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Evidence Bulletin: Decision aids for people facing health treatment or screening decisions

This **Evidence Bulletin** summarizes an updated Cochrane systematic review. In a systematic review the researchers aim to locate, quality appraise and synthesise all available evidence related to a specific research question. Cochrane review authors adopt rigorous methods to minimise bias as a way of producing reliable findings with the goal of making the evidence more useful for practice.

Intended audience: health providers involved in supporting people making healthcare decisions.

Cochrane review summary

In this updated Cochrane systematic review, Dawn Stacey and colleagues answer:

> *What are the effects of patient decision aids for adults considering health treatment or screening decisions?*

What are patient decision aids?

Patient decision aids are pamphlets, videos, or web-based tools to support active patient participation in decision making about health treatment or screening options. They specify a specific decision, outline the benefits and harms of options for treatment or screening and help patients clarify their personal values relating to the features and outcomes of the options.

Key findings

The authors of this updated review concluded that compared to usual care, people exposed to patient decision aids:

- are more knowledgeable (high-certainty evidence)
- feel better informed (high-quality evidence)
- are clearer about their values (high-certainty evidence)
- have a more active role in decision making (high-certainty evidence)
- have more accurate risk perceptions (high-certainty evidence)
- probably achieve decisions that are consistent with their informed values (moderate-certainty evidence).

Full citation for this Cochrane review:

Stacey D, et al. Decision aids for people facing health treatment or screening decisions. *Cochrane Database of Systematic Reviews* 2024, Issue 1. Art. No.: CD001431. DOI: 10.1002/14651858.CD001431.pub6.
This Evidence Bulletin is based on a template developed by the Centre for Health Communication and Participate, La Trobe University and the Cochrane Consumers and Communication Group, Melbourne, Australia.

Detailed review information

Background

Sometimes determining the best choice between one health treatment (or screening) option over others is not straightforward. This may be because either the evidence is not available or it is not possible to differentiate a clear advantage between the known benefits and harms of two or more valid health treatment options. In such cases the decision is considered 'preference sensitive'. Preference sensitive' means the best choice depends also on the values and preferences of the patient. In these situations, patient decision aids may help an individual to consider the options from a personal viewpoint by clarifying how important the possible risks and benefits of the treatment options are to them.

Information about this review

Stacey and colleagues conducted a detailed search of studies published up to March 2022. Using pre-determined criteria they looked for:

Types of studies

- Randomised controlled trials (RCT) and cluster RCTs.

Participants

- Trials involving adults (aged 18 and older) who were making decisions about screening or treatment options for themselves, a child, or as a proxy for a significant other.

Types of intervention

Drawing from the International Patient Decision Aids Standards, the review defined decision aids as evidence-based tools designed to help patients make specific and deliberated choices among healthcare options. Decision aids supplement (rather than replace) clinicians' counselling about options and typically contain the following features:

- explicitly state the decision that needs to be considered;
- provide evidence-based information about a health condition, the options, and associated benefits or harms;
- help patients to recognise the values-sensitive nature of the decision and to clarify, either implicitly or explicitly, the value they place on the benefits and harms of each option.

Comparisons

- Decision aids versus usual care (such as general information, clinical practice guideline, placebo or no intervention).

Outcomes

Primary outcomes

Based on the International Patient Decision Aids Standards evaluation criteria:

- Attributes of the choice made (e.g. informed values-choice congruence)
- Attributes of the decision process (e.g. knowledge, feeling informed, accurate risk perceptions, feel clear about features that matter most, participation in decision making, patient-clinician communication, proportion undecided, satisfaction with decision making process, be more prepared to make decisions).

Adverse events

- Decision regret
- Emotional distress

Secondary outcomes

- Choice implemented (if not reported, preferred option was used as a surrogate measure) and adherence to chosen option
- Confidence in decision making
- Preference-linked health outcomes
- Impact on the healthcare system (e.g. cost-effectiveness, consultation length costs, resource use).

Exclusions

The following trials were excluded:

- comparing two different types of decision aids.
- information about the decision aid was not available or not adequately described.
- participants were making hypothetical choices.

strategies focused on lifestyle changes, informed consent regarding a recommended option, adherence to one option, clinical trial entry, general advance directives, or general education.

Main results

About the studies

This review included 209 RCTs with 107,698 people who participated. The majority of trials evaluated decision aids regarding cancer screening decisions (e.g., colon, prostate, breast), cardiovascular treatment (e.g., atrial fibrillation LVAD), surgery (breast cancer, prostate cancer, joint replacement), genetic testing, and birth options after caesarean.

Trials were predominately conducted in the United States (106 trials), Canada (23 trials), UK (21 trials), Australia (17 trials), and Netherlands (10 trials). They were also conducted in Germany, China, Spain, Denmark, Finland, France, Japan, Greece, Italy, Malaysia, New Zealand, Sweden, Switzerland, and Turkey. Four trials included 2 or more countries.

Stacey D, Lewis KB, Smith M, Carley M, Volk RJ, for the Cochrane Review of Patient Decision Aids Research Team. (2024) Decision aids for people facing health treatment or screening decisions. Evidence Bulletin. Available at: https://decisionaid.ohri.ca

Decision aids took different formats and comparisons included a variety of control interventions (e.g. usual care, general information, no intervention, guideline, placebo intervention). Due to inclusion criteria, all decisions aids provided information about the options and associated benefits or harms and at least implicit clarification of values. Decision aids also included information about the clinical problem (92%), outcome probabilities (88%), and provided explicit methods to clarify values (67%). Few decision aids had examples of others' experiences (36%).

Effects of interventions

There is high-quality evidence that compared to usual care, when decision aids are used people are more knowledgeable about options, feel better informed, clearer about personal values, accurate expectations of the benefits and harms of options and probably participate more in decision making.

There is moderate-quality evidence that people who use decision aids may achieve decisions that are consistent with their informed values.

There was no evidence of any adverse effects of decision aids on patient outcomes or satisfaction.

What this review does not show

Studies are lacking that compare cost effectiveness. Research is needed to assess if people continue with their chosen option (adherence) and also to assess what impact decision aids have on healthcare systems.

Due to revised exclusion criteria this review does not examine the effects of simple decision aids compared to detailed decision aids (see previous updates of this review).

What does this mean for health care?

Relevance of settings and populations	The results of this review are highly relevant to developed countries. The review evidence covers a large range of health decisions and includes patient decision aids about major surgery, screening programs for a range of different cancers (prostate, colon), genetic testing, and birth options after a caesarean.
Implications for decision-makers	To influence and support the adoption of patient decision aids in routine clinical practice, the review evidence can be incorporated into clinical practice guidelines, relevant policy and organisational frameworks. The review provides evidence that patient decision aids increase patient knowledge, realistic expectations, and participation in the decision making process. The effects of decision aids on costs/resource use are unclear due to too few studies. Emerging synthesized evidence shows consultation length is no longer when used in preparation for the consultation and about 1.5 minutes longer if used during the consultation. The Ottawa Hospital Research Institute provides a clear framework for policy makers to guide the implementation of decision aids including providing an online tutorial designed to train clinicians in the use of decision aids.
Implications for clinicians	The evidence from this review suggests patient decision aids are effective at facilitating *informed* decision making. Specifically, relative to usual care, people who used patient decisions aids reported feeling more informed of and being knowledgeable about screening and treatment options, and having accurate risk perceptions of screening and treatment outcome probabilities. Additionally, the review evidence suggests patient decision aids are effective at supporting patient preparation for decision making. Specifically, relative to usual care, with patient decision aids people reported feeling clearer regarding their personal values and had greater participation in the decision making process. Taken together the review findings provide support for the continued use or addition of patient decision aids in a number of clinical contexts.

Related Resources

The plain language summary is available in English, Deutsch, Español, فارسی, Français, 한국어, 简体中文
There are ***podcasts*** *in* English or French. *And an inventory of patient decision aids that are quality appraised with the International Patient Decision Aid Standards (IPDAS):* https://decisionaid.ohri.ca

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Results table: Decision aids compared with usual care (assessed soon after exposure to the decision aid, unless otherwise indicated)

Outcome	Impact with usual care	Impact with decision aids	Relative effect* (95% confidence interval)	No. of people (studies)	Evidence quality (GRADE)#	Comments
Decisions are more consistent with informed values with decision aids						
Congruence between the chosen option and informed values	295 people per 1, 000	481 people per 1,000	RR 1.75 (1.44 to 2.13)	9,377 (21 studies)	Moderate ★★★	–
Knowledge improves with decision aids						
Standardised score range: 0 to 100; higher score indicates better knowledge	Mean knowledge score was 55.6 (ranged from 27.0 to 89.9)	Mean knowledge score was 11.9 higher (range: 10.6 to 13.2 higher)	–	25,492 (107 studies)	High ★★★★	82 out of 107 studies showed a statistically significant improvement in knowledge
Risk perceptions are more accurate with decision aids						
Accurate risk perceptions	281 people per 1,000	532 people per 1,000	RR 1.94 (1.61 to 2.34)	7,796 (25 studies)	High ★★★★	–
Feeling uninformed reduces with decision aids						
Decisional conflict, uninformed subscale: 0 to 100; lower scores indicate feeling more informed	Mean score for 'feeling uniformed' ranged from 6.4% to 85.0%	Mean score 'feeling uniformed' was 10.0 lower (range: 12.3 to 7.7 lower)	–	12,104 (58 studies)	High ★★★★	Scores ≤ 25 associated with following through on decisions. Scores > 38 associated with delay in decision making
Personal values are clearer with decision aids						
Decisional conflict, unclear about personal values subscale: 0 to 100; lower score indicates feeling clearer about values	Mean score for 'unclear values' ranged from 4.3% to 56.9%	Mean score for 'unclear values' was 7.9 lower (range: 9.7 to 6.0 lower)	–	11,880 (55 studies)	High ★★★★	Scores ≤ 25 associated with following through on decisions. Scores > 38 associated with delay in decision making
Participation in decision making increases with decision aids						
Clinician-controlled decision making - assessed soon after consultation with clinician	257 people per 1,000	188 people per 1,000	RR 0.72 (0.59 to 0.88)	4,348 (21 studies)	High ★★★★	Patient decision aids aim to increase patient involvement in decision making; lower proportion of clinician-controlled decision making is better
There were no adverse effects on health outcomes or satisfaction, and no other adverse effects reported.						

* Relative effect is measured as mean difference (MD), or relative risk (RR) (see here for further explanation); # For more information about GRADE, see www.gradeworkinggroup.org; 95% CI = 95% confidence interval

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