Communication interventions make a difference in conversations between physicians and patients: a systematic review of the evidence

Rao J K, Anderson L A, Inui T S, Frankel R M

CRD summary
This review assessed interventions to improve communication between patients and doctors. The authors concluded that communication interventions can improve communication behaviour although most studies involved doctors or patients, not both. The review possibly overemphasises positive results and many of the interventions are not feasible for everyday practice.

Authors' objectives
To synthesise evidence for the effects of communication interventions to enhance communication between physicians and patients.

Searching
MEDLINE, EMBASE, CINAHL, PsycINFO, the Social Sciences Index and the Cochrane CENTRAL Register were searched. The search strategy was reported and covered the period 1966 to February 2005. Reference lists of eligible articles, review articles and textbooks were used to identify additional studies. The review was restricted to studies published in the English language.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials (RCTs) were eligible for inclusion.

Specific interventions included in the review
Studies of interventions designed to improve communication behaviours were eligible for inclusion. The interventions used in the included studies were classified as information (instructions to change behaviour, e.g. written instructions, leaflets, readings, case reviews, lectures), feedback (critique of behaviour in writing or in person), modelling (demonstration of the behaviour in written models, in person or as videotapes) and practice (rehearsal of the behaviour as coaching sessions and role play). Most interventions directed at patients were of low or moderate intensity. Most interventions directed at physicians or residents/registrars were high intensity. Multiple type interventions were more common in studies of physicians, whereas single type interventions (mostly information) were more commonly directed at patients. The comparators included no intervention, placebo (non-communication intervention), equivalent communication interventions and non-equivalent communication interventions.

Participants included in the review
Studies involving physicians and/or patients were eligible for inclusion. Half of the included studies were conducted among practising physicians or medical residents/registrars; most of the others were in patients and a few involved both. Most of the physician and resident/registrar studies involved encounters with actual patients and a few involved interactions with standardised patients. About a third of the studies were conducted in medical speciality settings and the rest in primary care clinics. New and continuity patients were included.

Outcomes assessed in the review
Studies were eligible for inclusion if the primary communication outcome was an objective assessment of patient-centred verbal communication behaviour of the patient or physician. Self-reported outcomes were not included. Reported measures of physician or resident/registrar communication behaviour included establishing rapport, eliciting patient concerns, patient-centred style, encouraging patient involvement, expressing empathy, involving patients in decisions, providing information and verifying patient understanding. Measures of patient behaviour included setting an agenda, providing concerns and information, participation, question asking and verifying understanding.
How were decisions on the relevance of primary studies made?
Three reviewers were involved in the study selection process. Reporting of the procedure was not entirely clear. It appeared that each reviewer examined a sample of the studies identified. They maintained a level of agreement over 80% and resolved any differences by consensus.

Assessment of study quality
Studies were assessed with respect to blinding, whether or not pre- and post assessments were performed, whether analyses were conducted on audio or video tapes, use of standardised analysis methods, reporting of inter-coder reliability and sample size calculation.

Data extraction
Two reviewers abstracted the data independently and resolved any disagreements by discussion. Data on the type of intervention, intensity, delivery strategy and comparators were extracted. Data extracted on rate intensity were the number of times the intervention was delivered and whether it was delivered by research or clinic personnel. Intensity was classified as low (one or more types of intervention in any combination delivered once and not involving personnel), moderate (as for low intensity but involving personnel), or high (as for moderate intensity but with the intervention delivered more than once). For studies with more than one intervention group that received different interventions, the outcome data were extracted for the group that received the most intense intervention.

Methods of synthesis
How were the studies combined?
The studies were summarised in a narrative and tables. For each measure of communication behaviour, the studies were grouped as those that showed a significant effect and those in which there was no observed effect.

How were differences between studies investigated?
Studies that directed the intervention at physicians or residents/registrars were summarised separately to those that focused the intervention on patients. Differences between the interventions and comparators were tabulated and studies of practicing physicians were shown separately to studies of residents/registrars in the table.

Results of the review
Thirty-six studies were included. The total number of participants in studies of interventions directed at physicians or residents/registrars was 1,352 (594 practising physicians, 758 residents/registrars). The total number of participants in studies of interventions directed at patients was 2,339.

Effects on physicians and residents/registrars.
Twenty-one studies reported on various communication behaviours of physicians and residents/registrars. Most of the studies reported significant effects on one or more outcomes.

Participants who received high-intensity interventions were more likely to elicit patient concerns (significant effect in 3 out of 4 studies) and exhibit a patient-centred style (significant effect in 5 out of 6 studies). They were also more likely to express empathy (5 studies), although in one study the initial effect was not sustained after 12 months.

Significant improvement in information giving was shown in 6 out of 7 studies of high-intensity interventions. In 4 out of 5 studies there was a significant effect on physician behaviour to verify patient understanding of the information given.

Effects on patients.
Eighteen studies reported on various communication behaviours of patients. The findings were mixed.

Five studies of high- or moderate-intensity interventions showed significant effects on patient participation, whereas no effect was observed in 2 studies of low-intensity interventions.
Two out of 3 studies reported a significant effect on information verifying behaviour. The intensity of the interventions was high, low and moderate, respectively.

**Authors’ conclusions**
Communication interventions were associated with improved physician and patient communication behaviours.

**CRD commentary**
The review addressed a clear question and several appropriate databases were searched for relevant studies. Restriction of the review to published studies might have introduced bias in favour of positive findings, which the authors acknowledged. Restriction to the English language might also have introduced bias in the same direction. Steps were taken to minimise reviewer bias and errors in the study selection and data extraction process. Methodological aspects of the included studies were apparently assessed systematically (although aspects of the design and conduct of RCTs for which there is empirical evidence of an association with biased findings were not assessed), but the findings were not used in the interpretation of the results.

Study characteristics were summarised briefly in clear tables but all transparency was lost from the individual study results, which was reduced to listing studies with a significant effect and studies with no observed effect. A narrative approach to summarising the data was appropriate but fell short of an adequate synthesis. The authors’ conclusion appeared to be based on positive findings in the individual studies rather than a comprehensive synthesis of the evidence as a whole, including its quality and limitations.

**Implications of the review for practice and research**
**Practice:** The authors stated that many of the interventions reviewed were not feasible to implement in routine practice.

**Research:** The authors stated that studies to determine the effectiveness of communication interventions need to include both physicians and patients. The content of communication, as well as the frequency of communication behaviours, needs to be assessed. The authors recommended that investigators develop a framework that presents the sequence of physician and patient communication behaviours as they occur during the course of a clinical encounter.

**Bibliographic details**

**PubMedID**
17496718

**DOI**
10.1097/01.mlr.0000254516.04961.d5

**Indexing Status**
Subject indexing assigned by NLM

**MeSH**
Communication; Evidence-Based Medicine; Humans; Physician-Patient Relations; Professional Competence; Randomized Controlled Trials as Topic; United States

**AccessionNumber**
12007008100

**Date bibliographic record published**
30/11/2007
Date abstract record published
30/11/2007

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.