Table 2 Results after two rating rounds: stakeholder group medians and equimedian for responses to questions where differences between groups were significant (F and p-values are shown)

	Domain and Quality Criteria	Equimedian Rating	Policy Group	Patient Group	Practitioner Group	Researcher Group
1	**Using a systematic development process**					
1.1	The patient decision aid has information about the credentials of the people who developed it.	8	7	9	9	7
			F= 3.37, p value 0.02			
1.2	Patients were asked what they need to prepare them to discuss a specific decision.	9				
1.3	Practitioners were asked what they need to discuss a specific decision with patients.	8				
1.4	Patients who were facing the decision field tested the decision aid.	9				
1.5	Practitioners who counsel patients on the options field tested the decision aid.	8				
1.6	Field testing showed that the decision aid was acceptable to patients.	9	9	8.5	9	9
			F = 3.67, p value 0.01			
1.7	Field testing showed that the decision aid was acceptable to practitioners.	8				
1.8a	The decision aid was reviewed by outside experts [health professionals] who were not involved in its development or field testing	8				
1.8b	The decision aid was reviewed by outside experts [patients who previously faced the decision] who were not involved in its development or field testing	9				
2	**Providing information about options**					
2.1	The patient decision aid describes the health condition related to the decision.	9				
2.2	The patient decision aid lists the health care options.	9				
2.3	The option of choosing none of the health care options [e.g. doing nothing] is included	9				
2.4	The patient decision aid describes what happens in the natural course of a health condition if none of the health care options is chosen.	9				
2.5	The patient decision aid has information about the procedures involved (e.g. what is done before, during, and after the health care option)	9				
2.6	The patient decision aid has information about the positive features of the options (e.g. benefits, advantages)	9				
2.7	The patient decision aid has information about the negative features of the options (e.g. harms, side effects, disadvantages)	9				
2.8	The information about [outcomes] of options (positive and negative) includes the chances they [may] happen.	9				

Table 2 (continued)

	For decision aids focused on tests					
2.9	The patient decision aid has information about what the test is supposed to measure.	9				
2.10	The patient decision aid has information about the chances of receiving a true positive, true negative, false positive and false negative test result.	8				
2.11	The patient decision aid describes possible next steps based on the test results.	9				
2.12	The patient decision aid has information about the chances of disease being found with and without screening.	9				
2.13	The patient decision aid has information about detection and treatment of disease that would never have caused problems if screening had not been done.	9				
3	Presenting probabilities					
3.1	The patient decision aid presents probabilities using event rates in a defined group of patients for a specified time.	9				
3.2	The patient decision aid compares probabilities of options using the same denominator.	9				
3.3	The patient decision aid compares probabilities of options over the same period of time.	9				
3.4	The patient decision aid describes the uncertainty around the probabilities (e.g. by giving a range or by using phrases such as 'our best guess is').	8				
3.5	The patient decision aid uses visual diagrams to show the probabilities (e.g. faces, stick figures, or bar charts).	8				
3.6	The patient decision aid uses the same scales in the diagrams comparing options.	9				
3.7	The patient decision aid provides more than one way of explaining the probabilities (e.g. words, numbers, diagrams).	8				
3.8	The patient decision aid allows patients to select a way of viewing the probabilities (e.g. words, numbers, diagrams).	7	7	7	8	6
			$F = 3.92$, p value 0.01			
3.9	The patient decision aid allows patients to see the probabilities of what might happen based on their own individual situation. (e.g. specific to their age or severity of their disease).	8	8	9	9	7
			$F = 5.81$, p value 0.00			
3.10	The patient decision aid places the chances of what might happen in the context of other situations (e.g. chances of developing other diseases, dying of other diseases, or dying from any cause).	7	8	7	7	7
			$F = 3.4$, p value 0.02			
3.11	The way the probabilities were calculated is described [in a reference section or accessible technical document]	5				
3.12	If the chance of disease is provided by sub-groups [e.g., younger, middle-age, or older people], the tool that was used to estimate these risks is described [in a reference section or accessible technical document]	6				
3.13	The patient decision aid presents probabilities using both positive and negative frames (e.g. showing both survival and death rates).	8				
4	Clarifying and expressing values					
4.1	The patient decision aid describes the features of options to help patients imagine what it is like to experience their physical, emotional, and social effects.	8				

Table 2 (continued)

4.2	The patient decision aid asks patients to think about which positive and negative features of the options matter most to them.	9				
4.3	The patient decision aid suggests ways for patients to share [what matters most to them when] others are involved in the decision.	7				
5	**Using patient stories**					
5.1	The patient decision aid provides stories of other patients' experiences.	6				
5.2	If stories are used in a patient decision aid, the stories represent a range of experiences (positive and negative).	8				
5.3	If stories are used in a patient decision aid, the steps used to select these stories are described [in a reference section or accessible technical document].	6				
5.4	If stories are used in a patient decision aid, the steps that experts used to review the information contained in these stories is included [in a reference section or accessible technical document]	6				
5.5	If stories are used in a patient decision aid, a statement that the patients gave informed consent to include their stories is included. [in a reference section or accessible technical document]	7				
6	**Guiding / coaching in deliberation and communication**					
6.1	The patient decision aid provides a step-by-step way to make a decision.	8	9	8	8	7
			F = 3.91, p value 0.01			
6.2	The patient decision aid suggests ways to talk about the decision with a health practitioner.	8	8	8	9	8
			F = 3.53, p value 0.02			
6.3	The patient decision aid includes tools like worksheets or lists of questions to use when discussing options with a practitioner.	8	9	8	8	7
			F = 2.82, p value 0.04			
6.4	The patient decision aid offers the option of working with a trained 'coach' to help patients consider the options.	5	6	6	6	5
			F = 4.81, p value 0.01			
6.5	The patient decision aid offers the option of working with a trained 'coach' to help patients prepare to talk about the decision with a practitioner.	5	5	7	6	5
			F = 7.21, p value 0.00			
7	**Disclosing conflicts of interest**					
7.1	The patient decision aid reports where the money came from to develop the decision aid	9				
7.2	The patient decision aid reports where the money came from to copy and distribute the decision aid.	8				
7.3	The patient decision aid reports whether the authors of the decision aid stand to gain or lose by the choices patients make after using a decision aid.	9				
7.4	The patient decision aid reports whether the affiliations of the authors stand to gain or lose by the choices patients make after using a decision aid.	9				
7.5	If the patient decision aid includes stories of other patients' experiences, it reports if there was some financial or other reason why patients decided to share them.	8				
8	**Delivering patient decision aids on the Internet**					
8.1	If the patient decision aid is used on the Internet, it provides a step-by-step way to move through the web pages (screens) on the Internet.	9				

Table 2 (continued)

8.2	If the patient decision aid is used on the Internet, it allows patients to search for key words in the decision aid.	7	7	8	7	6
	F = 8.35, p value 0.00					
8.3	If the patient decision aid is used on the Internet, it provides feedback on personal health information that is entered into the decision aid. [e.g. the chances you may get a complication]	7				
8.4	If the patient decision aid is used on the Internet, the website provides security for personal health information entered into the decision aid.	9				
8.5	If the patient decision aid is used on the Internet, it easy for patients to find their way back to the point they were at in the decision aid when they clicked on links to other web pages.	9				
8.6	[If the patient decision aid is on the internet, it can also be printed as a single document (e.g., pdf document)	8				
9	**Balancing the presentation of options**					
9.1	The patient decision aid makes it possible to compare the positive and negative features of the available options.	9				
9.2	The patient decision aid shows the negative and positive features of options with equal detail (for example using similar fonts, order, display of statistical information).	9				
9.3	Field testing showed that undecided patients felt the information was presented in a balanced way.	9				
10	**Using plain language**					
10.1	The patient decision aid describes the 'professional standards for plain language materials' that guided its development (e.g. Plain Language Association International)	5	5	6	6	4
	F = 5.12, p value 0.00					
10.2	The patient decision aid identifies the reading level at which it is written and the formula [method] used to determine the level.	5	5	5	6	4
	F = 3.24, p value 0.03					
10.3	The patient decision aid is written at a level that can be understood by at least half of the patients for whom it is intended.	9				
10.4	The patient decision aid is written at a level no higher than grade 8 [or equivalent] according to a readability formula (e.g., SMOG or FRY).	7				
10.5	The patient decision aid provides ways to help patients understand information other than reading (e.g. audio, video, or in-person discussion).	8				
10.6	Field testing showed that the patient decision aid was understood by patients with limited reading skills.	8				
11	**Basing information on up-to-date scientific evidence**					
11.1	The patient decision aid provides references to scientific evidence used.	9				
11.2	The steps used to select the scientific evidence (e.g. finding, appraising, summarizing) is included [in a reference section or accessible technical document]	8	7	8	8	6.5
	F = 2.85, p value 0.04					
11.3	The patient decision aid reports the date when it was last updated.	9				
11.4	The patient decision aid reports how often the information in the decision aid is updated.	8	9	8	9	7
	F = 4.58, p value 0.04					
11.5a	The patient decision aid describes the quality of the scientific evidence (e.g. quality of research studies).	8	9	9	9	8
	F = 3.3, p value 0.02					

Table 2 (continued)

11.5b	The patient decision aid describes the quality of the scientific evidence (e.g. quality of research studies) [including lack of evidence].	8	
11.6	The patient decision aid uses evidence taken from studies on patients that are similar to the patients who would use the decision aid (e.g. age, gender).	8	
12	**Establishing effectiveness**		
12.1	There is evidence that the patient decision aid helps patients recognize that a decision needs to be made.	9	
12.2	There is evidence that the patient decision aid helps patients know about the available options.	9	
12.3	There is evidence that the patient decision aid helps patients know about different features of the options.	9	
12.4	There is evidence that the patient decision aid helps patients understand that values affect the decision.	9	
12.5	There is evidence that the patient decision aid helps patients be clear about which features of options matter most to them.	9	
12.6	There is evidence that the patient decision aid helps patients discuss values with their health practitioners.	8	
12.7	There is evidence that the patient decision aid helps patients become involved in decision making in ways they prefer.	9	
12.8	There is evidence that the patient decision aid improves the match between the features that matter most to the informed patient and the option that is chosen.	9	

What is an Equimedian?

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Suppose that the **population** of interest consisted of equal numbers of three groups of people – call them A, B, and C. Suppose also that in a survey, 50 from group A had a mean value of 2.5, 10 from group B had a mean value of 4.3 and 10 from group C had a mean of 8.2 (for some measurable characteristic). Whilst the overall mean of all data is 3.614 the overall population mean would be better estimated by an equally weighted mean of

$$5 = 2.5 \times \frac{1}{3} + 4.3 \times \frac{1}{3} + 8.2 \times \frac{1}{3}.$$

What would be the equivalent procedure for calculating the 'equimedian'?

As an example, suppose that the actual values in the three samples are given in the frequency table:

Value	Frequency in Sample from A	Frequency in Sample from B	Frequency in Sample from C
1	10	0	0
2	15	0	0
3	15	0	0
4	10	0	0
5	0	7	0
6	0	3	0
7	0	0	2
8	0	0	4
9	0	0	4

A cumulative percentage table may then be constructed – see the first four columns below. To this, we can estimate what the cumulative percentage might be in the whole population by taking the average cumulative percentage for each value across the three samples.

Value	Cumulative percentage in sample from A	Cumulative percentage in sample from B	Cumulative percentage in sample from C	Average Cumulative Percentage
1	20	0	0	6.66
2	50	0	0	16.66
3	80	0	0	26.66
4	100	0	0	56.66
5	100	70	0	66,66
6	100	100	0	66.66
7	100	100	20	73.33
8	100	100	60	86.66
9	100	100	100	100

From the cumulative percentage tables (or the graph) it is clear that the medians for the three samples are 2.5, 4 and 8 respectively (whilst the overall median is 3). It is also clear that the estimated cumulative percentage curve for the whole population crosses the 50% line at the value 4 – the 'equimedian'.

Example Equimedian