

Identifying attributes of cancer treatments: What do stakeholders consider important?

Baba C¹, Briggs A^{1,2}, McIntosh E¹, Lipitz-Snyderman A², Kaltenboeck A², Bach PB²

¹University of Glasgow, Glasgow, United Kingdom, ²Memorial Sloan Kettering Cancer Center, New York, NY, USA

Background

Ever rising oncology therapy costs and a focus on patient-centred care has created a call for adjustments to existing pharmaceutical development models to assessing the value of new treatment options (1). These new models have sought to move away from solely focusing on the clinical benefits to also include wider 'value' considerations (2,3). Value-based pricing (VBP) seeks to examine how to achieve a fairer provision of care, and the possibility of incorporating other non-health, contextual treatment features deliberated by payers and stakeholders. However, there is lack of consensus as to what criteria beyond health should be included to define a treatment's value and how these criteria may vary dependent on stakeholder perspective (4).

Study objective

To identify non-health attributes prioritised by oncology clinicians, nurses and cancer-patients stakeholders to aide the development of a new conceptual value framework for oncology.

Methodology

A structured focus group process employing the nominal group technique (5) was used to identify the attributes prioritized by different stakeholder groups. The 4 staged process is outlined below:

- Idea** – participants given 10 minutes to silently list their prioritised cancer treatments attributes;
- Round Robin Stage** – participants state attributes whilst the facilitator writes them on a board. The facilitator then suggests phrases of treatment attributes considered in existing value frameworks not stated by the group for review and possible addition to their collective list;
- Clarification** – the group discusses each treatment attribute, and produces a definition for each;
- Ranking** – First, individual silent ranking of the treatment attributes without discussion in order of descending importance. Second, group voting of the top six most important attributes.

Participants

Recruited through Memorial Sloan Kettering Cancer Centre (MSKCC). Eligible participants were English speaking, 18 to 70 years old and either previous cancer patients or currently employed as oncology nurses and clinicians. Focus groups were divided by experience, creating three distinctive stakeholder perspectives. Sessions were audio recorded ensuring that all discussions around the attributes could be transcribed. Transcriptions were anonymised to protect the identities of the respondents.

Data analysis

Participants' individual rankings were aggregated to produce a list of each focus group's cumulative importance scores for each attribute. Additionally, a list of all attributes identified through group voting was collated. Qualitative analysis of the transcripts was undertaken using NVivo software package (6) to facilitate coding. Key terms used by participants in discussions of each attribute were coded according to the treatment attribute they were being used to describe. This identified themes and contextual considerations associated with the attributes and captured any interactions between attributes and where themes were prevalent across multiple attributes.

Results

Three focus groups were conducted in February 2017 in New York City. A total sample of 24 participants was used, including 8 previous cancer patients, 10 currently practicing oncology nurses and 6 clinicians working within oncology. The socio-demographic characteristics of the participants are shown in Table 1. A total of 30 attributes were identified by the participants. Across all 3 focus groups issues of clinical efficacy and toxicity were prioritised. Table 2 presents the top ranked non-health attributes per group from the 2 ranking exercises. For the patients group, the quality of evidence on the treatment, how the treatment may affect their (and family) daily lives, the reputation of the treatment centre and whether there were other treatment options available were prioritised. Concerns about impact on daily lives were also highly ranked by the clinicians (burden and inconvenience attributes). Concerns of cost both to society and to the patient was also prioritised (financial toxicity, barriers, societal costs and consequences). Lastly, in addition to reputation, the focus groups highlighted the importance of communication and managing patient expectations about their disease and treatment. Following identification of the top-ranked attributes, the research team grouped the attributes and their links to other (lesser prioritised) attributes into eight categories representing the top-ranked attribute considerations across the focus groups. These are shown in Figure 1. Figure 1 also shows the health-related attributes which were reclassified into Quality Adjusted Life Expectancy (QALE).

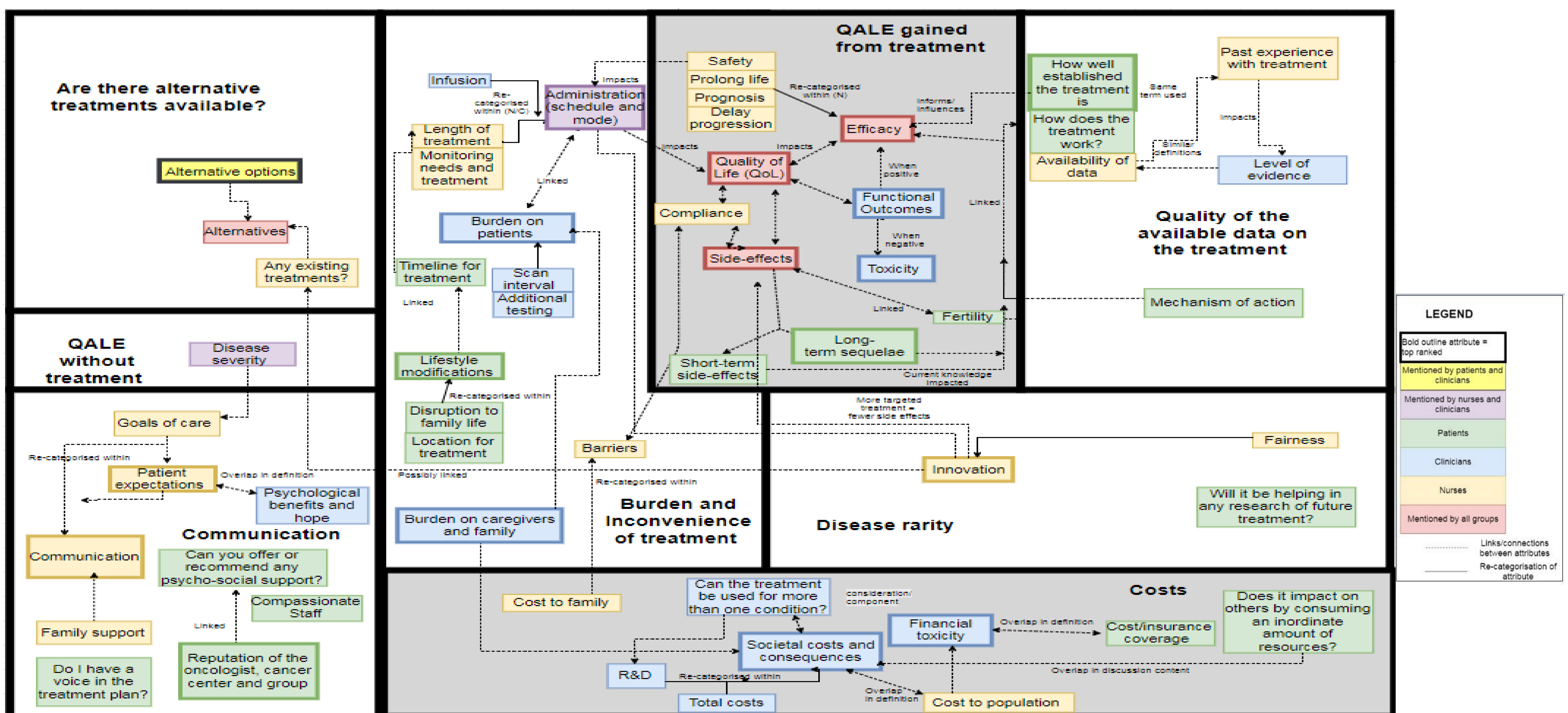
Table 2: Top ranked non-health attributes

Focus group	Activity	Ranking		
		1	2	3
Patients	Individual	How well established the treatment is	Reputation of the oncologist, cancer center, group	Lifestyle modifications
	Group	How well established the treatment is	Reputation of the oncologist, cancer center, group	Alternative treatment options
Clinicians	Individual	Burden and inconvenience to patients	Financial toxicity	Burden and inconvenience on family and caregivers
	Group	Financial toxicity	Burden and inconvenience to patients	Societal costs and consequences
Nurses	Individual	Communication	Patient expectations	Barriers
	Group	Communication	Innovation	Patient expectations

Table 1: Socio-demographic characteristics

Socio-demographic	Patients	Nurses	Physicians	Total
Male	37% (3)	10% (1)	33% (2)	25% (6)
Female	63% (5)	90% (9)	67% (4)	75% (18)
18-30	12.5% (1)	-	17% (1)	8% (2)
31-40	25% (2)	30% (3)	83% (5)	42% (10)
41-50	50% (4)	10% (1)	-	21% (5)
51-60	12.5% (1)	40% (4)	-	21% (5)
61-70	-	20% (2)	-	8% (2)

Figure 1: Top ranked attributes and relationships between attributes



Conclusion

The study illustrates how priorities when valuing oncology treatments differ by stakeholder group. Long-term adverse effects (sequelae), alternative treatment options, quality of evidence, how well established the treatment is and reputation of the treating oncologist/centre were prioritized by patients, whilst nurses prioritised mode of administration, quality of life, communication and treatment innovation. Clinicians focused on the burden and inconvenience of treatments, functional outcomes, financial toxicity to patients, and the societal costs and consequences from the treatment. This study identified a set of attributes and their inter-relationships to be taken forward for valuation within the next phase of the research, a discrete choice experiment survey.

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