Effective physician-patient communication and health outcomes: a review
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Authors' objectives
To ascertain whether the quality of physician-patient communication makes a significant difference to patient health outcomes.

Searching
MEDLINE was searched from 1983 to 1993 using the medical subject heading 'physician-patient relations' plus at least one of the following: 'communication', 'medical history taking', 'interviews', 'recall', 'consumer satisfaction', 'patient satisfaction', 'patient compliance', 'referral and consultation', 'outcome assessment (health care)', and 'outcome and process assessment (health care)'. The search excluded articles indexed with the term 'psychotherapy'. Six bibliographies and several conference proceedings were also reviewed. Retrieval was limited to English language articles. Unpublished papers, presented at meetings or referred to in annotated bibliographies, were also included.

Study selection
Study designs of evaluations included in the review
RCTs and analytical (observational) studies. The included studies had to provide sufficient description of the interventions and measurements to allow replication. They also had to record percentage differences, mean differences or statistical significance of findings.

Specific interventions included in the review
In the case of randomised controlled trials (RCTs), physicians or patients were randomly allocated to receive different interventions to improve communication approaches. These interventions consisted of seminars, training sessions, information packages, taped messages, patient education and different patient information approaches. Analytical (observational) studies involved the observation of communication behaviours without altering them. Communication was classified as relevant either to history-taking or to discussion of the management plan, or 'other' when it did not fit into either of these two categories.

Participants included in the review
Patients of all ages, and physicians in community or teaching hospitals, walk-in clinics and private practices, were included.

Outcomes assessed in the review
Patient health outcomes as measured by physiological status, functional status, symptom resolution, and emotional status.

How were decisions on the relevance of primary studies made?
The author does not state how the papers were selected for the review, or how many of the reviewers performed the selection.

Assessment of study quality
Aspects of the quality of the included RCTs were mentioned briefly, i.e. internal and external validity, and the use of blinding. The studies were categorised with reference to the level of evidence they provided, according to the Canadian Task Force evidence ranking scale.

Data extraction
For each included study, sample size, patient characteristics, clinical setting, elements of communication assessed, patient outcomes measured, and direction and significance of association between aspects of communication and
Methods of synthesis
How were the studies combined?
The studies were combined in a narrative review, with detailed information presented in tabular format. The studies were too dissimilar to attempt a meta-analysis.

How were differences between studies investigated?
The studies were analysed in subgroups, but there was no specific discussion of heterogeneity.

Results of the review
Twenty-one studies were included, of which 11 were RCTs and 10 were analytical (observational) studies. The total number of participants (patients) was 3,753. In addition, a total of at least 312 physicians participated in the review, as specified in 15 studies.

Studies of history-taking (4 RCTs involving 1,349 patients and 4 analytical studies involving 614 patients): education of both the patient and physician was found to improve patient health outcomes. Of the 8 studies, 7 showed significant positive findings, and 1 (an analytical study) a non significant result.

Studies of the discussion of the management plan (7 RCTs involving 1,251 patients and 8 analytical studies involving 1,025 patients): patient education was found to influence both emotional and physiological status, whilst physician education was found to influence emotional status. All of the RCTs and 6 of the analytical studies found significant correlations between communication interventions or variables and patient health outcomes.

Studies of other aspects of communication and patient health outcome (3 RCTs with 600 patients and 1 analytic study with 242 patients) were inconclusive.

Authors' conclusions
Most of the studies demonstrated a correlation between effective physician-patient communication and improved patient health outcomes.

CRD commentary
Although aspects of study quality are mentioned briefly, the studies do not appear to be formally weighted according to their quality. There is little information concerning decisions for selection of studies and data abstraction.

Implications of the review for practice and research
The author stated that initiatives in the domain of both medical and patient education are needed and will require rigorous evaluation. Effectiveness studies with regard to acceptability of the programmes, behavioural change of physicians and patients, and patient outcomes are warranted. Cohort studies are still needed to assess the association of communication measures not yet studied, with patient outcomes. Additional qualitative studies would be helpful.

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