Authors' objectives
To review the database literature on the effectiveness of community health workers (CHWs) in community health promotion and disease prevention efforts.

Searching
MEDLINE (from 1981 to 1999), HealthStar (from 1975 to 1999), CINAHL (from 1982 to 1999), EBM Reviews: Best Evidence (from 1991 to 1999), PsycINFO (from 1984 to 1999) and PubMed (from 1980 to 1999) were searched. The search terms were not listed. It is implied that only English language studies were included in the review.

Study selection
Study designs of evaluations included in the review
Studies of any design seem to have been eligible for inclusion in the review. The included studies had the following designs: cross-sectional or survey; retrospective; randomised controlled trials (RCTs); 'quasi-experimental'.

Specific interventions included in the review
CHWs. The terms CHW, community health advocate, promotora de salud, community health promoter, lay health worker and community outreach worker were used interchangeably. The definitions used in the included studies were used in the review, and each study was coded by the functions of the worker (outreach, case management or health education). Control interventions, where present, were not described. Only studies carried out in the USA were eligible for inclusion in the review.

Participants included in the review
Studies carried out in USA populations were eligible for inclusion in the review. The studies included in the review had the following participants: those at risk of HIV, primarily intravenous drug users; hard-to-reach ethnic minority groups; low-income underserved women and children; and homeless, mentally ill people.

Outcomes assessed in the review
All reported outcomes were eligible for inclusion in the review. Any study with a health focus for the activities of the CHWs was included in the review. The included studies reported access to health care, behaviour change, and knowledge and health status. Only 3 of the 19 studies used standardised measures for the outcomes.

How were decisions on the relevance of primary studies made?
The author does not state how the papers were selected for the review. The review had only one author; presumably only one author performed the selection.

Assessment of study quality
The author does not state that they assessed validity. However, the overall validity of the included studies and the validity of some individual studies were discussed.

Data extraction
One reviewer coded all data using a codebook, which was developed to document all relevant variables and was piloted on three studies initially. The method seems to have been based on an integrative analysis of concepts (see Other Publications of Related Interest). Data on the outcomes, cost, study design, standard tools, CHW role and target population were tabulated. The results were reported in terms of positive or negative effects.
Methods of synthesis
How were the studies combined?
The results from the coding exercise (data extraction) were displayed in tabular form and examined for frequencies, common themes, weaknesses, gaps and the need for future studies. The method seems to have been based on an integrative analysis of concepts (see Other Publications of Related Interest). The results were presented grouped by outcome: access, knowledge, health status and behaviour change.

How were differences between studies investigated?
Differences between the studies were discussed in the text in terms of population served, CHW roles and outcomes measured.

Results of the review
Nineteen studies were included: 5 cross-sectional or survey, 2 retrospective studies, 8 RCTs and 5 quasi-experimental studies. One study was classified as both a survey and a RCT. The numbers of participants in the included studies were not reported.

Roles: 25% of studies with CHWs performing an outreach function demonstrated positive outcomes, 87.5% of the studies with CHWs performing case management documented some positive outcomes, and all of the studies with CHWs performing health education function documented some positive outcomes.

Access: 11 of the 15 studies measuring changes in access to health care services in the target population documented at least partial effectiveness of the CHWs. These studies indicated preliminary support for CHW effectiveness in increasing access to care. This was particularly true for those in need of cancer screening and follow-up visits for chronic illness care.

Knowledge: two studies assessed the effectiveness of CHWs in increasing client knowledge in relation to health maintenance and disease prevention. Both had methodological flaws but showed positive effects of CHWs. There was limited evidence of CHW effectiveness with knowledge improvement outcomes.

Health status: 3 of the 4 studies in this area documented positive results. The results from these studies were mixed. The CHW intervention did not appear to be related to the health status changes in 2 studies (people with newly diagnosed diabetes, and homeless mentally ill people). The results were more positive in 2 studies that focused on low-income families.

Behaviour change: 5 of the 6 studies that measured outcomes in terms of behaviour change on part of the target population documented positive results. The studies were of limited validity.

Cost information
Two studies measured the costs of care. A study of community care for the mentally ill found that of the three different interventions studied, the costs did not differ among them. The types of costs differed across the interventions, with the CHW intervention having less hospitalisation costs but greater housing costs. A study of early entry into prenatal care measured cost-savings in terms of low birthweight births avoided and found no difference. However, they also did not document any difference in time of entry to prenatal care and had small numbers in their sample.

Authors’ conclusions
The research indicates preliminary support for CHWs in increasing access to care, particularly in underserved populations. There are a smaller number of studies documenting outcomes in the areas of increased health knowledge, improved health status outcomes and behavioural changes, with inconclusive results. Although CHWs show some promise as an intervention, their role can be doomed by overly high expectations, lack of a clear focus and lack of documentation. Further research is required with an emphasis on stronger study design, documentation of CHW activities and carefully defined target populations.
CRD commentary
The research question was broad and the inclusion criteria were well-defined and appropriate to answer the question. The literature search seemed reasonable, although more databases could have been searched. It is unclear whether any language restrictions were applied; even if only English language studies were included, this may have been appropriate if only studies conducted in the USA were to be included. The author does not seem to have attempted to search for unpublished studies, and it is possible that some relevant studies may have been missed even though the stated objective was to look for published literature. A validity assessment was not undertaken as such but methodological issues, such as control groups and standardisation of outcome measures, were discussed in the text and used appropriately to advise caution where necessary. Adequate details of the included studies were given in the text and in a table. A narrative synthesis, grouped by outcomes measured, seems to have been appropriate given the diversity of the included studies. The author's conclusions seem to follow from the results.

Implications of the review for practice and research
Practice: The author did not state any implications for practice.
Research: The author makes suggestions in relation to a number of areas. In the area of access to care, more RCTs are needed with specific definitions of the intervention and standardised outcome measures. In the area of knowledge improvement, further research is warranted to document both CHW effectiveness in knowledge improvement and behaviour change related to this change in knowledge. In the area of health status, further research on the process of CHW interactions and what populations are most amenable to CHW activities is warranted. In the area of cost, future work should look overall at the cost-effectiveness of CHW services, with comprehensive measures of both the costs of care and costs avoided through prevention.

Bibliographic details

PubMedID
11841678

Other publications of related interest

Indexing Status
Subject indexing assigned by NLM

MeSH
Behavior Therapy; Community Health Workers /standards; Databases, Bibliographic; Health Education; Health Promotion /standards; Health Services Accessibility; Health Services Research; Health Status; Humans; Outcome Assessment (Health Care); Primary Prevention /standards; United States

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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.