



Public Health
England

Protecting and improving the nation's health

The older adults' NHS and social care return on investment tool

Technical report

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1. Introduction

1.1 Background

A project report is available, which contains the summary of the methods used, and discussion of the key results of the ROI modelling¹. This accompanying Technical Report contains further detail of the literature review process, the process of assessment and prioritisation of interventions for inclusion in the tool, and the detailed modelling methods used.

1.2 Interventions included in the tool

Based on evidence from the literature review, and informed through discussion with expert Steering Group members, the following 9 interventions are included in the ROI tool:

- community singing
- a help at home scheme
- a befriending service
- the WHELD intervention for people living with dementia in nursing home
- the INTERCOM intervention providing hospital discharge support for COPD patients
- bundle of voluntary and community sector (VCS) services aimed at patients with long-term conditions, using social prescribing and other approaches to put patients in touch with services
- health coaching delivered by inter-professional health and social care services
- the BELLA intervention providing self-management support for COPD patients
- a home care reablement service

Please note that interventions looking at preventing falls were outside the scope of this project. A description of the interventions in the tool is provided in the main report. The studies underpinning each of the interventions are listed in Section 6 References.

¹ The Older Adults' NHS and Social Care Return on Investment Tool. Project Report. Public Health England. December 2019

2. Project governance and user engagement

The project work was led by a Project Team at PHE and overseen by a multi-disciplinary Steering Group. The development of the ROI tool was also informed by a User group.

2.1 Steering Group

The Steering Group met regularly throughout the project, to comment on the methods used and the outputs over the course of the project, provide advice on the project approach and agree key decisions. A Project Initiation Document was signed off by the Steering Group in August 2018. The Steering Group included representatives from the following organisations:

- PHE
- Department for Health and Social Care
- NICE
- commissioners of adult social care services in local authorities

In addition to the core Steering Group, PHE sought to involve other key stakeholders, such as academics with an interest in social care, in commenting on key outputs from the project. A workshop of academic experts was held towards the end of the literature review stage, to seek views on the potential interventions being considered for inclusion in the tool.

At the concluding stage of the literature review, approval from the Steering group was obtained to proceed to Phase Two of the project, having found sufficient economic evidence to develop an ROI tool. Steering Group members were given the opportunity to give feedback on the ROI tool, the Project Report and Technical Report.

2.2 User group

The Project Team recognised the need for engagement with people involved in commissioning health and social care interventions and also potential end-users of the ROI tool. Prior to commencing the project, PHE carried out user consultation via a Discovery Workshop, to inform the scope of the project and generate information on priorities, enablers and barriers to commissioning social care services for older people. A User Group of similar individuals was convened to comment on a prototype of the tool and provide comments to the Steering Group. A virtual meeting with the User Group to demonstrate a prototype of the tool was held in April 2019.

3. Literature search and review

A literature review protocol was developed which included the proposed eligibility criteria, the search stages and the process for study selection and data extraction. The eligibility criteria agreed by the Steering Group are set out in Table 3.1.

Table 3.1: Eligibility criteria for the review

	Eligible studies	Ineligible studies
Population	People 65 years and over	People under the age of 65
Interventions	Interventions relating to the interaction between NHS and social care Digital technology Interventions supporting the health of carers Building community capacity Interventions that support self-care and empowerment for people with long term conditions Practical support Supported housing	Studies not including these interventions and studies including multiple interventions (i.e. not only these interventions)
Comparators	Any similar intervention No intervention	Studies including multiple interventions where the relevant data are not reported separately
Outcomes	Cost-effectiveness outcomes e.g. cost per condition prevented, total cost savings, return on investment, cost per QALY, productivity gains Effectiveness outcomes for social care or health outcomes: Social care outcomes, e.g. changes in social care packages, numbers of people requiring care home places. Health outcomes e.g. number of hospitalisations.	Studies not reporting cost-effectiveness or effectiveness outcomes.
Study design	Any comparative study design that reports the outcomes specified. Studies need to include an evaluation comparing costs and/or outcomes of 2 or more options.	Studies not reporting comparative outcomes.
Limits	Evidence in English Evidence available as full text e.g. journal articles, reports, theses	Evidence in languages other than English Evidence in abstract form only e.g. abstracts of conference presentations

3.1 Search context

Identifying studies relevant to the protocol eligibility criteria presented a number of search challenges. Studies on older people may not explicitly describe an older population in the database record if older people are not the sole target of the intervention (e.g. personal budgets, bundle of voluntary and community sector (VCS) services aimed at patients with long-term conditions). In other studies, the older population may be implied rather than explicit (e.g. an intervention for dementia patients is likely to be in a largely elderly population but may not specify this in the title and abstract). However, not restricting the search to records explicitly referring to older people would result in the retrieval of large numbers of records, the majority of which would be irrelevant.

The interventions referred to in the eligibility criteria were mainly 'umbrella' terms, which encompassed a wide range of potentially eligible interventions (e.g. "digital technologies") and / or required further definition / specification for them to be searchable (e.g. "interventions that support self-care and empowerment for people with LTCs"). The research team decided not to further define or specify the interventions of interest within the umbrella categories prior to running the searches. It was therefore difficult to develop robust search terms to retrieve relevant studies reporting on all potentially eligible interventions. Furthermore, searching using generic terminology for social care alone was unlikely to be sufficiently sensitive; general social care search terms are not always present in the title and abstract of relevant database records - only the specific intervention is explicitly described, rather than the context.

The challenges of this search context, and search options, were discussed within the research team. In this context, and in the context of project timelines and resources, it was decided that a traditional "big bang" database search (that might be conducted for a systematic review of clinical interventions for example) was not feasible, and could potentially result in a search methodology with both poor sensitivity and low precision. Instead, it was decided to conduct several rounds of targeted, pragmatic searches. This approach would prioritise finding a manageable number of highly relevant papers, rather than attempting to provide 'comprehensive' retrieval of all of the relevant literature.

The planned rounds of searching were:

1. Searches for studies reporting Adult Social Care Outcomes Toolkit (ASCOT) or ICEpop CAPability measure for Older people (ICECAP-O) outcome measures.
2. Targeted, pragmatic searches for economic evaluations, resource use or health state utility value studies of social care interventions in older people.
3. Harvesting of studies from relevant studies and reviews.
4. Targeted web searches.
5. Analysis of material provided from PHE and topic experts.
6. Citation searches and / or author searches.
7. Targeted, gap-filling searches.

This approach is more iterative than traditional database search approaches. It was agreed that not all search rounds would be required if sufficient evidence was identified by the earlier rounds of searching.

3.2 Search methods

The search strategies for each of the rounds are described below. Where possible, the results of searches were downloaded in a tagged format and imported into bibliographic management software (EndNote). Results from resources which did not allow export in a format compatible with EndNote were added manually. One EndNote Library was used for the results of all of the database searches in order to prevent the same record being screened multiple times, maximising efficiency. The results were deduplicated using several algorithms and the deduplicated references held in a duplicates EndNote database for checking if required.

3.2.1 Search for studies reporting Adult Social Care Outcomes Toolkit (ASCOT) or ICEpop CAPability measure for older people (ICECAP-O) outcome measures

A search strategy was designed to identify studies reporting ASCOT or ICECAP-O outcome measures in MEDLINE (Ovid). The final MEDLINE strategy used is shown in Figure 3.1.

The search comprised 2 concepts: ASCOT (search lines 1 to 10) OR ICECAP (search line 11).

The strategy was devised using a combination of free text search terms in the title, abstract and keyword heading word fields. Clearly irrelevant material that used the same acronym as ASCOT was excluded using NOT (search lines 4 to 10). This included records referring to the A Severity Characterisation of Trauma scale and the Anglo-Scandinavian Cardiac Outcome Trial. The search strategy was only designed to identify studies where the named measure was explicitly referred to in the title, abstract or keyword heading word fields of the database record. It was not designed to identify studies where the named measures were only referred to in the full text.

The search strategy excluded animal studies from MEDLINE using a standard algorithm (search line 13) and also excluded publication types which were unlikely to yield relevant information (news items, comments, editorials, letters, and single case reports) and records with the phrase 'case report' in the title field (search line 14).

Figure 3.1: ASCOT and ICECAP search strategy: final strategy used for Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily

- 1 ascot.ti,ab,kf. (334)
- 2 (adult social care outcome\$ tool-kit\$ or adult social care outcome\$ toolkit\$).ti,ab,kf.
(26)
- 3 1 or 2 (339)
- 4 (severity characterisation of trauma or severity characterization of trauma).ti,ab,kf.
(30)
- 5 (trauma\$ adj3 (score\$ or scoring or survival or outcome\$)).ti,ab,kf. (8108)
- 6 (triss or injury severity score or glasgow coma scale).ti,ab,kf. (14786)
- 7 (hypertension or hypertensive\$ or antihypertensive\$ or blood pressure\$ or coronary or
cardiovascular).ti. (529185)
- 8 (AngloScandinavian Cardiac Outcome\$ Trial or Anglo-Scandinavian Cardiac
Outcome\$ Trial).ti,ab,kf. (147)
- 9 or/4-8 (549590)
- 10 3 not 9 (113)
- 11 (icecap or icepop or icecapo or icecapa).ti,ab,kf. (95)
- 12 10 or 11 (199)
- 13 exp animals/ not humans/ (4490072)
- 14 (news or comment or editorial or letter or case reports).pt. or case report.ti.
(3575020)
- 15 12 not (13 or 14) (173)
- 16 remove duplicates from 15 (173)

Key to Ovid symbols and commands:

- \$ Unlimited right-hand truncation symbol
- ti,ab,kf Searches are restricted to the Title, Abstract or Keyword Heading Word fields
- adjN Retrieves records that contain terms (in any order) within a specified number (N) of
words of each other
- / Searches are restricted to the Subject Heading field
- exp The subject heading is exploded
- pt. Search is restricted to the publication type field
- or/4-8 Combines sets 4 to 8 using OR

The MEDLINE strategy was translated appropriately for a range of other databases and information resources. Table 3.2 shows the databases and information sources searched. Appendix AA contains the full strategies (including search dates) for all sources searched.

Table 3.2: Databases and information sources searched for ASCOT and ICECAP searches

Resource	Interface / URL
MEDLINE, MEDLINE In-Process, MEDLINE Daily and Epub Ahead of Print	Ovid SP
Embase	Ovid SP
Cochrane Central Register of Controlled Trials (CENTRAL)	Cochrane Library / Wiley
Applied Social Science Index and Abstracts (ASSIA)	ProQuest
Social Policy and Practice (includes Social Care Online database)	Ovid SP
Social Services Abstracts	ProQuest
CINAHL Plus	EBSCO
EconLit	Ovid SP
PsycINFO	Ovid SP
NHS Economic Evaluation Database (NHS EED)	CRD Database
SchHARRHud	https://www.scharrhud.org/
ASCOT webpages	https://www.pssru.ac.uk/ascot/
ICECAP webpages	https://www.birmingham.ac.uk/research/activity/mds/projects/HaPS/HE/ICECAP/index.aspx

3.2.3 Targeted, pragmatic searches for economic evaluations, resource use or health state utility value studies of social care interventions in older people

A pragmatic search strategy was developed in Social Policy and Practice (Ovid) to identify studies of social care interventions in older people which were economic evaluations or which reported on resource outcomes or health state utility values (HSUVs). The final Social Policy and Practice strategy used is shown in Figure 3.2.

The research team decided that the overall search approach and selection of search terms should be informed by the searches undertaken to inform the recent NICE commissioned, Centre for Health Economics (CHE) scoping review of social care economic evaluation methods.²

² https://www.york.ac.uk/media/che/documents/papers/researchpapers/CHERP150_social_care_evaluation_methods.pdf

The search comprised 3 concepts:

- older people (search lines 1 to 4)
- economic evaluations / resource use (search lines 5 to 26)
- HSUVs (search lines 27 to 40)

The concepts were combined as follows: older people AND (economic evaluations / resource use OR HSUVs).

The strategy was devised using free text search terms in the title, abstract, descriptors and heading word fields. Resource use terms use were designed to identify records which explicitly refer to generic resource use (e.g. hospitalisation or admission) or resource use specific to placement in residential care. HSUV terms were designed to identify records which explicitly included terms highly relevant to the HSUVs concept.

In order to target the most recent research the search strategy was limited to studies published from 2008 to date.

Figure 3.2: Economic, resource use and HSUV studies search strategy for Social Policy and Practice (Ovid)

- 1 (elder\$ or aging or geriatric\$ or gerontol\$ or senior citizen\$ or seniors or pensioner\$ or veteran\$ or sexagenarian\$ or septuagenarian\$ or octogenarian\$ or nonagenarian\$ or centenarian\$).ti,ab,de,hw. (38011)
- 2 ((old or older or aged) adj3 (patient\$1 or people\$ or person\$ or woman\$ or women\$ or man or mans or men or mens or male\$1 or female\$ or adult\$ or population\$ or resident\$ or client\$ or consumer\$ or service user\$ or community or communities or individual\$ or citizen\$)).ti,ab,de,hw. (86019)
- 3 (aged care or old\$ age or oldest old or later life).ti,ab,de,hw. (7557)
- 4 or/1-3 (90887)
- 5 (((economic\$ or cost\$) adj3 model\$) or (monte carlo or markov)).ti,ab,de,hw. (710)
- 6 ((econom\$ or cost or costs or costing or price or pricing) adj3 (analysis or analyses or evaluation\$1 or study or studies)).ti,ab,de,hw. (2870)
- 7 ((economic\$ or cost) adj3 (effect\$ or utilit\$ or benefit\$ or consequence\$ or outcome\$1 or minimi\$)).ti,ab,de,hw. (5577)
- 8 ((economic\$ or cost or costs or value) adj4 (decision\$1 or threshold\$)).ti,ab,de,hw. (163)
- 9 (value adj2 (money or monetary)).ti,ab,de,hw. (1374)
- 10 (return on investment or ROI).ti,ab,de,hw. (139)
- 11 budget impact\$.ti,ab,de,hw. (2)
- 12 (decision\$ adj2 (tree\$ or analy\$ or model\$)).ti,ab,de,hw. (485)
- 13 resource\$1.ti. (1849)
- 14 (resource\$1 adj4 (use\$1 or usage or utilit\$ or utilis\$ or utiliz\$)).ti,ab,de,hw. (1453)

- 15 (visit or visits or visited).ti,ab,de,hw. (3217)
- 16 appointment\$.ti,ab,de,hw. (897)
- 17 (hospitalization\$1 or hospitalisation\$1 or hospitalised or hospitalized).ti,ab,de,hw. (961)
- 18 (admission\$1 or readmission\$1 or admitted or readmitted).ti,ab,de,hw. (5168)
- 19 (placement\$ or care package\$ or support package\$).ti,ab,de,hw. (7425)
- 20 ((place\$ or move\$ or moving) adj3 (home\$1 or facility or facilities or residential)).ti,ab,de,hw. (1824)
- 21 hospital stay\$1.ti,ab,de,hw. (234)
- 22 (bed adj3 day\$1).ti,ab,de,hw. (90)
- 23 ((days or time or length or duration\$1) adj3 (hospital\$ or home\$1 or facility or facilities or residential)).ti,ab,de,hw. (633)
- 24 ((days or time or length or duration\$1) adj3 (stay or stays or stayed)).ti,ab,de,hw. (543)
- 25 ((days or time or length or duration\$1) adj3 (discharge or discharged)).ti,ab,de,hw. (86)
- 26 or/5-25 (29430)
- 27 (quality adjusted or adjusted life year\$).ti,ab,de,hw. (101)
- 28 (qaly\$ or qald\$ or qale\$ or qtime\$).ti,ab,de,hw. (73)
- 29 (illness state\$1 or health state\$1).ti,ab,de,hw. (52)
- 30 (hui or hui1 or hui2 or hui3).ti,ab,de,hw. (8)
- 31 (multiattribute\$ or multi attribute\$).ti,ab,de,hw. (6)
- 32 (utility adj3 (score\$1 or valu\$ or health\$ or cost\$ or measur\$ or disease\$ or mean or gain or gains or index\$)).ti,ab,de,hw. (99)
- 33 (utility loss\$ or disutilit\$).ti,ab,de,hw. (3)
- 34 utilities.ti,ab,de,hw. (220)
- 35 (eq-5d or eq5d or eq-5 or eq5 or euro qual or euroqual or euro qual5d or euroqual5d or euro qol or euroqol or euro qol5d or euroqol5d or euro quol or euroquol or euro quol5d or euroquol5d or eur qol or eurqol or eur qol5d or eur qol5d or eur?qul or eur?qul5d or euro\$ quality of life or european qol).ti,ab,de,hw. (112)
- 36 (euro\$ adj3 (5 d or 5d or 5 dimension\$ or 5dimension\$ or 5 domain\$ or 5domain\$)).ti,ab,de,hw. (18)
- 37 sf\$.ti,ab,de,hw. (511)
- 38 (short form\$ or shortform\$).ti,ab,de,hw. (285)
- 39 (time trade off\$1 or time tradeoff\$1 or tto or timetradeoff\$1).ti,ab,de,hw. (8)
- 40 or/27-39 (1209)
- 41 4 and 26 (7942)
- 42 4 and 40 (464)
- 43 41 or 42 (8288)
- 44 limit 43 to yr="2008 -Current" (3006)
- 45 remove duplicates from 44 (2995)

Key to Ovid symbols and commands:

\$	Unlimited right-hand truncation symbol
\$1	Limited right-hand truncation symbol - restricts the number of characters following the word to N
ti,ab,de,hw	Searches are restricted to the Title, Abstract, Descriptor and Heading Word fields
adjN	Retrieves records that contain terms (in any order) within a specified number (N) of words of each other
or/1-3	Combines sets 1 to 3 using OR

The Social Policy and Practice strategy was translated appropriately for a range of other databases and information resources. Searches were conducted primarily in resources that contain social care or economic research. Reflecting the pragmatic search context, the research team decided that large, multidisciplinary databases (e.g. Scopus, Science and Social Science Citation Indexes) or biomedical databases (MEDLINE, Embase) would not be included.

The structure of the search in each resource was informed by the coverage of the resource and the number of records returned. For non-social care resources, an additional social care interventions and settings context concept was introduced. In the absence of specific, agreed named interventions of interest, the research team agreed that terms for this concept would be informed by the terms used in the strategies in the Centre for Health Economics (CHE) scoping review of social care economic evaluation methods³, terms used to describe interventions in the eligibility criteria, and terms used to describe interventions in the project initiation document. An English language limit was applied where this was appropriate and supported by the database. In particularly high yielding databases, an additional limit to focus on UK studies was added.

Table 3.3 shows the databases and information sources searched. Appendix AB contains the full strategies (including search dates) for all sources searched.

³ https://www.york.ac.uk/media/che/documents/papers/researchpapers/CHERP150_social_care_evaluation_methods.pdf

Table 3.3: Databases and information sources searched for economic evaluations, resource use or health state utility value studies of social care interventions in older people

Resource	Interface / URL
Applied Social Science Index and Abstracts (ASSIA)	ProQuest
Social Policy and Practice	Ovid SP
Social Services Abstracts	ProQuest
EconLit	Ovid SP
PsycINFO	Ovid SP
NHS Economic Evaluation Database (NHS EED)	CRD Database
SchARRHud	https://www.scharrhud.org/
Campbell Collaboration Library	https://campbellcollaboration.org/library.html
Database of Abstracts of Reviews of Effects (DARE)	CRD Database
Cochrane Database of Systematic Reviews (CDSR)	Cochrane Library / Wiley

3.2.3 Harvesting of studies from relevant studies and reviews

The economic reviews undertaken to inform the following NICE guidance were checked for eligible studies:

- NG74 intermediate care including reablement
- NH22 older people with social care needs and multiple long-term conditions
- NG21 home care - delivering care and practical support to older people living in their homes
- NG96 care and support of older people growing older with learning disabilities
- NG32 older people - independence and wellbeing

Studies were also harvested from existing relevant reviews known to the research team or identified by previous rounds of searching.

3.2.4 Targeted web searches

Targeted searches of the webpages of the following key organisations were conducted:

- Public Health England
- National Institute for Health and Care Excellence
- Social Care Institute for Excellence
- Personal Social Services Research Unit
- Economics of Social and Health Care Research Unit
- EPPI-Centre
- Age UK

- Joseph Rowntree Foundation
- Association of Directors of Adult Social Services
- King's Fund
- Nuffield Trust
- Centre for Ageing and Development Research Ireland
- Institute for Research and Innovation in Social Services
- NIHR School for Social Care Research

Details of the targeted web searches are found in Appendix AC.

3.2.5 Material provided from PHE and topic experts

No formal call for evidence was carried out, but studies passed to us by PHE, the steering group, or otherwise known to the research team were eligible for inclusion.

3.2.6 Citation searches and/or author searches

The project protocol stated that all search stages might not be required should sufficient evidence be identified by the earlier rounds. The research team decided that sufficient evidence had been identified by the earlier rounds of searching, therefore this round of searching was not required.

3.2.7 Gap filling searches

Following the assessment and prioritisation stages it was agreed that some further targeted searches would be conducted to seek evidence of interventions with evidence of economic impact but where literature was lacking some details for the purposes of developing the ROI tool. Searches were conducted for further evidence on the following interventions:

- inter-professional working
- self-management for COPD
- telecare/assistive technology
- hospital discharge support (INTERCOM)

Details of the search strategies used are found in Appendix AD.

3.3 Search results

The searches identified 9,201 records (Table 3.4). Following deduplication, 5,441 records were assessed for relevance by screening against the agreed eligibility criteria using title and abstract.

Table 3.4: Literature search results

ASCOT and ICECAP searches	
Resource	Number of records identified
MEDLINE, MEDLINE In-Process, MEDLINE Daily and Epub Ahead of Print	173
Embase	196
Cochrane Central Register of Controlled Trials (CENTRAL)	50
Applied Social Science Index and Abstracts (ASSIA)	25
Social Policy and Practice	38
Social Services Abstracts	22
CINAHL Plus	130
EconLit	12
PsycINFO	62
NHS Economic Evaluation Database (NHS EED)	7
SchARRHud	6
ASCOT webpages	27
ICECAP webpages	6
Total number of records retrieved	754
Total number of records after deduplication	292
Economic, resource use and HSUV studies searches	
Resource	Number of records identified
Applied Social Science Index and Abstracts (ASSIA)	1,837
Social Policy and Practice (includes Social Care Online database)	2,995
Social Services Abstracts	490
EconLit	372
PsycINFO	882
NHS Economic Evaluation Database (NHS EED)	871
SchARRHud	146
Campbell Collaboration Library	4
Database of Abstracts of Reviews of Effects (DARE)	260
Cochrane Database of Systematic Reviews (CDSR)	261
Total number of records retrieved	8,118
Total number of records after deduplication (within-set and against the ASCOT and ICECAP search results)	7,154
Total number of records after 'first-pass'	5,112

Targeted web searches	
Resource	Number of records identified
Public Health England website	22
National Institute for Health and Care Excellence website	10
Social Care Institute for Excellence website	58
Personal Social Services Research Unit website	104
Economics of Social and Health Care Research Unit website	3
EPPI-Centre website	4
Age UK website	44
Joseph Rowntree Foundation website	14
Association of Directors of Adult Social Services website	3
King's Fund website	18
Nuffield Trust website	11
Centre for Ageing and Development Research Ireland website	1
Institute for Research and Innovation in Social Services website	1
NIHR School for Social Care Research website	5
Additional (e.g. following links)	13
Total number of records retrieved	311
Harvesting of studies from relevant studies and reviews	
Total number of records retrieved	5
Additional studies (e.g. material provided from PHE and topic experts)	
Total number of records retrieved	13
TOTAL number of records retrieved	9,201
TOTAL number of records for screening	5,441

The additional targeted searches found a small number of additional records, as shown in Table 3.5.

Table 3.5: Outcome of the targeted literature searches

Intervention	No. records after screening for relevance	No. records after assessing for economic evidence
Self-management for COPD	12	2
Telecare / assistive technology	21	2
Hospital discharge	0	0
Inter professional working	9	2

4. Assessment and prioritisation of interventions

Following title/abstract screening of the 5,441 records, 150 were found to contain potentially relevant information.

In order to arrive at this set of interventions, a process of assessment and prioritisation was followed, as described below:

1. Preliminary data extraction
2. Stakeholder / expert workshop
3. Confidence in the evidence of cost effectiveness
4. Assessment of where benefits fall
5. Full data extraction
6. Assessment of population information and UK relevance
7. Assessment of modelling assumptions
8. Additional targeted literature searching
9. Final assessment

An overview of the process is shown in Figure 4.1. For practical reasons, in the early stages of the review work, papers were grouped into 'intervention types' e.g. care co-ordination, housing, telecare. Following the full data extraction stage, the interventions included in each paper were no longer grouped and were reported individually as 'individual interventions'. The interventions which were removed at each of these stages is summarised in Table 4.1.

Figure 4.1: Overview of the Assessment and Prioritisation Process

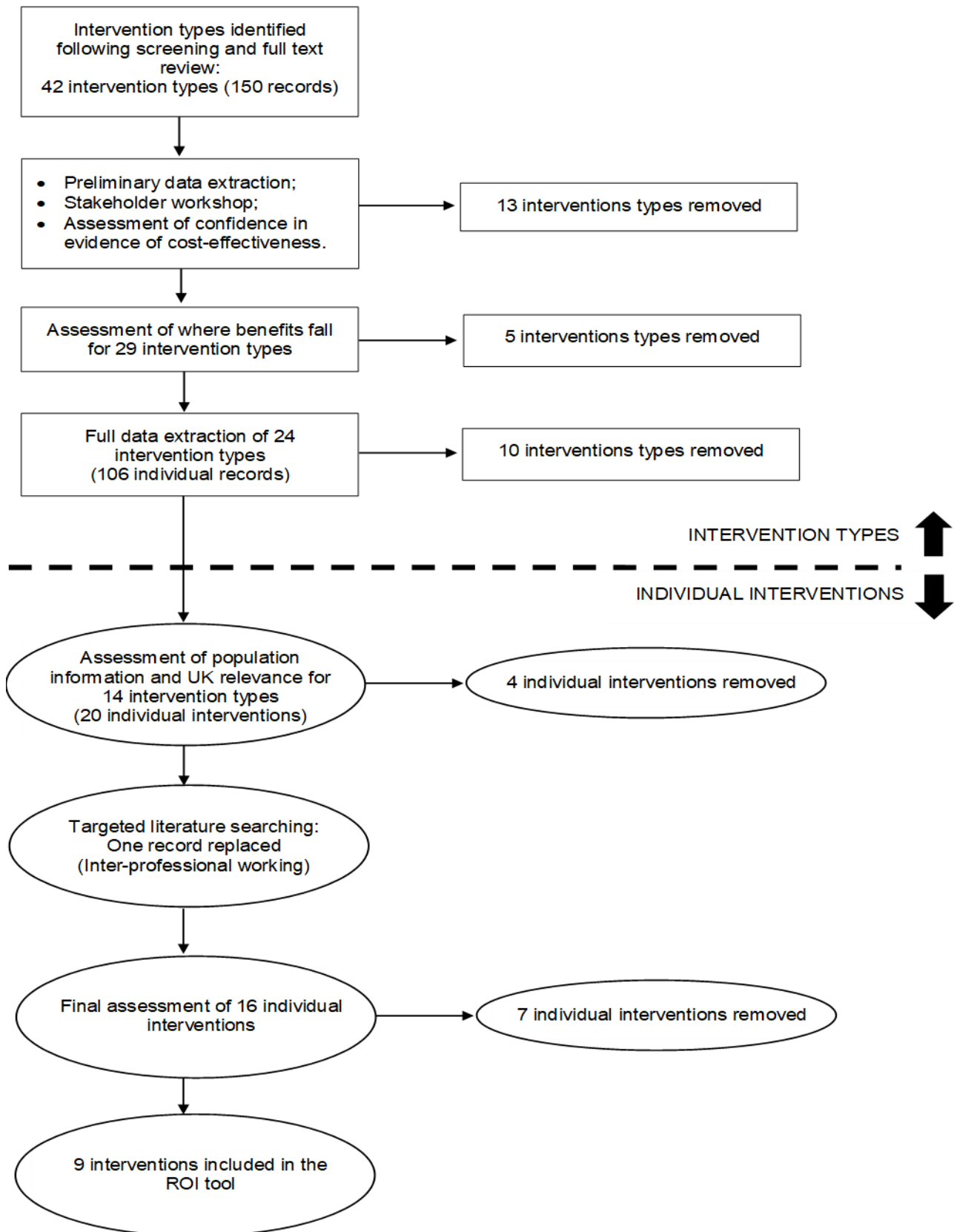


Table 4.1: Intervention removed at each stage of the assessment and prioritisation process

Stage	Interventions / intervention types removed
Confidence in the evidence	Various support for carers Community capacity: Other (various) Integration: Geriatric/frailty intervention Self-management: Diabetes (DESMOND) Self-management: Other Care co-ordination: Preventive home visits Dementia: Carers support Dementia: Case management Integration: Community MH teams Self-management: Telephone linked care Telehealth (COPD) Telehealth (CVD) Individual budgets
Assessment of where benefits fall	Housing: Other Integration: Other Timebanks Warm homes scheme Telehealth (multiple conditions)
Full data extraction	Patient / community navigators: Community Agents (Redcar & Cleveland) Dementia: non-pharmacological interventions: Tailored Activity Program (TAP) in USA Dementia: non-pharmacological interventions: range of cognitive, exercise, music therapy Housing adaptations and modifications: preventive housing interventions for disabled and vulnerable Housing adaptations and modifications: five-year investment programme to upgrade dwellings to a 'Lambeth Housing Standard' Integration: Inter-professional working: integrated care for elderly depressed patients in USA Integration: Inter-professional working: proactive case coordination Integration: Inter-professional working: services provided to people with long term conditions and other complex needs Physical activity: Community based schemes: for stroke survivors and carers/family Physical activity: Community based schemes: weekly 2-hour sessions with OT in USA Physical activity: Community based schemes: 'Be Active' Birmingham – residents' free access to leisure centres Physical activity: Community based schemes: time-limited exercise classes (VCS) -T'ai Chi course; a chiropody service; a rehabilitation course Practical support: Help at home schemes: preventative support services (handyperson, telecare, equipment, housing support) Practical support: Help at home schemes: community POPPS projects: e.g. housing repairs, gardening squads etc. Practical support: Help at home schemes: Living Well scheme (volunteer led) Reablement: general: bed based intermediate care Reablement: rehabilitation: 3-week intensive exercise training (IET) program directly following hospital discharge in patients with rheumatic diseases in the Netherlands

Stage	Interventions / intervention types removed
	Reablement: rehabilitation: Occupational therapy based, community based geriatric rehabilitation in the USA. Self-management: Chronic pain: EXTRA programme, for people with Rheumatoid Arthritis Self-management: COPD: supervised exercise sessions in a self-management programme for COPD patients in France.
Assessment of population information and UK relevance	Patient / community navigators (Galbraith et al 2017) Befriending (Optimity advisors, for NICE, 2015) Integration: Inter-professional working (NICE, 2015) Physical activity: Community based schemes (Davis et al, 2010; Davis et al, 2011)
Additional targeted literature searching	Inter-professional working (Opinder et al, 2017)
Final assessment	Extracare housing (Goswell, 2014; Frontier Economic, 2010; Batty, 2017; IPC, 2011) Telecare/assistive technology (Goodacre, 2008; Clifford et al, 2012). Exercise for depression in care homes (Underwood, 2013) Social care led care planning approach – IBSEN (NICE, 2015) Dementia - early diagnosis (Banerjee et, 2009) British Red Cross help at home (Dixon et al, 2014) Reablement (NICE, 2017)

4.1 Preliminary data extraction

The purpose of the preliminary data extraction was to inform the feasibility assessment and assess the extent of evidence on the different intervention types found in the literature review. The information extracted for each record was agreed by the Steering Group, as follows:

Heading	Description
Bibliographic details	Author, title, publication details
Intervention	What is the intervention?
Category	Selected from a drop-down list of categories and sub-categories
Comparator	What is the intervention being compared to?
Study design	e.g. RCT, cohort study
Age of study population	Describe age of patients/service users in 'study'
Country	What country did the intervention take place in?
Scale of intervention	e.g. community singing in one community would be classed as small; Extracare housing would be large
Payer	Which organisation pays for the intervention e.g. health/social care/joint funding?
Beneficiary	Which organisation benefits from the intervention? Where do the benefits fall?
Results	Brief summary of what the evidence is saying/which outcomes are measured? i.e. patient outcomes, resource use
Strength of evidence	High/medium/low - overall assessment of how good the evidence is based on study design and results
Notes	Any other important details

To facilitate discussion of the literature findings at this stage, the interventions were grouped into categories and sub-categories. These can be seen in Table 4.2.

Table 4.2: Intervention categories and sub-categories

Category	Sub-category	Number of records
Care co-ordination	Patient / community navigators	3
	Preventive home visits (care co-ordination)	1
	Bundle of VCS services for people with LTCs	1
	Other	1
Carers	Various support for carers	1
Community capacity	Social isolation/tackling loneliness	2
	Community arts	2
	Befriending	3
	Day services for older people	2
	Timebanks	1
	Other	6
Dementia	Carers support	1
	Case management	2
	Early diagnosis	1
	Nursing home interventions /tailored activity, OT, CST	2
	Non-pharmacological interventions	1
Housing	Extracare/lifestyle housing	10
	Handyperson scheme/care and repair	5
	Housing adaptations and modifications	6
	Sheltered housing/ specialist housing schemes	1
	Warm homes scheme	1
	Other	3
Integration	Community MH teams	1
	Geriatric/frailty intervention	2
	Hospital discharge support	8
	Inter-professional working	9
	Other	2
Physical activity	Community based schemes	8
	Remote support (e.g. telephone)	2
Practical support	Help at home schemes	8
Reablement	General	13
	Rehabilitation	8
Self-management	Chronic pain	2
	COPD	2
	Diabetes (DESMOND)	1
	Telephone linked care	1
	Other	1
Telecare/telehealth	Assistive technology at home	8
	Telehealth (COPD)	1
	Telehealth (CVD)	3
	Telehealth (multiple conditions)	2
Other	Individual budgets	1
	Multiple interventions	11

The strength of the evidence for the different interventions varied, from single case studies, to RCTs and systematic reviews. A judgement on strength of evidence was made, based on a combination of the study design and the results reported. For example, if a strong study design, such as a randomised control trial, concluded that evidence for cost effectiveness was weak, this was classified as low strength evidence of cost effectiveness. Equally, if a single case study found positive results, this was classed as low strength evidence, due to the study design. Interventions were eligible for inclusion whether they were more effective and less costly or more effective and more costly. If a strong study design showed weak evidence, this was still classed as weak evidence. The records judged to have stronger evidence of cost effectiveness were those with strong study design and showing positive results. Where there were several studies for one type of intervention, there was often a combination of study designs, so the overall judgement was based on the evidence across the different study designs.

The strength of evidence for the different categories, based on the approach described above, is summarised in Table 4.3.

Table 4.3: Summary of evidence strength for intervention categories

Strength of evidence of cost effectiveness/cost impact	Intervention
Strong	Dementia: Early diagnosis Dementia: Nursing/care home intervention Dementia: Non-pharmacological interventions Physical activity: Community based schemes
Strong/medium	Care co-ordination: Patient navigators Dementia: Carers support Housing: Extracare/lifestyle housing Integration: Geriatric/frailty intervention Physical activity: Remote support Reablement: General reablement Reablement: Rehabilitation Self-management: Diabetes
Medium	Care co-ordination: Bundle of VCS services for people with LTCs Care co-ordination: Local area co-ordination Community capacity: Community singing Dementia: Case management Housing: Sheltered housing/ specialist housing schemes Housing: Warm homes scheme Practical support/help at home Self-management: COPD Self-management: Chronic pain Self-management: 'self-assessment for low level services' Telecare/telehealth: Telehealth (COPD) Telecare/telehealth: Telehealth (CVD)
Medium/low	Community capacity: Befriending Community capacity: Social isolation/loneliness Community capacity: Day services for older people Housing: Housing adaptations and modifications Housing: Other

Strength of evidence of cost effectiveness/cost impact	Intervention
	Integration: Hospital discharge support: Integration: Inter-professional working Integration: other Telecare/telehealth: Telecare/assistive technology at home
Low	Care co-ordination: home visits Carers support Community capacity: timebanks Housing: Handyperson scheme/care and repair Integration: Community MH teams Telecare/telehealth: Telehealth (multiple conditions)

4.2 Stakeholder/expert workshop

A stakeholder workshop was held on 22 November 2019 to obtain views on the outcome of the preliminary data extraction and advise on the best way to use the evidence. Following the workshop discussion, it was agreed that the next stage of prioritisation should focus on 'confidence in the evidence', ranking the interventions according to this criterion. The attendees at the workshop advised that while the 'hierarchy of evidence' could inform this assessment, evidence based on less robust methods (e.g. case studies) should not be dismissed, due to the difficulty of carrying out studies such as RCTs in a social care context.

4.3 Further examination of confidence in evidence of cost effectiveness

The aim of doing a further assessing of the 'confidence in the evidence' was to produce a 'long-list' for further consideration, removing those interventions where there was low confidence in the cost-effectiveness evidence. A score and comment was allocated to each intervention type, based on the number of records for each intervention type showing positive cost-effectiveness results, quality of study design and country of evidence, as follows.

Concepts relevant to judging confidence on evidence:

- Number of records supporting case for cost effectiveness (i.e. positive results):
 - More than one record showing positive results (2)
 - One record showing positive results (1)
 - Mixed results from more than one record (1)
- Quality of study design - regardless of hierarchy of evidence (requires a quick assessment of the paper – full critical appraisal not practical at this stage):
 - All well designed studies (2)
 - Mixed quality of study design (1)
 - All average/poorly designed studies (0)

- Country of evidence:
 - UK only (2)
 - International including UK (1)
 - Overseas only (0)

Based on the total score and summary comments, a recommendation whether to take each intervention forward was made (Yes, Maybe or No). Following a steer from PHE, the interventions categorised as No were dropped at this point. The interventions removed at this stage are shown in Table 4.1.

4.4 Assessment of where benefits fall

It was viewed to be important that the interventions included in the tool contributed economic benefit to either social care services and/or societal benefits in the form of improved quality of life (evidenced by QALY measurement). It was decided that those interventions which only showed financial benefits to the NHS and had no impact on social care services or quality/quantity of life, should be dropped as they were not relevant to the scope of the project. The records were reviewed for this information and those without benefits to health or social care services were dropped. The outcome of this assessment can be seen in Table 4.4.

Table 4.4: 'Yes' and 'Maybe' interventions screened for benefits reported

Intervention	Outcome of Stage 1 Prioritisation			Benefits reported				Comments from screening
	Score	Take forward to Stage 2?	Comments	Social care	NHS	Wellbeing	QOL measure	
Extracare/lifestyle housing: compared to usual housing	6	Yes	Evidence split for the purposes of different comparator but consider as one intervention for Stage 2.	Yes	Yes	Yes	Yes	KEEP
Extracare/lifestyle housing: compared to a care setting	6	Yes		Yes	Yes	Yes		KEEP
Help at home schemes	6	Yes	All UK evidence	Yes	Yes	Yes	Yes	KEEP
Community singing	5	Yes	Evidence seems good	Yes	Yes	Yes	Yes	KEEP
Dementia: Non-pharmacological interventions	5	Yes	Evidence seems good			Yes	Yes	NICE review contains different interventions - mostly cognitive or exercise-based therapies. Main outcome of US study is benefits to time spent care giving / carer burden KEEP.
Housing adaptations and modifications	5	Yes	These interventions are to some extent similar to the handyperson scheme, depending on scale. Be clear about the scale of the intervention if included in tool.	???	Yes	Yes	Yes	More emphasis on health benefits but social care institutional benefits are mentioned. KEEP
Integration: Hospital discharge support	5	Yes	Nature and scale of interventions reported on is variable so will need to be clear on specific intervention if included in tool.	???	Yes	Yes	Yes	More emphasis on health/healthcare benefits. Social care institutional benefits speculated. KEEP
Integration: Inter-professional working	5	Yes	Nature and scale of interventions reported on is variable so will need	Yes	Yes	Yes	Yes	KEEP

Intervention	Outcome of Stage 1 Prioritisation			Benefits reported				Comments from screening
	Score	Take forward to Stage 2?	Comments	Social care	NHS	Wellbeing	QOL measure	
			to be clear on specific intervention if included in tool.					
Physical activity: Community based schemes	5	Yes	Several different types of interventions listed, so need to be clear on specific intervention if included in tool. Intervention for city dwellers is possibly less relevant for the target age group for the tool.	Yes	Yes	Yes	Yes	KEEP
Reablement: General	5	Yes	Good range of evidence, possibly reflecting the research focus on what was a 'new model of care' development when first introduced.	Yes	Yes	Yes	Yes	KEEP
Assistive technology at home	5	Yes	All UK evidence	Yes	Yes	Yes	Yes	KEEP
Patient / community navigators	4	Yes	Good US evidence and UK case study shows potential but need more info.	Yes	Yes	Yes	Yes	UK paper has summary ROI figure only. Knapp et al {5457} reports benefits mainly re debt and housing and QOL. KEEP
Befriending	4	Yes	Evidence seems good	NR	Yes	Yes	Yes	Refer to Knapp et al {5457} for further evidence and modelling. Cost savings mentioned more in NHS. KEEP
Day services for older people	4	Yes	Information from case study is sparse	Yes	Yes	Yes	Yes	Benefits to resource use are implied. KEEP

Intervention	Outcome of Stage 1 Prioritisation			Benefits reported				Comments from screening
	Score	Take forward to Stage 2?	Comments	Social care	NHS	Wellbeing	QOL measure	
Handyperson scheme/care and repair	4	Maybe	Main cost savings seem to come from prevented falls so may be overlap with other ROI tool?	Yes	Yes	Yes	Yes	Some benefits arise from falls prevention. Home assessment and modification is one of the 4 interventions in the falls ROI tool. Need to see more detail in papers to know if social care benefits arise only from falls prevention vs generally maintaining independence. KEEP
Housing: Other	4	Maybe	Interventions are multi-faceted, including some of the other housing interventions already listed. There may be the potential to focus on the impact on delayed discharge and social care placements.		Yes	Yes		Health service focussed: helping with hospital discharges. Examples of GPs involved in MDT housing interventions. LOSE
Integration: Other	4	Maybe	Mental health support may be more relevant than the advance care planning intervention.					Advance care planning has better study design than mental health. LOSE
Reablement: Rehabilitation	4	Maybe	Evidence of cost effectiveness seems mixed.	Yes	Yes	Yes	Yes	KEEP
Self-management: Chronic pain	4	Maybe	Benefits mostly in healthcare and for patient wellbeing		Yes		Yes	KEEP
Self-management: COPD	4	Maybe	Benefits mostly in healthcare and for patient wellbeing		Yes		Yes	KEEP

Intervention	Outcome of Stage 1 Prioritisation			Benefits reported				Comments from screening
	Score	Take forward to Stage 2?	Comments	Social care	NHS	Wellbeing	QOL measure	
Bundle of VCS services for people with LTCs	3	Maybe	Good evidence but just one study on bundle of voluntary and community sector (VCS) services aimed at patients with long-term conditions		Yes	Yes	Yes	QALY implied due to wellbeing values in summary findings. Focus on work, money, feeling positive. Avoided healthcare use mentioned. KEEP
Care co-ordination: Local area coordinators	3	Maybe	Evidence looks convincing but case studies are heterogeneous so may be tricky to define a 'typical intervention'.	Yes		Yes		KEEP
Timebanks	3	Maybe	Not age specific - possibly more focussed on working age adults	??	Yes	Yes		Potential savings are speculated. LOSE
Community capacity: Other (various)	3	No	Too heterogeneous but individual reports include positive economic findings for timebanks, community navigators and befriending. POPPS reports support case for interventions for reducing social isolation, improving wellbeing.					Added evidence for timebanks, community navigators and befriending. Timebanks benefits mainly re employment, Navigators benefits mainly re debt and housing and QOL. Befriending benefits in QOL and health service use.
Dementia: Early diagnosis	3	Maybe	Good evidence but just one study	Yes	Yes	Yes	Yes	KEEP
Dementia: Nursing home interventions	3	Maybe	Good evidence but just one study	Yes	Yes		Yes	Reduces nursing home costs KEEP

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Intervention	Outcome of Stage 1 Prioritisation			Benefits reported				Comments from screening
	Score	Take forward to Stage 2?	Comments	Social care	NHS	Wellbeing	QOL measure	
/tailored activity, OT, CST								
Sheltered housing/ specialist housing schemes	3	Maybe	Good evidence but just one study	Yes	Yes	Yes		Social care savings due to falls prevention KEEP
Warm homes scheme	3	Maybe	Good evidence but just one study		Yes	Yes		Healthcare benefits only and not quantifiable QOL LOSE
Physical activity: Remote support (e.g. telephone)	3	Maybe	May be too little UK evidence		Yes	Yes	Yes	KEEP
Telehealth (multiple conditions)	3	Maybe	Mixed evidence. Focussed searches would probably find more on this topic.		Yes	Yes		LOSE

This reduced the number of records in the database to 106, covering 24 intervention types, which were taken forward to the full data extraction stage, as summarised in Table 4.5.

Table 4.5: Summary results of the Stage 1 prioritisation assessment: intervention types

Interventions	Number of interventions	Number of records to extract
Extracare/lifestyle housing: compared to usual housing Extracare/lifestyle housing: compared to a care setting Help at home schemes Community singing Dementia: Non-pharmacological interventions Housing adaptations and modifications Integration: Inter-professional working Physical activity: Community based schemes Reablement: General Assistive technology at home Handyperson scheme/care and repair Reablement: Rehabilitation Care co-ordination: Local area coordinators Dementia: Early diagnosis Dementia: Nursing home interventions /tailored activity, OT, CST Sheltered housing/ specialist housing schemes Befriending Day services for older people Integration: Hospital discharge support Self-management: Chronic pain Self-management: COPD Bundle of voluntary and community sector (VCS) services aimed at patients with long-term conditions Patient / community navigators Physical activity: Remote support (e.g. telephone)	24	104

4.5 Full data extraction

In order to develop the ROI functionality in the tool, it was necessary to have quantitative information on the inputs and outcomes associated with the intervention. The next step was to undertake a full data extraction, to review the records for specific details on inputs and outcomes so the most appropriate and robust record (and its data) could be selected upon which to base the ROI calculations in the tool. This stage also included a quality assessment based on the Appraisal Checklist for Economic Evaluations, in Appendix H of the NICE Process and Methods manual. The full list of data extraction fields can be found in Appendix C.

The full data extraction resulted in some records being considered unsuitable due to there being insufficient cost information included in the record, or the quality assessment revealing that the record has limitations. There were also 8 'duplicates' found, which were those records reporting the same study in a different source or format.

The table in Appendix D shows the synthesised results from the full data extraction for each intervention (98 excluding duplicates). Where the intervention details are the same, these are listed together. The assessment as to whether to take the intervention forward to the next stage is interpreted as follows:

Take forward?	Meaning
Yes	There appears to be sufficient information available in the record
Maybe	Insufficient data available in the paper. Would need further searches to fill the gaps
No	The record was unsuitable, contained no cost information or was deemed to be poor quality.

The table also includes the population detail specific to each intervention, indicating the local level population data which would be needed for each intervention to be localised. Interventions are UK based unless otherwise stated.

Following discussion with the Steering group, it was agreed that those interventions assessed as 'Yes', plus a small number of the 'Maybes' would be taken forward. The remainder that were dropped from the long list at this stage are shown in Table 4.6.

Table 4.6: Interventions removed following full data extraction stage

Intervention
Patient / community navigators: Community Agents (Redcar & Cleveland)
Dementia: non-pharmacological interventions: Tailored Activity Program (TAP) in USA
Dementia: non-pharmacological interventions: range of cognitive, exercise, music therapy
Housing adaptations and modifications: preventive housing interventions for disabled and vulnerable
Housing adaptations and modifications: five-year investment programme to upgrade dwellings to a 'Lambeth Housing Standard'
Integration: Inter-professional working: integrated care for elderly depressed patients in USA
Integration: Inter-professional working: proactive case coordination
Integration: Inter-professional working: services provided to people with long term conditions and other complex needs
Physical activity: Community based schemes: for stroke survivors and carers/family
Physical activity: Community based schemes: weekly 2-hour sessions with OT in USA
Physical activity: Community based schemes: 'Be Active' Birmingham – residents' free access to leisure centres
Physical activity: Community based schemes: time-limited exercise classes (VCS) -T'ai Chi course; a chiropody service; a rehabilitation course
Practical support: Help at home schemes: preventative support services (handyperson, telecare, equipment, housing support)

Intervention
Practical support: Help at home schemes: community POPPS projects: e.g. housing repairs, gardening squads etc.
Practical support: Help at home schemes: Living Well scheme (volunteer led)
Reablement: general: bed based intermediate care
Reablement: rehabilitation: 3-week intensive exercise training (IET) program directly following hospital discharge in patients with rheumatic diseases in the Netherlands
Reablement: rehabilitation: Occupational therapy based, community based geriatric rehabilitation in the USA
Self-management: Chronic pain: EXTRA programme, for people with Rheumatoid Arthritis
Self-management: COPD: supervised exercise sessions in a self-management programme for COPD patients in France

4.6 Assessment of population information and UK relevance

The intention was for the tool to be pre-populated with local data on the population eligible for each intervention. For some interventions, where the population was less well defined, it was not clear if this would be possible as it included specific characteristics other than age e.g. 50+ years in care homes. The next step was to assess in more detail the population information for each of these interventions, and any information which may be pertinent to 'transferability' (i.e. UK relevance).

An assessment was made about the potential availability to the project team of local level data in order to pre-populate the tool. A desk review exercise was undertaken, plus suggestions on data sources were sought from the Steering Group. As a result of this assessment, we recommended excluding interventions where we would be unlikely to find the information, where specific individual level characteristics would make it difficult for local areas to estimate target populations, and where the evidence was from countries where the health and social care systems differed to the UK. The interventions removed at this stage are shown in Table 4.7.

Table 4.7: Interventions removed from assessment of population data and UK relevance

Intervention type (author)	Intervention details	Population information	Likelihood of population information being available	UK relevance	Recommendation on whether to include in next stage
<p>Patient / community navigators (Galbraith et al 2017)</p>	<p>Patient navigators (PNs) working in community on transitional care in USA.</p> <p>Provide hospital visits and outreach visits for 30 days post discharge. The intervention protocol goal was one hospital visit and 3 completed calls.</p> <p>Prior to discharge, the PNs conducted introductory visits with the patient and caregivers to assess post discharge needs; assist patients with communication related to post discharge concerns; discuss the importance of obtaining new medications, having timely outpatient follow-up with the patient's primary care provider in the CHA (?) system, and reporting concerning symptoms; and arrange for follow-up. They also alerted the patient's primary care provider about the discharge.</p>	<p>Patients being discharged from hospital described as 'high-risk safety-net patients'.</p> <p>Patients receiving the intervention had at least one risk factor for readmission (age > 60; admitted to hospital within the past 6 months; LOS ≥3 days; or admission diagnosis of heart failure or COPD); had a primary care provider within the system; and had an observation stay or inpatient admission on the general medicine service.</p> <p>Majority of benefits were found in the over 60s.</p>	<p>Unlikely to be available to us or to local areas as it requires individual level data on specific characteristics</p>	<p>USA based intervention</p>	<p>No – population data unlikely to be available to us or to local areas and population may not be transferable due to the evidence being international.</p>
<p>Befriending (Optimity advisors, for NICE, 2015)</p>	<p>Friendship programmes in Netherlands (Onrust et al. 2008). Participants received 10-12 one-to-one visits by widowed volunteers at home, which aimed to provide participants with a chance to express feelings and receive information and practical help. Volunteers delivering the intervention had received 6 training sessions and were supervised by a coordinator who themselves had received training.</p>	<p>For individuals aged 55 and over who had been widowed in the past year and had moderate or strong feelings of loneliness.</p>	<p>Unlikely to be available to us or to local areas as it requires individual level data on specific characteristics.</p>	<p>Dutch intervention</p>	<p>No – population data unlikely to be available to us or to local areas, so there is a risk of areas applying the evidence to other populations, when it is not necessarily transferable.</p>

Intervention type (author)	Intervention details	Population information	Likelihood of population information being available	UK relevance	Recommendation on whether to include in next stage
<p>Integration: Inter-professional working (NICE, 2015)</p>	<p>Integrating health and/or social care planning and professional input. Based on the American GRACE model: an in-home comprehensive geriatric assessment from case managers, used to create an individualised care plan discussed with the MDT. (GRACE: Geriatric Resources for Assessment and Care of Elders). An outpatient, multidisciplinary geriatric team (composed of a geriatrician, pharmacist, physical therapist, mental health social worker, community-based services liaison, practice manager and administrative assistant) plus case management (performed jointly by an advanced practice nurse and social worker).</p>	<p>Defined as those with a 40%+ chance of hospital admission, a measure constructed by the authors on the basis of patient age, sex, perceived health, availability of an informal caregiver, heart disease, diabetes, physician visits and hospitalisations. Mean 72 years, 64% female, 57% black, 67% with less than 12 years of education, 75% with low socioeconomic status (defined as having household income less than \$10,000 per year).</p>	<p>Unlikely to be available to us or to local areas as the criteria for selecting the population for the intervention requires a 'tool' we don't have access to.</p>	<p>USA based intervention, used to inform NICE guidelines on elements of care and support to older people with social care needs and multiple long-term conditions.</p>	<p>No – population data unlikely to be available to us or to local areas, so there is a risk of areas applying the evidence to other populations, when it is not necessarily transferable.</p>
<p>Physical activity: Community based schemes (Davis et al, 2010; Davis et al, 2011)</p>	<p>Two intervention groups: once-weekly resistance training, twice-weekly resistance training, compared with twice-weekly balance and tone classes (all 60-min duration). The resistance training program used a progressive, high-intensity protocol. (In Canada). Study in 2011 followed up participants after 21 months.</p>	<p>Community-dwelling women aged 65 to 75 years, living in community. Participants were excluded if they were unable to write and speak English, were partaking in resistance training in the last 6 months, and had a current medical condition for which exercise is contraindicated, had a neurodegenerative disease, and were taking cholinesterase inhibitors, being treated currently for depression or on hormone replacement therapy during the previous 12 months. Mean age 69 years.</p>	<p>Unlikely to be available to us or to local areas as it requires individual level data on specific characteristics.</p>	<p>Canadian intervention</p>	<p>No – population data unlikely to be available to us or to local areas, so there is a risk of areas applying the evidence to other populations, when it is not necessarily transferable.</p>

4.7 Assessment of modelling assumptions

The next stage was to conduct further assessment and critical appraisal of the detail in each study, to understand any assumptions that would be needed for the ROI modelling and also to select the strongest evidence where there was more than study on the same intervention. The summary in Table 4.8 gives brief details of each intervention, the eligible population, plus the assessment of the evidence and population data availability. The availability of cost and outcome data is mentioned only if this was viewed to be inadequate for the ROI modelling.

Table 4.8: Intervention modelling assessments

Intervention details	Population information	Data availability	Evidence conclusion	Recommendation to take forward
<p>Bundle of voluntary and community sector (VCS) services aimed at patients with long-term conditions (Dayson et al, 2014)</p> <p>A voluntary and community sector (VCS) liaison service, referring to other funded services. Participants were identified by GP surgeries using a risk stratification tool. Advisers discussed patients at risk of unplanned hospital admission within the integrated case management teams and patients identified as needing non-clinical means of support to improve their health and wellbeing were referred to the social prescribing scheme. Advisers then carried out a home visit. The 5 most common types of funded services referred to were information and advice, community activity, physical activities, befriending and enabling.</p>	<p>1,607 patients were identified by GP surgeries using a risk stratification tool and referred to the service during the pilot. 87% were aged 60 or over.</p> <p>The risk stratification identified the top 5% most intensive users of services, who were therefore eligible for case management.</p>	<p>This data is not available nationally. However, In 2013/14, the Primary Care Enhanced Service 'Risk Profiling and Care Management Scheme', required CCGs to use a risk profiling tool to identify patients at highest risk of admission to hospital. A number of different tools are available which may be commissioned to support CCGs and practices to identify this group e.g. Artemus. Identifying the patients most suitable for case management has been a common practice prior to the Enhanced Service being introduced.</p> <p>We believe it is likely that local areas will have data on this patient group.</p>	<p>Wellbeing benefits show statistical significance. Cost savings do not have statistical power.</p> <p>Benefits also quoted for VCS and value of volunteering.</p>	<p>Include</p> <p>Using the study quoted and potentially contact the author for more detail if required.</p>

Intervention details	Population information	Data availability	Evidence conclusion	Recommendation to take forward
<p>Befriending (Kanpp et al, 2011)</p> <p>Typically, befriender visits person in their home 1:1 and the individual has asked/agreed to be "befriended". 1hr/week or fortnight. Unstructured with no formal defined goal. Participants matched for interests.</p>	<p>Intervention presumed to be targeted at the lonely, isolated individual over 50.</p>	<p>A number of potential sources of data for this group at local level:</p> <ul style="list-style-type: none"> - Adult Social Care Survey (socially isolated – national figure by age and by LA (not age) - GP Patient survey ('feeling isolated from others') - POPPI – provides data for people living alone 65+ - Risk stratification tools with frailty index may have information on social isolation as a domain of eFI. 	<p>Sound study. Detail on input costs breakdown is lacking so input cost per patient would need to be used as quoted (plus inflation).</p>	<p>Include</p> <p>Using the study quoted and potentially contact the author for more detail if required.</p>
<p>Community singing (Coulton et al, 2015)</p> <p>A 14-week 90-minute programme of participative singing for older people, to improve mental health-related quality of life. Groups are led by facilitators over 90-minute sessions. Participants volunteered for the programme on the basis of publicity. Took place in 5 centres in East Kent.</p>	<p>All those expressing an interest and aged 60 or over were eligible. No specific inclusion criteria. 258 patients were eligible and consented to participate in the study. The mean age was 69 years (s.d. 7.14); the majority were female (84%) and white (98%).</p>	<p>Age profiles are available nationally. As the numbers of eligible people will be high, local areas may wish to enter a 'proportion eligible' into the tool.</p>	<p>Has statistically significant QALY gains. Evidence for service utilisation not statistically significant.</p>	<p>Include</p> <p>Using the study quoted and potentially contact the author for more detail if required.</p>
<p>Dementia: Early diagnosis (Banerjee et, 2009)</p> <p>Based on the Croydon Memory Service Model – a multi-disciplinary and interagency team to generate early diagnosis in a timely manner, enabling choice and forward planning while people have capacity. Provides early diagnosis of dementia as well as</p>	<p>The service is designed to assess all incident cases of dementia in a given population. The modelling is based on the population of 65+ years.</p>	<p>Data on dementia prevalence in 65+ available from POPPI. Also, local areas have access via primary care registered prevalence (diagnoses).</p>	<p>The findings are based on prospective modeling of scenarios, using evidence from other clinical studies.</p>	<p>Maybe include</p> <p>Would need to make clear that is based on modelled findings and not observed effectiveness data in this study.</p>

Intervention details	Population information	Data availability	Evidence conclusion	Recommendation to take forward
<p>information and direct medical, psychological and social help to patients and their families.</p>				
<p>Dementia: Nursing/care home interventions (Ballard et al, 2018)</p> <p>The WHELD programme: person centred care and psychosocial interventions for agitation in dementia sufferers living in nursing homes. Combines staff training, social interaction, and guidance on use of antipsychotic medications. The intervention also involved the development of a system for triggering appropriate review of antipsychotic medications by the prescribing physician attached to each home.</p>	<p>People with dementia living in 69 UK nursing homes. 847 individuals were randomised to WHELD or standard care. The majority of participants had moderately severe or severe dementia, and 71% were female. Average age was 86.6 years.</p>	<p>At national level, we have data on prevalence of dementia and proportions living in residential/ nursing homes (Alzheimer's Research UK), so could provide a national estimate.</p> <p>LAs/CCGs may have more accurate information on dementia beds in care homes in their area.</p>	<p>Statistically significant improvement in QoL, plus other statistically significant benefits (e.g. agitation). Reduced cost compared to standard care.</p>	<p>Include</p> <p>Using the study quoted and potentially contact the author for more detail if required.</p>
<p>Extracare housing - compared with home (Goswell, 2014; Frontier Economics, 2010; Batty, 2017; IPC, 2011)</p> <p>Self-contained accommodation, 24 hr support, some collective meal provision, range of leisure and other facilities on site, range of tenure options and varying size of developments.</p> <p>Records cover a range of schemes, some with more specific eligibility requirements.</p>	<p>Dorset: Aimed at older people 65+ but also those with care and support needs (could be under 65)</p> <p>Wales: Two-thirds of residents 75+, 63% female, 37% male. Mix of residents with support and/ or care needs.</p> <p>England overall: Mixed vulnerabilities in study, including older people (analysed separately). May be at risk in the community, dependent on others, vulnerable, physically incapacitated,</p>	<p>Adult Social Care survey provides data on level of support needed for daily living.</p> <p>Groups have mixed care needs so unlikely to have national data for the different profiles. Local areas may have more detail to update assumptions.</p>	<p>Studies show highly complex costing requirements, with variability around the country dependent on land purchase and construction costs. Level of detail required is thought to be beyond scope of ROI tool.</p>	<p>Maybe include.</p> <p>Need to look into the applicability of the evidence for current context.</p>

Intervention details	Population information	Data availability	Evidence conclusion	Recommendation to take forward
	<p>need assistance to cope with some daily or domestic tasks. No age range or mean given. Bradford: Residents aged between 59 and 92, with a mean of 78 years. Mixed care needs.</p>			
<p>Extracare housing - compared with other care home (Baumker, 2011)</p> <p>Extracare retirement villages (19 schemes, mixed housing tenures) located in Midlands and Northern England</p>	<p>For individuals previously admitted to a residential care home. Mean age 77 yrs and 66% female.</p>	<p>POPPI has numbers 65+ living in care homes.</p>	<p>As above</p>	<p>Maybe include.</p> <p>Need to look into the applicability of the evidence for current context.</p>
<p>Hospital discharge support (COPD) (Hoogendoorn et al, 2010)</p> <p>INTERCOM programme in Netherlands, consisted of exercise training, education, nutritional therapy and smoking cessation counselling offered by community-based physiotherapists and dieticians and hospital-based respiratory nurses.</p> <p>Included a 4-month standardised, supervised, intensive intervention phase, and a less intensive, less-standardised 20-month maintenance phase.</p>	<p>199 patients with COPD and impaired exercise capacity were recruited by respiratory physicians of 2 general hospitals in the Netherlands. Patients did not have prior rehabilitation or serious comorbidity that precluded exercise training. Mean age 66 years.</p>	<p>National estimates and LA estimates of total population aged 65 and over predicted to have a longstanding health condition caused by bronchitis and emphysema.</p> <p>Local areas could update with data from QOF registers for COPD.</p>	<p>A QALY gain of 0.08 (Not statistically significant) was reported as well as the percentage of patients who will have an improvement in SGRQ. Both could be incorporated into the model with QALYs monetised for a societal ROI.</p>	<p>Include</p> <p>Make clear it is a Dutch study so would need to value using UK units.</p>

Intervention details	Population information	Data availability	Evidence conclusion	Recommendation to take forward
<p>Inter-professional working (Opinder et al, 2017)</p> <p>Community In-reach Rehabilitation and Care Transition (CIRACT) service: an OT, physiotherapist, assistant practitioner, linked to a social worker, working with patients and carers.</p>	<p>Frail older people aged 70 years and older admitted to hospital as an acute medical emergency. Recruited from general medical elderly care wards at the Queen's Medical Centre, with community follow-up.</p>	<p>Hospital Episode Statistics contain admissions by CCG by age. Would need to apply an assumption on prevalence of frailty.</p> <p>Potentially could use the risk profiling data described for Rotherham scheme above.</p>	<p>The study was a pilot and too small for statistical significance. The non-statistically significant differences showed reduction in initial length of stay with community rehab but higher readmission rates.</p>	<p>Maybe include.</p> <p>Could do a targeted search for better evidence on interprofessional working.</p>
<p>Exercise for depression in care home residents (Underwood, 2013)</p> <p>Exercise for depression in care home residents - 'whole-home' exercise intervention, consisting of training for care home staff backed up with a twice-weekly, physiotherapist-led exercise group (compared with depression awareness training for staff).</p>	<p>Care home residents' ≥ 65 years. Individual patients excluded were: those with a terminal illness, those who were too ill to be seen at the time of assessment or who had severe communication problems, or those for whom the care home manager felt the study was not suitable for some other reason.</p>	<p>POPPI has data on 65+ in care homes, by LA.</p>	<p>No statistically significant change in QoL from baseline for intervention or control (depression awareness training for staff). Not clear whether exercise would have been more effective than doing nothing.</p>	<p>Don't include.</p>

Intervention details	Population information	Data availability	Evidence conclusion	Recommendation to take forward
<p>Volunteer led practical support (Bauer et al, 2017)</p> <p>Help at home community scheme in Shropshire, England - volunteer-provided face-to-face and telephone befriending scheme; a practical home help service for gardening, shopping and cleaning; and welfare benefit advice service. Whilst personal care was not provided as part of the scheme, people were assessed for and referred elsewhere for this type of support.</p>	<p>Older people aged 55 years and above living in their own homes. Of the 603 participants, 140 were carers for their spouse. 91% of respondents to wellbeing and resource use survey were 75+ years.</p>	<p>Census data available.</p>	<p>Statistically significant reductions in resource use (hospital/care home) and increases in ASCOT scores (non-significant). Lots of detail on costs.</p>	<p>Include.</p> <p>Using the study quoted and potentially contact the author for more detail if required.</p>
<p>Social care led care planning approach (NICE, 2015)</p> <p>Based on the IBSEN study: social care services provided as part of a care package for people living in their own home and the care planning approach. Care management provided by a professional care manager or coordinator, who was usually employed by the local authority or by home care agencies.</p>	<p>Older people (65 years and above) with conditions such as cognitive impairment, who were using home care and other social care services.</p>	<p>Data available at LA level on service use from Adult Social Care survey. Local areas would need to provide granular data on prevalence of conditions e.g. cognitive impairment.</p>	<p>The care planning aspect of the intervention (as opposed to care package for those meeting social care eligibility criteria) was poorly defined, and the effects not separately ascertained in terms of costs and effectiveness.</p>	<p>Don't include.</p> <p>(Intervention detail lacking, evidence is not strong, and data availability uncertain).</p>

Intervention details	Population information	Data availability	Evidence conclusion	Recommendation to take forward
<p>British Red Cross (BRC) Support at Home service (Dixon et al, 2014)</p> <p>British Red Cross (BRC) Support at Home service: short-term practical and emotional support aimed at developing confidence & independence esp. after difficult times such as hospital stay etc. - contact times of 4-40 hrs (ave 10 hrs).</p>	<p>Not age specific but often older people living with disability. 4 areas involved: London, Yorkshire, Northern Ireland, Scotland (Wales was omitted) Mean age of participants was 76 years, 75% female, 80% white, 65% lived alone, 75% had long term health conditions, 58% a disability</p>	<p>PHE comorbidity analysis (2012) applying research findings to demographics of local areas to give estimate of population with disability.</p> <p>Census - health status by age (2011 based).</p> <p>GP Patient Survey gives % patients living with a disability/ illness.</p>	<p>Case study evidence used to model scenarios, using many assumptions, based on small numbers.</p>	<p>Don't include.</p>
<p>Reablement (Glendinning et al, 2011)</p> <p>Short-term intervention in home care - helps users to regain confidence and relearn self-care skills and aims to reduce needs for longer-term support. Services provide personal care, help with activities of daily living and other practical tasks for a time-limited period. The provision of items of equipment is also an important feature.</p>	<p>Service users from home care reablement services in 5 English local authorities. Over 90% were aged over 65 years; approximately 70% were female.</p>	<p>Data available at LA level on service use from Adult Social Care survey.</p> <p>Local areas may have more accurate information.</p>	<p>Re-ablement was associated with a significant decrease in subsequent social care service use. Also had positive impacts on users' health-related QOL and social care-related QOL.</p>	<p>Don't include as a separate intervention, as included in NICE review below.</p>
<p>Reablement (NICE, 2017)</p> <p>Reablement - a short-term individualised service designed to promote independence and minimise the need for ongoing support services, for those at home (not post-hospital).</p>	<p>A hypothetical group of 1,000 home care users was followed starting from when individuals were 65 years to when they died. Two study groups - from England and Australia</p>	<p>Data available at LA level on service use from Adult Social Care survey.</p> <p>Local areas may have more accurate information.</p>	<p>Statistically significant reduction in social care costs, plus reported QALY gains.</p>	<p>Include.</p> <p>Cross reference and ensure consistent with NICE budget impact tool.</p>

Intervention details	Population information	Data availability	Evidence conclusion	Recommendation to take forward
<p>Self-management of COPD (Taylor et al, 2012)</p> <p>Better Living with Long term Airways disease (BELLA) - course run by 2 trained lay (peer) tutors (at least one of whom had COPD), who delivered a structured, manualised, 3-hour session once a week for 7 weeks at a local community centre. Addressed 5 core self-management skills: defining the problem, decision making, finding and using resources, forming partnerships with healthcare providers, and taking action (making a short-term action plan and acting on it).</p>	<p>Patients with moderate to severe COPD identified through primary care disease registers.</p> <p>Inclusion criteria were: aged >35 years, diagnosed COPD with a ratio of forced expiratory volume in 1 second (FEV1) to forced vital capacity (FVC) <0.7, plus either an exacerbation of COPD leading to unscheduled health care within the past year, or post-bronchodilator FEV1<80% predicted (moderate COPD). Mean age 69.5 years.</p>	<p>National estimates and LA estimates of total population aged 65 and over predicted to have a longstanding health condition caused by bronchitis and emphysema.</p> <p>Local areas could update with data from QOF registers for COPD.</p>	<p>Small study, indicating non-statistically significant improvements in QOL and probability of being cost effective at £30k per QALY.</p>	<p>Maybe include.</p> <p>Could do a targeted search for better evidence on self-management in COPD.</p>
<p>Telecare/assistive technology at home (Goodacre, 2008; Clifford et al, 2012).</p> <p>Assistive technology for patients with different long-term conditions.</p>	<p>Goodacre: Model/profiling created 7 user profiles age 70+ with impairments (e.g. arthritis, COPD, diabetes). Age range 70 – 78 years, with LTCs.</p> <p>Clifford: older people (65+) living in own homes, majority of cases had more than one condition or disability.</p>	<p>Patient profiles in Goodacre would be difficult to replicate.</p> <p>For Clifford study, PHE comorbidity analysis (2012) applying research findings to demographics of local areas to give estimate of population with disability.</p> <p>Census - health status by age (2011 based).</p> <p>GP Patient Survey gives % patients living with a disability/illness.</p>	<p>Study is not peer reviewed and based on a non-random sample of 50 people. Concludes savings are possible, based on some assumptions.</p>	<p>Maybe include.</p> <p>Could do a targeted search for better evidence on telecare.</p>

The next steps following the modelling assessment are shown in Table 4.9. The recommended 'Includes' were all supported to take forward to the ROI tool development stage.

Table 4.9: Next steps following modelling assessment

Include in the ROI tool	Do further targeted searches / assessment	Don't include in the ROI tool
Bundle of voluntary and community sector (VCS) services aimed at patients with long-term conditions Befriending Community singing Dementia: nursing home intervention Volunteer help at home scheme Reablement (x2)	Inter-professional working (CIRACT) Self-management for COPD Telecare/assistive technology Hospital discharge support (INTERCOM) Extracare housing	Exercise for depression in care homes Social care – care planning (IBSEN) British Red Cross help at home Dementia early diagnosis

4.8 Additional targeted literature searching

For those interventions where the assessment of modelling assumptions found a lack of detail and or equivocal results, it was viewed that some additional targeted searching may yield more suitable evidence. As the search terms for the original literature search were broad, it was thought possible specific key words may yield further evidence that had not been found previously.

Additional targeted literature searches were conducted for the following interventions:

- inter-professional working
- self-management for COPD
- telecare/assistive technology
- hospital discharge support

Better economic evidence was found for Inter-professional working, but not for the other 3 interventions.

4.9 Final assessment

Following the additional literature searches it was agreed to include self-management for COPD and the new evidence found on inter-professional working in the tool. The remainder of the interventions in Table 4.9 were removed from the shortlist. Further information on the rationale for their exclusion is given in Table 4.10.

The figure in Section 4.10 summarises the process that has led to the selection of the interventions included in the tool, and the number of interventions removed at each stage.

Table 4.10: Interventions excluded from final short list

Intervention	Rationale for exclusion
<p>Extracare housing</p>	<p>Extracare can be described as self-contained accessible housing accommodation, with flexible access to 24-hour care and an emphasis on supporting and maintaining independence. From a policy perspective, extracare housing and sheltered housing is of interest to local authorities as an intervention option when they make local plans (e.g. JSNAs/housing strategies). The review initially found 10 records on extracare housing, comparing it to both residential care and to 'own home'. The Steering Group had expressed interest in including this intervention, albeit with cognisance that the required investment (and hence affordability) was on a larger scale than most of the other interventions being considered.</p> <p>Following full data extraction, the 4 studies with the greatest potential were reviewed in detail for their suitability (Goswell, 2014; Frontier Economics, 2010; Batty, 2017; IPC, 2011). Following detailed assessment, the inclusion of extracare in the ROI tool appeared to present some challenges. For example, the complexity of the inputs, which would require users of the tool to do significant work to derive locally specific model inputs, or use sample costs which may not be representative of their local area e.g. land prices, labour costs etc. This could potentially have been overcome by use of a disclaimer such as 'based on average house prices in the area'. A more significant concern was the fact that the most useable study was based on a cohort from 1995 and 2005, with the latter cohort observing insignificant changes.</p> <p>Expert opinion was therefore sought from academic advisors to the Social Care ROI project. In summary, extracare housing is an enormously varied term, and the level of care available, in addition to other linked facilities, is quite different from scheme to scheme. The evidence-base also goes out of date quite quickly because thresholds for moving into care homes (the nearest alternative) have massively shifted over the last decade or two. Some have found that extracare housing isn't the substitute for care homes that people first thought it would be. For people who have a high risk of falling, or of 'wandering', or can need help at night-time, extracare housing is not often considered a safe alternative - and this accounts - today (but not 20 years ago) - of a huge proportion of care home admissions. For the more modest number for whom it is suitable, there then comes a question of prognosis (e.g. in dementia) - is it worth moving someone into extracare housing, if they will need to move again in 9 months' time?</p> <p>In conclusion, whilst these studies seem to be the most advanced available in the area, there remain important questions as to whether extracare offers a cost-effective alternative to residential care homes or care in the home. The data on which they are based is dated, the methods are limited and the associated costs in today's world might well look different. In light of this compelling advice, it was agreed with the PHE project team that extracare housing would not be included in the ROI tool.</p>
<p>Telecare</p>	<p>Telecare is briefly described as assistive technology, alarms and 24 hour access to remote telephone assistance in the home to enable elderly and physically less able people to remain living in their own homes. The literature review found mixed evidence (including the Whole Systems Demonstrator studies), and telecare was shortlisted for consideration for</p>

Intervention	Rationale for exclusion
	<p>inclusion in the ROI tool. While on balance the evidence seemed to be towards positive economic impact, the studies progressing to the final stage of the review (Goodacre et al, 2008; Clifford et al, 2012) did not show strong results and had shortcomings from a modelling perspective, such as, population info that couldn't be easily re-produced in local areas. Additional targeted literature searches were undertaken and no better evidence on telecare was found.</p> <p>Expert opinion was therefore sought from academic advisors on the merits, or otherwise of telecare from a cost impact/cost effectiveness perspective. In their opinion, the most rigorous study to date is the Whole Systems Demonstrator studies, plus a couple of further studies which suggested that telecare didn't produce cost-effective outcomes. A paper which looked at the global case for investment in assistive technology and telecare was not usable for the model as it was based on modelling of hypothetical scenarios and not observed data.</p> <p>Other studies, while not focusing on cost-benefit, have revealed interesting findings as to why technology might not be cost-effective: poor quality training of telecare staff responsible for assessing for telecare, limited range of telecare availability due to LA commissioning behaviour etc. leading to poor matching of need with device, and significant rates of abandonment etc. In light of this advice, plus the earlier consideration of positivity bias (as several papers had been excluded due to not showing evidence of cost effectiveness), it was agreed with the PHE project team that telecare would be excluded from the ROI tool.</p>
<p>Exercise for depression in care homes</p>	<p>A 'whole-home' exercise intervention, consisting of training for care home staff backed up with a twice-weekly, physiotherapist-led exercise group, compared to a depression awareness training programme for care home staff. (Underwood, 2013).</p> <p>The large OPERA trial found no evidence that exercise is effective for depression in care homes with no difference in quality of life or costs compared to depression awareness training for care home staff. It was unclear whether exercise would have been more effective than doing nothing. As the intervention had poor evidence of effectiveness it was recommended that this it was not included in the ROI tool.</p>
<p>Social care – care planning (IBSEN)</p>	<p>There were 2 aspects of service delivery- social care services provided as part of a care package for people living in their own home and the care planning approach (NICE, 2015). The NICE model used data from the Personal Budgets evaluation (the IBSEN study) with an intervention that was a combination of a care package and care planning. As care packages funded through personal budgets should be provided by local authorities if people meet eligibility criteria, this is not useful to include in a decision making tool. The effect of 'care planning' – which as an intervention was poorly described in the above economics report – was not separately ascertained in terms of costs and effectiveness. No separate information on social care costs from health care costs were provided. Findings on social care outcomes were based on the receipt or not of home care and not of a care planning approach. As the intervention is poorly defined, the costs for social care and the benefits of care planning cannot be isolated and the evidence is based upon the Personal Budgets evaluation, it was recommended that this intervention was not included in the ROI tool.</p>

Intervention	Rationale for exclusion
British Red Cross help at home	<p>British Red Cross (BRC) Support at Home service: short-term practical and emotional support aimed at developing confidence and independence especially after difficult times such as hospital stay provided by a mix of paid staff and volunteers. (Dixon et al, 2014).</p> <p>The study was not a robust evaluation and was based upon before and after responses from 50 people experiencing 4 different variations of the Support at Home model. The assumptions that were used to arrive at potential cost savings would have to be replicated with the user of the tool having to verify whether they agreed with these assumptions. Given the lack of evidence available on actual effect, the tool could only produce either a threshold analysis or a hypothetical ROI. It was recommended that this intervention was not included in the ROI tool.</p>
Dementia - early diagnosis	<p>The Croydon Memory Service Model provided early diagnosis of dementia as well as information and direct medical, psychological and social help to patients and their families (Banerjee et, 2009). Further consideration of the paper concluded that the findings are based on prospective modelling of scenarios, using evidence from other clinical studies. The effectiveness of the intervention was assumed, and linked to a reduction in admissions and lengths of stay in care homes, savings of which are offset by costs of care if people remain in their own homes. There was no actual effectiveness data in the model and only scenarios were run, so the tool could only produce either a threshold analysis or a hypothetical ROI. It was recommended that this intervention was not included in the ROI tool.</p>
Reablement	<p>The NICE report (2017) reviewed a short-term individualised service designed to promote independence and minimise the need for ongoing support services, for those at home (not post-hospital), modelling a hypothetical group of patients based on study groups from England and Australia. This record was removed in favour of the specific reablement intervention reported in Glendinning et al, 2011).</p>

4.10 Positivity bias

At the title/abstract screening stage, all records including cost effectiveness/cost impact were selected for further review, regardless of whether the results were positive, negative or neutral. At the full text review stage, papers with no evidence of positive impact were excluded. It is acknowledged that there is an inherent risk of introducing positivity bias to the review at this point. Therefore, when selecting the reason for exclusion, if the results were negative or neutral, the reason 'No evidence of impact' was selected over and above other potential exclusions reasons, e.g. insufficient cost information. This enabled the records to be reviewed for any themes in the interventions with negative as well as positive results.

The list includes 19 types of intervention. Two of these had more than one paper concluding neutral or negative findings. These areas were:

- telehealth/telemonitoring (4 records: COPD, chronic conditions, long term conditions, COPD)
- integrated care (5 records)

During this preliminary data extraction we have attempted to draw some conclusions on those interventions with the greatest extent of evidence for impact and cost effectiveness, in order to inform the discussion at a stakeholder workshop in November 2018.

5. Development of the economic tool

5.1 Developing the tool

The ROI tool was developed in Microsoft Excel to be interactive and user friendly. Stakeholder opinion and engagement helped inform the development of the tool. The initial design was shared with the project Steering Group who commented on the adopted methodology, structure, perspective, population, calculations and results. The Steering Group also provided feedback on 2 prototype versions, with particular regard to the tool's functionality and how it would be used in practice.

The final version of the tool was submitted for Quality Assurance checks conducted by an independent research consultant. The QA procedure involved checking the key calculations and pressure testing the tool by applying extreme values to several input parameters and confirming results changed in the expected direction. For example, a pressure test which reduced intervention costs to zero would be expected to increase the return on investment predicted by the model for each intervention.

5.2 Estimating the target population

A primary purpose of the tool is to enable local commissioners to conduct return on investment analyses of social care interventions for older adults in pre-specified geographical areas. To facilitate return on investment analyses, the tool is prepopulated with data from different levels of geographical area, including nationally for England and for individual local authorities (LAs), NHS clinical commissioning groups (CCGs), and NHS Sustainability and Transformation Partnerships (STPs). In addition, the tool allows local commissioners to define older people as either being aged 65 years and over or 80 years and over. Therefore the model is informed through data sources which identify the size of the 65+ and 80+ population in each geographical area. Population data was obtained from the most recent online sources published by the Office for National Statistics, this being June 2019 for England and the LAs (1) and October 2018 for CCG and STP areas (2).

The model's in-built populations are refined by identifying the percentage who are eligible to receive each intervention. Eligibility criteria represents the population who received the intervention in the underlying studies and therefore differs for each intervention. Where possible eligible populations were identified using data specific to national, LA, CCG and STP areas. If data was not available to estimate eligibility in local populations then national or regional data was assumed to be appropriate. This can be overwritten by the tool user.

The model further refines eligibility by age group as some interventions are likely to be available to a higher proportion of people in the 80+ age group when compared with the 65+ age group. Where possible, eligibility by age group was obtained directly from the local data sources. For several interventions, eligibility couldn't be established using local data as the data sources only reported relevant statistics for the local population as a whole (i.e. for 0+ age groups rather than specifically for 65+ or 80+ age groups). In such cases, national data was used to estimate the eligible % in the population as a whole (i.e. the 0+ age group) *and* for the age groups included in the model (i.e. the 65+ & 80+ age groups). Relative risks for the eligibility parameter were then established for the 65+ and 80+ populations vs. 0+ population in the national data set. Relative risks obtained from the national data sources could then be applied to the local data to estimate the % eligible for the intervention in LA, CCG and STP areas for the 65+ and 80+ populations.

Finally, the tool allows target populations to be adjusted to represent the expected uptake of the intervention in the eligible population. No in-built modelling assumptions regarding uptake are applied within the tool, which are instead defined entirely through user input.

The following section of the technical report summarises the underlying study populations and the assumptions, methods and data sources used to estimate eligible populations for each intervention included in the ROI model.

5.2.1 Community singing

The community singing intervention was described as being available to everybody who expressed an interest and was aged 60 or over. Consequently, no further refinements were required regarding eligibility criteria as it was assumed that 100% of individuals were eligible for the intervention across all national, LA, CCG & STP areas and for both the 65+ and 80+ age groups.

5.2.2 Help at home scheme

The help at home intervention was described as being available to people aged 55 or over who required help with day to day activities in their own homes. When establishing the eligible population within the ROI tool, it was assumed people would need help with day to day activities if they were unable to perform at least one instrumental activity of daily living (IADL) or activity of daily living (ADL). Both IADL and ADL are commonly used to assess disability in older people. Examples of: IADLs include meal preparation, housekeeping & transportation; and ADLs include walking, bathing, and using the toilet.

The eligible population was estimated within the ROI tool using data obtained from a study by Wittenberg et al. (2018) (3). The study estimates the % of people in the UK population with at least one ADL or IADL. No data was identified which estimated the % of people with IADL or ADL by LA, CCG or STP, therefore national rates were assumed for all local populations. The data from Wittenberg et al. (2018) did not estimate IADL/ADL disability by age group.

However, Health Survey for England (4) data reports the number with an ADL (but not IADL) by age group and was used to establish the relative risk of disability in 65+ and 80+ age groups vs. the population as a whole (0+). The relative risks from the Health Survey for England data (4) were multiplied by the estimates from Wittenberg et al. (2018) (3) to establish the % of the population with at least one IADL or ADL for 65+ and 80+ age groups.

5.2.3 Befriending

The befriending intervention was described as being available to people aged 50 or over who are lonely or isolated. When establishing the eligible population within the ROI tool, it was assumed isolated or lonely people could be appropriately identified if they responded positively to question 32 in the GP Patient Survey (5) which asked patients whether they had experienced feeling isolated or lonely from others in the previous 12 months. Rates of isolation/loneliness were obtained from the GP patient survey (5) for CCG and STP areas.

Data was not available specific to local authorities, which were instead grouped by region (regions included London, Midlands & East of England, North East, North West, South East, South West, and Yorkshire & the Humber). Age group data from the GP Patient Survey (5) was only available for England. Therefore national data was used to estimate the relative risk of loneliness/social isolation in 65+ and 80+ age groups vs the whole population (0+). The relative risks were then applied to estimate the % of people who are lonely/socially isolated in local areas (regional/CCG and STP) for the 65+ and 80+ age groups.

5.2.4 WHELD intervention for people living with dementia in nursing homes

The WHELD intervention was described as being available to people with dementia who are currently living in nursing homes. The inbuilt populations in the ROI tool uses data published by the Alzheimer's Society (6) to directly estimate the prevalence of dementia in England and in each CCG and STP area. Prevalence for dementia in LA areas was not reported and therefore assumed to be equal to those identified for England. The Alzheimer's Society (6) also reports all national, CCG, and STP dementia statistics by age which allowed prevalence rates for 65+ and 80+ age groups to be obtained directly. In addition a separate Alzheimer's Society report (7) identified the proportion of people with dementia who live in nursing homes in England, however this statistic was not available specific to geographical location or age group. The proportion in nursing homes was multiplied by all previously identified dementia

prevalence rates for national and local areas to estimate the number of people eligible for the WHELD intervention.

5.2.5 INTERCOM intervention providing hospital discharge support for COPD patients

The INTERCOM intervention was described as being available to people with moderate-severe COPD (stage 2 or 3) with impaired exercise capacity. The inbuilt populations in the ROI tool used prevalence data from the Quality and Outcomes Framework (QoF) for all cases of COPD for CCG and STP areas (8). Data was not available specific to local authorities so a separate QoF data source (9) was used to group LAs by region (regions included London, Midlands & East of England, North East, North West, South East, South West, and Yorkshire & the Humber).

It was assumed that moderate to severe cases of COPD included all those with scores greater than or equal to 3 on the dyspnoea scale, as this indicates moderately to severe symptoms of breathlessness that may prevent exercise capacity (9). The QoF data (9) was used to establish the proportion of COPD patients in England with dyspnoea scores ≥ 3 . The national proportion was multiplied by local prevalence rates to establish the % with moderate-severe COPD in each geographical area.

Finally, QoF data sources did not establish prevalence rates for COPD by age. Therefore, prevalence rates of COPD by age group were identified for England using data from the British Lung Foundation (10). The national data was used to estimate the relative risk of COPD in 65+ and 80+ age groups vs the whole population (0+). The relative risks were then applied to the QoF data to estimate the % of people with moderate-severe COPD in local areas (regional/CCG and STP) for the 65+ and 80+ age groups.

5.2.6 Bundle of Voluntary and Community Sector (VCS) Services aimed at Patients with Long-Term Conditions

The underlying study for this intervention established eligibility using a risk stratification tool to identify 5% of the most intensive health and social care service users in the population. Consequently, the ROI tool defined eligibility for the intervention as 5% of the total population size. The 5% eligibility criteria was applied for national, LA, CCG, and STP areas and for both the 65+ and 80+ age groups. Should it be adopted by local commissioners then similar risk stratification tools (as used by Dayson et al. (2014) (11) in the underlying study) might be used to establish eligibility for the intervention in the local area.

5.2.7 Health coaching: Inter-professional working

The health coaching intervention was described as being available to people aged 65 or over who have *2 or more* long existing long-term health conditions. The inbuilt populations in the ROI tool used data from Kingston et al. (2018) (12) to estimate the % of people with multiple morbidities (more than one health condition) in the UK. The data from Kingston et al. (2018) (12) reports multi-morbidity by age and therefore data was obtained directly for 65+ and 80+ age groups. No data was identified regarding multi-morbidity by local area and therefore national prevalence rates for the UK were assumed for England and for each LA, CCG and STP area.

5.2.8 BELLA for self-management of COPD

The BELLA intervention was described as being available to people with moderate to severe COPD, with the study population having an average age of 69. This population description matched the population who received the INTERCOM intervention. Therefore, equivalent methods were used to establish the eligible population for the BELLA intervention as were applied when identifying eligibility for the INTERCOM intervention.

5.2.9 Homecare reablement

The Homecare Reablement intervention was described as being available to older people struggling to cope with day to day activities without relying on social care services. When establishing the eligible population within the ROI tool, it was assumed people would need help with day to day activities if they were unable to perform at least one instrumental activity of daily living (IADL) or activity of daily living (ADL). These assumptions matched those that were applied to establish eligibility for the help at home scheme. Therefore, equivalent methods were used to establish eligible populations for homecare reablement as were applied when identifying eligibility for the help at home scheme.

5.3 Model inputs

5.3.1 Intervention costs

The model's inputs were obtained directly from the published studies identified from the literature review. Model inputs include intervention costs which are, where possible, split into the number of resource units (e.g. the number of staff required to administer the intervention) and unit costs (e.g. the hourly cost per staff member). The level of detail for intervention costs within the model is dependent on the availability of information provided by the studies underpinning each analysis. For instance the reablement intervention, BELLA for self-management of COPD, and befriending intervention only report the aggregated cost of the

intervention rather than reporting individual resource units that make up the intervention. Table 5.1 summarises the availability of evidence from the included studies.

All intervention costs were updated to 2018/19 prices using the Hospital & Community Health Services Pay & Prices Index (13).

Table 5.1: Level of detail across for intervention costs

Intervention	Reporting detail
Community Singing	Disaggregated: 15 individual resource items, resource usage and cost per resource unit reported.
Help-at-home scheme	Semi-disaggregated: 2 resource items reported including number of units and cost per unit.
Befriending	Aggregated: Only reports overall intervention costs.
WHELD (dementia nursing homes)	Aggregated: Only reports overall intervention costs.
INTERCOM (hospital discharge)	Semi-disaggregated: 4 individual resource items reported as cost per overall item (i.e. no unit number or cost per unit).
Bundle of voluntary and community sector (VCS) services aimed at patients with long-term conditions	Semi-disaggregated: 3 individual resource items reported as cost per overall item (i.e. no unit number or cost per unit).
Health coaching	Semi-disaggregated: 8 individual resource items reported as cost per overall item (i.e. no unit number or cost per unit).
BELLA (self-management of COPD)	Aggregated: Only reports overall intervention costs.
Homecare reablement	Aggregated: Only reports overall intervention costs.

5.3.2 Costs/savings to the NHS and social care budgets

The model inputs also include the costs and savings incurred by the NHS and social care budgets as a direct consequence of the intervention, when compared with a comparator. The majority of interventions were compared with the usual care offered by the country/region of the study population. This excluded the help-at-home scheme, where outcomes were compared with people who had just started using the scheme, and bundle of voluntary and community sector (VCS) services aimed at patients with long-term conditions, which didn't contain a control group as it was a before and after study. Care should be taken when generalising study outcomes to local populations if there are known differences in the type of usual care offered by local practices and the country/region of the study population.

As with intervention costs, the level of detail reported in the model was dependent on the information available from the included studies. For example, the WHELD intervention for people with dementia living in nursing homes included NHS costs/savings split by individual resource item (e.g. hospital admission, A&E visit, primary care etc.) as well as social care costs/savings, whereas the health coaching intervention only reported aggregated NHS costs and didn't report any social care costs/savings. In addition there was variation regarding whether the included studies reported the statistical significance of any observed outcome or not (Table 5.2). All costs/savings were updated to 2018/19 prices using the Hospital & Community Health Services Pay & Prices Index (13).

Table 5.2: Level of reporting detail across NHS and social care outcomes

Intervention	Reporting detail	
	NHS Outcomes	Social Outcomes
Community Singing	Disaggregated into primary and secondary care, statistical significance reported.	Aggregated outcomes only, statistical significance reported.
Help-at-home scheme	Aggregated outcomes only, statistical significance not reported.	Aggregated outcomes only, statistical significance not reported.
Befriending	Aggregated outcomes only, statistical significance not reported.	None reported.
WHELD (dementia nursing homes)	Disaggregated into hospital admissions, primary care, community care, and A&E costs. Statistical significance reported.	Single item (care home accommodation costs). Statistical significance reported.
INTERCOM (hospital discharge)	Disaggregated into GP/specialist visits, hospital admissions, medication, and oxygen use. Statistical significance reported for individual items but not for aggregated NHS costs.	None reported.
Bundle of voluntary and community sector (VCS) services aimed at patients with long-term conditions	Disaggregated into hospital admissions, A&E visits, and outpatient appointments. Statistical significance not reported.	None reported.
Health coaching	Aggregated outcomes only, statistical significance not reported.	None reported.
BELLA (self-management of COPD)	Aggregated outcomes only, statistical significance not reported.	None reported.
Homecare reablement	Aggregated outcomes only, statistical significance not reported.	Aggregated outcomes only, statistical significance not reported.

5.3.3 Health outcomes

The final model input included the estimated health impact of each intervention. The primary health outcome included in the model was the quality adjusted life year (QALY), a measure of health which combines both quality (morbidity) and quantity (length) of life. More specifically, QALYs are derived by estimating a person's health related quality of life (HRQoL) by assigning utility values to different health states, where full health is valued with a utility equal to 1, and death valued with utility equal to 0. QALYs are aggregated by obtaining the subject's HRQoL at different time points and summing these over a person's projected lifetime (or other time period e.g. matching the time horizon of the analysis).

Five of the underlying studies reported QALYs which were derived using a validated methodology i.e. by applying EQ-5D questionnaire. However, the remaining 4 studies estimated QALYs where various assumptions were applied to estimate each participant's HRQoL. Table 5.3 summarises the method used to derive QALYs for each of the included interventions.

Table 5.3: Method/Assumptions used to derive QALYs

Intervention	Method
Community Singing	Derived from individual responses to EQ-5D questionnaire.
Help-at-home scheme	Assigned individuals as being physically "well" or "unwell". Assigned HRQoL for well (0.73) and unwell (0.50) responses based on a published literature source.
Befriending	The original method to derive QALYs is not reported. However the study reports QALYs as monetary health benefit. QALYs were estimated for the tool by dividing reported monetary health benefit by a value per QALY. The authors did not report the value per QALY applied in the analysis so this was assumed to equal £30,000.
WHELD (dementia nursing homes)	HRQoL was measured on the DEMQOL-Proxy – a 31-item interviewer-administered questionnaire answered by caregivers to assess the quality of life for people with dementia. The ROI model obtained final QALY values from an accompanying study (14) which applies preference-based utility weights to health states in the DEMQOL-Proxy questionnaire.
INTERCOM (hospital discharge)	Derived from individual responses to EQ-5D questionnaire.
Bundle of voluntary and community sector (VCS) services aimed at patients with long-term conditions	Derived from score on a well-being tool developed specifically for the pilot study. The well-being measure contained 8 categories (feeling positive, lifestyle, looking after yourself, managing symptoms, work, money, where you live, and family & friends) scored from 1-5. The study assumed a maximum QALY difference equal to 0.352 between overall minimum and maximum scores (0 & 40), which was assumed to be equivalent to the disutility associated with a level-3 mental health condition. Each category and category score was assumed to contribute equally to overall utility i.e. a 1 point move in any score = $0.352/8$ (number of categories) and 5 (number of responses) [i.e. $0.352/40$].
Health coaching	Derived from individual responses to EQ-5D questionnaire.
BELLA (self-management of COPD)	Derived from individual responses to EQ-5D questionnaire.
Homecare reablement	Derived from individual responses to EQ-5D questionnaire.

Each intervention's impact on QALYs was converted to a monetary value which allowed them to be included in the return on investment calculations. The Department of Health suggests that each QALY has a monetised value of £60,000 (15) and this value was adopted within the model. The value of £60,000 per QALYs is higher than the cost-effectiveness threshold typically applied by the National Institute of Health and care Excellence (NICE), (£20,000 to £30,000) but is relevant as a valuation of health benefit for the public health interventions considered in this tool.

In addition to QALYs, the tool also reports the health impact of each intervention on any clinical/secondary outcomes if these were reported in the underlying studies. Whilst the clinical/secondary outcomes reported by the studies don't factor into any of the ROI calculations, they were reported separately in the model to provide explanation for the reasons behind QALY gains, which did factor into the ROI calculations. The additional outcomes included in the ROI tool for each intervention are reported in Table 5.4.

Table 5.4: Clinical/secondary health outcomes included in the ROI tool.

Intervention	Clinical/Secondary Outcomes
Community Singing	<ul style="list-style-type: none"> The York SF-12: A measure containing 12 items related to mental health-related quality of life.
Help-at-home scheme	<ul style="list-style-type: none"> Social care QALYs derived from the Adult Social Care Outcomes Toolkit (ASCOT).
Befriending	<ul style="list-style-type: none"> No clinical/secondary outcome reported.
WHELD (dementia nursing homes)	<ul style="list-style-type: none"> The DEMQOL-Proxy a 31-item interviewer-administered questionnaire answered by a caregiver to assess the quality of life for people with dementia. The Cohen-Mansfield Agitation Inventory (CMAI) which measures symptoms of agitation in dementia patients.
INTERCOM (hospital discharge)	<ul style="list-style-type: none"> The St George's Respiratory Questionnaire (SGRQ) which assesses symptoms of breathlessness. The total number of COPD exacerbations which resulted in contact with health services (including primary and secondary care).
Bundle of voluntary and community sector (VCS) services aimed at patients with long-term conditions	<ul style="list-style-type: none"> No clinical/secondary outcome reported.
Health coaching	<ul style="list-style-type: none"> The Patient Activation Measure, a questionnaire which assesses patient knowledge, skills and self confidence in management of long term health conditions. The World Health Organisation Quality of Life-BREF which is a 26-item measure of global quality of life and includes 4 domains for physical health, psychological health, social relationships, and the environment.
BELLA (self-management of COPD)	<ul style="list-style-type: none"> The St George's Respiratory Questionnaire (SGRQ) which assesses symptoms of breathlessness. Questionnaire response to total number of minutes spent exercising per week.
Homecare reablement	<ul style="list-style-type: none"> Social care QALYs derived from the Adult Social Care Outcomes Toolkit (ASCOT).

Two of the interventions (help at home and reablement) reported changes in social care related QALYs derived from the ASCOT (Adult Social Care Outcomes Toolkit) measure. These are reported as secondary outcomes and not included in the ROI analysis as social care related QALYs are not necessarily equivalent to health related QALYs. That is, the ASCOT measures contain health states related to health and social care whereas questionnaires such as the EQ-5D predominantly measure physical and mental health. Consequently the 2 measures may not produce comparable utility values for the same individual as there is some inconsistency in the included states. In addition, it was not considered appropriate to add benefits across social care related QALYs and health related QALYs due to a risk of double counting which would occur if any common health states are shared between the 2 measures.

5.4 Time periods and discounting

The model makes predictions of costs and benefits over a time period corresponding with the time horizon reported in each study. Where results are reported beyond one year, all outcomes are usually discounted, with recommended discount rates commonly equal to 3.5% for costs and 1.5% for benefits (QALYs). Discounting was not applicable for the majority of the interventions where study time horizons were less than or equal to 12 months. Outcomes of the health coaching intervention were reported over a 20 month time horizon. However discounting had already been conducted by the study authors at an appropriate discount rate (3.5%).

The bundle of voluntary and community sector (VCS) services aimed at patients with long-term conditions intervention (24 months) and INTERCOM for COPD hospital discharge support (24 months) interventions had time horizons with outcomes occurring after 12 months. Outcomes for these interventions were not discounted by the study authors. Therefore discounting was applied in the model at the suggested rates (3.5% costs and 1.5% health) by assuming that the outcomes occurred equally over the study time horizon. For example, if the total reported NHS savings were equal to £200 over a 24 month study time horizon, then it was assumed that £100 of savings occurred in year 1, and £100 occurred in year 2. The appropriate discount rate was then applied to all outcomes occurring after 12 months i.e. a discount rate of 0% applied to £100 of year 1 costs and a discount rate of 3.5% applied to £100 of year 2 costs.

5.5 Model Calculations and Outputs

5.5.1 Return on investment calculations

The key result of the model is the return on investment (ROI) associated with each intervention which is calculated using the equation below:

$$ROI = \frac{\sum Total\ discounted\ benefits}{\sum Total\ discounted\ costs}$$

The ROI equation technically estimates a cost benefit ratio, indicating the return on investment for every £1 spent on an intervention. A positive return on investment is indicated by a value above £1, whereas values lower than £1 indicate a net loss. The equation is consistent with methods applied for other ROI tools published by PHE, but differs from some other approaches used to calculate ROI, where typically total net benefits minus total costs are then divided by total costs.

5.5.2 Estimating the overall population impact of interventions

The overall financial costs/savings (including intervention, NHS and social care costs/savings) and the health impact of the intervention in the population of interest are reported as results within the tool. Overall population impacts are estimated by multiplying per person intervention costs, NHS costs, social care costs and QALYs by the size of the population expected to receive and uptake the intervention. Estimates of the overall population impact of the intervention were considered important as each intervention has a different eligible population. For example, an intervention could have a positive and large ROI (per person) but may have a relatively modest impact on a commissioner's budget if the intervention is only available to a small portion of the population.

5.6 Sensitivity analysis

Deterministic sensitivity analysis is used in economic models to examine the uncertainty associated with model input parameters. Due to the heterogeneous methods of reporting in the studies used to underpin the model, the only consistent input values across all interventions are the composite inputs used to estimate ROI (i.e. total intervention costs, NHS costs/savings, social care costs/savings and QALYs). Therefore, sensitivity analysis was performed by varying the value of each composite input parameter.

The results of the sensitivity analysis are displayed in terms of the societal ROI, which estimates the return on investment when including healthcare costs, social care costs and QALYs (valued at £60,000 per QALY). The tool illustrates the results on graphs which present

the results for the parameter values used in the base case analysis (i.e. values obtained from the published studies).

The sensitivity analyses also establish a threshold value for each parameter where the societal ROI would equal £1 (i.e. where £1 spent results in £1 saved and therefore no positive return on investment).

The sensitivity analysis graphs can be used to highlight the parameters that have the greatest impact on the results. For example, if small changes in the value of a parameter causes the societal return on investment to become equal to £1, then this indicates that parameter is an important driver of results. This means that small amounts of uncertainty regarding this parameter could influence whether the intervention provides a positive ROI or not.

Alternatively, if the threshold values are much larger than the base case parameters then this indicates that the parameter is not an important driver of the analysis outputs. This means that small amounts of uncertainty regarding this parameter are unlikely to influence whether the intervention provides a positive ROI or not.

5.7 Using the tool in practice

A full user guide is built into the tool. The guide describes the different steps required to generate results and walks users through an example intervention where the model is used to calculate the ROI for community singing for people aged 65+, in the York Local Authority area.

In addition to the in-built analyses, the tool can be updated to assess the ROI for a user defined intervention. The additional ROI analysis requires users to enter information on a selected intervention of their choice by including information on intervention costs and the impact of the user defined intervention on NHS costs, social care costs and QALYs. Once all model inputs are updated, the tool automatically calculates the ROI and overall impact of the user defined intervention for the selected population.

6. References

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www.gov.uk/government/uploads/system/uploads/attachment_data/file/216003/dh_120108.pdf.

Studies for interventions included in the tool

Intervention	Citation
Community singing	Coulton et al. Effectiveness and cost-effectiveness of community singing on mental health-related quality of life of older people: randomised controlled trial. <i>Br J Psychiatry</i> . 2015 Sep;207(3):250-5. doi: 10.1192/bjp.bp.113.129908.
Help at home scheme	Bauer et al. Costs and economic consequences of a help-at-home scheme for older people in England. <i>Health Soc Care Community</i> . 2017 Mar;25(2):780-789. doi: 10.1111/hsc.12372
Befriending service	Knapp et al. Mental health promotion and mental illness prevention: the economic case. Personal Social Services Research Unit, London School of Economics and Political Science. April 2011. [Accessed 31)October 2019 at: http://eprints.lse.ac.uk/32311/].
WHELD intervention for people living with dementia in nursing homes	Ballard et al. Impact of person-centred care training and person-centred activities on quality of life, agitation, and antipsychotic use in people with dementia living in nursing homes: A cluster-randomised controlled trial. <i>PLoS Med</i> . 2018 Feb 6;15(2):e1002500. doi: 10.1371
INTERCOM intervention providing hospital discharge support for COPD patients	Hoogendoorn et al. Is INTERdisciplinary COMMunity-based COPD management (INTERCOM) cost-effective? <i>Eur Respir J</i> . 2010 Jan;35(1):79-87. doi: 10.1183/09031936.00043309
Bundle of voluntary and community sector (VCS) services aimed at patients with long-term conditions	Dayson & Bashir. The social and economic impact of the Rotherham Social Prescribing Pilot Main Evaluation Report. [Accessed 31 October 2019 at: http://www.instituteofhealthequity.org/resources-reports/the-social-and-economic-impact-of-the-rotherham-social-prescribing-pilot-main-evaluation-report].
Health coaching delivered by inter-professional health and social care services	Bower et al. Improving care for older people with long-term conditions and social care needs in Salford: the CLASSIC mixed-methods study, including RCT. NIHR Journals Library; 2018 Aug. Health Services and Delivery Research. [Accessed 31 October 2019 at: https://www.ncbi.nlm.nih.gov/pubmed/30183219].
BELLA for self-management support of COPD	Taylor et al. Self-management support for moderate-to-severe chronic obstructive pulmonary disease: a pilot randomised controlled trial. <i>Br J Gen Pract</i> . 2012 Oct;62(603):e687-95. doi: 10.3399/bjgp12X656829
Home care reablement service	Home Care Re-ablement Services: Investigating the longer-term impacts (prospective longitudinal study). University of York, York : Social Policy Research Unit, 2010. 254 p

7. Appendices

7.1 Appendix A: Literature search strategies

7.1.1 APPENDIX AA: Search strategies for studies reporting ASCOT or ICECAP-O outcome measures

A.1: Source: Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily

Interface / URL: Ovid

Database coverage dates: 1946 to 22 August 2018

Search date: 23/08/18

Retrieved records: 173

Search strategy:

- 1 ascot.ti,ab,kf. (334)
- 2 (adult social care outcome\$ tool-kit\$ or adult social care outcome\$ toolkit\$).ti,ab,kf. (26)
- 3 1 or 2 (339)
- 4 (severity characterisation of trauma or severity characterization of trauma).ti,ab,kf. (30)
- 5 (trauma\$ adj3 (score\$ or scoring or survival or outcome\$)).ti,ab,kf. (8108)
- 6 (triss or injury severity score or glasgow coma scale).ti,ab,kf. (14786)
- 7 (hypertension or hypertensive\$ or antihypertensive\$ or blood pressure\$ or coronary or cardiovascular).ti. (529185)
- 8 (AngloScandinavian Cardiac Outcome\$ Trial or Anglo-Scandinavian Cardiac Outcome\$ Trial).ti,ab,kf. (147)
- 9 or/4-8 (549590)
- 10 3 not 9 (113)
- 11 (icecap or icepop or icecapo or icecapa).ti,ab,kf. (95)
- 12 10 or 11 (199)
- 13 exp animals/ not humans/ (4490072)
- 14 (news or comment or editorial or letter or case reports).pt. or case report.ti. (3575020)
- 15 12 not (13 or 14) (173)
- 16 remove duplicates from 15 (173)

A.2: Source: Embase <1974 to 2018 August 22>

Interface / URL: Ovid

Database coverage dates: 1974 to 22 August 2018

Search date: 23/08/18

Retrieved records: 196

Search strategy:

- 1 ascot.ti,ab,kw. (507)
- 2 (adult social care outcome\$ tool-kit\$ or adult social care outcome\$ toolkit\$).ti,ab,kw. (28)
- 3 1 or 2 (511)
- 4 (severity characterisation of trauma or severity characterization of trauma).ti,ab,kw. (37)
- 5 (trauma\$ adj3 (score\$ or scoring or survival or outcome\$)).ti,ab,kw. (10445)

- 6 (triss or injury severity score or glasgow coma scale).ti,ab,kw. (19007)
- 7 (hypertension or hypertensive\$ or antihypertensive\$ or blood pressure\$ or coronary or cardiovascular).ti. (659406)
- 8 (AngloScandinavian Cardiac Outcome\$ Trial or Anglo-Scandinavian Cardiac Outcome\$ Trial).ti,ab,kw. (188)
- 9 or/4-8 (685720)
- 10 3 not 9 (178)
- 11 (icecap or icepop or icecapo or icecapa).ti,ab,kw. (126)
- 12 10 or 11 (296)
- 13 (animal/ or animal experiment/ or animal model/ or animal tissue/ or nonhuman/) not exp human/ (5518126)
- 14 (conference abstract or conference paper or conference proceeding or conference review or editorial).pt. (4454002)
- 15 case report.ti. (255455)
- 16 (editorial or letter).pt. (1597057)
- 17 12 not (13 or 14 or 15 or 16) (201)
- 18 remove duplicates from 17 (196)

A.3: Source: Cochrane Central Register of Controlled Trials (CENTRAL)

Interface / URL: Cochrane Library, Wiley
 Database coverage dates: Issue 7 of 12, July 2018
 Search date: 23/08/18
 Retrieved records: 50
 Search strategy:

- #1 ascot 130
- #2 adult next social next care next outcome* next tool next kit* or adult next social next care next outcome* next toolkit* 3
- #3 #1 or #2 131
- #4 "severity characterisation of trauma" or "severity characterization of trauma" 0
- #5 trauma* NEAR/3 (score* or scoring or survival or outcome*) 1253
- #6 triss or "injury severity score" or "glasgow coma scale" 2019
- #7 (hypertension or hypertensive* or antihypertensive* or blood next pressure* or coronary or cardiovascular):ti 62825
- #8 AngloScandinavian next Cardiac next Outcome* Trial or Anglo next Scandinavian next Cardiac next Outcome* next Trial 87
- #9 #4 or #5 or #6 or #7 or #8 65817
- #10 #3 not #9 30
- #11 icecap or icepop or icecapo or icecapa 28
- #12 #10 or #11 57
- #13 #12 in Trials 50

A.4: Source: Social Policy & Practice

Interface / URL: Ovid
 Database coverage dates: 1890s to Present.
 Search date: 23/08/18
 Retrieved records: 38

- 1 ascot.ti,ab. (29)
- 2 (adult social care outcome\$ tool-kit\$ or adult social care outcome\$ toolkit\$).ti,ab. (28)

3 (icecap or icepop or icecapo or icecapa).ti,ab. (5)
4 or/1-3 (38)

A.5: Source: EconLit

Interface / URL: Ovid

Database coverage dates: 1886 to 16 August 2018

Search date: 23/08/18

Retrieved records: 12

Search strategy:

1 ascot.ti,ab. (4)
2 (adult social care outcome\$ tool-kit\$ or adult social care outcome\$ toolkit\$).ti,ab. (2)
3 (icecap or icepop or icecapo or icecapa).ti,ab. (8)
4 or/1-3 (12)

A.6: Source: PsycINFO

Interface / URL: Ovid

Database coverage dates: 1806 to August Week 2 2018

Search date: 23/08/18

Retrieved records: 62

Search strategy:

1 ascot.tw. (23)
2 (adult social care outcome\$ tool-kit\$ or adult social care outcome\$ toolkit\$).tw. (12)
3 (icecap or icepop or icecapo or icecapa).tw. (42)
4 or/1-3 (62)
5 remove duplicates from 4 (62)

A.7: Source: NHS Economic Evaluation Database (NHS EED)

Interface / URL: CRD Database

Database coverage dates: Coverage up to December 2014. Database now closed to new records.

Search date: 23/08/18

Retrieved records: 7

Search strategy:

1 (ascot) IN NHSEED 5
2 (adult social care outcome* tool-kit*) OR (adult social care outcome* toolkit*) IN NHSEED 1
3 (icecap*) OR (icepop*) IN NHSEED 2
4 #1 OR #2 OR #3 7

A.8: Source: SchARRHud

Interface / URL: <https://www.scharrhud.org/>

Database coverage dates: Last update 13th March 2018

Search date: 23/08/18

Retrieved records: 6

Search strategy:

The following search was conducted with 'Any field' selected.

ascot OR adult social care outcome* OR ICECAP* OR ICEPOP*

A.9: Source: Applied Social Science Index and Abstracts (ASSIA)

Interface / URL: ProQuest

Database coverage dates: 1987 to current

Search date: 23/08/18

Retrieved records: 25

Search strategy:

Set#: S1

Searched for: noft(ascot)

Results: 13

Set#: S2

Searched for: noft("adult social care outcome* tool-kit*" OR "adult social care outcome* toolkit*")

Results: 3

Set#: S3

Searched for: noft(icecap OR icepop OR icecapo OR icecapa)

Results: 10

Set#: S4

Searched for: S1 OR S2 OR S3

Results: 25

A.10: Source: CINAHL Plus

Interface / URL: EBSCO

Database coverage dates: 1937 to current

Search date: 23/08/18

Retrieved records: 130

Search strategy:

For each line:

Search modes - Boolean/Phrase

Interface - EBSCOhost Research Databases

Search Screen - Advanced Search

Database - CINAHL Plus

S12	S10 OR S11	130
S11	IN (icecap OR icepop OR icecapo OR icecapa) OR TI (icecap OR icepop OR icecapo OR icecapa) OR AB (icecap OR icepop OR icecapo OR icecapa)	62
S10	S3 NOT S9	74
S9	S4 OR S5 OR S6 OR S7 OR S8	123,384
S8	TI ("AngloScandinavian Cardiac Outcome* Trial" OR "Anglo-Scandinavian Cardiac Outcome* Trial") OR AB ("AngloScandinavian Cardiac Outcome* Trial" OR "Anglo-Scandinavian Cardiac Outcome* Trial")	72
S7	TI hypertension OR hypertensive* OR antihypertensive* OR "blood pressure*" OR coronary OR cardiovascular	114,921

S6	TI (triss OR "injury severity score" OR "glasgow coma scale") OR AB (triss OR "injury severity score" OR "glasgow coma scale")	5,352
S5	TI (trauma* N3 (score* OR scoring OR survival OR outcome*)) OR AB (trauma* N3 (score* OR scoring OR survival OR outcome*))	4,340
S4	TI ("severity characterisation of trauma" OR "severity characterization of trauma") OR AB ("severity characterisation of trauma" OR "severity characterization of trauma")	15
S3	S1 OR S2	174
S2	IN ("adult social care outcome* tool-kit*" OR "adult social care outcome* toolkit*") OR TI ("adult social care outcome* tool-kit*" OR "adult social care outcome* toolkit*") OR AB ("adult social care outcome* tool-kit*" OR "adult social care outcome* toolkit*")	31
S1	IN ASCOT OR TI ASCOT OR AB ASCOT	170

A.11: Source: Social Services Abstracts

Interface / URL: ProQuest

Database coverage dates: 1979 to current

Search date: 23/08/18

Retrieved records: 2

Search strategy:

Search Strategy

Set#: S1

Searched for: noft(ascot)

Results: 9

Set#: S2

Searched for: noft("adult social care outcome* tool-kit*" OR "adult social care outcome* toolkit*")

Results: 5

Set#: S3

Searched for: noft(icecap OR icepop OR icecapo OR icecapa)

Results: 13

Set#: S4

Searched for: S1 OR S2 OR S3

Results: 22

A.12: Source: ASCOT webpages

Interface / URL: www.pssru.ac.uk/ascot/references/

Database coverage dates: N/A

Search date: 23/08/18

Retrieved records: 27

Search strategy:

The ASCOT references under the headings "ASCOT Applications in the UK" and "International use – ASCOT Applications" were selected and imported to EndNote.

A.13: Source: ICECAP webpages

Interface

/

URL:

www.birmingham.ac.uk/research/activity/mds/projects/HaPS/HE/ICECAP/ICECAP-A/index.aspx

Database coverage dates: N/A

Search date: 23/08/18

Retrieved records: 6

Search strategy:

The references in the ICECAP-O section of the website, listed under the heading "Use of the measure is outlined in the following papers" were selected and imported to EndNote.

7.1.2 APPENDIX AB: Search strategies for economic evaluations, resource use or health state utility value studies of social care interventions in older people

A.1: Source: Social Policy and Practice 201807

Interface / URL: OvidSP

Database coverage dates: 1890s to Present

Search date: 30/08/18

Retrieved records: 2995

Search strategy:

- 1 (elder\$ or aging or geriatric\$ or gerontol\$ or senior citizen\$ or seniors or pensioner\$ or veteran\$ or sexagenarian\$ or septuagenarian\$ or octogenarian\$ or nonagenarian\$ or centenarian\$).ti,ab,de,hw. (38011)
- 2 ((old or older or aged) adj3 (patient\$1 or people\$ or person\$ or woman\$ or women\$ or man or mans or men or mens or male\$1 or female\$ or adult\$ or population\$ or resident\$ or client\$ or consumer\$ or service user\$ or community or communities or individual\$ or citizen\$)).ti,ab,de,hw. (86019)
- 3 (aged care or old\$ age or oldest old or later life).ti,ab,de,hw. (7557)
- 4 or/1-3 (90887)
- 5 (((economic\$ or cost\$) adj3 model\$) or (monte carlo or markov)).ti,ab,de,hw. (710)
- 6 ((econom\$ or cost or costs or costing or price or pricing) adj3 (analysis or analyses or evaluation\$1 or study or studies)).ti,ab,de,hw. (2870)
- 7 ((economic\$ or cost) adj3 (effect\$ or utilit\$ or benefit\$ or consequence\$ or outcome\$1 or minimi\$)).ti,ab,de,hw. (5577)
- 8 ((economic\$ or cost or costs or value) adj4 (decision\$1 or threshold\$)).ti,ab,de,hw. (163)
- 9 (value adj2 (money or monetary)).ti,ab,de,hw. (1374)
- 10 (return on investment or ROI).ti,ab,de,hw. (139)
- 11 budget impact\$.ti,ab,de,hw. (2)
- 12 (decision\$ adj2 (tree\$ or analy\$ or model\$)).ti,ab,de,hw. (485)
- 13 resource\$1.ti. (1849)
- 14 (resource\$1 adj4 (use\$1 or usage or utilit\$ or utilis\$ or utiliz\$)).ti,ab,de,hw. (1453)
- 15 (visit or visits or visited).ti,ab,de,hw. (3217)
- 16 appointment\$.ti,ab,de,hw. (897)
- 17 (hospitalization\$1 or hospitalisation\$1 or hospitalised or hospitalized).ti,ab,de,hw. (961)
- 18 (admission\$1 or readmission\$1 or admitted or readmitted).ti,ab,de,hw. (5168)
- 19 (placement\$ or care package\$ or support package\$).ti,ab,de,hw. (7425)
- 20 ((place\$ or move\$ or moving) adj3 (home\$1 or facility or facilities or residential)).ti,ab,de,hw. (1824)
- 21 hospital stay\$1.ti,ab,de,hw. (234)
- 22 (bed adj3 day\$1).ti,ab,de,hw. (90)
- 23 ((days or time or length or duration\$1) adj3 (hospital\$ or home\$1 or facility or facilities or residential)).ti,ab,de,hw. (633)
- 24 ((days or time or length or duration\$1) adj3 (stay or stays or stayed)).ti,ab,de,hw. (543)
- 25 ((days or time or length or duration\$1) adj3 (discharge or discharged)).ti,ab,de,hw. (86)
- 26 or/5-25 (29430)
- 27 (quality adjusted or adjusted life year\$).ti,ab,de,hw. (101)
- 28 (qaly\$ or qald\$ or qale\$ or qtime\$).ti,ab,de,hw. (73)
- 29 (illness state\$1 or health state\$1).ti,ab,de,hw. (52)

- 30 (hui or hui1 or hui2 or hui3).ti,ab,de,hw. (8)
- 31 (multiattribute\$ or multi attribute\$).ti,ab,de,hw. (6)
- 32 (utility adj3 (score\$1 or valu\$ or health\$ or cost\$ or measur\$ or disease\$ or mean or gain or gains or index\$)).ti,ab,de,hw. (99)
- 33 (utility loss\$ or disutilit\$).ti,ab,de,hw. (3)
- 34 utilities.ti,ab,de,hw. (220)
- 35 (eq-5d or eq5d or eq-5 or eq5 or euro qual or euroqual or euro qual5d or euroqual5d or euro qol or euroqol or euro qol5d or euroqol5d or euro quol or euroquol or euro quol5d or euroquol5d or eur qol or eurqol or eur qol5d or eur qol5d or eur?qul or eur?qul5d or euro\$ quality of life or european qol).ti,ab,de,hw. (112)
- 36 (euro\$ adj3 (5 d or 5d or 5 dimension\$ or 5dimension\$ or 5 domain\$ or 5domain\$)).ti,ab,de,hw. (18)
- 37 sf\$.ti,ab,de,hw. (511)
- 38 (short form\$ or shortform\$).ti,ab,de,hw. (285)
- 39 (time trade off\$1 or time tradeoff\$1 or tto or timetradeoff\$1).ti,ab,de,hw. (8)
- 40 or/27-39 (1209)
- 41 4 and 26 (7942)
- 42 4 and 40 (464)
- 43 41 or 42 (8288)
- 44 limit 43 to yr="2008 -Current" (3006)
- 45 remove duplicates from 44 (2995)

A.2: Source: PsycINFO 1806 to September Week 1 2018

Interface / URL: OvidSP

Database coverage dates: 1806 to September Week 1 2018

Search date: 12/09/18

Retrieved records: 882

Search strategy:

- 1 geriatric patients/ (12801)
- 2 aged.hw. (1661)
- 3 (elder\$ or aging or geriatric\$ or gerontol\$ or senior citizen\$ or seniors or pensioner\$ or veteran\$ or sexagenarian\$ or septuagenarian\$ or octogenarian\$ or nonagenarian\$ or centenarian\$).ti,ab,hw,id. (168943)
- 4 ((old or older or aged) adj3 (patient\$1 or people\$ or person\$ or woman\$ or women\$ or man or mans or men or mens or male\$1 or female\$ or adult\$ or population\$ or resident\$ or client\$ or consumer\$ or service user\$ or community or communities or individual\$ or citizen\$)).ti,ab,hw,id. (263168)
- 5 (aged care or old\$ age or oldest old or later life).ti,ab,hw,id. (28610)
- 6 or/1-5 (373947)
- 7 markov chains/ (1400)
- 8 (((economic\$ or cost\$) adj3 model\$) or (monte carlo or markov)).ti,ab,hw,id. (10403)
- 9 "costs and cost analysis"/ (15625)
- 10 health care economics/ (778)
- 11 ((econom\$ or cost or costs or costing or price or pricing) adj3 (analysis or analyses or evaluation\$1 or study or studies)).ti,ab,hw,id. (24260)
- 12 ((economic\$ or cost) adj3 (effect\$ or utilit\$ or benefit\$ or consequence\$ or outcome\$1 or minimi\$)).ti,ab,hw,id. (25331)
- 13 ((economic\$ or cost or costs or value) adj4 (decision\$1 or threshold\$)).ti,ab,hw,id. (4449)

- 14 (value adj2 (money or monetary)).ti,ab,hw,id. (900)
- 15 (return on investment or ROI).ti,ab,hw,id. (2297)
- 16 budget impact\$.ti,ab,hw,id. (61)
- 17 (decision\$ adj2 (tree\$ or analy\$ or model\$)).ti,ab,hw,id. (8547)
- 18 health care utilization/ (14701)
- 19 resource\$1.ti. (16768)
- 20 (resource\$1 adj4 (use\$1 or usage or utilit\$ or utilis\$ or utiliz\$)).ti,ab,hw,id. (12536)
- 21 (visit or visits or visited).ti,ab,hw,id. (38518)
- 22 appointment\$.ti,ab,hw,id. (6644)
- 23 exp hospitalization/ (21481)
- 24 (hospitalization\$1 or hospitalisation\$1 or hospitalised or hospitalized).ti,ab,hw,id. (55289)
- 25 (admission\$1 or readmission\$1 or admitted or readmitted).ti,ab,hw,id. (55639)
- 26 (placement\$ or care package\$ or support package\$).ti,ab,hw,id. (29490)
- 27 ((place\$ or move\$ or moving) adj3 (home\$1 or facility or facilities or residential)).ti,ab,hw,id. (4715)
- 28 treatment duration/ (3796)
- 29 hospital stay\$1.ti,ab,hw,id. (3301)
- 30 (bed adj3 day\$1).ti,ab,hw,id. (446)
- 31 ((days or time or length or duration\$1) adj3 (hospital\$ or home\$1 or facility or facilities or residential)).ti,ab,hw,id. (8644)
- 32 ((days or time or length or duration\$1) adj3 (stay or stays or stayed)).ti,ab,hw,id. (6635)
- 33 ((days or time or length or duration\$1) adj3 (discharge or discharged)).ti,ab,hw,id. (1905)
- 34 or/7-33 (272459)
- 35 (quality adjusted or adjusted life year\$).ti,ab,hw,id. (1589)
- 36 (qaly\$ or qald\$ or qale\$ or qtime\$).ti,ab,hw,id. (1015)
- 37 (illness state\$1 or health state\$1).ti,ab,hw,id. (1444)
- 38 (hui or hui1 or hui2 or hui3).ti,ab,hw,id. (534)
- 39 (multiattribute\$ or multi attribute\$).ti,ab,hw,id. (1052)
- 40 (utility adj3 (score\$1 or valu\$ or health\$ or cost\$ or measur\$ or disease\$ or mean or gain or gains or index\$)).ti,ab,hw,id. (4012)
- 41 (utility loss\$ or disutilit\$).ti,ab,hw,id. (226)
- 42 utilities.ti,ab,hw,id. (1868)
- 43 (eq-5d or eq5d or eq-5 or eq5 or euro qual or euroqual or euro qual5d or euroqual5d or euro qol or euroqol or euro qol5d or euroqol5d or euro quol or euroquol or euro quol5d or euroquol5d or eur qol or eurqol or eur qol5d or eur qol5d or eur?qul or eur?qul5d or euro\$ quality of life or european qol).ti,ab,hw,id. (1898)
- 44 (euro\$ adj3 (5 d or 5d or 5 dimension\$ or 5dimension\$ or 5 domain\$ or 5domain\$)).ti,ab,hw,id. (556)
- 45 sf\$.ti,ab,hw,id. (12048)
- 46 (short form\$ or shortform\$).ti,ab,hw,id. (12085)
- 47 (time trade off\$1 or time tradeoff\$1 or tto or timetradeoff\$1).ti,ab,hw,id. (371)
- 48 or/35-47 (29820)
- 49 6 and 34 (39694)
- 50 6 and 48 (4155)
- 51 49 or 50 (43132)
- 52 (national health service* or nhs*).ti,ab,in,cq. (27523)
- 53 (english not ((published or publication* or translat* or written or language* or speak* or literature or citation*) adj5 english)).ti,ab. (93001)

- 54 (gb or "g.b." or britain* or (british* not "british columbia") or uk or "u.k." or united kingdom* or (england* not "new england") or northern ireland* or northern irish* or scotland* or scottish* or ((wales or "south wales") not "new south wales") or welsh*).ti,ab,jx,in,cq. (440093)
- 55 (bath or "bath's" or ((birmingham not alabama*) or ("birmingham's" not alabama*) or bradford or "bradford's" or brighton or "brighton's" or bristol or "bristol's" or Carlisle* or "Carlisle's" or (Cambridge not (massachusetts* or boston* or harvard*)) or ("Cambridge's" not (massachusetts* or boston* or harvard*)) or (canterbury not zealand*) or ("canterbury's" not zealand*) or Chelmsford or "Chelmsford's" or chester or "chester's" or chichester or "chichester's" or coventry or "coventry's" or derby or "derby's" or (durham not (carolina* or nc)) or ("durham's" not (carolina* or nc)) or Ely or "Ely's" or Exeter or "Exeter's" or Gloucester or "Gloucester's" or Hereford or "Hereford's" or Hull or "Hull's" or Lancaster or "Lancaster's" or Leeds* or Leicester or "Leicester's" or (Lincoln not nebraska*) or ("Lincoln's" not nebraska*) or (Liverpool not (new south wales* or nsw)) or ("Liverpool's" not (new south wales* or nsw)) or ((London not (ontario* or ont or toronto*)) or ("London's" not (ontario* or ont or toronto*)) or Manchester or "Manchester's" or (Newcastle not (new south wales* or nsw)) or ("Newcastle's" not (new south wales* or nsw)) or Norwich or "Norwich's" or Nottingham or "Nottingham's" or Oxford or "Oxford's" or Peterborough or "Peterborough's" or Plymouth or "Plymouth's" or Portsmouth or "Portsmouth's" or Preston or "Preston's" or Ripon or "Ripon's" or Salford or "Salford's" or Salisbury or "Salisbury's" or Sheffield or "Sheffield's" or Southampton or "Southampton's" or St Albans or Stoke or "Stoke's" or Sunderland or "Sunderland's" or Truro or "Truro's" or Wakefield or "Wakefield's" or Wells or Westminster or "Westminster's" or Winchester or "Winchester's" or Wolverhampton or "Wolverhampton's" or (Worcester not (massachusetts* or boston* or harvard*)) or ("Worcester's" not (massachusetts* or boston* or harvard*)) or (York not ("New York*" or ny or ontario* or ont or toronto*)) or ("York's" not ("New York*" or ny or ontario* or ont or toronto*))))).ti,ab,in,cq. (344961)
- 56 (Bangor or "Bangor's" or Cardiff or "Cardiff's" or Newport or "Newport's" or St Asaph or "St Asaph's" or St Davids or Swansea or "Swansea's").ti,ab,in,cq. (17802)
- 57 (Aberdeen or "Aberdeen's" or Dundee or "Dundee's" or Edinburgh or "Edinburgh's" or Glasgow or "Glasgow's" or Inverness or (Perth not australia*) or ("Perth's" not australia*) or Stirling or "Stirling's").ti,ab,in,cq. (42966)
- 58 (Armagh or "Armagh's" or Belfast or "Belfast's" or Lisburn or "Lisburn's" or Londonderry or "Londonderry's" or Derry or "Derry's" or Newry or "Newry's").ti,ab,in,cq. (5606)
- 59 or/52-58 (589280)
- 60 51 and 59 (5953)
- 61 exp social services/ (42204)
- 62 exp social casework/ (17391)
- 63 social programs/ (1588)
- 64 (social adj3 (care\$ or caring or work\$ or welfare\$ or service\$ or support\$ or setting\$ or help\$ or intervention\$ or provision\$ or provider\$ or assistance)).ti,ab,hw,id. (151536)
- 65 (community adj3 (care\$ or caring or work\$ or welfare\$ or service\$ or support\$ or setting\$ or help\$ or intervention\$ or provision\$ or provider\$ or assistance or facility or facilities or hospital\$ or ward\$ or centre\$ or center\$)).ti,ab,hw,id. (68455)
- 66 community health\$.ti,ab,hw,id. (6675)
- 67 telemedicine/ (4471)
- 68 digital\$.ti,ab,hw,id. (21296)
- 69 assisted living/ or independent living programs/ (1040)
- 70 ((assisted or assistive) adj living).ti,ab,hw,id. (1207)
- 71 caregivers/ or caregiver burden/ (27898)

- 72 (caregiver\$ or care-giver\$ or caregiving or care-giving or carer\$).ti,ab,hw,id. (60298)
 73 community involvement/ (4167)
 74 (communit\$ adj3 capacit\$).ti,ab,hw,id. (965)
 75 (local\$ adj6 support\$).ti,ab,hw,id. (2638)
 76 befriend\$.ti,ab,hw,id. (492)
 77 (timebank\$ or time-bank\$).ti,ab,hw,id. (27)
 78 empowerment/ (6934)
 79 empower\$.ti,ab,hw,id. (25664)
 80 self-care skills/ (4172)
 81 exp self-help techniques/ (10004)
 82 (selfcare or selfcaring).ti,ab,hw,id. (56)
 83 (self adj (care or caring or manag\$)).ti,ab,hw,id. (20415)
 84 (practical adj5 (support\$ or help\$ or assist\$ or service\$ or intervention\$)).ti,ab,hw,id. (6841)
 85 (repair\$ adj3 (home or homes or hous\$)).ti,ab,hw,id. (65)
 86 (garden\$ or shop\$).ti,ab,hw,id. (11724)
 87 social support/ (33448)
 88 exp housing/ (8484)
 89 nursing homes/ (8047)
 90 residential care institutions/ (10089)
 91 (residential adj3 (care or home or homes or hous\$ or accommodation\$ or living)).ti,ab,hw,id. (13018)
 92 (supported adj (care or home or homes or hous\$ or accommodation\$ or living)).ti,ab,hw,id. (649)
 93 (sheltered adj (care or home or homes or hous\$ or accommodation\$ or living)).ti,ab,hw,id. (266)
 94 (retirement adj (care or home or homes or hous\$ or accommodation\$ or living)).ti,ab,hw,id. (212)
 95 ((community or social) adj3 (home or homes or hous\$ or accommodation\$ or living)).ti,ab,hw,id. (14300)
 96 nursing home\$.ti,ab,hw,id. (12097)
 97 care home\$.ti,ab,hw,id. (1638)
 98 home environment/ (9217)
 99 (reable\$ or re-able\$).ti,ab,hw,id. (24)
 100 (intermediate adj3 (care or caring)).ti,ab,hw,id. (484)
 101 (intermediate adj3 (setting\$ or unit\$ or scheme\$ or service\$ or facility or facilities or residen\$ or home\$ or hous\$ or nurs\$ or sector\$ or provision\$ or provider\$ or team\$ or model\$ or integrated or interdisciplinary or multidisciplinary or inter-disciplinary or multi-disciplinary or welfare or support\$ or help\$ or assistance or intervention\$)).ti,ab,hw,id. (908)
 102 community based.ti,ab,hw,id. (26863)
 103 crisis response\$.ti,ab,hw,id. (454)
 104 home-based.ti,ab,hw,id. (4387)
 105 bed-based.ti,ab,hw,id. (18)
 106 (local\$ adj3 (integrat\$ or pioneer\$)).ti,ab,hw,id. (729)
 107 (integration adj3 pioneer\$).ti,ab,hw,id. (9)
 108 ((personal\$ or individual\$) adj2 budget\$).ti,ab,hw,id. (185)
 109 ((home or homes or hous\$) adj3 (modif\$ or adapt\$ or assess\$ or safe\$ or hazard\$)).ti,ab,hw,id. (3819)
 110 ((social or community) adj3 (prescrib\$ or prescrip\$)).ti,ab,hw,id. (443)

- 111 ((social or community or non-medical or nonmedical) adj referral\$).ti,ab,hw,id. (94)
- 112 (linking adj (scheme\$ or program\$)).ti,ab,hw,id. (25)
- 113 ((wellbeing or well-being) adj program\$).ti,ab,hw,id. (74)
- 114 ((exercis\$ or walk\$ or gym or gyms or cycle or cycling or swim\$ or aqua\$ or books or reading or bibliotherapy or art or arts or creativity or learning or education or activity or activities or volunteer\$ or voluntary or club or clubs or sport\$ or dancing or dance\$ or fish\$ or knit\$ or self-help or selfhelp or computer\$ or mutual aid) adj3 (prescrib\$ or prescrip\$)).ti,ab,hw,id. (1529)
- 115 ((exercis\$ or walk\$ or gym or gyms or cycle or cycling or swim\$ or aqua\$ or books or reading or bibliotherapy or art or arts or creativity or learning or education or activity or activities or volunteer\$ or voluntary or club or clubs or sport\$ or dancing or dance\$ or fish\$ or knit\$ or self-help or selfhelp or computer\$ or mutual aid) adj3 referral\$).ti,ab,hw,id. (1007)
- 116 (signposting or sign-posting).ti,ab,hw,id. (124)
- 117 home care/ (6053)
- 118 (homecare or homecaring).ti,ab,hw,id. (274)
- 119 ((home or homes) adj3 (care or caring or service\$ or assistance or support\$)).ti,ab,hw,id. (16334)
- 120 ((domicil\$ or outreach or out-reach) adj (care or caring or service\$ or assistance or support\$)).ti,ab,hw,id. (564)
- 121 (homemaker\$ or home-maker\$).ti,ab,hw,id. (1273)
- 122 "hospital at home".ti,ab,hw,id. (39)
- 123 ((help or helping) adj4 (home or homes)).ti,ab,hw,id. (775)
- 124 integrated services/ (3231)
- 125 (integrated adj3 (care or caring or service\$ or healthcare)).ti,ab,hw,id. (6922)
- 126 (tailored adj3 activit\$).ti,ab,hw,id. (174)
- 127 or/61-126 (418862)
- 128 60 and 127 (1736)
- 129 elder care/ (4000)
- 130 aging in place/ (134)
- 131 ((elder\$ or aged or aging or geriatric\$ or gerontol\$ or old\$ age or oldest old or later life or pensioner\$ or senior\$ or old\$ people or old\$ person\$ or old\$ patient\$ or old\$ woman\$ or old\$ women\$ or old\$ man or old\$ mans or old\$ men or old\$ mens or old\$ male\$ or old\$ female\$ or old\$ adult\$ or old\$ population\$ or old\$ resident\$ or old\$ client\$ or old\$ consumer\$ or old\$ service user\$ or old\$ community or old\$ communities or old\$ individual\$ or old\$ citizen\$) adj3 (care\$ or caring or work\$ or welfare\$ or service\$)).ti,ab,hw,id. (26942)
- 132 or/129-131 (27042)
- 133 132 and (34 or 48) (4843)
- 134 133 and 59 (778)
- 135 128 or 134 (2047)
- 136 limit 135 to yr="2008 -Current" (882)
- 137 remove duplicates from 136 (882)

A.3: Source: SchARRHUD

Interface / URL: <https://www.scharrhud.org/index.php?recordsN1&m=search>

Database coverage dates: Information not found

Search date: 03/09/18

Retrieved records: 146

Search strategy:

The following 4 searches were conducted separately. 'Any field' was selected. Searches were limited to 'Year Published' 2008 – 2018. 194 records were imported into an empty EndNote library with default deduplication settings. 48 records were automatically removed as duplicates, 146 records remained for retrieval

1. (elder* or aging or geriatric* or gerontol* or senior citizen* or seniors or pensioner* or veteran* or sexagenarian* or septuagenarian* or octogenarian* or nonagenarian* or centenarian*) = 78 results
2. (old or older) and (patient* or people* or person* or woman* or women* or man or mans or men or mens or male* or female* or adult* or population* or resident* or client* or consumer* or service user* or community or communities or individual* or citizen*) = 101
3. (aged patient* or aged people* or aged person* or aged woman* or aged women* or aged man or aged mans or aged men or aged mens or aged male* or aged female* or aged adult* or aged population* or aged resident* or aged client* or aged consumer* or aged service user* or aged community or aged communities or aged individual* or aged citizen*) = 2
4. aged care or old* age or oldest old or later life = 13

A.4: Source: Cochrane Database of Systematic Reviews Issue 9 of 12, September 2018

Interface / URL: Cochrane Library

Database coverage dates: Information not found

Search date: 03/08/18

Retrieved records: 261

Search strategy:

- #1 [mh aged] 1669
- #2 [mh ^"Health Services for the Aged"] 433
- #3 [mh ^"HOMES FOR THE AGED"] 559
- #4 [mh ^"HOUSING FOR THE ELDERLY"] 35
- #5 (elder* or aging or geriatric* or gerontol* or senior next citizen* or seniors or pensioner* or veteran* or sexagenarian* or septuagenarian* or octogenarian* or nonagenarian* or centenarian*):ti,ab,kw 44661
- #6 ((old or older or aged) near/3 (patient* or people* or person* or woman* or women* or man or mans or men or mens or male* or female* or adult* or population* or resident* or client* or consumer* or service next user* or community or communities or individual* or citizen*)):ti,ab,kw 123460
- #7 ("aged care" or old* next age or "oldest old" or "later life"):ti,ab,kw 3702
- #8 #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 152379
- #9 [mh "models, economic"] 298
- #10 [mh ^"markov chains"] 248
- #11 [mh ^"monte carlo method"] 179
- #12 (((economic* or cost*) near/3 model*) or ("monte carlo" or markov)):ti,ab,kw 2607

- #13 ((econom* or cost or costs or costing or price or pricing) near/3 (analysis or analyses or evaluation* or study or studies)):ti,ab,kw 19192
- #14 ((economic* or cost) near/3 (effect* or utilit* or benefit* or consequence* or outcome* or minimi*)):ti,ab,kw 24993
- #15 ((economic* or cost or costs or value) near/4 (decision* or threshold*)):ti,ab,kw 1412
- #16 (value near/2 (money or monetary)):ti,ab,kw 230
- #17 ("return on investment" or ROI):ti,ab,kw 517
- #18 (budget next impact*):ti,ab,kw 139
- #19 (decision* near/2 (tree* or analy* or model*)):ti,ab,kw 1468
- #20 resource*:ti 1247
- #21 (resource* near/4 (use* or usage or utilit* or utilis* or utiliz*)):ti,ab,kw 4467
- #22 [mh "Office Visits"] 427
- #23 (visit or visits or visited):ti,ab,kw 45702
- #24 appointment*:ti,ab,kw 4249
- #25 [mh ^Hospitalization] 321
- #26 (hospitalization* or hospitalisation* or hospitalised or hospitalized):ti,ab,kw 35643
- #27 (admission* or readmission* or admitted or readmitted):ti,ab,kw 33828
- #28 [mh "Residential Facilities"] 1557
- #29 (placement* or care next package* or support next package*):ti,ab,kw 11217
- #30 ((place* or move* or moving) near/3 (home* or facility or facilities or residential)):ti,ab,kw 744
- #31 [mh ^"length of stay"] 6514
- #32 (hospital next stay*):ti,ab,kw 13458
- #33 (bed near/3 day*):ti,ab,kw 509
- #34 ((days or time or length or duration*) near/3 (hospital* or home* or facility or facilities or residential)):ti,ab,kw 17448
- #35 ((days or time or length or duration*) near/3 (stay or stays or stayed)):ti,ab,kw 19899
- #36 ((days or time or length or duration*) near/3 (discharge or discharged)):ti,ab,kw 3752
- #37 #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 156643
- #38 [mh "Quality-Adjusted Life Years"] 1029
- #39 ("quality adjusted" or adjusted next life next year*):ti,ab,kw 3437
- #40 (qaly* or qald* or qale* or qtime*):ti,ab,kw 2277
- #41 (illness next state* or health next state*):ti,ab,kw 710
- #42 (hui or hui1 or hui2 or hui3):ti,ab,kw 159
- #43 (multiattribute* or multi next attribute*):ti,ab,kw 56
- #44 (utility near/3 (score* or valu* or health* or cost* or measur* or disease* or mean or gain or gains or index*)):ti,ab,kw 2457
- #45 (utility next loss* or disutilit*):ti,ab,kw 49
- #46 utilities:ti,ab,kw 703
- #47 (eq-5d or eq5d or eq-5 or eq5 or "euro qual" or euroqual or "euro qual5d" or euroqual5d or "euro qol" or euroqol or "euro qol5d" or euroqol5d or "euro quol" or euroquol or "euro quol5d" or euroquol5d or "eur qol" or eurqol or "eur qol5d" or "eur qol5d" or euroquol or eurquol or euroquol5d or eurquol5d or euro* next quality next of next life or european next qol):ti,ab,kw 4264

#48 (euro* near/3 (5 next d or 5d or 5 next dimension* or 5dimension* or 5 next domain* or 5domain*)):ti,ab,kw 1390
 #49 sf*:ti,ab,kw 12845
 #50 (short next form* or shortform*):ti,ab,kw 8507
 #51 (time next trade next off* or time next tradeoff* or tto or timetradeoff*):ti,ab,kw 208
 #52 #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 23743
 #53 #8 AND #37 27935
 #54 #8 AND #52 5331
 #55 #53 OR #54 with Cochrane Library publication date from Jan 2008 to Jan 2018, in Cochrane Reviews and Cochrane Protocols 261

A.5: Source: Econlit 1886 to August 30, 2018

Interface / URL: OvidSP

Database coverage dates: 1886 to August 30, 2018

Search date: 07/09/18

Retrieved records: 372

Search strategy:

- 1 (elder\$ or aging or geriatric\$ or gerontol\$ or senior citizen\$ or seniors or pensioner\$ or veteran\$ or sexagenarian\$ or septuagenarian\$ or octogenarian\$ or nonagenarian\$ or centenarian\$).ti,ab,kw,hw. (15412)
- 2 ((old or older or aged) adj3 (patient\$1 or people\$ or person\$ or woman\$ or women\$ or man or mans or men or mens or male\$1 or female\$ or adult\$ or population\$ or resident\$ or client\$ or consumer\$ or service user\$ or community or communities or individual\$ or citizen\$)).ti,ab,kw,hw. (4522)
- 3 (aged care or old\$ age or oldest old or later life).ti,ab,kw,hw. (2703)
- 4 or/1-3 (19406)
- 5 (((economic\$ or cost\$) adj3 model\$) or (monte carlo or markov)).ti,ab,kw,hw. (34816)
- 6 ((econom\$ or cost or costs or costing or price or pricing) adj3 (analysis or analyses or evaluation\$1 or study or studies)).ti,ab,kw,hw. (141741)
- 7 ((economic\$ or cost) adj3 (effect\$ or utilit\$ or benefit\$ or consequence\$ or outcome\$1 or minimi\$)).ti,ab,kw,hw. (36927)
- 8 ((economic\$ or cost or costs or value) adj4 (decision\$1 or threshold\$)).ti,ab,kw,hw. (7038)
- 9 (value adj2 (money or monetary)).ti,ab,kw,hw. (1150)
- 10 (return on investment or ROI).ti,ab,kw,hw. (588)
- 11 budget impact\$.ti,ab,kw,hw. (58)
- 12 (decision\$ adj2 (tree\$ or analy\$ or model\$)).ti,ab,kw,hw. (4051)
- 13 resource\$1.ti. (14853)
- 14 (resource\$1 adj4 (use\$1 or usage or utilit\$ or utilis\$ or utiliz\$)).ti,ab,kw,hw. (5175)
- 15 (visit or visits or visited).ti,ab,kw,hw. (2849)
- 16 appointment\$.ti,ab,kw,hw. (973)
- 17 (hospitalization\$1 or hospitalisation\$1 or hospitalised or hospitalized).ti,ab,kw,hw. (650)
- 18 (admission\$1 or readmission\$1 or admitted or readmitted).ti,ab,kw,hw. (2311)
- 19 (placement\$ or care package\$ or support package\$).ti,ab,kw,hw. (1518)
- 20 ((place\$ or move\$ or moving) adj3 (home\$1 or facility or facilities or residential)).ti,ab,kw,hw. (384)
- 21 hospital stay\$1.ti,ab,kw,hw. (123)
- 22 (bed adj3 day\$1).ti,ab,kw,hw. (27)

- 23 ((days or time or length or duration\$1) adj3 (hospital\$ or home\$1 or facility or facilities or residential)).ti,ab,kw,hw. (698)
- 24 ((days or time or length or duration\$1) adj3 (stay or stays or stayed)).ti,ab,kw,hw. (587)
- 25 ((days or time or length or duration\$1) adj3 (discharge or discharged)).ti,ab,kw,hw. (45)
- 26 or/5-25 (227828)
- 27 (quality adjusted or adjusted life year\$).ti,ab,kw,hw. (743)
- 28 (qaly\$ or qald\$ or qale\$ or qtime\$).ti,ab,kw,hw. (437)
- 29 (illness state\$1 or health state\$1).ti,ab,kw,hw. (344)
- 30 (hui or hui1 or hui2 or hui3).ti,ab,kw,hw. (91)
- 31 (multiattribute\$ or multi attribute\$).ti,ab,kw,hw. (494)
- 32 (utility adj3 (score\$1 or valu\$ or health\$ or cost\$ or measur\$ or disease\$ or mean or gain or gains or index\$)).ti,ab,kw,hw. (1881)
- 33 (utility loss\$ or disutilit\$).ti,ab,kw,hw. (772)
- 34 utilities.ti,ab,kw,hw. (25293)
- 35 (eq-5d or eq5d or eq-5 or eq5 or euro qual or euroqual or euro qual5d or euroqual5d or euro qol or euroqol or euro qol5d or euroqol5d or euro quol or euroquol or euro quol5d or euroquol5d or eur qol or eurqol or eur qol5d or eur qol5d or eur?qul or eur?qul5d or euro\$ quality of life or european qol).ti,ab,kw,hw. (180)
- 36 (euro\$ adj3 (5 d or 5d or 5 dimension\$ or 5dimension\$ or 5 domain\$ or 5domain\$)).ti,ab,kw,hw. (24)
- 37 sf\$.ti,ab,kw,hw. (1214)
- 38 (short form\$ or shortform\$).ti,ab,kw,hw. (65)
- 39 (time trade off\$1 or time tradeoff\$1 or tto or timetradeoff\$1).ti,ab,kw,hw. (175)
- 40 or/27-39 (30360)
- 41 26 or 40 (252442)
- 42 (social adj3 (care\$ or caring or work\$ or welfare\$ or service\$ or support\$ or setting\$ or help\$ or intervention\$ or provision\$ or provider\$ or assistance)).ti,ab,kw,hw. (13487)
- 43 (community adj3 (care\$ or caring or work\$ or welfare\$ or service\$ or support\$ or setting\$ or help\$ or intervention\$ or provision\$ or provider\$ or assistance or facility or facilities or hospital\$ or ward\$ or centre\$ or center\$)).ti,ab,kw,hw. (2136)
- 44 community health\$.ti,ab,kw,hw. (309)
- 45 digital\$.ti,ab,kw,hw. (3644)
- 46 ((assisted or assistive) adj living).ti,ab,kw,hw. (44)
- 47 (caregiver\$ or care-giver\$ or caregiving or care-giving or carer\$).ti,ab,kw,hw. (860)
- 48 (communit\$ adj3 capacit\$).ti,ab,kw,hw. (180)
- 49 (local\$ adj6 support\$).ti,ab,kw,hw. (1106)
- 50 befriend\$.ti,ab,kw,hw. (13)
- 51 (timebank\$ or time-bank\$).ti,ab,kw,hw. (67)
- 52 empower\$.ti,ab,kw,hw. (3662)
- 53 (selfcare or selfcaring).ti,ab,kw,hw. (1)
- 54 (self adj (care or caring or manag\$)).ti,ab,kw,hw. (528)
- 55 (practical adj5 (support\$ or help\$ or assist\$ or service\$ or intervention\$)).ti,ab,kw,hw. (327)
- 56 (repair\$ adj3 (home or homes or hous\$)).ti,ab,kw,hw. (24)
- 57 (garden\$ or shop\$).ti,ab,kw,hw. (4357)
- 58 (residential adj3 (care or home or homes or hous\$ or accommodation\$ or living)).ti,ab,kw,hw. (1798)
- 59 (supported adj (care or home or homes or hous\$ or accommodation\$ or living)).ti,ab,kw,hw. (13)

- 60 (sheltered adj (care or home or homes or hous\$ or accommodation\$ or living)).ti,ab,kw,hw. (4)
- 61 (retirement adj (care or home or homes or hous\$ or accommodation\$ or living)).ti,ab,kw,hw. (125)
- 62 ((community or social) adj3 (home or homes or hous\$ or accommodation\$ or living)).ti,ab,kw,hw. (2428)
- 63 nursing home\$.ti,ab,kw,hw. (531)
- 64 care home\$.ti,ab,kw,hw. (60)
- 65 (reable\$ or re-able\$).ti,ab,kw,hw. (0)
- 66 (intermediate adj3 (care or caring)).ti,ab,kw,hw. (6)
- 67 (intermediate adj3 (setting\$ or unit\$ or scheme\$ or service\$ or facility or facilities or residen\$ or home\$ or hous\$ or nurs\$ or sector\$ or provision\$ or provider\$ or team\$ or model\$ or integrated or interdisciplinary or multidisciplinary or inter-disciplinary or multi-disciplinary or welfare or support\$ or help\$ or assistance or intervention\$)).ti,ab,kw,hw. (609)
- 68 community based.ti,ab,kw,hw. (1405)
- 69 crisis response\$.ti,ab,kw,hw. (79)
- 70 home-based.ti,ab,kw,hw. (299)
- 71 bed-based.ti,ab,kw,hw. (2)
- 72 (local\$ adj3 (integrat\$ or pioneer\$)).ti,ab,kw,hw. (321)
- 73 (integration adj3 pioneer\$).ti,ab,kw,hw. (1)
- 74 ((personal\$ or individual\$) adj2 budget\$).ti,ab,kw,hw. (168)
- 75 ((home or homes or hous\$) adj3 (modif\$ or adapt\$ or assess\$ or safe\$ or hazard\$)).ti,ab,kw,hw. (804)
- 76 ((social or community) adj3 (prescrib\$ or prescrip\$)).ti,ab,kw,hw. (32)
- 77 ((social or community or non-medical or nonmedical) adj referral\$).ti,ab,kw,hw. (2)
- 78 (linking adj (scheme\$ or program\$)).ti,ab,kw,hw. (5)
- 79 ((wellbeing or well-being) adj program\$).ti,ab,kw,hw. (7)
- 80 ((exercis\$ or walk\$ or gym or gyms or cycle or cycling or swim\$ or aqua\$ or books or reading or bibliotherapy or art or arts or creativity or learning or education or activity or activities or volunteer\$ or voluntary or club or clubs or sport\$ or dancing or dance\$ or fish\$ or knit\$ or self-help or selfhelp or computer\$ or mutual aid) adj3 (prescrib\$ or prescrip\$)).ti,ab,kw,hw. (44)
- 81 ((exercis\$ or walk\$ or gym or gyms or cycle or cycling or swim\$ or aqua\$ or books or reading or bibliotherapy or art or arts or creativity or learning or education or activity or activities or volunteer\$ or voluntary or club or clubs or sport\$ or dancing or dance\$ or fish\$ or knit\$ or self-help or selfhelp or computer\$ or mutual aid) adj3 referral\$).ti,ab,kw,hw. (11)
- 82 (signposting or sign-posting).ti,ab,kw,hw. (10)
- 83 (homecare or homecaring).ti,ab,kw,hw. (24)
- 84 ((home or homes) adj3 (care or caring or service\$ or assistance or support\$)).ti,ab,kw,hw. (870)
- 85 ((domicil\$ or outreach or out-reach) adj (care or caring or service\$ or assistance or support\$)).ti,ab,kw,hw. (19)
- 86 (homemaker\$ or home-maker\$).ti,ab,kw,hw. (62)
- 87 "hospital at home".ti,ab,kw,hw. (4)
- 88 ((help or helping) adj4 (home or homes)).ti,ab,kw,hw. (58)
- 89 (integrated adj3 (care or caring or service\$ or healthcare)).ti,ab,kw,hw. (244)
- 90 (tailored adj3 activit\$).ti,ab,kw,hw. (2)
- 91 or/42-90 (37639)

- 92 4 and 41 and 91 (383)
 93 ((elder\$ or aged or aging or geriatric\$ or gerontol\$ or old\$ age or oldest old or later life or pensioner\$ or senior\$ or old\$ people or old\$ person\$ or old\$ patient\$ or old\$ woman\$ or old\$ women\$ or old\$ man or old\$ mans or old\$ men or old\$ mens or old\$ male\$ or old\$ female\$ or old\$ adult\$ or old\$ population\$ or old\$ resident\$ or old\$ client\$ or old\$ consumer\$ or old\$ service user\$ or old\$ community or old\$ communities or old\$ individual\$ or old\$ citizen\$) adj3 (care\$ or caring or work\$ or welfare\$ or service\$)).ti,ab,kw,hw. (2125)
 94 41 and 93 (301)
 95 92 or 94 (611)
 96 limit 95 to yr="2008 -Current" (372)

Note: Applying English language limits removes some English language papers – particularly working papers – so this limit was not applied.

A.6: Source: NHS Economic Evaluation Database (NHS EED)

Interface / URL: <https://www.crd.york.ac.uk/CRDWeb/HomePage.asp>

Database coverage dates: Information not found. Funded from 1994 to March 2015. Searches to populate the database ceased at end of 2014.

Search date: 07/09/18

Retrieved records: 871

Search strategy:

- 1 (MeSH DESCRIPTOR Aged EXPLODE ALL TREES) 9687
 2 (elder* or aging or geriatric* or gerontol* or senior citizen* or seniors or pensioner* or veteran* or sexagenarian* or septuagenarian* or octogenarian* or nonagenarian* or centenarian*) 2807
 3 ((old or older or aged) near3 (patient* or people* or person* or woman* or women* or man or mans or men or mens or male* or female* or adult* or population* or resident* or client* or consumer* or service user* or community or communities or individual* or citizen*)) 3717
 4 ((patient* or people* or person* or woman* or women* or man or mans or men or mens or male* or female* or adult* or population* or resident* or client* or consumer* or service user* or community or communities or individual* or citizen*) near3 (old or older)) 1004
 5 (aged care or old* age or oldest old or later life) 188
 6 (#1 OR #2 OR #3 OR #4 OR #5) 12667
 7 MeSH DESCRIPTOR Social Welfare EXPLODE ALL TREES 162
 8 MeSH DESCRIPTOR Social Work EXPLODE ALL TREES 50
 9 ((social near3 (care* or caring or work* or welfare* or service* or support* or setting* or help* or intervention* or provision* or provider* or assistance))) 2817
 10 (((care* or caring or work* or welfare* or service* or support* or setting* or help* or intervention* or provision* or provider* or assistance) near3 social)) 775
 11 MeSH DESCRIPTOR Community Health Services 263
 12 ((community near3 (care* or caring or work* or welfare* or service* or support* or setting* or help* or intervention* or provision* or provider* or assistance or facility or facilities or hospital* or ward* or centre* or center*)) 2040
 13 (((care* or caring or work* or welfare* or service* or support* or setting* or help* or intervention* or provision* or provider* or assistance or facility or facilities or hospital* or ward* or centre* or center*) near3 community)) 1603

14	(community health*)	628	
15	MeSH DESCRIPTOR Telemedicine EXPLODE ALL TREES		423
16	(digital*)	488	
17	MeSH DESCRIPTOR Assisted Living Facilities	4	
18	((assisted or assistive) near0 living))	19	
19	MeSH DESCRIPTOR Caregivers	217	
20	((caregiver* or care-giver* or caregiving or care-giving or carer*))		1294
21	((communit* near3 capacit*))	2	
22	((capacit* near3 communit*))	3	
23	((local* near6 support*))	23	
24	(support* near6 local*)	39	
25	(befriend*)	10	
26	((timebank* or time-bank*))	0	
27	(empower*)	79	
28	MeSH DESCRIPTOR Self Care	479	
29	((selfcare or selfcaring))	0	
30	((self near0 (care or caring or manag*)))	840	
31	((practical near5 (support* or help* or assist* or service* or intervention*)))		43
32	((support* or help* or assist* or service* or intervention*) near5 practical))		19
33	((repair* near3 (home or homes or hous*)))	3	
34	((home or homes or hous*) near3 repair*))	3	
35	((garden* or shop*))	106	
36	MeSH DESCRIPTOR social support	331	
37	MeSH DESCRIPTOR housing	36	
38	MeSH DESCRIPTOR public housing	5	
39	MeSH DESCRIPTOR Nursing Homes	198	
40	MeSH DESCRIPTOR Residential Facilities	33	
41	((residential near3 (care or home or homes or hous* or accommodation* or living)))		
		194	
42	((care or home or homes or hous* or accommodation* or living) near3 residential))		
		78	
43	((supported near0 (care or home or homes or hous* or accommodation* or living)))		
		13	
44	((sheltered near0 (care or home or homes or hous* or accommodation* or living)))		
		19	
45	((retirement near0 (care or home or homes or hous* or accommodation* or living)))		
		4	
46	((community or social) near3 (home or homes or hous* or accommodation* or living)))		
		170	
47	((home or homes or hous* or accommodation* or living) near3 (community or social)))		
		275	
48	(nursing home*)	597	
49	(care home*)	133	
50	((reable* or re-able*))	3	
51	MeSH DESCRIPTOR Intermediate Care Facilities		6
52	((intermediate near3 (care or caring)))	42	
53	((care or caring) near3 intermediate))	16	

54	((intermediate near3 (setting* or unit* or scheme* or service* or facility or facilities or residen* or home* or hous* or nurs* or sector* or provision* or provider* or team* or model* or integrated or interdisciplinary or multidisciplinary or inter-disciplinary or multi-disciplinary or welfare or support* or help* or assistance or intervention*)))	48
55	((((setting* or unit* or scheme* or service* or facility or facilities or residen* or home* or hous* or nurs* or sector* or provision* or provider* or team* or model* or integrated or interdisciplinary or multidisciplinary or inter-disciplinary or multi-disciplinary or welfare or support* or help* or assistance or intervention*) near3 intermediate))	59
56	(community based)	622
57	(crisis response*)	1
58	(home-based)	322
59	(bed-based)	0
60	((local* near3 (integrat* or pioneer*)))	5
61	((((integrat* or pioneer*) near3 local*))	3
62	((integration near3 pioneer*))	0
63	((pioneer* near3 integration))	0
64	((((personal* or individual*) near2 budget*))	2
65	((budget* near3 (personal* or individual*))	1
66	((((home or homes or hous*) near3 (modif* or adapt* or assess* or safe* or hazard*)))	148
67	((((modif* or adapt* or assess* or safe* or hazard*) near3 (home or homes or hous*)))	137
68	((((social or community) near3 (prescrib* or prescrip*)))	11
69	((((prescrib* or prescrip*) near3 (social or community)))	12
70	((((social or community or non-medical or nonmedical) near0 referral*))	4
71	((linking near0 (scheme* or program*)))	0
72	((((wellbeing or well-being) near0 program*))	1
73	((((exercis* or walk* or gym or gyms or cycle or cycling or swim* or aqua* or books or reading or bibliotherapy or art or arts or creativity or learning or education or activity or activities or volunteer* or voluntary or club or clubs or sport* or dancing or dance* or fish* or knit* or self-help or selfhelp or computer* or mutual aid) near3 (prescrib* or prescrip*)))	93
74	((((prescrib* or prescrip*) near3 (exercis* or walk* or gym or gyms or cycle or cycling or swim* or aqua* or books or reading or bibliotherapy or art or arts or creativity or learning or education or activity or activities or volunteer* or voluntary or club or clubs or sport* or dancing or dance* or fish* or knit* or self-help or selfhelp or computer* or mutual aid)))	61
75	((((exercis* or walk* or gym or gyms or cycle or cycling or swim* or aqua* or books or reading or bibliotherapy or art or arts or creativity or learning or education or activity or activities or volunteer* or voluntary or club or clubs or sport* or dancing or dance* or fish* or knit* or self-help or selfhelp or computer* or mutual aid) near3 referral*))	43
76	((referral* near3 (exercis* or walk* or gym or gyms or cycle or cycling or swim* or aqua* or books or reading or bibliotherapy or art or arts or creativity or learning or education or activity or activities or volunteer* or voluntary or club or clubs or sport* or dancing or dance* or fish* or knit* or self-help or selfhelp or computer* or mutual aid)))	28
77	((signposting or sign-posting))	2
78	MeSH DESCRIPTOR home care services	365
79	MeSH DESCRIPTOR home care services, hospital-based	66
80	MeSH DESCRIPTOR home health nursing	0
81	MeSH DESCRIPTOR home nursing EXPLODE ALL TREES	65

82	MeSH DESCRIPTOR homemaker services	1
83	((homecare or homecaring))	15
84	((((home or homes) near3 (care or caring or service* or assistance or support*)))	1009
85	((((care or caring or service* or assistance or support*) near3 (home or homes)))	575
86	((((domicil* or outreach or out-reach) near0 (care or caring or service* or assistance or support*)))	49
87	((homemaker* or home-maker*))	15
88	(hospital at home)	31
89	((((help or helping) near4 (home or homes)))	14
90	((((home or homes) near4 (help or helping)))	53
91	MeSH DESCRIPTOR Delivery of Health Care, Integrated	104
92	((integrated near3 (care or caring or service* or healthcare)))	147
93	((((care or caring or service* or healthcare) near3 integrated))	137
94	(tailored near3 activit*)	10
95	(activit* near3 tailored)	6
96	#7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 OR #52 OR #53 OR #54 OR #55 OR #56 OR #57 OR #58 OR #59 OR #60 OR #61 OR #62 OR #63 OR #64 OR #65 OR #66 OR #67 OR #68 OR #69 OR #70 OR #71 OR #72 OR #73 OR #74 OR #75 OR #76 OR #77 OR #78 OR #79 OR #80 OR #81 OR #82 OR #83 OR #84 OR #85 OR #86 OR #87 OR #88 OR #89 OR #90 OR #91 OR #92 OR #93 OR #94 OR #95	8848
97	#6 AND #96	2857
98	MeSH DESCRIPTOR Housing for the Elderly	7
99	MeSH DESCRIPTOR Homes for the Aged	86
100	MeSH DESCRIPTOR Health Services for the Aged	154
101	((((elder* or aged or aging or geriatric* or gerontol* or old* age or oldest old or later life or pensioner* or senior* or old* people or old* person* or old* patient* or old* woman* or old* women* or old* man or old* mans or old* men or old* mens or old* male* or old* female* or old* adult* or old* population* or old* resident* or old* client* or old* consumer* or old* service user* or old* community or old* communities or old* individual* or old* citizen*) near3 (care* or caring or work* or welfare* or service*)))	1150
102	((((care* or caring or work* or welfare* or service*) near3 (elder* or aged or aging or geriatric* or gerontol* or old* age or oldest old or later life or pensioner* or senior* or old* people or old* person* or old* patient* or old* woman* or old* women* or old* man or old* mans or old* men or old* mens or old* male* or old* female* or old* adult* or old* population* or old* resident* or old* client* or old* consumer* or old* service user* or old* community or old* communities or old* individual* or old* citizen*)))	645
103	#97 OR #98 OR #99 OR #100 OR #101 OR #102	3732
104	(#103) IN NHSEED FROM 2008 TO 2018	871

A.7: Source: Database of Abstracts of Reviews of Effects (DARE)

Interface / URL: <https://www.crd.york.ac.uk/CRDWeb/HomePage.asp>

Database coverage dates: Information not found. Funded from 1994 to March 2015. Searches to populate the database ceased at end of 2014.

Search date: 07/09/18

Retrieved records: 260

Search strategy:

- 1 (MeSH DESCRIPTOR Aged EXPLODE ALL TREES) 9687
- 2 (elder* or aging or geriatric* or gerontol* or senior citizen* or seniors or pensioner* or veteran* or sexagenarian* or septuagenarian* or octogenarian* or nonagenarian* or centenarian*) 2807
- 3 ((old or older or aged) near3 (patient* or people* or person* or woman* or women* or man or mans or men or mens or male* or female* or adult* or population* or resident* or client* or consumer* or service user* or community or communities or individual* or citizen*)) 3717
- 4 ((patient* or people* or person* or woman* or women* or man or mans or men or mens or male* or female* or adult* or population* or resident* or client* or consumer* or service user* or community or communities or individual* or citizen*) near3 (old or older)) 1004
- 5 (aged care or old* age or oldest old or later life) 188
- 6 (#1 OR #2 OR #3 OR #4 OR #5) 12667
- 7 MeSH DESCRIPTOR Social Welfare EXPLODE ALL TREES 162
- 8 MeSH DESCRIPTOR Social Work EXPLODE ALL TREES 50
- 9 ((social near3 (care* or caring or work* or welfare* or service* or support* or setting* or help* or intervention* or provision* or provider* or assistance))) 2817
- 10 (((care* or caring or work* or welfare* or service* or support* or setting* or help* or intervention* or provision* or provider* or assistance) near3 social)) 775
- 11 MeSH DESCRIPTOR Community Health Services 263
- 12 ((community near3 (care* or caring or work* or welfare* or service* or support* or setting* or help* or intervention* or provision* or provider* or assistance or facility or facilities or hospital* or ward* or centre* or center*))) 2040
- 13 (((care* or caring or work* or welfare* or service* or support* or setting* or help* or intervention* or provision* or provider* or assistance or facility or facilities or hospital* or ward* or centre* or center*) near3 community)) 1603
- 14 (community health*) 628
- 15 MeSH DESCRIPTOR Telemedicine EXPLODE ALL TREES 423
- 16 (digital*) 488
- 17 MeSH DESCRIPTOR Assisted Living Facilities 4
- 18 (((assisted or assistive) near0 living)) 19
- 19 MeSH DESCRIPTOR Caregivers 217
- 20 ((caregiver* or care-giver* or caregiving or care-giving or carer*)) 1294
- 21 ((communit* near3 capacit*)) 2
- 22 ((capacit* near3 communit*)) 3
- 23 ((local* near6 support*))23
- 24 (support* near6 local*) 39
- 25 (befriend*) 10
- 26 ((timebank* or time-bank*)) 0
- 27 (empower*) 79
- 28 MeSH DESCRIPTOR Self Care 479

29	((selfcare or selfcaring))0	
30	((self near0 (care or caring or manag*))840	
31	((practical near5 (support* or help* or assist* or service* or intervention*))	43
32	((support* or help* or assist* or service* or intervention*) near5 practical)	19
33	((repair* near3 (home or homes or hous*))	3
34	((home or homes or hous*) near3 repair*)	3
35	((garden* or shop*)	106
36	MeSH DESCRIPTOR social support	331
37	MeSH DESCRIPTOR housing	36
38	MeSH DESCRIPTOR public housing	5
39	MeSH DESCRIPTOR Nursing Homes	198
40	MeSH DESCRIPTOR Residential Facilities	33
41	((residential near3 (care or home or homes or hous* or accommodation* or living)))	
	194	
42	((care or home or homes or hous* or accommodation* or living) near3 residential))	
	78	
43	((supported near0 (care or home or homes or hous* or accommodation* or living)))	
	13	
44	((sheltered near0 (care or home or homes or hous* or accommodation* or living)))	
	19	
45	((retirement near0 (care or home or homes or hous* or accommodation* or living)))	
	4	
46	((community or social) near3 (home or homes or hous* or accommodation* or living)))	
	170	
47	((home or homes or hous* or accommodation* or living) near3 (community or social))	
	275	
48	(nursing home*)	597
49	(care home*)	133
50	((reable* or re-able*))	3
51	MeSH DESCRIPTOR Intermediate Care Facilities	6
52	((intermediate near3 (care or caring)))	42
53	((care or caring) near3 intermediate))	16
54	((intermediate near3 (setting* or unit* or scheme* or service* or facility or facilities or residen* or home* or hous* or nurs* or sector* or provision* or provider* or team* or model* or integrated or interdisciplinary or multidisciplinary or inter-disciplinary or multi-disciplinary or welfare or support* or help* or assistance or intervention*))	48
55	((setting* or unit* or scheme* or service* or facility or facilities or residen* or home* or hous* or nurs* or sector* or provision* or provider* or team* or model* or integrated or interdisciplinary or multidisciplinary or inter-disciplinary or multi-disciplinary or welfare or support* or help* or assistance or intervention*) near3 intermediate))	59
56	(community based)	622
57	(crisis response*)	1
58	(home-based)	322
59	(bed-based)	0
60	((local* near3 (integrat* or pioneer*))	5
61	((integrat* or pioneer*) near3 local*))	3
62	((integration near3 pioneer*))	0
63	((pioneer* near3 integration))	0
64	((personal* or individual*) near2 budget*))	2
65	((budget* near3 (personal* or individual*))	1

- 66 (((home or homes or hous*) near3 (modif* or adapt* or assess* or safe* or hazard*)))
148
- 67 (((modif* or adapt* or assess* or safe* or hazard*) near3 (home or homes or hous*)))
137
- 68 (((social or community) near3 (prescrib* or prescrip*))) 11
- 69 (((prescrib* or prescrip*) near3 (social or community))) 12
- 70 (((social or community or non-medical or nonmedical) near0 referral*)) 4
- 71 ((linking near0 (scheme* or program*))) 0
- 72 (((wellbeing or well-being) near0 program*)) 1
- 73 (((exercis* or walk* or gym or gyms or cycle or cycling or swim* or aqua* or books or reading or bibliotherapy or art or arts or creativity or learning or education or activity or activities or volunteer* or voluntary or club or clubs or sport* or dancing or dance* or fish* or knit* or self-help or selfhelp or computer* or mutual aid) near3 (prescrib* or prescrip*))) 93
- 74 (((prescrib* or prescrip*) near3 (exercis* or walk* or gym or gyms or cycle or cycling or swim* or aqua* or books or reading or bibliotherapy or art or arts or creativity or learning or education or activity or activities or volunteer* or voluntary or club or clubs or sport* or dancing or dance* or fish* or knit* or self-help or selfhelp or computer* or mutual aid)))
61
- 75 (((exercis* or walk* or gym or gyms or cycle or cycling or swim* or aqua* or books or reading or bibliotherapy or art or arts or creativity or learning or education or activity or activities or volunteer* or voluntary or club or clubs or sport* or dancing or dance* or fish* or knit* or self-help or selfhelp or computer* or mutual aid) near3 referral*)) 43
- 76 ((referral* near3 (exercis* or walk* or gym or gyms or cycle or cycling or swim* or aqua* or books or reading or bibliotherapy or art or arts or creativity or learning or education or activity or activities or volunteer* or voluntary or club or clubs or sport* or dancing or dance* or fish* or knit* or self-help or selfhelp or computer* or mutual aid))) 28
- 77 ((signposting or sign-posting)) 2
- 78 MeSH DESCRIPTOR home care services 365
- 79 MeSH DESCRIPTOR home care services, hospital-based 66
- 80 MeSH DESCRIPTOR home health nursing 0
- 81 MeSH DESCRIPTOR home nursing EXPLODE ALL TREES 65
- 82 MeSH DESCRIPTOR homemaker services 1
- 83 ((homecare or homecaring)) 15
- 84 (((home or homes) near3 (care or caring or service* or assistance or support*))) 1009
- 85 (((care or caring or service* or assistance or support*) near3 (home or homes))) 575
- 86 (((domicil* or outreach or out-reach) near0 (care or caring or service* or assistance or support*))) 49
- 87 ((homemaker* or home-maker*)) 15
- 88 (hospital at home) 31
- 89 (((help or helping) near4 (home or homes))) 14
- 90 (((home or homes) near4 (help or helping))) 53
- 91 MeSH DESCRIPTOR Delivery of Health Care, Integrated 104
- 92 ((integrated near3 (care or caring or service* or healthcare))) 147
- 93 (((care or caring or service* or healthcare) near3 integrated)) 137
- 94 (tailored near3 activit*) 10
- 95 (activit* near3 tailored) 6
- 96 #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR

	#39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 OR #52 OR #53 OR #54 OR #55 OR #56 OR #57 OR #58 OR #59 OR #60 OR #61 OR #62 OR #63 OR #64 OR #65 OR #66 OR #67 OR #68 OR #69 OR #70 OR #71 OR #72 OR #73 OR #74 OR #75 OR #76 OR #77 OR #78 OR #79 OR #80 OR #81 OR #82 OR #83 OR #84 OR #85 OR #86 OR #87 OR #88 OR #89 OR #90 OR #91 OR #92 OR #93 OR #94 OR #95	8848
97	#6 AND #96	2857
98	MeSH DESCRIPTOR Housing for the Elderly	7
99	MeSH DESCRIPTOR Homes for the Aged	86
100	MeSH DESCRIPTOR Health Services for the Aged	154
101	((elder* or aged or aging or geriatric* or gerontol* or old* age or oldest old or later life or pensioner* or senior* or old* people or old* person* or old* patient* or old* woman* or old* women* or old* man or old* mans or old* men or old* mens or old* male* or old* female* or old* adult* or old* population* or old* resident* or old* client* or old* consumer* or old* service user* or old* community or old* communities or old* individual* or old* citizen*) near3 (care* or caring or work* or welfare* or service*))	1150
102	((care* or caring or work* or welfare* or service*) near3 (elder* or aged or aging or geriatric* or gerontol* or old* age or oldest old or later life or pensioner* or senior* or old* people or old* person* or old* patient* or old* woman* or old* women* or old* man or old* mans or old* men or old* mens or old* male* or old* female* or old* adult* or old* population* or old* resident* or old* client* or old* consumer* or old* service user* or old* community or old* communities or old* individual* or old* citizen*))	645
103	#97 OR #98 OR #99 OR #100 OR #101 OR #102	3732
104	(MeSH DESCRIPTOR models, economic EXPLODE ALL TREES)	2073
105	(MeSH DESCRIPTOR markov chains)	2056
106	(MeSH DESCRIPTOR monte carlo method)	427
107	((((economic* or cost*) NEAR3 model*))	2383
108	((((model* NEAR3 (economic* or cost*))	3051
109	((monte carlo or markov))	3645
110	((((econom* or cost or costs or costing or price or pricing) NEAR3 (analysis or analyses or evaluation* or study or studies))))	21243
111	((((analysis or analyses or evaluation* or study or studies) NEAR3 (econom* or cost or costs or costing or price or pricing))))	12348
112	((((economic* or cost) NEAR3 (effect* or utilit* or benefit* or consequence* or outcome* or minimi*))))	20304
113	((((effect* or utilit* or benefit* or consequence* or outcome* or minimi*) NEAR3 (economic* or cost))))	10140
114	((((economic* or cost or costs or value) NEAR4 (decision* or threshold*))))	2791
115	((((decision* or threshold*) NEAR4 (economic* or cost or costs or value))))	1389
116	((value NEAR2 (money or monetary))))	267
117	((((money or monetary) NEAR2 value))	75
118	((return on investment or ROI))	37
119	((budget impact*))	212
120	((decision* NEAR2 (tree* or analy* or model*))))	3590
121	((((tree* or analy* or model*) NEAR2 decision*))))	2039
122	((resource*):TI)	264
123	((resource* NEAR4 (use* or usage or utilit* or utilis* or utiliz*))))	6858
124	((((use* or usage or utilit* or utilis* or utiliz*) NEAR4 resource*))))	1069
125	(MeSH DESCRIPTOR Office Visits EXPLODE ALL TREES)	76
126	((visit or visits or visited))	3792

127	((appointment*))	391	
128	(MeSH DESCRIPTOR Hospitalization)	1296	
129	((hospitalization* or hospitalisation* or hospitalised or hospitalized))		4893
130	((admission* or readmission* or admitted or readmitted))	3296	
131	((placement* or care package* or support package*))	767	
132	((place* or move* or moving) NEAR3 (home* or facility or facilities or residential))		58
133	((home* or facility or facilities or residential) NEAR3 (place* or move* or moving))		49
134	(MeSH DESCRIPTOR length of stay)	2241	
135	((hospital stay*))	2377	
136	((bed NEAR3 day*))	177	
137	((day* NEAR3 bed))	24	
138	((days or time or length or duration*) NEAR3 (hospital* or home* or facility or facilities or residential))	2354	
139	((hospital* or home* or facility or facilities or residential) NEAR3 (days or time or length or duration*))	1800	
140	((days or time or length or duration*) NEAR3 (stay or stays or stayed))		3974
141	((stay or stays or stayed) NEAR3 (days or time or length or duration*))		842
142	((days or time or length or duration*) NEAR3 (discharge or discharged))		279
143	((discharge or discharged) NEAR3 (days or time or length or duration*))		154
144	(#104 OR #105 OR #106 OR #107 OR #108 OR #109 OR #110 OR #111 OR #112 OR #113 OR #114 OR #115 OR #116 OR #117 OR #118 OR #119 OR #120 OR #121 OR #122 OR #123 OR #124 OR #125 OR #126 OR #127 OR #128 OR #129 OR #130 OR #131 OR #132 OR #133 OR #134 OR #135 OR #136 OR #137 OR #138 OR #139 OR #140 OR #141 OR #142 OR #143)	28562	
145	(MeSH DESCRIPTOR Quality-Adjusted Life Years)	3547	
146	((quality adjusted or adjusted life year*))	5452	
147	((qaly* or qald* or qale* or qtime*))	3274	
148	((illness state* or health state*))	1475	
149	((hui or hui1 or hui2 or hui3))	161	
150	((multiattribute* or multi attribute*))	24	
151	((utility NEAR3 (score* or valu* or health* or cost* or measur* or disease* or mean or gain or gains or index*)))	3524	
152	((score* or valu* or health* or cost* or measur* or disease* or mean or gain or gains or index*) NEAR3 utility))	3607	
153	((utility loss* or disutilit*))	215	
154	((utilities))	1090	
155	((eq-5d or eq5d or eq-5 or eq5 or euro qual or euroqual or euro qual5d or euroqual5d or euro qol or euroqol or euro qol5d or euroqol5d or euro quol or euroquol or euro quol5d or euroquol5d or eur qol or eurqol or eur qol5d or eur qol5d or eurqul or euroquol or eurqul5d or euroqu5d or euro* quality of life or european qol))	795	
156	((euro* NEAR3 (5 d or 5d or 5 dimension* or 5dimension* or 5 domain* or 5domain*)))	136	
157	((5 d or 5d or 5 dimension* or 5dimension* or 5 domain* or 5domain*) NEAR3 euro*))	18	
158	((sf*))	791	
159	((short form* or shortform*))	318	
160	((time trade off* or time tradeoff* or tto or timetradeoff*))	376	

161 #145 OR #146 OR #147 OR #148 OR #149 OR #150 OR #151 OR #152 OR #153 OR
 #154 OR #155 OR #156 OR #157 OR #158 OR #159 OR #160 8054
 162 #144 OR #161 29023
 163 #103 AND #162 2802
 164 (#163) IN DARE FROM 2008 TO 2018 260

A.8: Source: Applied Social Sciences Index & Abstracts (ASSIA) (1987 - current)

Interface / URL: ProQuest

Database coverage dates: 1987 - current

Search date: 09/09/18

Retrieved records: 1837

Search strategy:

S1 MAINSUBJECT.EXACT.EXPLODE("Elderly people") 21437
 S2 MAINSUBJECT.EXACT.EXPLODE("Older people") 18539
 S3 MAINSUBJECT.EXACT.EXPLODE("Older women") 591
 S4 MAINSUBJECT.EXACT("Older men") 199
 S5 MAINSUBJECT.EXACT.EXPLODE("Elderly women") 856
 S6 MAINSUBJECT.EXACT.EXPLODE("Elderly men") 398
 S7 TI,AB(elder* or aging or geriatric* or gerontol* or "senior citizen*" or seniors or
 pensioner* or veteran* or sexagenarian* or septuagenarian* or octogenarian* or
 nonagenarian* or centenarian*) 35393
 S8 TI,AB((old or older or aged) NEAR/3 (patient* or people* or person* or woman* or
 women* or man or mans or men or mens or male* or female* or adult* or population* or
 resident* or client* or consumer* or "service user*" or community or communities or
 individual* or citizen*)) 51348
 S9 TI,AB("aged care" or "old* age" or "oldest old" or "later life") 8314
 S10 S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 85220
 S11 MAINSUBJECT.EXACT("Economic models") 2936
 S12 MAINSUBJECT.EXACT("Cost effectiveness") 2634
 S13 MAINSUBJECT.EXACT("Cost effective analysis") 84
 S14 MAINSUBJECT.EXACT("Costs-Benefits") 51
 S15 MAINSUBJECT.EXACT.EXPLODE("Monte Carlo method") 218
 S16 TI,AB((economic* or cost*) NEAR/3 model*) 1807
 S17 TI,AB("monte carlo" or markov) 1048
 S18 TI,AB((econom* or cost or costs or costing or price or pricing) NEAR/3 (analysis or
 analyses or evaluation* or study or studies)) 7226
 S19 TI,AB((economic* or cost) NEAR/3 (effect* or utilit* or benefit* or consequence* or
 outcome* or minimi*)) 9514
 S20 TI,AB((economic* or cost or costs or value) NEAR/4 (decision* or threshold*)) 1436
 S21 TI,AB(value NEAR/2 (money or monetary)) 709
 S22 TI,AB("return on investment" or ROI) 272
 S23 TI,AB("budget impact*") 48
 S24 TI,AB(decision* NEAR/2 (tree* or analy* or model*)) 2343
 S25 S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S20 OR
 S21 OR S22 OR S23 OR S24 23181
 S26 TI(resource*) 6174
 S27 AB(resource* NEAR/4 (use* or usage or utilit* or utilis* or utiliz*)) 4723
 S28 MAINSUBJECT.EXACT("Hospitalization") 6602
 S29 MAINSUBJECT.EXACT.EXPLODE("Admissions") 1888

S30 MAINSUBJECT.EXACT("Length of stay") 1160
 S31 MAINSUBJECT.EXACT.EXPLODE("Placements") AND
 MAINSUBJECT.EXACT.EXPLODE("Residential care") 31
 S32 TI,AB(visit or visits or visited) 14154
 S33 TI,AB(appointment*) 3151
 S34 TI,AB(hospitalization* or hospitalisation* or hospitalised or hospitalized) 9274
 S35 TI,AB(admission* or readmission* or admitted or readmitted) 17544
 S36 TI,AB(placement* or "care package*" or "support package*") 7911
 S37 TI,AB((place* or move* or moving) NEAR/3 (home* or facility or facilities or residential))
 2413
 S38 TI,AB("hospital stay*") 1432
 S39 TI,AB((bed NEAR/3 day*) 291
 S40 TI,AB((days or time or length or duration*) NEAR/3 (hospital* or home* or facility or
 facilities or residential)) 3508
 S41 TI,AB((days or time or length or duration*) NEAR/3 (stay or stays or stayed)) 3078
 S42 TI,AB((days or time or length or duration*) NEAR/3 (discharge or discharged)) 740
 S43 S26 OR S27 OR S28 OR S29 OR S30 OR S31 OR S32 OR S33 OR S34 OR S35 OR
 S36 OR S37 OR S38 OR S39 OR S40 OR S41 OR S4264131
 S44 MAINSUBJECT.EXACT("Quality adjusted life years") 435
 S45 TI,AB("quality adjusted" or "adjusted life year*") 1076
 S46 TI,AB(qaly* or qald* or qale* or qtime*) 684
 S47 TI,AB("illness state*" or "health state*") 652
 S48 TI,AB(hui or hui1 or hui2 or hui3) 136
 S49 TI,AB(multiattribute* or "multi attribute*") 173
 S50 TI,AB(utility NEAR/3 (score* or valu* or health* or cost* or measur* or disease* or mean
 or gain or gains or index*)) 1462
 S51 TI,AB("utility loss*" or disutilit*) 83
 S52 TI,AB(utilities) 532
 S53 TI,AB(eq-5d or eq5d or eq-5 or eq5 or "euro qual" or euroqual or "euro qual5d" or
 euroqual5d or "euro qol" or euroqol or "euro qol5d" or euroqol5d or "euro quol" or
 euroquol or "euro quol5d" or euroquol5d or "eur qol" or eurqol or "eur qol5d" or "eur
 qol5d" or eur?qol or eur?qol5d or "euro* quality of life" or "european qol") 593
 S54 TI,AB(euro* NEAR/3 ("5 d" or 5d or "5 dimension*" or 5dimension* or "5 domain*" or
 5domain*)) 186
 S55 MAINSUBJECT.EXACT("Short forms") 318
 S56 TI,AB(sf*) 2848
 S57 TI,AB("short form*" or shortform*) 2931
 S58 MAINSUBJECT.EXACT("Time tradeoff technique") OR TI,AB("time trade off*" or "time
 tradeoff*" or tto or timetradeoff*)210
 S59 S44 OR S45 OR S46 OR S47 OR S48 OR S49 OR S50 OR S51 OR S52 OR S53 OR
 S54 OR S55 OR S56 OR S57 OR S58 8504
 S60 S10 AND S25 1652
 S61 S10 AND S43 9304
 S62 S10 AND S59 1236
 S63 MAINSUBJECT.EXACT.EXPLODE("UK") 69694
 S64 TI,AB,IF,AU,ADR,ORG,SU,FT("national health service*" OR nhs*) 51097
 S65 TI,AB(english not ((published or publication* or translat* or written or language* or
 speak* or literature or citation*) NEAR/5 english)) 8018
 S66 TI,AB,IF,AU,ADR,ORG,SU,LOC,PUB,FT(gb or "g.b." or britain* or british*)
 175000

S67	TI,AB,IF,AU,ADR,ORG,SU,LOC,PUB,FT(uk or "u.k." or "united kingdom*")	
	189938	
S68	TI,AB,IF,AU,ADR,ORG,SU,LOC,PUB,FT(england* or "northern ireland*" or "northern irish*" or scotland* or scottish* or wales or welsh*)	97117
S69	TI,AB,IF,AU,ADR,ORG,SU,LOC,PUB,FT(bath or birmingham* or bradford* or brighton* or bristol* or carlisle* or cambridge* or canterbury* or chelmsford* or chester* or chichester* or coventry* or derby* or durham* or ely or exeter* or gloucester* or hereford* or hull or lancaster* or leeds* or leicester* or lincoln* or liverpool* or london* or manchester* or newcastle* or norwich* or nottingham* or oxford* or peterborough* or plymouth* or portsmouth* or preston* or ripon* or salford* or salisbury* or sheffield* or southampton* or "st albans" or stoke or sunderland* or truro or wakefield* or wells or westminster* or winchester* or wolverhampton* or worcester* or york*)	229090
S70	TI,AB,IF,AU,ADR,ORG,SU,LOC,PUB,FT(bangor* or cardiff* or newport* or asaph* or "st davids" or swansea*)	6494
S71	TI,AB,IF,AU,ADR,ORG,SU,LOC,PUB,FT(aberdeen* or dundee* or edinburgh* or glasgow* or inverness* or perth* or stirling*)	22554
S72	TI,AB,IF,AU,ADR,ORG,SU,LOC,PUB,FT(armagh* or belfast* or lisburn* or londonderry* or derry* or newry*)	3427
S73	S63 OR S64 OR S65 OR S66 OR S67 OR S68 OR S69 OR S70 OR S71 OR S72	432081
S74	S60 AND S73	609
S75	S61 AND S73	3220
S76	S62 AND S73	430
S77	pd(20080101-20181231)	494820
S78	S74 AND S77	358
S79	S75 AND S77	1593
S80	S76 AND S77	229
S81	LA(ENGLISH)	1254900
S82	S78 AND S81	358
S83	S79 AND S81	1593
S84	S80 AND S81	229

Notes:

1. Results in sets S82, S83 and S84 were downloaded separately into an empty ENL. Duplicates were removed using default Endnote settings – 338 duplicates were identified and archived. 1837 records remained for retrieval
2. The Proquest search strategy was initially developed to search all free text lines across the TI,AB,SU fields. The interface was unable to process the strategy or combine sets however. Proquest were contacted for help - they suggested trying to run the search without field limits. This was tried, but record numbers increased significantly. It was decided to limit the search lines to just the TI and AB fields. This meant that interface was able to process the strategy and was used for the final search. In doing so however, the potential increase in sensitivity which would have been gained by also including the SU field was lost.

A.9: Source: Social Services Abstracts (1979 - current)

Interface / URL: Proquest

Database coverage dates: 1979 - current

Search date: 09/09/18

Retrieved records: 490

Search strategy:

- S1 MAINSUBJECT.EXACT("Elderly") 15531
- S2 TI,AB(elder* or aging or geriatric* or gerontol* or "senior citizen*" or seniors or pensioner* or veteran* or sexagenarian* or septuagenarian* or octogenarian* or nonagenarian* or centenarian*) 29005
- S3 TI,AB((old or older or aged) NEAR/3 (patient* or people* or person* or woman* or women* or man or mans or men or mens or male* or female* or adult* or population* or resident* or client* or consumer* or "service user*" or community or communities or individual* or citizen*)) 24035
- S4 TI,AB("aged care" or "old* age" or "oldest old" or "later life") 5846
- S5 S1 OR S2 OR S3 OR S4 47746
- S6 MAINSUBJECT.EXACT("Economic Models") 406
- S7 MAINSUBJECT.EXACT("Cost-Benefit Analysis") 380
- S8 MAINSUBJECT.EXACT("Markov Process") 3
- S9 TI,AB((economic* or cost*) NEAR/3 model*) 747
- S10 TI,AB("monte carlo" or markov) 100
- S11 TI,AB((econom* or cost or costs or costing or price or pricing) NEAR/3 (analysis or analyses or evaluation* or study or studies)) 2711
- S12 TI,AB((economic* or cost) NEAR/3 (effect* or utilit* or benefit* or consequence* or outcome* or minimi*)) 3904
- S13 TI,AB((economic* or cost or costs or value) NEAR/4 (decision* or threshold*)) 496
- S14 TI,AB(value NEAR/2 (money or monetary)) 111
- S15 TI,AB("return on investment" or ROI) 47
- S16 TI,AB("budget impact*")4
- S17 TI,AB(decision* NEAR/2 (tree* or analy* or model*)) 886
- S18 S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 8139
- S19 TI(resource*) 2838
- S20 AB(resource* NEAR/4 (use* or usage or utilit* or utilis* or utiliz*)) 2062
- S21 MAINSUBJECT.EXACT("Hospitalization") 1133
- S22 MAINSUBJECT.EXACT("Admissions") 385
- S23 MAINSUBJECT.EXACT("Placement") AND (MAINSUBJECT.EXACT("Nursing Homes") OR MAINSUBJECT.EXACT("Residential Institutions")) 250
- S24 TI,AB(visit or visits or visited) 3686
- S25 TI,AB(appointment*) 687
- S26 TI,AB(hospitalization* or hospitalisation* or hospitalised or hospitalized) 2485
- S27 TI,AB(admission* or readmission* or admitted or readmitted) 3982
- S28 TI,AB(placement* or "care package*" or "support package*") 5997
- S29 TI,AB((place* or move* or moving) NEAR/3 (home* or facility or facilities or residential)) 2334
- S30 TI,AB("hospital stay*") 199
- S31 TI,AB("bed NEAR/3 day*") 35
- S32 TI,AB((days or time or length or duration*) NEAR/3 (hospital* or home* or facility or facilities or residential)) 955

S33	TI,AB((days or time or length or duration*) NEAR/3 (stay or stays or stayed))	816
S34	TI,AB((days or time or length or duration*) NEAR/3 (discharge or discharged))	149
S35	S19 OR S20 OR S21 OR S22 OR S23 OR S24 OR S25 OR S26 OR S27 OR S28 OR S29 OR S30 OR S31 OR S32 OR S33 OR S34	22088
S36	TI,AB("quality adjusted" or "adjusted life year*")	117
S37	TI,AB(qaly* or qald* or qale* or qtime*)	58
S38	TI,AB("illness state*" or "health state*")	124
S39	TI,AB(hui or hui1 or hui2 or hui3)	40
S40	TI,AB(multiattribute* or "multi attribute*")	38
S41	TI,AB(utility NEAR/3 (score* or valu* or health* or cost* or measur* or disease* or mean or gain or gains or index*))	309
S42	TI,AB("utility loss*" or disutilit*)	8
S43	TI,AB(utilities)	175
S44	TI,AB(eq-5d or eq5d or eq-5 or eq5 or "euro qual" or euroqual or "euro qual5d" or euroqual5d or "euro qol" or euroqol or "euro qol5d" or euroqol5d or "euro quol" or euroquol or "euro quol5d" or euroquol5d or "eur qol" or eurqol or "eur qol5d" or "eur qol5d" or eur?qul or eur?qul5d or "euro* quality of life" or "european qol")	52
S45	TI,AB(euro* NEAR/3 ("5 d" or 5d or "5 dimension*" or 5dimension* or "5 domain*" or 5domain*))	5
S46	TI,AB(sf*)	644
S47	TI,AB("short form*" or shortform*)	434
S48	TI,AB("time trade off*" or "time tradeoff*" or tto or timetradeoff*)	30
S49	S36 OR S37 OR S38 OR S39 OR S40 OR S41 OR S42 OR S43 OR S44 OR S45 OR S46 OR S47 OR S48	1677
S50	S5 AND S18	803
S51	S5 AND S35	3555
S52	S5 AND S49	333
S53	TI,AB,IF,AU,AF,ADR,ORG,SU,FT("national health service*" OR nhs*)	3043
S54	TI,AB(english not ((published or publication* or translat* or written or language* or speak* or literature or citation*) NEAR/5 english))	2009
S55	TI,AB,IF,AU,AF,ADR,ORG,SU,LOC,PUB,FT(gb or "g.b." or britain* or british*)	26252
S56	TI,AB,IF,AU,AF,ADR,ORG,SU,LOC,PUB,FT(uk or "u.k." or "united kingdom*")	27697
S57	TI,AB,IF,AU,AF,ADR,ORG,SU,LOC,PUB,FT(england* or "northern ireland*" or "northern irish*" or scotland* or scottish* or wales or welsh*)	28038
S58	TI,AB,IF,AU,AF,ADR,ORG,SU,LOC,PUB,FT(bath or birmingham* or bradford* or brighton* or bristol* or carlisle* or cambridge* or canterbury* or chelmsford* or chester* or chichester* or coventry* or derby* or durham* or ely or exeter* or gloucester* or hereford* or hull or lancaster* or leeds* or leicester* or lincoln* or liverpool* or london* or manchester* or newcastle* or norwich* or nottingham* or oxford* or peterborough* or plymouth* or portsmouth* or preston* or ripon* or salford* or salisbury* or sheffield* or southampton* or "st albans" or stoke or sunderland* or truro or wakefield* or wells or westminster* or winchester* or wolverhampton* or worcester* or york*)	76067
S59	TI,AB,IF,AU,AF,ADR,ORG,SU,LOC,PUB,FT(bangor* or cardiff* or newport* or asaph* or "st davids" or swansea*)	1637
S60	TI,AB,IF,AU,AF,ADR,ORG,SU,LOC,PUB,FT(aberdeen* or dundee* or edinburgh* or glasgow* or inverness* or perth* or stirling*)	4216
S61	TI,AB,IF,AU,ADR,ORG,SU,LOC,PUB,FT(armagh* or belfast* or lisburn* or londonderry* or derry* or newry*)	882
S62	S53 OR S54 OR S55 OR S56 OR S57 OR S58 OR S59 OR S60 OR S61	102885

S63	S50 AND S62	213	
S64	S51 AND S62	967	
S65	S52 AND S62	88	
S66	pd(20080101-20181231)		136450
S67	S63 AND S66	98	
S68	S64 AND S66	419	
S69	S65 AND S66	49	
S70	LA(ENGLISH)	396628	
S71	S67 AND S70	98	
S72	S68 AND S70	417	
S73	S69 AND S70	47	

Notes:

1. Results in sets S71, S72 and S73 were downloaded separately into an empty ENL. Duplicates were removed using default Endnote settings – 70 duplicates were identified and archived. 490 remained for retrieval.
2. The Proquest search strategy was initially developed to search all free text lines across the TI,AB,SU fields. The interface was unable to process the strategy or combine sets however. Proquest were contacted for help - they suggested trying to run the search without field limits. This was tried, but record numbers increased significantly. It was decided to limit the search lines to just the TI and AB fields. This meant that interface was able to process the strategy and was used for the final search. In doing so however, the potential increase in sensitivity which would have been gained by also including the SU field was lost.

A.10: Source: The Campbell Collaboration Library

Interface / URL: <https://www.campbellcollaboration.org/library.html>

Database coverage dates: Information not found

Search date: 10/09/18

Retrieved records: 4

Search strategy:

Searched using the advanced search interface. Terms were entered in the 'Keyword' search box. The search was restricted to 'Publication date' 2008-01-01 to 2018-09-10. Returned results were assessed online by the information specialist for focus on older adults. Relevant results were retrieved.

intext:elder OR intitle:elder OR intext:aging OR intitle:aging OR intext:geriatric OR intitle:geriatric OR intext:gerontol OR intitle:gerontol OR intext:senior OR intitle:senior OR intext:pensioner OR intitle:pensioner OR intext:veteran OR intitle:veteran OR intext:sexagenarian OR intitle:sexagenarian OR intext:septuagenarian OR intitle:septuagenarian OR intext:octogenarian OR intitle:octogenarian OR intext:nonagenarian OR intitle:nonagenarian OR intext:centenarian OR intitle:centenarian OR intext:old OR intitle:old OR intext:"later life" OR intitle:"later life" OR intext:aged OR intitle:aged = 4 (94 results returned)

7.1.3 APPENDIX AC: Search strategies for targeted web searches

A.1: Source: Public Health England

Interface / URL: <https://www.gov.uk/government/organisations/public-health-england>

Database coverage dates: n/a

Search date: 10/09/18

Retrieved records: 22

Search strategy:

The following searches were conducted. Records were selected for retrieval by the information specialist based on a rapid appraisal of their relevance

1. The website section titled "Publications" was browsed for relevant studies, selecting "Social care" from the "Policy area" drop-down menu.
2. The website section titled "Publications" was browsed for relevant studies, selecting "Pensions and Aging Society" from the "Policy area" drop-down menu
3. The website section titled "Publications" was browsed for relevant studies, restricting results to those including the following terms, using the 'contains' limiting feature: elderly, older

22 records were retrieved

A.2: Source: National Institute for Health and Care Excellence

Interface / URL: <https://www.nice.org.uk/>

Database coverage dates: n/a

Search date: 10/09/18

Retrieved records: 10

Search strategy:

The following searches were conducted. Records were selected for retrieval by the information specialist based on a rapid appraisal of their relevance

1. The website was browsed for relevant guidance related to older people by selecting NICE Guidance – Population groups – Older people.
2. The website was browsed by selecting NICE Guidance – Service delivery, organisation and staffing - Adult social services

10 records were retrieved

A.3: Source: Social Care Institute for Excellence (SCIE)

Interface / URL: <https://www.scie.org.uk/>

Database coverage dates: n/a

Search date: 12/09/18

Retrieved records: 58

Search strategy:

The Prevention and Wellbeing research database (<https://www.scie.org.uk/prevention/research-practice/>) was limited to the subject "older people".

Records were selected for retrieval by the information specialist based on a rapid appraisal of their relevance – only records that were obviously and explicitly relevant were selected.

The SCIE resources and services database was also browsed (<https://www.scie.org.uk/atoz/>), with the results limited to the followed resource types:

Case studies
Evaluation report
Knowledge review
Position paper
Practice example
Report
Research briefing

As above, records were selected by the information specialist based on a rapid appraisal of their relevance – only records that were obviously and explicitly relevant were selected.

58 records were retrieved.

A.4: Source: Personal Social Services Research Unit (PSSRU)

Interface / URL: <https://www.pssru.ac.uk/>

Database coverage dates: n/a

Search date: 24/09/18

Retrieved records: 104

Search strategy:

The following searches were conducted. Records were selected for retrieval by the information specialist based on a rapid appraisal of their relevance

1. The website section “Publications” was browsed for relevant studies.
2. The publications database was accessed at: <https://www.pssru.ac.uk/publications/>. The following searches were conducted separately across the database. Terms were entered in the ‘Search for’ box. Results with an older population focus based on rapid assessment by the information specialist were retrieved. Results with a publication date earlier than 2008 onwards were not retrieved.

elderly = 1 result retrieved

aged = 1 result retrieved

aging = 0 results retrieved

older = 99 results retrieved

geriatric = 0 results retrieved

old age = 3 results retrieved

oldest old = 0 results retrieved

later life = 0 results retrieved

senior citizen = 0 results retrieved

seniors = 0 results retrieved

pensioner = 0 results retrieved

A.5: Source: Economics of Social and Health Care Research Unit (ESHCRU)

Interface / URL: <http://eshcru.ac.uk/>

Database coverage dates: n/a

Search date: 25/09/18

Retrieved records: 3

Search strategy:

The website section "Publications" was browsed for relevant studies.

<http://eshcru.ac.uk/publications/index.htm>

Records were selected for retrieval by the information specialist based on a rapid appraisal of their relevance.

3 results retrieved

A.6: Source: EPPI-Centre

Interface / URL: <https://eppi.ioe.ac.uk/cms/>

Database coverage dates: n/a

Search date: 06/09/18

Retrieved records: 4

Search strategy:

The following searches were conducted. Records were selected for retrieval by the information specialist based on a rapid appraisal of their relevance.

1. The website section for "Publications" was browsed for relevant studies at <https://eppi.ioe.ac.uk/cms/Default.aspx?tabid=56> = 1 results retrieved
2. Chronological list of systematic reviews browsed at: <https://eppi.ioe.ac.uk/cms/Default.aspx?tabid=62> = 3
3. List of EPPI-Centre primary research and other forms of research synthesis browsed at: <https://eppi.ioe.ac.uk/cms/Default.aspx?tabid=3501> = 0 results retrieved

A.7: Source: Age UK

Interface / URL: <https://www.ageuk.org.uk>

Database coverage dates: n/a

Search date: 26/09/18

Retrieved records: 44

Search strategy:

The following searches were conducted. Records were selected for retrieval by the information specialist based on a rapid appraisal of their relevance.

1. The website sections for "Publications" and "Evaluation reports" were browsed for relevant studies at <https://www.ageuk.org.uk/our-impact/policy-research/publications/>
2. Browsed Reports and Briefings, Consultation responses and submissions.

44 results retrieved

A.8: Source: Joseph Rowntree Foundation

Interface / URL: <https://www.jrf.org.uk/>

Database coverage dates: n/a

Search date: 26/09/18

Retrieved records: 14

Search strategy:

The following searches were conducted. Records were selected for retrieval by the information specialist based on a rapid appraisal of their relevance.

1. The website section for "Reports" was browsed for relevant studies at <https://www.jrf.org.uk/reports>
2. Navigated to People / Older People and browsed content.

14 results were retrieved

A.9: Source: Association of Directors of Adult Social Services (ADASS)

Interface / URL: <https://www.adass.org.uk/home>

Database coverage dates: n/a

Search date: 26/09/18

Retrieved records: 3

Search strategy:

The following search was conducted. Records were selected for retrieval by the information specialist based on a rapid appraisal of their relevance.

The website section for "Publications" were browsed for relevant studies at <https://www.adass.org.uk/policy-documents>

3 results were retrieved.

A.10: Source: King's Fund

Interface / URL: <https://www.kingsfund.org.uk/>

Database coverage dates: n/a

Search date: 26/09/18

Retrieved records: 18

Search strategy:

The following searches were conducted. Records were selected for retrieval by the information specialist based on a rapid appraisal of their relevance.

1. The Topic section "Older people" was browsed for relevant studies
2. The Publications Section was browsed for "Reports" in the Topic of "Adult Social Care"

18 results were retrieved.

A.11: Source: Nuffield Trust

Interface / URL: <https://www.nuffieldtrust.org.uk/>

Database coverage dates: n/a

Search date: 26/09/18

Retrieved records: 11

Search strategy:

The following search was conducted. Records were selected for retrieval by the information specialist based on a rapid appraisal of their relevance.

The website section for "Research" was browsed for relevant studies at www.nuffieldtrust.org.uk/research. Publications were filtered using the topic drop down menu – "Older and complex care" was selected.

11 results were retrieved.

A.12: Source: Centre for Ageing and Development Research Ireland (CARDI)

Interface / URL: <http://www.cardi.ie/>

Database coverage dates: n/a

Search date: 26/09/18

Retrieved records: 1

Search strategy:

The following search was conducted. Records were selected for retrieval by the information specialist based on a rapid appraisal of their relevance.

The website sections for "CARDI Publications" and "Projects" were browsed for relevant studies at www.cardi.ie/publications/card and www.cardi.ie/research-projects/all?keys=&page=0%2C7.

1 result was retrieved

A.13: Source: Institute for Research and Innovation in Social Services (IRISS)

Interface / URL: <https://www.iriss.org.uk/>

Database coverage dates: n/a

Search date: 26/09/18

Retrieved records: 1

Search strategy:

The following searches were conducted. Records were selected for retrieval by the information specialist based on a rapid appraisal of their relevance.

1. The website section for "Case studies" was browsed for relevant studies at <https://www.iriss.org.uk/resources/case-studies>
2. The website section for "Reports" was browsed for relevant studies at <https://www.iriss.org.uk/resources/reports>

A.14: Source: NIHR School for Social Care Research (SSCR)

Interface / URL: <https://www.sscr.nihr.ac.uk/>

Database coverage dates: n/a

Search date: 25/09/18

Retrieved records: 5

Search strategy:

The following searches were conducted. Records were selected for retrieval by the information specialist based on a rapid appraisal of their relevance.

1. The website section "Our Research" was browsed for relevant studies under the headings "Scoping Reviews" and "Projects".
2. The website section "Knowledge and Resources" was also browsed – however, this section of the website seemed to be very "buggy" and many of the results could not be clicked on for further information beyond the title. These results were quickly scanned by title only for potential relevance.

5 results were selected

7.1.4 Appendix AD: Targeted gap filling searches

A1: Source: EconLit

Interface / URL: Ovid

Database coverage dates: 1886 to present

Search date: 13/06/19

Search strategy:

-
- 1 (elder\$ or aging or geriatric\$ or gerontol\$ or senior citizen\$ or seniors or pensioner\$ or veteran\$ or sexagenarian\$ or septuagenarian\$ or octogenarian\$ or nonagenarian\$ or centenarian\$).ab,sh,hw,ti. (16038)
 - 2 ((old or older or aged) adj3 (patient\$1 or people\$ or person\$ or woman\$ or women\$ or man or mans or men or mens or male\$1 or female\$ or adult\$ or population\$ or resident\$ or client\$ or consumer\$ or service user\$ or community or communities or individual\$ or citizen\$)).ab,sh,hw,ti. (4744)
 - 3 (aged care or old\$ age or oldest old or later life).ab,sh,hw,ti. (2789)
 - 4 1 or 2 or 3 (20229)
 - 5 (((economic\$ or cost\$) adj3 model\$) or (monte carlo or markov) or ((econom\$ or cost or costs or costing or price or pricing) adj3 (analysis or analyses or evaluation\$1 or study or studies)) or ((economic\$ or cost) adj3 (effect\$ or utilit\$ or benefit\$ or consequence\$ or outcome\$1 or minimi\$)) or ((economic\$ or cost or costs or value) adj4 (decision\$1 or threshold\$)) or (value adj2 (money or monetary)) or (return on investment or ROI) or budget impact\$ or (decision\$ adj2 (tree\$ or analy\$ or model\$))).mp. or (resource\$1 adj4 (use\$1 or usage or utilit\$ or utilis\$ or utiliz\$)).ab,sh,hw,ti. [mp=heading words, abstract, title, country as subject] (215604)
 - 6 resource\$1.ti. (15292)
 - 7 5 or 6 (227673)
 - 8 (quality adjusted or adjusted life year\$ or (qaly\$ or qald\$ or qale\$ or qtime\$) or (illness state\$1 or health state\$1) or (hui or hui1 or hui2 or hui3) or (multiattribute\$ or multi attribute\$) or (utility adj3 (score\$1 or valu\$ or health\$ or cost\$ or measur\$ or disease\$ or mean or gain or gains or index\$)) or (utility loss\$ or disutilit\$) or utilities or (eq-5d or eq5d or eq-5 or eq5 or euro qual or euroqual or euro qual5d or euroqual5d or euro qol or euroqol or euro qol5d or euroqol5d or euro quol or euroquol or euro quol5d or euroquol5d or eur qol or eurqol or eur qol5d or eur qol5d or eur?qul or eur?qul5d or euro\$ quality of life or european qol) or (euro\$ adj3 (5 d or 5d or 5 dimension\$ or 5dimension\$ or 5 domain\$ or 5domain\$)) or sf\$ or (short form\$ or shortform\$)).mp. or (time trade off\$1 or time tradeoff\$1 or tto or timetradeoff\$1).ab,sh,hw,ti. [mp=heading words, abstract, title, country as subject] (32081)

- 9 (visit or visits or visited or appointment\$ or (admission\$1 or readmission\$1 or admitted or readmitted) or (placement\$ or care package\$ or support package\$) or ((place\$ or move\$ or moving) adj3 (home\$1 or facility or facilities or residential)) or (bed adj3 day\$1) or ((days or time or length or duration\$1) adj3 (home\$1 or facility or facilities or residential)) or ((days or time or length or duration\$1) adj3 (stay or stays or stayed or placement\$))).mp. or ((days or time or length or duration\$1) adj3 (discharge or discharged or home or homes)).ab,sh,hw,ti. [mp=heading words, abstract, title, country as subject] (9231)
- 10 7 or 8 or 9 (261187)
- 11 (telecare or "assist\$ technolog\$").ab,sh,hw,ti. (35)
- 12 telerehab\$.ab,sh,hw,ti. (0)
- 13 11 or 12 (35)
- 14 (integrated adj (work\$ or care\$)).ab,sh,hw,ti. (45)
- 15 "integrated care team\$.ab,sh,hw,ti. (0)
- 16 (interprofessional adj2 work\$).ab,sh,hw,ti. (0)
- 17 interprofessional team\$.ab,sh,hw,ti. (0)
- 18 (interdisciplinary team or multidisciplinary team or MDT).ab,sh,hw,ti. (38)
- 19 ((co-locate\$ or colocate\$) adj professional\$).ab,sh,hw,ti. (0)
- 20 multidisciplinary service\$.ab,sh,hw,ti. (2)
- 21 (interdisciplin\$ or inter-disciplin\$ or interprofession\$ or inter-profession\$ or multidisciplin\$ or multi-disciplin\$ or multiprofession\$ or multi-profession\$).mp. and (collaborat\$ or cooperat\$ or co-operat\$).ab,sh,hw,ti. [mp=heading words, abstract, title, country as subject] (342)
- 22 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 (424)
- 23 (patient adj3 (transition\$ or discharge\$ or transfer\$)).ab,sh,hw,ti. (55)
- 24 (community or communities or home\$).ab,sh,hw,ti. (53421)
- 25 23 and 24 (6)
- 26 early support\$ discharge\$.ab,sh,hw,ti. (0)
- 27 25 or 26 (6)
- 28 13 or 22 or 27 (465)
- 29 4 and 10 and 28 (11)
- 30 4 and 10 and 28 (11)
- 31 limit 30 to yr="2008 -Current" (9)
- 32 (national health service\$ or nhs\$).ab,sh,hw,ti. (819)
- 33 english.ab,sh,hw,ti. (102897)
- 34 (england\$ or northern ireland\$ or northern irish\$ or scotland\$ or scottish\$ or wales or welsh\$).ab,sh,hw,ti. (9705)
- 35 (britain\$ or british\$ or uk or united kingdom\$).ab,sh,hw,ti. (41899)
- 36 (gb or "g.b." or "u.k").mp. [mp=heading words, abstract, title, country as subject] (67819)
- 37 32 or 33 or 34 or 35 or 36 (180342)
- 38 31 and 37 (1)
- 39 from 31 keep 1 (1)

A2: Source: Source: Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily

Interface / URL: Ovid

Database coverage dates: 1946 to present

Search date: 8/6/19

Search strategy:

- 1 elder\$ or aging or geriatric\$ or gerontol\$ or senior citizen\$ or seniors or pensioner\$ or veteran\$ or sexagenarian\$ or septuagenarian\$ or octogenarian\$ or nonagenarian\$ or centenarian\$).ab,hw,sh,ti. (637333)
- 2 ((old or older or aged) adj3 (patient\$1 or people\$ or person\$ or woman\$ or women\$ or man or mans or men or mens or male\$1 or female\$ or adult\$ or population\$ or resident\$ or client\$ or consumer\$ or service user\$ or community or communities or individual\$ or citizen\$)).ab,hw,sh,ti. (3394240)
- 3 (aged care or old\$ age or oldest old or later life).ab,hw,sh,ti. (78201)
- 4 exp Aged/ (2950355)
- 5 1 or 2 or 3 or 4 (3867871)
- 6 (chronic obstructive pulmonary disease or COPD).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (58140)
- 7 exp Pulmonary Disease, Chronic Obstructive/ (51742)
- 8 6 or 7 (78418)
- 9 (self adj2 (management or managing* or manage*)).ab,hw,sh,ti. (18786)
- 10 (self adj2 (care\$ or caring)).ab,hw,sh,ti. (43175)
- 11 exp Self Care/ (51973)
- 12 9 or 10 or 11 (73055)
- 13 (patient adj3 (transition* or discharge\$ or transfer\$)).ab,hw,sh,ti. (51914)
- 14 "early support\$ discharge\$".ab,hw,sh,ti. (141)
- 15 (community or communities or home\$).ab,hw,sh,ti. (1083313)
- 16 patient discharge/ or patient transfer/ (34173)
- 17 13 and 15 (11650)
- 18 14 or 16 or 17 (36416)
- 19 (telecare or "assistive technolog\$").ab,hw,sh,ti. (2422)
- 20 telemedicine/ or telerehabilitation/ (19763)
- 21 19 or 20 (21698)
- 22 (integrated adj (working or care)).ab,hw,sh,ti. (3771)
- 23 "integrated care team\$".ab,hw,sh,ti. (40)
- 24 (interprofessional adj2 work\$).ab,hw,sh,ti. (476)
- 25 "interprofessional team*".ab,hw,sh,ti. (1400)
- 26 (interdisciplinary team or multidisciplinary team or MDT).ab,hw,sh,ti. (17689)
- 27 ((co-locate\$ or colocate\$) adj professional\$).ab,hw,sh,ti. (0)
- 28 multidisciplinary service\$.ab,hw,sh,ti. (183)

- 29 (interdisciplin\$ or inter-disciplin\$ or interprofession\$ or inter-profession\$ or multidisciplin\$ or multi-disciplin\$ or multiprofession\$ or multi-profession\$).mp. and (collaborat\$ or cooperat\$ or co-operat\$).ab,hw,sh,ti. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (32812)
- 30 (interdisciplin\$ or inter-disciplin\$ or interprofession\$ or inter-profession\$ or multidisciplin\$ or multi-disciplin\$ or multiprofession\$ or multi-profession\$).mp. and (collaborat\$ or cooperat\$ or co-operat\$).ab,hw,sh,ti. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (32812)
- 31 (interdisciplin\$ or inter-disciplin\$ or interprofession\$ or inter-profession\$ or multidisciplin\$ or multi-disciplin\$ or multiprofession\$ or multi-profession\$).mp. and (collaborat\$ or cooperat\$ or co-operat\$).ab,sh,ti. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (31421)
- 32 (interdisciplin\$ or inter-disciplin\$ or interprofession\$ or inter-profession\$ or multidisciplin\$ or multi-disciplin\$ or multiprofession\$ or multi-profession\$).mp. and (collaborat\$ or cooperat\$ or co-operat\$).ab,ti. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (24420)
- 33 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 (53065)
- 34 18 or 21 or 33 (109965)
- 35 (((economic\$ or cost\$) adj3 model\$) or (monte carlo or markov)).ab,hw,sh,ti. (98386)
- 36 ((econom\$ or cost or costs or costing or price or pricing) adj3 (analysis or analyses or evaluation\$1 or study or studies)).ab,hw,sh,ti. (154493)
- 37 ((economic\$ or cost) adj3 (effect\$ or utilit\$ or benefit\$ or consequence\$ or outcome\$1 or minimi\$)).ab,hw,sh,ti. (197397)
- 38 ((economic\$ or cost or costs or value) adj4 (decision\$1 or threshold\$)).ab,hw,sh,ti. (17689)
- 39 (value adj2 (money or monetary)).ab,hw,sh,ti. (2184)
- 40 (return on investment or ROI).ab,hw,sh,ti. (10577)
- 41 budget impact\$.ab,hw,sh,ti. (1254)
- 42 (decision\$ adj2 (tree\$ or analy\$ or model\$)).ab,hw,sh,ti. (40389)
- 43 (resource\$1 adj4 (use\$1 or usage or utilit\$ or utilis\$ or utiliz\$)).ab,hw,sh,ti. (41420)
- 44 exp Cost-Benefit Analysis/ (76696)
- 45 models, economic/ (9407)
- 46 Economics/ (27046)
- 47 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 (442309)

- 48 (visit or visits or visited).ab,hw,sh,ti. (190965)
49 appointment\$.ab,hw,sh,ti. (27061)
50 (admission\$1 or readmission\$1 or admitted or readmitted).ab,hw,sh,ti. (370039)
51 (placement\$ or care package\$ or support package\$).ab,hw,sh,ti. (123986)
52 ((place\$ or move\$ or moving) adj3 (home\$1 or facility or facilities or residential)).ab,hw,sh,ti. (5218)
53 ((days or time or length or duration\$1) adj3 (home\$1 or facility or facilities or residential)).ab,hw,sh,ti. (5600)
54 ((days or time or length or duration\$1) adj3 (stay or stays or stayed or placement\$)).ab,hw,sh,ti. (139520)
55 ((days or time or length or duration\$1) adj3 (discharge or discharged or home or homes)).ab,hw,sh,ti. (21310)
56 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55 (789865)
57 (quality adjusted or adjusted life year\$).ab,hw,sh,ti. (18859)
58 (qaly\$ or qald\$ or qale\$ or qtime\$).ab,hw,sh,ti. (9511)
59 (illness state\$1 or health state\$1).ab,hw,sh,ti. (5946)
60 (hui or hui1 or hui2 or hui3).ab,hw,sh,ti. (1377)
61 (multiattribute\$ or multi attribute\$).ab,hw,sh,ti. (810)
62 (utility adj3 (score\$1 or valu\$ or health\$ or cost\$ or measur\$ or disease\$ or mean or gain or gains or index\$)).ab,hw,sh,ti. (13589)
63 (utility loss\$ or disutilit\$).ab,hw,sh,ti. (506)
64 utilities.ab,hw,sh,ti. (6489)
65 (eq-5d or eq5d or eq-5 or eq5 or euro qual or euroqual or euro qual5d or euroqual5d or euro qol or euroqol or euro qol5d or euroqol5d or euro quol or euroquol or euro quol5d or euroquol5d or eur qol or eurqol or eur qol5d or eur qol5d or eur?qul or eur?qul5d or euro\$ quality of life or european qol).ab,hw,sh,ti. (9916)
66 (euro\$ adj3 (5 d or 5d or 5 dimension\$ or 5dimension\$ or 5 domain\$ or 5domain\$)).ab,hw,sh,ti. (3443)
67 (sf\$ or short form\$ or shortform\$).ab,hw,sh,ti. (110169)
68 (time trade off\$1 or time tradeoff\$1 or tto or timetradeoff\$1).ab,hw,sh,ti. (1774)
69 exp "Quality of Life"/ (176843)
70 exp quality-adjusted life years/ (11065)
71 57 or 58 or 59 or 60 or 61 or 62 or 63 or 64 or 65 or 66 or 67 or 68 or 69 or 70 (300285)
72 47 or 56 or 71 (1446143) all outcomes
73 5 and 8 (32007) elderly and COPD
74 12 and 73 (563) self management AND elderly and COPD
75 72 and 74 (303) all COPD with outcomes
76 5 and 34 and 72 (13481) all older pop and out of hosp
77 exp Great Britain/ (353159)
78 (national health service* or nhs*).ti,ab,in. (172424)
79 (english not ((published or publication* or translat* or written or language* or speak* or literature or citation*) adj5 english)).ti,ab. (91656)

- 80 (gb or "g.b." or britain* or (british* not "british columbia") or uk or "u.k." or united kingdom* or (england* not "new england") or northern ireland* or northern irish* or scotland* or scottish* or ((wales or "south wales") not "new south wales") or welsh*).ti,ab,jw,in. (1931718)
- 81 (bath or "bath's" or ((birmingham not alabama*) or ("birmingham's" not alabama*) or bradford or "bradford's" or brighton or "brighton's" or bristol or "bristol's" or carlisle* or "carlisle's" or (cambridge not (massachusetts* or boston* or harvard*)) or ("cambridge's" not (massachusetts* or boston* or harvard*)) or (canterbury not zealand*) or ("canterbury's" not zealand*) or chelmsford or "chelmsford's" or chester or "chester's" or chichester or "chichester's" or coventry or "coventry's" or derby or "derby's" or (durham not (carolina* or nc)) or ("durham's" not (carolina* or nc)) or ely or "ely's" or exeter or "exeter's" or gloucester or "gloucester's" or hereford or "hereford's" or hull or "hull's" or lancaster or "lancaster's" or leeds* or leicester or "leicester's" or (lincoln not nebraska*) or ("lincoln's" not nebraska*) or (liverpool not (new south wales* or nsw)) or ("liverpool's" not (new south wales* or nsw)) or ((london not (ontario* or ont or toronto*)) or ("london's" not (ontario* or ont or toronto*)) or manchester or "manchester's" or (newcastle not (new south wales* or nsw)) or ("newcastle's" not (new south wales* or nsw)) or norwich or "norwich's" or nottingham or "nottingham's" or oxford or "oxford's" or peterborough or "peterborough's" or plymouth or "plymouth's" or portsmouth or "portsmouth's" or preston or "preston's" or ripon or "ripon's" or salford or "salford's" or salisbury or "salisbury's" or sheffield or "sheffield's" or southampton or "southampton's" or st albans or stoke or "stoke's" or sunderland or "sunderland's" or truro or "truro's" or wakefield or "wakefield's" or wells or westminster or "westminster's" or winchester or "winchester's" or wolverhampton or "wolverhampton's" or (worcester not (massachusetts* or boston* or harvard*)) or ("worcester's" not (massachusetts* or boston* or harvard*)) or (york not ("new york*" or ny or ontario* or ont or toronto*)) or ("york's" not ("new york*" or ny or ontario* or ont or toronto*))))).ti,ab,in. (1290788)
- 82 77 or 78 or 79 or 80 or 81 (2446089)
- 83 (exp africa/ or exp americas/ or exp antarctic regions/ or exp arctic regions/ or exp asia/ or exp oceania/) not (exp great britain/ or europe/) (2711877)
- 84 82 not 83 (2316236)
- 85 75 and 84 (72)
- 86 76 and 84 (1536)
- 87 75 and 84 (72)
- 88 limit 87 to yr="2008 -Current" (62) COPD – Ris file
- 89 76 and 84 (1536)
- 90 limit 89 to yr="2008 -Current" (977) Older pop out of hosp:
- 91 76 and 84 (1536)
- 92 limit 91 to (english language and yr="2008 -Current") (963) Older pop out of hosp – Ris file

A3: Source: Social Policy and Practice<201904>

Interface / URL: Ovid

Database coverage dates: 1890s to Present.

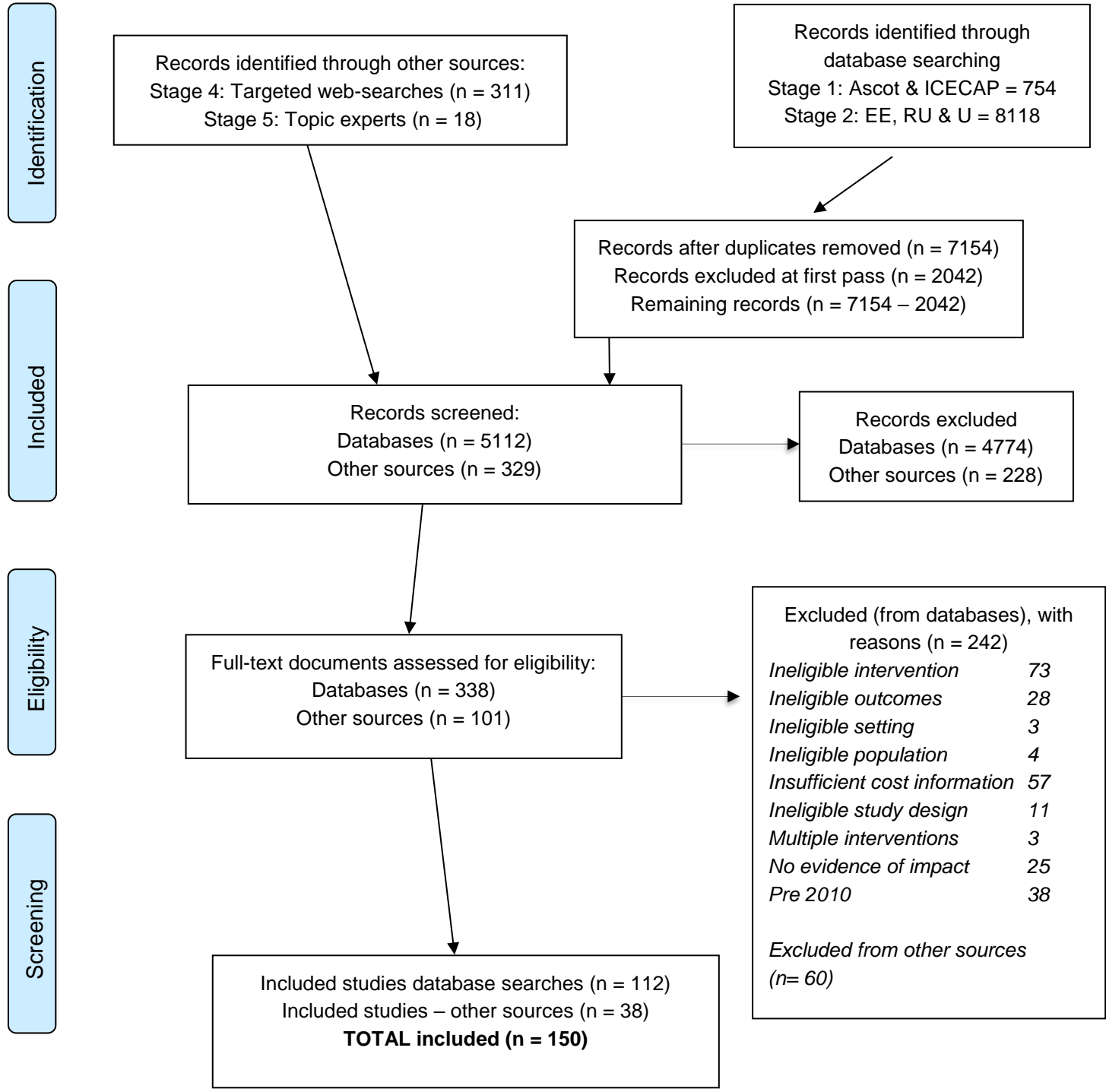
Search date: 20/06/19

Search strategy:

- 1 (elder\$ or aging or geriatric\$ or gerontol\$ or senior citizen\$ or seniors or pensioner\$ or veteran\$ or sexagenarian\$ or septuagenarian\$ or octogenarian\$ or nonagenarian\$ or centenarian\$).ab,de,hw,ti. (38470)
- 2 ((old or older or aged) adj3 (patient\$1 or people\$ or person\$ or woman\$ or women\$ or man or mans or men or mens or male\$1 or female\$ or adult\$ or population\$ or resident\$ or client\$ or consumer\$ or service user\$ or community or communities or individual\$ or citizen\$)).ab,de,hw,ti. (87403)
- 3 (aged care or old\$ age or oldest old or later life).ab,de,hw,ti. (7758)
- 4 1 or 2 or 3 (92324) elderly population
- 5 (((economic\$ or cost\$) adj3 model\$) or (monte carlo or markov) or ((econom\$ or cost or costs or costing or price or pricing) adj3 (analysis or analyses or evaluation\$1 or study or studies)) or ((economic\$ or cost) adj3 (effect\$ or utilit\$ or benefit\$ or consequence\$ or outcome\$1 or minimi\$)) or ((economic\$ or cost or costs or value) adj4 (decision\$1 or threshold\$)) or (value adj2 (money or monetary)) or (return on investment or ROI) or budget impact\$ or (decision\$ adj2 (tree\$ or analy\$ or model\$))).mp. or (resource\$1 adj4 (use\$1 or usage or utilit\$ or utilis\$ or utiliz\$)).ab,de,hw,ti. [mp=abstract, title, publication type, heading word, accession number] (9195)
- 6 resource\$1.m_titl. (1883)
- 7 5 or 6 (10847) economics/ROI
- 8 (quality adjusted or adjusted life year\$ or (qaly\$ or qald\$ or qale\$ or qtime\$) or (illness state\$1 or health state\$1) or (hui or hui1 or hui2 or hui3) or (multiattribute\$ or multi attribute\$) or (utility adj3 (score\$1 or valu\$ or health\$ or cost\$ or measur\$ or disease\$ or mean or gain or gains or index\$)) or (utility loss\$ or disutilit\$) or utilities or (eq-5d or eq5d or eq-5 or eq5 or euro qual or euroqual or euro qual5d or euroqual5d or euro qol or euroqol or euro qol5d or euroqol5d or euro quol or euroquol or euro quol5d or euroquol5d or eur qol or eurqol or eur qol5d or eur qol5d or eur?qul or eur?qul5d or euro\$ quality of life or european qol) or (euro\$ adj3 (5 d or 5d or 5 dimension\$ or 5dimension\$ or 5 domain\$ or 5domain\$)) or sf\$ or (short form\$ or shortform\$)).mp. or (time trade off\$1 or time tradeoff\$1 or tto or timetradeoff\$1).ab,de,hw,ti. [mp=abstract, title, publication type, heading word, accession number] (1240) Quality of Life
- 9 (visit or visits or visited or appointment\$ or (admission\$1 or readmission\$1 or admitted or readmitted) or (placement\$ or care package\$ or support package\$) or ((place\$ or move\$ or moving) adj3 (home\$1 or facility or facilities or residential)) or (bed adj3 day\$1) or ((days or time or length or duration\$1) adj3 (home\$1 or facility or facilities or residential)) or ((days or time or length or duration\$1) adj3 (stay or stays or stayed or placement\$))).mp. or ((days or time or length or duration\$1) adj3 (discharge or

discharged or home or homes)).ab,de,hw,ti. [mp=abstract, title, publication type, heading word, accession number] (17795) utilisation/stays
10 7 or 8 or 9 (28827) all outcomes
11 (telecare or "assist\$ technolog\$").ab,de,hw,ti. (1965)
12 telerehab\$.ab,de,hw,ti. (1)
13 11 or 12 (1966) telecare
14 (integrated adj (work\$ or care\$)).ab,de,hw,ti. (2048)
15 "integrated care team\$".ab,de,hw,ti. (9)
16 (interprofessional adj2 work\$).ab,de,hw,ti. (145)
17 interprofessional team\$.ab,de,hw,ti. (93)
18 (interdisciplinary team or multidisciplinary team or MDT).ab,de,hw,ti. (512)
19 ((co-locate\$ or colocate\$) adj professional\$).ab,de,hw,ti. (0)
20 multidisciplinary service\$.ab,de,hw,ti. (2501)
21 (interdisciplin\$ or inter-disciplin\$ or interprofession\$ or inter-profession\$ or multidisciplin\$ or multi-disciplin\$ or multiprofession\$ or multi-profession\$).mp. and (collaborat\$ or cooperat\$ or co-operat\$).ab,de,hw,ti. [mp=abstract, title, publication type, heading word, accession number] (2284)
22 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 (6036) inter disciplinary/MDT
23 (patient adj3 (transition\$ or discharge\$ or transfer\$)).ab,de,hw,ti. (186)
24 (community or communities or home\$).ab,de,hw,ti. (106802)
25 23 and 24 (115)
26 early support\$ discharge\$.ab,de,hw,ti. (16)
27 25 or 26 (131) hosp discharge
28 13 or 22 or 27 (8048) All interventions
29 4 and 10 and 28 (506) P+I+O
30 4 and 10 and 28 (506)
31 limit 30 to yr="2008 -Current" (351) **UK and RoW**
32 (national health service\$ or nhs\$).ab,de,hw,ti. (11658)
33 english.ab,de,hw,ti. (5275)
34 (england\$ or northern ireland\$ or northern irish\$ or scotland\$ or scottish\$ or wales or welsh\$).ab,de,hw,ti. (64067)
35 (britain\$ or british\$ or uk or united kingdom\$).ab,de,hw,ti. (107221)
36 (gb or "g.b." or "u.k").mp. [mp=abstract, title, publication type, heading word, accession number] (22642)
37 32 or 33 or 34 or 35 or 36 (145488) my quick UK filter
38 31 and 37 (157) **"UK" only 2008 on**

7.2 Appendix B: PRISMA 2009 flow diagram: PHE social care ROI tool – stages 1, 2, 4 & 5



7.3 Appendix C: Data extraction fields

Heading	Description
Preliminary data extraction	
Bibliographic details	Author, title, publication details
Intervention	What is the intervention?
Category	Selected from a drop-down list of categories and sub-categories
Comparator	What is the intervention being compared to?
Study design	e.g. RCT, cohort study
Age of study population	Describe age of patients/service users in 'study'
Country	What country did the intervention take place in?
Scale of intervention	e.g. community singing in one community would be classed as small; Extracare housing would be large
Payer	Which organisation pays for the intervention e.g. health/social care/joint funding?
Beneficiary	Which organisation benefits from the intervention? Where do the benefits fall?
Results	Brief summary of what the evidence is saying/which outcomes are measured? i.e. patient outcomes, resource use
Strength of evidence	High/medium/low - overall assessment of how good the evidence is based on study design and results
Notes	Any other important details
Full data extraction	
Intervention	in more detail (who, where, when)
Comparator	in more detail (who, where, when)
Results	Results for each outcome. These will be presented showing effect size and confidence intervals whenever possible
Costs (inputs)	: inputs required for the intervention - need detail here
Costs (outputs)	: value of outputs - need detail here
Comments on availability of cost information	- is there enough information to do an ROI calculation? If not, is there the potential to get the information and how much effort could be needed to get it (e.g. follow up other references, contact authors etc).
Number of participants	(total number of participants included in the study, number of participants in each arm, with inclusion and exclusion criteria, the numbers of participants who started and completed the study)
Details of study	(type of economic analysis, data sources, time horizon, discount rates, perspective and measures of uncertainty)
limitations	Any limitations identified by authors
Conclusion	" - do we think this record has information that could be used in the ROI tool?
Additional comments	e.g. source of funding, evidence gaps, further research identified, how good this record is when compared to others on the same type of intervention."

7.4 Appendix D: Interventions assessment summary

Intervention type (author)	Intervention details	Costs detail available?		Comments	Take forward?	Population information
		Inputs	Outcomes			
Local area co-ordination (Thurrock Council, 2014)	Information, support and (for some) longer term support for relationships and planning for future.	Some	No	Lack of robust methods to the collection and presentation of data on impacts.	No	Age 18-98 years
Patient / community navigators (Galbraith et al 2017)	Patient navigators working in community on transitional care in USA. Provide hospital visits and outreach visits for 30 days post discharge. The intervention protocol goal was one hospital visit and 3 completed calls.	Yes	Yes	Good quality evidence. Intervention based in USA.	Yes	Majority of benefits in over 60s
Patient / community navigators (Watson, P; Shucksmith, J. 2015)	Partnership of voluntary sector agencies and the statutory sector to support vulnerable people living in the borough of Redcar & Cleveland. Community Agents meet a wide range of needs including: Befriending; Benefits Advice; Form Filling; Social Activity; Transport; Shopping; Odd jobs/Maintenance; General support and information.	No	No	There is no data on costs. This is a summary report and it is not clear how to access a full report, nor if that includes cost data.	Maybe	Majority > 60 years
Bundle of voluntary and community sector (VCS) services aimed at patients with long-term conditions (Centre for Regional Economic and Social Research, 2014)	A voluntary and community sector (VCS) liaison service, referring to other funded services. The 5 most common types of funded services referred to were information and advice, community activity, physical activities, befriending and enabling.	Some	Yes	Good study, directly applicable. Minor limitations due to estimates used in calculations.	Yes	Over 60s
Befriending (Fitzsimmons 2010)	Telephone befriending. Weekly teleconferencing/calls for groups of 6-8 people with a host/facilitator leading.	Yes	No	Paper lacks detail, potential bias as authored by CX of the	No	Elderly people 65+ years

Intervention type (author)	Intervention details	Costs detail available?		Comments	Take forward?	Population information
		Inputs	Outcomes			
				community Network. Refers to a follow-up evaluation which may potentially have more detail.		
Befriending (Bauer et al 2011)	Befriender visits person in their home 1:1 and the individual has asked/agreed to be "befriended". 1hr/week or fortnight. Unstructured with no formal defined goal. Participants matched for interests. Intervention presumed to be targeted at the lonely, isolated individual over 50.	Yes	Potentially	Good quality study with potential for more detail.	Yes	Over 50s
Befriending (Optimoty advisors, for NICE, 2015)	Friendship programmes in Netherlands (need more detail as one of interventions included in a systematic review)	Yes	Yes	Summary for NICE. Dutch intervention.	Yes	Mean age of 63 years
Community singing (Coulton et al, 2015)	A 14-week 90-minute programme of participative singing for older people, to improve mental health-related quality of life.	Yes	Yes	Reasonably good record, with more detail than the other record for this intervention	Yes	Mean age 69 years
Community singing (Optimoty advisors, for NICE, 2015)	Participation in choral singing in USA. The intervention lasted for 30 weeks with weekly singing rehearsals as well as public performances several times during the intervention period	Yes	Maybe – would need more detail	Summary for NICE. USA intervention.	Yes	NR
Day services for older people (Age UK, 2011)	Day services: providing social contact and stimulation breaks for carers; offering activities: for mental and physical stimulation; enabling care and monitoring low-level support for older people at risk; assisting recovery and rehabilitation after an illness or accident care services e.g. bathing and nail-cutting; promoting health and nutrition.	No	No	Insufficient data in this document. Some of the documents quoted may yield data, however, many fall outside the review criteria due to pre 2010	No	50+ or 60+ years lone dwellers

Intervention type (author)	Intervention details	Costs detail available?		Comments	Take forward?	Population information
		Inputs	Outcomes			
Day services for older people (Windle et al, 2009)	Community facing projects: Well-being practical: 10 projects e.g. housing repairs, gardening squads etc. well-being emotional/social isolation: lunch clubs, hobby or ed classes, talking therapies friendship through classes or groups Well-being physical: time limited exercise classes 8-12 weeks) (55+ exercise Camden) Well-being community: neighbourhood schemes, "hubs" etc. active living centres/hubs	Some	No	This is a comprehensive report. Has info that could be used on ROI but aggregation of analysis may be a serious flaw preventing it from being useful at individual intervention level. Too heterogeneous.	No, but may be useful reference material for others	Mean age 74 years (range 40-101)
Dementia: Early diagnosis (Banerjee et, 2009)	Based on the Croydon Memory Service Model which provides early diagnosis of dementia as well as information and direct medical, psychological and social help to patients and their families	Yes	Yes	There is enough information to do an ROI calculation, but it is based on assumptions rather than observed impacts.	Yes	65+ years
Dementia: non-pharmacological interventions (Gitlin et al, 2010)	Tailored Activity Program (TAP) in USA: 8 sessions of occupational therapy over 4-months to develop customized activities, and train families in their use, for individuals with dementia	Some	Yes	USA intervention. Potentially useful information, although from a limited perspective. Unclear how caregivers spent saved time and whether less time in caregiving is related to better health outcomes.	Maybe	Mean age of 65 years (caregivers living with patients)
Dementia: non-pharmacological interventions (NICE, 2018)	Large range of cognitive, exercise, music therapy -: Cognitive rehabilitation; Cognitive stimulation therapy; Cognitive training; Reminiscence therapy; Exercise (Group); Music therapy (Active); Music therapy (Individual); Occupational therapy.	Yes	Yes	Several interventions listed – needs to be more granular.	Maybe	Generic cohort of people living with dementia

Intervention type (author)	Intervention details	Costs detail available?		Comments	Take forward?	Population information
		Inputs	Outcomes			
Dementia: Nursing/care home interventions (Ballard et al, 2018)	The WHELD programme: person centred care and psychosocial interventions for agitation in dementia sufferers living in nursing homes. Combines staff training, social interaction, and guidance on use of antipsychotic medications.	Yes	Yes	Was, in principle about non-pharmaceutical interventions, but did include an anti-psychotic review	Yes	People with dementia living in UK nursing homes
Dementia: Nursing/care home interventions (Siddiqi et al, 2016)	A 16 month educational package to support care home staff to address risk factors for delirium. A specialist Delirium Practitioner delivered 3 interactive education sessions and facilitated Working Groups of care home staff.	Yes	No	This is a feasibility study that does not calculate and report outcome costs.	No	Older people (age not specified)
Extracare housing - compared with home (Goswell, 2014; Frontier Economic, 2010; Batty, 2017; IPC, 2011)	Self-contained accommodation, 24 hr support, some collective meal provision, range of leisure and other facilities on site, range of tenure options and varying size of developments.	Yes	Yes	Several records with detailed information. If include would cross reference for ranges	Yes	Various
Extracare housing - compared with home (Petch, 2014; Extracare Charitable Trust, 2015; HLIN, 2017; Nash, 2013)	As above	No	No	These records are evidence reviews and summaries so may provide useful additional information to above	NA	Various
Extracare housing - compared with other care home (Baumker, 2011)	Extracare retirement villages (19 schemes, mixed housing tenures) located in Midlands and Northern England	Yes	Yes	Detailed record. Relevant if wish to include comparison with care homes versus own home	Maybe	Mean age 77 years
Housing adaptations and modifications (including	Services to carry out repairs and adaptations, sometimes on discharge from hospital, others to assist independence at home. May also involve caseworkers and advice.	Some	No	Insufficient detail on outcomes, and benefits based on assumptions not measured (e.g.	No	Various but all older people 60 years

Intervention type (author)	Intervention details	Costs detail available?		Comments	Take forward?	Population information
		Inputs	Outcomes			
handyperson scheme / care and repair (Crg, Research, 2009; Croucher & Lowson, 2011; IPC, 2011; Adams, 2018, Adams 2016; Powell et al, 2017)				assumed falls prevented)		
Housing adaptations and modifications (Garrett et al, 2016)	Preventive housing interventions for disabled and vulnerable, where risk of accidents in home is worse than national average.	No	No	Paper is truncated at the introduction. Summary claims benefits to health and social care but need more info and full report not accessible.	Maybe	NR
Housing adaptations and modifications (Ambrose et al, 2018)	Five-year investment programme of more than £490 million to upgrade over 32,000 dwellings to a 'Lambeth Housing Standard'. Sub-programmes were: warmth and comfort (including fuel poverty), safety and independence (including accident prevention) and security.	Some	Yes	There is information for a ROI tool, but it is based on other literature, not original data from this intervention.	Maybe	Mean 65+ years
Sheltered housing/ specialist housing schemes (Wood, 2017)	Sheltered housing (and retirement housing)	No	No	Briefing paper on review of interventions. Contains estimated value of benefits but no input costs. Full report may contain more details	No	Various
Integration: Hospital discharge support	Various integration schemes described in reviews.	No	No	Difficult to draw conclusions, largely due to weakness in the evidence and the	No	Various

Intervention type (author)	Intervention details	Costs detail available?		Comments	Take forward?	Population information
		Inputs	Outcomes			
(Nolte & Pitchforth, 2015;				variety of sources. May be useful background.		
Integration: Hospital discharge support (Hammar et al, 2009)	Generic prototype of care/case-management practice' attempting to standardise practice and make written agreements between hospital and home care and within home care (in Finland).	No	Some	Finnish study - interventions are not described in detail, but they appear to have different between municipalities.	No	65+ years
Integration: Hospital discharge support (Hoogendoorn et al, 2010)	INTERCOM programme in Netherlands, consisted of exercise training, education, nutritional therapy and smoking cessation counselling offered by community-based physiotherapists and dieticians and hospital-based respiratory nurses.	Yes	Yes	Dutch study, showing QAL gains and ICER. Including all COPD- and non-COPD-related healthcare costs, travel expenses and cost of productivity losses.	Yes	Mean age 66 years
Integration: Hospital discharge support (Kylie et al, 2018)	An enhanced program (HOME), involving pre/post discharge visits and 2 follow-up phone calls, compared with an in-hospital consultation using the home and community environment assessment and the Lawton Instrumental Activities of Daily Living assessment, in Australia.	Yes	Yes	Australian study. Short follow-up period (3 months). Health system perspective only – didn't consider the cost of unpaid care.	No	70+ years
Integration: Hospital discharge support (Windle et al, 2009)	A range of projects intended to prevent hospital admission, rehabilitate patients in hospital or assist patients returning home from hospital	No	No	POPSS evaluation report with insufficient detail on specific interventions	No	Various – mean age 78 years
Integration: Hospital discharge support (IPC, 2011)	Hospital Discharge teams in 2 Trusts were re-configured to be more rehabilitation focused, aiming to improve the patient journey from hospital to home and support patients to be independent.	No	Some	There are no input costs and impact costs are only assumed.	No	Elderly patients in hospital

Intervention type (author)	Intervention details	Costs detail available?		Comments	Take forward?	Population information
		Inputs	Outcomes			
Integration: Hospital discharge support (Royal Voluntary Service/SCIE, 2014)	Services for older people being discharged for hospital (review of various services).	No	No	Restricted to an analysis of hospital readmissions and potential savings dependent on a large number of assumptions.	No	75+ years
Integration: Inter-professional working (Allen & Glasby, 2010)	Review of prevention and rehabilitation schemes.	No	No	There are no specific inputs or outcomes, nor cost data. This is a narrative review.	No	Elderly (not specified)
Integration: Inter-professional working (Clarkson et al, 2011)	Integrating assessments of older people, including both care managers' and additional clinicians' assessments (with a standard reporting process back to care managers)	No	No	A research letter with no detail of input or output costs. It may be possible to get more detail from the original paper (but this is quite old).	No	Frail elderly - age not stated
Integration: Inter-professional working (Daksha et al, 2013)	Three inter-professional working models for community dwellers: Case Management, Collaboration and Integrated Teams.	No	No	Worldwide evidence with considerable heterogeneity in the outcomes reported and how they were measured. good overview of different integrated care models	No	Elderly (not specified)
Integration: Inter-professional working (Taylor, 2013)	Redesigned models of care, based on 6 community multi-disciplinary teams.	No	No	A description of service plans.	No	65+ years

Intervention type (author)	Intervention details	Costs detail available?		Comments	Take forward?	Population information
		Inputs	Outcomes			
Integration: Inter-professional working (Opinder et al, 2017)	Community In-reach Rehabilitation and Care Transition (CIRACT) service: an OT, physiotherapist, assistant practitioner, linked to a social worker, working with patients and carers.	Unclear	Unclear	Possibly enough information for a ROI calculation in the appendices. No significant differences in any of the outcomes but ICER favourable.	Yes	Frail elderly 70+ years admitted as an acute medical emergency.
Integration: Inter-professional working (Wiley-Exley et al, 2009)	Integrated care for elderly depressed patients with a behavioural health professional co-located in the primary care setting for veterans in USA (compared to specialty referral to a behavioural health provider outside primary care).	No	Yes	A good analysis of QALYs, but no input costs are provided.	Maybe	65+ years
Integration: Inter-professional working (Windle et al, 2009)	Proactive case coordination: various approaches to identify people at risk of admission to hospital or long term care (case finding) and care or case management.	No	No	Input and outcome costs not specified at individual project or category level. It may be possible to identify them from report authors	Maybe	Ave 78 years (range 48-99)
Integration: Inter-professional working (Windle et al, 2009)	Services provided to people with long term conditions and other complex needs, provided by integrated teams of social care, health and VCO staff.	No	No	Input and outcome costs not specified at individual project or category level. It may be possible to identify them from report authors	Maybe	Ave 75 years (range 41-97)
Integration: Inter-professional working (NICE, 2015)	Integrating health and/or social care planning and professional input. Based on the American GRACE model: an in-home comprehensive geriatric assessment from case managers, used to create an individualised care plan discussed with the MDT.	Maybe	Maybe	Need to check detail available on costs. Mainly healthcare benefits.	Maybe	Mean 72 years

Intervention type (author)	Intervention details	Costs detail available?		Comments	Take forward?	Population information
		Inputs	Outcomes			
Physical activity: Community based schemes (Harrington et al, 2010)	For stroke survivors and carers/family, to improve integration and well-being after stroke. Exercise and education schemes held twice weekly for 8 weeks for 9 participants, facilitated by volunteers and qualified exercise instructors (supported by a physiotherapist). (Compared to standard care – variable dependent on PCT)	Some	No	The report does not have enough information (output costs missing). These were presumably measured, but it may be difficult to identify them from the authors as the study is old (recruitment of participants in 2004).	Maybe	Minimum 50 years
Physical activity: Community based schemes (Clark et al, 2012)	Weekly 2-hour sessions (small group and individual) led by a licensed occupational therapist and up to 10 individual 1-h sessions with an occupational therapist in homes or community settings in USA.	Yes	No	USA intervention. Information on costs of outputs is missing. It may be difficult to identify this from the authors as the study is old.	Maybe	60-95 years
Physical activity: Community based schemes (Davis et al, 2010; Davis et al, 2011)	Two intervention groups: once-weekly resistance training, twice-weekly resistance training, compared with twice-weekly balance and tone classes (all 60-min duration). The resistance training program used a progressive, high-intensity protocol. (In Canada). Study in 2011 followed up participants after 21 months.	Yes	Yes	Canadian studies - Study and comparator group sizes were small and numbers included in the economic analysis were even smaller.	Maybe	Women aged 65 to 75 years, living in community
Physical activity: Community based schemes (Frew et al, 2014)	'Be Active' - allows Birmingham city residents to access their local Council-run leisure centres without charge at certain times of the day.	Yes	No	The base case analysis indicates a cost/QALY of £400. Most of the relevant output costs were based on assumptions from the literature. Focus is on	Maybe	16-70 years

Intervention type (author)	Intervention details	Costs detail available?		Comments	Take forward?	Population information
		Inputs	Outcomes			
				adults, not just older adults.		
Physical activity: Community based schemes (Underwood, 2013)	Exercise for depression in care home residents - 'whole-home' exercise intervention, consisting of training for care home staff backed up with a twice-weekly, physiotherapist-led exercise group (compared with depression awareness training for staff).	Yes	Yes	Only result in favour of intervention was odds of being depressed at 12 months. Other measures (inc QALYs) favoured control.	Maybe	≥ 65 years
Physical activity: Community based schemes (Windle et al, 2010)	Physical exercise to promote mental well-being in older age (review of evidence) targeted those who are sedentary and delivered in a community setting, primarily through a group-based approach led by trained leaders. As a minimum, the evidence would suggest 2 exercise sessions per week, each of 45min duration.	No	No	There is not enough information for a ROI calculation. This is an old review and included papers appear to have lacked data.	No	≥ 65 years
Physical activity: Community based schemes (Windle et al, 2009)	Time-limited exercise classes focussed on improving overall health; a T'ai Chi course; a chiropody service; a rehabilitation course run by a voluntary organisation.	No	No	Inputs costs not specified for intervention types. It may be possible to identify them from report authors	Maybe	Mean age 75 (range 56-94)
Physical activity: Remote support (e.g. telephone) (Geraedts et al, 2013)	Remote feedback strategies on physical activity and capacity in home-based physical activity interventions for older adults with or without comorbidities.	No	No	Review, with little information on costs for individual interventions considered.	No	55+ years
Physical activity: Remote support (e.g. telephone) (Graves et al, 2009)	A telephone-delivered intervention for physical activity and diet. Programme for participants with T2DM and/or hypertension. 12-month intervention involving 18 calls from trained counsellors - also receiving workbook, pedometer, self-monitoring form and exercise band. Compared to 'Usual Care' group (3	Yes	No	Output costs are missing. Getting the data from authors may be impractical as the study is quite old (2009) and is an Australian study.	No	Mean age 58.2 years

Intervention type (author)	Intervention details	Costs detail available?		Comments	Take forward?	Population information
		Inputs	Outcomes			
	telephone interviews of 45–60 minutes) and 'real control' (no intervention).					
Practical support: Help at home schemes (Bauer et al, 2017)	Help at home community scheme - volunteer-provided face-to-face and telephone befriending scheme; a practical home help service for gardening, shopping and cleaning; and welfare benefit advice service.	Yes	Yes	Applicable study with cost information.	Yes	55+
Practical support: Help at home schemes (Branelly & Matthews, 2010)	Handy person services: free home maintenance.	No	No	Thematic analysis with benefits discussed in narrative form.	No	
Practical support: Help at home schemes (Pleace, 2013)	Preventative support services: 1. Handyperson schemes, 2. Telecare models, alarm systems and mobile wardens, 3. Equipment and adaptations (grab rails, stair lifts, ramps etc.), 4. Floating housing support services (advice, information low level support (assisting reablement after ill health, hosp discharge etc.)	Maybe	Maybe	Review of evidence on various schemes, based on old data.	Maybe	Older people, 65+ years
Practical support: Help at home schemes (Windle et al, 2009)	Community facing projects: wellbeing practical: 10 projects e.g. housing repairs, gardening squads etc. (POPPS funded schemes)	No	No	Not sufficient detail at individual intervention level, unless POPP project information is still available, but projects are pre-2010..	Maybe	Mean age 75 years (range 40 – 101)
Practical support: Help at home schemes (NICE, 2015)	Based on the IBSEN study: social care services provided as part of a care package for people living in their own home and the care planning approach. Care management provided by a professional care manager or coordinator, who was usually employed by the local authority or by home care agencies.	Yes	Yes	Sufficient detail available to include.	Yes	≥65 years

Intervention type (author)	Intervention details	Costs detail available?		Comments	Take forward?	Population information
		Inputs	Outcomes			
Practical support: Help at home schemes (IPC, 2011)	Shared Lives: a service provided by individuals and families (carers) who provide care or support to people placed with them in their own home by the local authority. They can provide long-term accommodation and support; short breaks; day-time support; rehabilitative or intermediate support; and kinship support (to those in own homes).	Some	Some	The sources used were a bit confusing. The age range is mixed and 75% under 65	No	Mixed, 75% under 65
Practical support: Help at home schemes (SCIE, not dated)	The Living Well scheme - low level support for day to day living: volunteers help person build social network and community connections. Practical support, navigation and coordination are provided in order to boost self-confidence and self-reliance,	Some	Some	Need more detail of costs by contacting authors	Maybe	Older people
Practical support: Help at home schemes (Dixon et al, 2014)	British Red Cross (BRC) Support at Home service: short-term practical and emotional support aimed at developing confidence & independence esp. after difficult times such as hosp. stay etc. - contact times of 4-40 hrs, ave 10 hrs.	Yes	Yes	May need more detail from PSSRU.	Yes	Mean age 76 years
Reablement: general (Cochrane et al, 2016;	Time-limited reablement services to improve functional independence for older people (aged 65 years or more).	No	No	Cannot be used in a ROI tool. The outcomes are not measured or costed.	No	> 65 years
Reablement: general (Glendinning et al, 2011)	Short-term intervention in home care - helps users to regain confidence and relearn self-care skills and aims to reduce needs for longer-term support. Services provide personal care, help with activities of daily living and other practical tasks for a time-limited period. The provision of items of equipment is also an important feature.	Yes	Yes	Prospective longitudinal, comparative before-and-after study with sufficient cost information.	Yes	> 65 years, high proportion female
Reablement: general	Reablement designed to help people learn or relearn the skills necessary for daily living which	No	No	These records are evidence reviews,	No	> 65 years

Intervention type (author)	Intervention details	Costs detail available?		Comments	Take forward?	Population information
		Inputs	Outcomes			
(Francis et al, 2011; Sims-Gould, 2017; Wood & Salter, 2012; Faria et al, 2015; SCIE, 2011, SCIE, 2014)	may have been lost through deterioration in health and/or increased support needs. A focus on regaining physical ability is central, as is active reassessment.			briefings and summaries, with insufficient cost information, but may provide useful additional information.		
Reablement: general (Jutkowitz et al, 2012)	Advancing Better Living for Elders (ABLE) in USA, which involves occupational and physical therapy sessions and home modifications to address client-identified functional difficulties, performance goals, and home safety. 5 OT contacts and one 1.5-hour physical therapy (PT) home visit over the first 6 months.	Yes	No	Limitations due to comparator and unable to measure outputs. USA intervention.	No	> 70 years
Reablement: general (Sigurdsson et al, 2008)	Preoperative and postoperative education programs, as well as home visits from an outpatient team after a shortened hospitalization, in Iceland in 1997/99 (compared to conventional rehabilitation).	Some	Some	Costs of inputs and outputs reported separately, in an unpublished manuscript. Icelandic intervention from 1990s.	No	Patients with primary hip replacement.
Reablement: general (NICE, 2017)	Bed based intermediate care - acute care followed by nurse led bed based care, with nurse leading clinical team including authority to admit and discharge patients; discharge planning; patient centeredness.	Some	Some	Based on 4 UK studies. A number of the estimates used in the economic model were based on single studies and on expert opinion	Maybe	Mean age 70 years
Reablement: general (NICE, 2017)	Reablement a short-term individualised service designed to promote the independence and minimise the need for ongoing support services, for those at home (not post-hospital).	Yes	Some	Economic analysis of 2 studies from England and Australia. Costs of outputs are provided, but it is difficult to identify a cost per case.	Yes	65+ years

Intervention type (author)	Intervention details	Costs detail available?		Comments	Take forward?	Population information
		Inputs	Outcomes			
Reablement: Rehabilitation (Bulthuis et al, 2008)	3-week intensive exercise training (IET) program directly following hospital discharge in patients with rheumatic diseases in the Netherlands	Yes	Yes	Dutch study with wide age range.	Maybe	Range 44 - 89
Reablement: Rehabilitation (Chava et al, 2013)	Occupational therapy based, community based geriatric rehabilitation in the USA.	Some	Yes	Limited sample size and questions over validity of outputs.	Maybe	65+ years, receiving community services
Reablement: Rehabilitation (Opinder et al, 2016)	Community In-reach Rehabilitation and Care Transition Team	No	No	Only a summary of trial with no link to full document. CIRACT included in Pinder et al 2017 (integration)	No	≥70 years admitted to hospital as an acute medical emergency
Reablement: Rehabilitation (Waterhouse et al, 2010)	Different approaches to pulmonary rehabilitation (hospital/community, telephone follow-up/no follow-up).	Yes	Some	QALY gains not statistically significant	No	Mean 68.7 years, with COPD
Reablement: Rehabilitation (Williams et al, 2016; Williams et al, 2017)	Multidisciplinary rehabilitation package following hip fracture, including goal setting and patient held workbook.	Yes	Yes	Costs were higher in intervention group and QALY gains not statistically significant.	No	65+ years patients post surgery for proximal femoral fracture
Reablement: Rehabilitation (Windle et al, 2017)	Fall services providing specialist skills to address the needs of older people who were at risk or had sustained a fall.	No	No	Insufficient cost information and focus on falls.	No	Mean age 61 years (range 60-96)
Self-management: Chronic pain (Boyers et al, 2013)	Various self-management schemes for chronic pain e.g. aerobic exercise, water based, resistance training – heterogeneous, so no meta-analysis possible.		No	Self-management led to statistically significant QALY gains relative to usual care in one example. Although not enough information for	No	> 65 years

Intervention type (author)	Intervention details	Costs detail available?		Comments	Take forward?	Population information
		Inputs	Outcomes			
				ROI, this is a good paper with relevant general results on cost effectiveness.		
Self-management: Chronic pain (Manning et al, 2014)	The EXTRA programme, for people with Rheumatoid Arthritis (RA) comprised 4 1h supervised group (4 to 6 participants) training sessions (delivered twice weekly for the first 2 weeks) supplementing a daily home exercise regimen.		Yes	Small sample size. (NB. There are other programmes for RA e.g. ESCAPE pain)	Maybe	Mean 55 years
Self-management: COPD (Ninot et al, 2011)	Supervised exercise sessions in a self-management programme for COPD patients in France. 8 lectures to small groups of 4-8 participants at a rate of 2 sessions (i.e. 2 h per session) per week for 4 weeks, followed by exercise at home.	No	Yes	French study Input costs missing. It may be possible to make some assumptions for missing input costs.	Maybe	Mean 65 years
Self-management: COPD (Taylor et al, 2012)	Better Living with Long term Airways disease (BELLA) - course run by 2 trained lay (peer) tutors (at least one of whom had COPD), who delivered a structured, manualised, 3-hour session once a week for 7 weeks at a local community centre.	Yes	Yes	Small pilot study indicated improved self-reported exercise levels and HRQoL in the intervention group, with most of benefit to NHS utilisation.	Maybe	Mean 69.5 years
Telecare/assistive technology at home (Newton et al, 2008; Brownsell et al, 2008;)	Telecare service at home: referrals and equipment installation, alarm monitoring.	No	No	Insufficient cost information.	No	Mean age various
Telecare/assistive technology at home	Telecare services for elderly at home: referrals and equipment installation, alarm monitoring.	Some	Some	Cost information lack detail but report indicates positive ROI,	Maybe	80+ years

Intervention type (author)	Intervention details	Costs detail available?		Comments	Take forward?	Population information
		Inputs	Outcomes			
(London: DH Care Networks, 2010).				with savings to care system.		
Telecare/assistive technology at home (Goodacre, 2008; Clifford et al, 2012).	Assistive technology studied, for patients with different long term conditions.	Yes	Yes	Two economic modelling studies with detailed information	Yes	Age range 70 – 78 years, with LTCs
Telecare/assistive technology at home (Al-Oraibi et al, 2012)	Assistive Technology (AT) in care homes	No	Yes	Small and heterogeneous sampling	No	50+ years in care homes