review Intervention 2: Control intervention. 375 participants. Usual home care. Grouped as: Homecare

Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Care home admission: Care-home placement (survivors/follow-up) Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Homecare services usage: Home care - personal care only (pts) Hospitalisation: Hospitalisation (pts hospitalised once or more), Hospitalisation (days or nights) Outcomes of interest with bespoke measures: Personal activities of daily living Instrumental activities of daily living Outcomes not included in this review because insufficient data were reported: Costs: Costs to health care and social services Other outcomes not specified as of interest for this review: Home care - personal care only (hours ever used) Hospital emergency department (pts visited once or more) Percentages of pts (with complete FU data) independent in each of 17 items of ADL and IADL Timed Up and Go Test Modified Falls Efficacy Scale Quality of Life Scale (Hawthorne *et al.*, 1997)
Timepoints	Outcomes were measured at 3 months, 12 months and 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: An Australian Health Ministers' Advisory Council priority-driven research programme grant Conflicts of interest: Not mentioned.
Notes	As-treated (participants had minimum of 3hr personal care) analyses were also performed and reported.

Table 64. Liddle 1996[251] study characteristics

Methods	Aims: Whether providing equipment, modifying the home environment and using appropriate community services would have an effect on quality of life and independence in the short term. Design: Randomised Controlled Trial
Participants	Characterisation: aged 65 years and over living independently in the community Country: Australia Setting: Northern Sydney Area: participant's residence Enrolment started before 2006 Participants assigned: 105 Inclusion criteria: Participants were aged 65 years and over and living independently. They had been originally identified in 1992 from electoral rolls covering the Northern Sydney Health Area. The study population came from 753 respondents to a previous postal questionnaire on health and well

	being. All respondents with self-reported moderate or severe impairment of activities of daily living (n=69) and a random sample of respondents with mild (n = 102) or no impairment (n = 30) were approached to participate in this study. An OT assessed 167 people in their homes and made recommendation. People for whom the OT had recommended assistance were randomly allocated by an independent research nurse to either: Exclusion criteria: None reported Female: 68% Age: Mean (SD) = 81.6 (5.8); Range: 69 to 94 Has informal carer: not reported. Living alone: not reported. Ethnicity: Not mentioned. Dependence and disabilities: Activities of Daily Living assessment (Locomotor disability), mean: IG 1.3; CG 1.3 Significant comorbidities: Not mentioned. Health status: Health Assessment Questionnaire, mean: IG 0.98; CG 0.9 Sickness impact profile (0-100%), mean: total: IG (n=51) 13; CG (n=50) 13 physical: IG (n=51) 15; CG (n=50) 13 psychological: IG (n=51) 9; CG (n=50) 7 Cognitive status: Not mentioned Mood status: Life Satisfaction Index, mean: IG 14; CG 15 Happiness in last month, mean: IG 5.9; CG 5.8 Quality of life in last 6 months, mean: IG 6.1; CG 5.0 Frailty status: unclassifiable
Interventions	2 groups Intervention 1: Experimental intervention. 52 participants. Occupational Therapy assessment at home, recommendations and follow-on. OT assessment at home, recommendations and aids arranged and/or provided by nurse Grouped as: Aids, multifactorial-action and review Intervention 2: Control intervention.

	53 participants. Occupational Therapy assessment at home without recommendations or any follow-on therapy. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Care home admission: Care-home placement (survivors/follow-up) Tabulated outcomes: Personal activities of daily living: Health Assessment Questionnaire Disability Index (HAQ-DI) Mortality: Deaths (reported as loss to follow-up) Outcomes not included in this review because insufficient data were reported: Homecare services usage: Home care (pts) Hospitalisation: Hospitalisation (pts hospitalised once or more) Health status: Sickness Impact Profile (Total Score, Berger *et al.*, 1981), Sickness Impact Profile (Psychosocial Score, Berger *et al.*, 1981), Sickness Impact Profile (Physical Score, Berger *et al.*, 1981) Other outcomes not specified as of interest for this review: 17-item Philadelphia Geriatric Center Morale Scale 13-item Life Satisfaction Index Linear rating scales for 'happiness in the last month' Quality of life in the last six months Locomotor disability: The OT graded and timed the participants' ability to carry out activities of daily living for which simple interventions were available. These activities included getting on and off the toilet, getting in and out of the bath or shower, picking objects up from the floor, getting shoes on and off, walking, turning taps on and off, filling a kettle and pouring tea and dialling a telephone number. (Ref. Hart D, Bowlin A, Ellis M, Silman A. Locomotor disability in very elderly: value of a programme for screening and provision of aids for daily living. BMJ 1990; 301:216-20.) Health Assessment Questionnaire Change in residence (hostel care, nursing home)
Timepoints	Outcomes were measured at 6 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Australian Rotary Health Research Fund, and the Northern Sydney Area Health Service. Conflicts of interest: Not mentioned.
Notes	"No intervention" (3rd arm) is not randomised into the trial, thus ineligible in this review.

Table 65. Liimatta 2019[252-255] study characteristics

Methods	Aims: To explore the effectiveness of preventive home visits on the health-related quality-of-life (HRQoL) and mortality among independently community-dwelling older adults. Design: Randomised Controlled Trial Details: To avoid dilution of the intervention effect, spouses (n=128) were randomised together; Two randomisations were performed as 62 spouses were randomized together to avoid dilution of the intervention effect.

Participants	Characterisation: Home-dwelling people aged 75+ years old Country: Finland Setting: Hyvinkää municipal area Enrolment started in 2013 Participants assigned: 422 Inclusion criteria: 1. Aged 75 years or older 2. Home dwelling 3. Neither receiving home help or nursing services; nor regular home or institutional care 4. Finnish speaking 5. living permanently in the Hyvinkää area. Exclusion criteria: 1. Home or institutional care 2. Age under 75 years Female: 65% Age: Mean (SD) = 81 (4.3) Has informal carer: not reported. Living alone: not reported. Ethnicity: Not specified. Dependence and disabilities: 35 (17%) of the participants in the control arm and 21 (10%) in the intervention arm used a walker at baseline. Significant comorbidities: Charlson comorbidity index, mean (SD): IG= 1.3 (1.3) CG= 1.4 (1.5) Hypertension, n(%): IG= 129 (61) CG= 116 (55) Diabetes, n (%): IG= 28 (13) CG= 46 (22) Coronary artery disease, n(%): IG= 42 (20) CG= 43 (20) Cerebrovascular disorder, n(%): IG= 25 (12) CG= 15 (7) Osteoarthritis, n (%): IG= 86 (41) CG= 99 (47) Osteoporosis, n(%): IG= 28 (13) CG= 28 (13) Traumatic fracture in prior 12 months, n(%): IG= 22 (19) CG= 26 (12) COPD/asthma, n(%): IG= 32 (15) CG= 30 (14) Health status: 15D score (HRQoL), mean (SD); IG 0.82 (0.11); CG 82 (0.11) Falls in prior 6 months, n (%): IG= 68 (32) CG= 54 (26) Cognitive status: 6 (3%) of the participants in the control arm and 7 (3%) in the intervention arm had dementia. Mood status: 12 (6%) of the participants in the control arm and 11 (5%) in the intervention arm had depression at baseline. Frailty status: robust and pre-frail Based on characteristics and criteria: not receiving home care
Interventions	2 groups

	Intervention 1: Experimental intervention. 211 participants. Comprehensive, multiprofessional preventive home visits (PHVs). In addition to typical care including the normal health and social care offered by the municipality. Grouped as: Exercise and multifactorial-action with medication review Intervention 2: Control intervention. 211 participants. Standard usual care. Typical care including normal healthcare offered in the municipality health centre; and social care offered by the municipality. Grouped as: Available care
Outcomes	Outcomes included in NMA: Mortality: Deaths (from routine data) Tabulated outcomes: Hospitalisation: Hospitalisation (days or nights) Care home admission: Nursing home (long-term) (days per person-years) Home care (visits/ per person-years) Health status: QALY from 15D, 15D HRQoL (15-75) Outcomes not included in this review because insufficient data were reported: Costs: Costs to health care and social services (per person-year) Cost effectiveness: ICER - QALY (D15 score) Other outcomes not specified as of interest for this review: Hospital emergency department (visits per person-years) Nursing home (short-term) (days per person-years) Home care (visits/ per person-years) Mean use and cost of nurse visits. Mean use and cost of GP visits. Mean use and cost of primary ward days. Mean use and cost of Day Care days. Mean use and cost of Outpatient visits. Feedback survey on feasibility and participant's satisfaction
Timepoints	Outcomes were measured at 12 months and 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: 1. University-level health research grant from HYYKS's area of responsibility (ERVA). 2. The Medical Officer Uulo Arhio Foundation. 3. The Finnish Medical Foundation. Conflicts of interest: The authors declare that they have no conflict of interest.
Notes	Multiple imputations were performed for some missing 15D items with the method of chained equations and five sets of imputations, as implemented in the Stata ice add-on.

Table 66. Loh 2015[256-258] study characteristics

Methods	Aims: to develop and evaluate the effectiveness of a multiComponent Exercise and theRApeutic lifeStyle (CERgAS) intervention program targeted at improving physical performance and maintaining independent living as compared to general health education Design: Cluster RCT Details: Clusters are low-cost public subsidised flats with a common facility area or hall suitable for exercise sessions and with at least 100 residents
Participants	Characterisation: older people aged 60 years and above from urban poor settings Country: Malaysia Setting: Community: Low-cost public subsidised highrise flats (5 to 18 floors) in the Klang Valley, a bustling cosmopolitan area covering 10 municipalities Enrolment started in 2014 Clusters assigned: 8 Participants assigned: 256 Inclusion criteria: Aged 60 years and older. Residing in low-cost flats in the Klang Valley. Living independently at home. Willing and able to attend a one-hour session, twice each week for 6 weeks. Have a walking speed slower than 1.24 m/s for females or slower than 1.33 m/s for males. Not suffering from contraindications to exercise including unstable cardiovascular disease, uncontrolled chronic medical conditions, recent fractures and musculoskeletal diseases that would interfere with the safety and conduct of the intervention program. Exclusion criteria: Already involved or participating in any structured exercise programme. Cognitively impaired. Uncontrolled medical condition(s). Female: not reported. Age: not reported Has informal carer: not reported. Living alone: not reported. Ethnicity: not reported. Dependence and disabilities: not reported Significant comorbidities: not reported Health status: not reported Cognitive status: not reported Mood status: not reported Frailty status: unclassifiable

Interventions	2 groups Intervention 1: Experimental intervention. 168 participants. MultiComponent Exercise and theRApeutic lifeStyle intervention (CERgAS). Grouped as: Nutrition and exercise Intervention 2: Control intervention. 88 participants. Control arm receiving written health education information. Grouped as: Available care
Outcomes	Outcomes not included in this review because insufficient data were reported: Depression: Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986) Other outcomes not specified as of interest for this review: Katz ADL Scale (details unclear) Lawton IADL (Lawton & Brody, 1969, details unclear) SF-12 Health Survey (overall score) - Gait speed - Grip strength - Physical Activity Scale for the Elderly (PASE) (Washburn et al, 1993) Body composition analysis using BIA along with other measurements consisting of: - preactivity readiness for physical activity (PAR-Q+) - quality of life (SF-12) - Falls Efficacy Scale-International (FES-I) - fear of falling - cognitive function (MMSE) - nutrition status (MNA) - oral health (GOHAI)
Timepoints	Outcomes were measured at 3 months and 6 months
Funding and conflicts of interest	Funding: Non-commercial Sources: University of Malaya Grand Challenge PEACE grant (GC001-14HTM) and the Ministry of Education High Impact Research STeMM grant (E000010-20001). Conflicts of interest: The authors declare that they have no competing interests.
Notes	Data were extracted from protocol, trial registry and MMSE-only results abstract; no other results are available.

Table 67. Lood 2015[259] study characteristics

Methods	Aims: Assess feasibility of the Promoting Aging Migrants health promotion programme Design: Randomised Controlled Trial
Participants	Characterisation: ageing persons who have experienced migration Country: Sweden Setting: Community: a suburban district of the mid-sized city in Sweden, one with a low general income level and a large proportion of people who are born abroad

	Enrolment started in 2012 Participants assigned: 40 Inclusion criteria: Community-dwelling 80+ Independent in ADL MMSE 25+ Adapted eligibility criteria followed the original protocol, except for the following adaptations: participants should be 70 years of age or older, and have migrated from Finland, Bosnia and Herzegovina, Croatia, Montenegro or Serbia. Only people who spoke Bosnian or Serbo-Croatian were included. Exclusion criteria: None stated Female: 55% Age: Mean (SD) = 75.8 (3.3); Range: 71 to 85 Has informal carer: not reported. Living alone: 65% Ethnicity: Not reported Dependence and disabilities: ADL staircase scores not reported, states "all participants were independent at baseline" Significant comorbidities: Not reported Health status: SF-36 median 3, IQR 3-4 Goteborg QoL Instrument mean (SD) 9.2 (6.4) Cognitive status: Not reported Mood status: GDS20 Risk for depression mean (SD) 3.2 (3.4) Frailty status: robust and pre-frail Based on characteristics and criteria: foreign not disabled >70
Interventions	2 groups Intervention 1: Experimental intervention. 14 participants. Senior meetings and home visit. A person-centred approach to health promotion. Grouped as: Education Intervention 2: Control intervention.

	26 participants. Conventional care. Grouped as: Available care
Outcomes	Outcomes of interest with bespoke measures: Loneliness Outcomes not included in this review because insufficient data were reported: Health status: Health Perception (EVGFP / 1-5, SF-36) Depression: Geriatric Depression Scale (GDS 20, Swedish version) Other outcomes not specified as of interest for this review: ADL Staircase (categorised as independent) (9 items) Fear of falls: Are you afraid of falling? Frailty: Sum of frailty indicators (weakness, fatigue, weight loss, low physical activity, poor balance, slow gait speed, impaired cognition) Life satisfaction: Fugl-Meyer – LiSat Participation in leisure activities: Questionnaire (sum of activities performed) Symptoms: The Göteborg Quality of Life Instrument
Timepoints	Outcomes were measured at 3 months, 12 months and 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: The Swedish Research Council for Health, Working Life and Welfare (AGECAP 2013-2300), The Swedish Research Council (521-2009-4452), The University of Gothenburg Centre for Person-Centred Care (GPCC 2009-1088) and the Hjalmar Svensson Foundation Conflicts of interest: The authors declare no conflict of interest.
Notes	1. A feasibility pilot study; adapting intervention from Elderly persons in the risk zone EPRZ (Gustafsson 2013 2013).[155] 2. Only the baseline comparison results reported. Follow-up results comparing the arms were not reported.

Table 68. Mann J 2021[260-265] study characteristics

Methods	Aims: assess the acceptability and determine the impact of the OPEN ARCH intervention on the health and quality of life outcomes, health and social services utilisation and costs of older people with multiple chronic conditions and emerging complex care needs. Design: Cluster RCT Clustering accounted for. Details: Step-wedged cRCT: Clusters were randomly assigned to one of three steps that represent the time at which they would commence the OPEN ARCH intervention, and the subsequent intervention duration (3, 6, or 9 months). 3m prior to baseline was control period for all clusters.
Participants	Characterisation: Community-dwelling older persons with complex care needs Country: Australia Setting: 14 general practitioners (GPs) from 5 GP clinics in the Cairns and Hinterland region Enrolment started in 2018 Clusters assigned: 14 Participants assigned: 92

	Inclusion criteria: A community-dwelling older person with chronic conditions and complex care needs, defined as having multiple morbidities or a social situation that requires the attention of multiple healthcare providers or facilities, - who is 70 years or older for non-Aboriginal and Torres Strait Islander participants, or 50 years or older for Aboriginal and Torres Strait Islander participants; or - who is younger than the previous age criteria but has documented chronic or complex age related conditions (previously only associated with older persons), such as early-onset dementia or arthritis, or another condition. Exclusion criteria: - Residents of residential aged care facility or nursing homes. - Currently receiving specialist geriatrician intervention and/or care coordination, such as the Transition Care Program. Female: not reported. Age: Median = 81, IQR: 77 to 85 Has informal carer: not reported. Living alone: not reported. Ethnicity: (n=80 not dropped out at baseline) Non-Indigenous: 68 (85%) Indigenous: 12 (15%) Dependence and disabilities: (n=80 not dropped out at baseline) QoL score: median 70 [IQR 57.5–80] Significant comorbidities: Not reported. Health status: (n=80 not dropped out at baseline) FIM score (18-126): median 121 [IQR 115–124] Cognitive status: Not reported. Mood status: Not reported. Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: Described as over 70, with a few exclusions (under a geriatrician, dementia without an informant, or in receipt of a coordinated programme
Interventions	2 groups Intervention 1: Experimental intervention. Older Persons ENablement And Rehabilitation for Complex Health conditions (OPEN ARCH). A comprehensive, multidimensional geriatric assessment with care coordination. Grouped as: Multifactorial-action with medication review

	Intervention 2: Control intervention. Usual care. Grouped as: Available care
Outcomes	Tabulated outcomes: Hospitalisation: Hospitalisation (admissions /per 1000 person days) Outcomes not included in this review because insufficient data were reported: Personal activities of daily living: Functional Independence Measure (FIM) Hospitalisation: Hospitalisation (days or nights) Cost effectiveness: ICER - QALY (EQ-5D-5L) Health status: EQ-5D EQ-VAS (Health today 0-100), QALY from AQOL-8D, QALY from EQ-5D-5L, Assessment of Quality of Life (AQOL-8D), EQ-5D-5L (self-completion) Other outcomes not specified as of interest for this review: Emergency department visits per thousand person-days GP visits, allied health and support services utilisation. Identification of Seniors at Risk (ISAR) Screening Tool (Suijker *et al.*, 2014) Participant experience PSQ-18 Incremental cost-effectiveness ratio (ICER) RACR = residential aged-care facility reported as LTFU Deaths reported as LTFU
Timepoints	Outcomes were measured at 3 months, 6 months and 9 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Queensland Health Integrated Care Innovation Fund, supported by Cairns and Hinterland Hospital and Health Service, Northern Queensland Primary Health Network, and Torres and Cape Hospital and Health Service. Conflicts of interest: JM and ES are members of the OPEN ARCH service delivery team.
Notes	The time periods for these data comprised 3 months prior to each individual's baseline collection of study measures (i.e., Window 1) and successive three month periods (i.e., Windows 2–4) before each subsequent collection of study measures.

Table 69. Mann WC 1999[266] study characteristics

Methods	Aims: To evaluate a system of assistive technology (AT) and home environmental interventions (EIs) service provision designed to promote independence and reduce health care costs for physically frail elderly persons. Design: Randomised Controlled Trial
Participants	Characterisation: home-based frail elderly persons frail elderly persons living in western New York Country: USA Setting: home-based in western New York area: participant's' residence Enrolment started before 2006 Participants assigned: 104

	Inclusion criteria: score greater than 23 on the Mini-Mental State Examination Exclusion criteria: Female: 70% Age: Mean (SD) = 73 (8.4) Has informal carer: not reported. Living alone: 53% Ethnicity: Minority n= 30 (28.8%) White n= 74 (71.2%) Dependence and disabilities: CHART: physical independence: Treatment 78.3 (34.1); Control 85.8 (20.4) CHART: mobility: Treatment 70.6 (23.5); Control 64.2 (26.0) CHART: occupation: Treatment 35.5 (30.8); Control OARS-IADL: Treatment 9.6 (3.1); Control 9.2 (3.1) Significant comorbidities: No. of chronic illnesses/conditions, mean (SD) 6.5 (2.9) Health status: Days in hospital past 6 months, mean (SD): 5.3 (11.4) Physician visits last 6 months, mean (SD): 5.9 (5.0) No. of medications, mean (SD): 6.0 (3.6) Sick days in past 6 months, No. (%): None: 42 (40.4) <1 week: 23 (22.1) 1 week–1 month: 16 (15.4) >1 month–3 months: 18 (17.3) >3 months: 5 (4.8) FSI pain: Treatment 14.6 (6.4); Control 16.1 (5.5) Cognitive status: FIM cognitive score: Treatment 34.6 (0.64); Control 34.4 (1.2) MMSE: Treatment 28.8 (1.7); Control 28.3 (1.8) Mood status: Psychosocial, mean (SD): Self-esteem 32.3 (5.5); Depression 13.0 (10.6) Frailty status: frail Based on characteristics and criteria: housebound, in receipt of care, in hosp recently
Interventions	2 groups Intervention 1: Experimental intervention. 52 participants. Intensive Assistive Technology (AT) and Environmental Interventions (EI) service provision. Grouped as: Homecare and aids

	Intervention 2: Control intervention. 52 participants. Usual care. Grouped as: Homecare
Outcomes	Outcomes included in NMA: Instrumental activities of daily living: Older Americans Research and Services Center Instrument (OARS) - IADL scale Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Hospitalisation: Hospitalisation (days or nights) Care home admission: Care Home (days) Outcomes not included in this review because insufficient data were reported: Costs: Costs to health care and social services Other outcomes not specified as of interest for this review: Home care (hours, ever used) Functional FIM CHART Craig Handicap Assessment and Reporting Technique (CHART) Assistive devices acquired during trial FSI Pain MMSE
Timepoint	Outcomes were measured at 18 months
Funding and conflicts of interest	Funding: Non-commercial Sources: National Institute on Disability and Rehabilitation Research of the Department of Education, Washington, DC. Administration on Aging of the Department of Health and Human Services. Conflicts of interest: Not mentioned.
Notes	

Table 70. Markle-Reid 2006[267-269] study characteristics

Methods	Aims: To evaluate the comparative effects and costs of a proactive nursing health promotion intervention in addition to usual home care for older people compared with usual home care services alone. Design: Randomised Controlled Trial
Participants	Characterisation: =>75 years, frail, and eligible for personal support services through a home care programme in Ontario, Canada Country: Canada Setting: Home care services agencies Enrolment started in 2001 Participants assigned: 288 Inclusion criteria: (1) were 75 years of age and older; (2) were newly referred to and eligible for personal support services through the community care access centre of Halton; (3) Communicated in English (client and/or caregiver); and (4) expected to receive treatment and/or reside in the Halton region for the six months of the study. Exclusion criteria:

	Newly referred to the community care access centre for nursing services. Excluded if they refused to give informed consent, were unable to understand English or if they were deemed eligible for nursing services. Female: 77% Age: not reported Has informal carer: 52% Living alone: not reported. Ethnicity: Ethnic/cultural group, n % Canadian: 187 (77.30%) Other: 55 (22.70%) Dependence and disabilities: Not mentioned. Significant comorbidities: Not mentioned. Health status: SF-36 Physical Health Component Summary Score (0–100), mean (SD) IG (n=120) 37.94 (17.83); CG (n=121) 37.45 (17.65) SF-36 Mental Health Component Summary Score (0–100), mean (SD) IG (n=118) 54.32 (19.45); CG (n=122) 60.69 (18.68) Cognitive status: Short Portable Mental Status Questionnaire (Pfeiffer 1975)(mean (SD)): 0–4 errors (intellectually intact): 218 (90.50) 5–7 errors (moderately impaired): 13 (5.40) 8–10 errors (severely impaired): 10 (4.10) Mood status: Depressed: CESD > =21 n=62 (25.60%) Not depressed: CESD <21 n=180 (74.40%) SF-36 (Mental Health Score) (mean (SD)): 69.48 (22.20) Frailty status: frail Based on characteristics and criteria: receipt of care
Interventions	2 groups Intervention 1: Experimental intervention. 144 participants. Proactive nursing health promotion intervention. Grouped as: Homecare, multifactorial-action and review with medication review and self-management strategies Intervention 2: Control intervention. 144 participants. Usual home care. Grouped as: Homecare, multifactorial-action and review
Outcomes	Tabulated outcomes:

	Depression: SF-36: Mental Health, CES-D depression scale (20 items; Radloff 1977) Outcomes not included in this review because insufficient data were reported: Costs: Costs to health care and social services Health status: SF-36: Physical Component Summary (PCS) score, SF-36: Mental Component Summary (MCS) score Mortality: Deaths (reported as loss to follow-up) Other outcomes not specified as of interest for this review: Engagement rate (measure of dose of intervention) SF-36 8 sub-scales Short Portable Mental Status Questionnaire (Pfeiffer 1975) Personal Resource Questionnaire 85 (part two) (Weinert & Brandt 1987) (Perceived social support) Coping Questionnaire (Moos *et al.* 1985) (Coping style) Health and Social Service Utilization Inventory (Browne *et al.* 2001a) (not to include individual use, e.g., hospital, because this was meant for calculating costs, not as health outcomes/ indicators) Income Perceived social support: personal resource questionnaire
Timepoint	Outcomes were measured at 6 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Canadian Health Services Research Foundation, Ontario Ministry of Health and Long-Term Care Community Care Access Centre of Halton, McMaster University, System Linked Research Unit on Health and Social Services Utilization. Conflicts of interest: Not mentioned, but appears none.
Notes	Author confirmed the total sample size is that in the journal publication (n=288) and thesis (n=126). The trial published in 2002 was based on a subset of the study population for the trial published in 2006; they are based on same study.

Table 71. Melis 2008[270-277] study characteristics

Methods	Aims: To study the effects of Dutch EASYcare Study Geriatric Intermediate care Programme in independently living elderly people on their functional performance and health-related quality of life, their carer's health related QoL; and the costs of the programme. Design: Randomised Controlled Trial Clustering not accounted for.
Participants	Characterisation: Frail elderly Country: Netherlands Setting: Participant's residence (pts recruited by 54 general practitioners from 36 GP practices) Enrolment started in 2003 Participants assigned: 155 Inclusion criteria: 1. Lives independently in their own home or a retirement home 2. 70 years or older

3. Patient has a health problem that was recently presented to the physician
by the patient or informal caregiver

4. Request for help is related to the following problem fields: cognitive disorders, behavioral and psychological symptoms of dementia, mood disorders, mobility disorders and falling, or malnutrition

5. Patient/informal caregiver and physician have determined a goal to achieve

6. Fulfil one or more of these criteria:
i. MMSE< =26,
ii. GARS-3 (Groningen Activity Restriction
Scale-3) >=25, or,
iii. Medical Outcomes Study (MOS)-20/subscale mental health <=75

Exclusion criteria:
1. Problem or request for help has an acute nature, urging for action (medical or otherwise) within <1 week

2. Problem or request for help is merely a medical diagnostic issue, urging for actions only physicians (primary care physician or specialist) can offer

3. MMSE<20 or proven moderate to severe dementia (Clinical Dementia Rating scale [CDR] > 1) and no informal caregiver (no informal caregiver is defined as: no informal caregiver who meets the patient for at least once a week on average)

4. Patient receives other forms of intermediate care or health care from a social worker or community-based geriatrician

5. Patient is already on the waiting list for a nursing home because of the problem the patient is presented with in our study

6. Life expectancy < 6 months because of terminal illness

Female: 75%
Age: Mean (SD) = 82.2 (6.2); Range: 69 to 99
Has informal carer: not reported.
Living alone: not reported.
Ethnicity: Not reported

Dependence and disabilities:
Groningen Activity Restriction Scale (GARS): in meta-analysis data

Significant comorbidities:
Cumulative Illness Rating Scale-Geriatrics (scored from 0 to 56, with 0 indicating no comorbidity) (mean, SD): UCG (n=66) 9.8 (4.3); IG (n=85) 10.2 (3.7)

Health status:

	Cantril's self-anchoring ladder (scored from 0 to 10, with 10 indicating best score) (mean, SD): UCG (n=66) 5.9 (2.1); IG (n=85) 5.7 (2.1) Cognitive status: MMSE (mean, SD): UCG (n=66) 22.0 (6.0); IG (n=85) 22.8 (5.5) Mood status: SF-20 mental health, mean (SD): IG 53.3 (20.9); CG 53.8 (17.7) Frailty status: frail Based on characteristics and criteria: geriatrics problems
Interventions	2 groups Intervention 1: Experimental intervention. 88 participants. Dutch EASYcare Study Geriatric Intervention Programme (DGIP). A nurse-led home visiting multidisciplinary program to intervene on geriatric syndromes in vulnerable older people who live at home. Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 67 participants. Usual care. Grouped as: Available care
Outcomes	Tabulated outcomes: Personal and instrumental activities of daily living: Groningen Activity Restriction Scale (GARS-3) (overall) (18 items, score range 18-54) Hospitalisation: Hospitalisation (days or nights per person) Care home admission: Nursing home (days per person) Depression: SF-20: Mental Health Mortality: Deaths (pre-specified outcome, method of ascertainment unspecified) Outcomes not included in this review because insufficient data were reported: Costs: Costs to health care and social services Cost effectiveness: ICER - successful treatment (MOS-20MH + GARS-3 improved) Other outcomes not specified as of interest for this review: Home care - domestic care only (hours ever used) Home care - personal care only (hours ever used) Informal Caregiver burden using Zarit Burden Interview (informal caregiver burden) Timed Up and Go Test (mobility) SF-20 subscale (except mental health subscale) MMSE Loneliness (de Jong-Gierveld Loneliness Scale) (social functioning) Patient Enablement Instrument Time spent on care by informal caregiver Process evaluation (components of the individual interventions; compliance of the general practitioners; compliance of participants and informal caregivers)

	Cantril's self-anchoring ladder for actual quality of life (well-being) Dementia Quality of Life (DQoL) Hours of home care (domestic care and personal care) received over 6 months
Timepoints	Outcomes were measured at 3 months and 6 months
Funding and conflicts of interest	Funding: Non-commercial Sources: ZonMw (The Netherlands Organization for Health Research and Development) and the Radboud University Nijmegen Medical Centre. Conflicts of interest: No competing interests.
Notes	Marked as parallel RCT because in all clusters, participants could be randomised into either arm.

Table 72. Meng 2005[278-285] study characteristics

Methods	Aims: To test the effect of two interventions — a primary care-affiliated disease self-management -health promotion nurse intervention; a consumer-directed voucher; and their combination, against usual care on a variety of outcomes. Design: Randomised Controlled Trial
Participants	Characterisation: Medicare beneficiaries Country: USA Setting: Practices of 307 primary care physicians Enrolment started in 1998 Participants assigned: 1786 Inclusion criteria: a) were enrolled in Medicare Parts A and B; b) were functionally impaired with at least two limitations in ADLs (toileting, bathing, dressing, eating, and transferring) or at least three limitations in IADLs (prepare meals, shop for groceries, do routine household chores, manage money, do laundry, take medications, get to places out of walking distance, and use the telephone); c) had been hospitalized, been a nursing home patient or resident, or received Medicare home health care within the past 12 months, or had two or more emergency room visits in the past 6 months. Exclusion criteria: exclusion criteria included: living in a nursing home, receipt of Medicare Hospice or End Stage Renal Disease benefits, or enrolment in an HMO or a state Medicaid home and community-based waiver program. Female: not reported. Age: No report includes all participants for age, female, carer calculations! From Meng 2005- only subset of participants reported control (n=330), voucher (n=365), nurse (n=323), combination (n=376) Mean (SD) Control 80.6 (7.7) Nurse 80.0 (7.4) Voucher 80.6 (7.4) Combination 79.6 (7.6) Has informal carer: not reported. Living alone: not reported.

	Ethnicity: From Meng 2005 - only subset of participants reported control (n=330), voucher (n=365), nurse (n=323), combination (n=376) Minority ethnicity Control 2.4% Nurse 2.8% Voucher 3.0% Combination 4.0% Dependence and disabilities: From Meng 2005 - only subset of participants reported control (n=330), voucher (n=365), nurse (n=323), combination (n=376) ADL score Mean (SD) Control 5.8 (3.6) Nurse 5.7 (3.5) Voucher 5.7 (3.5) Combination 5.8 (3.3) IADL score Mean (SD) Control 7.7 (3.4) Nurse 7.3 (3.3) Voucher 7.6 (3.4) Combination 7.5 (3.4) Significant comorbidities: From Meng 2005- only subset of participants reported control (n=330), voucher (n=365), nurse (n=323), combination (n=376) no. of chronic conditions Mean (SD) Control 4.4 (2.1) Nurse 4.5 (2.3) Voucher 4.6 (2.2) Combination 4.6 (2.3) Health status: not reported Cognitive status: From Meng 2005 - only subset of participants reported control (n=330), voucher (n=365), nurse (n=323), combination (n=376) Cognitive Performance Scale score Mean (SD) Control 1.4 (1.5) Nurse 1.2 (1.3) Voucher 1.3 (1.4) Combination 1.4 (1.5) Mood status: Not reported Frailty status: frail Based on characteristics and criteria: high risk
Interventions	4 groups Intervention 1: Experimental intervention. 439 participants. Consumer-directed voucher. Grouped as: Care voucher Intervention 2: Experimental intervention. 443 participants. Home visiting nurse (HVN). Disease-management health-promotion nurse intervention. Grouped as: Education, multifactorial-action and review with medication review and self-management strategies Intervention 3: Experimental intervention. 445 participants. Combined home visiting nurse (HVN) and consumer-directed voucher. A disease-management health-promotion nurse intervention with provision of a consumer-directed voucher. Grouped as: Care voucher, education, multifactorial-action and review with medication review and self-management strategies

	Intervention 4: Control intervention. 459 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Personal activities of daily living: OASIS ADL dependence (6 items) Instrumental activities of daily living: OASIS IADL dependence (6 items) Health status: SF-36: Physical Component Summary (PCS) score, SF-36: Mental Component Summary (MCS) score, Health Perception (EVGFP / 5-1) - RAND Medical Outcome Study (MOS) Outcomes not included in this review because insufficient data were reported: Hospitalisation: Hospitalisation (days or nights) Other outcomes not specified as of interest for this review: Hospital emergency department (visits) Patient satisfaction and carer satisfaction (Nurse arm only, at 10m and 20m) Use of personal assistant goods and/or services, and the expenditure (nurse arm vs control, voucher arm vs control only) Homecare services usage: Home care (pts, over a period) SF-36 (whole set of sub-scales and questions) Mean number of bed days, disability days Cognitive Performance Scale Hearing Handicap Inventory for the Elderly - Screening Version Questions from Women's Health and Aging Study Functional Vision Screening Questionnaire Health care use (30 Services, including physician visits, skilled home care visits) Nurse data on patient's health, behaviors, and progress OASIS ADL and IADL difficulty (6 items each) (Difficulty and dependence in each ADL and IADL as scales and dichotomised. ADL disability (Combining difficulty and dependence scales).) General self-efficacy (Rodin & McAvay, 1992), health self-efficacy (Rodin & McAvay) Three Multidimensional Health Locus of Control subscales (Wallston, Wallston, & DeVellis, 1978).
Timepoints	Outcomes were measured at 12 months and 22 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Centers for Medicare and Medicaid Services; Agency for Healthcare Research and Quality T32 training grant. Conflicts of interest: No conflict of interest to declare.
Notes	1. 1786 randomized, but only 1605 entered intervention phase (gap between randomisation and start). 2. Home care use data excludes n=164 under the age of 65 and n=47 with private long-term care insurance. 3. ADL, IADL, health rating, SF-36 PCS and MCS analyses excluded those not interested in the intervention.

Table 73. Messens 2014[286-288] study characteristics

Methods	Aims: To evaluate the impact on older frail citizens of tele-monitoring of health vital sign devices, environmental sensors, domestic devices, e-Inclusion services, cognitive training, navigation support, and daily scheduler services Design: Randomised Controlled Trial
Participants	Characterisation: older people living independently Country: Europe (multinational) Setting: Participants' homes within 4 sites within the European Union: Belgium – City of Antwerp. Catalonia – Town of Badalona. Ireland – North Eastern Region. Italy – Town of Latina Enrolment started in 2011 Participants assigned: 208 Inclusion criteria: -Aged 65 years or over. -Living at home or in the community, i.e., not in a nursing home, acute or sub-acute clinical or care setting. -Scoring 'mildly frail' or 'moderately frail' in Edmonton Frail Scale (EFS). -Living alone [Badalona only] Exclusion criteria: - Not willing to participate (e.g., no signing informed consent form). - Living situation not suitable for independent living (also including long planned durations of absence from home). - Physically, mentally or otherwise unable to use and / or operate HSH devices / instruments. - Unable to administer self-assessment measurements (e.g., monitoring vital signs; questionnaires). - Significant impairment of language comprehension or expression (e.g., aphasia). - Active medical illness with a significant shortened life expectancy (< 6 months), based on mortality prognosis2. - Living without access to ISDN or ADSL service. - Living with another HSH participant in the same home. - Completely dependent on others for the activities of daily living. Female: 60% Age: Mean Antwerp: IG 78.4; CG 81.7 Badalona: IG 79.06*; CG 81.4* Louth: IG 75.97*; CG 76.93* Latina: IG 75.4; CG 75.2 * excluding pre-trial dropouts Has informal carer: not reported. Living alone: not reported. Ethnicity: Not reported Dependence and disabilities: Not reported Significant comorbidities:

	COPD Badalona IG 3 CG 5 Louth IG 7 CG 8 DM Badalona IG 4 CG 5 Louth IG 10 CG 9 CHF Badalona IG9 CG 9 Louth IG 12 CG 5 HMF: History of myocardial infarction Badalona IG 3 CG 3 HST: History of stroke Badalona IG 3 CG 2 Health status: Not reported Cognitive status: Not reported Mood status: Not reported Frailty status: pre-frail and frail Validated measure: Edmonton
Interventions	2 groups Intervention 1: Experimental intervention. 103 participants. Health monitoring and sOcial integration environMEnt for Supporting WidE ExTension of independent life at HOME (HOME SWEET HOME). Grouped as: Aids, cognitive training, telecoms, and monitoring Intervention 2: Control intervention. 105 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes not included in this review because insufficient data were reported: Hospitalisation: Hospitalisation (admissions) Care home admission: Nursing home (long-term) (pts) Depression: Hospital Anxiety and Depression Scale (depression subscore) (HADS-D) Mortality: Deaths (pre-specified outcome, method of ascertainment unspecified) Other outcomes not specified as of interest for this review: SF-36 Overall score Hospital emergency department (visits) Katz ADL Scale (details unclear) Edmonton Frailty Scale (EFS) Comprehensive Geriatric Assessment (CGA) Clinical Global Impression (CGI) Mini Nutritional Assessment (MNA) Gait Speed Test (GST) Timed Get Up & Go test (TGUG) Hand Grip Strength (HGS) Clock Drawing Test Mini-Cog: recall of words Social Impact indicator SF-36 Overall score

Timepoint	Outcomes were measured at 2 years
Funding and conflicts of interest	Funding: Non-commercial Sources: Information and Communication Technologies Policy Support Programme, European Commission (Grant Agreement No 250449) Conflicts of interest: Not reported
Notes	1. Little data in project report for baseline, mostly reported by site and not overall. The study was conducted in four sites within the European Union: - Belgium – City of Antwerp. - Catalonia – Town of Badalona. - Ireland – North Eastern Region. - Italy – Town of Latina. 2. The numbers recruited/randomised are unclear. Some sites recruited extra participants after a number of randomised participants withdrew

Table 74. Metzelthin 2013[28, 289-295] study characteristics

Methods	Aims: To evaluate the effectiveness and cost-effectiveness of an interdisciplinary primary care approach for community dwelling frail older people in comparison to usual care in reducing disability and preventing (further) functional decline. Design: Cluster RCT Clustering accounted for.
Participants	Characterisation: Community-dwelling frail older people (≥70 years) Country: Netherlands Setting: rural and urban GP practices Enrolment started in 2009 Clusters assigned: 12 Participants assigned: 346 Inclusion criteria: GP practices: We invited all general practices in the region of Sittard (the Netherlands) and its surrounding area that had no current active and systematic policy for the detection and follow-up of frail older people to take part in the study Participants: 1. Frailty: score of 6 or higher on Groningen Frailty Scale (GFI) 2. Community-dwelling 3. Aged 70 years and over, either sex 4. Willingness to participate Exclusion criteria: Those who were - terminally ill - were confined to bed, had severe cognitive or psychological impairments, or were unable to communicate in Dutch were excluded on the basis of the advice of the general practitioner Female: 58% Age: Mean (SD) = 77.2 (5.1) Has informal carer: not reported. Living alone: 49% Ethnicity: Not mentioned.

	Dependence and disabilities: Groningen Activity Restriction Scale, mean (SD): CG: 30.58 (10.62); IG 33.09 (11.52) Significant comorbidities: Not mentioned. Health status: EQ-5D, mean (SD): IG 0.62 (0.23); CG 0.66 (0.21) Cognitive status: Not mentioned. Mood status: HADS-D (mean, SD): IG= 6.54 (3.77) CG= 6.69 (4.35) Frailty status: frail Validated measure: Groningen
Interventions	2 groups Intervention 1: Experimental intervention. 6 clusters, 193 participants. Prevention of Care (PoC) approach. An interdisciplinary primary care approach, in which frail older people received a multidimensional assessment and interdisciplinary care based on a tailor-made treatment plan and regular evaluation and follow-up Grouped as: Education, multifactorial-action and review with medication review and self-management strategies Intervention 2: Control intervention. 6 clusters, 153 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Personal activities of daily living: Groningen Activity Restriction Scale (GARS) (ADL) Instrumental activities of daily living: Groningen Activity Restriction Scale (GARS) (IADL) Care home admission: Care-home placement (survivors/follow-up) Depression: Hospital Anxiety and Depression Scale (depression subscore) (HADS-D) Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Personal and instrumental activities of daily living: Groningen Activity Restriction Scale (GARS) (overall) Homecare services usage: Home care (hours) Hospitalisation: Hospitalisation (pts hospitalised once or more), Hospitalisation (days or nights) Care home admission: Care Home (days) Health status: QALY from EQ-5D-3L, EQ-5D-3L (self-completion)

	Outcomes not included in this review because insufficient data were reported: Costs: Costs to health services + social services + participant/carer Cost effectiveness: ICER - QALY (EQ-5D-3L) Falls: Falls (incidents / last 6 months) Other outcomes not specified as of interest for this review: Home care (pts ever used) Social support interactions (Social Support List SSL 12-I) Cognitive status (Telephone Interview Cognitive Status) Fear of falling (Shorted Falls Efficacy Scale-International) Social participation (Maastricht Social Participation Profile, scale A) Feelings of loneliness will be assessed by the question: "During the past 4 weeks, how often did you feel lonely?" Pearlin Mastery Scale to determine the feelings of competence and control in older people, feelings crucial for self management and coping Vision and hearing capacity Process evaluation (Reach, Dose delivered, Dose received, Barriers) Groningen Frailty Indicator
Timepoints	Outcomes were measured at 6 months, 12 months and 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Dutch National Care for the Elderly Programme by The Netherlands Organisation for Health Research and Development (ZonMw 311070301). Open access of this publication was financed by the Netherlands Organisation for Scientific Research (NOW). Conflicts of interest: None declared, and appears no conflicts.
Notes	Unclear about the number of participants of each arm analysed at each timepoint.

Table 75. Moll van Charante 2016[296-307] study characteristics

Methods	Aims: Cardiovascular risk factors are associated with an increased risk of dementia. We assessed whether a multidomain intervention targeting these factors can prevent dementia in a population of community-dwelling older people. Design: Cluster RCT Clustering accounted for.
Participants	Characterisation: Community-dwelling older people Country: Netherlands Setting: 116 general practices within 26 healthcare centres Enrolment started in 2006 Clusters assigned: 116 Participants assigned: 3526 Inclusion criteria: All community-dwelling older people (aged 70–78 years) registered with a participating general practice (>98% of the Dutch population is registered) to participate in the trial. Exclusion criteria:

	The only exclusion criteria were dementia and other disorders likely to hinder successful long-term follow-up according to the general practitioner (family doctor), such as terminal illness and alcoholism. Female: 54% Age: Mean (SD) = 74.5 (2.5) Has informal carer: not reported. Living alone: not reported. Ethnicity: White: IG n= 1817 (96%) CG n= 1578 (96%) Other: IG n= 40 (2%) CG n= 32 (2%) Missing data: IG n= 33 (2%) CG n= 26 (2%) Dependence and disabilities: Academic Medical Center Linear Disability Score (median, IQR): IG= 89 (86–89) CG= 89 (86–89) Significant comorbidities: Type 2 diabetes: IG n= 357 (19%) CG n= 289 (18%) Cardiovascular disease (excluding stroke and TIA): IG n= 568 (30%) CG n= 476 (29%) Stroke or TIA: IG n= 175 (9%) CG n= 172 (11%) Health status: not reported Cognitive status: MMSE (median, IQR): IG= 28 (27–29) CG= 28 (27–29) Mood status: GDS-15 (median, IQR): IG= 1 (0–2) CG= 1 (0–2) Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: unselected
Interventions	2 groups Intervention 1: Experimental intervention. 63 clusters, 1890 participants. Nurse-led intensive multifactorial vascular care intervention with regular follow-ups and assessments. Grouped as: Education, multifactorial-action and review with self-management strategies Intervention 2: Control intervention. 53 clusters, 1636 participants. Usual care. Grouped as: Available care
Outcomes	Tabulated outcomes: Personal and instrumental activities of daily living: Academic Medical Center Linear Disability Score (ALDS) (1-100) Hospitalisation: Hospitalisation (pts hospitalised once or more) Depression: Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986) Mortality: Survival time / Time to death, Deaths (from routine data)

	Other outcomes not specified as of interest for this review: Incident cardiovascular disease (myocardial infarction, stroke, and peripheral arterial disease) Cognitive decline as measured by MMSE and VATA Blood pressure Body-mass index (BMI) Blood lipid concentrations and glucose concentration Dementia subtype (not prespecified in the original protocol) but added as an endpoint before the analysis of data had begun. Serious adverse events: events that were fatal or life-threatening, or resulted in significant or persistent disability, and needed admission to hospital. Events were included if the condition was stated as the reason for admission or if the diagnosis was listed in the hospital discharge letter to the general practitioner.
Timepoints	Outcomes were measured at 2 years, 4 years and 6 years
Funding and conflicts of interest	Funding: Non-commercial Sources: Dutch Ministry of Health, Welfare and Sport; Dutch Innovation Fund of Collaborative Health Insurances; and Netherlands Organisation for Health Research and Development Conflicts of interest: No competing interests.
Notes	The effect of values not missing at random on repeated measurements outcomes was assessed in a sensitivity analysis using a joint model.

Table 76. Monteserin Nadal 2008[308, 309] study characteristics

Methods	Aims: To assess whether a geriatric intervention after CGA, carried out in the primary care setting, is effective in terms of reducing morbidity and mortality and also in terms of reversing the risk of frailty in patients attending a primary health centre. Design: Randomised Controlled Trial
Participants	Characterisation: Patients over 74 years in primary care Country: Spain Setting: Primary health care centre in Barcelona Enrolment started in 2004 Participants assigned: 620 Inclusion criteria: random selection of 1070 was selected from a total of 3294 people of 75 years or older that were registered in a primary health care centre in Barcelona. Exclusion criteria: 1.concurrent inclusion in another study. 2. diagnosis of a terminal disease. 3. institutionalization. 4. severe cognitive impairment. 5. difficulties in accessing the primary health care centre. 6. inability or unwillingness to give informed consent. Female: 60% Age: Mean = 79.9; Range: 75 to 94

	Has informal carer: not reported. Living alone: 31% Ethnicity: Not provided. Dependence and disabilities: Barthel index, mean (SD): 96.21 (6.05) Lawton index, mean (SD): 6.84 (1.63) Significant comorbidities: Comorbidity (Charlson index), n (%) Intervention : Without (0) -145 (47.1) Slight (1) - 82 (26.6) Moderate (2) - 38 (12.3) Severe (>2) - 43 (14.0) Control : Without (0) -158 (50.6) Slight (1) - 77 (24.7) Moderate (2) - 52 (16.7) Severe (>2) - 25 (8.0) Health status: Not mentioned. Cognitive status: No participants had a severe (>7) cognitive impairment. 8 (1.3%) participants had moderate (5-7) impairment. 22 (3.5%) had slight (3-4) impairment and 590 (95.2%) didn't have (<3) cognitive impairment (Pfeiffer). Mood status: 136 (21.9%) participants are reported in Table 2 as Yesavage scale > 1 for measuring depression. Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: clinical panel assessed risk of frailty, half were, half not
Interventions	2 groups Intervention 1: Experimental intervention. 308 participants. Geriatric education intervention after a comprehensive geriatric assessment (CGA), which served as a screening. Patients at non-risk of frailty were provided with recommendations about healthy habits and adherence to treatment in group sessions, while patients at risk of frailty were visited individually by a geriatrician in the primary care setting. Grouped as: Education and risk-screening Intervention 2: Control intervention. 312 participants. Usual care .

	Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Personal activities of daily living: Barthel index (0-100 scale) (Mahoney & Barthel, 1965) Instrumental activities of daily living: Lawton IADL scale (0-8) (Lawton & Brody 1969) Care home admission: Care-home placement (survivors/follow-up) Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Homecare services usage: Home care (pts) Falls: Falls (pts fell once or more) Outcomes not included in this review because insufficient data were reported: Depression: Geriatric Depression Scale 5-item version Other outcomes not specified as of interest for this review: Pfeiffer test (To detect the presence of intellectual impairment) Mini-Nutritional Assessment Short Form (Malnutrition risk, n (%)) Gijon's Social Scale Number of medications (mean) - Polymedication Vision (n%) - Sensory evaluation Hearing (%)- Sensory evaluation Comorbidity (Charlson index), n (%) Falls, n (%) Urinary incontinence, n (%) Risk of Frailty Dead, institutionalized or receiving home care Admissions to home care programme
Timepoint	Outcomes were measured at 18 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Sociedad Espanola de Geriatria y Gerontologia (2003). Conflicts of interest: Conflict of interest: None.
Notes	

Table 77. Morey 2006[310-312] study characteristics

Methods	Aims: To determine the feasibility and effectiveness of partnering patients and primary-care providers with an exercise health counselor Design: Randomised Controlled Trial Details: Three-arm randomized repeated-measures design
Participants	Characterisation: veterans age 70 years and older Country: USA Setting: Durham VHAMC geriatric and primary-care clinics and participant's' homes Enrolment started before 2006 Participants assigned: 179 Inclusion criteria: Age 70 and older

In the Durham Veterans Health Affairs Medical Center (VHAMC) geriatric and
primary-care clinics

Exclusion criteria:
-terminal disease
-unstable angina
-unresolved ventricular tachycardia
-stroke with moderate to severe aphasia -active substance abuse
-uncontrolled hypertension
-chronic obstructive pulmonary disease requiring two or more hospitalizations
within the preceding 12 months
-severe chronic pain that would preclude their ability to exercise
-patients reporting regular physical activity, 30 min or more on 5 or more days of the week for more than 6 months, were considered ineligible for an intervention designed to increase physical activity

Female: 1%
Age: Mean (SD) = 78.3 (5.2); Range: 70 to 94
Has informal carer: not reported.
Living alone: not reported.
Ethnicity: Minority race 25.7%

% White 69.3 IG, 79.1 Attention control 81.8 usual care

Dependence and disabilities:
% Reported difficulty or inability to:
Pull or push large objects: High-intensity counselling (n = 88) 70.5; Attention control (n = 43) 69.8; Usual care (n = 44) 52.3
Stoop, crouch, or kneel: High-intensity counselling (n = 88) 79.6; Attention control (n = 43) 90.7; Usual care (n = 44) 79.6
Lift/carry weights over 10 lb: High-intensity counselling (n = 88) 55.6; Attention control (n = 43) 53.5; Usual care (n = 44) 43.2

Physical function, M ± SD: High-intensity counselling (n = 88) 57.3 (29.2); Attention control (n = 43) 57.4 (23.2); Usual care (n = 44) 63.2 (24.2)

Significant comorbidities:
average number of 5.2 morbidities, range 0–15

arthritis (67%)
hypertension (65%)
heart disease (53%)
circulatory conditions of the arms or legs (46.3%)
cataracts (39%)
sleep problems (34%)
diabetes (30%).

Health status:
Self-rated health, % good, very good, or excellent: high intensity counselling arm (n=88) 62.5; attention control arm (n=43) 60.5; usual care arm 70.5

	Physical function (SF-36), M ± SD IG 57.3 (29.2) Attention control 57.4 (23.2) Usual care 63.2 (24.2) Cognitive status: Not reported Mood status: Not reported Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: unselected except a few medical exclusions but not so that it would exclude those with frailty
Interventions	3 groups Intervention 1: Experimental intervention. 45 participants. Enhanced usual care. One-off physical activity counseling plus usual care. Grouped as: Exercise Intervention 2: Experimental intervention. 90 participants. High-intensity physical activity counseling. Physical activity counseling with high intensity follow up. Grouped as: Exercise Intervention 3: Control intervention. 44 participants. Attention control. One-off physical activity counseling followed by health education counseling not directed at behavioural modification. Grouped as: Exercise
Outcomes	Outcomes of interest with bespoke measures: Personal activities of daily living Outcomes not included in this review because insufficient data were reported: Health status: Health Perception (EVGFP / 1-5, SF-36), SF-36: Physical Component Summary (PCS) score Falls: Falls (incidents) Other outcomes not specified as of interest for this review: Self-reported physical activity assessed using the Community Healthy Activities Model Program for Seniors (CHAMPS) activities questionnaire for older adults: two scores for analysis - frequency per week of all physical activities and calories per week expended in all physical activities. Number of minutes of physical activity 10-m-walk time 30-s chair stands- 8-foot up-and-go time 6-min-walk time Self-efficacy (How confident are you that you can engage in exercise or physical activity for 15, 20, 25, 30 minutes on 3 or more days of the week?) Pain subscale from the SF-36

	Vitality subscale from the SF-36 Injuries during preceding 3 months Changes in health during preceding 3 months
Timepoints	Outcomes were measured at 3 months and 6 months
Funding and conflicts of interest	Funding: Non-commercial Sources: VA Rehabilitation and Research Development Grant # E2788-RA and by the National Institutes on Aging, Claude D. Pepper Older American Independence Center Grant 5P60-AG-11268. Conflicts of interest: Not reported
Notes	1. Group assignment occurred at a ratio of 2:1, such that 2 persons were assigned to high-intensity counseling for every 1 person assigned to each of the different "control" arms. 2. Baseline characteristics and results only presented for participants who had a baseline and at least one follow-up measure. 4 withdrew between randomisation and baseline. 3. 179 were randomized. Four individuals withdrew from the study immediately after randomization and consequently did not complete the baseline telephone survey.

Table 78. Morey 2009[313-317] study characteristics

Methods	Aims: To determine the effects of primary care-based, multicomponent physical activity counseling (PAC) promoting physical activity (PA) guidelines on gait speed and related measures of PA and function in older veterans. Design: Randomised Controlled Trial
Participants	Characterisation: Older male veterans Country: USA Setting: Community: Veterans Affair Medical Center primary care clinic Enrolment started in 2004 Participants assigned: 400 Inclusion criteria: 1. Age 70 or over 2. Followed in VA primary care or geriatrics clinic 3. Able to walk 30 ft without human assistance and be sedentary, which is defined as engaging in less than 150 min of physical activity a week. Exclusion criteria: Patients must be free of the following: a terminal diagnosis, unstable angina, history of ventricular tachycardia, chronic obstructive disease requiring two hospitalizations within the previous 12 months, uncontrolled hypertension, stroke with moderate-to-severe aphasia, diagnosis of chronic pain, active substance abuse, diagnosis of mental or behavioral disorder, dementia, severe hearing loss, or severe visual loss. Female: 1% Age: Mean (SD) = 77.6 (5) Has informal carer: not reported. Living alone: not reported. Ethnicity: Black or African American: 90 (22.6%) White: 308 (77.4%)

	Dependence and disabilities: Late Life Function Component Score (mean, SD): 60.6 (10.5) Late Life Disability Component Score (mean, SD): 51.7 (5.7) Significant comorbidities: hypertension (73%), arthritis (65%), and heart conditions (47%) Health status: Self-Reported Diseases (No., SD): 5.3 (2.6) SF-36 EVGFP Health-Related QoL (% very good or excellent): 36.8% Cognitive status: Not reported. Mood status: Not reported. Frailty status: unclassifiable
Interventions	2 groups Intervention 1: Experimental intervention. 199 participants. Multicomponent physical activity counseling program. Grouped as: Exercise Intervention 2: Control intervention. 199 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Personal and instrumental activities of daily living: LLFDI: Function component overall score (Haley *et al.*, 2002; Jette *et al.*, 2002; Sayers *et al.*, 2004) (re-calculated score - range 0-100) Outcomes not included in this review because insufficient data were reported: Hospitalisation: Hospitalisation (admissions) Costs: Costs to health care services Health status: Health Perception (EVGFP / 5-1) - RAND Medical Outcome Study (MOS) Falls: Falls (incidents) Other outcomes not specified as of interest for this review: LLFDI: Disability component - limitation total dimension (Jette *et al.*, 2002) (Transformed to scaled range 0-100) Hospital emergency department (visits) Usual Gait Speed Rapid Gait Speed Physical Activity Frequency (CHAMPS Questionnaire) 2-Minute Walk

	SF-36 (4 Subscale (0 worst -100 better): health-related, quality of life, pain, vitality, and physical function) Changes in health status (specifically about significant life events, health changes, injuries): nature of the event, any requirement of a visit to the doctor, emergency room, or hospitalization (VA or non-VA). Modified personal functional goals tool (Personal health and fitness goals) (Bearon *et al.*, 2000) Exercise self-efficacy Late Life Function and Disability Instrument: Disability component frequency dimension (24m only measured physical functions, nothing for meta-analysis)
Timepoints	Outcomes were measured at 3 months, 6 months, 12 months and 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: VA Rehabilitation and Research Development Service grant, and National Institutes of Health Grant Conflicts of interest: No competing interests
Notes	3 female participants were randomized into the study which was not unexpected given the targeted sample and relative paucity of females in VA receiving care in this particular age group at the time. On submitting primary paper, the authors were required to eliminate the females from the study. No female participants were included in data presented (400 randomised, but 398 (?!) males remained). Baseline data extracted from Morey 2008 baseline characteristics table.

Table 79. Morgan 2019[318-321] study characteristics

Methods	Aims: To assess the feasibility of undertaking a definitive RCT of the physical activity facilitation (PAF) intervention in the target population. Design: Randomised Controlled Trial
Participants	Characterisation: adults aged 65 years or older years Country: UK Setting: 6 primary care practices Enrolment started in 2014 Participants assigned: 51 Inclusion criteria: 1. Aged 65 years or older 2. Community-dwelling, including those in sheltered accommodation. 3. Inactive: undertaking less than 150 minutes of moderate, or 75 minutes of vigorous, physical activity per week. 4. Non-disabled at baseline: able to complete a 4-metre walk at a speed of 0.8 m/s or greater, without sitting, leaning, using a walking aid or another person. 5. At risk of subsequent disability: scoring less than 10 out of 12 on the SPPB. Exclusion criteria: 1. Unable to participate in the intervention or study due to speech, language, or sensory problems. 2. Resident in a nursing home 3. Intention to move out of the area within 6 months of the screening clinic visit or to be away for more than 8 consecutive weeks during this period.

	4. Concurrent participation in an exercise-on-prescription or rehabilitation programme or study. 5. A documented or patient-reported medical condition including but not limited to: severe arthritis; lung disease requiring home oxygen; serious cardiovascular disease; past history of cardiac arrest; implantable cardioverter defibrillator; neuromuscular or musculoskeletal conditions exacerbated by exercise; moderate or severe cognitive impairment or dementia; severe uncontrolled psychiatric illness; multiple falls in previous 3 months. 6. Investigator concern about an individual's safety or ability to adhere to the intervention if enrolled in the trial. Female: 41% Age: Median = 74; Range: 65.3 to 88.1 Has informal carer: not reported. Living alone: not reported. Ethnicity: Not stated Dependence and disabilities: Self-report disability (median (IQR)) - Lawton's IADL score: all enrolled 8 (7–8); intervention arm 8 (7–8); control arm 8 (8–8) Significant comorbidities: not reported Health status: SPPB Median (IQR): all 9 (7–9) intervention arm 9 (7–9) control arm 9 (8–9) BMI Median (IQR) all 27.2 (22.3–35.5) intervention arm 26.9 (22.3–34.2)control arm 28.4 (26.0–33.1) Cognitive status: not reported Mood status: not reported Frailty status: pre-frail Based on characteristics and criteria: gait speed and SPPB
Interventions	2 groups Intervention 1: Experimental intervention. 34 participants. Physical Activity Facilitation. Delivery of behaviour change techniques with motivational interviewing strategies to increase physical activity in older adults at risk of disability. Grouped as: Exercise Intervention 2: Control intervention. 17 participants. Usual care and health promotion booklet. Grouped as: Available care
Outcomes	Outcomes included in NMA: Instrumental activities of daily living: Lawton IADL scale (0-8) (Lawton & Brody 1969)

	Tabulated outcomes: Hospitalisation: Hospitalisation (admissions / per person-year) Health status: EQ-5D-3L (self-completion) Depression: Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986) Mortality: Deaths (reported as loss to follow-up) Other outcomes not specified as of interest for this review: Short Physical Performance Battery (SPPB) Accelerometer data on physical activity Autonomy support Basic psychological needs Cognitive function (Montreal Cognitive Assessment MoCA) Grip strength Motivation for physical activity Physical activity outcome expectations scale Physical activity questionnaire (PASE) Psychological Need Satisfaction in Exercise Social support GP appointments Outpatient appointments
Timepoint	Outcomes were measured at 6 months
Funding and conflicts of interest	Funding: Non-commercial Sources: National Institute of Research (NIHR); service support costs and excess treatment costs provided by Western Clinical Local Research Network and Avon Primary Care Research Collaborative Conflicts of interest: Rona Campbell is a Director of DECIPHer Impact Limited, a not-for-profit company, wholly owned by the Universities of Bristol and Cardiff, which exists to licence and support the implementation of evidence-based public health interventions. The remaining authors declare that they have no competing interests.
Notes	EQ-5D and IADL provided by author directly as median and IQR because distribution is skewed.

Table 80. Newbury 2001[322, 323] study characteristics

Methods	Aims: Measure the outcomes of a health assessment, conducted by a nurse, of people aged 75+ living independently in their own homes. Design: Randomised Controlled Trial
Participants	Characterisation: people aged 75 years and older living independently in their own homes Country: Australia Setting: Community Enrolment started in 1998 Participants assigned: 100 Inclusion criteria: 75+ living independently in community Exclusion criteria: dementia (unable to consent)

	hospital inpatient Female: 63% Age: Mean (SD) = 79.9 (3.7); Range: 75 to 91 Has informal carer: not reported. Living alone: not reported. Ethnicity: Not reported Dependence and disabilities: Reported for Intervention arm only Barthel ADL score 33 (68.8%) scored 100, 14 (29.2%) scored 76-95, 1 (2.1%) scored 75 or less. Reported for Intervention arm only via 75+HA: number of self-reports of problems with ADL- 4 Reported for Intervention arm only via 75+HA: number of self-reports of problems with mobility- 23 Significant comorbidities: Reported for Intervention arm only via 75+HA: number of self-reports of blood conditions 1, heart conditions 10, Hypertension 23, Arthritis 28, neurological conditions 1, respiratory conditions 9, non-insulin-dependent diabetes mellitus 1 Health status: SF-36 General health score intervention arm 61.48 control arm 62.08 Summary Physical Health score intervention arm 37.10 control arm 37.87 Summary Mental Health score intervention arm 54.50 control arm 51.07 Cognitive status: Reported for Intervention arm only: MMS Score 25-30 (interpreted as normal) 38 (79%), score 19-24 (assessment indicated) 10 (21%). Reported for Intervention arm only via 75+HA: number of self-reports of cognition problems- 18 Intervention 89% 'normal' MMSE Control 77% 'normal' MMSE Mood status: Intervention Median GDS 2 (range 0-10) Control Median GDS 2 (range 0-9) SF-36 Mental Health score intervention arm 77.84 control arm 76.73 Frailty status: unclassifiable
Interventions	2 groups Intervention 1: Experimental intervention. 50 participants. Home health assessment reported to the person's nominated GP. Grouped as: Multifactorial-action with medication review Intervention 2: Control intervention.

	50 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (pts) Personal activities of daily living: Barthel index (0-100 scale) (Mahoney & Barthel, 1965) Care home admission: Care-home placement (survivors/follow-up) Depression: Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986) Mortality: Deaths (from routine data) Tabulated outcomes: Homecare services usage: Home care (pts) Falls: Falls (pts fell once or more / last 12 months) Outcomes not included in this review because insufficient data were reported: Health status: SF-36: Physical Component Summary (PCS) score, SF-36: Mental Component Summary (MCS) score Depression: SF-36: Mental Health Other outcomes not specified as of interest for this review: SF-36: General Health Self-rated health Folstein MMS (memory) Health behaviour (tetanus immunisation, smoking, alcohol consumption) Medication use and compliance Self-reported hearing, vision, and diagnoses of conditions Mobility (driving, walking, community services use) Nutrition risk (Australian Nutrition Screening Initiative, ANSI) Social contacts Housing SF-36 sub-scales
Timepoint	Outcomes were measured at 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: General Practice Evaluation Program, Commonwealth Department of Health and Aged Care Conflicts of interest: Not reported
Notes	1 'site'; 6 practices

Table 81. Newcomer 2004[324-326] study characteristics

Methods	Aims: To evaluate preventive case management among high risk elderly Design: Randomised Controlled Trial
Participants	Characterisation: high-risk geriatric patients using nurse case managers Country: USA Setting: Community: Sharp Healthcare–affiliated medical groups Enrolment started in 2001 Participants assigned: 3079 Inclusion criteria:

- PacifiCare members who were receiving primary care from a Sharp HealthCare – affiliated medical group.
- Active PacifiCare members as of January 1, 2000, through the date of demonstration program enrolment.
- 80 years old or older or age 65 or older with at least one qualifying condition (i.e., chronic obstructive pulmonary disease, congestive heart failure, coronary disease, diabetes).

Exclusion criteria:
- Persons living in nursing homes, at Alzheimer's facilities, or at hospices, those with end-stage renal diseases, or those with histories of organ transplants at the time of baseline data collection.

- At baseline, persons using Veterans Administration or other military-connected health care benefits.

Female: 60%
Age: Mean
IG: 82.0
CG: 81.7
Has informal carer: not reported.
Living alone: 40%
Ethnicity: White: n= 2704 (87.8%)
Hispanic: n= 178 (5.8%)

Dependence and disabilities:
Instrumental activities of daily living (Lawton & Brody 1969):
1 limitation: n= 578 (18.8%)
2 limitations: n= 269 (8.7%)
> = 3 limitations: n= 770 (25.0%)
Activities of daily living (Katz *et al.*, 1969): > = 1 limitations n= 325 (10.6%)
Receiving home health care: n= 100 (3.2%)
Require assistance (from person or equipment): n= 556 (18.1%)
Using special equipment: n= 181 (5.9%)

Significant comorbidities:
Eyesight (poor or none): n= 337 (10.9%)
Urinary incontinence: n= 1039 (33.7%)
Bowel incontinence: n= 654 (21.2%)

Health status:
SF-12 physical component summary, mean (SD): IG 38.9 (11.3); CG 38.7 (11.4)
SF-12 mental component summary, mean (SD): IG 52.4 (9.7); CG 51.9 (10.3)

Cognitive status:
Difficulty remembering (all, most, or a good bit of time): n= 391 (12.7%)
Gotten lost: n= 116 (3.8%)

Mood status:
Not mentioned.

	Frailty status: unclassifiable
Interventions	2 groups Intervention 1: Experimental intervention. 1537 participants. Enhanced Case Management (ECM). A prevention-oriented case management program including annual health screening, appointment monitoring, disease education, self-management support, and ongoing care coordination. Grouped as: Education, multifactorial-action and review with medication review Intervention 2: Control intervention. 1542 participants. Usual and customary care management in PacifiCare's Secure Horizons (PCSH). Including annual health screening, hospital discharge planning and event driven care coordination. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Hospitalisation: Hospitalisation (pts hospitalised once or more/ last 12 months) Care home admission: Care-home placement (survivors/follow-up) Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Health status: SF-12: Physical component summary, SF-12: mental component summary Outcomes not included in this review because insufficient data were reported: Costs: Costs (hospitalisation, monthly) Other outcomes not specified as of interest for this review: Hospital readmission Non-inpatient admission ER visit Primary care physician visits
Timepoint	Outcomes were measured at 12 months
Funding and conflicts of interest	Funding: Mixed Sources: California HealthCare Foundation (grant #99- 3017), Sharp HealthCare, PacifiCare, and Pfizer, Inc Conflicts of interest: Not mentioned.
Notes	Missing data: using group median values, or no (binary items).

Table 82. Ng 2015[327-329] study characteristics

Methods	Aims: To compare the effects of 6-month-duration interventions with nutritional supplementation, physical training, cognitive training, and combination treatment vs control in reducing frailty among community-dwelling prefrail and frail older persons. Design: Randomised Controlled Trial

	Details: Total of 5 arms in the trial, only 2 are eligible and included in this review.
Participants	Characterisation: Community-living prefrail or frail older adults, aged 65 year and above Country: Singapore Setting: Community group sessions, individual's home Enrolment started in 2009 Participants assigned: 246 Inclusion criteria: 1. Aged 65 years and above 2. Able to ambulate without personal assistance, no other physical limitations limiting participation and adherence, particularly to exercise intervention programme 3. Living at home 4. Meet criteria for pre-frailty or frailty: unintentional weight loss, slowness, weakness, exhaustion, and low activity, which were scored 1 if present, and 0 if absent. The total summed scores ranging from 0 to 5 - robust (score= 0), prefrail (score= 1 to 2), or frail (score= 3 to 5). Exclusion criteria: 1. Had significant cognitive impairment (Mini Mental State Examination score ≤ 23) 2. Major depression; severe audio-visual impairment; any progressive, degenerative neurologic disease; terminal illness with life expectancy <12 months 3. Were participating in other interventional studies 4. Unavailable to participate for the full duration of the study. 5. Member of household already enrolled 6. History of alcohol or any other substance abuse 7. Severely affect muscle/ joint dysfunction resulting in disability 8. Hospital admission in the past 3 months 9. Regular physical training, or physiotherapy, or current participation in a vigorous exercise or weight-training programme more than once per week. 10. Undergoing therapeutic diet incompatible with nutritional supplementation 11. Research clinician's opinion that the intervention was deemed to be potentially hazardous for the individual, e.g., serious cardiac and pulmonary disease. Female: 55% Age: Mean (SD) = 70.2 (4.9) Has informal carer: not reported. Living alone: not reported. Ethnicity: Not specified Dependence and disabilities: Self-report of any disability or dependence in any of the items of IADLs (8 items in Lawton & Brody, 1969 IADL scale), and ADLs (eating, bathing, dressing, transferring, toileting), number of pts reported (% in the allocated arm): IG n= 1 (2.0) CG n= 4 (8.0) Significant comorbidities:

	Not specified Health status: ≥5 medical comorbidities, n (%): IG n= 3 (6.1) CG n= 2 (4.0) Hospitalised in past 12 months, n (%): IG n= 3 (6.1) CG n= 1 (2.0) Cognitive status: MMSE, mean (SD): IG= 29.1 (1.06) CG= 28.6 (1.79) Mood status: Geriatric Depression Scale, mean (SD): IG= 0.7 (1.75) CG= 0.5 (0.86) Frailty status: pre-frail and frail Validated measure: Phenotype model
Interventions	2 groups Intervention 1: Experimental intervention. 49 participants. Physical Exercise + Nutritional Intervention + Cognitive Training: Combination intervention. Participants in this group underwent all three aforementioned interventions. Grouped as: Cognitive training, nutrition and exercise Intervention 2: Control intervention. 50 participants. Usual care + nutritional placebos. Access to standard community-based social, recreational and day care rehabilitation services for older people. Additionally, participants were given placebo liquid capsules and tablet formulations. Grouped as: Available care
Outcomes	Outcomes included in NMA: Hospitalisation: Hospitalisation (pts hospitalised once or more) Mortality: Deaths (pre-specified outcome, method of ascertainment unspecified) Tabulated outcomes: Falls: Falls (pts fell once or more) Outcomes not included in this review because insufficient data were reported: Care home admission: Care Home (long-term) (pts) Other outcomes not specified as of interest for this review: Hospital emergency department (visits) (Ng 2015) Frailty score Reduction of frailty (transition to a lower frailty category from baseline, such as from frail to prefrail or non-frail) Unintentional weight loss/ BMI 6-meter fast gait speed test Weakness (muscle strength by knee extension) Exhaustion (Energy score) = 3 questions in Medical Outcomes Study SF-12 scale

	Physical activity score (self-reported 31-item Longitudinal Ageing Physical Activity Questionnaire) Treatment adherence (monthly estimating proportion of supplements consumed or training sessions completed; averaged for 3 treatments in the combination group) Health service utilisation (frequencies of doctor visits) Disability in activities of daily living (ADL) and instrumental activities of daily living (IADL). (It seems to be measured by self-report of any disability or dependence in any of the items of IADLs (8 items in Lawton & Brody, 1969 IADL scale), and ADLs (eating, bathing, dressing, transferring, toileting). Therefore, the result is the number of pts reported dependence in any of the 13 items.)
Timepoints	Outcomes were measured at 3 months, 6 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: National Medical Research Council, Singapore Conflicts of interest: None reported.
Notes	1. Total of 5 arms in the trial: eligible included arms are: Combination interventions (n= 49); Control (n= 50); ineligible arms are: Nutrition supplementation (n= 49); Physical training (n= 48); Cognitive training (n= 50). 2. Sensitivity analysis was performed subsequently by adjusting for treatment compliance in each model. No significant interactions between compliance and treatment in all the models, and controlling for compliance in all models did not substantially alter the results.

Table 83. Parsons J 2012[330-332] study characteristics

Methods	Aims: To determine whether provision of restorative home support to older people would result in improvement in health-related quality of life and in ability to undertake activities of daily living compared with a group receiving standard homecare. Design: Cluster RCT Clustering accounted for.
Participants	Characterisation: Community-dwelling people 65 years and over, who were new referrals for homecare. Country: New Zealand Setting: Home care in an urban area Enrolment started in 2007 Clusters assigned: [331, 332] Participants assigned: 205 Inclusion criteria: 1. A new referral to Counties Manukau District Health Board Needs Assessment Service Coordination (NASC) for home-based support services. 2. Aged over 65 years (55 if Māori or Pacific Island). Exclusion criteria: 1. Cognitive impairment compromising adherence to interventions (Abbreviated Mental Test score <7/10). 2. Referred for assessment for residential care admission, carer support only or short-term services. Female: 66%

	Age: Mean (SD) = 78 (7.3) Has informal carer: not reported. Living alone: 63% Ethnicity: "Caucasian" (White): n= 159 (77.6%) Dependence and disabilities: No relevant outcomes data. Significant comorbidities: No relevant outcomes data. Health status: SF-36 physical component summary, mean (SD): IG 44.45 (3.52); CG 52.08 (3.42) SF-36 mental component summary, mean (SD): IG 56.42 (3.31); CG 60.24 (3.1) Cognitive status: No relevant outcomes data. Mood status: No relevant outcomes data. Frailty status: pre-frail and frail Based on characteristics and criteria: Receipt of care
Interventions	2 groups Intervention 1: Experimental intervention. 108 participants. Restorative home-based care using Towards Achieving Realistic Goal in Elders Tool (TARGET). The intervention arm involved participants completing a goal facilitation tool with assessors to establish rehabilitation aims. Regular reviews were conducted to enact required changes to service delivery and to develop management plans with the client. Grouped as: Homecare, multifactorial-action and review with self-management strategies Intervention 2: Control intervention. 97 participants. Standard homecare. Participants received a standard needs assessment, that informed the delivery of home care services in the traditional homecare models. Grouped as: Homecare and multifactorial-action
Outcomes	Tabulated outcomes: Health status: SF-36: Mental Component Summary (MCS) score, SF-36: Physical Component Summary (PCS) score Mortality: Deaths (reported as loss to follow-up) Outcomes not included in this review because insufficient data were reported: Homecare services usage: Home care (pts) Other outcomes not specified as of interest for this review: SF-36 overall score

	Dukes Social Support Scale Short Physical Performance Battery Proactive Coping Scale Number of formal client reviews Number of participants set goals for support care plan Referrals to allied health (number of participants in each arm referred) Number of participants using services relating to the 4 categories- domestic tasks, personal care, shopping, and individualised activities (activities identified specifically for the individual client - results not reported) Levels of engagement and motivation of the older participants by the Proactive Coping Scale Caregiver stress: Caregiver Reaction Assessment
Timepoint	Outcomes were measured at 6 months
Funding and conflicts of interest	Funding: Non-commercial Sources: New Zealand Health Research Council Disability Research Placement Programme, and University of Auckland Conflicts of interest: None declared.
Notes	

Table 84. Parsons M 2017[333-337] study characteristics

Methods	Aims: To establish the effectiveness of a restorative home support service on institutional-free survival in frail older people referred for needs assessment. Design: Randomised Controlled Trial
Participants	Characterisation: Frail older people referred for needs assessment and at risk of institutionalisation Country: New Zealand Setting: Medium-sized city of Hamilton, partnership between a charity and the district health board Enrolment started in 2003 Participants assigned: 113 Inclusion criteria: 1. Older people (age >= 65 years), or 55+ Māori or Pacific Island or classified by NASC as "like age and interest" 2. Assessed by NASC coordinators or hospital clinicians as of high or very high (complex) health and disability needs; i.e. at high risk of permanent institutional care. 3. Participant or main caregiver completed informed consent. 4. English-speaking, or family member provided interpretation. Exclusion criteria: 1. The older person's safety necessitated immediate placement in residential care. 2. Unable to communicate in English. Female: 61% Age: Mean (SD) = 83.1 (7.4) Has informal carer: 86% Living alone: 38% Ethnicity: 76.8% NZ European 1.8% New Zealand Māori

	0.9% Pacific 20.5% Other Dependence and disabilities: Require help for everyday activities (IADL): CG n= 57 (100%) IG n= 56 (100%) Using aids/devices for indoor mobility: CG n= 55 (96%) IG n= 55 (98%) Mean ADL Long form (SD) Range 0-28: CG= 4.63 (6.62) IG= 3.87 (5.01) Mean IADL Summary (SD) Range 0-21: CG= 14.8 (4.38) IG= 14.9 (3.98) Has Home Care: CG n=27 (47.4%) IG n=29 (52.7%) Has visiting nurses: CG n= 22 (38.6%) IG n= 28 (50.9%) Has Home Help: CG n= 35 (61.4%) IG n= 33 (60.0%) Hearing problems: CG n= 27 (47%) IG n= 29 (52%) Communication problems: CG n= 33 (58%) IG n= 25 (45%) Vision problems, 107 (94.69% Falls (in last 6 months): CG n= 37 (65%) IG n= 41 (73%) Health and Disability needs: High, 100 (89.28%); Very high, 12 (10.72%) [from full report] Significant comorbidities: Arthritis in joint: 64 (56.6%); Hypertension: 72 (63.7%); Cataracts: 51 (45.1%); Angina: 47 (41.6%); Stroke: 45 (39.8%); Wrist/vertebral fracture: 45 (39.8%); Irregular pulse: 28 (24.8%); Asthma: 25 (22.1%); Osteoporosis: 25 (22.1%). Health status: Mean Pain Scale (SD) Range 0-3: CG= 1.49 (1.17) IG= 1.45 (1.24) Mean Changes in Health, End-stage disease and Signs and Symptoms (CHESS) (SD): CG= 3.1 (1.0) IG= 3.0 (1.1) Mean EuroQoL VAS (SD): CG= 60.9 (26.6) IG= 68.8 (22.3) Terminally ill, n=4 (3.57%) Cognitive status: Memory problems, 86 (76.12%) The Cognitive Performance Scale (CPS, 0-6, higher is worse), Mean (SD) 1.93 (1.36), Usual care 1.55 (1.09), Intervention Mood status: Mean Depression Rating Scale (SD) Range 0-14: CG= 6.30 (3.29) IG= 5.11 (3.69) Depression: CG n= 13 (22.8%) IG n= 12 (21.8%) Frailty status: frail Based on characteristics and criteria: at risk of institutionalisation
Interventions	2 groups Intervention 1: Experimental intervention. 56 participants. Community Flexible Integrated Restorative Support Team (Community FIRST). An intensive restorative home support (RHS) service. Grouped as: Homecare, ADL, multifactorial-action and review with self-management strategies

	Intervention 2: Control intervention. 57 participants. Usual care, including home-based services and residential care. Grouped as: Homecare and multifactorial-action
Outcomes	Outcomes included in NMA: Living at home: Living at home (pts) Instrumental activities of daily living: IADL Summary Scale (InterRAI, MDS-IADL scale) Depression: Depression Rating Scale (DRS) (Burrows *et al.*, 2000) Mortality: Deaths (from routine data) Tabulated outcomes: Living at home: Care home and mortality (inverse of living at home) Personal activities of daily living: ADL Self-Performance Hierarchy Scale (The InterRAI MDS, Morris *et al.*, 1999), MDS: Late loss ADL (Transfer, toilet use, bed mobility and eating; Morris *et al.*, 1999), ADL Long Form Scale (The InterRAI MDS, Morris *et al.*, 1999) Hospitalisation: Hospitalisation (pts hospitalised once or more), Hospitalisation (admissions) Care home admission: Care-home placement (survivors/follow-up) Health status: EQ-5D EQ-VAS (Health today 0-100) Falls: Falls (incidents), Falls (pts fell once or more) Outcomes not included in this review because insufficient data were reported: Costs: Costs to society/ community (Parsons 2012, ASPIRE Studies) Cost effectiveness: ICER - each day residential care avoided, ICER - each day deceased avoided, ICER - each day in community gained Health status: EQ-5D-3L (self-completion) Other outcomes not specified as of interest for this review: IADL difficulty scale (The interRAI Minimum Data Set, MDS) IADL involvement Scale (The interRAI Minimum Data Set, MDS) Changes in Health, End stage disease and Signs and Symptoms (CHESS) EQ-5D EQ-VAS (Health today 0-100, Proxy completion - proxy's opinion) EQ-5D-3L (proxy-completion) The Cognitive Performance Scale (CPS, within MDS-HC) Pain Scale (within MDS-HC) GP visits Caregiver SF-36 (PCS, MCS) Caregiver Reaction Assessment (CRA MDS-HC Home Care Quality Indicators (HCQI) Hirdes *et al.*, (2004) Number of days per person spent in community care, residential care, an deceased over 12-month period (part of cost-effectiveness analyses) Recorded episodes of abuse Index of social engagement PANT instrument Practitioner Assessment of Network Type)
Timepoints	Outcomes were measured at 3 months, 6 months, 12 months, 18 months and 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: New Zealand government's Department of Health

	Conflicts of interest: The authors of this work are not aware of any competing interests that may impact on any aspect of work.
Notes	1. 1 of 3 ASPIRE trials, in Hamilton, New Zealand (Site A). 2. Data were collected at baseline, 3, 6, 12, 18 and 24 months post-randomisation. The follow-up period lasted an average of 18 months, and not results beyond 18 months reported. 3. The recruitment was staggered, with participants entering the study throughout the study period, and thus some participants that entered the study later on do not have data for some of the follow up time points.3. Secondary outcomes analysed with partial dataset, and complete dataset (including those admitted to care) 4. Subgroup analyses, and predictive modelling analyses performed. 5. Per protocol analysis was also performed.

Table 85. Parsons M 2012[334-338] study characteristics

Methods	Aims: To determine the effect of COSE on residential care placement and death, health-related quality of life, and caregiver burden in older adults referred for residential care placement. Design: Cluster RCT Clustering accounted for. Details: 55 GP practices in greater were cluster-randomized to either the intervention or usual care before participant recruitment, number of GP practices in each cluster unknown.
Participants	Characterisation: Older adults assessed as being at high risk of residential care placement Country: New Zealand Setting: Participant's residence, intervention coordinated from 55 GP practices. Enrolment started in 2003 Clusters assigned: 55 Participants assigned: 351 Inclusion criteria: 1. Aged 65 and older (55 or older for Māori, the indigenous people of New Zealand) 2. the regional geriatric assessment service or hospital clinical team had assessed as being at high risk of permanent residential care placement using a standardized needs assessment tool 3. Patients of the participating general practices were eligible for the study. Exclusion criteria: 1. A judgment by the clinical team that the older adult's safety required immediate residential care placement 2. Inability to communicate in English or provide a family member as interpreter (if required). Female: 69% Age: Mean (SD) = 80.9 (6.9) Has informal carer: 35% Living alone: 51% Ethnicity: 89.4% NZ European 0.9% New Zealand Māori 9.7% Other

	Dependence and disabilities: Require help for everyday activities (IADL): CG n= 172 (95%) IG n= 166 (98.2%) Using aids/devices for indoor mobility: CG n= 179 (98.9%) IG n= 169 (100%) Mean ADL Long form (SD) Range 0-28: CG= 0.91 (2.92) IG= 1.46 (4.11) Mean IADL Summary (SD) Range 0-21: CG= 7.79 (5.47) IG= 8.62 (5.77) Has Home Care: CG= 82 (45.3%) IG= 80 (47.3%) Has visiting nurses: CG= 25 (13.8%) IG= 27 (16%) Has Home Help: CG= 157 (86.7%) IG= 151 (89.3%) Hearing problems: CG n= 101 (55.8%) IG n= 96 (56.8%) Communication problems: CG n= 21 (11.6%) IG n= 14 (8.3%) Falls (in last 6 months): CG n= 57 (31.5%) IG n= 54 (32% Vision problems, 239 Health and Disability needs: High, n=278; Very high, n=72 Significant comorbidities: Medical history N/351, (based on full report) Arthritis in joint: 221; Hypertension: 184; Cataracts: 145; Angina: 133; Stroke: 100; Wrist/vertebral fracture: 104; Irregular pulse: 93; Asthma: 96; Osteoporosis: 77. Health status: Mean Pain Scale (SD) Range 0-3: CG= 1.3 (1.2) IG= 1.0 (1.2) Mean Changes in Health, End-stage disease and Signs and Symptoms (CHESS) (SD): CG= 2.1 (1.1) IG= 2.0 (1.0) Mean EuroQoL VAS (SD): CG= 63.4 (20.8) IG= 64.6 (18.2) Terminally ill: n= 4 Cognitive status: Mean Cognitive Performance Scale (SD) Range 0-6: CG= 1.30 (1.21) IG= 1.27 (1.28) Memory problems, 224 Mood status: Mean Depression Rating Scale (SD) Range 0-14: CG= 2.10 (1.98) IG= 2.45 (2.00) Depression: CG= 52 (28.7%) IG= 37 (21.9%) Frailty status: frail Based on characteristics and criteria: at risk of institutionalisation
Interventions	2 groups Intervention 1: Experimental intervention. 169 participants. Coordinator of Services for Elderly (COSE). Community-based client-centered care management system. Grouped as: Homecare, multifactorial-action and review Intervention 2: Control intervention.

	182 participants. Usual care, including home-based services and residential care. Grouped as: Homecare and multifactorial-action
Outcomes	Outcomes included in NMA: Instrumental activities of daily living: IADL Summary Scale (InterRAI, MDS-IADL scale) Depression: Depression Rating Scale (DRS) (Burrows *et al.*, 2000) Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Living at home: Living at home (calculated, from losses to follow up), Care home and mortality (inverse of living at home) Personal activities of daily living: MDS: Late loss ADL (Transfer, toilet use, bed mobility and eating; Morris *et al.*, 1999), ADL Self-Performance Hierarchy Scale (The InterRAI MDS, Morris *et al.*, 1999), ADL Long Form Scale (The InterRAI MDS, Morris *et al.*, 1999) Hospitalisation: Hospitalisation (admissions), Hospitalisation (pts hospitalised once or more) Care home admission: Care-home placement (survivors/follow-up) Health status: EQ-5D EQ-VAS (Health today 0-100) Falls: Falls (incidents), Falls (pts fell once or more) Outcomes not included in this review because insufficient data were reported: Costs: Costs to society/ community (Parsons 2012, ASPIRE Studies) Cost effectiveness: ICER - each day residential care avoided, ICER - each day deceased avoided, ICER - each day in community gained Health status: EQ-5D-3L (self-completion) Other outcomes not specified as of interest for this review: Changes in Health, End stage disease and Signs and Symptoms (CHESS) EQ-5D EQ-VAS (Health today 0-100, Proxy completion - proxy's opinion) IADL difficulty scale (The interRAI Minimum Data Set, MDS) IADL involvement Scale (The interRAI Minimum Data Set, MDS) EQ-5D-3L (proxy-completion) The Cognitive Performance Scale (CPS, within MDS-HC) Pain Scale (within MDS-HC) GP visits Caregiver SF-36 (PCS, MCS(Ware and Sherbourne 1992) Caregiver Reaction Assessment (CR) MDS-HC Home Care Quality Indicators (HCQI) Hirdes *et al.*, (2004) Number of days per person spent in community care, residential care, and deceased over 12-month period (part of cost-effectiveness analyses) Recorded episodes of abuse Index of social engagemet (ISE) Practitioner Assessment of Network Type (PANT) instrument (Wenger 1994)
Timepoints	Outcomes were measured at 3 months, 6 months, 12 months, 18 months and 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: New Zealand government's Department of Health Conflicts of interest: No conflict.
Notes	1. 1 of 3 ASPIRE trials, in Christchurch, New Zealand (Site C).

	2. Data were collected at baseline, 3, 6, 12, 18 and 24 months post-randomisation. The follow-up period lasted an average of 18 months, and not results beyond 18 months reported. 3. The recruitment was staggered, with participants entering the study throughout the study period, and thus some participants that entered the study later on do not have data for some of the follow up time points.3. Secondary outcomes analysed with partial dataset, and complete dataset (including those admitted to care) 4. Subgroup analyses, and predictive modelling analyses performed. 5. Per protocol analysis was also performed.

Table 86. Pathy 1992[339] study characteristics

Methods	Aims: To report the outcome of a 3-year, randomised controlled study in an urban general practice of a casefinding/surveillance programme based on a self-reporting, functional screening postal questionnaire with selective patient follow-up by a health visitor. Design: Randomised Controlled Trial Details: Randomisation was by household was (296 intervention, 290 control) so that people living together could be managed similarly.
Participants	Characterisation: Aged 65+ living in domestic accommodation, registered with a GP Country: UK Setting: General practice of four partners in central Cardiff. Enrolment started before 2006 Participants assigned: 725 Inclusion criteria: aged 65 or more living in domestic accommodation registered with the participating general practice of four partners in central Cardiff. Exclusion criteria: moved away died Female: 60% Age: Mean (SD) = 73.4 (6.4) Has informal carer: not reported. Living alone: 34% Ethnicity: Not stated Dependence and disabilities: Not stated Significant comorbidities: Not stated Health status: Not stated Cognitive status: Not stated

	Mood status: Not stated Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: unselected
Interventions	2 groups Intervention 1: Experimental intervention. 369 participants. Case finding and surveillance at home. Grouped as: Risk-screening Intervention 2: Control intervention. 356 participants. Usual care. Grouped as: Available care
Outcomes	Tabulated outcomes: Homecare services usage: Home care (pts) Hospitalisation: Hospitalisation (admissions) Care home admission: Care-home placement (including deaths) Health status: Health Status (Pathy 1992) Mortality: Deaths (from routine data) Outcomes not included in this review because insufficient data were reported: Personal and instrumental activities of daily living: Townsend Disability Scale (9 items, 0-18) Hospitalisation: Hospitalisation (days or nights) Health status: Nottingham Health Profile (NHP) Other outcomes not specified as of interest for this review: Self-ratings of quality of life Health status (self-rated) Life satisfaction index (Neigarten *et al.* 1961) Use of all services (GP contact, geriatric day hospital attendances, domiciliary visits by hospital specialists, meals on wheels, chiropody, attendance allowance) Left to register with another GP
Timepoint	Outcomes were measured at 3 years
Funding and conflicts of interest	Funding: Non-commercial Sources: Nuffield Provincial Hospital Trust. Conflicts of interest: Not mentioned.
Notes	1. Control arm did not have baseline measurement, some data were collected from routine data, then they only had 1 measurement 1m after the end of trial. 2. Randomisation was by household, the analysis was done at the individual patient level. Analyses by household yielded similar results but not reported.

Table 87. Phelan 2007[340] study characteristics

Methods	Aims: To assess the effect of a team of geriatrics specialists on the practice style of primary care providers (PCPs) and the functioning of their patients aged 75 and older. Design: Cluster RCT Clustering accounted for. Details: 1. 31 primary care providers (clinicians) practised at the 2 participating clinics were randomised to either arm, stratified according to clinic. 2. For the patients in the practice of a physician who was randomized to the intervention arm, the first 10 to respond and complete the baseline survey were invited to receive the intervention. A comparable arm of 10 early responders from the practices of physicians randomized to the control arm were identified to serve as the comparison arm. This arm of control and intervention patients was termed the ‘‘direct group”. The remaining patients formed the ‘‘diffusion group”, consisting of all but the first 10 patients in each intervention and each control practice.
Participants	Characterisation: Patients aged 75 and older Country: USA Setting: Two primary care clinics affiliated with Group Health Cooperative (a large health maintenance org) in the Seattle, Washington, area. Enrolment started in 2002 Clusters assigned: 31 Participants assigned: 874 Inclusion criteria: - Patients of the participating clinics, aged 75 and older. - Who did not decline to be contacted upon receiving a mailing with written information about the study and an invitation to participate. Exclusion criteria: - known to be permanently institutionalized or terminally ill Female: not reported. Age: Mean (SD) = 81.5 (4.7) Has informal carer: not reported. Living alone: not reported. Ethnicity: Not mentioned. Dependence and disabilities: Any restricted activity days Intervention arm 16% control arm 16% Difficulty with any IADLs Intervention arm 64% control arm 65% Difficulty with mobility Intervention arm 56% control arm 55% Preclinical disability Intervention arm 45% control arm 43% Difficulty with any basic ADL Intervention arm 35% control arm 32% IMS2-SF Physical subscale, mean Direct subgroup: IG 1.37; CG 1.18 Significant comorbidities: Heart disease Intervention arm 28% control arm 32% Diabetes Intervention arm 15% control arm 16% Hypertension Intervention arm 56% control arm 54% Chronic pain Intervention arm 40% control arm 40% Falls Intervention arm 10% control arm 12%

	Cancer diagnosed in last 3 years Intervention arm 8% control arm 6% Data mixed with 575 pts from ineligible arm. Health status: Current smoker Intervention arm 3% control arm 3% Any physical activity Intervention arm 89% control arm 88% AIMS2-SF physical subscale mean Intervention arm 1.27 control arm 1.28 Self-rated health good to excellent Intervention arm 70.1% control arm 74.9% Self-rated health - good to excellent, % Direct subgroup: IG 62.6 CG 79.4 Cognitive status: self-reported dementia Intervention arm 3% control arm 4% Failed cognitive screen Intervention arm 40% control arm 37% Data mixed with 575 pts from ineligible arm. Cognitive impairment, % Direct subgroup: IG 18; CG 19 Mood status: Table 3 AIMS2-SF affect subscale Intervention arm 2.39 control arm 2.47 Psychological wellbeing MHI-5 mean Intervention arm 78.8 control arm 78.5 Table 1 Self-reported depression 16% both intervention and control arms Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: >75
Interventions	2 groups Intervention 1: Experimental intervention. 15 clusters, 432 participants. Senior resource team (SRT). Interdisciplinary geriatric specialists working with primary care providers and patients, to enhance the geriatric focus of care. Grouped as: Multifactorial-action and review with medication review and self-management strategies Intervention 2: Control intervention. 16 clusters, 442 participants. Usual care. Care of older adults mainly based in primary care settings. Grouped as: Available care
Outcomes	Outcomes included in NMA: Hospitalisation: Hospitalisation (pts hospitalised once or more/ last 12 months) Tabulated outcomes: Depression: Mental Health Index-5 (MHI-5) Mortality: Deaths (from routine data) Outcomes not included in this review because insufficient data were reported:

	Health status: Health Perception (EVGFP / 5-1) - RAND Medical Outcome Study (MOS) Other outcomes not specified as of interest for this review: Reviewer 1 Main outcomes were a practice style reflecting a geriatric orientation and patient scores on the physical and affect subscales of the Arthritis Impact Measurement Scale 2-Short Form. Primary Care Providers perceptions of the intervention. Incident disability in activities of daily living (ADLs) (ADLs - Katz 1963, 0 days) IADLs - Lawton & Brody 1969 AIMS2-SF (physical and affect subscales reported)
Timepoints	Outcomes were measured at 12 months and 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: John A. Hartford Foundation, New York, New York. Conflicts of interest: This study was funded by Grant 2001-0006, Delivering Effective Primary Care to Older Adults: The Senior Resource Team at Group Health Cooperative, from the John A. Hartford Foundation, New York, New York, through their Geriatric Interdisciplinary Teams in Practice initiative. This research was conducted while Dr. Phelan was a K23 recipient from the National Institute on Aging and a Paul Beeson Physician Faculty Scholars in Aging Research Program Award recipient.
Notes	Only the "direct group" is eligible in this review; not the "diffusion group".

Table 88. Ploeg 2010[341, 342] study characteristics

Methods	Aims: To evaluate the impact of a provider initiated primary care outreach intervention compared with usual care among older adults at risk of functional decline. Design: Randomised Controlled Trial Details: Randomised each couple as a cluster of two and single people as individuals. Used a 1:1 allocation ratio to allocate individuals or couples to either the intervention or the control arm.
Participants	Characterisation: Older adults at risk of functional decline Country: Canada Setting: Community Primary Care setting Enrolment started in 2004 Participants assigned: 719 Inclusion criteria: 1. Eligible patients were aged 75 years or older. 2. They or their proxy were able to answer questions in English 3. They resided in the city of Hamilton, Ontario, Canada. 4. Patient is listed on the roster of a participating family physician practice. Exclusion criteria: -Patients were ineligible if they received home care services, -Lived in a nursing home or long term care home. -Were identified by their family physician as needing palliative care. -Were scheduled for major elective surgery in the next year. -Were planning to leave the country for more than one month during the 12-month follow-up period.

	Female: 53% Age: Mean (SD) = 81.1 (4.3) Has informal carer: not reported. Living alone: not reported. Ethnicity: Not mentioned. Dependence and disabilities: Older Americans resources and services multidimensional functional assessment—activities of daily living, n (%) Excellent-good: CG 81 (23); IG 75 (21) Mild impairment: CG 156 (44); IG 171 (47) Moderate impairment: CG 87 (24); IG 78 (22) Severe impairment: CG 21 (6): IG 23 (6) Total impairment: CG 13 (4); IG 14 (4) Significant comorbidities: Not mentioned. Health status: SF-36 self-rated health item, mean (SD) Health Utilities Index Mark 3: IG 0.54 (0.31), n=348; CG 0.51 (0.32), n=316 Cognitive status: Standardised mini-mental state exam score (out of 30): Normal (26-30): IG 283 (78%); CG 288 (80%) Mild cognitive impairment (20-25): IG 73 (20%); CG 66 (18%) Moderate cognitive impairment (10-19): IG 4 (1%); CG 4 (1%) Mood status: Not mentioned. Frailty status: pre-frail and frail Based on characteristics and criteria: Sherbrooke
Interventions	2 groups Intervention 1: Experimental intervention. 361 participants. Preventative primary care outreach intervention. Preventive primary care outreach is defined as a proactive, provider-initiated care above and beyond demand led routine care, provided in a community primary care setting. Grouped as: Education, multifactorial-action and review with medication review Intervention 2: Control intervention. 358 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Care home admission: Care-home placement (survivors/follow-up)

	Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Hospitalisation: Hospitalisation (admissions) Health status: Health Utilities Index Mark 3, Health Perception (EVGFP / 1-5, SF-36), QALY from HUI-3 Outcomes of interest with bespoke measures: Personal activities of daily living Outcomes not included in this review because insufficient data were reported: Costs: Costs to health care services Other outcomes not specified as of interest for this review: Hospital emergency department (visits) Family physician visits Nursing visits Specialist visits Physiotherapy visits Occupational therapy visits Social worker visits Nutritionist visits Homemaker visits Personal ADL (bespoke metric) to measure functional status -self report ADL section of Multidimensional functional assessment OARS (5 items)
Timepoints	Outcomes were measured at 6 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Ontario Ministry of Health and Long Term Care, Primary Health Care Transition Fund. Conflicts of interest: CHG was paid as a consultant to help in developing the Health Utilities Index Mark 3 quality of life measure. WF has a stock interest in Health Utilities, which distributes copyright Health Utilities Index instrumentation and provides methodological advice on the use of Health Utilities Index.
Notes	10 imputations to handle missing data and dropouts from the study apart from death. Reported observation data were analysed without imputation.

Table 89. Profener 2016[343-346] study characteristics

Methods	Aims: To evaluative the acceptability of preventive home visits (PHV) is to support independent living of elderly people for older adults with frailty Design: Randomised Controlled Trial
Participants	Characterisation: Frail participants in the LUCAS cohort study Country: Germany Setting: General practitioners in Hamburg Enrolment started in 2007 Participants assigned: 553 Inclusion criteria: All participants classified as frail in the longitudinal urban cohort aging study (LUCAS)

	All persons of the LUCAS long-term cohort recruited in 2000/2001 who continued to participate in 2007 (LUCAS wave 2 2007/2008) with completed questionnaires and complete information on the functional status were considered as the population. Exclusion criteria: No longer be reached Moved to nursing home Died Female: 72% Age: IG= 79.2 CG= 80.3; Range: 67 to 99.6 Has informal carer: 77% Living alone: 56% Ethnicity: Not recorded Dependence and disabilities: Heavy housework, yes = 38.52% Walking, 0 to 2 days in past week = 46.29% Significant comorbidities: Problems holding urine = 48.46% Health status: General self-perceived health condition: moderate to poor = 69.8% Fear of falling = 72.33% Pain that never completely goes away = 57.69% Hearing, excellent to good = 50.09% Eyesight, excellent to good = 51.72% Cognitive status: Not reported Mood status: Feeling depressed = 20.98% Frailty status: frail Based on characteristics and criteria: their own frailty tool
Interventions	2 groups Intervention 1: Experimental intervention. 174 participants. Preventive home visits. Grouped as: Education, multifactorial-action and review Intervention 2: Control intervention. 379 participants. Usual care. Grouped as: Available care
Outcomes	Tabulated outcomes: Falls: Falls (pts fell once or more / last 12 months) Mortality: Deaths (reported as loss to follow-up)

	Other outcomes not specified as of interest for this review: Reasons not participating home visits Escape/ displacement (This is a characteristic of the pts, about escape or expulsion, similar to immigration experience, not about respite care or care admission) Caregiver available Care levels General self-perceived health condition Fear of falling Feeling depressed Pain Problems holding urine Eyesight Hearing Heavy housework Walking (0-2 days in past week)
Timepoints	Outcomes were measured at 2 years and 4 years
Funding and conflicts of interest	Funding: Non-commercial Sources: Federal Ministry for Education and Research, Germany (Bundesministerium für Bildung und Forschung, BMBF) Conflicts of interest: No conflict of interest.
Notes	IG= 64+110 (participants in PHV+ non-participants) CG= 379

Table 90. Rockwood 2000[347, 348] study characteristics

Methods	Aims: To test CGA recommended by a Mobile Geriatric Assessment Team in rural community as an adjunct to usual care, using a clinimetric, patient-centred, individualised test (Goal Attainment Scaling) as the primary outcome. Design: Randomised Controlled Trial Details: Not specified.
Participants	Characterisation: Community-dwelling patients of rural family practitioners in three counties Country: Canada Setting: Rural family practitioners in three counties in Nova Scotia Enrolment started before 2006 Participants assigned: 182 Inclusion criteria: 1. Referral by family physicians, criteria targeted frailty, defined as a vulnerable state of health, arising from the complex interaction of medical and social problems, resulting in a decreased ability to respond to stress, and associated with a decline in functional performance. 2. Operationally, this consisted of any of the following: concern about community living, recent bereavement, hospitalization, or acute illness; frequent physician contact; multiple medical problems; polypharmacy; adverse drug events; functional impairment or functional decline; and diagnostic uncertainty. Exclusion criteria: Not specified.

	Female: 57% Age: Mean (SD) = 81.8 (7.2) Has informal carer: not reported. Living alone: 32% Ethnicity: Not specified. Dependence and disabilities: Barthel index, mean (SD): IG (n=95): 85.4 (17); CG (n=87) 82.7 (19.9) IADL (Lawton & Brody, 1969), mean (SD): IG 18.9 (6.3); CG 19.3 (0.7) Physical self-maintenance scale, mean (SD): IG 9.7 (4.0); CG 10.49 (4.4) Significant comorbidities: Not specified. Health status: Modified Spitzer Quality of Life Index score, mean (SD): IG 10.0 (2.4); CG 9.9 (2.2) Poor self-rated health: IG= 44.4% of 72 participants, CG= 41.7% of 60 participants Cognitive status: Mini-Mental State Examination, Mean (SD): IG= 22.7 (6.3), CG= 22.9 (7.1) Mood status: Not specified. Frailty status: frail Based on characteristics and criteria: vulnerability indicators
Interventions	2 groups Intervention 1: Experimental intervention. 95 participants. Interdisciplinary Mobile Geriatric Assessment Team (MGAT). Comprehensive geriatric assessment, specialized care and usual care Grouped as: Multifactorial-action with medication review Intervention 2: Control intervention. 87 participants. Comprehensive geriatric assessment and goal setting without specialized care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Personal activities of daily living: Barthel Index (Modified version. Grangers *et al.*, 1979) Instrumental activities of daily living: Lawton IADL (8-31) (Lawton & Brody, 1969) Mortality: Deaths (pre-specified outcome, method of ascertainment unspecified) Tabulated outcomes: Living at home: Institution-free survival (mean days over 12 months)

	Personal activities of daily living: Physical Self-Maintenance Scale (6-30) (Lawton & Brody 1969) Care home admission: Care-home placement (including deaths) Other outcomes not specified as of interest for this review: Modified Spitzer Quality Of Life Index (SQLI) (modified from Spitzer *et al.*, 1981, used in Rockwood 2000) Geriatric Status Sale/Score (GSS- Hogan and Fox, 1990): identification of an individual who would benefit from geriatric consultation - used as a frailty measure. Goal Attainment Scaling (GAS) Physicians global impression of change (GIC) MMSE
Timepoints	Outcomes were measured at 3 months, 6 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: National Health Research Development Program (NHRDP), the Nova Scotia Department of Health. NHRDP National Health Scholar award, NHRDP National Health PhD Fellowship award and NHRDP MSc Fellowship Conflicts of interest: Not mentioned, but appeared none.
Notes	

Table 91. Romera-Liebana 2018[349-351] study characteristics

Methods	Aims: To evaluate the effectiveness of a multifactorial intervention program to modify frailty parameters, muscle strength, and physical and cognitive performance in people aged 65 years or more. Design: Randomised Controlled Trial
Participants	Characterisation: community-living prefrail/frail elderly individuals Country: Spain Setting: 8 primary health care centres in Barcelona Enrolment started in 2013 Participants assigned: 352 Inclusion criteria: • 65 years or older • Resident in Barcelona, community-dwelling • Assigned to one of the 8 PHCC • Can attend on-site the consultation room at the PHCC • Will stay in the reference area a minimum of one year and a half • Frailty inclusion criteria: score of 1 point or above in the Barber Questionnaire, Fried modified frailty criteria: 3 or more, Gait time between 10 to 30 seconds in the Timed Get Up and Go test, MEC-35 of Lobo ≥18 points (no severe cognitive impairment) • Capable of consent. Agreement to participate in the study Exclusion criteria: • Medical conditions such as the presence of: unstable angina, uncontrolled congestive heart failure, unstable arrhythmia, COPD stage III or IV which contraindicate following a program of physical activity • Home Care Program or institutionalization at baseline. Planned admission to nursing home • Participation in other physical activity program

	• Has been operated on hip and/or knee the last 6 month (walking independently with technical assistance is not a contraindication) • Suffering a non-controlled neoplastic disease, terminal or severe disabling illness • Cannot understand Spanish Female: 75% Age: Mean (SD) = 77.3 (7.3) Has informal carer: not reported. Living alone: 47% Ethnicity: Not reported. Dependence and disabilities: Lawton & Brody IADL (0-8) (mean (SD)): IG= 6.6 (1.76) CG= 6.5 (1.9) Barthel Index (mean (SD)): IG= 96.0 (6.2) CG= 96.1 (7.5) Significant comorbidities: Charlson Index, mean (SD): CG 1.3 (1.5); IG 1.5 (1.6) n(%) Osteoarthritis: CG 145 (82.4%); IG 145 (82.4%) Osteoporosis: CG 24 (13.6%); IG 32 (18.2%) Hypertension: CG 127 (72.2%); IG 134 (76.1%) Stroke: CG 14 (8.0%); IG 17 (9.7%) Coronary Heart disease: CG 23 (13.1%); IG 30 (17.0%) Atrial fibrillation: CG 35 (19.9%); IG 35 (19.9%) Congestive Heart Failure: CG 18 (10.2%); IG 17 (9.7%) Chronic venous insufficiency: CG 69 (39.2%); IG 70 (39.8%) COPD: CG 16 (9.1%); IG 24 (13.6%) Asthma: CG 16 (9.1%); IG 12 (6.8%) Diabetes Mellitus: CG 53 (30.1%); IG 58 (33.0%) Dyslipidemia: CG 90 (51.1%); IG 107 (60.8%) Obesity: CI 71 (40.3%); IG 86 (48.9%) Anemia: CG25 (14.2%); IG 26 (14.8%) Chronic renal disease: CG 47 (26.7%); IG 48(27.3%) Health status: Charlson Index (mean (SD)): IG= 1.5 (1.6) CG= 1.3 (1.5) Frailty criteria, n (%): -Prefrail: CG 44 (25.0%); IG 45 (25.6%) -Frail: CG 132 (75.0%); IG 131 (74.4%) Cognitive status: MEC-35 Lobo score (mean (SD)): IG= 31.2 (3.2) CG= 30.6 (4.1) Mood status: Anxiety (n(%)): IG= 59 (33.5) CG= 72 (40.9) Depression (n(%)): IG= 38 (21.6) CG= 35 (19.9) Frailty status: pre-frail and frail Validated measure: Phenotype model
Interventions	2 groups

	Intervention 1: Experimental intervention. 176 participants. Multifactorial intervention program- physical activity and diet, memory workshops and review of medication. Grouped as: Cognitive training, medication-review, nutrition and exercise Intervention 2: Control intervention. 176 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Care home admission: Care-home placement (survivors/follow-up) Mortality: Deaths (reported as loss to follow-up) Outcomes not included in this review because insufficient data were reported: Personal activities of daily living: Barthel index (0-100 scale) (Mahoney & Barthel, 1965) Instrumental activities of daily living: Lawton IADL scale (0-8) (Lawton & Brody 1969) Hospitalisation: Hospitalisation (pts hospitalised once or more) Falls: Falls (pts fell once or more) Other outcomes not specified as of interest for this review: Barber Questionnaire Fried modified criteria Short Physical Performance Battery Functional Reach Test Unipodal Station Strength of upper extremities Strength of lower extremities Mini Nutritional Assessment MEC-35 of Lobo Short and Medium-Term Verbal Memory Animal Naming Test Evocation of words Designation of famous people names Verbal designation of images Verbal abstraction of word pairs Total number of drugs Psychotropic Medication presence Withdrawal of drugs Comorbidities Biological measurements Analytical parameters Sphincter incontinence Visual impairment Auditive impairment Technical support aids Quality of Life: SF12 Fractures Inclusion in a Home-Care Program

Timepoints	Outcomes were measured at 3 months and 18 months
Funding and conflicts of interest	Funding: Non-commercial Sources: ISCIII, Ministry of Economy and Competitiveness, Spain, Technical, Scientific and Innovation Research National Plan 2008; European Union ERDF funds, PI12/01503; Jordi Gol i Gurina Foundation; Carlos III Health Institute; Fundació Mutuam Conviure, Becas Esteve de Innovación en Salud 2013; VIII Primary Health Care Research Award; IDIAP Jordi Gol Conflicts of interest: The authors declare that they have no competing interests.
Notes	Incomplete cases were handled using the multiple imputation analysis by "mi impute pmm" procedure in Stata IC v12 statistical software. The estimates of the parameters for each imputed data set were combined using Rubin's rules.

Table 92. Rooijackers 2021[352-357] study characteristics

Methods	Aims: To evaluate the effectiveness of the "Stay Active at Home" (SAaH) reablement training program for homecare staff on older homecare clients' sedentary behavior. Design: Cluster RCT Clustering accounted for.
Participants	Characterisation: Older adult clients receiving home care services Country: Netherlands Setting: MeanderGroep South-Limburg, a large healthcare provider that offers domestic services, personal care and nursing services. Enrolment started in 2017 Clusters assigned: 10 Participants assigned: 264 Inclusion criteria: receive homecare services by the selected teams; and are 65 years or older Exclusion criteria: are terminally ill or bedbound; have serious cognitive or psychological problems; or are unable to communicate in Dutch Female: 68% Age: Mean (SD) = 82.1 (6.9) Has informal carer: not reported. Living alone: 69% Ethnicity: Ethnicity not reported. "Country of origin": Netherlands n=256 / 264. Dependence and disabilities: Disability (GARS 18–72, lower is better), mean (SD) 41.7 (10.6) Types of homecare received, n - Personal care, 232 (87.8%) - Nursing care, 135 (51.1%) - Domestic support, 151 (57.1%)

	Significant comorbidities: Not reported Health status: Not reported Cognitive status: Not reported Mood status: PHQ-9: mean (95% CI); control, intervention 1.8 (1.6, 1.9), 1.7 (1.6, 1.9) Frailty status: frail Based on characteristics and criteria: >65, home care
Interventions	2 groups Intervention 1: Experimental intervention. 5 clusters, 133 participants. Stay Active at Home. Usual home care from staff who received 'Stay Active at Home', a reablement training program for homecare staff including assessment and planning, tailored advice, and a particular focus on physical activity and activities of daily living Grouped as: Homecare, ADL, multifactorial-action and review with self-management strategies Intervention 2: Control intervention. 5 clusters, 131 participants. Usual home care. Grouped as: Homecare
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up), Living at home (calculated, from losses to follow up) Personal activities of daily living: Groningen Activity Restriction Scale (GARS) (ADL) Instrumental activities of daily living: Groningen Activity Restriction Scale (GARS) (IADL) Care home admission: Care-home placement (survivors/follow-up) Depression: Patient Health Questionnaire (PHQ-9) Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Personal and instrumental activities of daily living: Groningen Activity Restriction Scale (GARS) (overall) Falls: Falls (pts fell once or more / last 6 months) Outcomes not included in this review because insufficient data were reported: Costs: Costs to health services + social services + participant/carer Cost effectiveness: ICER - QALY (EQ-5D-5L) Health status: QALY from EQ-5D-5L Falls: Falls (incidents / last 6 months)

	Other outcomes not specified as of interest for this review: Sedentary time: (1) average daily minutes and (2) average proportion of wake/wear time, measured by ActiGraph GT3X+ (LASA sedentary behaviour questionnaire, planned but not used due to participant's difficulty answering) Physical activity by Short Physical Performance Batter Healthcare utilisation by self-developed questionnaire based on iMTA Medical Consumption Questionnaire (older adults) Informal care Home care (i.e. domestic services, personal care, and nursing care) Intervention cost Process evaluation (implementation, mechanisms, context)
Timepoints	Outcomes were measured at 6 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Netherlands Organization for Health Research and Development Conflicts of interest: The authors have no conflicts.
Notes	Missing values were imputed using mean imputation.

Table 93. Rubenstein 2007[358] study characteristics

Methods	Aims: To test whether a system of screening, assessment, referral, and follow-up provided within primary care for high-risk older outpatients improves recognition of geriatric conditions and healthcare outcomes. Design: Randomised Controlled Trial Details: Randomly assigned by Social Security number to 1 of 3 practice groups - 1 group provided intervention, another provided usual care to control arm, 3rd group was studied in this trial's pilot.
Participants	Characterisation: Community-dwelling higher-risk (GPSS ≥ 4) older people enrolled in a Department of Veterans Affairs (VA) healthcare system Country: USA Setting: Sepulveda Ambulatory Care Center (SACC) of the VA Greater Los Angeles Healthcare System Enrolment started before 2006 Participants assigned: 792 Inclusion criteria: 1. Community dwelling ≥65 years patients, receiving care at Sepulveda Ambulatory Care Centre (SACC) of the Department of Veterans Affairs (VA) Greater Los Angeles Healthcare System 2. had at least 1 clinic visit at SACC in the previous 18 months 3. with Geriatric Postal Screening Survey (GPSS) score ≥4, classified as higher risk with GPSS score Exclusion criteria: 1. lived outside a 30-mile radius of SACC 2. already enrolled in outpatient geriatric services at SACC 3. were living in a long-term care facility Female: 3% Age: Mean (SD) = 74.4 (6) Has informal carer: not reported. Living alone: not reported. Ethnicity: Not mentioned.

	Dependence and disabilities: ADL Functional Scale Questionnaire (FSQ), mean (SD): IG 84.2 (19.6); CG 82.9 (20.3) IADL Functional Scale Questionnaire (FSQ), mean (SD): IG 54.2 (26.3); CG 53.6 (28.6) Significant comorbidities: Charlson Index Comorbidity score: IG: 2.5 (1.9); CG: 2.2 (1.8) Reported incontinence in previous year, n (%): IG 189 (50.0), CG 199 (48.3) Health status: Medical Outcomes Study 36-Item Short Form health perception score Intervention arm: 32.9, 13.2 Control arm: 33.2, 12.9 Cognitive status: 1. Short Orientation-Memory-Concentration Test (range 0–26), mean (SD): IG= 4.6 (4.6) CG= 5.0 (4.9) 2. Short Orientation-Memory-Concentration Test score >6 (impaired mental status), n (%): IG= 92 (26.7) CG= 95 (26.0) Mood status: 1. 46% showed symptoms of depression 2. Baseline GDS entered in observation Frailty status: frail Based on characteristics and criteria: high risk
Interventions	2 groups Intervention 1: Experimental intervention. 380 participants. Case finding and referral model of geriatric care. includes telephone assessment, case finding referral, focused geriatric assessment in a specialty clinic for selected patients, and limited case management and follow up by telephone, all following postal screening. Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 412 participants. Usual care in a Department of Veterans Affairs ambulatory care center. Grouped as: Available care
Outcomes	Outcomes included in NMA: Personal activities of daily living: ADL Functional Scale Questionnaire (FSQ) Instrumental activities of daily living: IADL Functional Scale Questionnaire (FSQ) Hospitalisation: Hospitalisation (pts hospitalised once or more/ last 12 months) Depression: Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986) Mortality: Deaths (from routine data)

	Tabulated outcomes: Hospitalisation: Hospitalisation (days or nights) Falls: Falls (pts fell once or more / last 3 months) Outcomes not included in this review because insufficient data were reported: Care home admission: Care Home (pts) Other outcomes not specified as of interest for this review: Home care (pts ever used) SF-36 – Health perceptions (general health subscale) Urinary incontinence Short Orientation-Memory-Concentration Test Referral rates to selected clinics and programmes during 1st year of FU Non-VA healthcare service used in last 6 months timepoint - 6 months, 18 months, 30 months Cause of falls Injuries associated with falls Subjective report of severity of fall-related injuries Number of people referred for home care during the first year
Timepoints	Outcomes were measured at 6 months, 12 months, 18 months, 24 months, 30 months and 36 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Department of Veterans Affairs, Veterans Health Administration, Health Services Research and Development Service (HSR&D), and the VA Greater Los Angeles Geriatric Research, Education and Clinical Center. Conflicts of interest: 1. The sponsor (VA HSR&D) had no part in the design, methods, subject recruitment, data collection, analysis, or preparation of the manuscript. 2. No declaration from authors.
Notes	1. Trial period unclear; pilot report was published in Sept 1993 (Yano *et al.*, 1993) 2. The total numbers of pts included in each outcome are different from each other at the same follow-up timepoint, and between the number of pts interviewed. The exact number of participants in each arm for each outcome is unknown and imputation not used. 3. Subgroup analyses for each target condition to explore whether the intervention had a greater effect on participants with more impairment at baseline.

Table 94. Ryvicker 2011[359, 360] study characteristics

Methods	Aims: To explore the impact of a quality improvement initiative (QI) on functional outcomes of older, chronically ill patients served by a large homecare organization Design: Cluster RCT It is unclear whether clustering was accounted for.
Participants	Characterisation: Older, chronically ill patients Country: USA Setting: Community: 45 teams in Visiting Nurse Service of New York (VNSNY)'s four largest regions (Bronx, Brooklyn, Manhattan, and Queens) Enrolment started in 2005

	Clusters assigned: 45 Participants assigned: 3290 Inclusion criteria: Had at least one HHA visit. Life expectancy greater than 6 months. Room for improvement in at least one of the selected ADLs. Exclusion criteria: severely cognitively impaired bedridden in need of 24-hour care Female: 73% Age: Mean (SD) = 75.6 (12.7) Has informal carer: not reported. Living alone: 49% Ethnicity: Non-White (%): Intervention arm (N = 1,516) 47.96; UC arm (N = 1,774) 41.88 Dependence and disabilities: Transferring score, M (SD): intervention arm (N = 1,516) 0.85 (0.58); UC arm (N = 1,774) 0.92 (0.57) Ambulation score, M (SD): intervention arm (N = 1,516) 1.22 (0.61); UC arm (N = 1,774) 1.27 (0.62) Bathing score, M (SD): intervention arm (N = 1,516) 2.61 (0.73); UC arm (N = 1,774) 2.64 (0.73) Significant comorbidities: Number of co-morbidities, M (SD): intervention arm (N = 1,516) Wound (%) QI 38.13 UC 40.98 Urinary incontinence (%) QI 16.95 UC20.46 Moderate dyspnoea (%) QI 54.09 UC49.49 High dyspnoea (%) QI 0.59 UC 1.24 High pain (%) QI 5.61 UC 3.38 Number of co-morbidities, M (SD) QI 4.12 (1.17) UC4.08 (1.21) Health status: Number of co-morbidities, M (SD): IG (n=1,516) 4.12 (1.17); UC arm (N = 1,774) 4.08 (1.21) Cognitive status: Moderate cognitive impairment (%): intervention arm (N = 1,516) 21.11; UC arm (N = 1,774) 17.64 Moderate confusion (%): intervention arm (N = 1,516) 5.54; UC arm (N = 1,774) 3.61 Mood status: Not reported Frailty status: unclassifiable
Interventions	2 groups Intervention 1: Experimental intervention.

	22 clusters, 1516 participants. Home Health Aide (HHA) Partnering Collaborative. A quality improvement initiative implemented into usual homecare and provided by a homecare organisation, to better integrate HHAs into the homecare team, and increase support for ADL improvements. Grouped as: Homecare, multifactorial-action and review Intervention 2: Control intervention. 23 clusters, 1774 participants. Usual homecare. Grouped as: Homecare, multifactorial-action and review
Outcomes	Other outcomes not specified as of interest for this review: OASIS ADL difficulty (6 items)
Timepoint	Outcomes were measured at 6 months
Funding and conflicts of interest	Funding: Non-commercial Sources: This work was supported by the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services (Contract HHSP23320044304EC). Conflicts of interest: Not reported
Notes	1. Observation timepoints are unclear. 2. Baseline characteristics and group numbers were reported for Phase 1 only.

Table 95. Serra-Prat 2017[361, 362] study characteristics

Methods	Aims: To assess the effect of an intervention in preventing frailty progression in pre-frail older people. Design: Randomised Controlled Trial
Participants	Characterisation: Pre-frail older people (≥70 years) consulting in primary care Country: Spain Setting: Practising primary care centres in Mataró (Barcelona, Spain) Enrolment started in 2013 Participants assigned: 172 Inclusion criteria: Non-institutionalised patients aged ≥70 years consulting for any reason at any of three participating primary care centres in Mataró (Barcelona, Spain) were screened for frailty according to Fried criteria. Potential study candidates were individuals for whom a prefrail status was established, as defined by the presence of one or two of the Fried criteria. Exclusion criteria: unable to stand without assistance, completely blind, with previous diagnosis of dementia recorded in clinical notes, and receiving palliative care or with life expectancy below 6 months. Female: 56% Age: Mean (SD) = 78.4 (5) Has informal carer: not reported.

	Living alone: not reported. Ethnicity: Not reported Dependence and disabilities: Barthel index, mean (SD): IG 98.4 (4.2); CG 98.5 (3.1) Significant comorbidities: Mean number of co-morbidities (SD): CG 3.5 (1.7): IG 3.92 (1.7) Arthritis: CG 32 (43.8%); IG 36 (58.1%) Heart diseases: CG 16 (21.9%); IG 8 (12.9%) Peripheral vasculopathy: CG 12 (16.4%); IG 10 (16.1%) Stroke: CG 6 (8.2%); IG 6 (9.7%) Parkinson disease: CG 0 (0%); IG 1 (1.6%) Depression: CG 9 (12.3%); IG 12 (19.4%) Cancer: CG 4 (5.5%); IG 5 (8.1%) Chronic lung diseases: CG 15 (20.5%); IG 3 (4.9%) Diabetes: CG 26 (35.6%); IG 21 (33.9%) Chronic renal failure: CG 7 (9.6%); IG 4 (6.5%) Health status: Mean number of Fried criteria (SD): CG 1.4 (0.5); IG 1.5 (0.5) -Weight loss: CG 1 (1.1%); IG 4 (5.0%) -Exhaustion: CG 22 (23.9%); IG 22 (27.5%) -Low physical activity: CG 20 (21.7%); IG 9 (11.3%) -Low gait speed: CG 22 (23.9%); IG 28 (35.0%) -Low muscle strength: CG 66 (71.7%); IG 59 (73.8%) Outdoor walking in h/day: CG (SD) 1.1 (1.0); IG 1.1 (0.6) Walking speed in m/s (SD): CG 0.9 (0.2); IG 0.9 (0.2) TUG test in s (SD): CG 9.3 (3.5); IG 9.3 (3.2) Hand grip in kg (SD): -CG: Men 26.2 (7.4); IG 24.8 (7.5) -CG: Women 16.3 (4.0); IG 15.9 (4.7) VAS—Pain, Mean (SD): CG 3.7 (3.1); IG 4.3 (2.9) Cognitive status: Not reported Mood status: Depression: CG n= 9 (12.3%) IG n= 12 (19.4%) Frailty status: pre-frail Validated measure: Phenotype model
Interventions	2 groups Intervention 1: Experimental intervention. 80 participants. Nutritional assessment plus physical activity programme. The intervention includes nutritional assessment and consequent interventions accordingly, and a physical activity programme. Grouped as: Nutrition and exercise Intervention 2: Control intervention. 92 participants.

	Usual Care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Personal activities of daily living: Barthel index (0-100 scale) (Mahoney & Barthel, 1965) Health status: EQ-5D EQ-VAS (0-10) Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Falls: Falls (pts fell once or more / last 3 months) Outcomes not included in this review because insufficient data were reported: Hospitalisation: Hospitalisation (days or nights), Hospitalisation (admissions) Care home admission: Nursing home (long-term) (pts) Other outcomes not specified as of interest for this review: Hospital emergency department (visits) Prevalence of frailty Prevalence of robustness (defined as the presence of none Fried criteria) Hand grip Timed up-and-go (TUG) test; Nutritional status assessed using the Mini Nutritional Assessment short form (MNA-sf) Pain according Visual Analog Scale Number of visits to primary care centre No. of visits to nutritionist No. of visits to social services Outdoor walking (h/day) Walking speed (m/s) Adherence to intervention
Timepoint	Outcomes were measured at 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Partially funded by grants from the Spanish Ministry of Health (Instituto de Salud Carlos III, Fondo de Investigación Sanitaria [FIS] programme PI13/00931). Conflicts of interest: The authors have no conflicts of interest to disclose.
Notes	The same analysis was performed for the subgroup of patients considered to achieve good adherence.

Table 96. Shapiro 2002[363] study characteristics

Methods	Aims: This study examined the effects of an early interventive social service program on the subjective wellbeing, permanent institutionalization, and mortality risk of low-income community-dwelling elders. Design: Randomised Controlled Trial
Participants	Characterisation: “moderately at-risk” elderly, awaiting to receive state's social services Country: USA Setting: Community: participant's residence Enrolment started in 1998

Participants assigned: 108

Inclusion criteria:
older adults who, in January 1998, were on a waiting list to receive social services through the State of Florida's Community Care for the Elderly (CCE) program and
were characterized as "moderate risk" based on a uniform statewide assessment device,
able to self-report.

Exclusion criteria:
- refused to participate
- moved out of the moderate-risk classification
- died
- were unable to be contacted by telephone
- could not self-report
- were institutionalized

Female: 80%
Age: (IG n=40/43, not including the 3 removed at baseline)
G: 77.1
CG: 77.1
(no SD)
Has informal carer: not reported.
Living alone: not reported.
Ethnicity: (IG n=40/43, not including the 3 removed at baseline)
White: IG=65.0% CG=60.0%
Black: IG=32.5% CG=36.9%
Hispanic: IG=0% CG=1.5%
Other: IG=2.5% CG=1.5%

Dependence and disabilities:
(IG n=40/43, not including the 3 removed at baseline)
Average no. of ADL limitations: IG=3 CG=3

Significant comorbidities:
Not reported.

Health status:
(IG n=40/43, not including the 3 removed at baseline)
Average subjective health (1=poor, 5=excellent): IG=2.9 CG=3.0
Average no. of health conditions: IG=3.9 CG=4.0

Cognitive status:
Not reported.

Mood status:
(IG n=40/43, not including the 3 removed at baseline)
CED-S 12 items (better 0 - worse 84) (n=53, completers only): IG=18.78 CG=16.91

Frailty status: frail

	Based on characteristics and criteria: Described as medium risk (rather than high) but not using a formal tool
Interventions	2 groups Intervention 1: Experimental intervention. 43 participants. Community-Based Early Intervention Program. Providing care planning, case management and selected services according to need Grouped as: Homecare, multifactorial-action and review Intervention 2: Control intervention. 65 participants. Waiting list presumably receiving usual care (not described). Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Care home admission: Care-home placement (survivors/follow-up) Mortality: Deaths (reported as loss to follow-up) Outcomes of interest with bespoke measures: Depression Outcomes not included in this review because insufficient data were reported: Costs: Costs of intervention Other outcomes not specified as of interest for this review: Satisfaction with social relationships (Lehman, 1988) Environmental mastery (Ryff, 1989) Life satisfaction Intervention cost
Timepoints	Outcomes were measured at 3 months, 6 months, 9 months, 12 months, 15 months and 18 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Borchard Center Foundation on Law and Aging, the United Way of Northeast Florida, and Baptist and St. Vincent's Hospitals. Conflicts of interest: Not mentioned.
Notes	1. 3 pts of the IG were removed from the study after baseline (2 institutionalized and 1 refused to participate), but prior to the receipt of the intervention. They were replaced by 3 pts of CG. Therefore to count baseline IG n=43, CG n=65. 2. 6/65 participants who became high risk for institutionalisation during the trial period were removed from the trial.

Table 97. Sherman 2016[364, 365] study characteristics

Methods	Aims: 1. analyse the effects of preventative home visits by District Nurses on the self-reported health of 75-year-olds, including changes in self-reported health after the visits 2. investigate whether participants felt the visit was useful Design: Cluster RCT Clustering accounted for.

Participants	Characterisation: 75-year-olds Country: Sweden Setting: Community, from health care centres Enrolment started in 2006 Clusters assigned: 16 Participants assigned: 583 Inclusion criteria: for the HCC to be included - HCC had to have at least three DNs employed - all >75y were contacted from the HCC Exclusion criteria: - Died - Did not live at the address mentioned in their records - Lived in a nursing home - Could not be reached - Had dementia or had experienced a stroke - Declined participation. Female: 53% Age: Age of study population was 75 years at recruitment/baseline Has informal carer: not reported. Living alone: 35% Ethnicity: Not reported Dependence and disabilities: (IG n=176, CG=262 analysed) Mobility, mean rank: IG (n=173) 3.3; CG (n=255) 3.5 Fatigue, mean rank: IG (n=173) 2.7; CG (n=255) 2.9 Significant comorbidities: Not reported Health status: (IG n=176, CG=262 analysed) Energy, mean rank: IG (n=173) 2.8; CG (n=255) 2.9 Sleep, mean rank: IG (n=173) 2.9; CG (n=255) 3.0 Pain, mean rank: IG (n=173)2.7; CG (n=255) 2.8 Bowel function, mean rank: IG (n=173) 3.4; CG (n=255) 3.4 Vertigo, mean rank: IG (n=173) 3.2; CG (n=255) 3.5 Cognitive status: (IG n=176, CG=262 analysed) Not reported Mood status: (IG n=176, CG=262 analysed) Mood, mean rank: IG (n=173) 3.1; CG (n=255) 3.2 Loneliness, mean rank: IG (n=173) 3.4; CG (n=255) 3.5 Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: unselected

Interventions	2 groups Intervention 1: Experimental intervention. 8 clusters, 280 participants. Preventive home visits by district nurses. Grouped as: Multifactorial-action with medication review Intervention 2: Control intervention. 8 clusters, 303 participants. Usual care. Grouped as: Available care
Outcomes	Tabulated outcomes: Loneliness: Loneliness (in Health Index) (1 item, 1-4) Outcomes of interest with bespoke measures: Health status Personal and instrumental activities of daily living Other outcomes not specified as of interest for this review: Use of medication Knowledge about and contact with the local community and the county council Usefulness of the preventive home visit Self-reported health problems in the categories of well being, integrity, prevention and safety (VIPS) Health behaviour Self-reported health and well-being (health index-scores) Perceived general health Communication Cognition/development Breathing/circulation Nutrition Pain
Timepoint	Outcomes were measured at 1 year
Funding and conflicts of interest	Funding: Non-commercial Sources: Stockholm Executive Board of the County Council Conflicts of interest: No potential conflicts of interest.
Notes	Need to check/ confirm baseline n number, i.e., who are regarded as randomised?

Table 98. Siemonsma 2018[366-368] study characteristics

Methods	Aims: To compare functional task exercise (FTE), with problems prioritised by older people, trained in the home environment, versus usual preventive physical therapy (PPT), on daily functioning among community dwelling older people with complex health problems Design: Randomised Controlled Trial Details: 155 participants were randomised into the intervention arms. For a non-randomised comparison, 228 matched control subjects were selected from another RCT (ISCOPE-study, Blom 2016)[30]
Participants	Characterisation: Community-dwelling persons aged ≥75 years with daily activity limitations

Country: Netherlands
Setting: FTE was provided in the participant's home; The location of PPT treatment was up to the therapists' professional opinion.
Enrolment started in 2009
Participants assigned: 155

Inclusion criteria:
1. 75 years or older
2. Living independently
3. a positive score on the functional domain and at least one other domain (somatic, mental, social)
4. not receiving physiotherapy treatment
5. a score of > 18 on the Mini Mental State Examination (MMSE)
6. no absolute and relative contra-indications for physical exercise according to the Guidelines for Exercise Test Administration' in de ACSM Guidelines for Exercise Testing and Prescription.

Exclusion criteria:
1. Terminal illness (life expectancy less than 3 months)
2. Planned surgery within 3 months
3. Physiotherapy or exercise therapy at the moment of inclusion
4. Contra-indication for physical exertion (assessed by general practitioner).
5. Admitted to nursing home
6. Did not speak Dutch
7. inability to comprehend and follow instructions and current physical therapy treatment.

Female: 74%
Age: median (25 and 75 percentile):
FTE arm= 84.0 (79.4;88.7)
PPT arm= 83.9 (80.2;86.4)
Has informal carer: not reported.
Living alone: not reported.
Ethnicity: Not mentioned.

Dependence and disabilities:
Groningen Activity Restriction Scale (GARS) (overall), median (IQR): FTE arm 40 (33-46); PPT arm 40 (34-46)
Katz-15, median (IQR): FTE arm 5 (3-6); PPT arm 5 (3-7)

Significant comorbidities:
Not mentioned

Health status:
Health perception score (EVGFP), mean (SD): FTE arm 3.78 (0.58); PPT arm 3.86 (0.50)

Cognitive status:
MMSE (median (25 and 75 percentile)): PPT arm= 28 (26; 29), FTE arm= 28 (26; 29)

Mood status:

	Participants reporting problems in the mood domain of the ISCOPE questionnaire, n (%): FTE arm 53 (70%); PPT arm 56 (71%) Frailty status: frail Based on characteristics and criteria: risk questionnaires
Interventions	2 groups Intervention 1: Experimental intervention. 76 participants. Functional Task Exercise (FTE). A home-based intensive functional training programme, focuses on training of those daily activities which are problematic for the elderly. Grouped as: ADL Intervention 2: Control intervention. 79 participants. Preventive physical therapy (PPT). Regular physical therapy (usually consisting of muscle exercises, balance exercises, and walking exercises) from a physiotherapist. Grouped as: Multifactorial-action
Outcomes	Outcomes included in NMA: Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Personal and instrumental activities of daily living: Katz-15 (0-15), Groningen Activity Restriction Scale (GARS) (overall) Health status: Health Perception (EVGFP / 1-5, SF-36) Outcomes not included in this review because insufficient data were reported: Falls: Falls incidents (Instrument and results not reported) Other outcomes not specified as of interest for this review: Quality of life (instrument and results not reported) Psychological and social functioning (instrument and results not reported) Use of care (instrument and results not reported) Physical Performance Test User-Participation questionnaire Level of physical activity Treatment satisfaction Perceived effect Mobility
Timepoints	Outcomes were measured at 4 months, 8 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: ZonMw, the Netherlands, Organisation for Health Research and Development. Conflicts of interest: Declared no conflicts.
Notes	1. Health EVGFP and perceived health comparison results were directly provided by author, Dr Blom. 2. The control arm is ineligible, thus data from this arm are not extracted. 3. Sensitivity analysis of the change in modified Katz-15 score.

	4. Missing data were accounted for by the statistical techniques used (LMM)

Table 99. Stewart 2005[369-371] study characteristics

Methods	Aims: To compare the effectiveness of occupational therapist-led assessments of older people on dependency and service costs with that of social worker-led assessments. Design: Randomised Controlled Trial
Participants	Characterisation: Frail older people living in the community Country: UK Setting: Cambridgeshire Social Services (social work or occupational therapy service), or Lifespan Healthcare Trust Primary Care occupational therapy team; and participant's residence Enrolment started in 2000 Participants assigned: 321 Inclusion criteria: 1. Over 65 years were considered for the study following referral to either Cambridgeshire Social Services (social work or occupational therapy service) or Lifespan Healthcare Trust Primary Care occupational therapy team for assessment for services to maintain them in the community. 2. Subjects with dementia were eligible providing they had an informal carer able to give consent. Informal carers of randomised subjects were also approached to provide data both on themselves and the index subject if that person was unable to do so. Informal carers were defined here as relatives or friends, who regularly provided unpaid help with daily living activities to the participant, as defined by the participant or sometimes by the referrer. Exclusion criteria: When the older person required an urgent response. Female: 64% Age: Mean (SD) = 81.4 (7.2) Has informal carer: not reported. Living alone: 59% Ethnicity: Not mentioned. Dependence and disabilities: CDI, mean (SD): social work arm 59.9 (17.0); OT arm 60.5 (15.8) Significant comorbidities: Not mentioned. Health status: EQ-5D-3L, mean (SD): social work arm 0.44 (0.27); OT arm 0.45 (0.3) EQ-5D VAS, mean (SD): social work arm 56.9 (21.5); OT arm 55.6 (18.9) Cognitive status: Not mentioned. Mood status:

	Perceived Stress Scale (PSS) (mean (SD)): Social work arm= 24.1 (8.6) OT arm= 25.4 (8.6) Frailty status: pre-frail and frail Based on characteristics and criteria: referred to social services
Interventions	2 groups Intervention 1: Experimental intervention. 160 participants. Occupational Therapy Led Assessment. Grouped as: Multifactorial-action Intervention 2: Control intervention. 161 participants. Social Worker Led Assessment. Grouped as: Multifactorial-action
Outcomes	Tabulated outcomes: Personal activities of daily living: Community Dependence Index (CDI) Health status: EQ-5D-3L (self-completion), EQ-5D EQ-VAS (Health today 0-100) Mortality: Deaths (reported as loss to follow-up) Outcomes not included in this review because insufficient data were reported: Costs: Costs to health services + social services + participant/carer Cost effectiveness: ICER - Community Dependency Index, ICER - QALY (EQ-5D-3L over predicted lifetime), ICER - QALY (EQ-5D-3L) Health status: QALY from EQ-5D-3L Other outcomes not specified as of interest for this review: QALY from EQ-5D-3L and life expectancy Perceived Stress Scale Participating informal carers: -Carers' Assessment of Difficulties Index (CADI) -Subjective Burden Scale (SBS) -EQ-5D -Perceived Stress Scale.
Timepoints	Outcomes were measured at 4 months and 8 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Department of Health. Conflicts of interest: No conflicts of interest.
Notes	Subset analysis of participants with initial scores of 60 or more on the CDI was undertaken to investigate whether subjects who were less frail responded differently to the interventions following assessment.

Table 100. Stuck 1995[372-377] study characteristics

Methods	Aims: To test whether a program of in-home CGA, follow-up, and health promotional strategies such as health education and prevention will have measurable beneficial effects on function, health, survival, wellbeing and institutional health service utilisation. Design: Randomised Controlled Trial

Participants	Characterisation: People living in the community who were 75 years of age or older Country: USA Setting: Community. Santa Monica, California. Enrolment started in 1988 Participants assigned: 414 Inclusion criteria: Targeted: - aged 75 years and over - community-dwelling - Santa Monica population - persons without terminal illness or extreme functional decline Exclusion criteria: 1. Severe cognitive impairment. 2.Language problems 3. Plans to move to a nursing home 4. Plans to move away 5. Self-reported terminal illness 6. Participation in another randomised trial 7. Severe functional impairment Female: 70% Age: Mean (SD) = 81.2 (4) Has informal carer: not reported. Living alone: 64% Ethnicity: 95.0% of the intervention arm was of white race. 94% of the comparison arm was of white race. Dependence and disabilities: Basic Activities of Daily Living (Lawton), mean (SD): intervention arm 17.8 (0.87); comparison arm 17.9 (0.61) Basic Activities of Daily Living (Lawton), % completely independent: intervention arm 91%; comparison arm 92% Instrumental Activities of Daily Living (Lawton), mean (SD): intervention arm 23.4 (2.9); comparison arm 22.9 (3.2) Significant comorbidities: Number of chronic conditions, mean (SD): intervention arm 3.2 (1.7); comparison arm 3.1 (1.8) Health status: Health perception (mean EVGFP score), mean (SD): intervention arm 3.2 (1.2); comparison arm 3.1 (1.2) Cognitive status: Cognitive Status questions from the multilevel assessment instrument (MAI) (Lawton), mean (SD): intervention arm 3.5 (0.8); comparison arm 3.5 (0.8) Mood status: Geriatric Depression Scale, mean (SD): intervention arm 2.8 (2.7); comparison arm 3.1 (2.9)

	Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: all eligible apart from the very ill
Interventions	2 groups Intervention 1: Experimental intervention. 215 participants. Home-based geriatric assessment, follow-up and health promotion program. Grouped as: Education, multifactorial-action and review with medication review Intervention 2: Control intervention. 199 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Personal activities of daily living: Physical Self-Maintenance Scale (0 -100) (Lawton & Brody; used in Rubenstein 1994) Instrumental activities of daily living: Lawton IADL scale (Lawton & Brody 1982) (0 -100) (used in Rubenstein 1994) Care home admission: Care-home placement (survivors/follow-up) Tabulated outcomes: Personal and instrumental activities of daily living: Physical Self Maintenance and IADL scale (0-100) (Lawton and Brody; Kempen) Hospitalisation: Hospitalisation (days or nights / 100 persons / year), Hospitalisation (pts hospitalised once or more) Care home admission: Nursing home (long-term) (days/100 persons/year), Care-home placement (including deaths) Mortality: Deaths (from routine data) Outcomes not included in this review because insufficient data were reported: Health status: Health Perception (EVGFP / 5-1) - RAND Medical Outcome Study (MOS) Depression: Geriatric Depression Scale 5-item version Falls: Falls (incidents) Mortality: Survival time / Time to death Other outcomes not specified as of interest for this review: Nursing home (short-term) (pts) Nursing home (short-term) (days/100 persons/year) Reintegration to normal living index (Wood Dauphinee) (scale not stated) Home care - domestic care only (pts ever used) Home care - personal care only (pts ever used) Cost of intervention program Intellectual (Cognitive) Function - Mental Status Questionnaire (MSQ) Cognitive Status questions from the Mal (20) Satisfaction with Medical Care - Rand Medical Outcome Study (MOS), short form, satisfaction subscale Pain - Pain Scale Quality of Life - Reintegration to Normal Living Ability to Cope - Sense of Coherence, short form

	Number of participants using home care over 3 years
Timepoints	Outcomes were measured at 4 months, 8 months, 12 months, 16 months, 20 months, 24 months, 28 months, 32 months and 36 months
Funding and conflicts of interest	Funding: Non-commercial Sources: W.K Kellogg Foundation, the U.S. Department of Veterans Affairs, the Swiss National Science Foundation, the UCLA-National Institute of Aging Claude Pepper Older Americans Independence Center, and Senior Health and Peer Counseling of Santa Monica. Conflicts of interest: Not provided.
Notes	1. Subjects were interviewed by telephone every four months to determine their health status, number of falls, and use of health and community services. After the three-year study period concludes, researchers would continue monitoring the effects of the intervention with follow-up telephone interviews every six months for at least two additional years to assess long-term effects. However, most results only reported at baseline and 3y. 2. Sensitivity analyses were conducted by repeating the analyses with the base-line characteristics of the participants excluded, as well as outliers, if appropriate. In addition, analyses of functional status were repeated, with imputed (estimated) values used for missing data. The imputed estimates were derived from the known base-line and outcome data, with the use of maximum-likelihood techniques and simulations.

Table 101. Stuck 2000[378-382] study characteristics

Methods	Aims: a randomized controlled trial to test the hypothesis that preventative home visits with annual multidimensional assessments have more favourable effects on functional status and nursing home admissions Design: Randomised Controlled Trial Details: Within strata, randomisation ratio was 1:2 (IG:CG)
Participants	Characterisation: community-dwelling older people Country: Switzerland Setting: Participant's residence Enrolment started in 1993 Participants assigned: 791 Inclusion criteria: on health insurance list of community-residing subjects aged 75 years and older living in 3 ZIP code areas in Bern Exclusion criteria: living in care living out of area non-German speaking terminal illness Female: 73% Age: Mean (SD) = 81.6 (4.6) Has informal carer: 5% Living alone: 55% Ethnicity: Not stated Dependence and disabilities: Activities of daily living Basic ADL: impairment in >=1 of 5 n= 115 (14.5%)

	Basic ADL (mean score) IG 95.7 (12.5) CG 96.6 (10.2) Instrumental ADL (mean score)IG 89.0 (20.9) CG 91.8 (17.0) Advanced ADL (mean score) IG 56.8 (25.0) CG60.6 (22.9) Significant comorbidities: Uncontrolled systolic hypertension (54%) balance/gait disorder (9%) cognitive impairment (7%) 6 or more medications (21%) depressive symptoms (10 %), and impaired basic ADL (15 %) Health status: Tinetti gait balance score Range 0-28 (mean) IG 24.4 (4.7) CG 24.9 (4.1) Health perception (mean EVGFP score) IG 70.4 (18.1) CG 69.3 (18.5) Pain in last month (mean Coop score) IG 66.4 (27.8) CG 66.1 (27.9) Fair or poor self-perceived health (n, %): IG 85 (32); CG 175 (33) Cognitive status: Cognitive status Range 0-30 (mean MMS score (SD)): IG= 27.2 (3.4) CG= 27.3 (3.0) Mood status: Depression Range 15-0 (mean Yesavage score (SD)): IG= 2.9 (2.3) CG= 2.7 (2.2) Mental strain/distress in last month (mean Coop score (SD)): IG= 76.4 (27.2) CG= 77.4 (24.8) Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: stratified low risk and high risk: presented as two trials
Interventions	2 groups Intervention 1: Experimental intervention. 264 participants. In-Home Geriatric Health Visits in Elderly Residents (EIGER). An in-home comprehensive geriatric assessment program. Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 527 participants. Usual care. Grouped as: Available care
Outcomes	Tabulated outcomes: Care home admission: Care-home placement (including deaths) Mortality: Deaths (pre-specified outcome, method of ascertainment unspecified) Outcomes not included in this review because insufficient data were reported: Personal activities of daily living: Lawton ADL (5 items) (Lawton *et al.*, 1982) (used in Stuck 1995)

	Hospitalisation: Hospitalisation (admissions) Costs: Costs to health care services Health status: Dartmouth COOP - Overall condition chart (Nelson *et al.*, 1990), Health Perception (EVGFP / 100-0, SF-36) Depression: Geriatric Depression Scale (GDS 15) (0-100) (Sheikh & Yesavage, 1986) Other outcomes not specified as of interest for this review: Lawton IADL (6 items) (Lawton *et al.*, 1982) (used in Stuck 1995) Cognitive function (MMSE) Gait and balance performance Medication use Self-reported chronic conditions Healthcare utilisation (physician visits, nursing home care) Intervention costs (reported separately from total costs) Number of days per hospital admission Dartmouth COOP (whole set of charts) Blood pressure Weight Height Functional status Tinetti falls risk index Advanced ADL (Reuben *et al.*, 1990) Social support (Sherbourne & Hays 1990)
Timepoints	Outcomes were measured at 1 year, 2 years and 3 years
Funding and conflicts of interest	Funding: Non-commercial Sources: Swiss National Science Foundation; Cantonal Department of Health and Social Affairs, Bern; WK Kellogg Foundation, Battle Creek, Mich; Novartis Foundation for Gerontological Research, Basel; Visana Health Insurance Co, Bern Conflicts of interest: Not mentioned.
Notes	1. Requested author (Prof Stuck) for results of costs, 15-item Geriatric Depression Scale score, General health score, number of hospital admission per 100 persons per year, and number of days per hospital admission, because the available data are from sub-group analyses. Prof. Stuck replied that the requested data are not available now. 2. Imputed data only used in cost analysis: Third year ambulatory care cost data were imputed from data for the first half of that year. Since hospital cost insurance records reflect only part of total hospital cost, public sector subsidies had to be imputed. 3. Sensitivity analyses were conducted by repeating the analyses without adjusting for baseline characteristics of the participants and by using nonparametric procedures.

Table 102. Stuck 2015[177-181, 383] study characteristics

Methods	Aims: Evaluate the effects of an innovative approach to health risk assessment (HRA) and counselling in older individuals for health behaviours, preventive care, and long-term survival. Design: Randomised Controlled Trial Details: The randomisation ratio (intervention to control arm) was 1:1 in the first project phase (November 16, 2000, to March 27, 2001), and 1:2

	in the second project phase (March 28, 2001, to January 8, 2002), resulting in a ratio overall of 1:1.6.
Participants	Characterisation: community-dwelling individuals aged 65 years or older Country: Switzerland Setting: 19 GP practice circles in two mixed rural and urban primary care catchment areas in the Canton of Solothurn in Switzerland Enrolment started in 2000 Participants assigned: 2284 Inclusion criteria: All patients aged 65 years or older whom they [primary care practitioners] had seen at least once over the past 5 years Exclusion criteria: -Patients with disability (defined as needing human assistance for performing basic activities of daily living) -cognitive impairment (equivalent to a Mini Mental State Examination score of 24 or less) -terminal disease -inability to speak German Female: 57% Age: Mean (SD) = 74.5 (6) Has informal carer: not reported. Living alone: 29% Ethnicity: Not reported Dependence and disabilities: Intervention arm (n=748) (n,%): Difficulty/need for human assistance in>=2 IADL items: 135 (18.0%) Changed kind of mobility activity (preclinical mobility disability): 366 (48.9%) Decreased frequency of mobility activity (preclinical mobility disability): 262 (35.0%) Significant comorbidities: n,%, IG n=874; CG n=1,410: Self-reported diabetes: IG 91 (10.4%); CG 169 (12.0%) Self-reported coronary heart disease: IG 189 (21.6%); CG 325 (23.0%) Health status: Self-perceived health (n,%) (IG n=874; CG n=1,410): Excellent: IG 22 (2.5%); CG 33 (2.3%) Very good: IG 133 (15.2%); CG 189 (13.4%) Good: IG 545 (62.4%); CG 839 (59.5%) Fair: IG 168 (19.2%); CG 338 (24.0%) Poor: IG 6 (0.7%); CG 11 (0.8%) Cognitive status: Intervention arm (n=748) (n,%): memory problems 46 (6.1) Mood status: Intervention arm (n=748) (n,%): depressive mood: 105 (14.0%)

	Frailty status: robust and pre-frail Based on characteristics and criteria: disability excluded
Interventions	2 groups Intervention 1: Experimental intervention. 874 participants. Health Risk Assessment for Older Persons (HRA-O). A self-administered questionnaire leading to individualised computer-generated feedback reports, combined with nurse and GP counselling over a 2-y period Grouped as: Education, multifactorial-action and review with medication review and self-management strategies Intervention 2: Control intervention. 1410 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Care home admission: Care-home placement (survivors/follow-up) Tabulated outcomes: Mortality: Survival time / Time to death, Deaths (reported as loss to follow-up) Outcomes not included in this review because insufficient data were reported: Hospitalisation: Hospitalisation (pts hospitalised once or more/ last 12 months) Costs: Costs of intervention Health status: Health status (5 items) (Human Population Laboratory, 1965) Depression: Mental Health Index-5 (MHI-5) Falls: Falls (incidents / last 12 months) Mortality: Survival time / Time to death Other outcomes not specified as of interest for this review: ADL (dichotomous) IADL (dichotomous) Health Risk Appraisal Older (HRA–O) people instrument: -Health behaviour (accident prevention, alcohol use, nutrition intake, physical activity, tobacco use); and -Preventative care use (blood pressure, breast cancer screening, cholesterol level, colon cancer screening, dental care, diabetes screening, hearing examination, influenza immunisation, pneumococcal immunisation, vision examination). Short (6-item) version of the Lubben Social Network Scale Activity limitation due to fear of falling Hearing Handicap Inventory for the Elderly (and hearing exam history) Visual Functioning Questionnaire (and vision exam history) Multiple medication use (>3 prescribed medications) 24-item Geriatric Pain Measure Medical history of diagnosed chronic conditions

	Geriatric Oral Health Assessment Index (GOHAI) Perceived Efficacy in Patient–Physician Interactions Questionnaire Use of health services over the previous 12 months (primary care or outpatient appointments) Availability of a carer in an emergency Qualitative study: to explore the perspectives of both professionals and older people on modifiable health behaviours and risks in later life.
Timepoints	Outcomes were measured at 1 year, 2 years and 8 years
Funding and conflicts of interest	Funding: Non-commercial Sources: European Union, Federal Education and Science Ministry (Berne, Switzerland), Swiss National Science Foundation, Swiss Foundation for Health Promotion, Velux Foundation. Conflicts of interest: The authors have declared that no competing interests exist.
Notes	1. PRO-AGE Solothurn: linked to Harari 2008[165] (PRO-AGE London) - same intervention but different location. 2. 3 GP practices randomised, then only the 2 practices assigned to receive training would recruit pts for participant-level randomisation. Therefore to use the IG and CG from participant-level randomisation (total n=2284). 3. Multiple imputation by chained equations assuming a missing-at-random situation. Analyses were run on 25 imputation datasets, and the results were combined with Rubin's rule.

Table 103. Suijker 2016[384-390] study characteristics

Methods	Aims: To evaluate the effects of nurse-led multifactorial care to prevent disability in community-living older people. Design: Cluster RCT Clustering accounted for.
Participants	Characterisation: community-dwelling older persons who are at increased risk for functional decline Country: Netherlands Setting: General Practices in the northwestern region of the Netherlands (including both rural and urban communities). Participants selected to participate by the GP. Setting is in the community , in the participants home. Enrolment started in 2010 Clusters assigned: 24 Participants assigned: 2283 Inclusion criteria: Community-dwelling Aged 70 years and older Registered with one of the participating general practices An increased risk for functional decline, defined as a score of two or more on the ISAR-PC screening instrument Exclusion criteria: 1. Excluded those who had a life expectancy of less than three months. 2. Suffered from dementia. 3.Did not understand Dutch. 4. Planned to move or spend a long

	time abroad. 5. Lived in a nursing home. Female: 64% Age: Age, in years, median (IQR) : Intervention (N = 1209) - 82.6 (76.8–86.8) Control (N = 1074)- 82.9 (77.3–87.3) Has informal carer: not reported. Living alone: not reported. Ethnicity: Caucasian Intervention arm: n = 1141 (95.4%) Control: n = 1022 (96.5%) Dependence and disabilities: Katz ADL Scale, range 0-6 (Katz et al, 1963), median (IQR): IG 1 (0-1); CG 1 (0-1) Katz-15 (0-15), median (IQR): IG 2 (1-5); CG 3 (1-5) Lawton IADL scale (0-8) (Lawton & Brody, 1969), median (IQR): IG 1 (0-3); CG 2 (0-3) Significant comorbidities: Multimorbidity (>2), n (%): IG 997 (83.2%); CG 856 (80.6%) Health status: EQ-5D, mean (SD): IG 0.75 (0.21); CG 0.72 (0.22) Emotional wellbeing (Rand-36) (range 4–100), mean (SD): IG: 71.4 (17.4); CG 70.3 (17.6) Self-perceived quality of Life (scale range 0–10), mean (SD): IG 7.2 (1.3); CG 7.2 (1.2) Cognitive status: Not mentioned Mood status: Not mentioned Frailty status: frail Based on characteristics and criteria: ISAR
Interventions	2 groups Intervention 1: Experimental intervention. 1209 participants. Functional decline In Transition (FIT). A comprehensive geriatric assessment, an individually tailored care and treatment plan based on multifactorial interventions and nurse-led care coordination. Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 1074 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Care home admission: Care-home placement (survivors/follow-up)

	Mortality: Deaths (from routine data) Tabulated outcomes: Personal and instrumental activities of daily living: Katz-15 (0-15) Hospitalisation: Hospitalisation (admissions/ last 6 months) Health status: QALY from EQ-5D-3L, EQ-5D-3L (self-completion) Falls: Falls (incidents / last 6 months) Outcomes not included in this review because insufficient data were reported: Personal activities of daily living: Katz ADL Scale (Katz *et al.*, 1963) (Range 0-6, 6 questions) Instrumental activities of daily living: Lawton IADL scale (0-8) (Lawton & Brody 1969) Hospitalisation: Hospitalisation (pts hospitalised once or more/ last 12 months) Care home admission: Nursing home (long-term) (days) Costs: Costs to health care services Cost effectiveness: ICER - QALY (EQ-5D-3L), ICER - Modified Katz ADL Index Falls: Falls (pts fell once or more) Other outcomes not specified as of interest for this review: Visits to the emergency department of the hospital Self-perceived quality of life assessed using a Cantril's Ladder Measured only in the intervention arm: Psychological and social functioning (subscale Rand 36) Evaluation of burden of caregivers (CarerQol) CGA Physical examination : BMI (kg/m2) , Blood pressure (mmHg) , Pulse (beats/min), Grip strength (kg), Walking speed Mini- Mental State Examination (MMSE) Jong Gierveld-questionnaire Confusement Assessment Method(CAM) Evaluation of burden of caregivers (CarerQol) ISAR-PC: Scorecard: Identification of Seniors At Risk - Primary Care Short Nutritional Assessment Questionnaire (SNAQ) Fear of falling (FES-I)
Timepoints	Outcomes were measured at 6 months, 12 months, 18 months and 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: This study was funded by ZonMW 'The Netherlands Organisation for Health, Research and Development' (ZonMw no. 313020201) and was part of the Dutch National Care for the Elderly Programme. Conflicts of interest: The authors declared that they have no competing interests.
Notes	

Table 104. Szanton 2011[391-393] study characteristics

Methods	Aims: To determine effect size and acceptability of a multi-component behavior and home repair intervention with low-income, disabled older adults.

	Design: Randomised Controlled Trial Details: Pilot RCT
Participants	Characterisation: low-income older adults with difficulties in at least 1 ADL or 2 IADLs awaiting home-based services in Baltimore City Country: USA Setting: Community: participants' homes Enrolment started in 2010 Participants assigned: 40 Inclusion criteria: - at least 65 years old; - demonstrate cognitive function with a score of 24 or higher on the Mini-Mental State exam; - report difficulty with at least one Activity of Daily Living (ADL), or at least two Instrumental Activities of Daily Living; - be considered low income (household income equalling or less than 199% of Federal Poverty Level); - be able to stand with or without assistance; - For this study, define disability defined as having difficulties performing at least 1 ADL or 2 IADLs. Exclusion criteria: - had been hospitalized more than 3 times in the previous year; - were currently receiving in-home rehabilitation (nursing, physical therapy or occupational therapy); - had a terminal diagnosis with less than one year expected survival as determined by their physician or receiving active cancer treatment; - had plans to move in less than one year, or not competent to provide informed consent. Female: 95% Age: Mean (SD) = 78.2 (7.7) Has informal carer: not reported. Living alone: not reported. Ethnicity: 79% of the overall group was African-American In Experimental arm (n=24), 77% were African American In control arm (n=16), 81% were African American Dependence and disabilities: Katz ADL Scale, mean(SD): IG 2.1 (0.2); CG 2.6 (0.4) Lawton IADL (0-6) (Lawton & Brody 1969), mean (SD): IG 2.3 (1.4); CG 2.0 (1.1) 44% (18 / 41) reported 3 or more ADLs for which they reported difficulty at baseline. Significant comorbidities: Not mentioned. Health status: EQ-5D VAS, mean (SD): 57.9 (18.7); CG 63.1 (19.1) Cognitive status: Mini Mental Score: IG= 26.0 (1.3) CG= 27.3 (0.7)

	Mood status: Not mentioned. Frailty status: pre-frail and frail Based on characteristics and criteria: some disability
Interventions	2 groups Intervention 1: Experimental intervention. 24 participants. Community Aging in Place, Advancing Better Living for Elders (CAPABLE) intervention. A client centered home-based multi-component intervention including occupational therapist intervention, a nurse intervention and safety and access handyman services. Grouped as: ADL, aids, education, exercise, multifactorial-action and review with medication review and self-management strategies Intervention 2: Control intervention. 16 participants. Attention control intervention. Social and attention engagement involving reminiscing and sedentary activities chosen by the participants. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Personal activities of daily living: Katz ADL Scale (Katz *et al.*, 1963) (Range 0-5, 5 questions) Instrumental activities of daily living: Lawton IADL (0-6) (Lawton & Brody 1969) 6 questions Care home admission: Care-home placement (survivors/follow-up) Tabulated outcomes: Health status: EQ-5D EQ-VAS (Health today 0-100) Mortality: Deaths (reported as loss to follow-up) Other outcomes not specified as of interest for this review: Falls Efficacy EQ-5D
Timepoint	Outcomes were measured at 24 weeks
Funding and conflicts of interest	Funding: Non-commercial Sources: National Institutes of Health; John A. Hartford Foundation; National Institute on Aging; The Atlantic Philanthropies, The Starr Foundation Conflicts of interest: None to declare
Notes	

Table 105. Szanton 2019[392, 394-404] study characteristics

Methods	Aims: To determine whether a 10-session, home-based, multidisciplinary program reduces disability. Design: Randomised Controlled Trial
Participants	Characterisation: low-income community-dwelling adults with a disability Country: USA

Setting: Community: participant's residence
Enrolment started in 2012
Participants assigned: 300

Inclusion criteria:
people who were functionally limited but medically
stable and were cognitively intact enough to participate actively in the intervention. Older
adults are eligible for the study if they are: a)ages 65 years or older who are cognitively
27
intact based on the Short Portable Mental Status Questionnaire;
b) reported difficulty with
ADL18
;19
at least 1
or at least 2 IADLs
c) report income of 200% or less of the Federal
Poverty Level ($22,980 or less for a household of one); d)able to stand with or without
assistance.

Exclusion criteria:
Participants are excluded from the study sample if they have been hospitalized
more than 3 times in the previous 12 months, if they are receiving in-home physical therapy,
nursing or occupational therapy if they have a terminal diagnosis (<1 year expected survival)
or are receiving active cancer treatment, if they plan to move houses within 1 year or if they
live in an apartment.

Female: 87%
Age: Mean (SD) = 75.8 (7.6)
Has informal carer: not reported.
Living alone: 50%
Ethnicity: Intervention:
White 26 (17.1%)
Black 126 (82.9%)
Asian 0

Control
White 14 (9.5%)
Black 133 (89.9%)
Asian 1 (0.7%)

Dependence and disabilities:
ADL score Mean (SD) control arm 4.0 (3.0) intervention arm 4.0 (3.1)
IADL score Mean (SD) control arm 5.6 (3.9) intervention arm 6.2 (4.2)

Significant comorbidities:
Intervention:
Mean (SD) comorbidities 3.3 (1.4)

	Health status: No. of medical conditions mean (SD) control arm 3.3 (1.4) intervention arm 3.3 (1.4) Cognitive status: Not stated Mood status: PHQ-9 score mean (SD) control arm 6.6 (5.2) intervention arm 7.0 (5.0) Frailty status: pre-frail and frail Based on characteristics and criteria: some disability
Interventions	2 groups Intervention 1: Experimental intervention. 152 participants. Community Aging in Place - Advancing Better Living for Elders (CAPABLE). A biobehavioral-environmental intervention, which consists of an assessment-driven, individually tailored package of interventions by an interdisciplinary team of a nurse, occupational therapist, and handyman. Grouped as: ADL, aids, education, exercise, multifactorial-action and review with medication review and self-management strategies Intervention 2: Control intervention. 148 participants. Attention control intervention. Social and attention engagement involving reminiscing and sedentary activities chosen by participants Grouped as: Available care
Outcomes	Outcomes included in NMA: Personal activities of daily living: Katz ADL Scale (8 items, range 0-16) (Modified by Branch *et al.*,1984) Instrumental activities of daily living: Lawton IADL (8 items, range 0-16) Health status: EQ-5D EQ-VAS (Health today 0-100) Depression: Patient Health Questionnaire (PHQ-9) Mortality: Deaths (reported as loss to follow-up) Outcomes not included in this review because insufficient data were reported: Costs: Costs to health care services Health status: EQ-5D-3L (self-completion) Other outcomes not specified as of interest for this review: Perceived Program Benefits survey (evaluated participant via 10 questions) Short Physical Performance Battery (SPPB) Home Environmental safety Patient Activation Scale (Patient activation in relation to medical visits) The Brief Pain Inventory (short form) Control-Oriented Strategy Use Fried frailty phenotype Lifespace measures The Family Support Satisfaction Scale Falls efficacy

Timepoints	Outcomes were measured at 5 months and 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: National Institutes of Health, USA Conflicts of interest: Dr Szanton and Dr Gitlin reported being inventors of the CAPABLE training program, for which the Johns Hopkins University is entitled to fees. This arrangement has been reviewed and approved by the Johns Hopkins University in accordance with its conflict of interest policies.
Notes	1. PHQ-9, EQ5D3L, EQ VAS results provided by authors directly. 2. The means and SEs for 12-month data were weighted to adjust for missing data.

Table 106. Takahashi 2012[405-412] study characteristics

Methods	Aims: To determine the effectiveness of home telemonitoring compared with usual care in reducing the combined outcomes of hospitalization and emergency department visits in an at-risk population 60 years of age or older. Design: Randomised Controlled Trial
Participants	Characterisation: Older adults with multiple health issues Country: USA Setting: Participant's residence / four sites within Mayo Clinic's program of Employee and Community Health (ECH) Enrolment started in 2009 Participants assigned: 205 Inclusion criteria: -older than 60 years of age -in the Employee and Community Health (ECH) primary care panel, and -had a high (>15) score on the Elder Risk Assessment Index (ERA). Exclusion criteria: -lived in a nursing home -had a clinical diagnosis of dementia, or -had a score of 29 or lower on the Kokmen Short Test of Mental Status -Subjects who felt they could not use the home telemonitoring system (i.e., visual impairment, inability to use the device) Female: 54% Age: Mean (SD) = 80.2 (8.3) Has informal carer: not reported. Living alone: 46% Ethnicity: Race, white (among 194 participants): 190 (97.9%) Dependence and disabilities: Barthel ADL (mean, SD): 94.4 ± 9.2 Significant comorbidities: Myocardial infarction n=30 (14.6%) CHF n=75 (36.6%) COPD n=86 (42.0%) Diabetes n=78 (38.1%) Renal disease n=42 (20.55)

	Health status: Charlson index (mean, SD): 2.9 ± 2.3 SF 12 physical (mean, SD): 35.1 ± 11.0 SF 12 mental (mean, SD): 55.9 ± 8.0 Cognitive status: Kokmen Mental status score (mean, SD): 34.5 ± 2.3 Mood status: PHQ 9 score for depression (mean, SD): 3.7 ± 3.8 Frailty status: frail Based on characteristics and criteria: Described as high risk of admission
Interventions	2 groups Intervention 1: Experimental intervention. 102 participants. Daily home telemonitoring of older adults with high Elder Risk Assessment scores (TELE-ERA). Grouped as: Monitoring Intervention 2: Control intervention. 103 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Personal activities of daily living: Barthel index (0-100 scale) (Mahoney & Barthel, 1965) Hospitalisation: Hospitalisation (pts hospitalised once or more) Health status: Health Perception (EVGFP / 1-5, SF-36) Depression: Patient Health Questionnaire (PHQ-9) Mortality: Deaths (pre-specified outcome, method of ascertainment unspecified) Tabulated outcomes: Hospitalisation: Hospitalisation (days or nights per person), Hospitalisation (admissions) Health status: SF-12: Physical component summary, SF-12: mental component summary Outcomes not included in this review because insufficient data were reported: Costs: Costs to health care services, Costs of intervention Other outcomes not specified as of interest for this review: Hospital emergency department (visits) Hospital emergency department (pts visited once or more) Compliance with the device Attitudes about telemonitoring Hospice referral (different from hospital and nursing care admissions) Qualitative evaluation with 20 IG participants Kokmen Short Test of Mental Status (cognition) (3m, 9m) Fried phenotype for frailty

	Likert scale scores for attitudes and behavior Functional measures include grip strength with tonometry, timed up-and-go test, gait speed. Caregiver Quality of Life Scale (caregiver burden) Healthcare provider survey (about their perception of the home monitoring intervention)
Timepoints	Outcomes were measured at 3 months, 6 months, 9 months and 12 months
Funding and conflicts of interest	Funding: Mixed Sources: Mayo Foundation Institutional Funds for clinical support. CareInnovations (GE/Intel). National Center for Research Resources. NIH Roadmap for MedicalResearch Conflicts of interest: The authors of the study received funding of this study through Intel and GE Healthcare through donations of the Intel Health Guide and support of the device. Other than receipt of this in-kind gift of use of the telemonitors, the authors declare no further funding support and no further competing interests
Notes	

Table 107. Teut 2013[413, 414] study characteristics

Methods	Aims: To evaluate the feasibility and to obtain preliminary data on effectiveness of an Integrative Medicine (IM) program compared to usual medical care. Design: Cluster RCT Clustering not accounted for.
Participants	Characterisation: Older adults living in shared apartment communities including caregiving Country: Germany Setting: Apartment-sharing communities with integrated nursing care Enrolment started in 2009 Clusters assigned: 8 Participants assigned: 58 Inclusion criteria: 1. living in shared flat/residential community. 2. informed consent of patient or authorized representative. Exclusion criteria: 1. Participation in another study within the last 6 months. 2. Acute or chronic disease condition that does not allow participation. actual use of complementary therapies 3. In a state of health which would absolutely not permit participation (e.g., the patient was dying). Female: 67% Age: Mean (SD) = 79.4 (11.3) Has informal carer: 83% Living alone: 0% Ethnicity: Not specified. Dependence and disabilities: Maximum level of care, n (%): IG n= 7 (24.1), CG n= 3 (10.3)

	Significant comorbidities: Number with Apoplectic insult history (n,%) in experimental arm: 2 (6.8) and control arm: 6 (20.6) Health status: number of ICD diagnoses (mean, SD) in experimental arm 9.9 (±2.9) and in control arm 9.6 (±2.9) Cognitive status: Cognitive impairment, n (%): IG n= 16 (55.1), CG n= 14 (48.2) Mood status: Not specified. Frailty status: frail Based on characteristics and criteria: home nursing, probably like extra care
Interventions	2 groups Intervention 1: Experimental intervention. 4 clusters, 29 participants. Integrative Medicine (IM) program. A mix of different medical styles and practices also known as Conventional alternative medicine (CAM therapies): lifestyle modification around exercise and diet, external treatment by naturopathy, homeopathy and modification of conventional drug therapy. Grouped as: Homecare, alternative-medicine and exercise Intervention 2: Control intervention. 4 clusters, 29 participants. Usual Care. Grouped as: Homecare
Outcomes	Outcomes included in NMA: Personal activities of daily living: Barthel index (0-100 scale) (Mahoney & Barthel, 1965) Depression: Nurses Observation Scale for Geriatric Patients (NOSGER) - Depressed mood Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Hospitalisation: Hospitalisation (admissions) Outcomes not included in this review because insufficient data were reported: Instrumental activities of daily living: Nurses Observation Scale for Geriatric Patients (NOSGER) – Instrumental activities of daily living dimension Other outcomes not specified as of interest for this review: Nurses Observation Scale for Geriatric Patients (NOSGER) – Activities of daily living dimension

	Nurses Observation Scale for Geriatric Patients (NOSGER) – sub-scales: Impaired memory, Impaired social behaviour, Disturbing behaviour Assessment of motor and process skills (AMPS) Adverse effects Profile of Wellbeing Mini-mental State Examination Risk of falls (Tinetti Test) Medication use and Potentially Inappropriate Medication Use Qualidem (Quality of life) Sociodemographic data and disease history (assessed at baseline by the study physicians) Adverse events and serious adverse events monitored throughout the study by the caregivers Absolute falls requested from care givers but not reported Notes: no baseline results reported
Timepoints	Outcomes were measured at 3 months, 6 months and 12 months
Funding and conflicts of interest	Funding: Mixed Sources: Homöopathie-Stiftung, omoeon e.V., and Karl and Veronica Carstens-Stiftung with additional support from Reck-Technik GmbH by providing the trial with Motomed ergometer devices. Conflicts of interest: Reported no conflicts.
Notes	No mentioned of cluster-adjusted analysis, but acknowledged the baseline differences of age and gender likely attribute to cluster randomisation thus results adjusted for these differences.

Table 108. Thiel 2019[415-417] study characteristics

Methods	Aims: The aim of this randomized, controlled pilot study is to test the feasibility of a multimodal, resource-oriented, intervention program on frailty in older people. Design: Randomised Controlled Trial
Participants	Characterisation: Older people with frailty Country: Germany Setting: Participants' homes Enrolment started in 2017 Participants assigned: Inclusion criteria: -over 65 years of age -have frailty (FI ≥ 0.25 points) -live in own household Exclusion criteria: 1. lack of vision, 2. Deafness / deafness, 3. insufficient German language skills, 4. Inability to understand / implement the study information and the informed written consent 5. Infections / acute illness, 6. scheduling reasons (e.g. planned absence such as vacation, rehabilitation / hospital stay, etc.) a duration> 14 days in a row within the intervention period room),

	7. Life expectancy <12 months, 8. Place of residence outside the urban area of Bochum, 9. existing or planned participation in another, regular multimodal treatment with Focus on physical training (more than once a week). This does not apply to any individual therapeutic interventions, such as for example physical, occupational or nutritional therapy, 10. Contraindications for performing physical training: a. severe cardiovascular diseases, including in particular unstable angina; decompensated heart failure; unstable or excessively high blood pressure; Heart attack within the last 6 months, b. severe muscular lethal diseases, including especially fractures or other orthopedic surgery within the last 6 months; severe joint diseases, c. severe neurological diseases that do not allow participation in the intervention program allow (e.g. severe Parkinson's disease [Hoehn-Yahr> 3]; Stroke with severe hemiparesis [National Institutes of Health Stroke Scale> 6]). Female: not reported. Age: not reported Has informal carer: not reported. Living alone: not reported. Ethnicity: not reported. Dependence and disabilities: not reported Significant comorbidities: not reported Health status: not reported Cognitive status: not reported Mood status: not reported Frailty status: frail Validated measure: FI>.25
Interventions	2 groups Intervention 1: Experimental intervention. High-Intensity Functional Exercise program (HIFE). A multimodal, resource-oriented, inter-professional intervention including the HIFE program- a standardized, physical exercise program Grouped as: Exercise, multifactorial-action and review with medication review Intervention 2: Control intervention. Usual care. Grouped as: Available care

Outcomes	Outcomes not included in this review because insufficient data were reported: Hospitalisation: Hospitalisation (admissions/ last 3 months) Health status: SF-12: Physical component summary, SF-12: mental component summary Depression: Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986) Falls: Falls (incidents / only pts had fell / last 3 months) Other outcomes not specified as of interest for this review: Late Life Function and Disability Instrument (LLFDI) Sayers *et al.*, 2004 Frailty index Physical frailty phenotype (Fried criteria) Minimal Mental State Examination Morton Mobility Index Functional Ambulation Categories Timed "Up And Go" Test Habitual walking speed over 4m Physical Performance Battery Falls efficacy Scale Mini Nutritional Assessment, short version Accelerometry over 7 days (Actigraph GT3M): activity-induced energy expenditure and extent of moderate to intense physical activity
Timepoints	Outcomes were measured at 3 months and 6 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Hochschule für Gesundheit, Bochum Conflicts of interest: No conflicts of interest
Notes	Information from protocol only.

Table 109. Thomas 2007[418] study characteristics

Methods	Aims: To examine whether people 75 or over are enabled to stay at home longer through annual assessments and referrals to health/social services compared to through assessments only or without assessments. Design: Randomised Controlled Trial Details: Three-arm RCT.
Participants	Characterisation: 75 years or over living in own homes, receiving informal care from family/peer Country: Canada Setting: Community: participants' residences Enrolment started in 2001 Participants assigned: 520 Inclusion criteria: 1. Aged 75 years or older who were not receiving formal (paid) home care services, but were receiving informal care from a family member or peer. 2. The care recipient was living either in her/his own accommodation, or with friends or relatives (not in a nursing home, cooperative living arrangement, or other long-term care facility) 3. The care recipient could identify a primary caregiver 4. Both the care recipient and the caregiver were mentally competent to give informed consent: both the elderly person and the caregiver needed to score above 20 on the Mini-Mental State Examination (MMSE).

	5. Both were competent in English. Exclusion criteria: 1. Refused to participate. 2. Not meet inclusion criteria. Female: 68% Age: Mean (SD) = 80.6 (4.4) Has informal carer: 100% Living alone: 46% Ethnicity: Not specified. Dependence and disabilities: Mean total number of Client Assessment Protocols triggered by RAI-HC assessment of the 2 IGs: 2.7 Significant comorbidities: No relevant info. Health status: Self-rated health: general self-perceived health of the elder measured by a question adopted from the Household Survey of Canada's National Health Population Survey (Moore *et al.*, 1997), which asked subjects to rate their own state of health on a 5-point ordinal scale (1-excellent health and 5-poor health), mean of all arms= 2.6 Cognitive status: Mean MMSE score of all arms= 27.7 Mood status: No relevant info. Frailty status: pre-frail and frail Based on characteristics and criteria: not receiving homecare, receiving informal care
Interventions	3 groups Intervention 1: Experimental intervention. 170 participants. Functional assessment- results given and offered referrals. Functional assessment with results given to participant who was offered referrals to health/ social services. Grouped as: Multifactorial-action and review with medication review Intervention 2: Experimental intervention. 175 participants. Functional assessment results shared and advice given. Functional assessment with results given to participant who was invited to take appropriate action. Grouped as: Multifactorial-action and review with medication review Intervention 3: Control intervention. 175 participants.

	Control Arm. No assessment results given and no advice from the functional assessment that was conducted. Grouped as: Available care
Outcomes	Outcomes included in NMA: Care home admission: Care-home placement (survivors/follow-up) Health status: Self-rated health (used in Thomas 2007) Tabulated outcomes: Homecare services usage: Home care (pts) Outcomes not included in this review because insufficient data were reported: Mortality: Deaths (pre-specified outcome, method of ascertainment unspecified) Other outcomes not specified as of interest for this review: General Perceived Self-Efficacy Scale (GPSES)(Jerusalem & Schwarzer, 1992) Caregiver Burden Inventory (CBI) (Zarit *et al.*, 1980) Cognitive functioning (MMSE) Number of triggered Client Assessment Protocols (CAPS) generation (as indicated by RAI-HC scores)
Timepoints	Outcomes were measured at 1 year, 2 years, 3 years and 4 years
Funding and conflicts of interest	Funding: Unclear Sources: Not mentioned. Conflicts of interest: Not mentioned, but appears none according to role description of the team.
Notes	The report states “Trial registration: Canadian Institutes of Health Research # 10576”, which cannot be found in Google, or the website of Canadian Institutes of Health Research.

Table 110. Tomita 2007[419] study characteristics

Methods	Aims: To test the feasibility and effectiveness of currently available smart home technology compared 46 treatment and 67 control home-based frail elders who lived alone. Design: Randomised Controlled Trial
Participants	Characterisation: Home-based frail elders who lived alone Country: USA Setting: Participant's residence Enrolment started before 2006 Participants assigned: 124 Inclusion criteria: 1. a minimum 60 years of age; 2. living alone; 3. having difficulty in activities of daily living (ADL) or instrumental ADL (IADL) due to chronic health conditions without cognitive impairment; 4. having an interest in using a computer. Exclusion criteria: Not mentioned.

	Female: 88% Age: Mean (SD) = 74 (5) Has informal carer: not reported. Living alone: 100% Ethnicity: Black n=18 (23.1%) White n=60 (76.9%) Dependence and disabilities: FIM Motor (mean (SD)): IG= 78.21 (12.02) CG= 79.95 (5.03) FIM Cognition (mean (SD)): IG= 34.03 (1.82) CG= 33.73 (1.78) SIP Movement (mean (SD)): IG= 104.85 (84.87) CG= 80.89 (84.87) CHART Mobility (mean (SD)): IG= 85.9 (18.8) CG= 85.6 (17.0) Significant comorbidities: Number of illnesses 6.6 (3.2) 6.8 (2.9) Arthritis: IG n= 28 (82.4%) CG n= 37 (84.1%) Hypertension: IG n= 23 (67.7%) CG n= 27 (61.4%) Cataracts: IG n= 20 (58.5%) CG n= 26 (59.1%) Cardiovascular disease: IG n= 14 (41.2%) CG n= 20 (45.5%) Foot problem: IG n= 10 (29.4%) CG n= 6 (13.6%) Circulation problem: IG n= 9 (26.5%) CG n= 17 (38.6%) Hearing impairment: IG n= 9 (26.5%) CG n= 9 (20.5%) Hip/knee fracture: IG n= 6 (17.7%) CG n= 9 (20.5%) Osteoporosis: IG n= 5 (14.7%) CG n= 8 (18.2%) High cholesterol: IG n= 5 (14.7%) CG n= 5 (11.4%) Cancer: IG n= 4 (11.8%) CG n= 13 (29.6%) Effects of stroke: IG n= 4 (11.8%) CG n= 7 (15.9%) Diabetes: IG n= 4 (11.8%) CG n= 14 (31.8%) Asthma: IG n= 2 (5.9%) CG n= 5 (11.4%) Urinary tract disease: IG n= 1 (2.9%) CG n= 9 (20.5%) Health status: Not reported. Cognitive status: MMSE (mean (SD)): IG= 29.74 (0.75), CG= 29.43 (0.97) Mood status: Depression: IG n= 5 (14.7%) CG n= 6 (13.6%) Frailty status: frail Based on characteristics and criteria: Described using "frailty" but actually meaning with limitations in ADL (disability)
Interventions	2 groups Intervention 1: Experimental intervention. 53 participants. Smart Home Technology. Grouped as: Aids Intervention 2: Control intervention. 71 participants.

	Usual care. Control condition, not described, presumably usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (pts) Instrumental activities of daily living: Older Americans Research and Services Center Instrument (OARS) - IADL scale Care home admission: Care-home placement (survivors/follow-up) Tabulated outcomes: Mortality: Deaths (reported as loss to follow-up) Outcomes not included in this review because insufficient data were reported: Personal activities of daily living: Functional Independence Measure (FIM) Homecare services usage: Home care (hours) Hospitalisation: Hospitalisation (days or nights) Other outcomes not specified as of interest for this review: Mobility subsection of Dysfunction section of Sickness Impact Profile (SIP) Craig Handicap Assessment and Reporting Technique (CHART) Mobility for handicap measure Mini-Mental State Examination (MMSE) Number and type of illnesses Number of medications Use of health institutions and home treatment Aide hours Computer use (self-report) Computer use (recorded)
Timepoints	Outcomes were measured at 12 months and 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: National Institute of Disability and Rehabilitation Research. Conflicts of interest: No statement provided
Notes	1. Outcomes were recorded monthly and it is unclear what timepoints were intended to be analysed. 2. Baseline and follow-up analyses only included those remained at the end of trial.

Table 111. Tulloch 1979[420] study characteristics

Methods	Aims: To evaluate geriatric screening, management and surveillance in over 70s in Oxford Community Health Project Design: Randomised Controlled Trial
Participants	Characterisation: patients aged 70 years or more Country: UK Setting: Community: GP practice Enrolment started in 1972 Participants assigned: 339 Inclusion criteria:

	Aged 70 or over from a practice register health in the Oxford Community Health Project, a computerised information service designed to aid the development of primary medical care. Exclusion criteria: In Part 3 accommodation. After randomisation, additional exclusions from this residual list were made for those patients who had died or moved away but whose names had not yet been removed from the practice list. Female: 46% Age: 70-74: n= 131 75-79: n= 79 80+ : n= 85 Excluded after randomisation n= 44 Has informal carer: not reported. Living alone: not reported. Ethnicity: Not mentioned. Dependence and disabilities: Not mentioned. Significant comorbidities: Not mentioned. Health status: Not mentioned. Cognitive status: Not mentioned. Mood status: not reported Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: unselected
Interventions	2 groups Intervention 1: Experimental intervention. 170 participants. Geriatric screening and surveillance program. Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 169 participants. Conventional patient-initiated care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Care home admission: Care-home placement (survivors/follow-up) Tabulated outcomes: Hospitalisation: Hospitalisation (pts hospitalised once or more), Hospitalisation (days or nights), Hospitalisation (admissions)

	Mortality: Deaths (reported as loss to follow-up) Other outcomes not specified as of interest for this review: Residential care home (short-term) (pts) 1. Health problems - identifying those previously unrecognized, and reviewing the of their outcome management, then rated as resolved, ameliorated, unchanged. 2. Use of health and social services resources 3. Domestic care rating (4 categories: Fully independent, minor disability, partial independence, dependence on others for support) 4. Risk index (according to socio-economic problems and disabilities)
Timepoint	Outcomes were measured at 24 months
Funding and conflicts of interest	Funding: Unclear Sources: Not mentioned. Conflicts of interest: Not mentioned.
Notes	

Table 112. Tuntland 2015[421-424] study characteristics

Methods	Aims: To investigate the effectiveness of reablement in home-dwelling adults compared with standard treatment in relation to daily activities, physical functioning, health-related quality of life, use of health-care services, and costs. Design: Randomised Controlled Trial
Participants	Characterisation: Home-dwelling older adults with functional decline Country: Norway Setting: Primary care setting in a rural municipality (home based) Enrolment started in 2012 Participants assigned: 61 Inclusion criteria: 1. Home-dwelling persons over the age of 18 years 2. Lived in the municipality 3. Able to understand written and oral Norwegian 4. Had a functional decline in one or more daily activities. 5. Applicant of, or referred to home-based services Exclusion criteria: 1. People in need of institution-based rehabilitation or a nursing home placement 2. Were terminally ill, or 3. Were moderately or severely cognitively reduced (subjectively assessed by health-care providers based on observation and communication) Female: not reported. Age: Mean (SD) = 79 (10.1) Has informal carer: not reported. Living alone: 77% Ethnicity: Not specified. Dependence and disabilities: 1. Canadian Occupational Performance Measure (COPM, scale 1–10, 10 is best):

	Activity performance, mean (SD): IG= 2.6 (1.5) CG= 2.8 (1.4) Activity satisfaction, mean (SD): IG= 2.6 (1.6) CG= 3.3 (1.9) 2. Daily activities chart (COOP/Wonca Charts), scale 1–5, 1 is best, mean (SD): IG= 3.5 (1.1) CG= 3.2 (0.8) Significant comorbidities: 1. Cardiovascular condition, n (%): IG n= 5 (16.1) CG n= 2 (6.7) 2. Neurological condition included strokes, n (%): IG n= 8 (25.8) CG n= 8 (26.7) 3. Orthopedic condition, n (%): IG n= 10 (32.3) CG n= 12 (40.0) 4. Lung condition, n (%) IG n= 4 (12.9) CG n= 1 (3.3) Health status: 1. Self-reported number of medical conditions, mean (SD): IG= 3.0 (1.7) CG= 2.9 (1.1) 2. Change in health chart (COOP/Wonca Charts), scale 1–5, 1 is best, mean (SD): IG= 2.4 (1.0) CG= 2.1 (0.9) 3. Overall health chart (COOP/Wonca Charts), scale 1–5, 1 is best, mean (SD): IG= 3.0 (0.9) CG= 2.9 (0.8) Cognitive status: Not specified. Mood status: Motivation for rehabilitation, scale 1–10, 10 is best, mean (SD): IG= 7.5 (2.3) CG= 7.7 (2.1) Feelings chart (COOP/Wonca Charts), scale 1–5, 1 is best, mean (SD): IG= 2.4 (1.5) CG= 2.3 (0.9) Frailty status: unclassifiable
Interventions	2 groups Intervention 1: Experimental intervention. 31 participants. Reablement- time-intensive, multidisciplinary, multi-component and individualised. home-based rehabilitation for older adults with functional decline. Grouped as: Homecare, ADL, aids and multifactorial-action with self-management strategies Intervention 2: Control intervention. 30 participants. Usual care. Conventional treatment offered to homebound persons Grouped as: Homecare and multifactorial-action
Outcomes	Tabulated outcomes: Health status: COOP/ Wonca Charts - Overall health chart (Holm & Steen, 2005; van Weel, 1993) Mortality: Deaths (reported as loss to follow-up) Outcomes not included in this review because insufficient data were reported: Costs: Costs of home-based visits

	Cost effectiveness: ICER - COPM satisfaction with performance in daily life activities, ICER - COPM performance in daily life activities Other outcomes not specified as of interest for this review: COOP/ Wonca Charts - Daily Activities chart (Holm & Steen, 2005; van Weel, 1993) 1. Canadian Occupational Performance Measure (COPM) (0d, 3m, 9m) (Performance score, Satisfaction score) 2. COOP-Wonca Charts (Physical fitness, Feelings, Social activities, Change in health) (scale 1-5, 1 is best) (0d, 3m, 9m) 3. Timed Up and Go (0d, 3m, 9m) 4. Grip strength (Jamar dynamometer, right/ left and male/ female)) (0d, 3m, 9m) 5. Success of the research assistants' blinding rate (3m, 9m) 6. Health-care service usage (Outpatient treatment, day centre placement, other admissions, care home admission (15m), hospitalisation) (3m, 9m - author confirmed the data for the last 2 items not collected in the trial) 7. Home care (results mixed all visits from home-helper, nurse, auxiliary nurse, OT, physiotherapist, social worker, assistant, speech therapist, student, Meals on Wheels) Other outcomes: Hospitalisations and Care home admissions Data not collected - please see Natalie's comments on why these were not included. 1. Canadian Occupational Performance Measure (COPM) 2. Timed Up and Go test
Timepoints	Outcomes were measured at 3 months, 9 months and 15 months
Funding and conflicts of interest	Funding: Non-commercial Sources: 1. Regional Research Funds Western Norway 2. Norwegian Association of Occupational Therapists Conflicts of interest: The authors declare that they have no competing interests.
Notes	Control arm started receiving the intervention at 9m, therefore not to include the 15m in analysis.

Table 113. van der Pols-Vijlbrief 2017[425, 426] study characteristics

Methods	Aims: To evaluate the cost-effectiveness of a multifactorial personalized intervention focused on eliminating or managing the underlying causes of undernutrition to prevent and reduce undernutrition in comparison with usual care. Design: Randomised Controlled Trial
Participants	Characterisation: Community-dwelling adults aged 65 years and older with or at risk of undernutrition receiving home care or household support. Country: Netherlands Setting: Home care organizations in the two districts: participants' home Enrolment started in 2013 Participants assigned: 155 Inclusion criteria:

	1) undernourished (unintentional weight loss of 4 kg in the past 6 months or mid-upper arm circumference (MUAC) < 25 cm) or at risk of undernutrition (poor appetite in the last week in combination with inability to climb up and down stairs of 15 steps); 2) 65 years or older; 3) living at home and receiving home care or household support Exclusion criteria: Inability to stand independently (on a weighing scale). Life expectancy of less than 6 months. Inability to communicate in Dutch. Poor cognitive functioning defined as a Mini-Mental State Examination (MMSE) score <18. Institutionalised. Living outside intervention region. Female: 75% Age: Mean (SD) = 82.7 (7.7) Has informal carer: not reported. Living alone: 83% Ethnicity: Not stated Dependence and disabilities: ADL dependency (Barthel Index) (0-20) Intervention 17 (2-20) Control 17 (9-20) Assistance with preparing meals: Full assistance: IG 22.8%; CG 19.7% Partial assistance: IG 15.2%; CG 22.4% No assistance: IG 62.0%; CG 57.9% Significant comorbidities: Number of chronic diseases, mean (SD) Intervention 3.2 (2.1) Control 3.3 (1.9) Health status: Utility (EQ5D) (-0.33, 1), mean (SD): IG 0.4 (0.3); CG 0.3 (0.3) Self-reported health (0-100), mean (SD): IG 60.3 (16.5); CG 62.4 (16.6) Cognitive status: MMSE score (range 0-30), mean (SD) Intervention 27.0 (2.6) Control 26.2 (3.1) Mood status: QOL Mental component (SF-12) (0-100) Intervention 54.2 (20.4) Control 54.3 (18.9) Frailty status: frail Based on characteristics and criteria: homecare and risk of malnutrition
Interventions	2 groups Intervention 1: Experimental intervention.

	79 participants. Personalized action plan targeting undernutrition, plus home care. Personalized action plan targeting undernutrition, and home care (standard intervention) multifactorial personalized intervention action plan, focused on eliminating or managing the underlying causes of undernutrition to prevent and reduce undernutrition. Grouped as: Homecare, nutrition, multifactorial-action and review Intervention 2: Control intervention. 76 participants. Usual care plus healthy diet information brochure. Grouped as: Homecare
Outcomes	Tabulated outcomes: Personal activities of daily living: Barthel Index (0-20 scale) Health status: QALY from EQ-5D-3L, SF-12: Physical component summary, SF-12: mental component summary Mortality: Deaths (reported as loss to follow-up) Outcomes not included in this review because insufficient data were reported: Costs: Costs to health care and social services Cost effectiveness: ICER - QALY (EQ-5D-3L) Other outcomes not specified as of interest for this review: 1. body weight 2. mid-upper arm circumference 3. grip strength 4. gait speed 5. Short Physical Performance Battery (0-12)
Timepoints	Outcomes were measured at 3 months and 6 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Netherlands Organization for Health Research and Development (ZonMw) Conflicts of interest: No conflict of interest.
Notes	1. 50 multiple imputed datasets with five iterations were created using the multivariate imputation by chained equations algorithm. 2. Sensitivity analyses (extracted) in complete cases were performed to assess the influence of the imputation on the effect size and significance, and per protocol analyses were performed to evaluate the effect of the intervention when all participants randomized to the intervention arm executed at least one component of their action plan.

Table 114. van Dongen 2020[427-431] study characteristics

Methods	Aims: To test effectiveness of a resistance exercise and dietary protein intervention for older adults implemented in a real-life setting. Design: Randomised Controlled Trial It is unclear whether clustering was accounted for. Details: Cross-over at 24 weeks
Participants	Characterisation: community-dwelling, (pre-)frail elderly (>= 65 years) Country: Netherlands

Setting: 4 regional care organisations (Zorggroep Apeldoorn, Viattence, Zorggroep Noordwest-Veluwe, and Opella), local sports-promoting agency, prevention centre
Enrolment started in 2016
Participants assigned: 168

Inclusion criteria:
1. Community-dwelling
2. Aged = >65 years
3. Speak Dutch
4a. Frail or prefrail based on the Fried frailty indicator, or
4b. Non-frail but experiencing difficulty in daily activities and being inactive (defined as not participating in resistance exercise >30 minutes a day on more than 2 days a week). Additional for those not recruited via care organisation: reported loss of muscle strength.

Exclusion criteria:
1. Having an allergy to, or being sensitive to, milk proteins or being lactose intolerant
2. Diagnosed COPD or cancer
3. Diagnosed diabetes type 1 or type 2, that is unstable, not well regulated with medication, or the participant is not able
to notice hypoglycaemia
4. Diagnosed hypertension (systolic blood pressure > 160 mmHG) that is not well regulated with medication
5. Severe heart failure
6. Renal insufficiency (eGFR < 30 ml/min)
7. Having physical impairments that prevent them from participating in the exercise training
8. Having cognitive impairments that prevent them from understanding and completing questionnaires
9. Receiving terminal care
10. Having a newly fitted artificial hip or knee prosthesis, unless fully recovered
11. Having recent surgery (< 3 months) scars that the exercises might stress

Female: 61%
Age: Mean (SD) = 75.3 (6.2)
Has informal carer: 16%
Living alone: 37%
Ethnicity: 160 out of 168 native Dutch, other ethnicities not listed

Dependence and disabilities:
1. Care use: n=27 (16%)
2. Basic Lower Extremity Function questionnaire from the Late Life Function and Disability Index (ADL) [score (95%CI)]: IC=70.5 (67.4-73.7), CG=71.7 (68.6-74.8)

Significant comorbidities:
Diabetes: 18 (11%)
Arthrosis: 80 (48%)
Fracture: 7 (4%)
Other: 136 (81%)

	Health status: Self-perceived health status score (0-100), part of the EQ-5D-5L (mean (95%CI)): IG=82.9 (80.4-85.5), CG=82.9 (80.4-85.4) Cognitive status: not reported Mood status: not reported Frailty status: all (robust, pre-frail and frail) Validated measure: Phenotype model: pre-frail and frail specifically included but also nonfrail with difficulty in daily activities and inactivity. 48% non-frail, 48% prefrail, 4% frail
Interventions	2 groups Intervention 1: Experimental intervention. 82 participants. ProMuscle, combining resistance exercise and protein supplementation. Included an intensive support intervention implemented by physiotherapists and dietitians, and a subsequent voluntary moderate support intervention. Grouped as: Nutrition and exercise Intervention 2: Control intervention. 86 participants. Regular care control arm. Receives only regular care, and no intervention. Grouped as: Available care
Outcomes	Tabulated outcomes: Hospitalisation: Hospitalisation (pts hospitalised once or more) Health status: EQ-5D-5L (self-completion), QALY from EQ-5D-5L, EQ-5D EQ-VAS (Health today 0-100) Outcomes not included in this review because insufficient data were reported: Costs: Costs to society (health care, patient and family, productivity), Costs to health care services Cost effectiveness: ICER - QALY (EQ-5D-5L) Other outcomes not specified as of interest for this review: LLFDI: Basic Lower Extremity function domain (Haley *et al.*, 2002, Jette *et al.*, 2002) (Transformed to scaled range 0-100) LLFDI: Disability component - limitation total dimension (Jette *et al.*, 2002) (Transformed to scaled range 0-100) Short Physical Performance Battery (SPPB) Timed-up-and-go Test (TUG) 6 Minute Walking Test (6 MWT) Lower limb muscle strength 3-Repetition Maximum (3RM) test (Leg press strength, Leg extension strength, Knee extension strength) Body composition (Lean body mass, Appendicular lean mass, Fat mass, Hydration state) Daily dietary intake (Energy, Protein, Fat, Carbohydrates) Body weight Body Mass Index (BMI) LLFDI: disability, frequency dimension (Jette *et al.*, 2002)

	Social participation (frequency) in Social Role Domain questionnaire - Late-Life Function and Disability Instrument (Jette *et al.*, 2002)
Timepoints	Outcomes were measured at 12 weeks and 24 weeks
Funding and conflicts of interest	Funding: Mixed Sources: (Private companies) FrieslandCampina, and Innopastry; (Dutch) Ministry of Economic Affairs (grant number KI-AF-15206). Conflicts of interest: The ProMuscle in Practice project is a publice private partnership. The public partners are responsible for the study design, data collection and analysis, decision to publish, and preparation of the manuscript. The private partners FrieslandCampina, Innopastry, Nutrition and Healthcare Alliance, Zilveren Kruis) have contributed to the project through regular discussion, and financial and in-kind contributions. The 3 funding bodies did not have any role in the design, analyses, or writing of this article.
Notes	Authors stated couples would be randomised together but, in the results section, does not state how many couples were randomised.

Table 115. van Heuvelen 2005[432, 433] study characteristics

Methods	Aims: To determine to what extent both physical and psychological training can lead to an improvement in physical and psychological fitness and self-reliance Design: Randomised Controlled Trial
Participants	Characterisation: Elderly people living independently or in a home for the elderly Country: Netherlands Setting: Community / Gyms in neighbourhood Enrolment started in 2001 Participants assigned: 233 Inclusion criteria: - participants were recruited from a larger pool of respondents in a longitudinal study (Groningen Longitudinal Aging Study) (GLAS) which includes individuals aged 57 years or older who live in the north of the Netherlands, either independently or in a home for the elderly. Exclusion criteria: Subjects with severe cognitive impairments were excluded [Mini Mental State Examination score of less than 17 Excluded (flow dig): Died Questionnaire undeliverable Not interested or not capable Cohort heart failure Questionnaire delayed Moved outside research area Other reasons Too active Partially invalid screening data Invitation undeliverable Did not want to participate No response

	Female: not reported. Age: Mean (SD) = 73.7 (5.7) Has informal carer: not reported. Living alone: not reported. Ethnicity: Not stated Dependence and disabilities: Physical Performance Test Combination training -.992 (3.19) Educational training .004 (3.99) Additional Physical Performance Test Combination training -.857 (2.16) Educational training .004 (3.99) GARS-ADL Combination training 12.5 (3.3) Educational training 13.1 (3.7) GARS-IADL Combination training 9.6 (3.0) Educational training 10.3 (4.8) Significant comorbidities: Not reported Health status: Fitness rating Combination training 7.25 (0.73) Educational programme 6.80 (0.92) Cognitive status: Trail making A Trail Making Combination training 42.4 (8.7) Educational training 57.9 (23.2) Trail making B Combination training 93.2 (34.3) Educational training 124.0 (52.8) WAIS-III information Combination training 16.4 (5.7) Educational training 16.8 (5.6) WAIS-III matrix reasoning Combination training 14.2 (4.9) Educational training 14.9 (5.4) WAIS-III symbol substitution Combination training 48.3 (9.1) Educational training 45.7 (12.3) Stroop colour Combination training 65.1 (16.3) Educational training 67.0 (14.6) Stroop word Combination training 49.2 (10.0) Educational training 51.7 (8.6) Stroop colour-word Combination training 122.1 (43.6) Educational training 124.3 (34.5) 15-word test direct recall Combination training 36.6 (12.8) Educational training 34.9 (9.6) 15-word test delayed recall Combination training 8.5 (2.9) Educational training 6.7 (2.9) 15-word test recognition Combination training 27.7 (2.8) Educational training 27.6 (4.5) Mood status: Anxiety (HADS) Combination training 12.9 (4.0) Educational programme 11.6 (3.5) Depressive symptoms (HADS) Combination training 10.9 (2.8) Educational programme 11.5 (3.8) Frailty status: pre-frail and frail Based on characteristics and criteria: high level of activity excluded
Interventions	2 groups

	Intervention 1: Experimental intervention. 49 participants. Physical activity and psychological training. Grouped as: Exercise and psychology Intervention 2: Control intervention. 65 participants. Educational programme. Grouped as: Available care
Outcomes	Outcomes included in NMA: Personal activities of daily living: Groningen Activity Restriction Scale (GARS) (ADL) Instrumental activities of daily living: Groningen Activity Restriction Scale (GARS) (IADL) Depression: Hospital Anxiety and Depression Scale (depression subscore) (HADS-D) Other outcomes not specified as of interest for this review: 1. Physical limitations: subscale of the Medical Outcome Scale (MOS) six items with two possible answers. Sum scores are transformed to a range from 0 (limited on all six items) to 100 (not limited on all six items). 2. Number of chronic conditions (assessed with a list of 19 conditions) 3. Hospital Anxiety and Depression Scale (anxiety) 4. Neuroticism and extroversion (assessed with subscales of the revised version of the Eysenck Personality Questionnaire) 5. 12-item Social Support List for Interactions (SSL-12-I) 6. Use of vision, hearing and walking aids 7. Perceived physical fitness (GFO) 8. Blood pressure, height and weight, body mass index, fat percentage, squeeze force (hand grip dynamometer, GFO), leg strength (preferred leg quadriceps isometric strength), manual dexterity (Minnesotatest, GFO), reaction time (singular with visual stimulus, GFO), balance (balance plank test, GFO and functional reach), endurance for walking (GFO), ADL test (Physical Performance Test, Reuben and Sui) with additional complex tasks (ICBW). 9. CST (screening), Trail Making Test A + B, BADS Zoo map, BADS 6-element test, Stroop Test, WAIS-III subtests information, symbol substitution and matrices, 15-word test, Stroop Test 10. Physical self-efficacy (Bosscher) 11. Falling behaviour (ICBW) 12. Fear of falling (ABC scale, Myers and Powell) 13. Memory and attention (Brouwer) 14. General competence (Sherer) 15. Coping (UCL) 16. Physical activity in past 12 months (Minnesota LTPA-Q, PARQ) Notes: For some of the people: stabilometry (laboratory measurements for static balance in single and double task conditions) (n = 34) Astrand cycle ergometer test (n = 34). Finger tapping (n = 65)
Timepoints	Outcomes were measured at 18 weeks and 44 weeks

Funding and conflicts of interest	Funding: Non-commercial Sources: Dutch Organisation for Scientific Research (NOW) Conflicts of interest: Not mentioned.
Notes	1. Only 2 eligible arms: Combination trainings, and Educational (attention control); ineligible arms (not complex intervention): Physical activity, and Psychological training 2. Except the van Heuvelen (2005) published report, all other documents and info were provided by the authors directly. 3. Per-protocol: only pts participated in half or more of offered sessions were included in treatment effect analyses: total N=159/234. In emails from author, she confirmed it's per protocol analysis. Enquiring authors about total n randomised to each arm.

Table 116. van Hout 2010[434-436] study characteristics

Methods	Aims: Can indicative prevention of home-visiting nurses be effective when targeted at a frail senior population using multidimensional geriatric assessments and personalized care plans? Design: Randomised Controlled Trial Details: Frail persons living at the same address were randomised as one unit.
Participants	Characterisation: Frail persons aged 75 years or older and living at home but neither terminally ill nor demented Country: Netherlands Setting: 33 primary care practices (55 primary care physicians) Enrolment started in 2002 Participants assigned: 658 Inclusion criteria: -Age 75 y and older and listed as primary care practice patient -Living at home -Frail: self-reported score in the worst quartile of at least two of six COOP–WONCA charts (scoring range: 1, excellent to 5, very bad): overall health ≥4; physical fitness ≥5; changes in health ≥4; daily activities ≥4; mental health ≥3; social activities ≥3 Exclusion criteria: -Terminally ill as determined by PCPs -Persons with dementia symptoms (self-report of memory deterioration, MMSE <24, or 7-minute screen >50%) -Living in residential homes. -Participating in other research projects Female: 71% Age: Mean (SD) = 81.4 (4.1) Has informal carer: 66% Living alone: 55% Ethnicity: Not mentioned. Dependence and disabilities: Daily functioning (GARS) (range 18–72), M (SD): IG= 55.6 (10.5) CG= 56.8 (9.9)

	Significant comorbidities: C hronic diseases, n (%) C O: IG n= 52 (15.7%) CG n= 45 (14.1%) Heart infarction: IG n= 131 (39.6%) CG n= 119 (37.2%) A rterial dysfuncti: IG n= 61 (18.4%) CG n= 60 (18%) C ancer: IG n= 56 (16.9%) CG n= 49 (15.3%) Diabetes mellitus: IG n= 165 (49.8%) CG n= 156 (48.8%) Joint condition: IG n= 42 (12.7%) CG n=43 (13.4%) R heumatism: IG n= 23 (6.9%) CG n= 20 (6.3%) Hypertension: IG n= 94 (28.4%) CG n=94 (29.4%) Hearing problems, despite aids: IG n= 132 (39.9%) CG n= 119 (37.2%) Vision problems, despite aids: IG n= 77 (23.3%) CG n= 76 (23.8%) Health status: S F-36 physical score (range 0–100), M (SD): IG= 31.8 (10.0) CG= 31.9 (9.9) S F-36 mental score (range 0–100), M (SD): IG= 44.2 (11.4) CG= 45.0 (11.3) Cognitive status: C ognitive impairment, IQCODE (pts scored >=3.6): IG n= 50 (15.1%) CG n= 43 (13.4%) Mood status: Depressive symptoms (range 0–60) CESD, M (SD): IG= 18.1 (7.5) CG= 17.5 (7.4) Frailty status: frail Based on characteristics and criteria: Lowest quartile of a COOP-WONCA-based frailty index constructed by the authors
Interventions	2 groups Intervention 1: Experimental intervention. 334 participants. Preventive home visiting program. Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 324 participants. Usual Care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Hospitalisation: Hospitalisation (pts hospitalised once or more) Care home admission: Care-home placement (survivors/follow-up)

	Mortality: Deaths (from routine data) Tabulated outcomes: Personal and instrumental activities of daily living: Groningen Activity Restriction Scale (GARS) (overall) Care home admission: Time to institutionalisation, Care-home placement (including deaths) Health status: SF-36: Physical Component Summary (PCS) score, SF-36: Mental Component Summary (MCS) score Mortality: Survival time / Time to death Outcomes not included in this review because insufficient data were reported: Costs: Costs to health care and social services Health status: EQ-5D EQ-VAS (Health today 0-100) Depression: CES-D depression scale (10 items; Andresen *et al.*, 1994 & Irwin *et al.*, 1999) Other outcomes not specified as of interest for this review: Hospital emergency department (pts visited once or more) COOP-WONCA charts (Van Weel *et al.*, 1995) used, but no details of which charts and no results. Chronic disease list (but reported as OR of having >2 chronic diseases) Mobility and falls (part of health screening, at all timepoints) Incontinence
Timepoints	Outcomes were measured at 6 months and 18 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Vrije University Medical Centre (VUMC), The Netherlands Organisation for Health Research and Development (ZonMw) (Netherlands) Conflicts of interest: The author(s) declare that they have no competing interests.
Notes	Per-protocol analysis, subgroup analysis, and sensitivity analysis were also conducted.

Table 117. van Leeuwen 2015[437-442] study characteristics

Methods	Aims: To investigate the impact of a chronic care model approach on frail older adults, and to evaluate the effectiveness as well as the cost-effectiveness and implementation process of such an intervention. Design: Cluster RCT Clustering accounted for. Details: Stepped wedge cluster randomized controlled trial
Participants	Characterisation: Frail elderly persons 65 years of age or older who live independently Country: Netherlands Setting: Community - primary care practices Enrolment started in 2010 Clusters assigned: 35 Participants assigned: 1147 Inclusion criteria:

	Persons 65 years or older with multiple conditions and who may be, partly as a consequence of this condition, vulnerable. These persons may experience insufficient alignment, management and continuity in care, risks due to their medication utilisation. We made this condition ready for use in the following way: 3 or more chronic conditions, or long term use of 5 or more types of medication during the previous half year or two or more referrals to specialists during the previous half year. Exclusion criteria: 1. Being institutionalized 2. Living outside Amsterdam-Zuid/ Amstelveen and Westfriesland, while the GP works in this area 3. Intellectually disabled 4. Less consciousness. Female: 67% Age: Mean (SD) = 80.5 (7.5) Has informal carer: 52% Living alone: not reported. Ethnicity: not reported. Dependence and disabilities: Katz-6 ADL limitations, mean (SD): 0.9 (1.2) Lawton IADL limitations, 0–7, mean (SD): 2.6 (1.6) Significant comorbidities: Diabetes mellitus: 28.5% Cancer: 10.7% Lung disease: 27.3% Arthritis: 59.0% Stroke: 6.7% Health status: EQ5D-3L, mean (SD): 0.60 (0.28) SF-12 MCS, 0–100, mean (SD): 49.9 (10.5) SF-12 PCS, 0–100, mean (SD): 33.8 (9.5) Cognitive status: Not mentioned. Mood status: SF-12 Psychological wellbeing, 0–100, mean (SD): 67.7 (20.6) Frailty status: frail Validated measure: PRISMA7
Interventions	2 groups Intervention 1: Experimental intervention. Geriatric Care Model. A multifaceted intervention based on the chronic care model, which was designed to guide and enhance the comprehensive and interdisciplinary delivery of care. Grouped as: Multifactorial-action and review with medication review and self-management strategies

	Intervention 2: Control intervention. Usual care. Unrestricted primary care including PCP care and referrals to other healthcare services. Grouped as: Available care
Outcomes	Outcomes not included in this review because insufficient data were reported: Personal activities of daily living: Katz ADL Scale (Katz *et al.*, 1963) (Range 0-6, 6 questions) Instrumental activities of daily living: IADL (7 items, 0-7) (Weinberger *et al.*, 1992) Hospitalisation: Hospitalisation (pts hospitalised once or more/ last 6 months) Costs: Costs to health services + social services + participant/carer Cost effectiveness: ICER - QALY (EQ-5D-3L) Health status: Health Perception (EVGFP / 5-1) - RAND Medical Outcome Study (MOS), QALY from EQ-5D-3L, EQ-5D-3L (self-completion), SF-12: Physical component summary, SF-12: mental component summary Depression: SF-36: Mental Health, Patient Health Questionnaire (PHQ-9) Mortality: Deaths (reported as loss to follow-up) Other outcomes not specified as of interest for this review: Process evaluation: fidelity, facilitators and barriers in implementation. Care needs (CANE) Informal carers: Self-rated Burden of Care (CareQol), SF-12 Professionals and organisation: Quality of care (ACOVE and RAI indicators) Patient-reported Client-centred Care (CCCQ) Coordination of Care from the patient's perspective (2 items on QUOTE) RAND SF-36 (social functioning) ICERs based on SF-12 PCS, SF-12 MCS, Katz-6, Lawton IADL 7-item (also reported, but not extracted yet, because unlikely comparable with other ICERs extracted).
Timepoints	Outcomes were measured at 6 months, 12 months, 18 months and 24 months
Funding and conflicts of interest	Funding: Non-commercial Sources: This study was supported by the Netherlands Organization for Health Research and Development (ZonMw): Dutch National Care for the Elderly Program grant number 311080201 Conflicts of interest: Hein P. J. van Hout is board member of the Dutch Association of users of interRAI tools (unpaid). The geriatric assessments in this study were conducted using one of interRAI's tools. Maurits W. van Tulder received more than €2 million in the last 5 years from The Netherlands Organization for Health Research and Development.
Notes	1. Sub-group analyses performed on potential effect modifiers. 2. Imputation was used in the cost-effectiveness analysis.

Table 118. van Lieshout 2018[443, 444] study characteristics

Methods	Aims: The aim of this study is to evaluate the effectiveness of the Supporting Proactive lifestyle intervention in

	frailty and disability (SPRY) program on daily functioning among (pre) frail community-dwelling persons that are 65 years and over Design: Randomised Controlled Trial
Participants	Characterisation: Community-dwelling pre-frail older people aged 65 years and over Country: Netherlands Setting: Local pharmacy, local gym, and local community centre in the rural community of Wijk bij Duurstede Enrolment started in 2011 Participants assigned: 710 Inclusion criteria: 1. aged 65 years and over 2. living independently in the community and 3. having a Groningen Frailty Indicator (GFI) score of ≥ 1 (15) Exclusion criteria: 1. A GFI score of zero 2. Severe immobility (such as wheelchair dependence) 3. Inability to communicate in Dutch 4. Impaired cognition defined as a score of ≤ 24 on the Mini Mental State Examination (MMSE) Female: 55% Age: Mean (SD) = 74 (7.2) Has informal carer: not reported. Living alone: 62% Ethnicity: No mentioned Dependence and disabilities: 1. Katz-6 score: Median (in either IG/ CG) = 0 ≥ 1 disabilities n= 46 (16.4%) 2. Used home care: n= 39 (13.9%) Significant comorbidities: Not mentioned Health status: SF-12 physical mean score (SD) IG = 45.0 (10.55), CG = 46.3 (10.53) SF-12 mental mean score (SD) IG = 48.3 (9.6), CG = 48.0 (10.0) Cognitive status: All pts scored 24 or over in MMSE (exclusion criterion). Mood status: Not compared between IG and CG Frailty status: pre-frail and frail Validated measure: Groningen
Interventions	2 groups Intervention 1: Experimental intervention.

	351 participants. Supporting PRoactive lifestyle intervention in frailty and disability (SPRY). An interdisciplinary multicomponent intervention program consisting of four consecutive intervention components targeting the improvement of medication use, physical activity, psychosocial health and nutritional status. Grouped as: ADL, medication-review, nutrition and social-skills Intervention 2: Control intervention. 359 participants. Waiting list control. The control arm received care as usual. Grouped as: Available care
Outcomes	Outcomes included in NMA: Hospitalisation: Hospitalisation (pts hospitalised once or more/ last 12 months) Tabulated outcomes: Health status: SF-12: mental component summary, SF-12: Physical component summary Other outcomes not specified as of interest for this review: Katz-6 (dichotomised version: score 1-6) Nursing home (short-term) (pts) Health consumption (Dr's visit beyond ordinary hours, visit day care center, use of other forms of healthcare, home care by community nurse) Groningen Frailty Indicator (Frailty) Outcomes on IG only (3 weeks, 5 weeks, 12 weeks, 23 weeks): Grip strength (left and right) Groningen Activity Restriction Scale (GARS) 6 Minute Walking Test (Functional capacity) TUG (walking speed) DEMMI (mobility) HADS-A De Jong-Gierveid Loneliness Scale Short Nutritional Assessment Questionnaire (SNAQ, nutritional status) Upper arm circumferences Optimization of medication (Pre Optimization Method, Polypharmacy)
Timepoints	Outcomes were measured at 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: ZonMw, Municipality Wijk bij Duurstede, project partners. Conflicts of interest: Authors declared no competing interests.
Notes	1. Multiple imputations (M=11) were performed to address the missing values, and subsequent results in each of the imputations were pooled with Rubin's rule. 2. 208 participants (59.9%) in the intervention arm and 211 participants in the control arm (59.8%) withdrew from participation between randomisation and intervention commenced. They were excluded from all outcome analyses.

Table 119. van Rossum 1993[445-447] study characteristics

Methods	Aims: To assess the effect of preventive home visits by public health nurses on the state of health of and use of services by elderly people living at home. Design: Randomised Controlled Trial
Participants	Characterisation: Aged between 75 and 84 years, living at home Country: Netherlands Setting: Community: participant's residence Enrolment started in 1988 Participants assigned: 580 Inclusion criteria: People between 75 and 84 years of age. Exclusion criteria: 1. Elderly people and their partners who were already receiving home nursing care at least once a week. 2. Not institutionalised. 3. live in a monastery and cannot be considered living independently at home (the monastery provides some domestic services for all inhabitants). Female: 58% Age: 75-79 years: IG n= 210 (72%) CG n= 211 (73%) 80-84 years: IG n= 82 (28%) CG n= 77 (27%) Has informal carer: 87% Living alone: 39% Ethnicity: Not mentioned. Dependence and disabilities: Activities of daily living disabilities (score range; 0= no disabilities to 5= completely dependent): score 0: IG n= 257 (91%) CG n= 245 (86%) score 1-5: IG n= 27 (10%) CG n= 41 (14%) Household disabilities (score range; 0= no disabilities to 5= completely dependent): score 0: IG n= 107 (38%) CG n= 95 (35%) score 1-2: IG n= 112 (39%) CG n= 107 (39%) score 3-5: IG n= 65 (23%) CG n= 73 (27%) Significant comorbidities: Not mentioned. Health status: Self-rated health Dutch educational system), mean: IG 7.2; CG 7.2 Cognitive status: Not mentioned. Mood status: Loneliness data only collected at final follow-up Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: all 75-85

Interventions	2 groups Intervention 1: Experimental intervention. 292 participants. Preventive home visits. Grouped as: Multifactorial-action and review Intervention 2: Control intervention. 288 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Hospitalisation: Hospitalisation (pts hospitalised once or more) Mortality: Deaths (from routine data) Tabulated outcomes: Hospitalisation: Hospitalisation (days or nights), Hospitalisation (admissions) Care home admission: Nursing home (long-term) (months), Care-home placement (including deaths) Health status: Self-rated Health (Dutch educational system) Loneliness: Loneliness (de Jong-Gierveld Scale) (0-11) Outcomes of interest with bespoke measures: Personal activities of daily living Instrumental activities of daily living Outcomes not included in this review because insufficient data were reported: Costs: Costs to health care and social services Other outcomes not specified as of interest for this review: Home care (hours, ever used) Home care (pts ever used) Use of services over 3 years (GP, home care, home nursing care, meals on wheels, ambulatory mental service, physiotherapy, outpatient clinic) The functional status refers to disabilities in performing activities of daily living (ADL) and household tasks. Zung's self-rating depression scale (Zung 1965) (4 items of the original 20 items) Well being (subscales morale and optimism (6 and 7 items, score 0-20 points each) of a more extended Dutch scale for well-being (Tempelman 1987). Memory disturbances (short version of the Abbreviated Mental Test (Qureshi and Hodkinson 1974). Intervention costs (reported separately in report). Admission to "home for the elderly" (sheltered residential accommodation, not regraded as institutionalisation)
Timepoints	Outcomes were measured at 6 months, 12 months, 18 months, 24 months, 30 months and 36 months
Funding and conflicts of interest	Funding: Non-commercial

	Sources: Netherlands Ministry of Welfare, Health and Cultural Affairs, the Foundation for Research and Development of Social Health Care (STOOM) Het Praeventiefonds. Conflicts of interest: Not mentioned.
Notes	1. 600 participants randomised. 20 who lived in a monastery were excluded because of living independently at home. 2. Participants who were living together were always allocated to the same arm.

Table 120. Vass 2005[448-469] study characteristics

Methods	Aims: To investigate whether this model gives enhanced active life expectancy; to elaborate and investigate the most suitable way to organize and structure the content of preventive home visits as part of everyday life in primary care. Design: Cluster RCT Clustering accounted for. Details: For randomization the 34 municipalities were paired according to county, size, urban/rural status, and geriatric department serving the municipality. Within each pair, one municipality was drawn to receive an intervention. The remaining municipality was the comparison municipality. The randomization was performed independently of the investigators.
Participants	Characterisation: Aged 75 years and older Country: Denmark Setting: Primary care, 34 municipalities in 4 counties. Enrolment started in 1999 Clusters assigned: 34 Participants assigned: 4060 Inclusion criteria: Choice of communities: - Communities should offer preventative home visits according to the law; - In the communities, it should be possible for the GPs to participate in the preventative program and local political support and structural possibilities enabling primary care to provide fair or good rehabilitation to inhabitants living in in the community should be present. Choice of participants: - Participants born in year 1918 or 1923/24 Exclusion criteria: Participants who are institutionalised. Female: 56% Age: 74 or 75yr: n=2876 80yr: n=1184 Has informal carer: not reported. Living alone: 44% Ethnicity: Not mentioned. Dependence and disabilities: Independent of help from others in 6 ADLs: IG 1641; CG 1491 Independent of help from other in 0-5 ADLs: 451; CG 451

	Significant comorbidities: Not mentioned. Health status: Not reported for baseline. Cognitive status: Not mentioned. Mood status: Not reported for baseline. Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: all 75 and all 80
Interventions	2 groups Intervention 1: Experimental intervention. 17 clusters, 2104 participants. Preventive home visits. Structured visits with professionals that received an educational program focused on relevant gerontological and geriatric problems, especially on the importance of tiredness as an indicator of frailty Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 17 clusters, 1956 participants. Preventive home visits as in usual practice [unstandardized]. Grouped as: Multifactorial-action and review
Outcomes	Outcomes included in NMA: Mortality: Deaths (from routine data) Tabulated outcomes: Hospitalisation: Hospitalisation (pts hospitalised once or more) Outcomes not included in this review because insufficient data were reported: Homecare services usage: Home care - domestic care only (hours), Home care - personal care only (hours) Hospitalisation: Hospitalisation (admissions) Care home admission: Care-home placement (including deaths), Nursing home (long-term) (days) Costs: Costs to health care and social services Cost effectiveness: ICER - Active life years per person Other outcomes not specified as of interest for this review: Hospital emergency department (visits) ADL (dichotomous) Detailed use of social and health services medication Mob-T Scale (number of PADL items performed without tiredness, range 0-6) Self-rated mood (categorised: excellent, good/ reasonable, changing, poor)

	Self-rated control over one's own life (categorised: most often / sometimes, never) Live alone Social participating (frequency) Physical activity (frequency) Process evaluation (with the professionals involved, about performance in all intervention and control communities.)
Timepoints	Outcomes were measured at 1 year, 18 months, 2 years, 3 years, 4.5 years and 5 years
Funding and conflicts of interest	Funding: Non-commercial Sources: Danish Medical Research Council, the Research Foundation for General Practice and Primary Care, Eastern Danish Research Forum, the County Value-Added Tax Foundation and the Danish Ministry of Social Affairs Conflicts of interest: Not reported
Notes	1. Randomisation at community level, outcomes measured at individual level. 2. Missing data replaced with mean values for all participants in the study by age.

Table 121. Vetter 1984[470] study characteristics

Methods	Aims: To test the effectiveness of health visitors' visiting and monitoring of a caseload of elderly people in their respective general practices. Design: Randomised Controlled Trial Details: Randomised by household.
Participants	Characterisation: GP patients who were aged over 70. Country: UK Setting: Health visitors based in a general practice Enrolment started in 1980 Participants assigned: 1148 Inclusion criteria: born in 1909 or before were living at home registered with the either participating general practice Exclusion criteria: Not mentioned Female: not reported. Age: Over 70 years, no other details Has informal carer: not reported. Living alone: not reported. Ethnicity: Not reported. Dependence and disabilities: Not reported. Significant comorbidities: Not reported. Health status:

	Not reported. Cognitive status: Not reported. Mood status: Not reported. Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: unselected
Interventions	2 groups Intervention 1: Experimental intervention. 577 participants. Health visitor visits. Health visitors working with elderly patients, conducting one unsolicited visit a year and the follow up resulting from that visit. Grouped as: Multifactorial-action and review Intervention 2: Control intervention. 571 participants. Usual care. Grouped as: Available care
Outcomes	Tabulated outcomes: Mortality: Deaths (pre-specified outcome, method of ascertainment unspecified) Outcomes not included in this review because insufficient data were reported: Personal and instrumental activities of daily living: Townsend Disability Scale (9 items, 0-18) Homecare services usage: Home care (pts) Depression: Delusions-Symptoms-States Inventory (DSSI, 7 depression items) Other outcomes not specified as of interest for this review: DSSI anxiety frequency of social contacts, Use of medical and social services, and community services Carer presence, Subjective feelings of quality of life Health visitor referrals to healthcare and social services Amount of people receiving benefits and allowances
Timepoint	Outcomes were measured at 2 years
Funding and conflicts of interest	Funding: Non-commercial Sources: Welsh Office and the Department of Health and Social Security through the office of the Chief Scientist. Conflicts of interest: not mentioned
Notes	A third arm of 137 participants were randomised to questionnaire only (intervention), no intervention details or results provided, judged to be a single component (questionnaire), ineligible intervention.

Table 122. von Bonsdorff 2008[471-477] study characteristics

Methods	Aims: We studied the effect of physical activity counseling on mobility among older people and evaluated whether counseling-induced benefits persist after cessation of the intervention. Design: Randomised Controlled Trial
Participants	Characterisation: Older sedentary community-dwelling persons with a wide range of IADL disability Country: Finland Setting: City center of Jyvaskyla, Finland Enrolment started in 2003 Participants assigned: 632 Inclusion criteria: -To be able to walk 500 meters without assistance -Be only moderately physically active or sedentary (at most 4 hours of walking or 2 hours of other exercise weekly) -Have a Mini-Mental State Examination (MMSE) score greater than 21 -Have no severe medical contraindications for physical activity (assessed by the study nurse and when necessary, ascertained by a physician) -Sign an informed consent to participate in a randomized controlled trial Exclusion criteria: Those with severe mobility limitation (not able to walk 0.5 km independently), and those who were physically active (greater than 4 exercise a week), were excluded. In addition, subjects with MMSE points less than 22 were excluded. Female: 75% Age: Mean (SD) = 77.6 (1.9) Has informal carer: 17% Living alone: not reported. Ethnicity: Not mentioned. Dependence and disabilities: Ability to walk 2 km without difficulties (%): IG (n=318) 66.2; CG (n=314) 68.1 Disability in one or more IADL tasks (%): IG (n=318) 45.0; CG (n=314) 52.5 Significant comorbidities: Not mentioned. Health status: Self-rated health (%) (IG n=318; CG n=314) Excellent: IG 2; CG 1 Good: IG 47; CG 38 Not so good: IG 48; CG 58 Poor: IG 3; CG 3 Cognitive status: Mini-Mental State Examination score (mean (SD)): IG: 27.1 (2.0) CG: 27.0 (2.2), range 22-30 Mood status: CES-D score ≥ 16: IG n=19.4% CG n=20.0%

	Feeling lonely: Often/almost always n= 47 (7.5%) Seldom n= 127 (20.0%) Very seldom/never n= 458 (72.5%) Frailty status: robust Based on characteristics and criteria: mobile but not very active
Interventions	2 groups Intervention 1: Experimental intervention. 318 participants. Screening and Counseling for Physical Activity and Mobility in Older People (SCAMOB). Grouped as: Exercise Intervention 2: Control intervention. 314 participants. Usual care, including advice on healthy living habits. Grouped as: Available care
Outcomes	Tabulated outcomes: Instrumental activities of daily living: IADL (8-0) (von Bonsdorff 2008) Homecare services usage: Home care (pts) Mortality: Deaths (from routine data) Outcomes of interest with bespoke measures: Personal activities of daily living Loneliness Outcomes not included in this review because insufficient data were reported: Hospitalisation: Hospitalisation (admissions) Care home admission: Care Home (long-term) (pts) Health status: LEIPAD scale (De Leo *et al.*, 1998) Depression: CES-D depression scale (20 items; Radloff 1977) Other outcomes not specified as of interest for this review: Habitual physical activity Mobility difficulty Mobility task modification Lower extremities were examined for oedema, varicose vein, callus in feet, status of skin and nails, tactile sense in feet and posture of knees and ankles Height Weight Blood pressure, Visual acuity Maximal walking speed over 10m Stair mounting height (Aniansson *et al.*, 1980), Timed five chair stands Time to maintain balance in three different standing positions (Guralnik *et al.*, 1994), Maximal isometric grip strength (Heikkinen *et al.*, 1984) Leg extension power

	Selection, optimization and compensation (SOC) Cardiovascular and respiratory symptoms (Rose, 1968) Factors enhancing or inhibiting physical activity Physical exercise participation (intensity and frequency of all the activity forms) Chronic conditions Number of medications MMSE Use of health and social services (no details, no results)
Timepoint	Outcomes were measured at 3.5 years
Funding and conflicts of interest	Funding: Non-commercial Sources: Ministry of Education, Finland; Ministry of Social Affairs and Health, Finland; Juho Vainio Foundation, Finland; Finnish Cultural Foundation, Finland; City of Jyväskylä, Finland; and University of Jyväskylä, Finland Conflicts of interest: None disclosed.
Notes	For cases with missing values, data were imputed with the multiple imputation procedure implemented in SAS using information on the other IADL questions and baseline information such as number of chronic diseases, physical activity level, and MMSE and CES-D scores. Values were not imputed for persons who died during follow-up (n=516).

Table 123. Wallace 1998[246, 478] study characteristics

Methods	Aims: The purpose of this pilot study was to evaluate the feasibility and efficacy of delivering an integrated disability-prevention intervention at a neighborhood senior center Design: Randomised Controlled Trial
Participants	Characterisation: age 65 or over and ambulatory, living in the catchment area of the senior center Country: USA Setting: Northshore Senior Center, a community senior center run by Seattle-King County Senior Services. Enrolment started before 2006 Participants assigned: 100 Inclusion criteria: -age over 65 -ambulatory -living in the catchment area of the senior center Exclusion criteria: Specific exclusion criteria included - legal blindness; - a timed "Up and Go" test (9) greater than 30 s (time to rise from a chair, walk 3 m, and return to the chair); - a score of less than 24 on the Folstein Mini-Mental State exam; - a myocardial infarction or change in angina pattern in the past year; - presence of other medical conditions that precluded or contraindicated exercise (i.e., end-stage heart or lung disease, recent deep venous thrombosis, severe degenerative joint disease requiring joint replacement, severe inflammatory arthritis).

	In addition, each subject's primary physician was contacted to ascertain if he or she had concerns about the patient's participation. Female: 73% Age: Mean (SD) = 71.9 (4.6) Has informal carer: not reported. Living alone: not reported. Ethnicity: White: 99% Dependence and disabilities: Self-report Usual activities restricted 1+ days in the past year due to illness or injury 36%, stayed in bed 1+ days in the past year due to illness or injury 24%. SF-36 Role limitations-physical intervention arm 66.0 control arm 67.5 Role limitations- emotional intervention arm 78.6 control arm 78.7 Significant comorbidities: Not reported Health status: Hospitalised in last 12 months 12%, currently smoking 1%, exercising 3 times/week 37%, fair or poor perceived health 2% SF-36 General health perceptions intervention arm 78.6 control arm 74.1 Physical functioning intervention arm 82.0 control arm 80.5 Cognitive status: Not reported Mood status: CES-D score (0 best, 60 worse) Table 2 reports Intervention arm 7.9 Control arm 8.2. Discrepancy with Table 1 which reports score of 12.1 for all participants SF-36 mental health score intervention arm 78.0 control arm 77.1 Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: all eligible except the very disabled
Interventions	2 groups Intervention 1: Experimental intervention. 53 participants. Community-Based Health Promotion Program. A multicomponent disability prevention program consisting of a senior center-based intervention that involved a nurse assessment visit and follow-up interventions targeting risk factors for disability with a structured exercise program as the central component. Grouped as: Exercise, multifactorial-action and review

	Intervention 2: Control intervention. 47 participants. Senior center standard care. Control arm, recruited amongst the senior centre users and presumably receiving the senior centre standard care (not specified) Grouped as: Available care
Outcomes	Tabulated outcomes: Depression: CES-D depression scale (20 items; Radloff 1977), SF-36: Mental Health Other outcomes not specified as of interest for this review: SF-36: General Health SF-36: Social functioning SF-36: Bodily pain SF-36: Energy/fatigue SF-36: Role limitations - emotional SF-36: Role limitations - physical SF-36: Physical functioning Bed and restricted-activity days: Physical disability as measured by self-reported restricted-activity days (days in the past year that usual activities were restricted due to illness or injury) and bed days (days in the past year spent in bed due to illness or injury).
Timepoints	Outcomes were measured at 2 months and 6 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Centers for Disease Control and Prevention, the National Institute on Aging, the Department of Veterans Affairs (Health Services Research and Development Service). Conflicts of interest: Not reported
Notes	Sample sizes (both arms): 6 months (unadjusted) = 90; 6 months (adjusted) = 83

Table 124. Walters 2017[479-481] study characteristics

Methods	Aims: To develop and test feasibility of an evidence- and theory-based home-based health promotion intervention for older people with mild frailty. Design: Randomised Controlled Trial
Participants	Characterisation: Community-dwelling older adults aged ≥ 65 years with mild frailty Country: UK Setting: Participants' homes Enrolment started in 2015 Participants assigned: 51 Inclusion criteria: Older people aged ≥ 65 years registered with a participating general practice Scoring as ‘mildly frail’ on the Rockwood Clinical Frailty Scale7 Community dwelling (including extra care housing) A life expectancy of > 6 months

	Capacity to consent to participate (including those with dementia or communication difficulties who retained capacity). We included people unable to speak English, with the provision of translated materials and translators, if required. Exclusion criteria: were living in care homes had moderate to severe frailty or who are not frail (according to the Rockwood Clinical Frailty Scale were on the GP register for palliative care or dementia were housebound were already case managed were lacking capacity to consent it would be inappropriate to have an invitation to participate for at this time (e.g. because of recent bereavement), as judged by their GP Female: 59% Age: Mean (SD) = 80 (6.6); Range: 67 to 91 Has informal carer: not reported. Living alone: 51% Ethnicity: 45 (88.2%) white British 4 (7.8%) other white 1 (2%) African 1 (2%) other Asian Dependence and disabilities: Modified Barthel Index, mean (SD): 98.31 (2.04) Significant comorbidities: Long-term conditions 3.6 (SD 2) Health status: EQ-5D-5L, mean (SD): 0.70 (0.19) Cognitive status: MoCA, mean (SD): 23.57 (3.72) Mood status: GHQ-12, mean (SD): 13.43 (6.05) Frailty status: pre-frail Validated measure: CFS mild frailty
Interventions	2 groups Intervention 1: Experimental intervention. 26 participants. HomeHealth. A manualised home-based behaviour change multicomponent health promotion service for vulnerable older people delivered by trained non-specialist support workers. Grouped as: Multifactorial-action and review with self-management strategies

	Intervention 2: Control intervention. 25 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Personal activities of daily living: Barthel Index (MBI, Modified version, Shah 1989) Tabulated outcomes: Health status: QALY from EQ-5D-5L, EQ-5D-5L (self-completion) Depression: General Health Questionnaire 12 items (GHQ-12) Falls: Falls (pts fell once or more) Outcomes not included in this review because insufficient data were reported: Costs: Costs to health care services, Costs to social services, Costs of intervention Other outcomes not specified as of interest for this review: Feasibility – recruitment, retention, acceptability and intervention costs. Weight Height Alcohol Use Disorders Identification Test – Consumption (AUDIT-C) Smoking MoCA CSRI Grip strength Gait speed Capability (ICECAP-O) International Physical Activity Questionnaire for the Elderly (IPAQ-E) Warwick–Edinburgh Mental Well-being Scale (WEMWBS) NHS service use for costs analysis (NHS GP records) Long-term conditions (NHS GP records) Prescribed medication (NHS GP records) Costs analysis: societal costs (costs to family and close others), budget impact analysis Capability-adjusted life-years (CALYs) calculated from the ICECAP-O Safety (AEs & SAEs) Adherence
Timepoints	Outcomes were measured at 3 months and 6 months
Funding and conflicts of interest	Funding: Non-commercial Sources: National Institute for Health Research Health technology programme Conflicts of interest: No conflict of interest to declare
Notes	

Table 125. Whitehead 2016[482-484] study characteristics

Methods	Aims: to test the feasibility of conducting a randomised controlled trial (RCT) of an intervention targeted at activities of daily living (ADL), delivered by an occupational therapist, in homecare reablement. Design: Randomised Controlled Trial
Participants	Characterisation: People referred for homecare reablement

	Country: UK Setting: Community: local authority homecare reablement service Enrolment started in 2014 Participants assigned: 30 Inclusion criteria: 1. Homecare re-ablement service user 2. Able to provide informed written consent Exclusion criteria: 1. Unable to speak English 2. Receiving end of life care 3. Needing assistance of two or more people to transfer or receiving input from a community rehabilitation team. 4. Had a diagnosis of dementia who already had a specialist dementia homecare service within the area. Female: 57% Age: Mean (SD) = 82.4 (11) Has informal carer: 70% Living alone: 67% Ethnicity: White British: IG n= 12 (80%) CG n= 14 (93%) Other: IG n= 3 (20%) CG n= 1 (7%) Dependence and disabilities: Barthel Index median 16 (IQR 14-17) intervention, 17 (16-18) control NEADL 19 (12-28) intervention, 20 (16-28) control Significant comorbidities: Primary medical category Neurological: IG n= 0 (0%) CG n= 5 (33%) Musculoskeletal: IG n= 11 (73%) CG n= 5 (33%) Frailty: IG n= 1 (7%) CG n= 3 (20%) Mental health: IG= 0 (0%) CG n= 2 (14%) 1 (7%) frailty intervention, 3 (20%) control Health status: EQ5D median 0.27 (IQR 0.08-0.59) intervention, 0.59 (0.08-0.64) control SF36 PCS 27.0 (20.3-33.0) intervention, 29.3 (20.4-39) control SF36 MCS 48.5 (34.0-54.0) intervention, 52.4 (45.2-55.3) control Cognitive status: MMSE median 27 (IQR 24-28) intervention, 26 (23-28) control Mood status: SF-36 Mental Component Score (median [IQR]): IG 48.50 (33.98–54.03); CG 52.36 (45.23–55.26) Frailty status: frail Based on characteristics and criteria: homecare
Interventions	2 groups Intervention 1: Experimental intervention.

	15 participants. Home care reablement plus Occupational Therapy. A targeted ADL programme, delivered by an occupational therapist incorporating goal setting, teaching/practising techniques, equipment/adaptations and provision of advice/support. This was in addition to home care reablement. Grouped as: Homecare, ADL, aids and multifactorial-action Intervention 2: Control intervention. 15 participants. Home care reablement. 6 weeks of homecare reablement delivered by social care workers (no routine Occupational Therapist input). Grouped as: Homecare and multifactorial-action
Outcomes	Tabulated outcomes: Personal activities of daily living: Barthel Index (0-20 scale) Instrumental activities of daily living: Nottingham Extended Activities of Daily Living (NEADL) (0-22) Homecare services usage: Home care (pts/ last 3 months) Hospitalisation: Hospitalisation (pts hospitalised once or more/ last 3 months) Care home admission: Care-home placement (survivors/follow-up) Health status: SF-36: Mental Component Summary (MCS) score, SF-36: Physical Component Summary (PCS) score, EQ-5D-3L (self-completion) Falls: Falls (incidents / only pts had fell / last 3 months), Falls (pts fell once or more / last 3 months) Mortality: Deaths (reported as loss to follow-up) Outcomes not included in this review because insufficient data were reported: Living at home: Living at home (calculated, from losses to follow up) Costs: Costs to health care and social services Other outcomes not specified as of interest for this review: Acceptability of the intervention Adult Social Care Outcomes Toolkit (ASCOT) Caregiver Strain Index (CSI) Length of intervention (Reablement) Use of health and community services
Timepoints	Outcomes were measured at 8 weeks, 5 months and 8 months
Funding and conflicts of interest	Funding: Non-commercial Sources: National Institute for Health Research (NIHR) (UK) - Doctoral Research Fellowship Conflicts of interest: None declared.
Notes	

Table 126. Williams 1992[485, 486] study characteristics

Methods	Aims: To evaluate a programme of timetabled visiting by Health Visitor Assistants (HVAs) to patients over 75 years old who were recently discharged from hospital. Design: Randomised Controlled Trial

Participants	Characterisation: Patients over 75 who were recently discharged from hospital Country: UK Setting: Community (post-discharge): participant's home Enrolment started before 2006 Participants assigned: 470 Inclusion criteria: Aged over 75 Discharged from hospital over a one-year period Returned to their own or a relative's home Exclusion criteria: None reported Female: 59% Age: 52 per cent (243) were aged 75-79 years, 32 per cent (152) were aged 80-84 years, 13 per cent (59) were aged 85-89 years and 3 per cent (16) were aged 90 years and over. Has informal carer: 86% Living alone: 44% Ethnicity: not reported. Dependence and disabilities: Disability level (0-12+) mean score Intervention 8.0 Control 7.8 Mean Townsend score = 8.3 Self-care score = 3.1 Significant comorbidities: Not stated Health status: Physical status (0-31) mean score Intervention 5.7 Control 6.1 Overall physical status: No problems (score 0): n=30 (7%) Moderate problems (score 1 - 5): n=203 (44%) Fairly severe problems (score 6 - 10): n=155 (34%) Severe problems (score 11 - 15): n=49 (11%) Very severe problems (score 16+): n=24 (5%) Cognitive status: Mean mental status score = 3.3 Good mental status (scores 1 - 5): n=358 (78%) Poor mental status (scores 6 - 10): n=85 (18%) Very poor mental status (scores 11 or more): n=17 (4%) Mood status: Mental status (0-24) mean score Intervention 3.2 Control 3.1 Could only control their anxiety when otherwise occupied: n=63 (13%) Could not control their anxiety: n=63 (13%)

	Occasionally depressed: n=63 (31%) Frequently or constantly depressed: n=56 (12%) Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: discharged from hospital >75
Interventions	2 groups Intervention 1: Experimental intervention. 231 participants. Health Visitor Assistants timetabled visits, following post-discharge visit by a health visitor. Grouped as: Multifactorial-action and review Intervention 2: Control intervention. 239 participants. Post-discharge visit by a health visitor. Grouped as: Multifactorial-action
Outcomes	Outcomes included in NMA: Mortality: Deaths (from routine data) Tabulated outcomes: Personal and instrumental activities of daily living: Townsend Disability Scale (9 items, 0-18) Other outcomes not specified as of interest for this review: Health status was assessed by asking patients about their health and abilities. Questions related to four health status measures: physical status, mental status disability level and ability to undertake personal self-care. The physical status score was based on four questions about mobility, and questions on appetite, continence, and difficulties with vision, hearing, eating, sleeping and breathing. The mental status score was based on questions on anxiety, depression and memory. Home circumstances, informal support, their use of social and nursing services (both statutory and voluntary), their needs for help from social services and their needs for information on financial benefits.
Timepoint	Outcomes were measured at 12 months
Funding and conflicts of interest	Funding: Non-commercial Sources: South Cumbria Health Authority Conflicts of interest: None stated
Notes	1. Per-protocol: Total 8 visits set for IG, if <4 visits received, excluded from analysis. 2. Subgroup analyses to analyse relationships between outcomes and participants' characteristics.

Table 127. Wolter 2013[487-490] study characteristics

Methods	Aims: To assess whether the RAI can help to improve or stabilise functional abilities and cognitive skills, improve quality of life, and reduce institutionalisation, thereby increase outcome quality. Design: Cluster RCT Clustering accounted for. Details: Cluster unit= home care services
Participants	Characterisation: People in need of care Country: Germany Setting: Community: home care services Enrolment started in 2007 Clusters assigned: 69 Participants assigned: 920 Inclusion criteria: Need for long-term care according to Social Code Book XI. Exclusion criteria: Not reported Female: 65% Age: Mean = 78.9 Has informal carer: not reported. Living alone: 48% Ethnicity: Not reported Dependence and disabilities: 45.2% were assessed at dependency level I 35.7% at dependency level II 14.9% at dependency level III. The remaining clients were not entitled to long-term care insurance benefits. Care provision (h/week): IG= 7.76 CG= 4.76. ADL (mean): IG= 26.30 CG= 27.33 IADL (mean): IG= 15.47 CG= 15.13 Significant comorbidities: Not reported Health status: EQ-5D-3L (mean): IG= 0.38 CG= 0.36 Cognitive status: MMST (mean): IG= 21.02 CG= 22.27 Mood status: Not reported Frailty status: frail Based on characteristics and criteria: homecare
Interventions	2 groups Intervention 1: Experimental intervention.

	36 clusters, 543 participants. Resident Assessment Instrument in home care settings (including nursing). Grouped as: Homecare, multifactorial-action and review with medication review Intervention 2: Control intervention. 33 clusters, 377 participants. Usual home care services (including nursing). Grouped as: Homecare
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Instrumental activities of daily living: IADL (RAI Home Care) (7 items, 0-23) Care home admission: Care-home placement (survivors/follow-up) Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Personal activities of daily living: ADL (RAI Home care) (10 items, 0-66) Hospitalisation: Hospitalisation (pts hospitalised once or more) Health status: EQ-5D-3L (self-completion) Outcomes not included in this review because insufficient data were reported: Hospitalisation: Hospitalisation (admissions) Other outcomes not specified as of interest for this review: ADL (maintained independence) Cognitive skills (Mini-Mental State Test, MMST) Job satisfaction (Nurses only, 0d, 7m) Copenhagen Psychosocial Questionnaire (COPSOQ) (nurses only, 13m) Documentation of the nursing process (%pts have care plan)
Timepoint	Outcomes were measured at 13 months
Funding and conflicts of interest	Funding: Non-commercial Sources: German Ministry of Education and Research (BMBF). Conflicts of interest: No conflicts of interest, financial or otherwise, to declare.
Notes	1. ICC=0.08 assumed in sample calculation. 2. Sub-group analysis conducted, by splitting IG into optimal users and suboptimal users (Stolle *et al.*, 2015).

Table 128. Wong 2019[491-495] study characteristics

Methods	Aims: To examine the effectiveness and cost-effectiveness of a preventive self-care health management program for community-dwelling older adults as compared to usual care. Design: Randomised Controlled Trial
Participants	Characterisation: community-dwelling older adults Country: Hong Kong Setting: Participant's residence Enrolment started in 2016

	Participants assigned: 540 Inclusion criteria: 1. People aged 60 or above 2. Living within the service area 3. Cognitively competent with Chinese version Mini-Mental Status Examination (C-MMSE) with score ≥ 20 (Wong, *et al.*, 2011) Exclusion criteria: 1. not able to communicate, 2. bedbound 3. not able to be reached by phone 4. not living at home 5. having known active psychiatric problems and recent hospitalisation within the previous 6 months 6. being already engaged in structured health or social programs and 7. not intending to stay in Hong Kong over the subsequent 3 months. Female: 75% Age: Mean (SD) = 78 (7.9); Range: 60 to 105 Has informal carer: not reported. Living alone: 52% Ethnicity: Not stated Dependence and disabilities: Not stated Significant comorbidities: Not stated Health status: Not stated Cognitive status: Not stated Mood status: Depression mean (SD) Control 4.6 (3.4) Intervention 4.6 (3.6) Frailty status: all (robust, pre-frail and frail) Based on characteristics and criteria: over 60
Interventions	2 groups Intervention 1: Experimental intervention. 271 participants. Health-social partnership intervention programme. Home-based health-social partnership intervention programme, with nurse case management and self-care empowerment Grouped as: Multifactorial-action and review with self-management strategies Intervention 2: Control intervention.

	269 participants. Usual care with placebo social calls. Grouped as: Available care
Outcomes	Outcomes included in NMA: Living at home: Living at home (calculated, from losses to follow up) Care home admission: Care-home placement (survivors/follow-up) Tabulated outcomes: Hospitalisation: Hospitalisation (days or nights), Hospitalisation (admissions) Health status: SF-6D (QOL from SF-12), QALY from SF-12 Mortality: Deaths (reported as loss to follow-up) Outcomes of interest with bespoke measures: Instrumental activities of daily living Outcomes not included in this review because insufficient data were reported: Personal activities of daily living: Barthel Index (MBI, Modified version, Shah 1989) Instrumental activities of daily living: Nottingham Extended Activities of Daily Living (NEADL) (0-22) Costs: Costs to health services + participant/carer Cost effectiveness: ICER - QALY (SF-12) Health status: SF-12: Physical component summary, SF-12: mental component summary Depression: Geriatric Depression Scale (GDS 15) (Sheikh & Yesavage, 1986) Other outcomes not specified as of interest for this review: Hospital emergency department (visits) Self-efficacy belief in self-care management at home (General Self-Efficacy Scale – Chinese version (CGSE), 10-item) Change of medication adherence to chronic medications (Morisky Medication Adherence Scale MMAS-8) Physical activity level for the elderly (PASE-C) Mini Nutritional assessment (MNA-SF) Global item of life satisfaction (5-point scale) Blood pressure Blood glucose BMI Number of public/private GP visits Attendance to government outpatient clinics and private GPs
Timepoints	Outcomes were measured at 3 months and 6 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Research Grants Council of the Hong Kong Special Administrative Region Conflicts of interest: None.
Notes	1. Sensitivity analyses were conducted to capture the uncertainties around the cost effectiveness parameters. 2. The missing data were imputed using multiple imputation by chained equation.

Table 129. Yamada 2003[496] study characteristics

Methods	Aims: To investigate the effects of preventive home visits by public health nurses based on the MDS-HC on elderly people who were dependent in instrumental activities of daily living (IADL) but not ADL. Design: Randomised Controlled Trial
Participants	Characterisation: Aged 65 and over, dependent in IADLs but independent in ADLs Country: Japan Setting: Participants' homes Enrolment started in 1999 Participants assigned: 368 Inclusion criteria: i) community-dwelling elderly people, aged 65 years and older; (ii) dependent in the performance of instrumental activities of daily living (IADL); (iii) independent in activities of daily living (ADL) Exclusion criteria: - who were fully dependent in either the mobility or the personal care item of the EQ-5D were excluded as 'disabled'; - and those who were independent in all IADL, or dependent in one or two IADL, but rated their own health as excellent, were excluded as 'healthy'; - An additional exclusion criterion for healthy people was added later because having some IADL disabilities does not necessarily mean that such people are frail. - those who were receiving scheduled visits from nurses in existing home care programs and those who refused to participate. Female: 63% Age: Mean (SD) = 78.7 (7.1) Has informal carer: not reported. Living alone: 9% Ethnicity: not reported. Dependence and disabilities: EQ-5D-3L items: Mobility – any problem (n): IG=122 (66.3%) CG=116 (63.4%) Self-care – any problem (n): IG=40 (21.7%) CG=44 (23.9%) Usual activities – any problem (n): IG=124 (67.4%) CG=120 (65.2%) Significant comorbidities: Not reported Health status: EQ-5D score (mean, SD): 0.682 ± 0.164 Cognitive status: Not reported Mood status: EQ-5D items, n (%) - any (moderate or extreme) problem Anxiety/depression - IG 74 (40.2%); CG 67 (36.4%)

	Frailty status: pre-frail and frail Based on characteristics and criteria: Criteria were independent in PADL but dependent in IADL
Interventions	2 groups Intervention 1: Experimental intervention. 184 participants. Preventive home visits based on Minimum Data Set-Home Care. Grouped as: Multifactorial-action and review with medication review Intervention 2: Control intervention. 184 participants. Usual care. Grouped as: Available care
Outcomes	Outcomes included in NMA: Mortality: Deaths (reported as loss to follow-up) Tabulated outcomes: Health status: EQ-5D-5L (self-completion) Outcomes not included in this review because insufficient data were reported: Instrumental activities of daily living: IADL Summary Scale (InterRAI, MDS-IADL scale) Hospitalisation: Hospitalisation (pts hospitalised once or more/ last 12 months) Health status: Health Perception (EVGFP / 1-5, SF-36) Other outcomes not specified as of interest for this review: Recent changes in health behaviors in various aspects, such as eating regularly, doing physical exercise, and having time to relax. Frequency of going out of the home (from the MDS-HC) Types of advice given by the Public Health Nurse to IG Participant's compliance with advice Use of healthcare services
Timepoint	Outcomes were measured at 18 months
Funding and conflicts of interest	Funding: Non-commercial Sources: Ministry of Health and Welfare in Japan. Conflicts of interest: Not mentioned.
Notes	n=512 were randomised, but n=144 were 'randomly excluded'

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