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[Intervention Review]

Decision aids for people facing health treatment or screening decisions

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ABSTRACT

Background

Decision aids prepare people to participate in decisions that involve weighing benefits, harms, and scientific uncertainty.

Objectives

To evaluate the effectiveness of decision aids for people facing treatment or screening decisions.

Search strategy

For this update, we searched from January 2006 to December 2009 in MEDLINE (Ovid); Cochrane Central Register of Controlled Trials (CENTRAL, *The Cochrane Library*, issue 4 2009); CINAHL (Ovid) (to September 2008 only); EMBASE (Ovid); PsycINFO (Ovid); and grey literature. Cumulatively, we have searched each database since its start date.

Selection criteria

We included published randomised controlled trials (RCTs) of decision aids, which are interventions designed to support patients' decision making by providing information about treatment or screening options and their associated outcomes, compared to usual care and/or alternative interventions. We excluded studies in which participants were not making an active treatment or screening decision.

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Data collection and analysis

Two review authors independently screened abstracts for inclusion, extracted data, and assessed potential risk of bias. The primary outcomes, based on the International Patient Decision Aid Standards, were:

- A) decision attributes;
- B) decision making process attributes.

Secondary outcomes were behavioral, health, and health system effects. We pooled results of RCTs using mean differences (MD) and relative risks (RR), applying a random effects model.

Main results

Of 34,316 unique citations, 86 studies involving 20,209 participants met the eligibility criteria and were included. Thirty-one of these studies are new in this update. Twenty-nine trials are ongoing. There was variability in potential risk of bias across studies. The two criteria that were most problematic were lack of blinding and the potential for selective outcome reporting, given that most of the earlier trials were not registered.

Of 86 included studies, 63 (73%) used at least one measure that mapped onto an IPDAS effectiveness criterion: A) criteria involving decision attributes: knowledge scores (51 studies); accurate risk perceptions (16 studies); and informed value-based choice (12 studies); and B) criteria involving decision process attributes: feeling informed (30 studies) and feeling clear about values (18 studies).

A) Criteria involving decision attributes:

Decision aids performed better than usual care interventions by increasing knowledge (MD 13.77 out of 100; 95% confidence interval (CI) 11.40 to 16.15; n = 26). When more detailed decision aids were compared to simpler decision aids, the relative improvement in knowledge was significant (MD 4.97 out of 100; 95% CI 3.22 to 6.72; n = 15). Exposure to a decision aid with expressed probabilities resulted in a higher proportion of people with accurate risk perceptions (RR 1.74; 95% CI 1.46 to 2.08; n = 14). The effect was stronger when probabilities were expressed in numbers (RR 1.93; 95% CI 1.58 to 2.37; n = 11) rather than words (RR 1.27; 95% CI 1.09 to 1.48; n = 3). Exposure to a decision aid with explicit values clarification compared to those without explicit values clarification resulted in a higher proportion of patients achieving decisions that were informed and consistent with their values (RR 1.25; 95% CI 1.03 to 1.52; n = 8).

B) Criteria involving decision process attributes:

Decision aids compared to usual care interventions resulted in: a) lower decisional conflict related to feeling uninformed (MD -6.43 of 100; 95% CI -9.16 to -3.70; n = 17); b) lower decisional conflict related to feeling unclear about personal values (MD -4.81; 95% CI -7.23 to -2.40; n = 14); c) reduced the proportions of people who were passive in decision making (RR 0.61; 95% CI 0.49 to 0.77; n = 11); and d) reduced proportions of people who remained undecided post-intervention (RR 0.57; 95% CI 0.44 to 0.74; n = 9). Decision aids appear to have a positive effect on patient-practitioner communication in the four studies that measured this outcome. For satisfaction with the decision (n = 12) and/or the decision making process (n = 12), those exposed to a decision aid were either more satisfied or there was no difference between the decision aid versus comparison interventions. There were no studies evaluating the decision process attributes relating to helping patients to recognize that a decision needs to be made or understand that values affect the choice.

C) Secondary outcomes

Exposure to decision aids compared to usual care continued to demonstrate reduced choice of: major elective invasive surgery in favour of conservative options (RR 0.80; 95% CI 0.64 to 1.00; n = 11). Exposure to decision aids compared to usual care also resulted in reduced choice of PSA screening (RR 0.85; 95% CI 0.74 to 0.98; n = 7). When detailed compared to simple decision aids were used, there was reduced choice of menopausal hormones (RR 0.73; 95% CI 0.55 to 0.98; n = 3). For other decisions, the effect on choices was variable. The effect of decision aids on length of consultation varied from -8 minutes to +23 minutes (median 2.5 minutes). Decision aids do not appear to be different from comparisons in terms of anxiety (n = 20), and general health outcomes (n = 7), and condition specific health outcomes (n = 9). The effects of decision aids on other outcomes (adherence to the decision, costs/resource use) were inconclusive.

Authors' conclusions

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New for this updated review is evidence that: decision aids with explicit values clarification exercises improve informed values-based choices; decision aids appear to have a positive effect on patient-practitioner communication; and decision aids have a variable effect on length of consultation.

Consistent with findings from the previous review, which had included studies up to 2006: decision aids increase people's involvement, and improve knowledge and realistic perception of outcomes; however, the size of the effect varies across studies. Decision aids have a variable effect on choices. They reduce the choice of discretionary surgery and have no apparent adverse effects on health outcomes or satisfaction. The effects on adherence with the chosen option, patient-practitioner communication, cost-effectiveness, and use with developing and/or lower literacy populations need further evaluation. Little is known about the degree of detail that decision aids need in order to have positive effects on attributes of the decision or decision-making process.

PLAIN LANGUAGE SUMMARY

Decision aids to help people who are facing health treatment or screening decisions

Identifying and making a decision on the best health treatment or screening option can be difficult for patients. Decision aids can be used when there is more than one reasonable option, when no option has a clear advantage in terms of health outcomes, and when each option has benefits and harms that patients may value differently. Decision aids may be pamphlets, videos, or web-based tools. They describe the options available and help people to understand these options as well as the possible benefits and harms. This allows patients to consider the options from a personal view (e.g. how important the possible benefits and harms are to them) and prepares them to participate with their health practitioner in making a decision.

The updated review of 86 studies found that when patients use decision aids they: a) improve their knowledge of the options; b) are helped to have more accurate expectations of possible benefits and harms; c) reach choices that are more consistent with their informed values; and d) participate more in decision making. Decision aids have a variable effect on actual choices but they reduce the choice of elective surgery when patients consider other options. When patients use decision aids, there appears to be a positive effect on communication with their health practitioner, and a variable effect on the time required for this consultation. Decision aids with more detail compared to simpler decision aids showed smaller improvements. There are no apparent adverse effects on health outcomes or satisfaction. More research is needed to evaluate adherence with the chosen option, patient-practitioner communication, and the associated costs.