



Traceability of users attended at the Reception and Emergency Care Center of a dental clinic-school


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Abstract The objective of this study was to verify the traceability of patients attended in the emergency sector of the Reception and Emergency Care Center of the Federal University of Pernambuco (NAPA-UFPE), the time elapsed between their referral and the continuity of treatment at the institution, in addition to identifying the users' profile. This is a descriptive observational study, with data collection from the physical and electronic medical records of patients treated in the second half of 2014 (2014.2) and in the first half of 2015 (2015.1). A total of 373 medical records were analyzed. There was a higher prevalence of females and an age group between 20 and 59 years in both semesters. The traceability revealed that 40.75% of the patients continued their treatments at the institution. Moreover, 31.20% and 82.00% of the patients in the 2014.2 and 2015.1 semesters continued with the elective treatment up to 30 days after the emergency care, respectively. In conclusion, traceability revealed a higher prevalence of females and the adult age group. The number of patients who continued treatment at the institution within 30 days after referral was within the expected range, considering the characteristics of the teaching clinics.

Descriptors: Dental Health Services. Dental Care. Ambulatory Care.

Trazabilidad de los usuarios atendidos en el Centro de Acogida y Urgencias de una clínica-escuela de odontología

Resumen El objetivo de la investigación fue verificar la trazabilidad de los pacientes atendidos en el sector de urgencias del Centro de Recepción y Atención de Urgencias de la Universidade Federal de Pernambuco (NAPA-UFPE), el tiempo transcurrido entre su derivación y la continuidad del tratamiento en la institución, además de identificar el perfil de los usuarios. Se trata de un estudio observacional descriptivo, con recolección de datos de los registros físicos y electrónicos de pacientes atendidos en el segundo semestre de 2014 (2014.2) y en el primer semestre de 2015 (2015.1). En total se analizaron 373 historias clínicas. En ambos semestres hubo mayor prevalencia del sexo femenino y del grupo de edad entre 20 y 59 años. La trazabilidad reveló que el 40,75% de los pacientes continuaron sus tratamientos en la institución. En los semestres 2014.2 y 2015.1, respectivamente, el 31,20% y el 82,00% de los pacientes continuaron con el tratamiento electivo hasta 30 días después de la atención de emergencia. En conclusión, la trazabilidad reveló una mayor prevalencia del sexo femenino y del grupo etario adulto. El número de pacientes que continuaron el tratamiento en la institución dentro de los 30 días posteriores a la derivación estuvo dentro del rango esperado, considerando las características de las clínicas docentes.

Descriptoros: Servicios de Salud Dental. Atención Odontológica. Atención Ambulatoria.

Rastreabilidade dos usuários atendidos no Núcleo de Acolhimento e Pronto Atendimento de uma clínica-escola de Odontologia

Resumo A pesquisa teve como objetivo verificar a rastreabilidade dos pacientes atendidos no setor de urgência do Núcleo de Acolhimento e Pronto Atendimento da Universidade Federal de Pernambuco (NAPA-UFPE), o tempo decorrido entre seu encaminhamento e a continuidade do tratamento na instituição, além de identificar o perfil dos usuários. Trata-se de estudo observacional descritivo, com coleta de dados a partir dos prontuários físicos e eletrônicos dos pacientes atendidos no segundo semestre de 2014 (2014.2) e no primeiro semestre de 2015 (2015.1). Ao total, foram analisados 373 prontuários. Em ambos os semestres houve maior prevalência do sexo feminino e da faixa etária entre 20 e 59 anos. A rastreabilidade revelou que

40,75% dos pacientes continuaram seus tratamentos na instituição. Nos semestres 2014.2 e 2015.1, respectivamente, 31,20% e 82,00% dos pacientes prosseguiram com o tratamento eletivo até 30 dias após a realização do atendimento de urgência. Em conclusão, a rastreabilidade revelou maior prevalência do sexo feminino e da faixa etária adulta. O quantitativo de pacientes que deram continuidade ao tratamento na instituição em até 30 dias após o encaminhamento esteve dentro do previsto, considerando-se as características das clínicas-escola.

Descritores: Serviços de Saúde Bucal. Assistência Odontológica. Assistência Ambulatorial.

INTRODUCTION

Dental urgencies are included in the first level of healthcare and are defined as the care provided to patients suffering from acute conditions or exacerbations of chronic pathologies who are attended without prior appointment. Most of these urgencies involve cases of acute infections of endodontic or periodontal origin¹. Dental caries are identified as the main cause of emergency care in dental clinics, whether in children or adults²⁻⁴. However, there are urgencies arising from impaired masticatory function, as well as dental trauma and acute oral mucosa conditions¹.

The demand for the service is mainly motivated by pain which can cause a loss in working days, in addition to impairing the performance of school and daily activities, negatively impacting the individual's psychosocial well-being and quality of life^{2,4}.

There are a variety of demands detected in emergency services that require a generalist attitude from the dentist, involving knowledge from different areas, in addition to their own skills and abilities for making immediate decisions that solve or alleviate pain^{1,2}.

Higher education institutions with dental teaching clinics must be articulated with other service points through referral and counter-referral flows. The Dentistry Course at the Federal University of Pernambuco (Universidade Federal de Pernambuco - UFPE) is structured in this model. It provides emergency dental services to the community through the Nucleus of Reception and Emergency Care [Núcleo de Acolhimento e Pronto Atendimento] (NAPA), and offers initial reception to users of the teaching clinics, seeking to resolve urgent situations and offering care aimed at basic and specialized care.

Comparing the evolution in emergency treatments over a period of 80 years, it was found that there were significantly fewer dental extractions as a form of treatment (from 34% to 2%), showing that treatments in the current century have been more conservative⁵. However, most emergency dental procedures are inconclusive and require further treatment^{6,2}. It was also found that only 37.2% of users continue and complete treatment².

The resolution of emergency services consists of solving the immediate complaint of users. However, patient follow-up is essential to provide care continuity. Thus, there must be an organized care structure and an effective database system capable of showing the path taken by the patient during his/her care trajectory (traceability). In this way, the aim of this study was to analyze the traceability of patients attended in the emergency sector of NAPA-UFPE, identifying the users' profile, the treatment continuity and the time elapsed between referral and the first elective care at the institution.

METHOD

A descriptive observational study was carried out with data collected by evaluating physical and electronic records, approved by the Research Ethics Committee of the UFPE (Opinion 1.059.204, CAAE: 43686515.2.0000.5208). All the medical records of NAPA-UFPE users who sought the service for urgent care were analyzed in the academic semesters from 2014.2 to 2015.1, a period in which the service was operating at full capacity.

Records with incomplete and/or inaccurate data were excluded. A researcher transcribed the information on a data collection form, which was then checked by a second researcher. The variables analyzed were: age, gender, referrals made and case resolution.

Traceability data were obtained after accessing the NAPA electronic medical records system (Odonto Way Ensino, LS Sistemas, Vila Velha, ES, Brazil). To do so, an administrative password was created which enabled visualizing the patient's journey after the emergency (traceability). Thus, it became possible to establish whether continuity of care was offered to the user and not just the procedure on an urgent basis.

The data were organized in electronic spreadsheets and submitted to descriptive and inferential statistics, with a significance level of 5%. STATA/SE 12.0 (StataCorp, College Station, TX, USA) and Excel 2010 (Microsoft, Redmond, WA, USA) software programs were used.

The results are presented as absolute and relative frequencies; numerical variables are represented by central tendency and dispersion measures. The existence of an association between categorical variables was assessed using the Chi-squared and Fisher's exact tests, and between quantitative variables using the Kolmogorov-Smirnov test. A comparison between groups was performed using the Student's t-test or Mann-Whitney test, depending on the normal or non-normal distribution, respectively.

RESULTS

A total of 373 medical records were included in the study. Of these, 227 (60.90%) were urgent care provided in the 2014.2 semester. The characterization of the sample studied showed a prevalence of females for both semesters (Figure 1), as well as a predominance of emergency care for adults (Figure 2).

Positive traceability was represented by users returning to the institution to continue the treatment, and was found to be 44.90% in 2014.2 and 34.24% in 2015.1 (Figure 3). A statistically significant difference was observed when comparing semesters. Adding up the results of the evaluated semesters, 152 (40.75%) of the 373 patients treated had the opportunity to continue the treatment at the UFPE teaching clinics.

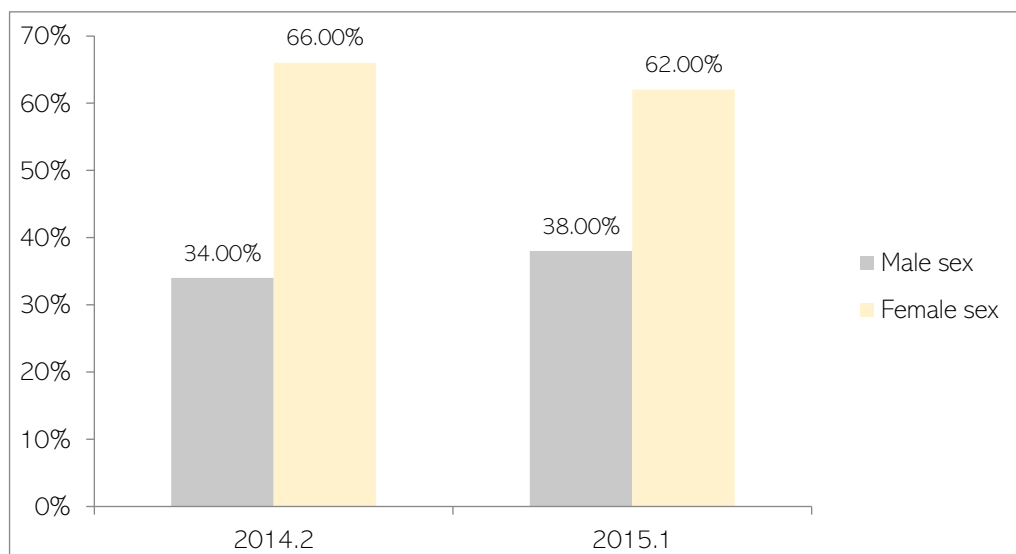


Figure 1. Profile of users who received emergency care at NAPA regarding gender in the 2014.2 and 2015.1 semesters.

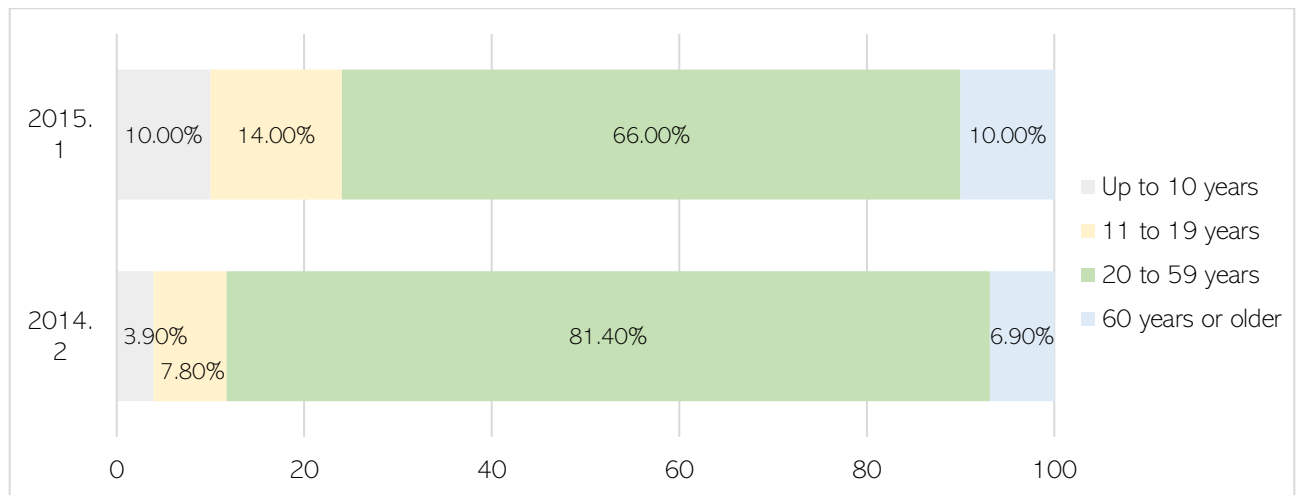


Figure 2. Profile of those who received emergency care at NAPA regarding age in the 2014.2 and 2015.1 semesters.

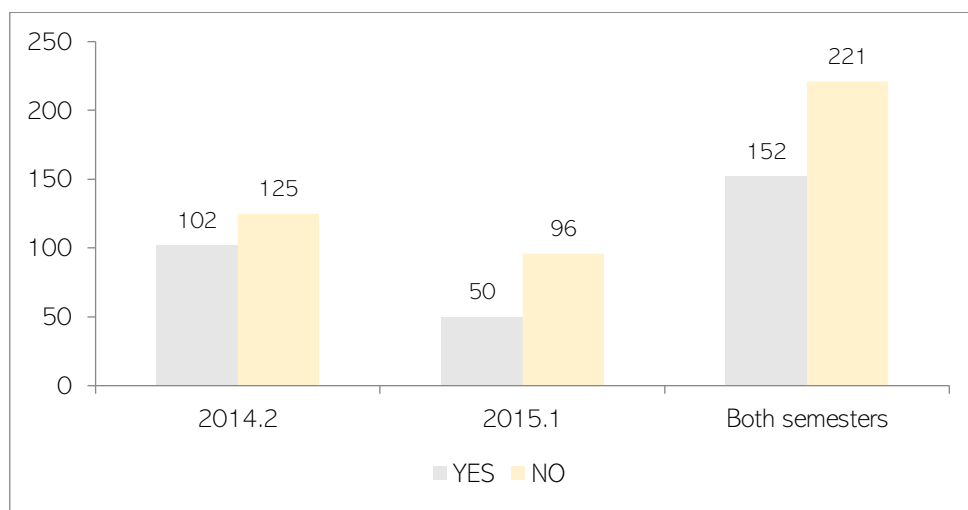


Figure 3. Comparative analysis of the number of cases by traceability (positive - YES and negative - NO) in each evaluated semester ($p=0.040$, chi-squared test).

Table 1 shows the time elapsed between emergency care and the start of care at the UFPE teaching clinics. It was found that 31.20% and 82.00% of patients had the opportunity to continue treatment for up to 30 days in the 2014.2 and 2015.1 semesters, respectively. More than 20.00% of patients returned after only 180 days in the 2014.2 semester, while there was a reduction in this time in 2015.1, reaching a maximum of 90 days of waiting. Table 2 compares the 2014.2 and 2015.1 semesters according to the institution's clinics to which the patients were referred after emergency care. These referrals were made to comprehensive clinics, distributed according to specific age groups, or to specialized clinics and internships.

DISCUSSION

The lower number of emergency consultations performed in the 2015.1 semester reflects the stoppages that occurred as a result of employee strikes, school recess and a maintenance period for the service's equipment.

There was a prevalence of females and adults (20-59 years old) among the patients seen in both evaluated semesters. Furthermore, by adding the results of the two semesters, positive traceability corresponded to a percentage of 40.75% and proved to be significantly variable between the evaluation periods. These data reveal the need to increase the productive capacity of teaching clinics for greater care resolution. However, it should be considered that these services are performed by students in the learning process under the guidance of teacher-tutors. Thus, the value is within the forecast.

Table 1. Comparison between the semesters regarding the time elapsed between the urgency and the appointment to continue the treatment ($p < 0.001$, Fisher's Exact test).

Time (in days)	Semester	
	2014.2 n (%)	2015.1 n (%)
Up to 30	32 (31.40)	41 (82.00)
31-60	11 (10.80)	8 (16.00)
61-90	7 (6.90)	1 (2.00)
91-120	4 (3.90)	-
121-150	9 (8.80)	-
151-180	15 (14.70)	-
Over 180	24 (23.50)	-

Table 2. Comparison between semesters regarding the institution's clinics to which patients were referred after emergency care ($p=0.034$, Fisher's exact test).

Clinic	Semester	
	2014.2 n (%)	2015.1 n (%)
Comprehensive Clinic 1 (Primary Care for Adults)	11 (10,80)	1 (2,00)
Comprehensive Clinic 2 (Adolescent Care)	8 (7,80)	2 (4,00)
Comprehensive Clinic 3 (Care for the Elderly)	2 (2,00)	1 (2,00)
Comprehensive Clinic 4 (Adult Care)	11 (10,80)	2 (4,00)
Comprehensive Clinic 5 (Child Care)	3 (2,90)	1 (2,00)
Stomatology	1 (1,00)	1 (2,00)
Periodontics	11 (10,80)	1 (2,00)
Pediatric Dentistry	2 (2,00)	3 (6,00)
Special Patients	2 (2,00)	1 (2,00)
Surgery	4 (3,90)	7 (14,00)
Internship 1	16 (15,70)	6 (12,00)
Internship 2	31 (30,30)	24 (48,00)

With respect to the time between emergency care and the continuation of clinical treatment, it was found that 76.50% of the visits in the 2014.2 semester occurred within 6 months. It was observed that 100.00% of users received proper treatment within 3 months for the 2015.2 semester.

In addition, considering the results of the studied semesters, the clinics that received the most patients from the emergency room were Internships 1 and 2. These disciplines offer comprehensive care with a higher workload than the others, which would explain the greater number of treatments offered to the population. The Internship 2 teaching clinic carried out its activities during the implantation phase of the UFPE Dental Specialties Center (Centro de Especialidades Odontológicas - CEO), characterized as a secondary care network, offering specializations of periodontics, endodontics, patients with special needs requiring specialized care, oral diagnosis and minor oral surgery^{7,8}.

The research findings were similar to those of other studies which reported a greater predominance of females^{2,5,6,9,10,11}. Authors explain the higher prevalence due to the fact that women are more concerned with aesthetic issues⁹ and value self-care, mainly for cultural reasons. This is due to the rooted ideology that men should be strong and invulnerable, so seeking the health service could represent weakness and insecurity, so they tend to only seek help as a last resort¹².

Regarding the age group most observed in emergency services, this study was in agreement with other studies which demonstrate a greater presence of adults, especially in the range between 19 and 34 years (35.46%), 35 and 59 years (33.93%)⁹, 18 and 30 years old (42.10%)², and from 20 to 44 years⁶. In this context, it was found that caries and other complications arising from this disease, as well as periodontal diseases, remain highly prevalent in the adult population^{9,11,13}.

Studies have observed that there has been a constant decrease in the search for urgent care in older age groups^{2,14}. The authors hypothetically explain that the lower rate of individuals aged over 51 years occurs because this portion of the population is composed of partially toothless people. For this reason, they are less prone to dental problems and consequently require less emergency services². Similar results were obtained in the present study, in which the percentage of older individuals was significantly lower.

It was possible to observe that the age group from 11 to 19 years old was the second most prevalent in this study. In this context, although the present study did not compare age, sex and reason for urgency, studies which correlated these variables observed a higher prevalence of dental trauma in individuals with an average age of 14.7 years and male, which represents 8.00% of patients who seek help in dental emergency services¹⁵. It should also be added that dental emergencies in children and adolescents seem to predominate in males^{3,15,16}, which can be explained by the higher risk of traumatic emergencies caused by falls and sports and recreational accidents¹⁵.

A study carried out with public service users in the municipality of Embu das Artes in Brazil showed an association between emergency dental care and variables such as household crowding, more children, lower family income and history of smoking¹¹. In this context, a study carried out in the United States evaluated the social determinants of health related to a high number of visits to the emergency department, verifying that low-income patients and residents of rural areas were more frequent¹⁴.

Chronic diseases and/or risk factors such as diabetes, smoking and hypertension are related to a higher probability of the individual receiving an oral surgery procedure such as tooth extraction in a dental emergency room. Findings such as these reveal the importance of comprehensive primary care which acts in health promotion and disease prevention, along with the provision of other dental services¹⁷.

Only the most prevalent age and age group were analyzed to outline the profile of the patients evaluated in this study. However, it would be interesting if other epidemiological factors and health determinants addressed in some studies were jointly evaluated^{11,14,17}, such as the socioeconomic and regional profile, in addition to variables such as the quality of oral hygiene and systemic factors that aggravate health conditions, for example.

From another perspective, the present study presented a differential in relation to other similar studies in the literature, since it addressed the traceability of patients treated in the emergency sector, tracing an overview between emergency treatment and continuity of specialized clinical treatment. Therefore, the study proves to be of great importance, since it evidenced the capacity of the teaching clinics of the UFPE in meeting demands for treatment after emergency care. Thus, it was possible to analyze the resolution of the service provided.

The data collection interval evaluated in this study, corresponding to the second half of 2014 and the first half of 2015, is justified by the fact that it was the operating period of the institution's emergency service, in which there were day and night operations. The lack of teachers in the following years culminated in the service being deactivated. Consequently, the data presented show the importance of welcoming emergency cases and reinforces the need to reactivate the service in question, as well as a subsequent care network. Therefore, the information presented herein will also be important for future studies aimed at a comparative analysis with the pre-pandemic period explored in this investigation.

Finally, it is proposed that new studies with a longer evaluation time be carried out, preferably randomized and controlled

clinical trials, which represent a higher level of scientific evidence¹⁸. Such studies should address the traceability of patients and the continuity of treatment after emergency care, as the literature has shown to be scarce on this topic. In addition, it is suggested to trace the complete epidemiological profile of the individual in order to analyze determinant variables in health and factors related to systemic health that may influence the need for urgent care in Dentistry.

CONCLUSIONS

Traceability of emergency dental care performed at NAPA-UFPE during the 2014.2 and 2015.1 semesters revealed a higher prevalence of females and the adult age group. The number of patients who continued their treatments at the institution was within the forecast, since the care is provided by supervised students in the training process. Most patients were able to proceed with the treatment within 30 days after emergency care.

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