



Clinical guidelines: an evidence-based debate

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Abstract

Background: This study aimed to evaluate the effectiveness of debate as a learning tool for changing audiences' views regarding the use of clinical guidelines in routine clinical practice.

Methods: A debate scenario including different rationales for and against using guidelines in clinical practice, presented by the student section of Iranian Evidence Based Medicine Center of Excellence, was held at the first International Student Congress of Research Integrity and Evidence-Based Practice (Kish Island, Iran, December, 2015). The audience was first asked to check the papers given to them, and if they agreed to the terms, they were asked to choose, "Yes", "No", or "I don't know".

Results: Of the 400 individuals participating in the congress, 100 were present during the scheduled debate time. Among the 71 people completing pretest questionnaires, 73% (52) answered "yes" to the question, "Should we use guidelines?" About 7% (5) claimed that we shouldn't use guidelines, and 20% (14) had no opinion about using them. Following the debate, the participants who chose "yes" to the guidelines remained in favor of their use in clinical practice. Of the 14 who did not have an opinion for guideline use, all agreed to use guidelines in clinical practice. Surprisingly, the five participants who were against guideline implementation remained fixed in their view, continuing to disagree regarding their use in clinical encounters.

Conclusion: Although we were unable to change the attitudes of physicians who were against the use of guidelines in clinical practice, the debate caused a positive shift among participants who did not have an opinion regarding their use in clinical scenarios.

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Introduction

Clinical practice guidelines (CPGs) are "systematically developed statements to assist practitioner and patients about appropriate health care for specific clinical circumstances".¹ Adults receive only about half of the right care at the right time, so recently, clinical guidelines have become an increasingly familiar part of clinical practice.^{1,2}

Clinical guidelines can improve the quality of clinical decisions, offering explicit recommendations for clinicians who are uncertain about how to manage clinical conditions. Clinical guidelines can help change the beliefs of physicians accustomed to outdated practices and improve consistency of care. The implementation

of certain guidelines can reduce the outlay regarding hospitalization, drug prescriptions, surgery, and other unnecessary procedures. While medical practitioners often know what is best for the patient, emphasizing harm and doing exactly as recommended in the guidelines, this can be inappropriate on an individual basis. For example, a defined approach may not be responsive to patients with different clinical characteristics. In some cases, clinical guidelines can harm practitioners by providing inaccurate scientific information and clinical advice, thereby compromising the quality of care. In some settings, clinical guidelines could also encourage ineffective, harmful, or wasteful interventions.¹⁻³

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Although guidelines are valuable tools to help fill the gaps among best practices, patient preferences, and local contexts of clinical practice, they are not warmly endorsed by many physicians. In fact, despite the wide promotion of CPGs during recent years, there has not been a significant change in practice, and there are still physicians who do not implement the guidelines in their routine practice or do not even agree with their implementation.^{1,4}

The use of debate as an educational tool has garnered much attention, and its effectiveness as an appropriate teaching method has been shown in various topics such as pharmacology and ethics.⁵

Moreover, debate as an educational tool can lead to improvements in critical thinking, public speaking, and teamwork skills.^{6,7} Debate is also used in teaching complex issues such as health care reform and health care economics.^{8,9} It has been shown that trainees who participate in debate have better academic performance compared to those who only attend lectures.¹⁰ More importantly, debate is a much better tool for discussing controversial topics because they contribute to the comfort level of trainees, allowing them to discuss their own ideas and receive feedback in order to come to a reasonable conclusion.¹¹

Although some studies have found that adopting evidence-based guidelines have been at least moderately successful in appropriate patient care, there is still a wide variety in implementation and fidelity/adherence.⁴ Some health professionals think that practical guidelines are only developed to reduce patient costs and financial burdens on the health care system. Some think that clinical guidelines are difficult to use. Most healthcare professionals have valuable experience and knowledge but are used to reading textbooks and not used to seeking out “the best available evidence.” For these reasons, and by considering several opinions in evidence-based guideline implementation, we designed a new method of group debate for scientific meetings. In this method, we conducted an educational group debate emphasizing good features and criticisms regarding CPGs. We exposed educated people to evidence-based facts about guidelines, then evaluated the effects of this method on their attitudes using their own comments. We all deserve the best educational methods, so it is rational to appraise before propagating an idea. The impact was assessed through evaluating the efficacy of this method.

Materials and Methods

Setting and participants

This debate took place at the first International Student Congress of Research Integrity and Evidence-Based Practice, Kish Island, Iran, on December 5 to 7, 2015, held by the Tabriz University of Medical Sciences. Over 400 participants from different cities of Iran and outlying areas participated in this congress. It was a premier opportunity to discuss one of the most important issues in the field

of EBP (Evidence-Based Practice): “GUIDELINES,” using an innovative method: a debate as drama. While the debate was on the stage, the audience was in the salon and participated in voting: “Should we use guidelines, Yes or No?” The estimated recommended sample size of the study was 60; total participants reached 71.

Voting

Before the debate, the audience was asked to check the papers given to them. If they agreed to participate, they were asked to choose “Yes,” “No,” or “I don’t know.” During the debate, they were again asked to write down any comments about using guidelines, either as an open question answered on paper, or expressing their comment after the presentation.

The issues discussed in the debate were selected from the highly regarded papers that explain the controversies and criticize the advantages and disadvantages of using guidelines in clinical practice. Each statement was followed with a relevant answer from the opposing group.

Design of the debate

Two groups, each with three participants, acted as guideline developers and physicians who were for or against using guidelines. Colors were used to represent each group for ease of identification and communication. Group White was in favor of using guidelines in clinical practice and Group Purple was against using them. Two moderators began the session, introduced participants, and explained the rules of the debate. They also facilitated the session. All the rules for debate were complied with; however, there was a sense of humor and some comic points to attract more attention from the audience. The design of this study was quantitative with closed-ended questions. Participants were informed about the study and had to consent to participate.

Controversial topics of the debate

The debate started with Group White giving an introduction to clinical guidelines, describing them and who can benefit from them. It was stated that clinical guidelines provide a framework for the management plan. The following issues were the main items that each group discussed.

- ▶ Medical issues cannot fit into a framework. A complex concept such as the patient-physician relationship cannot fit into it.
- ◆ Guidelines promote effective interventions, as proven by the reduction of mortality and morbidity and the improvement of the quality of life.
- ▶ What is recommended overall might not be appropriate for individuals.
- ◆ They recommend options, but do not obligate. They then provide the best available evidence.
- ▶ A small part of medicine is tested in well-designed studies because of ethical issues. It may harm a group

- of patients at risk.
- ◆ There are gaps in evidence, and the mission of the clinical guidelines is to identify and fill these gaps.
 - ◆ The grade of recommendation helps us know the strength of recommendations.
 - ▶ Using guidelines is time consuming, inconvenient, and frustrating while facing conflicting issues.
 - ◆ A critical appraisal of guidelines using checklists helps with conflicting issues.
 - ▶ Using checklists is time consuming and requires skill and interpretation; it might be subjective.
 - ◆ Guidelines break complex data into manageable pieces, and they unite different interpretations.
 - ▶ Variability of problems and priorities in different nations make a single guideline not applicable.
 - ◆ Guideline adaptation makes the guidelines applicable in any nation.
 - ▶ Guidelines might advocate costly interventions.
 - ◆ Guidelines are based on economic evaluation, and they offer cost effective recommendations.
 - ▶ Conflicts of interest can influence guideline developers and consumers.
 - ◆ Disclosing and using checklists can help practitioners identify conflicts of interest.
 - ▶ Guidelines cannot ensure behavioral changes.
 - ◆ Behavioral changes require long-term effort and continuous education.

Data analysis

Data analysis was performed using SPSS version 16. Descriptive statistics were used for the pre- and post-debate comparison and a qualitative approach was undertaken for the open-ended question. Each answer that was written on paper or expressed by the audience in the salon was coded and representative samples were reported.

Results

About 100 participants of the first International Student Congress of Research Integrity and Evidence Based Practice were present while the group debate was held. Not all of the participants opted to fill out the questionnaire. A total of 71 evidence-based educated people completed the questionnaire; this number was above our estimated necessary sample size of 60. About 73% (52) answered "Yes" to the question, "Should we use guidelines?" About 7% (5) claimed that we shouldn't use guidelines, and about 20% (14) had no opinion about whether to use guidelines. We asked participants to provide comments and evaluate the impact of the debate on the audience. After the debate, all pretest responders stated their comments about the guidelines (100% response rate). Participants who agreed to the use of guidelines and insisted on their use stated, "Yes, of course," even after exposure to the criticisms about guidelines and the group debate. Some participants expressed that it depended on the guidelines and their

Table 1. Demographic distribution of participants

Variable	No.	%
Gender		
Male	31	43.6
Female	40	56.4
Age (y)		
20-25	48	67
25-35	12	16.9
35-45	6	8.4
>45	5	7
Education		
Medical student	37	52
Bachelors student	10	14
Bachelors of science	5	7
Medical doctor	12	16
Medical professor	7	9.8
Nationality		
Iranian	54	76
Non-Iranian	17	24

quality, relevancy, and validity. Participants who said, "No" at the pre-test did not change their opinion at post, with their rationale being that the disadvantages of guidelines outweighed the advantages. Those who had no opinion about using guidelines, however, agreed to their use after the group debate, possibly as a result of the information they learned from the debate (Table 1).

Discussion

Although we could not influence the evidence-based participants of the first International Student Congress of Research Integrity and Evidence Based Practice with this group debate, we had some success in educating those who did not have an opinion about using clinical guidelines. This group debate had some outstanding features, and therefore had a relatively strong impact. First, we could assume participants from all over the country and overseas had basic familiarity with evidence-based practices due to their attendance and participation in the first International Student Congress of Research Integrity and Evidence-Based Practice. Second, all the phrases in the group debate, and all the comments made by debate participants, were based on the best available resources, such as systematic reviews discussing the issue. Third was the controversial topic of the debate, where each defending phrase from Group White was followed by a criticism as an answer from Group Purple. All issues discussed in the group debate had their own response from the other group, and thus all the participants were exposed to all of the controversial subjects without any confusion.

Other studies have used methods such as booklets, pamphlets, CD-ROMs, and videos to inform health care professionals about guidelines. Although the evidence shows that using educational materials in combination

with other methods may be more efficient, there are relatively few studies that evaluate the effect of later methods. Imagination and creativity are valuable assets for planning and teaching medical skills and knowledge. Innovative techniques can overcome many barriers to learning.¹² This debate format was designed with an eye to innovation to positively engage the audience, but there are additional factors that should be considered in choosing strategies. One of these factors includes adding fun gestures and phrases to hold the attention of the audience and promote engagement, more since the effectiveness of such methods has been shown in other studies.¹³

Interactivity is an important factor in gaining the attention of the audience. As the evidence shows, interactive methods are effective in engaging behavior.^{5,7} Although we used several methods to involve the audience, there were some limitations that should be regarded for future studies.

Evidence-based debates are useful tools for discussing controversial topics because they ease the comfort level of trainees, allowing them to discuss their own ideas and receive feedback in order to come to a reasonable conclusion.^{11,14} This concludes why we chose the debate as a format to engage the audience.

Evidence-based debate on the current controversies in the context of medical education provides a learning mode that encompasses critical thinking skills of analysis and construction of arguments. These aspects make debate a highly interactive method of education. Stronger arguments challenge the debater and the audience to confront biases and justify ideas. This method also emphasizes cooperation and teamwork skills in the audience with their different disciplines.^{12,15}

A key point about this educational intervention (a focus group debate) was the fact that we did not try to convince people that guidelines are useful and good, we stated issues for and against the guidelines and let the audience decide. Perhaps this was the reason why those who were against guidelines did not change their opinion, and this may also be why those who agreed with using guidelines insisted on their own ideas.

There are different points of view about guidelines, including their advantages and disadvantages. Some are for it, some are against, and all of them have their own logical reasons. Clinical guidelines can benefit patients, health care professionals and healthcare systems, but they also can harm them in other aspects.¹⁻³

Further, the development of good guidelines does not ensure their use in clinical practice. A review of the literature for strategies for changing professional behavior show that relativistic passive methods of disseminating and implementing guidelines rarely lead to changes in professional behavior.¹⁶

Policy makers should use multifaceted and evidence-based interventions to ensure the implementation of guidelines. Various strategies have been used to change

the attitude and behavior of healthcare practitioners toward guidelines.¹⁶

It is well known that it is difficult to change previously established behaviors, even if they are incorrect or harmful, yet even small changes can have positive impacts to health care professionals and, more broadly, to the healthcare system. In order to change behavior, one must first recognize barriers to implementing guidelines.¹⁷ These include a lack of awareness, a lack of familiarity, a lack of agreement, a lack of self-efficacy, a lack of expected outcomes, the inertia of previous practice, and external barriers. However, studies on improving physician guideline adherence may not be generalizable since barriers in one setting may not be present in another.¹

Various professional and organizational strategies can be used to overcome barriers. For example, educational approaches (seminars and workshops) may be useful where barriers relate to health care professionals' knowledge. Audits and feedback may be useful when health care professionals are unaware of suboptimal practices. Social influence (local consensus process, educational outreach, opinion leaders, marketing, etc) may be useful when barriers are related to the existing culture and routines and practices of health care professionals. Reminders along with patient-mediated interventions may be useful when healthcare professionals have problems processing information within a consultation.¹⁶

We suggest that policy makers be aware of barriers in each environment and choose the best strategy to overcome it. The most important barrier in all societies is the barrier of knowledge, as stated in many papers.¹⁸⁻²⁰ We have developed new methods of indirect education. Our focus group consisted of evidence-based practitioners who were familiar with the language of guidelines whether or not they agreed or disagreed with their implementation.

Limitations

We encountered several limitations that are outlined here. First, the low number of participants in this study was one (although the sample size estimation was surpassed); however, more participants from each major and group could make this type of study more valuable. Another limitation was the limited amount of time for the debate at the conference. Due to this we could not discuss the pitfalls with the audience after the debate to learn about our mistakes and hear suggestion to make the show better for educational purpose. One further limitation was the limited time of the debate that did not allow us to respond to more questions and questions with open answers or to make the connections between answers. We hope in another debate we can address some of these limitations.

We suggest new types of educational methods to be considered in educational approaches. Methods such as interprofessional learning, a case-based approach, scenario writing, group discussion, and role play can change the future of guideline usage. More studies are

needed to evaluate the efficiency of educational methods or combinations of these. We also suggest educational outreach visits. These may be more effective in responding to individual barriers and aiming the focus group at the delivery of care, which can be the subject of future studies.

Conclusion

Although the attitudes of physicians who were against the use of guidelines in clinical practice did not shift, the debate caused a positive shift among participants who had no opinion regarding use of guidelines in clinical scenarios. This shows that there is the possibility of changing physicians' views regarding guideline implementation in clinical practice through the use of debate as an innovative learning tool

Ethical approval

Participants were informed about the study and had contest participation. This study was approved in the ethical committee of university.

Competing interests

We had no conflicts of interest in this study.

Authors' contributions

All authors contributed equally to the study and writing the paper.

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