

Clinical Practice Guidelines: A strategy for evaluating perception and quality

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Article Info: Received 18 November 2018; Accepted 10 December. 2018

Cite this article as: Camargo-Cardona, Z.-E., Bernal-Ballen, A., & Cely-Andrade, J.-L. (2018). CLINICAL PRACTICE GUIDELINES: A STRATEGY FOR EVALUATING PERCEPTION AND QUALITY. *International Journal of Medical and Biomedical Studies*, 2(6).

DOI: <https://doi.org/10.32553/ijmbs.v2i6.66>

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Conflict of interest: No conflict of interest.

ABSTRACT:

Clinical practice guidelines (CPG) are recommendations based on a systematic review of scientific evidence and generally these documents are under constant assess. For this matter, a group of health-professionals which belong to Fundación Centro Colombiano de Hipoterapia evaluated the use and quality of the used CPG using AGREE II instrument. The obtained results evidence correlation between both parameters since health-professionals trust in their acquired experience without detracting from the benefits that can be obtained with the use of guidelines. Among the mentioned benefits, improving the quality of care, effectiveness in clinical decisions, and the optimization of costs related to health care can be mentioned. Nonetheless, health-professionals reflect uncertainty in the recommendations generated by the guidelines because of the barriers presented such as strictness in its elaboration, it lacks in updates, audits and evaluations.

Key words: Clinical practice guidelines, assessment, quality.

INTRODUCTION:

Clinical practice guidelines (CPG) are commonly defined as systematically developed statements to assist practitioner and patient decisions about appropriate health-care for specific clinical circumstances [1–3]. Moreover, CPG are based on recommendations of a systematic review of scientific evidence, they evaluate risks and benefits of any treatment, and the main purpose

is optimizing health care of patients [4]. A successful implementation of CPG should improve the quality of care by decreasing inappropriate variation and expediting the application of effective advances to everyday practice. Nonetheless, there is insufficient information about how physicians change their practice methods when they become aware of a guideline [5–7].

On the other hand, plethora of publications describes, justifies, and explains the founded barriers of CPS. Among them, content, health-care-professional, and institution related issues can be mentioned [5,8–11]. These barriers can be identified and faced considering two important aspects; quality and implementation of the CPG. As it can be noticed, CPG might have relevant repercussion in health-care systems, although there is an uncountable possibility for improving both, its implementation as well as its distribution in medical institutions. For that reason, assessing CPG with methodological rigor, is a relevant task that scientific community must do for well-established medical institutions, but even more important, for organizations that are responsible for alternative medical treatment.

In order to evaluate the quality and variability of the CPG, the Colombian government has proposed the AGREE II instrument. Indeed, the legislation, (Resolution 2003, 2014), establishes procedures and conditions that all Health Services providers should fulfill. Among them, it can be mentioned that processes, procedures, guidelines and protocols must be known by the personnel in charge and there must be evidence of their socialization and updating; each institution should establish procedures for adopting and developing guide that are based on evidence; it is mandatory to have a protocol for socialization, management and security of the existing technologies in the Institution, and it should include any offered service; the institution must have a procedure for evaluating compliance with the guidelines or protocols through adherence studies; CPGs should contain at least objectives, target population, scope, recommendations and management algorithms, and their implementation methodology should be explicit and with periodic updates of no more than 5 years. Moreover, it should allow flexibility and adaptation to the patient's individualities; the guides should have registered dissemination mechanisms, training mechanisms, evaluation mechanisms, feedback mechanisms and should be based on evidence.

In this context, AGREE II can be considered as a tool that assesses rigorously and transparently a CPG with methodological rigor [12]. The instrument consists of 23 items which encompasses 6 different domains. Furthermore, it evaluates the quality of CPG through a health spectrum, provides a methodological strategy for the development of the guidelines and establishes what information should be presented in the guidelines and in what form it should be done. Because of its easy and quick use, it can be applied to guides on health promotion, treatment, medical interventions and public health [6]. Simultaneously, AGREE II evaluates the implementation of the guidelines, taking into account the barriers that health professionals can present.

It has been established that often, CGP are elaborated with adequate methodology, and well developed, but the guides do not consider crucial aspects such as the implementation in the daily work, and they remain in the paper, without being able to reach their objective which is to offer the best attention to the patients [13]. Although CPG are focused on improving the health-care quality in medical centers the guides are not updated frequently and it causes that the institutions do not considered CPG as a valuable strategy [14,15]. Instead, they are based on their own experience. Even-though CPG are acknowledged for its utility in medical practices, health-care professionals perceive them as a useful strategy although they do not follow the guides because their own attitudes towards their practical experience [11]. For that reason, the present study pretends to evaluate the quality of 14 CPG as well as the attitudes that professionals in the Colombian Hippotherapy Center Foundation (CFCH) have related to CPG. CFCH carry out a systematic application of physiotherapy, occupational therapy, phono-audiology, psychology, nursing and respiratory therapy. The foundation has qualified professionals in each of the therapies described as well as with adequate technologies for the implementation of such therapies. For all the

aforementioned reasons, the present research is focused on evaluate using the AGREE II instruments, both, quality and adhesion to CPS which are established for FCCH.

Finally, as recommended by Colombian legislation, it is also necessary to deal with the aspects related to the implementation of the guidelines, which is why the survey conducted by students of the National University (Faculty of Medicine) was taken, and in this way it was used this survey assessing the perception that FCCH health professionals have of the use of CPGs. The survey establishes the following domains: previous experiences in the development or application of clinical practice guidelines, perception of availability of resources and technical training for the preparation of a guide, perception of the practical applicability of a clinical practice guide in the FCCH, weighting between personal experience and clinical practice guidelines, when making decisions about the usefulness of the guide for the management of patients [7].

MATERIALS AND METHODS

Population and sample

The target population was health-care professionals which are responsible for use CPG in medical institutions, and the sample consisted of 5 therapeutics that work at Fundación Colombiana de Hipoterapia (CHCF). The study is classified as qualitative and quasi-experimental design.

CPG assessment used in CHCF

The evaluation of the perception of health professionals was carried out through a survey which was validated by the National Institute of Cancerology. The instrument contains 12 items which were evaluated using a Likert scale from strongly disagree to strongly agree (1 to 5)

A second presents a dichotomous answer (Yes / No), where professionals choose one of these two options for each generated item.

Quality evaluation

The FCHH is intended to use new technologies as and CPG are included. Furthermore, the mandatory national standards promote the need to investigate new tools that allow improving quality of patient-care in 2011, and the original plan was to develop clinical guidelines and protocols. It implies a review of the set of available evidence, which takes into account both previously published systematic reviews of the literature and primary studies. This type of guidelines is developed by the professionals of the entity with the use of evidence-based methodology focused on the treatment of the disease. For 2013 CPG for hippotherapy and hydrotherapy are socialized, and in 2015 CPGs were created for injuries and pathologies managed by the foundation.

AGREE II was used for evaluating the quality of CPG used in CHCF (Table 1). The instrument consists of 23 items in which six domains were tested (scope and objective, participation, rigor, clarity, applicability, and editorial independence) using a Likert scale. Then, the compliance was calculated using equation 1.

$$\frac{\text{Obtained score} - \text{Minimum possible score}}{\text{Maximum possible score} - \text{Minimum possible score}} \quad (1)$$

Table 1: CPS used in CHCT

CPT	
Fractures	Down Syndrome
Injuries	Tubular Sclerosis
SNG	Cranial Traumatism
Phychomotor delay	Bifid Spine
ECV	Epilepsies
Mental retardation	Hipoteraphy
Muscular Dystrophy	Hydrotherapy

RESULTS AND DISCUSSION

CPG assessment used in CHCF

As it was mentioned in the methodology, the assessment was carried out using a Likert scale in which, the health-professionals were asked to indicate their preferences towards CPG (Annex A). Table 2 shows the obtained results as well the

media for all the tested parameters. It is of paramount importance to indicate that it was not possible to identify a tendency in the sample about if it is more important using and following a CPG than a personal experience (item 1). By virtue that the calculated median is 3, it might be established that the sample cannot be categorized in the frame of agreement or disagreement. It is plausible to assume then, that although health-professionals are aware that the CPG are important for the dairy work, the cumulative experience give them confidence in the patients' treatment, and therefore, it is not possible to indicate which one should be considered as the most relevant aspect. Item 9 asked about the participation in the preparation of CPG. The question has the lowest value, indicating that FCCH did not promote both, a systematic review of CPG neither the health-professionals feel that they can improve them. The other answers are located within an average value, thus having a favorable attitude towards domains such as application of clinical practice guidelines, perception of availability of resources and technical training for the preparation of a guide, perception of practical applicability of a guide to clinical practice and perception of the

usefulness of the guide for the management of patients.

On the other hand, question 5 and 6 were rated with the highest values indicating that the health-professionals are willing to participated more actively in the revision of CPG, maybe because they positively valorate the utility of the guides.

In general, FCCH professionals give value and importance to the use of CPG and it has been reported that health-professionals have a preference in which they must support its practice based on evidence [16]. This is even more relevant for the participants who have had experience in the elaboration of CPG. Furthermore, the professionals who have been in a longer period working for FCCH give greater importance to their professional experience and this could be associated to the fact that they do not know the process of the elaboration, then, there is an uncertainty about applying the CPG.

It is relevant that all the sample replied YES to all the dichotomous questions. It indicates that health-care professionals know the relevance of CPG as well as the importance to follow them in order to minimize risk that might presented in the course of any medical treatment.

Table 2: Survey results of the selection questions generated by the health professionals of the FCCH

Question	No. Professional					
	1	2	3	4	5	MEDIAN
1	2	3	3	3	3	3
2	2	5	3	3	4	3
3	4	4	4	5	4	4
4	2	4	4	5	4	4
5	4	5	4	5	5	5
6	4	5	5	5	3	5
7	3	3	3	5	3	3
8	4	4	4	5	4	4
9	1	3	1	4	1	1
10	1	3	4	4	3	3
11	3	3	3	4	3	3
12	1	3	4	4	4	4

Quality evaluation

The obtained results for each domain are presented in table 3 and each domain are analyzed separately. CPG for fractures and injuries have a moderate compliance. Nonetheless, it does not reach a minimum of 50% and the reason can be found in the fact that the CPG has not established scope and objective. On the contrary, CPG for psychomotor delay, CVD, mental retardation, muscular dystrophy, tuberous sclerosis, head trauma, spina bifida and epilepsies have reached a high percentage of

compliance, and SNG, hippotherapy and hydrotherapy guidelines reached fulfill all the compliance requirements that were evaluated. The results for the second domain (participation) indicates that the % of compliance is lower than for scope. The main reason of the low obtained results is related to the fact that the guides do not specify the type of population to whom the guide is intended to apply. Nonetheless, CPG for hippotherapy and hydrotherapy reach 100% of compliance because these guides were elaborated in the FCCH.

Table 2: Percentage of compliance for each CPG and each domain

CPG	Compliance CPS (%) for the six evaluated domains					
	Scope	Participation	Rigor	Clarity	Applicability	Independence
Fractures	39	28	2	89	0	42
Injuries	39	28	2	89	0	42
SNG	94	28	2	94	0	42
Psycho-motor delay	67	28	2	89	0	42
CVD	67	28	2	89	0	42
Mental Retardation	67	28	2	89	0	42
Muscular Dystrophy	67	28	2	89	0	42
Down Syndrome	67	28	2	89	0	42
Tubular Sclerosis	67	28	2	89	0	42
Cranial Trauma	67	28	2	89	0	42
Spina Bifida	67	28	2	89	0	42
Epilepsies	67	28	2	89	0	42
Hippotherapy	94	100	29	89	46	50
Hydrotherapy	94	100	29	89	46	50

The results in the third domain show that all the percentages of the CPGs were low without being able to reach the minimum of compliance, reason for which there are shortcomings in the systematic methods for the search of the evidence of the recommendations generated in

each one of the guides, as well as the description of the procedures for the updates of the guides and the revisions generated by experts external to the FCCH. In the fourth domain, the clarity in the definitions and concepts of the guide is evaluated, and in general the results of the 14

evaluated CPG was greater than 89%, thus generating compliance particularly with the content. In domain five, the 14 CPGs obtained low percentages without reaching a percentage of 46%. These results were obtained because there was no evidence about the factors that can be presented to facilitate its application as well as the barriers that may arise, and the criteria to be taken into account to monitor and audit each of the CPG. Finally, domain six was evaluated, and the obtained results did not exceed 50% of compliance. In this domain, there was no information about the funding of the guides in its preparation and whether this has influenced or not the content of the CPGs, as well as how little has been expressed if there is conflict of interest between the participants of the development group.

AGREE II request the assessment of the 100% of compliance. In this matter, a CPG needs to fulfill minimum 50% of compliance for each domain. As can be seen in table 3, just hippotherapy and hydrotherapy CPG reach that percentage and therefore, AGREE II authorize its uses in FCCH. It can be explained because those CPG were elaborated by the FCCH and the medical-professionals know and applied them. Finally, it is recommended that the use of these two CPG needs a constant updating with the periodicity indicated by the legislation. On the other hand, the remaining 12 CPG are not recommended to use, as long as the aspects which were evaluated are adjusted.

CONCLUSIONS

It is important for any institution to evaluate, train, update and audit each CPG, and thus obtain the benefits associated with its use. Additionally, it is necessary to complete the requirements generated by the Colombian national health system.

In the evaluation of the quality using AGREE II Method, the results by domain showed that for the domain 2, 3 and 5, it is necessary to generate in all the CPG modifications that allow to clearly identify the participation of those who are

involved, as well as the rigor of the processing and its applicability.

In the evaluation of the implementation it is evident the commitment and the attitude that the health professionals of the FCCH have in the use of the CPGs, which was also demonstrated in the survey. Nonetheless, it is necessary to generate greater participation of the clinical professionals in the elaboration, updating, training and auditing of the CPG of the foundation.

There is a direct correlation between the quality and implementation of CPGs in any institution, and it can be evidenced in the results generated in this research, since the perception that health professionals have towards the use of CPGs is altered by not having the certainty of the methodological rigor with which the guide was drawn up and they choose to give greater importance to their professional experience.

Table 3: Overall quality score of the CPG

CPG	Global quality for CPG (%)
Fractures	17
Injuries	17
SNG	33
Phycho-motor delay	33
CVD	33
Mental Retardation	33
Muscular Dystrophy	33
Down Syndrome	33
Tubular Sclerosis	33
Cranial Trauma	33
Spina Bifida	33
Epilepsies	33
Hippotherapy	67
Hidrotherapy	67

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ANNEX A

The survey is made up of two parts respectively, the first is multiple-choice questions and the second are dichotomous questions to answer YES / NO.

PART 1: Select the option that you consider applies according to your criteria.

ITEM	1	2	3	4	5
Is the CPG more important than your personal experience?					
If I am invited by the FCCH to participate in the preparation of a CPG, I would have to take a lot of time out of my job because I would not have time in my workday					
Regarding to personnel required to prepare CPG at the FCCH, I consider that there is no one in the institution sufficiently trained to organize the preparation of the CPG					
In relation to the economic resources required to prepare CPG, my opinion is that in the FCCH, there is no economic resources to carry out this work					
If I am invited to participate in a group for the elaboration of a CPG, I would not be interested at all in participating in this type of activity					
Regarding CPG, I considered that there is absolutely necessary and indispensable for good clinical practice					
I have absolutely no experience with CPG. I have never had the opportunity to consult or apply them					
In my opinion, the work of preparing CPG is unnecessary, it is just a product of a fashion which was imposed by medicine based on evidence.					
I have never participated in the work of preparing the CPG					
Regarding my experience with the use of CPG, I can say that I have never needed to use a CPG					
Regarding to financial and administrative difficulties that CPG may have, I believe that in the FCCH, they are so important that they would make any CPG completely applicable					
At FCCH I would prefer to use a GPC that were developed by a group of experts from scientific societies outside the FCCH.					

PART 2: Answer YES or NO to each of the following reasons.

Reasons related to the use of CPGs:

ITEM	YES	NO
CPGs help and give security in decision making		
CPGs have credibility because they are carried out by experts		
CPGs are useful, practical, punctual, agile		
CPGs allow to unify concepts and criteria		
The CPGs have legal, administrative and ethical implications		
CPGs are learning tools and are updated		
CPGs take local resources and experiences into account		
CPGs facilitate interdisciplinarity		