

Factors influencing implementation of clinical practice guidelines: what do users think?

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Introduction

- Many factors affect the uptake of clinical practice guidelines, including institutional barriers to change, the effectiveness of dissemination and implementation strategies, and the costs of implementation.
- At GIN 2010 in Chicago, we presented a poster describing a systematic review that concluded there was very limited evidence on how the format or presentation of guidelines influence implementation.

Aim

- The authors of the review included a proposal for a conceptual framework of characteristics that may influence clinical practice guideline uptake, using their knowledge as guideline developers.
- We have updated this conceptual framework based on an analysis of the views of users that explored which features of guidelines influence uptake.
- This analysis was used to develop an evidence-based framework of guideline characteristics that affect implementation.

Methods

- Previous searches were updated and usual systematic review principles applied.
- Studies^a were included if they reported the views or perceptions of users on how the format or presentation of guidelines influence the use of their recommendations.
- A simple thematic analysis was used to develop the framework, with 2 authors (EJ Shaw and J Thornton) identifying relevant themes and coding them according to a pre-specified structure.
- Where appropriate, new concepts were added to the pre-specified themes, and any uncertainties were resolved.

Results

We developed a conceptual framework of guideline characteristics that influence implementation, resulting in refinement of concepts and an assessment of the direction of association between the identified concepts and guideline implementation.

Four key themes emerged: content, development, methods, and physical format (see Figure 1). Within each key theme, further themes were identified (see Table 1).

Interestingly, many features initially proposed by guideline developers as being important to users were not supported by the literature. For example, no information was identified on how patient or user involvement influences the views of guideline users.

Conclusion

The framework developed was based on published reports of what users think of the format and presentation of clinical practice guidelines. Some consistent messages emerged that may help with future guideline development, but there were some important

features of clinical guidelines where we had expected to find information on how these influence implementation but no evidence was identified.

Understanding what users think and how this influences use may help in developing guidelines that are more 'user friendly' and ultimately used to improve patient care.

More research is needed to evaluate the impact of format and presentation on implementation rates, and ultimately on patient outcomes.

Figure 1 Key features of clinical guidelines that impact on implementation

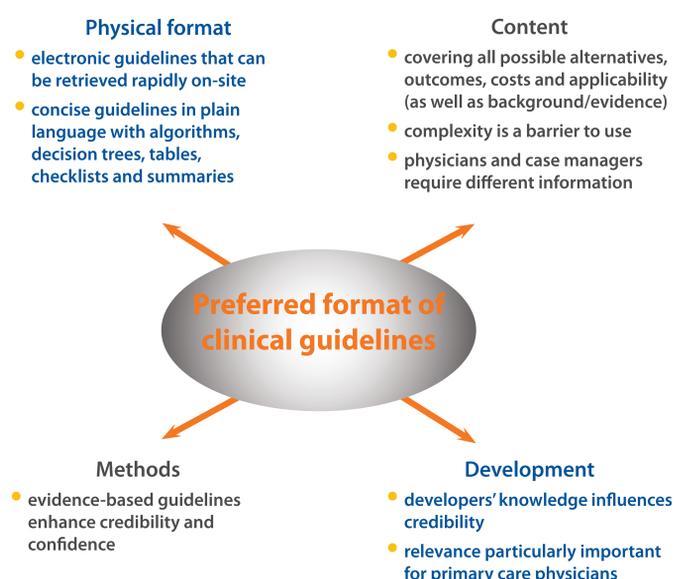


Table 1 Further themes, by key feature, that influence implementation

Physical format	Patient or lay version	Several studies suggested guidelines could be used to help explain treatments to patients by including tear-off sheets or purpose-written leaflets.
	Summary guideline	Studies suggested that a brief summary of the important information is presented (around 1–2 pages and easy to print).
	Full guideline	Although conciseness was preferred, participants in 1 study wanted access to detailed explanations of the guidelines and the evidence supporting recommendations.
	Paper	In several studies, physicians preferred guidelines in an electronic form because this would increase use. Also there were proposals for record forms on screen, guideline-based data collection, and key look-up terms and hypertext links.
	Diagrammatic summary (algorithm)	Physicians wanted a one-sheet algorithm or a summary, or a single screen with knowledge summarised in an algorithmic fashion. It was suggested that forms with algorithm, history and physical examination, diagnosis, treatment, disability and restrictions would increase use.
	Website	Appropriate use of web technologies could improve the speed and ease of access to information.
Content	Ease of reading	Users reported that language must be easily understandable by both physicians and patients. Guidelines need to be short and simple enough to be read and understood in a short time, but comprehensive enough to be convincing.
	Grading of recommendations	Guidelines need to include clear grading on the levels of evidence; those with up-to-date and graded recommendations were more likely to be trusted.
	Algorithm or care pathway	Most studies reported a preference for information to be presented as algorithms and diagrams, but 1 study commented that algorithms and prescriptive recommendations made it difficult for physicians to adapt interventions to a patient's individual circumstances.
	Complexity	Guidelines that are easy to understand, easy to try out and do not require specific resources have a greater chance of being used. Clear, strong, simple, non-ambiguous recommendations are more likely to be followed. A systematic presentation helps logical thinking.
	Evidence synthesis	The evidence base underpinning recommendations is important in influencing the use of guidelines; reliable guidelines were considered to be based on scientific evidence. A short synthesis of the literature assists decision making but some guideline users thought it may lead to a lack of key elements for decision making.
	References	While references allow a user to judge the credibility of the guideline, they may be of limited use when applying these to patient care directly (for example, in consultations).

^aA full reference list of included studies is available on request.