Effects of intensive home visiting programs for older people with poor health status: a systematic review

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CRD summary
This review concluded that intensive home visiting programs appeared to have no beneficial effect for older people with poor health or functional impairment within the health care setting of Western countries. The authors’ cautious conclusion appeared reasonable, but was based on a small number of variable studies.

Authors' objectives
To evaluate the effectiveness of intensive home visiting programs aimed at older people with poor health or functional impairments.

Searching
MEDLINE, EMBASE, CINAHL, PsycINFO and Cochrane Central Register of Controlled Trials (CENTRAL) were searched from 2001 to July 2007 without language restriction. Search terms were reported. Systematic reviews and reference lists of retrieved articles were scanned for additional studies. A search for unpublished data was carried out (details not reported).

Study selection
Randomised controlled trials (RCTs) that assessed the effectiveness of preventive home visiting programs that consisted of at least four home visits per year for 12 months or more and aimed at older people (aged 65 or older) with poor health were eligible for inclusion. Included studies had to assess people with a poor health status based either on subjective measures such as self-rated health or objective measures such as self-reported functional impairments and dependencies in daily living activities. Studies that evaluated people with only one specific disease were excluded from the review. Studies that did not report data on health status, service use or cost were also excluded.

Various home care visit programmes were utilised in the included studies. These were multi-dimensional programmes that evaluated medical, functional, psychosocial and environmental criteria (details reported in review). The mean number of home visits was 4.5. Duration of interventions varied between 12 and 36 months. Home visits were generally conducted by home or health nurses, or by a primary care physician or a geriatrician. Details of comparators were not reported. Most participants were aged between 75 and 79 years and had various function or mobility impairments, or self-reported poor health status as assessed using a variety of instruments (details reported in the review). Outcomes assessed in the included studies were: mortality; health status; functional status measured by activities of daily living (ADL) or instrumental household activities of daily living (IADL); mental health; social functioning; hospital admission; nursing home admission; home for older person admission; medical specialist contacts; GP contacts; home nursing care; home help; and financial evaluation.

Two reviewers independently selected studies and resolved disagreements through discussion or recourse to a third reviewer.

Assessment of study quality
Validity was assessed based on the Cochrane Back Review Group criteria adapted to include five descriptive criteria (eligibility criteria, description of groups, reporting of adverse events and short- and long-term follow-up), two statistical criteria (sample size, reporting of point estimates and measures of variability) and eight validity criteria (concealment of allocation, groups similar at baseline, cointerventions, blinding of outcome assessor, withdrawal and dropout rates, timing of outcome assessment and conduct of an intention-to-treat analysis). The maximum possible score was 8. Only studies that fulfilled at least four validity criteria were included in the analysis.

Two reviewers independently assessed validity and resolved disagreements through discussion or recourse to a third reviewer.
Data extraction
Percentage mortality, functional status and nursing home admissions were extracted. Mean length of hospital and nursing home admissions were extracted. Two reviewers independently extracted data and resolved disagreements through discussion or recourse to a third reviewer. Authors of studies with incomplete or missing information were contacted for additional data.

Methods of synthesis
The studies were combined in a narrative synthesis with accompanying data tables.

Results of the review
Eight RCTs were included in the review, of which six RCTs (n=2,154) were included in the analysis. Three RCTs scored 7 points for methodological quality, one RCT scored 6 points, three RCTs scored 5 points and one RCT scored 3 points. Data on potential confounding of cointerventions or on compliance was generally not provided. Three RCTs had study groups dissimilar at baseline. Most papers reported concealment of treatment allocation, blinding of outcome assessor and included an intention-to-treat analysis.

Overall results showed no statistically significant favourable effects of home visits compared to control for mortality (six RCTs), health status (four RCTs), mental health (four RCTs), social functioning (three RCTs), hospital admission (five RCTs), nursing home admission (four RCTs), home for older person (two RCTs), medical specialist contacts (four RCTs), general practitioner contacts (four RCTs), home nursing care (four RCTs), home help (three RCTs) and financial evaluation (two RCTs).

One RCT reported significant beneficial effects of home visits on functional status (ADL, IADL) at 12 months follow-up, but not at 18 months follow-up. Four other RCTs reported no statistically significant differences between home visit groups and control groups for functional status.

Authors' conclusions
Intensive home visiting programs appeared to have no beneficial effect for older people with poor health or functional impairment within the health care setting of Western countries.

CRD commentary
The review question and inclusion criteria were clearly defined. Several relevant sources were searched and attempts were made to minimise language bias; some attempts were made to limit publication bias. Two reviewers independently selected studies, assessed validity and extracted data, thus the potential for reviewer bias and errors was reduced. Validity was assessed using specified criteria and results of the assessment were reported. Validity of all but one of the studies was considered to be adequate. In view of the differences between studies, a narrative synthesis was appropriate. Characteristics of the included studies were presented in tables, although no details of comparators were provided. Results for individual studies were reported without levels of statistical significance, which made it impossible to fully verify the findings reported in the review. The authors’ cautious conclusion appeared reasonable, but was based on a small number of variable studies.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors stated that further research was needed to evaluate alternative approaches to improve the health status of older people with poor health.

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