

## Location explains some—but not all—of the racial and ethnic barriers to knee replacement surgery.

### Overview

This meta-analysis evaluated randomized trials of decision aids in a variety of clinical situations and found that patient knowledge and comfort with decision making were greater when these tools were used. In some cases, patients whose care providers used decision aids made different treatment decisions than patients whose care providers employed standard care. These findings suggest that decision aids can help patients better understand the complexities of medical treatment.

### Background

Medical decisions can be complex due to uncertain evidence about outcomes or differing patient values about the risk-benefit ratios of the available options. Practice guidelines recommend that patients in these circumstances understand the probable outcomes of the various options, consider their personal values regarding associated risks and benefits, and actively participate with their health care provider in making decisions about treatment. Researchers and clinicians have developed decision aids and shared decision-making programs to support providers during patient counseling about medical decisions.

### Objective

To determine whether decision aids improve patient decision making and outcomes.

### Previously known about the topic:

- General reports and reviews suggest that decision aids are effective when used in conjunction with counseling by health care providers.

### Contribution of this study:

- Pooled data from 17 randomized trial that support the effectiveness of decision aids in improving patient knowledge and comfort with decision making.

### Methods

- Study design: meta-analysis of randomized trials that evaluated the use of decision aids in a variety of clinical situations
- Search strategy: investigators searched 7 electronic databases for randomized controlled trials that compared decision aids to alternative interventions or controls. Decision aids were defined as interventions designed to help patients make specific and deliberate choices among various options by providing information about the options and relevant outcomes. Two reviewers assessed each study and extracted data using standardized forms. Results were then pooled using weighted mean differences and relative risk.
- Primary outcome measures: improved decision making, which was defined as having a positive effect on decision making processes and outcomes of decisions (e.g., improving knowledge, satisfaction, and participation in decision-making).

## Main Results

- Over 10,000 citations were evaluated. Of these, 500 focused on patient decision-making, and 17 met the study inclusion criteria.
- Compared with usual care, use of decision aids was associated with significantly higher average knowledge scores for options and outcomes (by 13 to 25 points out of 100; 95% CI = 14 to 25).
- In 3 of 4 studies, use of decision aids was associated with lower average decisional conflict scores compared with usual care (reductions ranged from 0.2 to 0.4 out of 5; 95% CI = 0.1 to 0.4).
- Three studies found a trend toward an association between the use of decision aids and the proportion of patients who played a more active role in decision making (pooled relative risk 2.27; 95% CI = 1.3 to 4).
- The three studies that evaluated patient satisfaction with decision aids found that the intervention had no significant effect on satisfaction with decision making.
- Decision aid use had a variable effect on decisions. Among patients contemplating major surgery, decision aid use was associated with lower preference for the more intensive treatment (relative risk 0.74; 95% CI = 0.6 to 0.9). However, use of decision aids had no effect on preference for newborn circumcision.
- When more complex decision aids were compared with simpler ones, use of the more complex aid was associated with lower decisional conflict scores and slightly higher knowledge scores.
- Four studies found that use of decision aids was not associated with reduced patient anxiety.

## Key Implications

- Use of decision aids added to patient knowledge, and in some cases, resulted in different decisions, suggesting that standard practice is not sufficiently educating patients about the complexities of these medical decisions.
- Use of more detailed aids was associated with greater patient comfort with decision making and greater knowledge than the use of aids that included fewer details. However, it was not associated with lower patient anxiety.
- The use of decision aids did not have a significant effect on patient satisfaction. This finding may be related to the fact that satisfaction scores were high in the control group. It also may be explained by the psychological tendency for a person to state he or she is satisfied with a particular choice once a decision has been made. ■

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## Full citation:

O'Connor AM, Rostom A, Fiset V, Tetroe J, Entwistle V, Llewellyn-Thomas H, Holmes-Rovner M, Barry M, Jones J. Decision aids for patients facing health treatment or screening decisions: systematic review. *BMJ*. 1999;319(7212):731-4.

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