

Dental care profile at an Urgent Care Unit in the city of Santa Maria, Brazil

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ABSTRACT

The aim of the present study was to analyze documental information to characterize cases of urgent and emergency dental care at an Urgent Care Unit in the city of Santa Maria, state of Rio Grande do Sul, Brazil. A retrospective analysis was performed of data from the records of male and female patients 18 years of age or older in a six-month period. The variables of interest were patient's sex, age and main complaint as well as the procedures performed and duration in the Urgent Care Unit. The sample was composed of 625 patient records. Mean age was 39.6 ± 14.5 years. The main complaint was pain ($n = 190$; 24.4%), followed by edema ($n = 49$; 6.3%). The most frequent procedures were the prescription of medication ($n = 250$; 27.1%) and pulp access ($n = 235$; 25.5%). Follow-up appointments occurred in 189 cases (30.2%) for procedures such as the prescription of medication ($n = 130$; 27%), pulp access ($n = 122$; 26%) and exchange of the intracanal medication ($n = 96$; 20%). Endodontic treatment diminished and extractions increased with the increase in patient age. In summary, the following urgent dental care profile was found: male and female patients with a median age of 37 years who spent less than one hour at the Urgent Care Unit whose main complaint was pain and the most frequent procedure was the prescription of medication.

Descriptors: Dentistry. Oral Health. Public Health. Urgent Care.

1 INTRODUCTION

Brazil is one of the few countries in the world that provides oral health care free of charge through the public healthcare system. According to data from the *Instituto Brasileiro de Geografia e Estatística* (IBGE [Brazilian Institute of Geography and Statistics]) from the mid 2000s, approximately 30 million Brazilians had never been to a dentist¹. Oral health teams were added

to the Family Health Strategy (primary care modality) through Ordinance N°. 1444 on December 28th, 2000², with financial incentives to improve the organization of oral health care. In 2004, the Health Ministry launched the National Oral Health Policy (“Brazil Smiling”)³ to broaden access to treatment and assist in dental care for the population.

In the same period, the National Urgent and

Emergency Care Policy⁴ was issued in 2003 to improve the organization and structuring of the urgent and emergency care network in the country. Urgent Care Units were established through Ordinance n° 1601 of March 7th, 2011⁵ to reduce or replace hospital services. The directive was uninterrupted care 24 hours per day seven days per week. Urgent Care Units are classified as healthcare services of medium complexity and occupy a position among primary care units, the Family Health Strategy and hospitals. Urgent Care Units have different sizes depending on the population of the municipality, physical area, number of available beds, human resources and the daily capacity to provide care. Types I, II and III have the capacity to provide care for 150, 300 and 450 patients, respectively, in a 24-hour period.

According to the Health Ministry, the aim of Urgent Care Units is to concentrate health care of intermediate complexity, composing an organized network together with primary care and hospital care. Access occurs by spontaneous demand, with the reception of patients and their families whenever they seek care. This is followed by communication with a primary care unit, the Family Health Strategy, emergency medical care and hospital units, creating a coherent, effective flow of referrals and counter-referrals. This flow is organized through Urgent Care Regulation Centers⁵.

The concepts of urgent and emergency care are broad and diverse. One of the concepts of urgent dental care is that of immediate measures to resolve symptoms of pain, infections and/or esthetic aspects of the oral cavity⁶. Emergency care is that in which an individual's life is at risk due to the failure of vital functions⁷. According to the Healthcare Protocol – Urgent Dental Care⁸, urgent care in dentistry is that related to acute pain, hemorrhage, abscess, alveolitis and traumatic dental injury. Thus, Urgent Care Units

prioritize the care of acute cases, falls, or the fractures of restorations with esthetic and functional impacts or those that cause soft tissue injuries⁹.

The international literature offers diverse reports on seeking urgent and emergency care, demonstrating a similar demand for procedures compared to what occurs in Brazil. In Korea, 66% of patients seek urgent care for cases of traumatic dental injury¹⁰. Pain is the major cause of seeking treatment in Finland¹¹. In Brazil, the main complaint is pain as a consequence of dental caries or associated with a diagnosis of irreversible, symptomatic pulpitis^{6, 12}.

The national literature reports the poor distribution of patients according to their dental problems, as patients with repair needs are found at Urgent Care Units when such cases could be resolved at a primary care unit. It is extremely important for dental healthcare providers at urgent care services to be general clinicians in order to meet the demands with the necessary skills to alleviate pain and make immediate decisions based on knowledge in different fields of dentistry⁶.

The aim of the present study was to analyze documental information to characterize cases of urgent and emergency dental care at an Urgent Care Unit in the city of Santa Maria, state of Rio Grande do Sul, Brazil, evaluating the patient profile, main complains, procedures performed and duration in the Urgent Care Unit.

2 METHODS

A descriptive, retrospective, observational study was conducted. Data were analyzed from the records of patients who sought the Urgent Care Unit in the city of Santa Maria for dental care in a six-month period (August 2019 to January 2020).

Data collection was performed by two researchers in the morning and afternoon shifts

three times per week after prior authorization from the team of the Urgent Care Unit and approval from the local Human Research Ethics Committee (certificate number: 4.350.695). This study was conducted in accordance with the ethical precepts stipulated in Resolution n° 466/12, which governs studies involving human subjects.

The study was developed in a room at the clinic with a computer. The two researchers evaluated electronic records. The variables of interest were patient's sex, age and main complaint as well as the procedures performed and duration in the Urgent Care Unit.

The inclusion criteria were electronic records of cases of urgent and emergency dental care at least once at the service in which the main complaint, type of procedure and duration in the Urgent Care Unit were available on male and female patients 18 years of age or older. Incomplete records and those of individuals less than 18 years of age were excluded.

The purpose of the study was to gain knowledge on the population that seeks dental care at the Urgent Care Unit as well as characteristics and indicators that could benefit the service. Moreover, as a pilot study, the results of this investigation could be used to guide further studies. As a documental study, the risks were minimal and the researchers ensured patient anonymity and the confidentiality of the data as well as the non-handling of data for purposes other than the present study.

The data were tabulated with the aid of Microsoft Excel (Microsoft, Richmond, WA, USA) and submitted to descriptive statistics. Associations between age and procedures performed were evaluated using the chi-squared test, with the significance level set at 5% ($p < 0.05$). Statistical analysis was performed with the aid of the SPSS 18.0 program (IBM, Armonk, NY, USA).

3 RESULTS

Cases of urgent and emergency dental care at the Urgent Care Unit of the city of Santa Maria in southern Brazil were characterized by the male sex and duration of less than one hour. Pain was the main complaint and the prescription of medication was the most frequent procedure.

The records of 625 patients were examined, totaling 724 appointments and 920 procedures in the six-month period analyzed. Patient age ranged from 18 to 91 years, with a mean of 39.6 ± 14.5 years and median of 37 years, corresponding to the adult phase. Three hundred four patients (48.6%) were women and 321 (51.4%) were men (table 1).

Duration at the Urgent Care Unit ranged from 0 to 662 minutes. Three hundred eighty-three patients (50.2%) remained at the service for less than one hour; 293 (38.3%) remained between one and two hours; 46 (6.2%) remained between two and three hours; and 41 (5.3%) were at the service for more than three hours (table 2).

Pain was the most frequent main complaint, occurring in 190 (24.4%) of the cases, followed by edema ($n = 49$; 6.3%), sensitivity ($n = 6$; 0.8%) and other complaints ($n = 14$, 1.5%). A total of 518 (67.0%) of the records had no information on the main complaint (table 3). The most frequent procedure was the prescription of medication for pain relief ($n = 250$; 27.1%), followed by pulp access ($n = 235$; 25.5%), the exchange of intracanal medication ($n = 141$; 15.3%), extraction ($n = 111$; 12.1%), temporary filling ($n = 76$; 8.3%) and others ($n = 107$; 11.7%) (table 4).

Among the 625 patients, 189 (30.2%) returned for follow-up appointments in the six-month period. The most frequent procedure at the follow-up appointments was the prescription of medication ($n = 130$; 27.0%), followed by pulp access ($n = 122$; 26.0%), exchange of intracanal medication ($n = 96$; 20.0%) and others ($n = 127$;

27.0%) (table 5).

Type of procedure was associated with patient age, which was divided into two groups

by the median. Endodontic treatment diminished and extractions increased with the increase in patient age (table 6).

Table 1. Distribution of patients according to sex

Sex	n	%
Female	304	48.6
Male	321	51.4
Total	625	100.0

Table 2. Distribution of patients according to duration in Urgent Care Unit

Time (minutes)	n	%
0-60	383	50.2
61-120	293	38.3
121-180	47	6.2
More than 181	41	5.3
Total	764	100.0

Table 3. Distribution of patients according to main complaint

Complaint	n	%
Pain	190	24.4
Edema	49	6.3
Sensitivity	6	0.8
Trismus	5	0.5
Fracture	5	0.5
Mobility	3	0.4
Pericoronitis	1	0.1
No information	518	67.0
Total	777	100.0

Table 4. Distribution of patients according to procedure performed

Procedure	n	%
Prescription of medication	250	27.1
Pulp access	235	25.5
Exchange intracanal medication	141	15.3
Extraction	111	12.1
Temporary filling	76	8.3
Assessment	24	2.6
Oral hygiene counseling	22	2.4
Drainage	18	2.0
Suture removal	14	1.5
Scraping and planing	11	1.2
Referral	7	0.8
Prosthesis adjustment	6	0.7
Restoration	5	0.5
Total	920	100.0

Table 5. Distribution according to return of patients and procedures performed

Patients	n	%
Total number of patients	625	70.0
Return patients	189	30.0
Procedure	n	%
Prescription of medication	130	27.0
Pulp access	122	26.0
Exchange of intracanal medication	96	20.0
Others	127	27.0
Total	475	100.0

Table 6. Distribution of type of procedure according to age group

Procedure	Age group		p-value
	Up to 37 years	More than 37 years	
Endodontic	227 (47.3%)	149 (33.9%)	<0.001
Restoration	179 (37.3%)	151 (34.4%)	
Extraction	29 (6.0%)	82 (18.7%)	
Other	45 (9.4%)	57 (13.0%)	

chi-squared test

4 DISCUSSION

Urgent Care Units are classified as services that provide procedures of intermediate complexity, the purpose of which is to reduce services of the Family Health Strategy, primary care units and hospitals, offering urgent care to the population seven days per week 24 hours per day¹³ with the aim of resolving acute cases¹⁴. Patients who access Urgent Care Units are first assessed according to their needs, after which the service is offered.⁹ The present study involving the collection of data from 625 records of patients who received care in a six-month period revealed that, in practice, the distribution of these patients does not occur in an adequate manner based on their needs and the urgent services offered, as the need for procedures such as the exchange of intracanal medication (15.3%) and the removal of sutures (1.5%) could be performed at a Family Health Strategy unit or primary care unit located closer to the patient's place of residence⁹.

Men predominated slightly in the sample, but the difference between sexes was not statistically significant. Studies found in the literature offer diverse results. In a study conducted in Korea, 62.7% of patients who sought emergency services were male¹⁰. In contrast, Paula *et al.* (2012)¹⁴, Pinto *et al.* (2011)⁶ and Cassal *et al.* (2012)¹⁵ found that the female sex predominated, accounting for 61.7%, 63.4% and 77.0% of the samples, respectively.

Patient age ranged from 18 to 91 years, with a mean of 39.6 ± 14.5 and median of 37. Individuals up to 37 years of age sought care for procedures related to endodontic treatment, whereas older individuals sought treatment seen as "mutilating", such as extractions. The holdover of a care model centered on mutilating practices with low resolute power for the oral problems of the adult population remains common, especially among older Brazilians,

which ends up resulting in edentulism and a high demand for prosthetic treatment^{5,16,17}. Data from an epidemiological survey conducted in 2010 revealed that more than three million older adults required complete dentures in at least one of the arches and more than four million required partial dentures⁵.

Duration in the Urgent Care Unit ranged from 0 to 662 minutes, counting from the moment of first contact with reception to the end of the consultation. However, bias in terms of this information is immense due to the lack of standardization in the data entry process of the system. For instance, information was found in patients records of a stay of more than 24 hours at the service. No studies were found in the literature addressing information on the duration of patients at urgent care services.

Pulp access and the prescription of medication for pain relief were the most frequently performed procedures. Pain was the most common main complaint registered in the records. Studies in the literature confirm the need for oral health counseling. Cassal *et al.* (2012)¹⁵ found that the search for urgent care was associated with pain (70%) and pulp disease (49%), which is in agreement with the present findings. Nomura *et al.* (2002)¹⁸ also found that pain (33.7%) was one of the main reasons that lead patients to seek urgent dental care.

In the present investigation, 30% of the patients returned for further care at the Urgent Care Unit in the six-month period, mainly for the exchange of intracanal medication subsequent to pulp procedures, which could have been performed at other non-urgent services (Family Health Strategy, primary care unit or Dental Specialty Center). Such orientation should have been given after the urgent care procedure. This suggests difficulty in gaining access to such services and a failure in the referral and counter-referral process for patients from the urgent care

system to primary care. According to Pinto *et al.* (2011)⁶, many patients do not finalize or continue dental treatment following urgent care, abandoning treatment after the resolution of the problem that led to them to the urgent care service. Hypotheses have been raised regarding the reasons for not finalizing or giving continuity to treatment, such as dental fear/anxiety, the impossibility of missing work, delays in the scheduling of treatment at Dental Specialty Centers and having moved to another neighborhood distant from the Family Health Strategy unit in the previous neighborhood⁶.

Some limitations were observed, such as the lack of standardization in completing the patient records, incomplete data, difficulty in the definition of the main complaint, a lack of access to referrals and a lack of referral and counter-referral flow in the system. Thus, further studies with a broader scope are needed for a more in-depth analysis and characterization of patients who seek urgent and emergency care services in the city of Santa Maria in southern Brazil to outline planning and concrete proposals for the solution of this problem. We also suggest oral health promotion and disease prevention strategies that can expand knowledge to diverse population groups, leading to the better distribution of resources and the reorganization of the population in accordance with care units and their needs.

5 CONCLUSION

In summary, the following care profile was found in the present study: age between 19 and 91 years, with a median of 37 years, corresponding to the largest portion of patients who had access to urgent care; no significant differences between the sexes; the prescription of medication for pain relieve was the most frequent procedure, followed by pulp access; average

duration at the Urgent Care Unit in the city of Santa Maria, RS, Brazil was up to 60 minutes.

RESUMO

Perfil do atendimento odontológico na Unidade de Pronto Atendimento do Município de Santa Maria

O objetivo do estudo foi buscar informações documentais para caracterizar casos de urgências e emergências odontológicas na Unidade de Pronto Atendimento (UPA), em Santa Maria/RS. Para isso, realizou-se uma análise retrospectiva de dados nos prontuários dos pacientes de ambos os sexos e maiores de 18 anos, no período de seis meses. A amostra foi coletada de acordo com o perfil do paciente e levou-se em consideração: queixa principal, procedimentos realizados, tempo de permanência na UPA, sexo e idade. A amostra foi composta por dados de 625 prontuários. A média de idade dos usuários foi de 39,6±14,5 anos. A principal queixa encontrada foi a dor (190, 24,4%), seguida de edema (49, 6,3%), enquanto prescrições de medicamentos (250, 27,1%) e acesso à polpa (235, 25,5%) foram os procedimentos mais realizados. O retorno de consultas no período analisado se deu em 189 (30,2%) dos casos, para realização de procedimentos como prescrição de medicamentos (130, 27%), acesso à polpa (122, 26%) e troca de medicação intracanal (96, 20%). Concluiu-se que, à medida em que a idade dos pacientes aumenta, os tratamentos endodônticos diminuem e as exodontias crescem. Além disso, foi possível identificar o perfil da população atendida: pacientes de ambos os sexos, com idade mediana de 37 anos, cujo tempo de permanência na UPA foi inferior a 1 hora, tendo como queixa principal a dor, enquanto o procedimento mais realizado foi a prescrição de medicamentos.

Descritores: Odontologia. Saúde Bucal. Saúde Pública. Urgências.

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