

‘FACTORING VALUES INTO OUTCOMES EVALUATION’

Hypothesis / aims of study

The study utilised Conjoint Value Hierarchy (CVH) analysis to evaluate outcomes of a continence management program. CVH was used to quantify stakeholder values so that these could be factored into the identification and measurement of outcomes.

Study design, materials and methods

CVH is derived from a number of theoretical/methodological approaches, including axiology, multi attribute value theory and value measurement systems. It is underpinned by measurement theory, a branch of applied mathematics. CVH extends outcomes measurement beyond performance by determining whether performance means anything or is worth having. To achieve this the CVH methodology maps the value of an entity and overlays it with a numerical system [1] that enables it to be analysed through standard mathematical procedures.[2]

The application of the CVH process in this study began by defining the scope of the problem (i.e., the precise definition of what was to be measured) and engaging representative stakeholders with knowledge and experience to make judgments about the value and performance of the continence program.[3] Twenty-five stakeholders representing the key stakeholder groups were selected. Information was then acquired from these stakeholders in order to capture the key elements that drive value. A hierarchy of values was constructed through an iterative process until it was felt that the resulting value attributes were measurable. All opinions from the stakeholders were combined and attributes at all levels were tested for uniqueness of meaning. The final step was to survey the stakeholders individually to determine their value preferences, customise the mathematical models, and analyse the results.

Results

The CVH analysis provided an understanding of what is important in the program and a baseline measurement of:

- the value attributed to the program by stakeholders;
- the relative importance of the value attributes; and
- stakeholders’ perception of performance to date.

The broad results showed that there was a general consensus that “outcomes and their delivery” were most important with more than half (55%) of the value generated by these. “Capability generation - the development of academic and human infrastructure” - was slightly less important, accounting for a further 37% of value of the strategy. The “reputation and image of the strategy” provided the remaining 8% of overall value. This pattern indicates that the value attributes were well aligned with the aim of the program, which may be summed up as making a practical difference to continence management.

The CVH results were also able to highlight potential for loss and gain, by indicating the relative change in value if the performance of an attribute were to be increased or decreased. This allowed for a ‘what if’ analysis to be performed in an effort to understand the impact of funding decisions. Re-allocation of funds in order to gain an improvement in performance in one area was seen to result in changes to the performance in another; the opportunity cost. The analysis revealed consequences if the opportunity cost was a 10% reduction in performance, with some attributes losing in excess of 3 times the value.

Interpretation of results

CVH results have provided a tool for determining the appropriateness of desired program outcomes in sustaining and working towards improvements in the key categories of value identified by stakeholders:

- a focus on outcomes for those with incontinence;
- upskilling the workforce; and
- knowledge/evidence enhancement.

Ongoing use of the process has revealed an increase in value and performance over time, partly as a result of targeted planning possible through the information gained via CVH.

Concluding message

In summary, the use of CVH within the evaluation framework for a national continence program has highlighted a number of important potential benefits:

1. the scope of CVH to capture stakeholder values and incorporate their measurement into the evaluation of a large-scale health program;
2. the potential for CVH to ‘grow’ and take account of program and other contextual changes as long-term programs are implemented; and
3. the capacity for CVH to inform ongoing program modifications, signalling which potential changes can have the most beneficial or damaging consequences.

References

1. Pike, S. and G. Roos, Mathematics and modern business management. *Journal of Intellectual Capital*, 2004. 5(2): p. 243-256.
2. Luce, R.D. and P. Suppes, Representational Measurement Theory, in *Steven's Handbook of Experimental Psychology*. 2002, John Wiley and Sons, Inc. p. 1-42
3. Burgman, R. and G. Roos, Measuring, managing and delivering value performance in the public sector *International Journal of Learning and Intellectual Capital*, 2004. 1(2): p. 132-149.

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<i>Is this a clinical trial?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	No
<i>This study did not require ethics committee approval because</i>	... incorporating stakeholder values into the evaluation process was a quality assurance activity According to the Australian National Health and Medical Research Committee, ethics approval is not required where "the primary purpose is to monitor, evaluate or improve the quality of health care delivered by a health care provider (an individual, a service or an organisation)." National Health and Medical Research Committee. Feb 2003
<i>Was the Declaration of Helsinki followed?</i>	No
<i>This study did not follow the Declaration of Helsinki in the sense that</i>	... the study was involved in monitoring, evaluation and quality assurance and did not involve human experimentation.
<i>Was informed consent obtained from the patients?</i>	No