

Development of guideline-based quality indicators: a systematic review

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Background

Clinical practices are not in line with evidence-based guidelines. Therefore, active tools for implementation, such as indicators, are needed to ensure the use of guidelines in daily clinical practice.

Objectives

To describe the methods and results of studies aimed at identifying quality indicators based on clinical guidelines, and to assess the quality of these studies.

Methods

A systematic review. Publications (from 1995 to September 2009) were identified from the Medline and Cochrane databases. The search terms were health care quality indicators or indicators or process indicators and guideline or clinical guidelines or practice guidelines. Inclusion criteria were as follows: indicators guideline-based, explicitly described development process, the indicators were described, and the indicators targeted at multiple organizational levels.

Results

We identified 109 potentially eligible full-text articles and after assessments 15 were included. Additional literature searches after guideline review were used to identify potential indicators in 7 studies. The most used methods to evaluate and choose the indicators were Modified Delphi method or RAND appropriateness method. Rated characteristics of potential indicators varied (Figure 1) The total number of potential indicators was 1047 and 385 (36.8%) were accepted. Of the accepted indicators 347 (88%) were process measures. The setting was unclear in 7 and explicit description of indicator types was missing in 6 reports. A clarifying flowchart on the development process was presented in 5 reports.

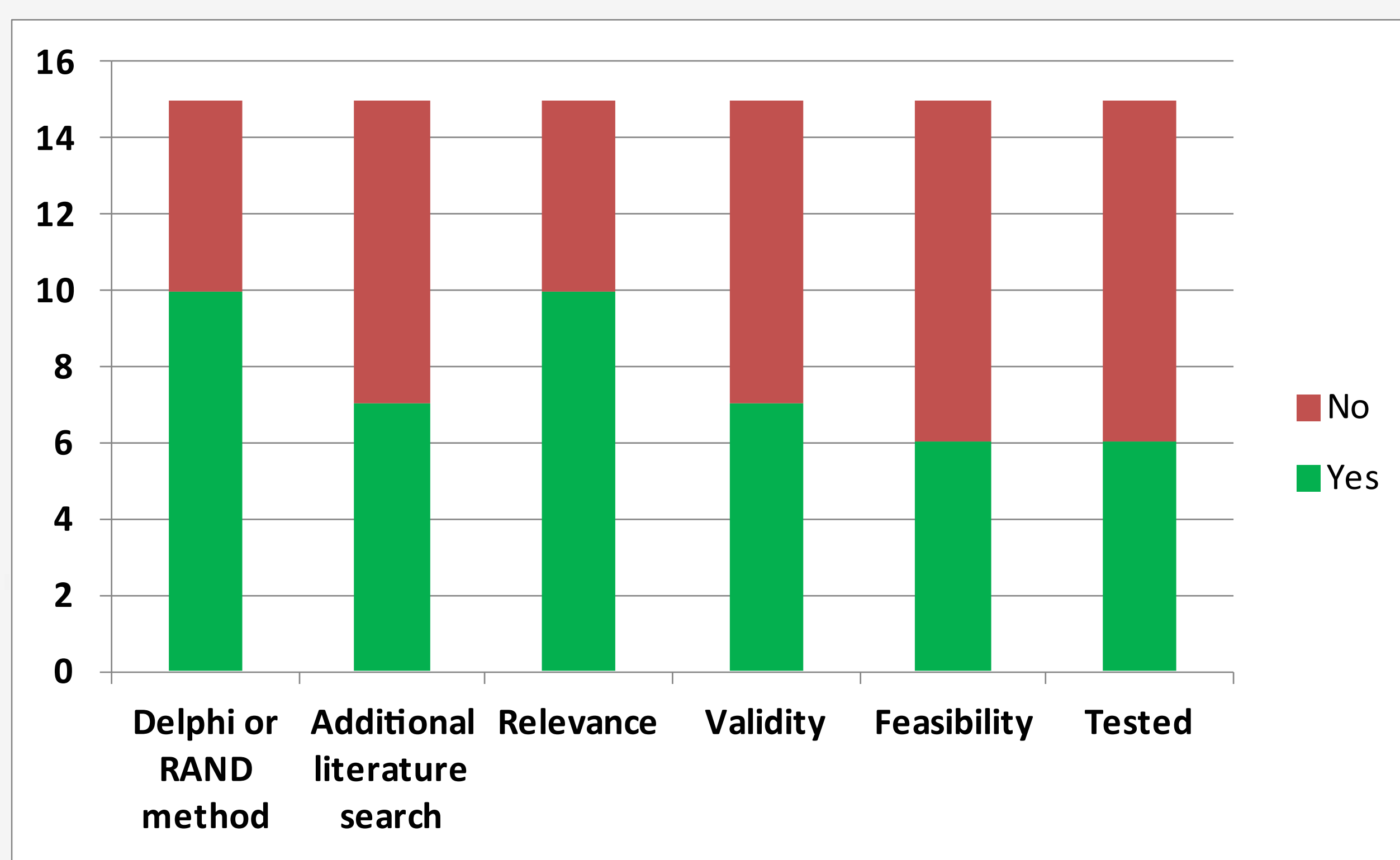


Figure 1. Number of studies using certain identification and evaluation processes for development of indicators.

Conclusions

Since indicators should be evidence-based and dependent on local circumstances, it would be practical to develop indicators during the clinical guideline process.

Implications for guideline developers are presented in Table I as recommendation for developing indicators and for reporting the development.

Table I. Recommendation for the process of developing guideline-based indicators and for their reporting

Development	Reporting
<p>Combination of rated evidence (guidelines) and consensus (expert panel)</p> <p>Participants: members of the guideline group, clinical and quality assessment expertise</p> <p>Evaluation of potential indicators</p> <ul style="list-style-type: none"> • Relevance: Measured issue is of major importance for high quality of care. With the gained information it is possible to change clinical practices • Validity: The evidence base of the indicator is explicit and clear. The indicator is able, in a reliable way, to determine the realization of the actual clinical situation or problem, and meeting the indicator is considered a better quality (face validity). • Feasibility: The data is available in a reliable and consistent way <p>Field testing or piloting</p>	<p>Definition of clinical entity and target health care setting</p> <p>Definition of rated characteristics of potential indicators</p> <p>Explicit definition of the development process with a flowchart</p> <p>Number of potential and accepted indicator</p> <p>List of accepted (and potential) indicators</p> <p>Definition of accepted indicator types</p>