Residência RP Pediátrica
Publicação Oficial da Sociedade Brasileira de Pediatria
ISSN-Online: 2236-6814

Submitted on: 11/16/2022
Approved on: 07/12/2023

ORIGINAL ARTICLE

Inappropriate use of the Pediatric Emergency Room

Ana Carolina de Andrade Rodrigues[1], Rafaela Catelan Martins Pereira[2], Thanile Lais da Silva[1], Isabella Andreazza de Freitas[1], Beatriz Cassolatti Graciolli[1], Joelma Gonçalves Martin[2], José Roberto Fioretto[2].

Keywords:
Unified Health System,
Pediatric Emergency Medicine,
Emergency Service, Hospital,
Child Care,
Pediatrics.

Abstract

Objective: To identify the reasons for seeking the Pediatric Emergency Room (PER) of a city in the state of São Paulo and define the profile of users who seek the service. **Method:** Observational prospective study conducted from February to August 2021, through structured interviews with guardians of children taken to the PSP with a form developed for the research containing sociodemographic and clinical information, in addition to the emergency classification at the time of triage. Data were presented as mean ± standard deviation (SD) or absolute frequency and percentage. **Results:** A total of 252 caregivers were interviewed, with the majority being mothers (76.2%) or fathers (15.9%), with a mean age of 32 years (SD=±8.7). High or moderate level of concern about the childs health status was answered by 91.6% of caregivers, although most cases were classified at screening as minor or not urgent (77.3%). **Conclusion:** The level of concern of the caregiver and the belief that PER provides more effective care motivated the non-urgent search for this service. The data reflect the need for health education to raise awareness of the flow of care in the Unified Health System, identifying primary health care as the gateway to the system and the PER as a place intended for urgent and emergency care. Ultimately, it is intended to contribute to the provision of care in a qualified manner to the comprehensive health of the child.

[1] Universidade Estadual Paulista (UNESP), Medicina - Botucatu - São Paulo - Brazil.
[2] Universidade Estadual Paulista (UNESP), Pediatria - Botucatu - São Paulo - Brazil.

Correspondence to:
Rafaela Catelan Martins Pereira.
Universidade Estadual Paulista. 95, R. Jorge Barbosa de Barros, 1 - Jardim Paraíso, Botucatu/SP, 18610-304. E-mail: rafaela.catelan@unesp.br; rafaela.catelan@gmail.com

DOI: 10.25060/residpediatr-2024.v14n1-986

This work is licensed under a Creative Commons Attribution 4.0 International License.

INTRODUCTION

There are many reasons why parents and guardians seek out the Pediatric Emergency Room (PER) units of the Brazilian Public Healthcare System (SUS). Fever, cough and/or difficulty breathing are some of the most frequent examples that worry families and become the main reasons for seeking care in hospitals, and emergency rooms. For the most part, such symptoms require little or no complementary therapeutic or diagnostic intervention, capable of being resolved in less complex services.[1]

In the SUS, healthcare services are organized in such a way as to guarantee broad access and full coverage to the population, based on complexity of care.[2] Namely, based on this organizational structure, primary care services, as the name suggests, are characterized by a set of healthcare actions, at the individual and collective level, which encompass the promotion and protection of health, the prevention of health problems, diagnosis, treatment, rehabilitation, reduction of damage and health maintenance with the aim of developing comprehensive care that positively impacts the health situation of the community.[3] Therefore, within the scope of the RAS, it is configured as the gateway to the SUS and the center that organizes care.

The intermediate level of care is the responsibility of the Mobile Emergency Care Service, the Emergency Care Units (ECU) and medium and high complexity care provided in hospitals and emergency rooms (ER). In this way, an ER is organized within the health system to operate 24 hours a day, uninterruptedly, with the aim of serving anyone who seeks it, without prior scheduling or limit of appointments, on an urgent or emergency basis.[4]

Characteristically, due to the guarantee of immediate care, the Pediatric Emergency Room (PER) becomes an environment of high demand for parents and guardians seeking medical help, even for non-urgent reasons. Due to inefficiencies in dealing with demand or difficulty in accessing assistance in Basic Healthcare Units (BHU) and Healthcare Centers (HC)[5], many parents and guardians choose the PER healthcare services not only because of their geographic location, but also for their resolution, quality of service, guarantee and agility in access, for positive experiences in the past and for the reception provided.[6] Another factor that also contributes to the search for emergency help in these cases is related to the anxiety of the patient and family, the which is closely linked to the trust they have in emergency services, in addition to not being able to correctly assess which situations are legitimate in seeking such care.[7] According to Northington, Brice and Zou (2005), 76% of the people who attend the emergency room, they unnecessarily do so because they believe they receive better care there.[8]

However, the use of emergency services for non-urgent medical care is a problem,[9,10] as it leads to overcrowding in emergency rooms, leading to longer waits and consequent exposure to a greater number of infectious agents, leading to cross-infections,[11] user dissatisfaction,[12] the overload of healthcare professionals[1] and the greater probability of worse results for patients who really need urgent care.[13] Furthermore, non-urgent care in an emergency service instead of primary care is more costly and can generate excessive healthcare expenditure on unnecessary diagnostic tests and treatments.[14,15,16] Furthermore, there is a reduction in continuity of care,[17] which represents a missed opportunity to promote the doctor-patient relationship in primary care,[18-24] and results in a lack of preventive treatment and adequate therapy for chronic conditions.[25]

In this context, this scenario is seen in a municipal Pediatric Emergency Room that provides urgent and emergency care to patients aged 0 to 14 years, 11 months and 29 days, with reception with risk classification and a defined flow with external services (SAMU, COBOM, CAPS) and internal. According to data from January to September 2019, this PER had 36,307 consultations, carrying out a total of 22,284 exams, 766 hospitalizations and 2,219 consultation requests, which demonstrates the importance and demand for this service.[26]

Therefore, in view of the above, this study aims to identify users' perception of the resolution of their needs in the PER, as well as the factors that determine parents' decision to seek emergency services, instead of primary service units. In this way, it is possible to contribute to the reorganization of the flow of patients in the municipality's healthcare services, in order to optimize the resolution of the assistance provided at the primary level of care, improving the care of the population and the work of the healthcare professionals involved in medical care in the municipality, even more so in times like the current one, given the SARS-COV-2 pandemic, where the search for medical assistance must be rational so as not to overload services or fail to assist cases of greater severity.

This study aims to:

1- Identify the reasons for seeking the Pediatric Emergency Room in a city in the State of São Paulo.

2- Outline the profile of users who seek emergency services.

3- Finally, contribute to the provision of qualified care for a child's overall health.

METHOD

Study design

This is a prospective observational study carried out in a Pediatric Emergency Room (PER).

The study was approved by the Institutional Research Ethics Committee (opinion No. 4,569,317) and participation took place by signing an Informed Consent Form.

Study participants

This study was developed with a non-probabilistic convenience sample,[27] made up of 252 parents or legal guardians of children taken to the PER. There were no eligibility criteria for inclusion and/or exclusion, so all guardians present in the waiting room on data collection days were invited to participate in the study.

Data collection

The data were collected from February to August 2021 in the PER waiting room. The invitation to the guardians took place randomly and all of them were invited, that is, all the guardians who entered the PER, after being screened by the nursing team, were approached by the researchers and invited to participate in the interview.

Data collection was done using printed forms, applied individually by the researchers, in a "face-to-face" situation with the interviewee, from Mondays to Fridays, at all times (morning, afternoon and night), to highlight the differences in demands in each period of the day.

Study Instruments

The data collection instrument was a form (complementary document 1), prepared by the team for this research, containing socio-demographic and clinical information about the patient and their guardians, namely: origin, arrival time, name and age of the patient, degree of kinship, education and age of the person responsible, complaint and duration, which led to seeking the health service, and, finally, the risk classification offered in the triage of care by the nursing team, based on an adaptation of the Manchester Protocol – "blue" (not urgent), "green" (little urgent), "yellow" (urgent), "orange" (very urgent) and "red" (emergency).

Data analysis

The results were presented as mean, standard deviation and median (minimum – maximum), or absolute frequency and percentage, depending on the type of variable. All analyzes were carried out using the Microsoft Excel program, Office 2019 version.

RESULTS

Sample characterization

Among the 252 families interviewed, in relation to the data of those responsible, the majority of children were accompanied by their mother (76.2%) or father (15.9%), the education profile was mostly completed high school (53 .2%), followed by completed Higher Education (14.3%), ages ranged from 16 years to 58 years, with an average of 32 years (SD± 8.7 years). Among the tutors interviewed, the majority (82.1%) came from the city where the study was carried out.

Regarding the clinical characteristics of the children, their ages ranged from 8 days of age to 14 years, with a mean of 3 years (SD± 4.8 years). The general symptoms reported included pain (abdominal, odynophagia, dysuria) with 40.1% of responses, followed by fever (20.2%), gastrointestinal symptoms (vomiting, diarrhea and/or nausea) with 19.4% and respiratory symptoms (cough, runny nose, nasal obstruction, dyspnea) with 13.1% of responses.

The socio-demographic and clinical characteristics of the patient and their guardians are described in table 1.

When asked about the level of concern about the child's health status at that moment, the majority reported a high level of concern with 53.8% of responses, secondly a moderate level of concern (37.8%) and the minority of responses a low level of concern (8.4%). In comparison, the majority of cases (77.3%) were classified in the triage as non-urgent (green) or non-urgent (blue), respectively 72.5% and 4.8%, categories that represent care that can wait from 120 to 240 minutes or can be referred to other less complex services. The urgency classification (yellow) had a significant percentage of responses with 21.8%, the very urgent (orange) one with 0.9% of responses and in this study there was no red classification (immediate).

Regarding the visit to the PER, the afternoon period was marked as the period of choice among interviewees (54.8%) for seeking care. In relation to the health services sought, 72.8% of respondents did not seek another healthcare service (HS) before receiving emergency care and the main justification (58.9%) was the belief that care is more effective in the PER, and secondly (19.0%), because it was the only HS open at times

Table 1. Socio-demographic and clinical characteristics of patients and their guardians.

Variables	Nº(%)
Age of guardian	
Minimum	16 years
Maximum	58 years
Child's age	
Minimum	1 month
Maximum	14 years
Kinship	
Mother	192 (76,2%)
Father	40 (15,9%)
Grandmother	9 (3,6%)
Oher	11 (4,4%)
Guardian's schooling	
Basic education I incomplete	5 (1,9%)
Basic education I complete	2 (0,8%)
Basic education II incomplete	3 (1,2%)
Basic education II complete	31 (12,0%)
Incomplete Highschool	25 (9,9%)
Complete high school	134 (53,2%)
Incomplete college education	13 (5,5%)
Complete college education	36 (14,3%)
Graduate degree	3 (1,2%)
Patient's age	
Infant (≥28 days and <2 years)	72 (28,6%)
Pre-school (≥2 and <6 years)	88 (34,9%)
School-aged (≥6 and <12 years)	65 (25,8%)
Adolescent (≥12 years and <15 years)	27 (10,7%)
Main complaints reported in the PER	
Pain	101 (40,1%)
Fever	51 (20,2%)
Vomits, nausea and/or diarrhea	49 (19,4%)
Respiratory complaints (cough, dyspnea, runny nose)	33 (13,1%)
Other	18 (7,1%)

Table 2. Justification for immediate search for Pediatric Emergency Room.

Reason for coming to the PER	N (%)
For being closer to home	19 (7,7%)
Because it is the only facility open when I can go	48 (19,0%)
I have had bad experiences at Other facilities (e.g.: no resolution, did not like the staff, etc.)	7 (3,0%)
For personal preference (e.g.: I believe the staff is better trained and the service is better, then I will have better care, etc.)	148 (58,9%)
Because of worsening symptoms	6 (8,7%)
Other	24 (9,5%)

when those responsible would be available (table 2). Only 7 (4.2%) of those responsible claimed to seek the emergency service directly to recognize the seriousness of the case.

Among those who looked for another SS before searching for the PER,[27] (39.1%) reported that the problem was not resolved in the first scenario and (30.4%) were actually referred from another HS[21]. Only 6 (8.7%) guardians sought the service because the child had shown clinical worsening. Despite these results, around 74.5% of respondents claim to use primary health care (Basic Health Unit and Family Health Unit) on a regular basis.

DISCUSSION

Several studies have focused attention on the distorted use of urgency and emergency facilities by the general population and, above all, in the pediatric age group[28-30]. It is already known in the literature that this trend is related to sociodemographic and cultural, even organizational, factors, including access to services and the organization of the healthcare system itself.

Despite cultural factors, there is the "Emergency Room Culture", characterized by a belief by the part of the population that because it is a 24-hour service, with a team trained and specialized in treating serious cases and with resources at their disposal, this service would be superior and more effective than that offered by primary care. Furthermore, it is easy and convenient to operate for 24 hours uninterruptedly, without the need to schedule an appointment. This conception is in line with what we identified in our study when analyzing that the PER was the first facility chosen by parents when looking for care, due to the belief in greater resolution and because it is always open at times when the guardians would be available.

In relation to the real need for urgent care, our study found mostly low-complexity demands, with approximately 80% of screenings in the not-very-urgent or non-urgent groups, indicating that the majority of cases could be resolved on an outpatient basis, in line with national and international literature[28-30]. This can be attributed to a certain anxiety and often excessive concerns on the part of the guardians, who, because they do not know how to assess the severity of the child's health condition, end up overestimating it, seeking the emergency service in situations that could be resolved in a less complex facility.

Furthermore, it is worth highlighting that in our study there is a discrepancy between the data collected on the use of the BHU/FHU and the PER, since despite the majority of interviewees reported that they attended primary care on a regular basis, the first choice in a situation of a health problem is still the emergency care facility. This fact does not contribute to the longitudinality of care and shows a weak relationship with the healthcare team and low confidence in regular childcare facility.

Pain and fever were the main reasons for seeking care. Fever represented approximately 20% of all complaints, a result very similar to the paper by Becker & Silva, 2020, which presents temperature elevation as a complaint that generates anxiety and insecurity in the parents, known as "feverphobia". The fact that the guardians associated inappropriate speculations to fever, such as possibilities of serious sequelae (mainly neurological), can take them to the PER in recurrent and premature ways. It is the responsibility of routine childcare to provide health education about the health-disease process and, above all, to work on recognizing alarming signs and preventing injuries on a routine basis, avoiding unnecessary visits for the healthcare facility.

The pediatric age group has its peculiarities as it is a period in which the vast majority of pathological conditions, which causes to demand for the service, benign and self-limited, often associated with viral infections, which do not require additional tests, and which clinical management is simple. Therefore, qualified listening, reception and guidance in the context of prevention are aspects that proved to be lacking in the routine follow-up of these children and their guardians.

Future studies

In future studies, it would be interesting to map the regions with the greatest demand for emergency services in order to investigate relationships and analyze the socioeconomic profile of each region, its situational diagnoses, coverage of basic care with the main demands of the assigned population and their search for emergency services. Mapping would be important to identify gaps in healthcare service coverage and also the places with the greatest need for health education.

Limitations and strengths

The carrying out of this study coincided with the year in which the coronavirus pandemic devastated Brazil and the world, bringing repercussions in all areas of scientific development, including this study. The biggest limitation justified by the epidemiological moment was the non-completion of the last phase of the project, which aimed to intervene in the community through lectures and meetings with the parents of children from schools in the municipality where the study was carried out, with the aim of informing them about the outcomes involved in the non-urgent search for pediatric emergency care, making the guardians aware of the logic of organizing healthcare services and how to use them coherently. As the study began during the period of social isolation

when schools were not receiving students and there were limitations on the public's ability to transfer the intervention to the online platform, it was not possible to complete this extremely important stage for the project.

In contrast, our study stands out for having managed to outline the profile of emergency service users, as well as being able to evaluate the complaints that were actually pertinent to the ER and those that could be resolved on an outpatient basis.

CONCLUSIONS

We conclude that there is much to be achieved in pediatric care, as the lack of information is just one of the pillars that leads to an inadequate search for children's ER, the lack of encouragement and continuity in childcare proved to be another fundamental pillar. Achieving and maintaining the bond between the family and the healthcare team obtained in sequential childcare meetings can be the key to offering the security that parents need to free themselves from this need to always resort to emergency services.

Therefore, our study reflects a need for health education to raise awareness of the flow of care in the Public Healthcare System, thus informing the population, teaching about the prioritization of medium and high complexity situations only in cases of urgency, as well as managing parents' fears through educational measures, they are the basis for improving comprehensive care for children in the context of health care and their possible problems.

ACKNOWLEDGMENT

To the National Council for Scientific and Technological Development for funding and promoting research.

To the parents and other guardians of the children who were willing to contribute to this study.

REFERENCES

1. Rati RMS, Goulart LMHF, Alvim CG, Mota, JAC. Criança não pode esperar: a busca de serviço de urgência e emergência por mãe e suas crianças em condições não urgentes. Cien Saude Colet, 2013; 18 (12).
2. Cecilio LC. O. Modelo tecno-assistenciais em saúde: da pirâmide ao círculo, uma possibilidade a ser explorada. Cad *Saude Publica*, 1997; 13 (3).
3. Ministério da Saúde, Portaria de consolidação Nº 2, de 28 de Setembro de 2017.
4. Pinto IC, Rodolpho F, Oliveira MM. Pronto- Atendimento: a percepção da equipe de Enfermagem quanto ao seu trabalho no setor de recepção. Rev Gaúcha Enferm. 2004; 25(1):8-81.
5. Paul SA, Reddy MC,DeFlitch CJ. A Systematic Review of Simulation Studies Investigating Emergency Department Overcrowding. Simulation, 2010; 86(89): 55968.
6. Ramos DD, Lima MADS. Acesso e acolhimento aos usuários em uma unidade de saúde de Porto Alegre, Rio Grande do Sul, Brasil. Cad Saude Publica 2003; 19(1):21-34.
7. Joanne E. Coster, MSc, Janette K. Turner, MSc, et al - Why Do People Choose Emergency and Urgent Care Services? A Rapid Review Utilizing a Systematic Literature Search and Narrative Synthesis. Acad Emerg Med . 2017 Sep;24(9):1137-1149.
8. Northington WE, Brice JH, Zou B. Use of an emergency department by nonurgent patients. Am J Emerg Med. 2005 mar;23(2):131–137.
9. Office of the Inspector General. Use of Emergency Ro-oms by Medicaid Recipients. Rockville, MD: US Dept of Health and Human Services; 1991.
10. US General Accounting Office. Emergency Departments: Unevenly Affected by Growth and Change in Patient Use. Washington, DC: US General Accounting Office; 1993.
11. Rathore MH, Jackson MA, Committe on infectious diseases. Infection prevention and control in pediatric ambulatory settings. Pediatrics. 2017 nov; 140(5):2017-2857.
12. Lima CA, Santos BTP, Andrade DLB, Barbosa FA, Costa FM, Carbeiro JA. Qualidade dos prontos-socorros e prontos-atendimentos: a satisfação dos usuários. Einstein. São Paulo Oct./Dec. 2015 vol.13 no.4
13. Bindman AB, Grumbach K, Keane D, Rauch L, Luce JM. Consequences of queuing for care at a public hospital emergency department. JAMA 199; 266:1091-1096.
14. Kasper JD. The importance of type of usual source of care for children's physician access and expenditures. Med Care 1987; 25:386-398.
15. Fleming N, Jones H. The impact of outpatient and emergency room use on costs in the Texas Medicaid Program. Med Care. 1983; 21:892-910
16. Gill JM. Nonurgent use of the emergency department: appropriate or not?. Ann Emerg Med. 1994; 24(5):953-957.
17. Burokienė S. et al.: Factors determining parents' decisions to bring their children to the Pediatric Emergency Department for a Minor Illness. Med Sci Monit, 2017; 23: 4141-4148
18. Carret M, Fassa A, Domingues M. Inappropriate use of emergency services: a systematic review of prevalence and associated factors. Cad. Saúde Pública. 2009; 25(1):7–28.
19. Durand A, Gentile S, Devictor B, et al. ED patients: how nonurgent are they? Systematic review of the emergency medicine literature. American Journal of Emergency Medicine. 2010
20. Guttman N, Zimmerman D, Nelson M. The Many Faces of Access: Reasons for Medically Nonurgent Emergency Department Visits. Journal of Health Politics, Policy and Law. 2003; 28(6)
21. Redstone P, Vancura J, Barry D, Kutner J. Nonurgent Use of the Emergency Department. J Ambulatory Care Manage. 2008; 31(4):370–376.
22. Phelps K, Taylor C, Kimmel S, Nagel R, Klein W, Puczynski S. Factors Associated With Emergency Department Utilization for Nonurgent Pediatric Problems. Arch Fam Med. 2000; 9:1086–1092.
23. Carret M, Fassa A, Kawachi I. Demand for emergency health service: factors associated with inappropriate use. BMC Health Serv Res. 2007; 7:131.
24. Cunningham P, Clancy C, Cohen J, Wilets M. The use of hospital emergency departments for nonurgent health problems. Med Care Res Rev. 1995; 52(4):453–474.
25. Caplan C. Emergency room use by patients from a family practice. Patterns of illness and motivation. J Fam Pract 1975; 2:271-276.
26. Hospital das Clínicas da Faculdade de Medicina de Botucatu - UNESP. Acesso em: 29 de abril de 2020. Disponível em: http://www.hcfmb.unesp.br.
27. Jager, J., Putnick, D. L., Bornstein, M. H. II - More than just convenient: the scientific merits of homogeneous convenience samples. Monogr Soc Res Child Dev, 2017; 82(2):13–30.
28. Wong AC, Claudet I, Sorum P, Mullet E. Why do parents bring their children to the emergency department? A systematic inventory of motives. Int J Family Med. 2015;2015:10p.
29. Phelps K, Taylor C, Kimmel S, Nagel R, Klein W, Puczynski S. Factors associated with emergency department utilization for nonurgent pediatric problems. Arch Fam Med. 2000;9:1086-1092.
30. Berry A, Brousseau D, Brotanek J M, Tomany-Korman S, Flores G. Why do parents bring children to the emergency department for nonurgent conditions? A qualitative study. Ambul Pediatr. 2008; (6):360-367

COMPLEMENTARY DOCUMENT 1

Sociodemographic and clinical data of patients seeking PSP

Patient identificatio:

· Name: _____

· Age: _____

· Procedure (city and neighborhood): _____

· Complaint and duration: _____

· Details and arrival time: _____

· Risk rating:

a) Red (emergency)
b) Orange (very urgent)
c) Yellow (urgent)
d) Green (not urgent)
e) Blue (not urgent)

Identification of the person responsible:

· Name: _____

· Age: _____

· Degree of kinship: _____

· Level of education:

a) I never studied
b) Between the 1st and 4th grade of Elementary School (former primary)
c) Between the 5th and 8th grade of Elementary School (formerly gymnasium)
d) Complete primary education (formerly primary and secondary school)
e) Complete primary education (formerly primary and secondary school)
f) Complete primary education (formerly primary and secondary school)
g) Started, but did not complete Higher Education
h) Completed Higher Education
i) Complete or incomplete postgraduate degree

Questions:

1. Why did you seek care?

a) February
b) Vomiting and/or nausea
c) Diarrhea
d) Pain (e.g.: in the throat, abdominal, when urinating)
e) Cough, rapid breathing and/or shortness of breath
f) Stuffy nose and/or runny nose
g) Lack of appetite
h) Convulsion
i) External causes (trauma)
j) Lethargy
k) Other

2. A. Did you reach any other health service before this one?

a) yes
b) No

B. If so, why did you feel the need to seek this service?

a) The problem has not been resolved
b) The child worsened
c) I thought my child was not examined correctly

d) I would like a second opinion
e) Other

C. If not, why did you choose to seek the Emergency Room instead of another service?
a) Because it is closer to my house
b) Because it is the only one open at the times I have availability
c) I have negative experiences with other services (e.g. lack of resolution, I don't like the professionals, etc.)
d) By preference (e.g.: believing that the professionals are more qualified and the service is better, so I will have better service, etc.)
and another

3. Do you usually use a UBS/USF?
a) yes
b) No

4. What is your level of concern about the child's situation?
a) High
b) Moderate
c) Low