



Clinical Analysis of Management Aspects of Centers for Dental Specialties

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Abstract

Objective: To evaluate the different management aspects of Centers for Dental Specialties (CEO) in Brazil. **Material and Methods:** Quantitative study with analysis of secondary data. The results of external evaluation of the first PMAQ-CEO cycle were considered, especially those related to planning and self-assessment, demand organization, work process, human resources as well as the availability of supplies/materials/dental equipment. The selected data were analyzed based on the calculation of proportions using the Microsoft Office Excel and Statistical Package for the Social Sciences (SPSS) programs. **Results:** The planning of actions in CEOs is conducted in nearly 80% of units, with the participation of dental surgeons, receiving support, mainly, from the local dental health or state public manager. The access to CEO is given, mostly, in a referenced or mixed (referenced and spontaneous) form. Only 49% of CEOs offer permanent education actions for workers. The work management process has been guided by quality standards of PMAQ-CEO for 77% of managers. **Conclusion:** The study allowed perceiving the presence of an often shared management, on the CEO organization, on self-evaluation process, planning, demand organization and work process, as well as human resources and infrastructure, showing conformity with the Oral Health National Policy guidelines. However, the results show that some problems with regard to the evaluation as work routine and management of access to CEOs still persist, pointing to the need for further studies and effort of managers to overcome them.

Keywords: Public Health Dentistry; Dental Care; Health Services.

Introduction

Management is an important component of health policies. The development of these policies includes the definition of objectives, strategies, monitoring of actions and evaluation. The evaluation process includes the approach of people and interpersonal relationships, physical, financial resources and quality parameters, grouped into macro variables, classified as structure, process and result [1].

In management, it is necessary to overcome the traditional model of public administration, excessively centered on structure, investing in items of process and result, with emphasis on the quality of relations between managers, professionals and users, continuously increasing the autonomy of these subjects, and incorporating these aspects into the management process itself [2].

The National Program for Improving Access and Quality of Centers for Dental Specialties (PMAQ-CEO), proposed and implemented by the Ministry of Health, aims to evaluate the quality of specialized oral health services. It means the commitment to strengthen the oral health care network, whose organization was initiated in 2004 with the implementation of the Brasil Sorridente Program [3].

With PMAQ-CEO, municipalities that implemented CEOs and joined the program [3] had the opportunity to propose goals with the Ministry of Health, aiming at improving the organization and supply of specialized oral health services. The program proposes the adoption of a shared management model, with different actors (managers, professionals and users), who must participate in the different phases of the process, democratizing the management and making it more effective in considering the real demands of the population. Democratic and shared management is the mainspring of quality assessment and monitoring for CEOs.

In addition to the phase of adhesion and proposal of goals and the stage of development and self-evaluation, PMAQ-CEO also includes a third phase of PMAQ-CEO External Evaluation (AVE PMAQ-CEO). In the external evaluation, in 2014, one of the dimensions considered was the management processes of CEOs.

Due to the multiplicity of factors involved in the health conditions of municipalities, local-regional and socioeconomic contexts, it is possible that there is no standardized management process for CEOs in Brazil. Therefore, the present study aims to evaluate some aspects of CEO management through the analysis of factors related to planning and self-assessment, ways of access organization, human resources management, organization of services, availability of supplies / materials / dental equipment and organization of the work process.

Material and Methods

PMAQ-CEO External Evaluation (AVE PMAQ-CEO)

At AVE PMAQ-CEO, external evaluators recorded quantitative data and performed cross-sectional and observational evaluation. Health units and CEOs that have joined and contracted PMAQ-CEO were selected. CEOs that did not adhere were also included in order to cover all CEOs in the country. In all, 932 CEOs were evaluated. In addition to the observation of the service with a

structured guideline, the following were included as research subjects: managers (1), dentists (at least 1) and users (10) of each CEO, all of whom must be over 18 years of age. The approach to health care units occurred in the first half of 2014, from March to June, when the on-site evaluation was carried out to verify access and quality standards of PMAQ-CEO. Observations of CEO's infrastructure were made, interview with CEO's Manager, dentists, users, and document verification. A mobile electronic device - tablet - was used for the collection of data, powered by software designed for PMAQ.

For this work - quantitative study of secondary data - data collected in the PMAQ-CEO AVE process and included in the Data Bank were used. The answers regarding the issues that deal with planning and self-assessment, demand organization, work process, human resources and the availability of supplies / materials / dental equipment, which are in dialogue with the service management, were analyzed. The database, together with the dictionary of questions, was made available by the Ministry of Health, after signature of a commitment term by the authors in relation to its use.

Data Analysis

The selected data were analyzed based on the calculation of proportions. For this, the Microsoft Office Excel and Statistical Package for the Social Sciences (SPSS) version 19.0 programs were used.

Ethical Aspects

The AVE PMAQ-CEO was submitted to CONEP analysis (National Committee for Ethics in Research) and was approved for its development (CAAE 23458213.0.0000.5208, Opinion Number: 740.874, Date of report: 07/31/2014). This type of research falls within the modality of minimum risk according to CNS 466/2012 Resolution, and the free and informed consent form was obtained from all participating subjects.

Results

The total number of respondents regarding health care management issues were 930 (99.78%) of the 932 healthcare units (CEOs) that participated in the AVE PMAQ-CEO.

The planning of actions in Centers for Dental Specialties in Brazil takes place in about 80% of units, with the participation of dentists, receiving support from municipal (majority) and state managements, represented by municipal or state oral health coordinators. The goals for specialties established by the Ministry of Health are monitored and used in the planning process in 616 CEOs (66.2%), together with data from self-assessment and SIA (Outpatient Information System). In 65.8% of CEOs, the self-assessment results were considered in the organization of the teamwork process (Table 1).

Table 1. Distribution of planning and self-assessment actions performed in CEOs.

Questions	N	%
In the past 12 months, has any activity for CEO's actions been planned? (Yes)	723	77.7
Does the CEO receive support for planning and organizing the work process? (Yes)	587	63.1
Who performs the support? (More than one answer was possible)		
Municipal / State Oral Health Coordinator	497	53.4
Institutional supporter	113	12.2
Health surveillance professionals	87	9.4
Other management professionals	238	25.6
Other (s)	49	5.3
What resources are used to carry out the planning? (More than one answer was possible)		
Information panel	181	19.5
Epidemiological reports	225	24.2
Situation room	146	15.7
SIA monthly consolidated reports	490	52.7
Is the monitoring and analysis of goals established for each specialty offered to the CEO performed? (Yes)	794	85.4
In the last 12 months, was there any activity to plan the CEO's actions with the participation of Dental Surgeons? (Yes)	657	70.6
In this planning, are the suggestions / opinions of Dental Surgeons taken into consideration? (Yes)	646	69.5
The CEO's Team plans / schedules its activities considering (More than one answer was possible):		
The SIA information	454	48.8
Local epidemiological survey information	272	29.2
The goals of each specialty established by the Ministry of Health	616	66.2
The challenges identified from self-assessment	466	50.1
The Involvement of Community Organizations (Partnership and Agreements with the Community)	257	27.6
Does the CEO's Team perform an evaluation of planned / programmed actions? (Yes)	472	50.8
Has a self-evaluation process been conducted by the CEO's Team in the last six months? (Yes)	680	73.1
What instrument / source is used? (More than one answer was possible)		
AMAQ-CEO	647	69.6
Instrument developed by the municipality / team	111	11.9
Instrument developed by the State	29	3.1
Other (s)	55	5.9
Are the self-assessment results considered in the organization of the CEO Team work process? (Yes)	612	65.8

In relation to the demand organization and access to oral health services in secondary care, it was possible to characterize reference and counter-reference flows (Table 2). Access to CEO occurs mostly in a referenced or mixed way (referenced associated to spontaneous). To obtain access to CEO, patients are referenced to the service by referral from basic health units. In spite of this, not all CEOs (26.8%) previously know the users who will go through consultations, since in 75.2% of cases, patients receive a referral form in the basic health unit and schedule their consultation directly in CEOs, rather than basic health units pre-scheduling the care, for example, through regulatory systems.

One of the strong components of management is the commitment to human resources through permanent education. Only 49% of CEOs promote permanent education actions for their workers (Table 3). In the last year, these actions covered the municipalities where CEOs are located: seminars, exhibitions, workshops and discussion groups in 341 (36.7%); classroom courses in 307 (33.0%); distance courses in 179 (19.2%); teleconferencing in 45 (4.8%); exchanges of experiences in 290 (31.2%); and tutoring in 67 (7.2%).

Table 2. Distribution of actions related to the access to CEOs.

Questions	N	%
Access to CEO occurs through which demand below:		
Spontaneous 1	12	1.3
Mixed	385	41.4
Referenced	533	57.3
What actions are triggered from access performed through spontaneous demand: (More than one answer was possible)		
User schedules on the CEO schedule	435	46.8
Directs and guides the user to the basic health unit of reference	837	90.0
No specific action only denies the care	14	1.5
Other (s)	125	13.4
Does the CEO have prior knowledge of the users who will use the service?		
Yes, by listing received from regulation	130	14.0
Yes, through listing received from the BHU	127	13.7
Yes, the waiting list is at the CEO	367	39.5
Yes, others	57	6.1
No	249	26.8
What is (are) the possible way (s) to schedule the consultation in the CEO (More than one answer was possible)		
The consultation is scheduled by the basic health unit	312	33.5
The appointment is scheduled by the patient at the specialist appointment scheduling center	137	14.7
The patient receives a referral form at the basic health unit and addresses the CEO	699	75.2
Others	198	21.3
There is no defined course	4	0.4

Table 3. Distribution of permanent education actions for CEOs' professionals.

Questions	N	%
Does the municipality promote permanent education actions that include CEO professionals? (Yes)	459	49.4
In which of these actions has the CEO Team participated in the last year:		
Seminars, Shows, Workshops, Discussion Groups	341	36.7
Classroom courses	307	33.0
Remote courses	179	19.2
Teleconferencing	45	4.8
Experience exchange	290	31.2
Tutoring	67	7.2
Do these ongoing education actions address the demands and needs of the CEO Team?		
Yes, totally	129	13.9
Yes, partially	285	30.6
No	46	4.9
Not applicable	470	50.5

For 77.6% of managers, the work process management has been guided by the quality standards of PMAQ-CEO. Team meetings, which are fundamental to the discussion about the planning of actions and evaluation of processes, are carried out in 76.8% of CEOs, mostly with indefinite periodicity (Table 4).

Table 4. Distribution of questions about structure and work process in CEOs.

Questions	N	%
Does management support the organization of the work process to improve access and quality from the PMAQ-CEO standards? (Yes)	722	77.6
Does the CEO hold team meeting? (Yes)	714	76.8

How often do meetings take place?		
Weekly	16	1.7
Fortnightly	23	2.5
Monthly	259	27.8
Without defined frequency	416	44.7
Not Applicable	216	23.2
In the last 12 months, did you stop attending for lack of inputs or instruments? (Yes)	283	30.4
In the last 12 months, did you stop attending for not having properly functioning equipment? (Yes)	359	38.6

Regarding inputs, instruments and equipment, between 30.4% and 38.6% of CEOs, care was interrupted due to the lack or absence of these materials, or due to the inadequate functioning of dental equipment (Table 4).

Discussion

The accomplishment of the AVE PMAQ-CEO process, of national scope, covered the main aspects that characterize the management in Centers for Dental Specialties, responsible for secondary oral health care in the Brazilian public health system.

One-third of CEOs stopped working properly due to lack of inputs and / or equipment. It is an undesirable situation that negatively interferes with the achievement of goals, production, access and the work process. It could also, by reducing coverage, compromise the quality of services provided by CEOs. By addressing the quality of services, the health service management should seek to meet needs and provide supply and coverage of the highest proportion of the population [4] (Table 4).

The structure of health services refers to resources (physical, human, material and financial) necessary for the implementation of actions [1]. Regarding the existing resources, the PMAQ CEO's instructional manual states that "even if it is not possible to intervene in everything that is deemed necessary [...], priorities and action strategies should be established to overcome the problems identified" [5]. This means the importance of establishing effective (computerized) systems to assist management in the processes of purchasing inputs and instruments, in the definition of stocks and their storage, as well as in permanent monitoring. It also means the adoption of preventive and corrective maintenance mechanisms inherent to processes of equipment acquisition, with the technical support of dental surgeons and engineers who should plan the installation and management of this maintenance [6].

The care deficiency in CEOs due to the lack of inputs and equipment can also be faced with the adoption of clinical engineering, which is a strategic sector in a health service for planning, "management, training, incorporation of technology and technical support". Its adoption by the management aims to increase the useful life of the equipment and the inclusion of professionals when training and educational actions regarding the operation and the correct care of the equipment is proposed, with the purpose of minimizing their misuse, ensuring the safety of those involved.

For the Ministry of Health, in approaches for assessing the quality of a service, "the elements of structure, although can and should be evaluated in the scope of the work of teams, are of the responsibility of

managers" [7]. This responsibility should include team professionals and becomes fundamental to the reach of "*practices committed to care and to the expansion of the dialogue between all the subjects involved in this change, thus promoting participative management*" [8].

Items 1.1, 1.6, and 1.7 of Table 1 describe the participation of the dental surgeon in the CEO planning process. This is a very positive situation, as it suggests the commitment from CEO team professionals in the planning process. The planner must be someone who lives the reality about what it is planned, and that the people with whom it shares the work and the problem, are also subjects in the act of planning [9]. It proposes a situational planning method where "situation" is the place of action of actors. In the same sense, the committed participation of professionals in the planning processes is perceived as something that can affect and transform the conception of the world of these subjects and contribute to the conception of new actions through a critical reflection of practices carried out [10].

It is essential that the oral health teams of CEOs take the lead in the process of planning actions, since the actors who plan them are part of the planned reality and, in this way, can effectively participate in decision making and evaluation of these actions [11].

The support that CEOs received for the planning and work process organization, especially the state or municipal management, shows a tendency of management support to the local level in the performance of planning processes. Public management must be more flexible, increasing the possibilities of decision-making in a decentralized way, giving health professionals more autonomy to deal with problems and seek solutions to overcome them [12].

CEOs have been using the monthly reports of the SUS Outpatient Information System (SIA / SUS) as resources to carry out the planning, monitoring and analysis of goals established for each specialty offered in CEOs (Table 1). The result reveals the care taken by managers and oral health teams of CEOs to base planning actions on information produced by the SUS Health Information System (SIS), as they strengthen planning processes and ensure "*permanent population health situation assessment and the results of actions taken*" [13]. It is the goal of a health information system to "*evaluate and support planning, decision making and actions at all levels of the SUS organizational framework*" [13].

Regarding the importance of CEO production goals, these take into account the working hours and monthly production by specialty proposed by the Ministry of Health (Table 1). Working hours should be widely discussed between managers and professional teams, and constitute an important tool for monitoring work, which is fundamental to CEO planning [3]. The minimum production targets by specialty are established by Ordinance GM / MS No. 1464 of June 24, 2011, and the fact that only two-thirds of CEOs take these goals into account for the planning process may reveal some structural difficulties and perhaps an inadequacy to regional realities [14]. It is suggested that the current indicators and parameters of production and coverage should be re-evaluated according to some aspects, in each place / region, such as the conditions necessary for their performance, regarding material resources (inputs, instruments and equipment), technological resources, financial and human resources; the epidemiological condition and social risks (which

determine demand). For these reasons, they should be carefully adjusted with the objective of better adapting them in each region of the country. It is possible that, without observing these measures, the evaluation of production in CEOs is imprecise, producing results with less reliability, impairing decision making, with undesirable consequences for the work process and the planning itself.

Preceding the PMAQ CEO's external evaluation (AVE), the Self-assessment Process for Improving Access and Quality of Centers for Dental Specialties (AMAQ-CEO) was the main instrument used for self-assessment involving CEO teams. Its objective was to institute the culture of evaluating and monitoring actions and health services of CEOs. Due to its scope, it proposed an important approach to issues related to the structure, management and work process of oral health teams in primary and specialized care. It sought to know the situation of services through the perception of managers, professionals and the users' satisfaction regarding access and use [3,5,15]. It should be understood as a step of extreme importance and useful for managers and teams to better know their characteristics, identify the most common (or recurring) problems and facilitate the search for their coping and overcoming. Self-assessment is considered by the Ministry of Health as a starting point, fundamental to the reorganization of team work and management. It points to the importance that individuals and groups involved should advance in the "self-analysis, self-management, problem identification, and formulation of intervention strategies to improve services, relationships and the work process" [15].

Although their results were considered important for the organization of the work process of oral health teams in 65.8% of CEOs of this study, only 50.1% of these specialized health units answered that they plan their actions considering the challenges arising from self-assessment (Table 1). It is worrying that 49.9% do not, because in this process, self-assessment can be a useful moment to reflect on the practice and the insertion / implication of each of the subjects, and the health team itself with the planning of actions and with the work process organization. One can thus lose the possibility that new ways of doing the work are proposed and implemented. And the possibility of implication and protagonism of professionals with the work, with politics and with users is also lost. This issue becomes more serious due to the fact that AVE PMAQA-CEO showed that only 50.8% of CEOs carry out evaluation of their actions (planned and programmed). In this sense, the process of participatory self-assessment presents, as a characteristic, "reflexivity", which is translated as a process in which the people involved are led to "rethink their practices, goals and results achieved" [16].

Another source of support for service planning was the information from SIA / SUS (48.8%) (Table 1). Local information on epidemiological surveys and involvement of community organizations (partnerships and agreements) was taken into account in this process, respectively, in 272 CEOs (29.2%) and 257 CEOs (27.6%). These results point to the need for management to strengthen the use of regional epidemiological information due to its importance as a diagnosis of the health situation of the population, which is fundamental in guiding decision-making processes. It is also necessary to expand and strengthen partnerships with the community, since it is the final

destination of health actions. According to the Ministry of Health, in a planning process, taking the local information as one of its references, specialized care should be responsible for the analysis of the organization and operation of services, with emphasis on the demand / supply relationship, the incorporation of technology, flows "*between different care levels, resolubility and regulatory mechanisms*" [12].

The demand organization in CEOs is a crucial point in the management process (Table 2). According to the National Oral Health Policy Guidelines (PNSB), CEOs are the specialized reference for cases diagnosed in the Primary Health Care (AB) for areas of Endodontics, Periodontics, Minor Oral Surgery, Mucosa Lesions, Mouth Cancer and patients with special needs (PNE) [17]. Patients should be referred from AB to CEOs through reference instruments and in accordance with the norms established in protocols elaborated by the Ministry of Health, States and Municipalities [18]. The results obtained by AVE PMAQ-CEO, even to a lesser extent, reveal that there is a worrying percentage of direct access to CEOs, without complying with AB referencing. This situation can mean the fragmentation of actions, disarticulation between AB and Specialized Care (AE), or some lack of knowledge of managers and the professional teams of CEOs on the model of care proposed by PNSB and SUS in the construction of Health Care Networks. It may also reveal the occurrence of emergencies or other problems that prevent the organization of access from AB. A recent study conducted in the southeastern macroregion of Minas Gerais shows results close to those obtained by AVE PMAQ-CEO. The study shows that, in terms of access, "*74.2% of users were referred for secondary care from a primary health care unit (PHC)*". *The study showed the occurrence of other reference forms, "as a political contact or another professional within the CEO"* [19].

Regarding the reference to CEOs, although there was low percentage of cases of spontaneous demand, when asked about the type of referral for these patients, 435 CEOs (46.8%) reported scheduling these patients (Table 2). Dissimilarly, 837 CEOs (90.0%) reported that they guide and refer the user to the basic health unit of reference, so that it can refer them, via a reference document to the CEOs. The direct scheduling on the agenda of CEOs worries, therefore, reveals a facility for users from spontaneous demand, which violates the principles of universality and equity, disrespects the care model advocated by PNSB and demonstrates a work fragmentation in the interface with AB [17].

Although it is possible to affirm that the relationship between primary care and CEOs shows signs of effectiveness regarding reference and counter-reference, the results show some fragility, leading to the need to think about the permanent improvement of regulation flows. Because it works at the interface between the different levels of care, the regulation presents managers with the need to integrate their functions, in order to give more and more accurate contours to the care model, in a network, guaranteeing users access to all care points. In a study carried out in a metropolitan region of northeastern Brazil, they analyzed oral health practices in the perspective of modeling care networks, and pointed out the importance of services to produce "*regulation protocols that culminate in improved access and the quality of care provided*" [20].

The health work process refers to the organization of actions through the use of technologies, with the support of scientific and organizational references in relation to which managers and professionals propose goals, plan actions and execute them [1]. For 722 CEOs (77.6%), management supports the work process organization aiming at improving access and quality considering the PMAQ-CEO standards (Table 4). This result is in line with the proposal of the shared management model, which emphasizes the importance of organization management and provision of health services. Through this proposal, "*microsocial aspects regarding the commitment of the worker with the management process and the issue of the autonomy of professionals / subjects are highlighted*" [21]. In this model, the support functions of professionals and teams are fundamental both in terms of managerial practices and in the concern to think about "*new approaches in the training of managers*" [21].

Most CEO oral health teams hold meetings to plan and organize their actions (76.8%) (Table 4). The frequency of meetings varies from team to team and is usually directly related to a management definition and / or decision of its members. In almost half of CEOs, there is no defined frequency of team meetings (44.7%). In CEOs, dental surgeons generally have some specialized training and the team is completed with the presence of an Oral Health Assistant (ASB) and / or an Oral Health Technician (TSB). There is, therefore, an important diversity in formations and professional experiences allowing the discussion of difficult and challenging clinical cases, sentinel events, or the elaboration of singular therapeutic projects with the participation of Primary Care oral health teams. In addition, it is expected that team meetings will also address issues such as the work process organization, the construction of a weekly, biweekly or monthly schedule. And it is in these common meeting spaces that major decisions are made. The CEO management should recognize these characteristics so that, in building the care model proposed by the National Oral Health Policy, the efficiency, and effectiveness dimensions are not lost, and it is possible for subjects to become involved with the proposal of construction of oral health proposed by SUS [22]. Although the organization of the work of oral health teams in CEOs presents a trait of predominantly clinical nature, focused on the specialties and under the requirement of monthly production defined according to the type of CEO, it is necessary to allow team meetings to overcome the eminently clinical aspects, allowing an effective participation of the entire team in the health care organization.

Regarding permanent education actions, they do not occur in every CEO. They represent the continuity of professional training and are fundamental for the consolidation of the work process of the CEO's oral health teams. They facilitate the establishment of solid partnerships with training institutions, are powerful for updating and technical and scientific qualification, favor the introduction of new technologies and create new methods to organize the work. It is up to the management to encourage CEO's professionals to be part of the permanent education processes organized and offered by SUS management.

Asked if these permanent education actions contemplate the demands and needs of the CEO's teams, only 129 (13.9%) answered that they fully contemplate, with half responding that permanent

education actions do not apply to the work performed in CEOs (Table 3). This result demonstrates a significant degree of dissatisfaction on the part of professionals, which must be carefully treated by managers. The management of CEOs should insist on participation and strengthen the leading role of professionals, but must do so in a way to ensure that the demands and needs of the CEO's team are addressed and, as far as possible, resolved [23-25].

Conclusion

The present study allowed perceiving the presence of management, often shared, in the organization of CEOs, in the processes of self-evaluation, planning, demand organization and work process, as well as human and infrastructure resources, showing concordance with guidelines of the National Oral Health Policy. However, the results showed persistence of some problems regarding management of access to CEOs, pointing to the need for a greater effort by managers to overcome them. The reference and counter-reference flows still need to be improved, but they are moving towards the adequacy of the PNSB guidelines.

The work process organization has been advanced and has been taken over by management, mainly through periodic team meetings, but whose aim is still focused on the clinical aspect and specialties.

The evaluation of actions and services, although present, is still incipient in CEOs. It is critical that the evaluation becomes an activity effectively taken on by management and by oral health teams at all times of planning and organizing the work process. This movement aims at the implication and protagonism of subjects with the work, politics and users.

Further studies should be carried out on the same theme with a view to decision making more qualified and attentive to the social needs and the oral health team in the context of the National Oral Health Policy. The present study did not intend to exhaust the subject, but, through the AVE PMAQ-CEO results, to evaluate how variables, planning and self-assessment, access, human resource management, structure and work process influence and define the CEO management models.

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