Difficulties in the dissemination and implementation of clinical guidelines in government Neonatal Intensive Care Units in Brazil: how managers, medical and nursing, position themselves

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Abstract

Rationale, aims and objectives Clinical guidelines are tools that systematize scientific evidence and help to achieve proper care. Several difficulties are reported regarding the effective use, such as the shortcomings in the level of knowledge and attitudes by the professionals, the service structure and the preferences appointed by patients. An analysis of these difficulties was the objective of this study in the context of government Neonatal Intensive Care Units (NICU) in Brazil.

Method A semi-structured survey was carried out with 53 managers (medical and nursing) of the 15 NICU in a convenient sample of two groups of government units in Brazil. The managers chose their answers from a list of difficulties to implement the guidelines based on the analytical model of Cabana and graded the difficulties found on a 5-point scale with no reference to quality.

Results Respondents have reported several difficulties with the following priority: lack of professionals to provide care, being perceived as more critical within the nursing and physiotherapy crews, minor participation of professionals in the discussion process and inadequate infrastructure. The lack of acquaintance with the guidelines by the professionals has been reported by few of the surveyed.

Conclusion These findings show some common ground to literature pointing the importance of adequate infrastructure. Managers showed a low valuation of both the level of knowledge and the professionals’ adhesion to the guidelines.

Introduction

Well-designed clinical guidelines (CG) have been regarded as an important tool for the quality of care, as they sum up and systematize scientific evidences [1,2]. Different strategies for the dissemination and the implementation of CG are being researched, aiming at their broader deployment in daily services, identifying a gradient of effects [3].

Cabana et al. [4] emphasize that the difficulties in the dissemination of CG should be identified in each service and systematically categorize them in three groups. The first group includes the difficulties related to the level of knowledge of the professional, that is, when the professional is not aware of or not familiar with the guideline. The second group implies facts related to the professional’s attitudes, such as not agreeing with the guideline, considering it restraining to practices, not being up to the task of following the guideline, not believing the expected result will occur, preferring the former practices. The last group includes features related to preferences reported by patients and to the job description itself which defines the time for the procedures, the environment for the services and the very characteristics of the CG.

The limited amount of adherence of a well-known CG has been the aim of evaluation studies of the neonatal care in Brazil, and these studies have acknowledged undesirable variations of the care, such as lesser use of antenatal corticoid [5], inadequate procedure to manage pain in newborns under painful treatment while in care in Neonatal Intensive Care Unit (NICU) [6], late use of the surfactant and/or the low-level use of mild ventilation [7].
The goal of this study was to present an analysis of the above mentioned difficulties found by managers of the NICU in Brazilian government maternities regarding the dissemination and the implementation of the CG in their services.

Methods

The study is based on a survey carried out with the management team of the NICU in a convenient sample of two groups of government units; the first one included all government NICU located in the city of Rio de Janeiro (RRJ), and the other group, all the units that comprised the Brazilian Neonatal Research Network (BNRN).

Eight of the 10 RRJ units participated, including six municipal NICU and two belonging to federal hospitals. Seven out of the eight BNRN units have been included – these are services performed by universities’ hospitals. The losses are derived from shortcomings in the team’s agendas or from changes in the team structure.

Most of the NICU have been classified as IIIB [8] because of their structural capacity to care for extremely low-weight newborn (birthweight < 1000 g), and to provide life support and access to minor surgical procedures. Two RRJ units (25%) were of IIIA complexity, because they lacked surgical facilities. One BNRN unit has referred newborn care in post-surgical cardiac procedure, thus being classified as IIIC. General hospital facilities are a characteristic of the BNRN (86%), which was a less common feature in the RRJ area (38%).

The RRJ had one-fourth of its NICU with 15 or more beds, while in BNRN units 75% had the same condition. Most units (80%) showed a high volume of care with more than 2000 live births per year, while 73% of the NICU have assisted more than 3% of newborns with very low weight.

The managing team of the NICU has been defined as the medical and nursing chiefs and the professionals appointed by them as their substitutes, who would have a leadership role in the team.

The sources of information for the study were the positioning of this managing team viewed through a survey that included both structured and semi-structured questions and one observation tour to the service.

Aiming at the desired analysis, a list has been properly devised and it included the difficulties to implement the CG based on the analytical model set by Cabana et al. [4] and on the review by Cochrane et al. [9]. Managers have been asked to grade difficulties listed on a 5-point scale, with 0 indicating that the difficulty does not occur in the service.

The survey questionnaire was validated, including the valuation of its scope and the pertinence of its form and content by three neonatal physicians and three nursing specialists in neonatology. These questions were pilot tested with one medical and one nursing with clinical and management expertise in NICU.

Interviews were scheduled, performed in meetings in the NICU, that took place from March to July, 2008. In the beginning, the aim of the research was explained and once consent had been given, the interview was carried out. They were recorded in audio too. Two managers chose to send their responses, via electronic mail. After the survey, there followed a brief visit to the NICU facilities together with the head-chief of the service.

The findings were systematized in accordance with the set of responses provided by the managers of each researched network (RRJ and BNRN) and they were taken in such a manner that was complementary to the written responses provided by the chiefs in the surveys, as well as the notes by the surveyor during the meeting, and the transcriptions of the recorded surveys, because those who responded also commented on the survey itself. This procedure aimed at the enhancement of the comprehension of the matter under scrutiny.

Those surveyed were described in accordance with these characteristics: sex, age, years of neonatology practice, years of working as chief, qualification on neonatology and management. The neonatology qualification for a chief position in this service is a legal requirement [10] and the qualifications for the management activities have been included to be evaluated if these managers have these specific qualifications that are highly desirable of whatever kind to exercise the management [11].

The project has been submitted to and approved by the Ethics in Research Committee of the Fernandes Figueira Institute (CAAE 0014.1.008-08) and it was also approved by four other Committees of the hospitals that have asked for it (CAAE 0082.0.314.000-08 – SMS/RJ, CAAE 082.0.318.008-08 – HGB, CAAE 0061.0.002.008.09 – PUC RGS, CEP/HSE 000.346 Protocol). In every performed survey, proper consent has been granted.

Results

Characteristics of the surveyed

There have been a total of 53 managers from NICU surveyed in the study, 30 of which from RRJ and 23 from BNRN. Most of those surveyed individuals were women (79%), over 40 years old (74%), with more than 10-year professional practice on the neonatology area (92%) and who had been working as chiefs for more than 5 years (51%).

The qualification on neonatology has been reported by the majority of chiefs (84%). BNRN professionals, especially medical ones, had additional Doctorate degrees because those are university service units. The required qualification to be a manager, through graduation courses on specialized areas or updating courses, was acknowledged in 40% of RRJ managers and in the medical staff of BNRN. Among nursing chiefs from BNRN, 55% referred to have taken such courses.

Difficulties faced in the dissemination and the implementation of the clinical guidelines

Among the difficulties appointed as relevant to the process of implementation of the CG, the lack of professionals qualified to provide care was the most important one to be confronted (67% in RRJ and 39% in BNRN), and it motivated 12% of the managers that openly manifested their comments, pointing out that this situation has been aggravated by the high personnel turnover and the little commitment of the professionals vis-à-vis the services, as a consequence of their engagement in multiple jobs elsewhere. One of the managers has indicated that a full-time job contract to a given service would be important, because it would enable commitment, group discussions with broader scopes.
The inadequacy of the professional staff has been perceived as more critical within the nursing and physiotherapy crews. Managers of RRJ have also mentioned the difficulty of access to specialists or to specialized examinations.

The small participation of professionals in the discussion activities regarding the services has been cited as a relevant difficulty to 47% of managers of RRJ, but only to 17% of BNRN managers. This difficulty has been mainly related to on-duty professionals who usually were present only during their time schedules.

Infrastructure difficulties related to physical environment, material and equipment are significant to managers of both networks, but with different weights. Physical premises have been mentioned as an important difficulty by 35% of BNRN managers and only by 17% of RRJ managers. The uneven provision of materials (27%) and the poor quality of equipments in general (23%) were reported as relevant difficulties for the RRJ managers, whereas the quality of the material has been cited by an equal number of managers of both networks (17%).

Other chiefs (eight RRJ and two BNRN) have highlighted the difficulty regarding the quality of materials, equipments and their maintenance; however, these chiefs have stated that basic infrastructure items were available.

The lack of acquaintance with the CG by the professionals has been reported by few of the surveyed (20% RRJ and 9% BNRN), 6% of which have mentioned the high turnover of professionals in the services, especially of those in the nursing crew, as well as the presence of personnel not specifically qualified on neonatology, as relevant factors that contribute to the lack of familiarity with the CG, moreover by those working on duty periods.

Approximately 17% of managers of both networks have acknowledged that the preference of professionals regarding former practices is one of the difficulties to be managed by the services. One of these managers even quoted Einstein: ‘it is easier to break up an atom than to change a habit’. Other managers have reinforced this approach towards the difficulty to promote a change by linking it to the lack of comprehension, of knowledge, and a certain resistance to change as well as little commitment to the services by the professionals.

Desired changes, according to some managers, would be facilitated by certain activities that would impart on the professionals a broader perception that their work actually contributes to the quality of life of their patients and that the use of the CG would lead to a more consistent care, thus reducing negative results and making it easier to evaluate the work that is performed.

Approximately 4% of the BNRN managers have considered, as an important difficulty, that CG could restrain clinical practices. Some managers have looked upon the inflexibility of the guidelines or the way they are implemented in some services as weakness of this process (Table 1).

### Discussion

The chiefs surveyed in the study were professionals with neonatology qualification who have been working as specialists in the area and as managers for a significantly long term, which granted them a high level of relevance and importance to the survey.

The way the chiefs have positioned themselves vis-à-vis the implementation of the CG seems not to match the scheme as devised by Cabana et al. [4]. There has been an emphasis on structural aspects, especially focused on the allocation of personnel and minor relevance as to the capacities and attitudes of the professionals.

Cochrane [9], in systematic reviews, has identified a larger number of studies (47%) about structural difficulties, such as time,
support, financing issues, resources, organization of services, overcrowding, reference processes. Managers have positioned themselves in a way that is more related to this second study, which might indicate that such issues are yet more relevant to Brazil than to other health systems, as Brazil has not achieve a more adequate and stable structure of services, becoming a real challenge even for those services provided by the units of reference such as the ones included in the survey.

The knowledge and attitudes by the professionals have been evaluated in somewhat contradictory references. On one side, few managers have considered them relevant when they responded to structured questions, as opposed to several remarks they have made about the same issue, which might infer the importance of the matter. The surveyed individuals may not have taken this difficulty as that important because of their focus on the quality of the structure of the services, while they have looked upon the levels of knowledge and attitudes of the professionals as an individual misdemeanour that can be dealt with by using notes or some other approach on a personal level.

The low valuation regarding the professionals’ comprehension capacities might be the consequence of adapting the CG to the services as a gradual process, in which the guideline that is best known to the service would be taken first, leaving the adaptation process as a whole to the group discussion activities. Michie [12] suggests that an important strategy for the implementation of the CG would be the adoption of a clear-cut written text that would precisely indicate the recommended points; however, this author emphasized that the central issues of evidence should be preserved.

Cabana et al. [4] proposes, as well as other authors [3,9,12,13], that several interventions might be carried out in a combined way in order to overcome specific difficulties of each service, because it is understood that difficulties must be identified first whenever the implementation of CG is intended. Revised literature points out to the even more important need to understand the complexity of the implementation process, indicating the need for several and different strategies to be deployed.

It would be reasonable to infer that differences among the individuals and the way they learn and work could lead to the general acceptance that several strategies would amplify the possibility of success of the process, rather than just one, taken in an isolated manner, because each strategy could reach a specific group of professionals.

Conclusion

The difficulties that have been identified in the survey show some common ground and refer to points in the literature such as the importance of structure issues (physical infrastructure and the work organization). Managers have not positioned themselves in agreement to the literature when they showed a low valuation of both the level of knowledge and the professionals’ adhesion to the process, which literature frequently takes into account in a remarkable way.

The improvement of the structural conditions, especially regarding the time dedicated by the professionals to the learning process and discussion activities in the services as well as the support to the development of strategies aiming at the implementation of the CG, might be a point to consider when devising the financing plan for the Brazilian system.

The inclusion of these themes in the current debate of the health system management plans could be considered as one efficient tool, among many others, that are available to managers from different levels in the system, in the pursuit of the reduction of the gap between what effectively exists in terms of knowledge and what is actually available to the citizens.

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References


