HOST WITH EVALUATION AND RISK RATING IN THE EMERGENCY: CHARACTERIZATION OF ATTENDANCES

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ABSTRACT
Study aimed to characterize the attendances at the Emergency Room of Pelotas-Rio Grande do Sul, according to the protocol host with evaluation and risk classification, which makes use of colors to identify the severity of the case and the order of visits. This is a study with quantitative approach, cross-sectional and descriptive. There were evaluated 5,629 medical records and their classification protocols. There were predominant attendances to young adults (36 to 65 years old) of both sexes, and the majority (84.4%) residents of the municipality itself. The period of greatest demand for attendance was between 10 and 15 o’clock. Regarding the classification by colors, 1% of consultations received red (emergency), 15% yellow (urgent), 40% green (needs attention, but without risk of life), 5% blue (mild cases) and 39% the attendances were not classified according to risk. Adjustments to the data that comprised the protocol may be needed to accommodate recurring demands of service and maximize the use of it to direct the flow of care.

Keywords: Home. Rating. Emergency. Nursing.

INTRODUCTION
Assistance to emergencies and constitutes an important component of the health system, being traditionally held by the Emergency Services (PS) and Mobile Emergency (SAMU). These, in turn, are characterized by continuous delivery service within 24 hours, the ordering of the visits by the demand of users and focus on the immediacy of attention. At present, it is not difficult to see that these services, plus offering assistance to severe and risk of life, yet absorb the demand that has no access to health care for other input ports of the health system(1,2). Thus, in addition to severe cases, Ready-Aid (PS) provides assistance to users with diverse needs, which generates huge queues waiting.

This reality is generating conflicts between users and professionals(1,3), since the definition of urgency is different for these social actors and often health professionals believe that users looking for the emergency service also unaware their specific functions(4). It is worth noting, that the understanding of health professionals about the needs of the users sometimes do not reach the complexity of factors involved in the complaint manifests, which requires knowledge about the possibilities of the network of health care, and the objective criteria for identifying priorities in attendance, as well as sensitivity to understand human relations that result from encounters in this area. Thus, the development of professional skills to enhance the worker-patient relationship in the scenario of health work has been a recurring recommendation in the literature(1,3,5,6).

This situation results in low user satisfaction, since the rationality of prioritized actions in attendances at emergency care, alongside the demands of fast pace and intensifying due to overcrowding, have provided dehumanized interactions in service(1), and professionals end disregarding the social context in which the person lives and health network that assists.

Faced with this problem, invested in the National Policy on Humane Care and Management of SUS (PNH), known as Policy, in order to qualify and implement the guiding principles of the SUS with the challenge of
producing new attitudes of workers, managers and users on the problems of daily work. These are investments that seek to overcome the undesirable practices observed in queues, deficiencies in working conditions and sometimes the workers insensitivity to the suffering of the users, as well as disrespectful treatment between users and professionals. Bound to PNH suggest the reorganization of care services and emergency from the classification of risk of life, using the host of user needs as a technology to be inserted into the working process of the emergency services and emergency. Thus, the host with assessment and risk classification aims to streamline service delivery, especially for severe cases or as the potential for worsening the degree of distress.

The health care is understood as a lightweight technology aimed at human relations between the caregiver and care, which materializes when the warm considers the emotional state of the patient / family, has the ability and sensitivity to see the needs of users and to be responsible their resoluteness. Thus, the host proposes to be the goal of all actions of the health teams based in establishing bonds of trust between those involved.

Furthermore, the need to prioritize serious cases requires a systematic classification of the severity of demands for health, which happens to be a technology associated with the principles described above on the host. Thus, the host with assessment and risk rating is systematized through a protocol divided into two axles and signaled by four colors.

The first axis, the red color indicates patients at risk of life, which require immediate attention, while the yellow color refers to patients in critical condition or half critic which are now stabilized, but need special attention. Already the green classifies non-urgent cases, but remain under observation. The second axis is intended to blue, which are classified with the demands of low complexity, for patients apparently not serious, susceptible to primary care.

In this direction, it is worth noting that the principles governing the HNP services and emergency excel to welcome users by risk assessment criteria defined by clinical protocols, guided by a system of reference and counter-reference and respecting the differences and needs of the subject. However, the use of clinical protocols should be optimized by adapting to the characteristics of patients seen in emergency services and emergency, given their local or regional peculiarities. The aim of this study was to characterize the attendances at the Emergency Room of Pelotas, Rio Grande do Sul, according to the protocol host with assessment and risk rating. Besides the benefits of knowing the characteristics of users seeking the PS, this research is also justified by the need to question the adequacy of the protocol used by the service, and the operational strategy of the host.

**METHODOLOGY**

Study of quantitative approach, cross-sectional and descriptive study conducted in the emergency department of Pelotas (Pelotas PS), having as materials analysis protocols of the host with the risk rating and the medical records of their users. The variables analyzed were: sex, age, color classification according to the risk of life, origin, means of access, time of arrival and types of complications or complaints.

The criteria used for the selection of chips and protocols to be analyzed was defined by drawing five days of each month, from the month of August 2010 (month deployment to host assessment and risk rating) for January 2011. In this six-month period, 5,629 sheets were evaluated and protocols. Data collection was carried out from January to March 2011, using a structured instrument, previously prepared for data collection.

The project was approved by the Research Ethics Committee of the Faculty of Nursing, Federal University of Pelotas (no. 180/2011). It was used by Disclaimer Use of data along the direction of the service, requesting authorization for the data collection. Data were coded and entered into Microsoft Excel 2007 and analyzed for relative and absolute frequencies with SPSS, version 18.0.

**RESULTS AND DISCUSSION**

Based on 5,629 records of visits analyzed it was established that only 51 (1%) of these visits were classified as emergencies, getting red and 872 (15%) were classified as emergencies,
which were identified with yellow color (Figure 1).

Cases needing emergency care (green) totaled 2,261 calls (40%), whereas 269 (5%) were classified as blue, i.e., cases likely to receive care in Basic Health Units (BHU). Still, it is possible to identify which 2,176 (39%) of the patients seen in the period were not classified according to color, which reflects the incomplete implementation of the protocol host with assessment and risk classification of service (Figure 1).

![Figure 1. Distribution of visits by Risk Rating, Emergency Room Pelotas from August 2010 to January 2011.](image)

The greatest demand service was aimed at studying demands emergency care (ranked in green), or not dealt with cases requiring immediacy. This fact is crucial to the overcrowding of service and may be indicating the fragility of medium complexity services, although it is estimated that many of these situations may have been due to chronic untreated and have worsened by the lack of basic support to health.

As for the profile of users seen at PS Pelotas, there was a similar distribution in relation to variable sex. However, it is possible to observe that in the cases considered urgent and emergency care, the percentage was predominantly male, while the calls classified as green and blue was the prevalence of females (Table 1).

In research, it has been observed a male predominance⁶,¹⁰ and women⁴,¹¹,¹². These, in turn, the authors believe that women are more concerned with the process of health and illness, as men turn to service when the disease is more advanced or often do not adhere to treatment.

The age of patients seen concentrated in the age group of 36-65 years old (Table 1). By comparing the profile of the service users studied with the description of other studies in emergency departments and emergency, realize that the average age and age groups are similar⁹,¹¹, although it has also been observed age predominantly between 18 and 29¹⁰ and between 14 and 54 years¹².

Access a variable was studied in order to verify the entry form and / or means of transport to the service user. It could be observed predominance of incomplete records with 1,315 (60.4%), not allowing the identification of the users who come to PS Pelotas via bus, motorcycle, bike, car or on foot, making deduced that these cases could be included on the "own resources" or as a given unidentified, explaining the high prevalence of both variables. Other studies have pointed out that most users use their own means⁴,¹¹ to reach emergency services.

The significant number of calls that were not submitted to the protocol host with assessment and risk classification, revealing gaps in the implementation of the new technology represent most of the cases evaluated by SAMU totaling 434 cases (19.9%), thus seeing the disconnection between the services which should be complementary in the concreteness of a technology that aims to reorganize the flow of calls, as well as methods of operating the process work in PS and care network of the municipality. Moreover, one cannot disregard failures records, one common limitation in studies on secondary data.
Table 1. Characterization of the visits by Risk Classification of Emergency Pelotas-RS, from August 2010 to January 2011.

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>RED N=51(%)</th>
<th>YELLOW N=872(%)</th>
<th>GREEN N=2261(%)</th>
<th>BLUE N=269(%)</th>
<th>NON CLASSIFIED N=2176(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>27(52,9)</td>
<td>466(53,4)</td>
<td>987(43,7)</td>
<td>144(42,4)</td>
<td>1181(54,3)</td>
</tr>
<tr>
<td>Female</td>
<td>24(47,1)</td>
<td>406(46,6)</td>
<td>1274(56,3)</td>
<td>155(57,6)</td>
<td>995(45,7)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;15</td>
<td>1(2,0)</td>
<td>85(9,7)</td>
<td>229(10,1)</td>
<td>15(5,6)</td>
<td>893(41,0)</td>
</tr>
<tr>
<td>16-35</td>
<td>11(21,6)</td>
<td>223(25,6)</td>
<td>809(35,8)</td>
<td>91(33,8)</td>
<td>486(22,3)</td>
</tr>
<tr>
<td>36-65</td>
<td>25(49,0)</td>
<td>386(44,3)</td>
<td>874(38,7)</td>
<td>123(45,7)</td>
<td>501(23,0)</td>
</tr>
<tr>
<td>&gt;66</td>
<td>14(27,5)</td>
<td>178(20,4)</td>
<td>349(15,4)</td>
<td>40(14,9)</td>
<td>296(13,6)</td>
</tr>
<tr>
<td>Access</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non identified</td>
<td>34(66,7)</td>
<td>751(86,1)</td>
<td>1943(85,9)</td>
<td>230(85,5)</td>
<td>1315(60,4)</td>
</tr>
<tr>
<td>Own ways</td>
<td>12(23,5)</td>
<td>92(10,6)</td>
<td>292(12,9)</td>
<td>39(14,5)</td>
<td>141(6,5)</td>
</tr>
<tr>
<td>SAMU</td>
<td>3(5,9)</td>
<td>14(1,6)</td>
<td>20(0,9)</td>
<td>-</td>
<td>434(19,9)</td>
</tr>
<tr>
<td>Military brigade</td>
<td>1(2,0)</td>
<td>2(0,2)</td>
<td>3(0,1)</td>
<td>-</td>
<td>164(7,5)</td>
</tr>
<tr>
<td>Other cities ambulance</td>
<td>1(2,0)</td>
<td>13(1,5)</td>
<td>2(0,1)</td>
<td>-</td>
<td>66(3,0)</td>
</tr>
<tr>
<td>Other ways</td>
<td>-</td>
<td>-</td>
<td>1(0,0)</td>
<td>-</td>
<td>56(2,5)</td>
</tr>
<tr>
<td>Origin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pelotas</td>
<td>40(78,4)</td>
<td>726(83,3)</td>
<td>1974(87,3)</td>
<td>246(91,3)</td>
<td>1767(99,7)</td>
</tr>
<tr>
<td>Other cities</td>
<td>5(9,9)</td>
<td>74(8,2)</td>
<td>105(4,3)</td>
<td>5(2,0)</td>
<td>174(7,7)</td>
</tr>
<tr>
<td>Non identified</td>
<td>6(11,8)</td>
<td>72(8,2)</td>
<td>182(8,0)</td>
<td>18(6,7)</td>
<td>235(10,8)</td>
</tr>
</tbody>
</table>

Although it was established that users from the city of Pelotas calls totaled 4,753 (84.4%), while 363 (6.5%) were sourced from other cities (Table 1). Thus, it is believed that demand outside the municipality does not represent interference from strong impact on overcrowding service. Other studies corroborate these findings.(9)

Based on the time in which it was generated record attendance, were analyzed the schedules of the initial provision of services according to the colors of the protocol risk rating. In yellow and blue peaks occurred on the morning shift, while the green there were two peaks, one in early morning and another with greater demand, at 13 hours. For the cases not classified by the protocol was seen that the peaks occur in the afternoon (Figure 2).

The period of greatest demand for the service was the late morning to early afternoon, from 10 to 15 hours. Note that it is often times for the activities of work or study. In other research, we found increased demand for the same type of service the day shift(12) and increased in the period between 19 and 20 hours(11), which coincides with the time change duty nursing professionals.

The evaluation of the most frequent reason for seeking the minimum portion classified with red color identified the prevalence of cases of hemiparesis, hemiparesthesia, hemiplegia, with or without facial paralysis, which amounted to 19.6% (n=51) of complaints, typical diagnostic signs of stroke. Similar data were observed in similar research(9). Users with intense respiratory distress and complaining of chest pain/epigastric achieved a percentage of 15.7% (n=51) each. Severe multiple trauma accounted for 11.8% (n=51) of consultations classified with the color red.

In this sample, 15.3% (n=872) of consultations classified by the color yellow have been identified as "referrals" from other services, especially primary care services hall, but also private doctors or other health institutions with telephone contact prior medical or not, demonstrating thus the reference to PS Pellets for emergencies.
Figure 2. Distribution of times of the visits by Risk Classification of Emergency Pelotas-RS, from August 2010 to January 2011.

Users who had some blunt-Lacerations requiring suturing totaled 12.7% (n=872) cases of yellow, followed by polytrauma light, with 9.1% (n=872). Complaints of abdominal pain, lumbar or thoracic nonanginal intense with changes in vital signs or accompanied by nausea, vomiting, sweating, pallor and cyanosis, totaled 8.3% (n=872) of consultations classified by the color yellow.

The classification of the green was the most prevalent among the treatments studied, i.e., cases in which show no urgency and emergency, of which 50.7% (n=2261) were related to complaints of pain in some part of body, and the most prevalent chest pain (14.3%), followed by abdominal pain (12.3%). Also the predominant complaint of pain in the findings from other research done on the basis of risk classification protocols.

Users complaining of fever were also among the leading causes of care (14.3%), followed by injuries in limbs (11.9%), and external causes (9.2%). Among the external causes, 5.1% (n=2261) were designed to falls (height, from height, motorcycle, bicycle or bed) and 4.1% (n=2261) with minor traumas.

Finally, were noted situations incompatible with urgency and emergency, were therefore classified by the color blue (n=269), such as need assessment examinations (5.9%), prescription (2.2%) and dressing (1.9%). Given the low frequency of consultations classified with the color blue (4.8%), it is worth mentioning the probable relationship to the lack of support services referral and counter-referral for cases blue, which, in this service, were often classified as green in order to be guaranteed service. Another issue to be considered in this classification is the inaccuracy unprepared professionals in an innovative activity, as well as uncertainty regarding the use of the protocol for decision-making, a process that requires time experience beyond clinical knowledge. This reality reveals the difficulties experienced with the implementation of the Home Valuation and Risk Classification, although still incipient Brazilian studies on the subject.

These findings show that the prevalence of failures in care is linked to the ratings of the colors on the same axle, stressing non-urgent cases (green and blue). In the same vein, research conducted in a hospital in Londrina found that in the first four months of the deployment of host-rated risks were considered blue 36% (n=4487) of cases, cases where users were directed to other service reference.

This study also found complaints of patients who were not included in the options embedded in the protocol used by the Emergency of Pelotas. Therefore, the complaints were outlined manually and words by nurses welcoming, showed up, mostly imprecise and difficult to interpret, what happened to those cases in which complaints signaled chest pain and dyspnea, as well as in situations "forwarding", which are prevalent in the classification showed yellow.

These are therefore recurring reviews that need to be inserted in the service protocol. Therefore, one should know that the lack of specificity of the complaints set out in the
protocol results in failures in the definition of the chief complaint, duration and intensity of symptoms\textsuperscript{(15)}. Despite the limitation found, it was still possible to identify recurrent complaints, which therefore need to be inserted to the protocol.

Study in a public Betim-Minas Gerais showed that the demand from users for the service of Attendance (PA) is given for different needs, with complaints that caused them discomfort at the time, either because of acute or not. In these situations, many users had to UBS as the first option to search for the service, opting directly by BP to meet their grievances. Still, in the same study, it was found that the design of the user's doctor PA was considered that the most qualified professional who would your consultation in primary care\textsuperscript{(4)}, which also interferes with the profiling of users of health services.

Moreover, the quality of health services depends on satisfying the needs and expectations of users through resolution, efficiency and effectiveness of health care, reduce health risks, humanizing relations between professionals and users. Furthermore, the quality depends on the promptness in attention and comfort in the user support, team motivation, health care and social control in the organization of the health system of the country. In contrast, the population believes the delay in solving their health problems, the waiting time to be seen by the doctor or the nursing staff and the poor reception of services as the main reasons for dissatisfaction\textsuperscript{(17)}.

It should be noted that the host protocols with evaluation and classification of risk confined to objective data and are not intended to subjective questions, affective, cultural and social, for that reason, the protocols do not replace professional interaction with the user\textsuperscript{(6)}.

However, it is understood that these protocols are tools that are designed to enhance the encounter between user and employee regarding the humane care, reducing waiting lists, improving user access and flow, prioritizing the most serious situations.

Therefore, it is believed that the implementation of the host with assessment and risk classification recognizes the need for changes regarding work organization and health professionals. So there is functionality, the physical structure should be adequate, and there must be political incentive. Linked to this, you should invest in interventions that advance in service, aiming to improve care and reduce overcrowding, but that these should be evidence-based and have the purpose of finding the problems and the characters involved in the changes\textsuperscript{(18,19)}.

**FINAL CONSIDERATIONS**

From these results one can know the characteristics of the trainees in the service during the period of six months, thus defining the target audience of service and enabling professionals focus their attention. Similarly, the results indicate the need to adapt the instrument for the assessment and classification of risk, in addition to qualifying records made as many errors were found in the filling of medical records regarding access and origin, as well as a number expressive of users who were not classified according to the risk of life, thus hampering the use of classification as an indicator of changes achieved by investments in user access to other services.

Regarding the classification of nurses, it was noticed sometimes certain imprecision in risk ratings identified by the color green. This fact points to the need to invest in staff training to operate with the Home Valuation and Risk Classification, as well as the restructuring of the reference and counter-reference. The results also suggest the use of the pain scale to enhance the knowledge about the most frequent complaint in the colors green and blue.

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**ACOLHIMENTO COM AVALIAÇÃO E CLASSIFICAÇÃO DE RISCO NO PRONTO SOCORRO: CARACTERIZAÇÃO DOS ATENDIMENTOS**

**RESUMO**

Estudo que objetivou caracterizar os atendimentos realizados no Pronto Socorro de Pelotas-RS segundo o protocolo de acolhimento com avaliação e classificação de risco, o qual se utiliza de cores para identificar a gravidade dos casos e a ordem dos atendimentos. Trata-se de um estudo de abordagem quantitativa, do tipo...
transversal e descritivo. Foram avaliadas 5.629 fichas de atendimento e seus respectivos protocolos de classificação. Predominaram atendimentos a adultos jovens (de 36 a 65 anos), de ambos os sexos e na sua maioria (84,4%) residentes do próprio município. O período de maior demanda por atendimentos esteve entre 10 e 15 horas. Quanto à classificação por cores, 1% dos atendimentos receberam a cor vermelha (emergência), 15% amarela (urgência), 40% verde (necessita atenção, mas sem risco de vida), 5% azul (casos não graves) e 39% dos atendimentos não foram classificados quanto ao risco. Ajustes nos dados que compunham o protocolo se mostraram necessários a fim de contemplar demandas recorrentes do serviço e potencializar o uso do mesmo para direcionar o fluxo dos atendimentos.


ACOGIDA CON LA EVALUACIÓN Y CLASIFICACIÓN DE RIESGO EN LA EMERGENCIA: CARACTERIZACIÓN DE ASISTENCIAS

RESUMEN

Estudio tuvo como objetivo caracterizar las atenciones en la sala de emergencias de Pelotas-Rio Grande do Sul, de acuerdo con el protocolo de acogida con la evaluación y clasificación de riesgo, que hace uso de colores para identificar la gravedad del caso y el orden de las visitas. Se trata de un estudio de abordaje cuantitativo, transversal y descritivo. Se evaluaron 5.629 historias clínicas y los protocolos de clasificación. Predominaron la atención a los adultos jóvenes (36 a 65 años), de ambos sexos y la mayoría (84,4%) residentes del propio municipio. El período de mayor demanda de asistencia fue entre 10 y 15 horas. En cuanto a la clasificación de los colores, el 1% de las consultas recibidas rojo (emergencia), 15% de amarillo (urgente), el 40% de verde (necesidades de atención, pero sin riesgo para la vida), 5% de azul (casos leves) y el 39% no fueron clasificados en función del riesgo. Ajustes a los datos que componen el protocolo puede ser necesaria para dar cabida a las demandas recurrentes de servicio y maximizar el uso de ella para dirigir el flujo de la atención.

Palabras clave: Acogida. Clasificación. Enfermería de Urgencia.

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