Secondary Care and the training process in Dentistry: the experience of the University of Pernambuco, Santo Amaro campus

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ABSTRACT

The Dental Specialty Centers (CEO) constitute fields of essential practices in the training process of the dental surgeon. However, they face a series of challenges. The purpose of this article is to describe the experience in conducting practical activities of specialized care in oral health, in the context of the COVID-19 pandemic, in the Undergraduate Course in Dentistry of the University of Pernambuco (UPE), in the Santo Amaro campus. This is an exploratory and descriptive experience report, built upon the work developed from March 2020 to July 2021. Approximately two hundred specialized procedures in oral health were carried out, providing actions, reflections, creativity and innovation in the consolidation of a propositional scenario in the face of real problems faced in the teaching-service integration, agreed between the Faculty of Dentistry of Pernambuco and the City Hall of Recife. CEOs are a fundamental equipment in comprehensive oral health care, allowing to identify feasible strategies capable of ensuring the maintenance of the formative role of secondary care, even in contexts such as the COVID-19 pandemic.


1 INTRODUCTION

Dental Specialty Centers (Centros de Especialidades Odontológicas - CEO) are medium-complexity services that are part of the oral health care network. Established in in Brazil in 2004, after the implementation of the National Oral Health Policy (PNSB), with its defined criteria, standards and implementation requirements in 2006 and updated in 20091-3. Their units are qualified into 3 different types, characterized according to the specialties developed and the equipment and materials used.
Their production is inserted in the Outpatient Information System (SIA), allowing planning, monitoring and the evaluation of their activities.

Consultation carried out with the National Registry of Health Establishments (CNES) points out that in May 2021 the oral health care network consisted of 1,178 Dental Specialty Centers qualified throughout Brazil (507 of Type I, 522 of Type II and 149 of Type III), with 75 units located in the Brazilian state of Pernambuco (38 of Type I, 27 of Type II and 10 of Type III).

When analyzing the offer of specialized care in the CEOs in Brazil in 2014, Rios and Colussi (2019) identified the best inhabitant-to-dentist ratios (one dentist for every 46,670 inhabitants) and between the resident population and the number of CEOs (one unit for every 157,384 inhabitants) in the Northeast Region. Nonetheless, they perceived limitations in the offer of services, with the unavailability of the minimum recommended specialties (periodontics, endodontics, patients with special needs, oral diagnosis and minor oral surgery) in 40% of the services in the country, which restricts treatment options, interfering with the integrity of care and prevents more conservative approaches to treatment.

CEOs and all other services that make up the network of the Brazilian Unified Health System (SUS) constitute a true training school for health professionals (managers, workers and students) and social control. Different practices are applied, with strategies and products seeking to strengthen the SUS School Network as a field of learning and practical training, such as experiences, technical visits, mandatory and non-mandatory curricular internships.

Regarding the work process in specialized care, the analysis of the practices developed by the professionals of the CEOs in two municipalities in the State of Bahia revealed that the knowledge provided by training in Public Health and the experience of acting in public management influenced the performance of the municipal coordinator of oral health of one of the participating municipalities. This emphasised the successful performance from the perception of the object and purposes of the work carried out. This finding strengthens the importance and influence of management and the manager's technical capacity in the work process.

In the health region of Aracati, state of Ceará, Almeida et al. (2019) sought to analyze the policies and management instruments aimed at the regional organization of SUS’ specialized care. The authors found that the work process and flows to access the CEOs need to be adapted to local definitions and to the role of primary care, making it essential to advance in the elaboration of protocols, in the implementation of integrated electronic medical records and in the qualification of regulatory processes.

In addition to the fundamental role that the Centers have in guaranteeing users' access to specialized oral health care, their role in in-service training needs to be recognized as a political and technical exercise focused on social needs and involved with real health care situations. The insertion of students in the fields of practice needs to consider the articulation of training, management, health care and social participation as subjects of health processes. In this dynamic, the training dimension in real work scenarios is immersed in challenges, which cross aspects of physical structure, supplies, work process, besides considerations agreed between management and educational institutions, amplified by the recognition by professionals of their irreplaceable role.

The health context in Brazil deteriorated in March 2020, with the COVID-19 pandemic declared an International Public Health Emergency. With this, the collegiate of the Dentistry Course of the University of
Pernambuco (UPE), Santo Amaro campus, established a debate and developed alternative ways to conduct its practical teaching activities in specialized care, which will be reported below.

2 EXPERIENCE REPORT

The University of Pernambuco is an institution governed by public law, currently linked to the Brazilian Secretariat of Science and Technology and the Environment, constituting a heritage of the Pernambuco society. Its academic structure is organized into 11 Campi, which house 29 on-site courses (21 bachelor's degrees, 9 undergraduate degrees and 1 technology degree) and 4 distance learning courses. This is combined with the Teaching Units, which are UPE’s Health Units, a hospital complex consisting of four large university hospitals, including the Integrated Health Center Amaury de Medeiros (CISAM).

The Faculty of Dentistry of Pernambuco from the University of Pernambuco was founded in 1955, located in the Brazilian municipality of Camaragibe, in the metropolitan region of Recife, 25 km away from the capital of the state of Pernambuco. Besides the bachelor’s degree in Dentistry, it also offers a Lato Sensu Post-Graduate course and three Stricto Sensu Post-Graduate programs (master's and doctorate).

In 2019, the property where the teaching activities of the Dentistry course took place, located in the Camaragibe Campus was interdicted by competent bodies due to the risk of collapse.

In the first half of March 2020, the outpatient clinical practice activities of the curricular component “Primary Care Clinic III”, within the axis of dental sciences with 150h/class, were transferred to the Integrated Health Center Amaury de Medeiros (CISAM-UPE). This is a unit that is part of the hospital complex of the University of Pernambuco, where one of the type III Dental Specialty Centers (CEO) is located, making up the federal program Brasil Sorridente of prevention and specialized dental care, offered by SUS and the Recife City Hall. This center provides care to the population from the basic primary care health units , residing in the Sanitary District II and with vacancies available in the Services of Endodontics, Periodontics, Dental Prosthesis, Care for patients with disabilities, Stomatology and Minor Oral Surgery.

In this regard, the learning objectives of the curricular component were extended to specialized care. In practice, this had already occurred before, as a demand from the Own Evaluation Committee for restructuring the teaching core of the course, and reflected in the changes of the curriculum matrix of the pedagogical project implemented in 2020. The curriculum component is now called "Secondary Care Clinic".

Faced with the health emergency caused by the pandemic, activities were suspended and new challenges emerged. The municipal management created a referenced network for the care of suspected COVID-19 cases and its oral health teams were transferred from their units to the frontline, strengthening community actions, territorial surveillance, monitoring of cases, carrying out diagnostic tests and dental care only in urgent cases.

The issues of biosafety and the use of personal protective equipment (PPE) were crucial points for the reorganization of care that needed to be reviewed and restructured, despite the little scientific information available at the time on the transmissibility of the virus. These adjustments motivated a reassessment of dental practices and equity of care.

The course collegiate formed a working group to discuss new biosafety practices, adapting to new scenarios, based on the
consensus of the Brazilian Association of Dental Education (ABENO)\textsuperscript{11}. The document gathered guidelines for standardizing clinical environments, flow of users and companions, routines, biosafety protocols and training for local team works, based on collective work carried out remotely and collaboratively involving 501 teachers, including both Dentistry courses at the University of Pernambuco, under the management of mediators and rapporteurs. This group built and published a guide entitled “Biosafety routines in Dentistry and other support materials”\textsuperscript{12}.

The pedagogical coordination of the course and the administration of the curricular component were mobilized to restructure the return of activities based on adaptations for education and work in oral health, guaranteeing the teaching-learning process with safety and creativity. These led to theoretical and methodological changes.

The revised services were based on the Guidance for dental care in the context of COVID-19, developed by the Ministry of Health (MS) in partnership with the National Health Surveillance Agency (Anvisa), the Federal Council of Dentistry (CFO) and collaborating researchers\textsuperscript{13}. The thematic axes of the document were related to the general aspects of SARS COV-2, transmission routes, repercussions on dental practice, groups at risk for the manifestation of severe forms of COVID-19, the production of dental care in the context of the pandemic, as well as the implementation of appropriate care scenarios.

With this, teaching activities and the planned activities, from then, used collaborative online learning strategies, flipped classroom, formative feedback and integration with Gmail, Google drive, Google Docs, Google Forms and Google Meet tools. In addition, evaluation processes were carried out through an online knowledge survey questionnaire.

In partnership with the Oral Health Coordination of Recife City Hall, they agreed responsibilities and collaborative actions, bringing the integration of teaching even closer to real practice and society. This helped to consolidate the course as a field of practice of the SUS Network for undergraduates, with professors acting as preceptors, with the expansion of specialized care in the area of dentistry.

In addition, this highlighted the course’s commitment to maintaining essential and expanded elective care for users referred by the Basic Health Units of District II, whose oral health teams maintained their own Primary Health Care (PHC) actions, especially in urgent clinical care. Moreover, considering individual and collective risks in the production of care, according to the epidemiological scenario of the municipality, decisions of local authorities and clinical judgment of professionals, besides guaranteeing the availability of PPE shared by municipal and university management.

Public access to the Health Unit was later reorganized by the municipal management by sharing data identification and elective care needs, prioritizing COVID-19 risk groups and dental prenatal care, as well as the care of patients with chronic diseases, other systemic conditions, people with deficiency and the termination of abruptly interrupted treatments in order to avoid the worsening of oral health problems or repercussions on patient’s general health conditions\textsuperscript{14}.

Face-to-face appointments were then carried out by the students, under the supervision of the professors, through tele-dentistry and communication tools widely used by the population: telephone calls, video calls, text or audio messages, WhatsApp, Google applications and social networks such as Instagram and
Facebook, following the guidelines of the national Resolution. The students were then instructed to complete an individual pre-clinical questionnaire for anamnesis and patient selection, confirming their need for oral health and assessing the risk of COVID-19. If there was a report of flu-like symptoms, positive confirmation by COVID-19 test, socializing, contact or risk activity with suspected/confirmed cases, medical evaluation was considered and the face-to-face dental care rescheduled. In cases of emergency care, the patient was instructed to seek emergency dental services of reference in the city of Recife. The guidelines regarding Biosecurity measures such as the use of masks, social distancing, hand hygiene, use of hand sanitizers, reduction of healthcare accompaniment and avoidance of gatherings, were then presented online\textsuperscript{17}.

Elective consultations, under the supervision of professors, adopted the parameters of care optimization, which establish longer consultation times, with the greatest possible number of procedures or the completion of treatment in a single session. This contributed to the rationalization of the use of PPE and to reduce the number of visits from the public to the health unit, except for the cases in which patients were suspected or confirmed as carriers of Sars-Cov2, whose care was then postponed. Thus, the treatment plans were prepared in advance, agreed with the professors and the dental materials used according to the treatment forecast to be applied on the day and separated in advance.

The class was made up of 30 students, distributed in pairs, for 06 shifts. Each pair was supervised, in addition to the preceptors (CEO professionals), by a professor and a stricto-sensu undergraduate or graduate monitor. Dental care was provided in 05 individual offices that provide infrastructure for the follow-up of biosafety measures, aimed at mitigating transmission in the environments of health facilities.

The recommendations of Anvisa (2020)\textsuperscript{18} then advanced to the use of antimicrobial solutions such as oral mouthwashes in dental pre-services. These are therapeutic techniques that can help to reduce the emission of aerosols, promote adequate use of PPE, absolute isolation, as well as use of essential and necessary items for the provision of care and guidance for dressing and undressing.

For air quality management, during the procedures, the service teams were instructed to keep the windows open, favoring the renewal of air in the environment, following the Technical Note GVIMS/GGTES/Anvisa No. 04/202018. Only one service per shift was performed to reduce the possibility of contamination by indirect contact, especially after procedures that spread aerosols and could contaminate surfaces.

In 2021, elective services started on February 8\textsuperscript{th}, followed by the interruption after three weeks of operation due to the state decree at the time, in face of the public health emergency from the new coronavirus, prohibiting face-to-face activity in public universities. The return of face-to-face appointments took place on May 3, 2021.

During the 05 months of restructuring the work process with effective clinical care, around two hundred specialized procedures in oral health were performed, characterized by greater demand for the Oral Surgery specialty. Upon completion of the procedures, patients were counter-referred to the Basic Health Units in order to guarantee the flow of users through these two different levels of health care, consolidating comprehensive care.

The challenges identified during the implementation of this innovative practice scenario were driven by reflections and actions, with innovation and creativity to ratify the need...
to include health workers and managers together with the academic community in the dialogue in search of solving real problems. The approach to the problems involving all the related actors was crucial to subsidize the elaboration of proposals that addressed the issues of individual and collective health care for users.

The suspension of elective dental treatments in the first weeks of the pandemic in Brazil led to the interruption of activities in most Dentistry courses. A process of research, training, discussion and teaching planning strategies was carried out in FOP/UPE throughout the transition period between the suspension and the gradual resumption of activities, guided by the local epidemiological scenarios together with the classification of the types of appropriate care for the different contexts. This ensured the resumption of oral health care with minimal risks to all involved.

In this sense, the possibility of triggering a work process based on the experience of other teams and educational institutions was fundamental.

The study by Sponchiado-Júnior et al. (2021) highlights the impact and operating strategies of public and private undergraduate dentistry courses in Brazil in the pandemic context. Many similarities with the experience reported are perceived in the present report. The authors reveal that from the completion of online questionnaires by the coordinators of the participating courses, most (83.3%) suspended all face-to-face activities and a small portion maintained only emergency care. Few courses completely suspended activities (16.7%), while most maintained theoretical activities via virtual classrooms. Most of the courses (50%) facilitated discussions to ensure the graduation of graduates and 30% adopted alternative means of evaluating students.

The study by Fernandez et al. (2020) collaborated with reflections on the main challenges posed on the activities of dental education in the pandemic scenario. The study characterized an international panorama, permeating the need for adapting education to virtual learning strategies, democratization access to technology, education in the control of infection, adoption of compatible biosecurity measures, family and social conditions favorable to the development of study/work, besides psychological support for teachers, students, technicians and users of educational institutions as key elements in the consolidation of this experience.

Bruzamolin et al. (2020) shared the innovative experience of creating a 360º video that represents a fictitious situation of preparation for dental care of a patient in the surgical center of Universidade Positivo, located in Curitiba, Paraná. The material was intended to serve as a support tool for the student, made available prior to practical activities. The tool is a resource that can be combined with other teaching methods.

Pessoa and Noro (2020) carried out a documentary study of the Pedagogical Projects of the Courses, with the application of a criteria matrix and interview with coordinators of four Dentistry courses in public and private institutions. The authors identified advances in terms of teaching-service integration. However, there was no consensus about students being able to understand the complexity of the SUS in the organization, principles and guidelines, which are often addressed in courses on public health.

With the experience from the pandemic and the change in the form of services in the Faculty of Dentistry of Pernambuco, it is estimated that this assumption is easier to achieve, as it enables the integrated immersion of the actors of training, management and assistance.

These results further encourage the
consolidation of this experience that addresses secondary care in oral health integrated into the SUS, in order to extrapolate the curricular components linked to Collective Health.

3 FINAL CONSIDERATIONS

The undergraduate experiences in the SUS network are in most cases presented as the first opportunity to establish a connection between knowledge and reality for the health professional in Brazil. It is at graduation that the health professional understands the importance of guaranteeing training spaces that provide their personal and professional development. The Dental Specialty Centers present themselves as fundamental equipment for carrying comprehensive care and training, even in the face of the COVID-19 pandemic. The experience presented points out feasible strategies to ensure the maintenance of the role of secondary care in more restricted contexts, such as those of the COVID-19 pandemic.

REFERENCES


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