Patient satisfaction and the effectiveness of medical advice at the Hospital Emergency Department – own observations**

Satysfakcja pacjentów i skuteczność udzielanych porad lekarskich w Szpitalnym Oddziale Ratunkowym – obserwacje własne

*Teresa Jackowska1, 2, Małgorzata Czajkowska2

Department of Pediatrics, Centre of Postgraduate Medical Education, Warsaw
Head of Department: prof. Teresa Jackowska, MD, PhD

Department of Pediatrics, Father Jerzy Popiełuszko "Bielski" Hospital, Independent Public Health Care Institution in Warsaw
Head of Department: prof. Teresa Jackowska, MD, PhD

Keywords
medical advice, Hospital Emergency Department (ED), patient satisfaction, survey research

Stówa kluczowe
porada lekarska, szpitalny oddział ratunkowy, satysfakcja pacjenta, badania ankietowe

Summary
Introduction. According to the current guidelines of the Ministry of Health, the emergency department serves two main purposes: conducting diagnostic procedures to indicate an initial diagnosis of the patient and administering the necessary procedures to stabilize the patient whose health is at immediate threat.

Aim. The aim of this study was to analyse the quality and efficiency of medical services provided and the reasons for reporting at the Hospital Emergency Department (ED).

Material and methods. The results of a retrospective survey consisting of 21 closed-end questions were analysed and interpreted. The survey was carried out via phone and was conducted by a doctor among 153 parents of patients. The sole criterion of inclusion was the period of being discharged from the Hospital Emergency Department – over 48 hours.

Results. Among the patients participating in the study, 54.9% (84/153) of the children had been referred to the ED, and the remaining 45.1% (69/153) reported without a referral. Diagnostic tests were necessary for 46.4% (71/153) of the patients and 34% (52/153) of them were provided with emergency treatment. 94.8% (145/153) of the respondents considered preliminary assessment of the patient’s condition fast and efficient. 77.1% (118/153) of the respondents assessed the conditions of the emergency facilities positively. The qualifications of the medical personnel (doctors and nurses) were assessed positively by 92.8 and 90.8% of the respondents, respectively. 91.5% (140/153) of the respondents stated that they were provided with information concerning further procedure in the case of deterioration in the child’s condition. 90.2% (138/153) of the respondents claimed to have fully complied with the medical recommendations. The respondents observed improvement in the child’s condition in 80.4% (123/153) of the patients. 62.8% (96/153) of the children required medical advice again, but 69.8% (67/96) of them were follow-up visits.

Conclusions. The quality and efficiency of medical services at the ED were assessed to be very high.

Streszczenie
Wstęp. Zgodnie z aktualnym rozporządzeniem Ministerstwa Zdrowia w Szpitalnym Oddziale Ratunkowym (SOR) ma miejsce wstępna diagnostyka choroby oraz podejmowane powinny być działania niezbędne dla stabilizacji funkcji życiowych osób, które znajdują się w stanie nagłego zagrożenia zdrowotnego.

Cel pracy. Celem pracy była analiza jakości i skuteczności udzielonych świadczeń medycznych oraz przyczyn zgłoszeń do Szpitalnego Oddziału Ratunkowego (SOR).


 Wyniki. Spośród włączonych do badania dzieci do SOR-u skierowanych było 54,9% (84/153) dzieci, pozostałe 45,1% (69/153) zgłosiło się bez skierowania. 46,4% (71/153) wymagało badań diagnostycznych. 34% (52/153) otrzymało doraźne leczenie. 94,8% (145/153) ankietowanych rodziców uważało, że wstępna ocena stanu

**Supported by the Centre of Postgraduate Medical Education in Warsaw grant number 501-1-20-19-16
INTRODUCTION

A Hospital Emergency Department (ED) is an organisational unit of the hospital and the State Medical Rescue established with the goal of providing medical services for patients in the condition of a sudden threat to life (1). The operation of the ED consists in preliminary assessment and diagnostics as well as starting treatment to the extent necessary to stabilise life functions of the patient. Not only those requiring immediate medical help and/or hospitalisation reach Hospital Emergency Departments, but also outpatients. Such an organisation of health care contributes to great overload of Hospital Emergency Departments, extending waiting time for the visit among patients requiring immediate medical assistance. In fact, preliminary division is always applied (saturation, pulse, temperature measurement) — into patients requiring immediate, or faster help as well as those who can wait. However, lacking thorough medical history and examination of the child, the doctor finds it hard to determine whether the patient’s life is under threat. The patient being brought by the Emergency Service or having a referral is not enough, but often misleading when making the decision concerning the severity of the patient’s condition. It is also often the cause of conflicts among the waiting patients, as in determining the sequence of taking care of a child, the decisive factor should be the clinical condition of the child, rather than the sequence or mode of being admitted. The transformation of spatial organisation of the Hospital Emergency Departments in the period of 2008-2011 had an impact on the level of accessibility of those facilities nationwide and within particular provinces (2).

Despite the fact that Hospital Emergency Departments provide a lot of medical services daily, a vast majority of patients continue outpatient treatment due to the lack of indications to hospitalisation, the doctor has no knowledge whether the therapeutic decisions, or refusal to admit the child to hospital were good decisions. It results from the lack of a system monitoring further situation of the patients discharged from the Hospital Emergency Departments, or the efficiency of the recommendations concerning further procedure. Moreover, there is no habit among patients to inform the General Practitioner, either by means of an electronic system on visiting the Hospital Emergency Department, or Night Medical Advice, as the situation is in other countries. Therefore, the operations of Hospital Emergency Departments, being the place of many thousands of hospitalisations, generating huge costs in the budget of every hospital, at very low rate of subsidies granted by the National Health Fund are not verified by the payer at all (www.mz.gov.pl/system-ochrony-zdrowia/panstwowe-ratownictwomedyczne/szpitalne-oddzialy-ratunkowe).

The majority of the analyses conducted, specifying the satisfaction and the efficiency of the medical services provided, applied to persons subject to hospitalisation or further procedure among patients following being discharged from the hospital (3). Additionally, the possibility to issue own opinion by the patients is limited. The majority of questionnaires are posted on hospitals’ websites, which may pose a barrier for some patients as regards the availability of questionnaires. Furthermore, questionnaires are most often filled in by unsatisfied persons, which may be misinterpreted.

AIM

The objective of the paper was to:
1. Assess the quality and the efficiency of the services provided by the medical personnel of the Hospital Emergency Department.
2. Assess the conditions of stay at the Hospital Emergency Department by patients who — according to the doctor-on-duty — required no hospitalisation.
3. Analyse the reasons for coming to the Hospital Emergency Department.

MATERIAL AND METHODS

Analysis covered the data from the survey obtained from telephone conversations with parents of children subject to medical services at the paediatrics part of the Hospital Emergency Department of Father J. Popiełuszko “Bielański” Hospital in Warsaw. The research lasted two weeks (from 1 March 2015 to 16 March 2015). The period was selected randomly. Initially, it was planned to conduct phone calls within longer periods of time (6, 3 or 1 month), but the number of children reporting at the Hospital Emergency Department in the period of the two-week-research, who did not require hospitalisation was huge, so we decided it would prove reliable for the analysis carried out (e.g. in March, 521 patients reported at the Hospital Emergency Department, out of whom 66.2%, namely 345, were rejected).

156 telephone calls were conducted. Three (1.92%) people refused to provide information via the phone. The following patients were excluded from the research:
– not subject to hospitalisation,
– whose parents resigned, at their own request, from services prior to the child being examined by the doctor or prior to issuing full medical documentation and recommendations concerning further outpatient treatment.

Further analysis covered 153 surveys obtained from the parents of 49% (75/153) of the girls and 51% of the boys (78/153), being the patients of the Hospital Emergency Department. 49.7% (76/153) of the children, whose parents answered the questions included in the survey were aged over 3, 24.2% (37/153) aged between 1 and 3, 24.8% (38/153) aged between 2 and 12 months, while 1.3% (2/153) aged below 1 month (fig. 1).

69.9% (107/153) of the parents answering the question had higher education, 23.5% (36/153) high school level education, 2% (3/153) elementary education and 3.3% (5/153) vocational. Two parents (1.3%) provided no data.

Medical documentation of the Hospital Emergency Department provided the following data: age and gender of the patient, mode of referral to the hospital, referring doctor’s diagnosis, diagnostic test performed at the Hospital Emergency Department, type of emergency treatment applied, indications for antibiotics therapy in outpatient settings.

Phone calls were made by one doctor asking questions from the prepared survey. The survey comprised of 21 closed-end questions, out of which 2 questions made it possible to provide additional commentary. In order to standardise the scheme of the call, options of answers were prepared that were supplemented after being provided with an answer by the parent/guardian. The questions pertained to three categories: the quality and efficiency of the services provided and the assessment of medical personnel’s competences. Phone calls with parents/guardians of the patient took place at least 48 hours after visiting the Hospital Emergency Department. Maximum 3 phone call attempts were made.

RESULTS

54.9% (84/153) of the children reported at the Hospital Emergency Department with a referral, and the remaining 45.1% (69/153) were subject to hospitalisation without a referral (fig. 2). The most common reasons for coming to the Hospital Emergency Department (diagnoses after medical history verification and patient’s examination by the Hospital Emergency Department’s doctor) were: upper respiratory tract infections (28.1%; 43/153) and obstructive bronchitis (15.7%; 24/153), followed by vomiting and/or diarrhoea (15.7%; 24/153). Less common diagnoses included otitis media (7.2%; 11/153), viral infections (5.2%; 8/153), allergies (7.2%; 8/153), laryngitis (4.6%; 7/153) as well as pneumonia (3.9%; 6/153) and pain in the abdomen (3.9%; 6/153). In individual cases, the reason for referral were: pain in lower extremities, neonatal jaundice, poisonings, pain in the thorax, syncope, pyrexia, lymphadenitis, inflammation near the perineum, foreign body aspiration, incorrect body mass increment, roseola, epistaxis, migraine, arthritis, renal colic, influenza, symptoms of haemorrhage from the alimentary canal.

In the group of children that reported at the Hospital Emergency Department without a referral, in 62.3% (43/69) of the cases, parents stated the cause of coming to be the possibility to obtain professional medical assistance. Other reasons for coming to the Hospital Emergency Department include: in 15.9% (11/69) the child being taken to the hospital by the Emergency Service and in 13.0% (9/69) and 8.7% (6/69), respectively, lack of the possibility to obtain medical assistance at the clinic or Night Medical Advice.

Indication to perform diagnostic tests (laboratory, radiological) was the case in 46.4% (71/153) of the children. 34% (52/153) were provided with emergency treatment (tab. 1). Antibiotics were administered in 15.7% (24/153), of which 33.3% (8/24) of the cases covered continuing the previous treatment.

46.4% (71/153) of the parents assessed the waiting time at the Hospital Emergency Department to be short, while 30.1% (46/153) to be long and 23.5% (36/153) claimed waiting time was average. 94.8% (145/153) of the parents stated that the preliminary assessment of
the patient’s condition and the measurement of vital signs were conducted fast and efficiently; 4.6% (7/153) stated that the time of assessment was average and only one parent (0.6%) determined it to be too long. The engagement of the medical staff understood as politeness and the willingness to help was positively evaluated by 93.5% (143/153) of the parents and 6.5% (10/153) assessed that to be average. No negative opinion was observed. Medical staff’s expertise and qualifications were assessed to be very high. Positive opinions constituted 90.2% (138/153) and negative 1.3% (2/153). 5.2% (8/153) of the surveyed were of no opinion. The quality of the examination performed (interview to obtain medical history and examination of the child) was also assessed to be very good. Positive opinions constituted 92.8% (142/153) and negative only 2.6% (4/153). 8.5% (13/153) of the surveyed were of no opinion (fig. 3).

Quality analysis of medical advice given showed that 83.7% (128/153) of the parents obtained sufficient information concerning the planned course of the child’s treatment; 11.8 (18/153) of the persons failed to obtain information and 4.6% (7/153) of the surveyed had no recollection of such a subject. 91.5% (140/153) of the parents confirmed that they were duly informed about the actions that were to be taken in the case of deterioration in the child’s condition. 5.2% (8/153) of the parents claimed that they did not obtain such information, while 3.3% (5/153) did not recollect the exact course of the conversation (tab. 2). 90.2% (138/153) of the parents declare that they have fully implemented doctor’s recommendations; 7.2% (11/153) performed only part of the recommendation, while 2.6% (4/153) did not follow the treatment suggestion. 99.4% (152/153) of the parents claimed that they understood the meaning of doctor’s recommendations, owing to which they were able to perform them unassisted. The main reasons for failure to perform the recommendations were parents’ objections and the child being reluctant to take medicine they are included in the table 3. In 80.4% (123/153) of the cases, parents observed great improvement in the child’s condition. In 4.6% (7/153) symptoms worsened, which was the cause of re-visiting the healthcare facility (fig. 4). 62.8% (96/153) of the children after hospitalisation at the Hospital Emergency Department were re-consulted by a doctor, but in 69.8% (67/96) of the cases these included ordered follow-up visits. Other reasons for re-consultation with a doctor (30.2%; 29/96) included: parents’ concern, failure to meet the expectations concerning medical advice, interpretation of the results of ordered follow-up visits, planned further diagnostics, persisting/intensifying or relapse of the symptoms as well as the emergence of new symptoms and the development of another infection. Four (2.6%) children required hospitalisation, but in two cases these were planned for further diagnostics of the ailments observed (fig. 5). 92.2% (141/153) of the parents were satisfied with medical advice given and the effects of treatment.

77.1% (118/153) assessed positively the welfare conditions at the Hospital Emergency Department. Main objections included too small area of the waiting room and lack of the possibility to isolate children. Additionally, attention was drawn to the lack of sufficient number of toilets and poor air ventilation. Assessing the conditions during medical examination, 82.4% (126/153) of the parents felt comfortable and stated that they were provided with sufficient intimacy both for the child and the parents, 15% (23/153) assessed the conditions to be average, while 2.6% (4/153) claimed them to be insufficient.

DISCUSSION

Despite the fact that Hospital Emergency Departments, according to principles resulting from the Act, should be a unit providing medical services for persons in the state of sudden threat to life, many of the pa-

---

**Tab. 1.** Emergency treatment at the Hospital Emergency Department (in some cases more than one medical procedure)

<table>
<thead>
<tr>
<th>Emergency treatment</th>
<th>Number of patients N = 52</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicine nebulisation</td>
<td>20</td>
<td>38.5</td>
</tr>
<tr>
<td>Hydration:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>oral</td>
<td>7</td>
<td>13.5</td>
</tr>
<tr>
<td>intravenous</td>
<td>6</td>
<td>11.5</td>
</tr>
<tr>
<td>Medicine:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- antipyretics</td>
<td>22</td>
<td>42.3</td>
</tr>
<tr>
<td>- sedatives</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>- relaxants</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>- antihistamines</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>- intravenous steroids</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>- glycerin suppositories</td>
<td>1</td>
<td>1.9</td>
</tr>
</tbody>
</table>

---

**Fig. 3.** Assessment of medical personnel’s qualifications and the quality of services provided at the Hospital Emergency Department A – expertise and qualifications of the doctors; B – expertise and qualifications of the nurses; C – quality and precision of the medical history; D – quality and precision of the medical examination

74.5% (114/153) of the parents declared that in the course of the examination, the doctor informed them in a comprehensive manner about the child’s health and the diagnosis. 73.9% (113/153) of the parents were satisfied with medical advice given as regards further medical procedure. 4.6% (7/153) of the surveyed did not recollect precisely the course of the conversation, while 2% (3/153) did not understand the information communicated.
Patients reporting did not require immediate emergency treatment. A common reason for coming to the Hospital Emergency Department is parents' concern about their children’s health, which does not result from the patient’s condition but lack of sufficient knowledge and outpatient procedure.

Survey conducted by Poirier et al. in 2010 (4) proved that even one of the most common symptoms, being fever, is still controversial and over 1/3 of the parents covered by the survey administered antipyretics incorrectly. In a similar work conducted by us in 2014 (5), it was indicated that only 35% of the parents were able to correctly diagnose fever threshold and antipyretic treatment was applied by 14% of the parent’s at the temperature lower than 38°C. Huge majority of the parents stated that fever is harmful and some of the observed types of parents' behaviour pose a threat of children being administered or even over-dosing antipyretics.

Many times within the course of the child’s disease it is of greater importance for the parents to provide fast emergency treatment and lower waiting time for medical examination rather than the continuity of pediatric care at the clinic (6). The majority of patients visit a doctor at the clinic to check the health condition and/or continue treatment (6). Children brought to the Hospital Emergency Department by medical transport often do not require such help, and sometimes there is a conviction that in the case of an Emergency Service transport the child will be admitted disregarding the order. In the prospective cohort study conducted by Grossman et al. (7), it was shown that children brought by the Emergency Service Team to the Hospital Emergency Department not previously consulted via phone by a doctor at the clinic, statistically more rarely have the indications for justified medical transport (7).

Many authors indicate unjustified arrival at the Hospital Emergency Department. The reason stated is not serious condition of the child, but the willingness to be given fast medical service out of the working time of the parents/guardians (8, 9). The cause is said to be difficulty with access to the doctor at the district clinic,
especially out of the working time of parents (10). Also, on the basis of our unpublished observations, one of the reasons reported by parents are difficulties with the access to a doctor at the district clinic, lack of numbers for a given day, the necessity to register the child to the doctor in person at early morning hours. Some of the reasons of arrival at the Hospital Emergency Department show total lack of the parent’s understanding of the rules of such a facility functioning (e.g. I was just passing by the hospital with the child, the child woke up in the middle of the night and cannot sleep, itches the child around their anus, he or she might have pinworms, he or she has had constipation for weeks etc.).

Our survey conducted among parents of children that did not require hospitalisation showed that 66% (101/153) of the children not only did not require being provided with emergency treatment, but their clinical condition and the course of the disease in 53.6% (82/153) proved no necessity to have diagnostics at the Hospital Emergency Department.

We are of the opinion that running educational campaigns for parents concerning the fact that children waiting at the Hospital Emergency Department are exposed to the risk of contacting other sick children are necessary. It is of particular importance for neonates at the Hospital Emergency Department, e.g. because of jaundice. Parents should become aware of the functions of the Hospital Emergency Department and its role in health care. The basic unit in the diagnostic-treatment process should be district clinics (8), where the child has their doctor taking care over the child. Clinics should ensure the continuity of paediatric care, and in the case of the need to obtain treatment at the Night Medical Advice or Hospital Emergency Department, doctor at the clinic should be immediately informed (by the parent or electronic system) about that fact. Another solution could be catchment areas of Night Medical Advice, where the obligation of servicing rests upon doctors from the clinic the Night Medical Advice is subject to. Parents should be aware that care given by one paediatrician leads to developing a closer relation and building patient-doctor trust, therefore it contributes to greater satisfaction as regards health care (11).

The analysis conducted also shows that not each and every child coming to the hospital (referred by a doctor or without a referral) has some indication to perform additional diagnostics in the cases, visits at the Hospital Emergency Department without a referral and without any attempt to obtain help at the clinic. In 62.3% of the cases, visits at the Hospital Emergency Department were the choice of the parents. There were no indications to perform additional diagnostics in 53.6% of the children and 66% required no emergency treatment under the conditions of a Hospital Emergency Department is no different than one regarding stay in hospital, patients are referred to obtain further outpatient care.

The analysis conducted showed high (92.2%) satisfaction as regards medical advice at Hospital Emergency Departments. The level of satisfaction has been influenced by the manner of communication between the doctor/nurse and the patient and parent/guardian, which constitutes a crucial element of treatment (12). Abiding by the doctor’s recommendations has a positive impact on the results of the treatment. Appropriate education of the parents and drawing attention to possible hazardous factors for the patient may act as a protection and prevent similar symptoms or accidents in the future (13). A significant element of care may be telephone control over the performance of doctor’s recommendations and obtaining information concerning the progress in treatment. That may have an impact on better understanding of the symptoms present in children, therefore reducing the number of unjustified visits at the Hospital Emergency Department (14, 15). Monitoring the patient’s condition and the performance of recommendations constitute a valuable source of information for doctors.

A disadvantage of our work may be short analysis period (2 weeks). We find it necessary to continue the research on a larger group of people within a longer period of time. However, it may be said even now that the research was an important source of information concerning the work of the medical personnel at the Hospital Emergency Department and whether doctor’s decision concerning not admitting a child to hospital was correct. It could prove interesting to carry out an analysis of patient satisfaction and the effectiveness of the advice given depending on the specialisation and the seniority of the doctor.

**CONCLUSIONS**

The research conducted proved, in the opinion of the parents, very high quality and effectiveness of first aid. However, only 77.1% of the parents assessed positively the facility conditions at the Hospital Emergency Department. Almost half of the patients (45.1%) reported at the Hospital Emergency Department without a referral and without any attempt to obtain help at the clinic. In 62.3% of the cases, visits at the Hospital Emergency Department were the choice of the parents. There were no indications to perform additional diagnostics in 53.6% of the children and 66% required no emergency treatment under the conditions of a Hospital Emergency Department.

---

**BIBLIOGRAPHY**

1. Rozporządzenie Ministra Zdrowia z dnia 3 listopada 2011 r. w sprawie szpitalnego oddziału ratunkowego, art. 34 ustawy z dnia 8 września 2006 r. o Państwowym Ratownictwie Medycznym (Dz. U. Nr 191, poz. 1410, z późn. zm).

11. Nokoff N, Brunner AM, Linakis JG, Amanullah S: Presentation to either the pediatric emergency department or primary care clinic for acute illness: the caregivers’ perspective 2014; 30: 146-150.