URGENT AND EMERGENCY CARE NETWORK: PROFILE, DEMAND AND FLOW OF ELDERLY TO HEALTH CARE POINTS*

Bárbara Cris Skora Antunes¹, Karla Crozeta², Fernanda de Assis³, Maria Cristina Paganini⁴

ABSTRACT: Objective: characterize the profile, demand and flow of care to elderly registered in a Municipal Health Unit assisted at an Emergency Care Network (RUE) of Curitiba. Method: cross-sectional study of quantitative approach for assessment and documentation purposes conducted between August 2015 and June 2016, based on reports of care provided to users at the referred Network and electronic medical records of users aged 60 and over. Descriptive statistics was used in the analysis. Results: it was found that 102 elderly people made 160 visits at the Emergency Care Unit (UPA), as follows: 59 (57.8%) were women, 50 (49%) were aged 60-69 years old, the demands of 55 (53.9%) were considered to be “not very urgent” and 10 individuals were hospitalized. Conclusion: Analysis of the demands of users with ordinary health problems indicated the need for operational and managerial reorganization of the network, for adequacy of care at all its levels of complexity.

KEYWORDS: Nursing, Primary health care; Medical emergency services; Elderly

REDE DE ATENÇÃO ÀS URGÊNCIAS E EMERGÊNCIAS: PERFIL, DEMANDA E ITINERÁRIO DE ATENDIMENTO DE IDOSOS*

RESUMO: Objetivo: caracterizar o perfil, a demanda e o itinerário de idosos cadastrados em uma Unidade Municipal de Saúde, atendidos na Rede de Atendimento às Urgências e Emergências de Curitiba. Método: pesquisa avaliativa, documental, transversal, de abordagem quantitativa, realizada entre agosto de 2015 e junho de 2016, cuja fontes de dados foram Relatórios de Atendimento na Rede e prontuários eletrônicos de usuários com 60 anos ou mais. A análise foi realizada por estatística descritiva. Resultados: identificaram-se 102 idosos que realizaram 160 consultas na Unidade de Pronto Atendimento, 59 (57,8%) eram do sexo feminino, 50 (49%) tinham entre 60 e 69 anos, em 55 (53,9%) a demanda foi considerada “pouco urgente”, e 10 foram internados. Conclusão: observou-se a demanda de usuários devido a agravos comuns de saúde, sendo necessária a reorganização operacional e gerencial da rede, objetivando adequação do atendimento em todos os seus níveis de complexidade.

DESCRITORES: Enfermagem; Atenção primária à saúde; Serviços médicos de emergência; Idoso.

RED DE ATENCIÓN A URGENCIAS Y EMERGENCIAS: PERFIL, DEMANDA E ITINERARIO DE ATENDIMIENTO DE ANCIANOS*

RESUMEN: Objetivo: caracterizar el perfil, la demanda y el itinerario de ancianos registrados en una Unidad Municipal de Salud, atendidos en la Red de Atención a Urgencias y Emergencias de Curitiba. Método: pesquisa evaluativa, documental, transversal, de abordaje cuantitativo, realizada entre agosto de 2015 y junio de 2016, cuyas fuentes de datos fueron Informes de Atendimiento en la Red y prontuarios electrónicos de usuarios con 60 años o más. El análisis fue realizado por estadística descriptiva. Resultados: se identificaron 102 ancianos que realizaron 160 consultas en la Unidad de Urgencias, 59 (57,8%) eran del sexo femenino, 50 (49%) tenían entre 60 y 69 años, en 55 (53,9%) se consideró la demanda “poco urgente”, y 10 fueron internados. Conclusión: se observó la demanda de usuarios debido a agravios comunes de salud, siendo necesaria la reorganización operacional y administrativa de la red, con el objetivo de adecuar el atendimento en todos sus niveles de complejidad.

DESCRIPTORES: Enfermería; Atención básica a la salud; Servicios médicos de emergencia; Anciano.

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INTRODUCTION

There have been significant advances in the Unified Health System (SUS) throughout its 27 years in Brazil. However, given the change in the profile of the population and health problems over time, and considering the obstacles to the consolidation of the constitutional principles of the system, there is an evident difficulty in overcoming the intense fragmentation of health services and actions, and the quality, effectiveness and comprehensiveness of care in the current health setting must be improved\(^1\)-\(^2\).

In view of the aforementioned, there was the emergence of the Health Care Networks (RAS), which integrate care to provide effectiveness, safety and quality to solve the main health issues of the Brazilian population\(^2\)-\(^3\).

In the Brazilian health care scenario, there is a predominance of chronic non-communicable diseases (CNCD). There is currently increased morbidity and mortality due to diseases of the circulatory system among Brazilians, particularly acute myocardial infarction (AMI) and stroke, which are the main causes of mortality among men and women in the country\(^4\).

Corroborating Brazilian statistics, it is estimated that in 2015 diseases of the circulatory system were the main cause of mortality among residents of Curitiba, accounting for 27.45% of deaths, followed by cancer, with 21.20% of the deaths, and external causes that represent 12.14% of the causes of mortality in the referred city\(^5\). These data reveal that urgent and emergency care should be a priority of the federal government, as well as of several municipalities of the country, since the individuals are often affected by such disorders, and the absence or inadequacy of a health system to treat such conditions can result in disability, death or suffering of patients and their families\(^6\)-\(^7\).

In view of the aforementioned, the Urgent and Emergency Care Networks (RUE) were created. They aim to handle the health problems of SUS users in urgent and emergency care in a resolute and timely manner, coordinating health equipment, expanding and qualifying humanized and comprehensive access\(^8\).

The Emergency care Network proposes to handle different conditions, ranging from clinical, surgical, and traumatic situations related to external causes, such as violence, to gynecological-obstetric, psychiatric and pediatric conditions. Thus, the network aims at the expansion and coordination of emergency services, in a qualified and resolute manner, coordinating actions to promote health and prevention of diseases, diagnosis, treatment, rehabilitation and palliative care\(^8\).

Primary Health Care (PHC), one of the components of the RUE and the user’s entry point to the healthcare system, aims to provide care based on a continuous and integrated relationship from the first visit to the emergency services to referrals to other care points of the network, when necessary, and with appropriate assessment of risks and vulnerabilities. Moreover, PHC must be the preferential first contact point and entrance for a network of resolute services of universal access. It must coordinate care and organize the services in the network\(^8\).

Based on the aforementioned, the motivation for the present study was the need for knowledge on the profile of users and their demand for care at Urgent and Emergency Care Networks (RUE) at the institution of the researchers, as well as the flow of users between health services and care points, identifying the main health problems, in order to assess and collect data that can be useful for the maintenance of actions carried out in the different services and care points.

Therefore, the present study integrated the research actions of the Health Education Program (PET Saúde) – Curitiba Care Networks, with the purpose of characterizing the profile, demand and flow of elderly users of a Municipal Health Unit who attended the Urgent and Emergency Care Network (RUE).
**METHODOLOGY**

Cross-sectional study of quantitative approach for assessment and documentation purposes based on data from users registered in a Municipal Health Unit (UMS) in the city of Curitiba, Paraná, under the Family Health Strategy (FHS), aimed to characterize the profile, demand and flow of users at the Urgent and Emergency care Network.

The data source for the study consisted of reports of visits of users to the Emergency Care Units (UPA), reference for the Municipal Health Unit (UMS), from January to July 2015; Hospital Admission Reports from May to July 2015 and the electronic records of patients registered at the UMS.

Data was collected from August to September 2015, and included information related to visits of users aged 60 years of age or older to the emergency care services of Curitiba, with permanent register at the UMS, from January to July 2015. Data from users temporarily registered at the UMS was excluded, as well as data not available at the electronic patient records.

The data collected was tabulated in Microsoft Excel 2013 spreadsheets and the Statistical Package for Social Science for Windows (SPSS) was used for descriptive statistics (distribution of frequencies, means and medians), and arranged in charts and tables. The results were grouped into two categories: visits to the Urgent and Emergency Care Unit (UPA) and visits to hospitals.

Regarding the visits to the UPA, the variables analyzed were age, gender, frequency of visits to the UPA (number of visits to the service), number of visits, diagnosis according to the International Classification of Diseases (ICD-10), complete description of the diagnosis, risk classification (Manchester Protocol for Risk Assessment and Classification), day of the visit, return to UMS in up to seven days, time interval between the visit to the UPA and Home Visits (period of days between the latest visit to the UPA and the first home visit, care with the same diagnosis or similar, and subsequent hospitalization.

The following variables were considered in the analysis of hospital admissions: age, gender, health facility of referral, diagnosis according to ICD, home visits by the healthcare team and length of time between hospitalization and return to the UMS after hospital discharge.

The study was submitted to the Research Ethics Committee of Setor de Ciências da Saúde da Universidade Federal do Paraná (CEP/SD/UFPR)and the Research Ethics Committee of the Municipal Health Department (SMS) of Curitiba, and was approved under protocols 499,507 and 547,439, respectively.

**RESULTS**

Analysis of Reports of visits to the Emergency care unit (UPA) found that 102 elderly registered at the UMS were assisted in the study period. Of these, 59 (57.84%) were women and 50 (49.01%) were aged 60-69 years, according to Table 1.

Table 1 – Age range of the elderly users assisted at the UPA. Curitiba, PR, Brazil, 2016

<table>
<thead>
<tr>
<th>Age range</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 to 69 years</td>
<td>50</td>
<td>49.01</td>
</tr>
<tr>
<td>70 to 79 years</td>
<td>43</td>
<td>42.15</td>
</tr>
<tr>
<td>80 to 89 years</td>
<td>19</td>
<td>18.62</td>
</tr>
<tr>
<td>90 to 99 years</td>
<td>2</td>
<td>1.69</td>
</tr>
<tr>
<td>100 years or more</td>
<td>1</td>
<td>0.98</td>
</tr>
<tr>
<td>TOTAL</td>
<td>102</td>
<td>100</td>
</tr>
</tbody>
</table>

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Of the 102 elderly, 69 (67.64%) made one visit and 33 (32.35%) made two or more visits. (Table 2).

There were 160 visits to the referred UPA, with an average of 1.56 visits per elderly user.

Table 2 – Frequency of visits of elderly to the UPA. Curitiba, PR, Brazil, 2016

<table>
<thead>
<tr>
<th>Number of visits</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>69</td>
<td>67.64</td>
</tr>
<tr>
<td>2</td>
<td>16</td>
<td>48.48</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td>36.36</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>12.12</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>3.03</td>
</tr>
<tr>
<td>TOTAL</td>
<td>102</td>
<td>100</td>
</tr>
</tbody>
</table>

Regarding the Protocol for Assessment and Classification of Risk, one elderly patient (0.98%) had an “emergency” (red) classification visit, one (0.98%), the visit was “very urgent” (orange), 13 (12.74%) made “urgent” visits (yellow), 55 (53.92%) made “not very urgent” visits, four (3.92%) were assisted by the SAMU, 21 (20.58%) had visits with different classifications, and seven (6.86%) were ignored due to lack of data (Table 3).

Regarding the diagnosis, according to ICD-10, of the 102 elderly, 69 (67.64%) had only one diagnosis and 33 (32.35%) presented two or more, since they performed multiple visits in the UPA. Regarding these 69 visits, 22 (31.88%) were driven by symptoms, signs and abnormal findings of clinical and laboratory tests; 14 (20.28%) were related to factors that impact health status and to contact with health services; seven (10.14%) were due to diseases of the circulatory system and 26 (37.70%) were related to other diagnoses that had a frequency distribution less than seven.

Of the 33 elderly patients who attended the UPAs multiple times (91 in total), 18 (54.54%) had two or more equal diagnoses or diagnoses allocated to the same chapter of the ICD, and 15 (45.46%) had different diagnoses in all the visits. Of the 18 elderly, six (16.67%) had different diagnoses in all cases.

In these diagnoses, symptoms, signs and abnormal findings of clinical and laboratory tests prevailed with a frequency of 25 (27.47%), followed by diseases of the respiratory system with 21 (23.07%) cases; factors that influence health status and contact with health services with 15 (16.48%) cases, and diseases of the circulatory system with seven (7.69%) cases. The other 67 cases occurred due to other health problems.

The time elapsed between the visit to the UPA and the home visit of the FHS team was in average 22.85 days. Two elderly people received home visits before the latest visit to the UPA. The subsequent visits could not be identified for all the patients due to lack of such information in patients’ electronic medical records.

From May to July 2015, 10 elderly people registered at the UMS were hospitalized. Of these, three (30%) were female and seven (70%) were male. The three women made previous visits to the UPA, and of the men, only two did not make previous visits to the UPA. There were 12 hospitalizations for different ICDs, since two elderly (20%) had two hospitalizations in different months. Of these 12 hospitalizations, 8 (66.67%) were in hospitals and four (33.33%) were at the UPA (Table 3).
Table 3 – Diseases diagnosed in the hospitalized elderly (n=12). Curitiba, PR, Brazil 2016

<table>
<thead>
<tr>
<th>ICD Chapter</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certain infectious and parasitic diseases</td>
<td>1</td>
<td>8.34</td>
</tr>
<tr>
<td>Diseases of the circulatory system</td>
<td>1</td>
<td>8.34</td>
</tr>
<tr>
<td>Respiratory diseases</td>
<td>5</td>
<td>41.67</td>
</tr>
<tr>
<td>Diseases of the skin and subcutaneous tissue</td>
<td>1</td>
<td>8.34</td>
</tr>
<tr>
<td>Diseases of the genitourinary system</td>
<td>1</td>
<td>8.34</td>
</tr>
<tr>
<td>Signs, symptoms and abnormal clinical and laboratory findings, not elsewhere classified</td>
<td>1</td>
<td>8.34</td>
</tr>
<tr>
<td>Injury, poisoning and other consequences of external causes</td>
<td>2</td>
<td>16.67</td>
</tr>
<tr>
<td>TOTAL</td>
<td>12</td>
<td>100</td>
</tr>
</tbody>
</table>

Of the 12 hospitalized patients, in one case (8.33%) it was possible to identify the date of hospital discharge. The length of stay of the elderly in the health service was five days. Of the 10 users, seven (70%) received a home visit from the FHS team after all hospitalizations and three (30%) did not receive such visits. Regarding return to the UMS after hospitalization, six elderly (60%) returned after hospitalizations and four (40%) did not.

● DISCUSSION

The profile, demand and flow of care to elderly registered in a Municipal Health Unit (UMS) of Curitiba, assisted at the Emergency Care Service (UPA) were analyzed in the present study. The total number of elderly individuals assisted at the UPA in a seven-month period was 102, generating 160 visits to the service.

The UPAs are defined as intermediate structures between PHC services and the hospital network. They comprise an organized network of services aimed to provide urgent and emergency care to less complex situations. Their primary objective is to provide resolute care that meets the needs of the users, through counter referrals between other facilities in the network, ensuring continuous and integral treatment to the users(9).

As for the elderly, 57.84% were women and 49.01% were aged 60-69 years. In an integrative review that attempted to identify the production of knowledge on the characteristics of frequent users of emergency services, studies have shown that women are the most frequent users. Most users of these services are aged 65 years or over(10). Another study found that of the 385 individuals who sought emergency care, 211 were women and 142 were aged 60-79 years. The predominance of females can be related to the higher level of concern of women with healthcare(11-12).

Regarding the frequency of attendance, 67.64% users had one visit and 32.35% had two or more visits. Studies indicate that patient attendance may vary from 4 to 58 times. However, most users repeatedly missed appointments compared to those with moderate to high attendance(12).

The elderly who participated in this study had similar complaints. The main complaints of these users included symptoms, signs and abnormal findings from clinical and laboratory tests, followed by factors influencing health status and contact with services, respiratory and circulatory system diseases, injury, poisoning, and certain other consequences of external causes. This reflects a situation in which the great inflow of users with ordinary health problems results in the overcrowding in secondary and tertiary services, complicating the operationalization of the healthcare network.

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In Brazil, the Manchester Triage System (STM) with five risk categories is currently used. The categories are as follows: red (emergency, immediate care), orange (very urgent conditions, care to be provided in 10 minutes), yellow (urgent conditions, care provided in 60 minutes), green (not urgent conditions, care provided in 120 minutes) and blue (not urgent conditions, care provided in 240 minutes) was implemented in Brazil, at the SUS. Most visits of elderly to the UPA driven by conditions described in Chapter 18 of the ICD, the most prevalent among these users, concern clinical pictures for which a definitive diagnosis has not been reached. Therefore, they are not related to a given pathology, but rather to symptoms that require continuous care in other health services, such as PHC.

Regarding the visits to the UPA, the complaints of 53.92% of the elderly were classified as “not very urgent” and 20.58% of the users had several complaints classified as “not very urgent” and “urgent”). Studies aimed to identify the complaints of elderly at the UPA found that in 69.1% of the cases the complaints of users aged 60 years or over did not require the level of care provided at an emergency care service. Considering the significant number of users who attend emergency services for the treatment of low-severity health problems and non-urgent problems at urgent and emergency care, it is concluded that most complaints could be handled at PHC.

As demonstrated in this study, the UPAs have become “entry points” to the health system both for users requiring emergency care and users who need primary and specialized care. There are many reasons to explain why users often seek the UPAs for care, such as the failure of resolute care in PHC due to the lack of specialized professionals, appropriate facilities for undertaking tests and lack of drugs; difficulty in making appointments; long time waiting in lines; greater use of the service by populations of smaller cities and the fact that users perceive care at the UPAs as prompt and effective.

Thus, users tend not to rely on the care provided by PHC units, because they often have trouble scheduling medical appointments on a timely basis at their local units and have to wait a long time for the desired appointment, and when they get the appointments, they do not return to the unit for the necessary follow-up appointments, except when they are registered in a specific program.

In this regard, the home visits in PHC are a useful tool. Their purpose is to provide the health staff with understanding of the environment of the elderly, such as home life, family relationships, cultural background, and other factors, for the establishment of a bond. Of the 58 elderly people who participated in the study, 40 received home visits (in most cases, from community healthcare agents (ACS). A study corroborated such data reporting that most patients who attended the emergency care service were later visited by the healthcare team.

The elderly were admitted 12 times in a period of three months to inpatient wards: eight times to hospitals and four times to the UPA. The main diagnosis was respiratory diseases, injuries, poisoning and other consequences of external causes. Among the main reasons for the hospitalization of the elderly in hospitals, respiratory diseases and external causes were among the six most common causes in a study. In a study carried out in two general hospitals, it was observed that the main causes of hospitalization of the elderly were circulatory diseases followed by respiratory diseases, which were the main problems in the hospitalization of the subjects of this study.

**CONCLUSION**

The UPAs, emergency services of secondary complexity, currently handle complaints (diseases) that could be treated at PHC level. This was demonstrated in the appointments/visits classified as not very urgent. In addition, most of the conditions treated at the Emergency Units concern symptoms not directly related to pathologies, which can be handled at PHC.

Despite the emphasis on the reorientation process in the current care model and the definition of PHC as the entry point to the healthcare system, it is inferred that users prefer emergency services and
hospitals as their entry points in the healthcare system, which leads to overcrowding in secondary and tertiary services, complicating the operationalization of the network.

It is necessary to reinforce the importance of PHC as an essential component of the Emergency Care Network in the search for the organization of the flow of care, as it provides effective care to ordinary health problems and ensures referral to higher complexity facilities in situations that require more technology apparatus.

One limitation of this study is the sample size, as it was based on the analysis of data from only one health unit in the city of Curitiba, as well as on incomplete reports. However, the findings obtained here can be applied to other scenarios. Thus, further and more comprehensive studies on the subject are recommended.

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