

# Review: Health care decision aids improve knowledge, decrease decisional conflict, and increase active participation

O'Connor AM, Rostom A, Fiset V, et al. Decision aids for patients facing health treatment or screening decisions: systematic review. *BMJ*. 1999 Sep 18;319:731-4.

## QUESTION

Do decision aids (interventions providing information on options and outcomes designed to help persons make specific and deliberate choices related to their health) used as adjuncts to counseling from health care practitioners improve decision making and outcomes for persons who are making treatment or screening decisions?

## DATA SOURCES

Studies were identified by searching MEDLINE (1966 to April 1998), EMBASE/Excerpta Medica (1980 to November 1998), PsycINFO (1979 to March 1998), CINAHL (1983 to February 1998), Aidsline (1980 to 1998), CancerLit (1983 to April 1998), Cochrane Library (1998, issue 4), personal files, and 3 health care journals.

## STUDY SELECTION

Randomized controlled trials were selected if decision aids were compared with controls or alternative interventions and participants were > 14 years of age and were making health care choices among options for treatment and screening issues. Studies were excluded if they used hypothetical situations or pertained to choices about lifestyle, participation in a

clinical trial, advance directives, general education, or patient compliance.

## DATA EXTRACTION

Data were extracted on patient numbers, choices considered, and outcomes (knowledge, decisional conflict, satisfaction, participation in decision making, and decisions made).

## MAIN RESULTS

17 studies that evaluated 3 screening and 8 treatment decisions met the inclusion criteria. Decision aids improved knowledge scores (weighted mean difference in point score 19 out of 100, 95% CI 14 to 25, when decision aids were compared with usual care; weighted mean difference 3 out of 100, CI 0.7 to 5.0, when more intensive aids were compared with less intensive aids) (4 studies for both comparisons). Decisional conflict was decreased slightly in 1 of 2 studies comparing decision aids with usual care and in 2 of 2 studies comparing intensities of decision aids. Decision aids reduced preferences for more major invasive surgery (relative risk [RR] 0.74, CI 0.6 to 0.9, 4 studies) and for prostate-specific antigen testing (2 of 3 studies but no effect on pooling of data). 3 studies showed an

increase in the proportion of participants who assumed a more active role in decision making (RR 2.27, CI 1.3 to 1.4). No pooled difference was shown in satisfaction with the decision or process of decision making (3 trials) or in patient anxiety (4 studies). 1 study showed an increased preference for hepatitis B vaccine (RR 1.76, CI 1.3 to 2.5) but no changes in preference for circumcision of newborn infants, screening for breast cancer genes, prenatal testing, dental surgery, or hormone replacement therapy.

## CONCLUSION

Decision aids improve knowledge, decrease decisional conflict, and increase participation in the decision-making process for persons who must make health care treatment and screening decisions.

*Source of funding: Medical Research Council of Canada.*

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## COMMENTARY

One message of this review by O'Connor and colleagues is that the current practice of medicine is neither efficiently nor sufficiently designed to support patients who are making decisions. One step to improving this situation is that those who provide care must accept that the patient is the sole decision maker. To achieve this ideal, providers would need to fully inform patients of the consequences of alternative choices, ensure that they are fully informed, and then let them decide.

If fully informing patients is our task, then we need stringent standards. Fully informing includes the following. First, patients must become acquainted with the numbers of risk and benefit. Knowing numbers means understanding the concept of marginal difference, the difference between the population's and the person's numbers, and the uncertainty surrounding the numbers. Second, patients must understand how to balance risks and benefits so that they see how their personal values for the consequences of a decision affect their choice.

Given this vision of being fully informed, another message of this review is that current decision aids also are not adequately designed

to support patients who are making decisions. For example, decision aids are not sufficient if they just improve knowledge "on average," as outlined in the review. Instead, patients must know the numbers so that uncertainty is explicit. Decision aids will not have to measure how well they improve patients' participation if participation is mandatory. Finally, because bad outcomes occur even with good decisions, satisfaction with the decision is not an important measure of a decision aid. Satisfaction with the decisions is not as important to measure as making sure that it is the patient who makes the choice. A decision aid needs to ensure these things.

To study decision aids is to examine how we think medical decisions should be made. We have a lot to learn about how to fully inform patients, and we know almost nothing about how to redesign the delivery of care to ensure informed choice. Perhaps once we agree that only patients should decide, we will learn how best to aid them.

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