A systematic review of studies to promote self-care in housebound patients with long term conditions.

Aims, review questions and scope

The aim is to review studies aimed at promoting self-care in housebound patients who have long term conditions. Standard systematic review methods will be used (CRD 2008) to identify, describe and synthesise evidence from relevant studies to answer the following questions:

What interventions have been used to target self-care in housebound people?

Which interventions been demonstrated to be effective and what components are associated with effectiveness?

What measures have been used to demonstrate efficacy?

What measures have been used to ensure fidelity to the intervention?

What was the patients' experience of these interventions?

Study selection:

Study design
 Primary research using a study design – RCT, quasi RCT, controlled trial, before and after trial and qualitative studies. Reported in English in a published article or dissertation studies published only in other languages will be accounted for to assess the potential bias impact this may have.

Participants
Studies which include people over 60 years of age and who are housebound will be reviewed. Housebound is defined as people who only have infrequent absences from home which are short in duration and require taxing effort in line with the Medicare definition of homebound (U.S. Department of Health and Human Services 2010).

Intervention
Studies which evaluate self-care interventions that aim to change health behaviour associated with the management of long term physical conditions. Long term conditions are defined as physical chronic disease which cannot usually be cured for example diabetes, heart failure, respiratory disease.
This review will only include interventions which are delivered face to face.

The following electronic bibliographic databases will be searched: The Cochrane Library (Cochrane Database of Systematic Reviews, MEDLINE, PsycINFO, ASSIA, CINHAL and Web of Science (science and social science citation index). Worldcat and open grey will be searched for grey literature and ETHOS for dissertations.

 The search strategy will include only terms relating to or describing the intervention and the population. The search strategy for MEDLINE is available as appendix 1. The search terms will be adapted for use with other bibliographic databases. The search will include any language but only studies in English will be included in the analysis. Studies in all languages will be used to assess the

degree of bias caused by not including other languages. Studies published between January 1990 and the date the searches are run will be sought. 1990 was chosen as the development of interventions to encourage self-care for people with long term conditions was in its early stages before this time and here is little published research. The searches will be re-run just before the final analyses and further studies retrieved for inclusion.

Comparison
Usual care, waiting list control, any active intervention, no control intervention

Outcome
Studies included in this review will report quantitative or qualitative data on health related behaviour or experience of self-care interventions. The quantitate data will need to be reported at more than one point in time for comparison. Physical behaviour change outcomes could include weight, Blood pressure HbA1c, cholesterol, wound healing, health status, health related quality of life, self-efficacy. Health behaviours that may change are physical activity, diet and hydration, medication adherence, monitoring of symptoms or disease markers.

Study screening

Titles obtained from searches will be screened to exclude obviously irrelevant papers guided by the following questions

Does the paper report a primary study?

Does the study target relevant physical health related behaviour?

Does the study target housebound adults?

Is the intervention face to face?

If the answer to these questions is either yes or unclear the citation will be included; if the answer to these questions is no it will be excluded.

All selected papers will be downloaded to Mendeley reference management database. The total number of references will be recorded, duplicates removed and the total number of references obtained from each data source recorded as a flow chart using the PRISMA guidelines (Moher et al. 2009).

Study Selection

Abstracts of the studies identified from the searches will be examined by one reviewer who will decide whether it is included in the full text review based on the above criteria. A flowchart in appendix 1 will show how the inclusion criteria will be applied. Once full texts are obtained supplementary data may be sought in any linked reports, such as study protocols, and will be used during data extraction and to assess the quality of the study. Two reviewers will independently review the full texts for inclusion. Any uncertainty or disagreement about inclusion of a study will be referred to a third reviewer.

Assessment of study quality

The studies will be assessed and summarised for quality using The Cochrane tool for assessing risk of bias by one author and the results tabulated. Using these data two authors will independently classify the studies as low risk, unclear risk of bias or high risk of bias. Where there are discrepancies in decisions a third reviewer will be asked to give their opinion. The results of the quality assessment will be considered in regard to the population, interventions, outcomes and methodology used in the study. The quality assessments will be represented in a table and used to describe the selected studies. They will be explored to explain heterogeneity and used to inform the decision on suitability of meta-analysis.

Data extraction

A data extraction template will be used to systematically extract data from the selected studies. Categories included in the template will be:

General details e.g. year of publication, country, aims.

Participant characteristics e.g. number, age, gender, diagnosis, co-morbidity scale, deprivation index.

Intervention details including:

Provider e.g. professional background, additional training received.

The nature and theoretical background to intervention

Number, duration and frequency of exposure to intervention

Measurement of fidelity to the intervention.

Health behaviour outcomes reported and the measures used.

Other outcomes reported e.g. health service use, self-efficacy, quality of life, patient centeredness.

Patient experience outcomes

Reported study findings

Study design and comparison group

Study quality as measured against the Cochrane Collaboration's tool for assessing bias

Data Synthesis

A table will be created of the descriptive data capturing the characteristics of the participants, the interventions, the quality and findings of the studies. This will be summarised in a narrative review. Due to the range of interventions and outcomes and the small number of studies of the housebound population it is not expected that there will be scope for a meta-analysis. However, if there is sufficient heterogeneity of methodology, interventions, comparators and outcomes measured the results will be pooled and a random effects meta-analysis undertaken. Standardised mean differences will be calculated for continuous outcomes and risk ratios for binary outcomes, 95%

confidence intervals and two sided P values for each outcome will be calculated. Heterogeneity of effect measures between studies will be assessed using both chi-squared statistic and degrees of freedom. Degrees of freedom greater than 50% will be considered indicative of substantial heterogeneity. Sensitivity analyses based on study quality will be assessed. Stratified meta-analyses will be used to explore heterogeneity in effect relative to study quality, study populations, fidelity to the intervention, and the type of intervention. Publication bias will also be assessed.

References:

Centre for Reviews and Dissemination (2008) Systematic Reviews: CRD's guidance for undertaking reviews in health, CRD: University of York

Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(6): e1000097. doi:10.1371/journal.pmed1000097
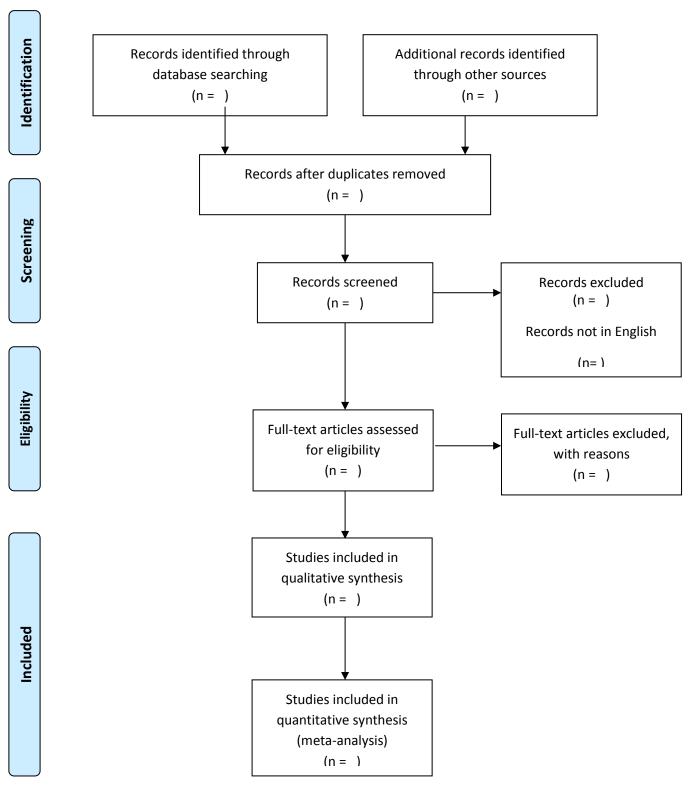
U.S. Department of Health and Human Services (2010) Medicare and Home Health Care. Retrieved from www.medicare.gov/pubs/pdf/10969.pdf on 11/01/2014.

Appendix 1: Search strategy for Medline 02/01/2015

Searches	Results	Search Type
1	housebound*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	223
2	homebound*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	983
3	self-care.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	31663
4	self-management.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	9575
5	behaviour* change.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	3158
6	behavior* change.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	7709
7	motivational interview*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	2400
8	"chronic care model".mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	530
9	"Goal-Setting".mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	2098
10	"action plan*".mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	4152

11	"health coaching".mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	181
12	3 or 4 or 5 or 7 or 8 or 9 or 10 or 11	47081
13	1 or 2	1175
14	12 and 13	41
15	remove duplicates from 14	40

Appendix 2: PRISMA Flow Diagram

Identification

Records identified through
database searching
(n =   )

Additional records identified
through other sources
(n =   )

Records after duplicates removed
(n =   )

Screening

Records screened
(n =   )

Records excluded
(n =   )

Records not in English

(n=)

Eligibility

Full-text articles assessed
for eligibility
(n =   )

Full-text articles excluded,
with reasons
(n =   )

Included

Studies included in
qualitative synthesis
(n =   )

Studies included in
quantitative synthesis
(meta-analysis)
(n =   )

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). *Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(6): e1000097. doi:10.1371/journal.pmed1000097*