CRD summary
The review found that patient advocacy case management did not increase service use or costs in frail older people or people with chronic illness and there was some evidence of reductions. Due to lack of strong consistent evidence, these conclusions should be regarded with a degree of caution.

Authors’ objectives
To assess the effects on service use and healthcare costs of patient advocacy case management for chronically ill adults and frail older people in the community.

Searching
MEDLINE, CINAHL and The Cochrane Library were searched from 1995 to March 2007 for articles published in English. The search was periodically updated. Search terms were reported. Reference lists of eligible studies were checked.

Study selection
Randomised controlled trials (RCTs) of patient advocacy case management interventions were eligible for inclusion. This case management model was described as the comprehensive coordination of services across the continuum of care, viewed from a patient perspective. Participants were required to live in the community and to be either adults with a chronic somatic disease or older people who were frail or had impairment. Required outcomes were service use and costs. Studies of acute care, mental health care, substance abuse or discharge follow-up were excluded.

All studies in the review included frail or older people with conditions such as functional impairment, medical problems, dementia or frailty. Two studies also included younger participants with catastrophic and/or chronic illness or dementia. Mean age of study groups, where stated, ranged from 77 to 84 years. In most groups most participants were female (range 49% to 71%). Case managers were generally nurses or social workers (where stated), who worked either independently or as part of a multidisciplinary team. The mean caseload (where reported) was 60 patients (range 30 to 100). Interventions comprised a wide range of activities that involved patients, caregivers and/or health professionals; activities included screening, monitoring, planning, training, co-ordination and liaison. Usually the main patient contact method was home visiting and/or telephone calls. Controls received a differing case management model (where stated). Intervention duration was in most cases 12 months (range 10 to 36 months). Service-use outcomes reported in the review included visits or admissions to hospital, nursing home or emergency department and hospital length of stay; costs were expressed as price of healthcare. The studies were set in USA, Canada and Europe.

Two reviewers independently selected the studies. Disagreements were resolved by consensus or by discussion with a third reviewer.

Assessment of study quality
Points were allocated for the following aspects of study validity, based on published criteria: group equivalence, randomisation and statistical methods (three points each); power analysis, analysis of dropouts and control of confounders (two points each); ethics approval, allocation concealment, outcome measures and inclusion criteria (one point each). The maximum was 19 points. Studies were quality scored as weak (5 to 9 points), good (10 to 14 points) or high (15 to 19 points); studies that scoring under 5 points were excluded.

Two reviewers independently assessed study validity. Disagreements were resolved by consensus or by discussion with a third reviewer.
Data extraction
For each study t-tests were used to calculate the 95\% confidence interval (CI) for mean differences between the groups. Where there were statistically significant differences between groups, effect sizes (ES) were calculated. Cohen’s h was used for data reporting proportions and Cohen’s d for data reporting means.

Two reviewers independently extracted data. Attempts were made to obtain additional information from study authors (without success).

Methods of synthesis
Heterogeneity between the studies and missing standard deviations precluded statistical pooling. Attempts to transform the data into comparative statistical indicators were unsuccessful. Studies were combined in a narrative synthesis, supported by tables of results.

Results of the review
Eight RCTs (one with three comparisons) were included in the review (n=15,746, range 100 to 8,095). Quality was assessed as high for two RCTs, good for four and weak for two. The proportion of participants followed up ranged from 30\% to 100\%.

Six RCTs reported hospital admissions. One good-quality RCT found a small but clinically relevant decrease in hospital admissions (ES -0.30), a weak-quality RCT found a trivial increase in one intervention group (ES 0.15). The other four studies reported no statistically significant difference between intervention and control groups.

Five RCTs reported hospital length of stay. One good-quality study found a trivial reduction in length of stay in the intervention group (ES -0.7). The other four studies reported no statistically significant difference between intervention and control groups.

Five RCTs reported emergency department visits. One good-quality study reported a decrease in visits (ES -0.35) in the intervention group. A weak-quality RCT found a trivial increase for in one intervention group (p=0.01). The other three studies reported no statistically significant difference between intervention and control groups.

No RCT found any statistically significant difference between the groups for nursing home admissions (three RCTs).

Authors’ conclusions
Patient advocacy case management did not increase service use or costs in frail older people or people with chronic illness and there was some evidence of reductions.

CRD commentary
The objectives and inclusion criteria of the review were clear in most respects. However, inclusion criteria for control interventions were not stated and in most cases control interventions were not described in the review. Relevant sources were searched for studies. The final search date was not reported. No specific attempts were made to locate unpublished studies and the review was restricted by language, so it may be prone to language and publication biases. Publication bias did not appear to have been assessed. Steps were taken to reduce the risk of reviewer bias and error by having more than one reviewer independently select studies, assess validity and extract the data. In view of heterogeneity between the studies, the decision to combine them by narrative synthesis rather than statistical pooling was appropriate. Although the review was well conducted in many respects, the findings were rather difficult to interpret due to heterogeneity between the studies, inconsistent findings, lack of information about control conditions and lack of confidence intervals for the reported effect sizes. There was no convincing evidence to support the authors’ conclusion that the intervention did not increase service use or costs. The applicability of review findings was limited by lack of information on clinical outcomes such as functional status and quality of life. Due to lack of strong consistent evidence, the authors’ conclusions should be regarded with a degree of caution.

Implications of the review for practice and research
Practice: The authors stated that there should be increased implementation of patient advocacy case management for people with chronic illness and frail older people. They suggested that the intervention should be delivered by experienced managers, interdisciplinary communication should be of high quality and the intervention should be delivered for an adequate length of time to an appropriate population. They noted that nursing may help develop this model.

Research: The authors stated that methodologically rigorous studies were needed on patient advocacy case management and that patient and caregiver quality of life and satisfaction with care should be reported as outcomes.

Funding
Not stated.

Bibliographic details

PubMedID
19448524

DOI
10.1097/NNR.0b013e3181a30941

Original Paper URL

Indexing Status
Subject indexing assigned by NLM

MeSH
Aged; Case Management /organization & administration; Chronic Disease /economics /prevention & control; Community Health Nursing /organization & administration; Cost of Illness; Cost-Benefit Analysis; Emergency Service, Hospital /utilization; Frail Elderly; Humans; Length of Stay; Models, Nursing; Models, Organizational; Nursing Administration Research; Nursing Evaluation Research; Nursing Homes /utilization; Outcome Assessment (Health Care); Patient Admission; Patient Advocacy; Patient-Centered Care /organization & administration; Randomized Controlled Trials as Topic; Research Design

AccessionNumber
12009105649

Date bibliographic record published
19/08/2009

Date abstract record published
20/01/2010

Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.