



ANALYSIS OF PATIENTS - CHILDREN WHO PASSED THROUGH THE EMERGENCY DEPARTMENT OF ST. MARINA UNIVERSITY HOSPITAL - VARNA FOR A PERIOD OF SEVEN YEARS

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ABSTRACT:

Emergency medicine is a dynamically complex and well-coordinated specialty. However, paediatric emergency sub-specialty is not yet well developed in most low and middle income countries. The purpose of the present study is to analyze the pediatric patients who passed through the emergency department of the hospital.

Results: Total examined children - 44547. Hospitalized – 12 062 - 30.7% of the total. Boys predominate (54.0%). Children in the age group 1-10 years - 81.8%. The patient flow in the pediatric emergency department from other districts increased by 35.8%.

Conclusion: Children are a particularly vulnerable group of patients who go through the emergency department, which is related to the specifics of pediatric care. The results of the study show that the largest proportion of pediatric patients are children aged 1-10 years, males, who sought medical help in connection with respiratory infections.

Keywords: children, emergency department, analysis,

INTRODUCTION

In recent years, the increase in pediatric emergency patient attendance has become a serious problem for health systems. Recent data show that there is a steady trend towards increasing overcrowding in both adult and pediatric emergency departments [1, 2].

Overcrowding in paediatric emergency departments remains an important public health problem. Unlike adult emergency departments, pediatric patients do not have higher odds of hospital admission or mortality after discharge from an overcrowded emergency department [3]. However, overcrowding can negatively affect the quality of care, for example, delaying antibiotic administration in febrile neonates, analgesia in sickle cell crises, or treatment of acute asthma exacerbation [4, 5, 6]. In addition, children presenting to crowded pediatric emergency departments are also more likely to be admitted [3, 7]. Therefore, it remains important to understand the causes of overcrowding. However, the needs of children have historically received little attention in the emergency care system. Emergency medical services are a relatively new component of our national health care system, and recently, there has been increasing attention to the specific needs of children during emergencies, as well as significant disparities in the quality of care [8, 9, 10].

The aim of the present study was to analyze pediatric patients who passed through the emergency department of the hospital.

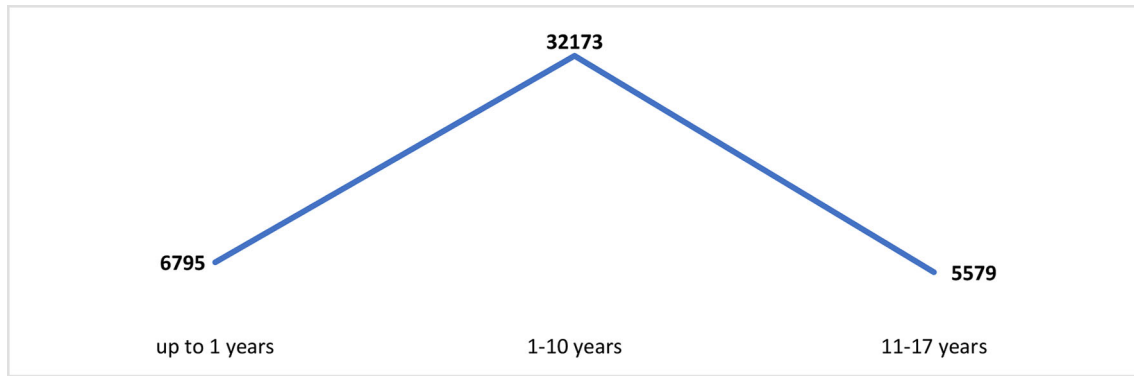
MATERIALS AND METHODS

A retrospective study of patients admitted to the Emergency Department of St. Marina University Hospital – Varna, Bulgaria, over a 7-year period was conducted. Data were collected from the hospital information system.

RESULTS

For a period of seven years (2016-2022), 44547 children were examined in the emergency department of St. Marina University Hospital - Varna, the distribution by age groups is presented in Figure 1. The results show that children in the age group 1-10 years (72.2%) predominate. According to gender distribution, it can be said that boys have a slight predominance (52.0%).

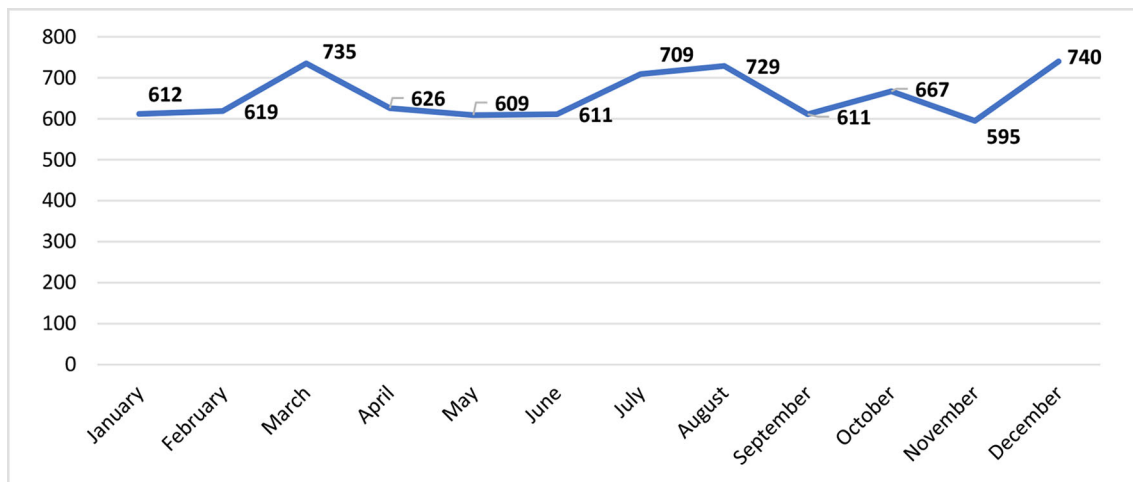
Fig. 1. Number of patients by age group who passed through the emergency department



During the study period, the number of patients examined increased by a factor of 1.5, from an average of 18 per day to an average of 27 per day.

In terms of monthly emergency department visits, there was a steady trend over the study period (Fig. 2).

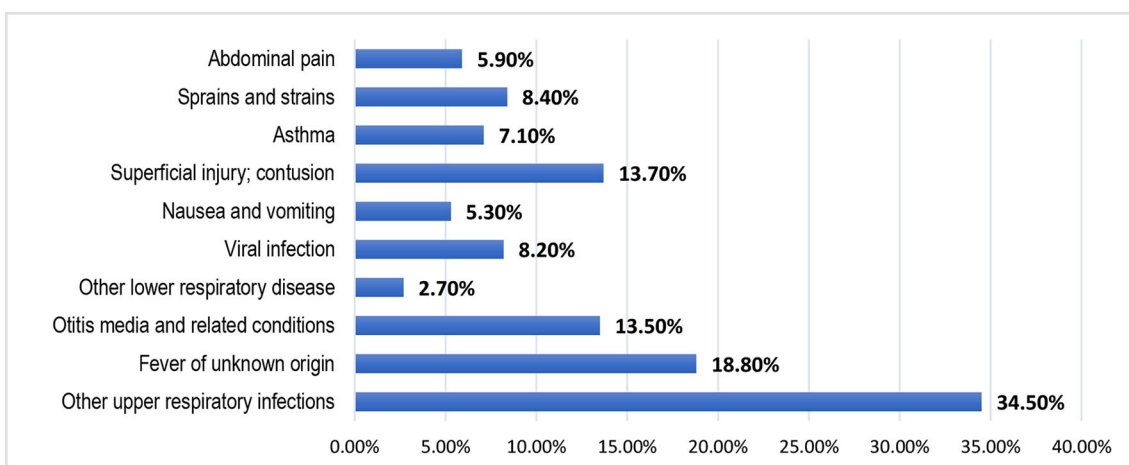
Fig. 2. Mean number of patients passed through the emergency department for the period 2016-2022 by month



Patient flow to the pediatric emergency department from other areas increased by 35.8%.

Figure 3 presents the main reasons for visiting the pediatric emergency department. The results show that respiratory upper respiratory tract infections (34.5%) accounted for the largest relative proportion, followed by fever of unknown origin (18.8%) and superficial injury/contusion (13.7%). Patients with respiratory infections of the lower respiratory tract (2.7%) were the least common.

Fig. 3. Main reasons for visiting the children’s emergency department



DISCUSSION

The results of the present study show that there is a persistent trend of increasing attendance in paediatric emergency departments, leading to overcrowding. This necessitates the need for a triage and referral system to improve the quality of care and reduce errors resulting from reduced examination times. The results of this study prove those of other authors that the number of children treated in emergency departments is increasing in many countries around the world [3, 11].

In our study, the proportion of children seeking emergency care who were hospitalized was 35.8% compared with 9%, 51% and 25% in studies of similar age groups from Pakistan [12], Cambodia [13] and Malaysia [14], respectively. In two other studies involving younger pediatric populations from Pakistan [15] and India [16], the proportion of hospitalized was higher, at (45%) and (42%), respectively.

Nevertheless, our findings in this unselected pediatric emergency population highlighted that pediatric emergency patients typically present with infections and

injuries and that fewer girls than boys presented to ED. We found that high triage priority levels at ED presentation were strongly associated with the need for advanced care and indicated higher mortality risk after discharge. These findings support that pediatric triage assessment systems can be implemented in a general ED in a low resource setting. The study indicates the need for further follow-up studies on mortality in children who seek emergency care. We suggest that such interventions should emphasize the effective treatment of infections and injuries and the identification of children at risk for complications after discharge.

CONCLUSION

Children are a particularly vulnerable group of patients who pass through the emergency department, which is related to the specificity of pediatric care.

The results of the study showed that the highest relative proportion of paediatric patients were male children aged 1-10 years who sought medical care for respiratory infections.

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