

Study of emergency medical service frequentation rates

MARÍA ISABEL CANO DEL POZO¹, MARÍA JOSÉ RABANAQUE HERNÁNDEZ²,
CRISTINA FEJA SOLANA¹, MARÍA DEL CARMEN MARTOS JIMÉNEZ¹, JOSÉ MARÍA ABAD DÍEZ¹,
JOSÉ MIGUEL CELORRIO PASCUAL¹, FOR THE GRUPO DE INVESTIGACIÓN EN SERVICIOS SANITARIOS
(INSTITUTO DE CIENCIAS DE LA SALUD)

¹General Council of Aragón, Spain. ²University of Zaragoza, Spain.

CORRESPONDENCE:

M.^a José Rabanaque Hernández
Departamento de Medicina
Preventiva y Salud Pública
Facultad de Medicina
Universidad de Zaragoza
C/ Domingo Miral, s/n
50009 Zaragoza, Spain
E-mail: rabanake@unizar.es

RECEIVED:

11-10-2007

ACCEPTED:

25-2-2008

CONFLICT OF INTEREST:

None

Background: Despite the application of several measurements, such as the creation of an emergency medical service (EMS), massification and inadequate use of hospitalary emergency departments are still current concerns. The aim of the present study was to assess the utilization of these services in Aragón and to analyze the covariables influencing in their use.

Methods: Observational study regarding the use of the Service 061 ARAGON, during 2003. A bivariate analysis was performed to compare the rates of frequentation in EMS by groups of age, sex and health region, and a study of variability of frequentation rates by health region was made using as the coefficient variation % (CV). A logistic regression model was used to identify the main variables which could have any impact on the likelihood of calling 061 ARAGON on the weekend days.

Results: In contrast with the findings in the provinces of Huesca and Teruel, the highest rates of frequentation were observed in the zones of the city of Saragossa and the percentage of women was higher. The variability for health regions was also higher in women. The probability of asking for the service on Sunday increased with the lower severity of the illness and decreased for males and people under 60 years of age.

Conclusions: EMS have centralized the coordination of emergency care and increased the accessibility to healthcare system, however, the variability in the use should be analyzed. [Emergencias 2008;20:179-186]

Key words: Emergency, medical services. Triage. Utilization.

Introduction

The coordination of emergency care among the different healthcare levels is currently one of the problems pending solution in the National Healthcare System. Overcrowding of hospital emergency departments and the variability in frequentation has led to different approaches with the aim of improving this situation and are the objective of this study.

The problems of overcrowding and inadequate use of hospital emergency departments continue despite the application of measures to reform primary healthcare initiated in the 1990s. These reforms were implemented after an analysis of the critical situation of the hospital emergency departments^{1,2}. The rise in the use of these services has been constant with an annual growth of 5%^{3,4}. Several different reasons may explain this increase with changes in the patterns of morbidity, socio-

cultural, demographic, organisational factors, accessibility and lack of confidence of patients in first level care being of note.

It is worrisome that in addition to the increase in the use of the emergency services^{3,4}, different studies have reported that this rise is produced, at least in part, by assistance to 20%-80% of inadequate cases^{4,9-13}. Some specific actions have been proposed to reduce and orient the use of these services such as patient triage programmes, derivation of non urgent patients to other healthcare levels or the incorporation of general physicians to the staff of hospital emergency departments^{14,15}. Other measures aimed at reducing the demand such as healthcare education and an improvement in the accessibility to primary care do not seem to reduce the use of hospital emergency departments¹⁶.

On the other hand, it seems that integration of the assistance provided at the different healthcare

levels is considered as a basic element for guaranteeing the continuity and effectiveness of care and decreasing inadequate use of the same⁷⁻¹⁹.

To this respect, in addition to the reform process of primary healthcare in the 1990s, a new element was introduced: the creation of extrahospital emergency services. The objective was two-fold: to establish a mechanism for coordinating the demand for urgent healthcare with the implementation of a single access telephone number and to create specific teams for both extrahospital care and the transfer of patients.

The Emergency Assistance and Healthcare Emergencies Services 061 in the autonomous community of Aragón was initiated in 2000 with the aim of providing 24-hour response 365 days of the year to urgent and emerging healthcare demands producing with the setting of this autonomous community, mobilizing the most adequate resource in each case according to the criteria of severity, proximity and availability.

In its eighth year of service the present study was developed with the objective of knowing the degree of utilisation of this service and analysing the frequentation based on different variables such as age, sex, seasonality, basic healthcare area and reason for demand. Another objective was to analyse the possible variability in its use by healthcare regions.

Methods

A descriptive, observational study on the use of the Extrahospital Emergencies Service 061, ARAGÓN, in the autonomous community of Aragón during 2003 was carried out.

Information was obtained from the computerised database of 061 ARAGÓN which contains data of all the calls attended by this service as well as the patients attended. The study variables analysed included the age of the patient, sex, the month, day of the week and the time the care was received, the reason for the request, severity, the type of resource mobilised and the basic healthcare area of the patient. Classification of the reason for the request was based on a typing system developed by 061 ARAGÓN which includes a total of 202 categories grouped into 8 main categories. This classification system is based on symptoms, not on diagnostic categories, following a "tree" scheme with a maximum of three branches for each main category. Each category thereof is associated with a level of severity based on the type of urgency: severity 1 = "vital ur-

gency" or "emergency"; severity 2 = "non vital urgency" and severity 3 = "delayable urgency" or "non urgent".

Proportions and rates of frequentation were used as measures of frequency. The gross and specific rates were calculated by group of age, sex and basic healthcare area and the reference population was considered that obtained in the data from the healthcare cards by health area in 2003. The rates of frequentation adjusted by age were also determined with the direct method²⁰ using the European population model as the pattern. The confidence interval for the gross rate was calculated according to the following formula:

$$CI95\%(TB) = t \pm 1,96 \sqrt{t/m},$$

in which t = specific estimated rate and m = persons/year; for the adjusted rate the formula was:

$$CI95\%(TB) = T\hat{A}E_i \pm 1,96 \sqrt{\frac{\sum_i N_i^2 t_i}{N^2 m_i}}$$

with $T\hat{A}E_i = \sum_i \frac{N_i}{N} t_i$ = estimated adjusted rate,

m_i = persons-year, N_i = standard population in group i , N = total standard population and t_i = estimated specific rate in group i .

In addition to the descriptive analysis of each of the variables included in the study, bivariate analysis was performed comparing the rate of emergency frequentation by groups of age, sex and basic healthcare area using means comparison for quantitative variables and the Chi-square and Pearson tests for qualitative variables. Likewise, a variability study of the rates of frequentation per healthcare area was carried out considering not only the gross rates but also those adjusted for age, in men and women, using the coefficient of variation (CV):

$$CV = \frac{S_x}{x}, \text{ where: } S = \text{typical deviation; } X = \text{mean.}$$

Thereafter, a logistic regression model was adjusted only for the healthcare areas of the city of Zaragoza with the aim of identifying which variables influence the probability of an emergency call being made on a holiday. The corresponding odd ratios (OR) were calculated with their confidence intervals (CI 95%). "Type of day on which the call was made: workday or holiday" (with "workday" being the reference category) was considered as a dependent variable while sex, age in three categories (< 20, 20-59 and > 59) and severity of the call (vital urgency, non vital ur-

Table 1. Rate of frequentation by men and women

	Gross rate	CI 95% GR	Rate adjusted for age (AR)	CI 95% AR	p
Men	6,662.81	6,597.66-6,727.96	5,463.90	5,404.74-5,523.06	< 0.05
Women	8,614.22	8,541.31-8,687.14	6,185.33	6,122.86-6,247.80	< 0.05
DR	0.77		0.88		

Rates per 100,000 inhabitants; DR: difference in rate: men/women; AR: rates adjusted for European age of population model using direct method.

gency, no urgency) were deemed independent variables. The backwise step elimination method was used to introduce the independent variables in the analysis with a probability of input of 0.05 and output 0.1.

The level of significance for all the comparisons was determined to be a value of 95% ($p < 0.05$).

Results

During 2003 a total of 285,841 calls were received by 061 ARAGÓN, 131,603 (46%) of which requested urgent healthcare assistance. The daily mean was of 385 calls. The remaining 54% corresponded to informative calls and resource coordination.

With respect to the characteristics of the persons attended, it is of note that 56.4% of the patients were women, representing a gross rate of frequentation of 8,614.2 per 100,000 women/year. For males the gross rate was 6,662.8 and the differences in rate adjusted for male/female age was 0.88 (Table 1). In regard to age, 56.2% were over the age of 60 years and 9.9% were under 19 (Figure 1).

Sunday was the weekday with the greatest demand for all the age groups, with a significantly higher daily mean of calls ($p < 0.05$) for the weekends than work days (Table 2). Distribution by times of the day was also different and the range from 15:00 to 22:00 h showed the highest number of calls on work days while on weekends the time period from 08:00 to 15:00 h was the most frequent ($p < 0.05$) (Table 2 and Figure 2). The hours during which the consultations were made varied little between the different age groups, and morning consultations predominated in the most elderly age groups. Thus, 37% of the consultations made by patients over the age of 60 were undertaken from 08:00 to 15:00 h, while those under the age of 19 consulted mainly during the afternoon from 15:00 to 22:00 h. November (10.9%) and December (10.3%) were the months during which the highest percentage of consultations took place.

The main reasons for consultation were disease (55.7%), request for resources as per physician

(21.9%) and external cause (5.4%). Within the disease group the main reason for consultation for both men and women was "pain" (13.9%) followed by "fever" (10.1%), "respiratory tract diseases" (6.3%) and "neurological alterations" (5.4%). "Traffic accidents" were more frequent from June to August with 32.6% of the total accidents being concentrated in these months while more consultations for "disease" were made in November and December with 23.5% of the total. "Traffic accidents" were more frequent and of note in the age group from 20 to 39 years with 40.2% of the accidents being produced in this age group. In the patients over 60 years of age the consultations for "disease" (52.2%), "request for healthcare personnel assistance" (74.9%) and the "request for resources as per medical instruction" (76.9%) were the most frequent.

With regard to the severity of the process, of the total number of assistance requests received 52.5% were considered as "non urgent", 35.1% "non vital urgency" and 12.4% were "vital urgencies". Of the latter, 27.3% were due to traffic accidents.

Twenty-five percent of the calls were solved by telephone by the 061 personnel either through medical advice via telephone (35% of the cases) or derivation to other care points, mainly primary care. The remaining 75% of the calls were solved with the mobilization of a healthcare transport service. The most frequent type of resource mobilized was a home visit by a physician (38.%) followed by conventional ambulances (Table 3).

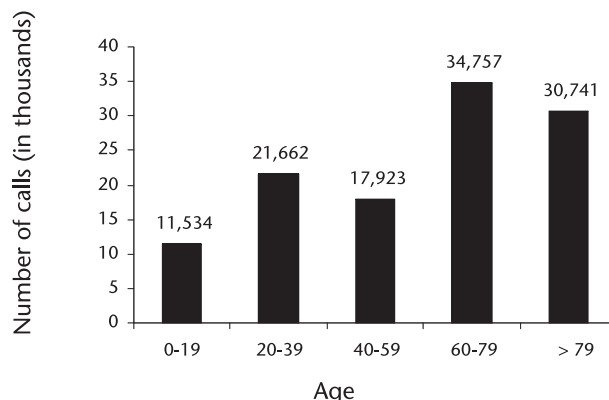
**Figure 1.** Distribution of the number of calls by age groups.

Table 2. Distribution of calls by periods of time (mean \pm standard deviation)

Time period	Total mean daily calls	Mean daily weekday calls	Mean daily weekend calls	<i>p</i>
8-15 h	121 \pm 40.2	110 \pm 29.3	173 \pm 44	< 0.05
15-22 h	134 \pm 37	133 \pm 33.8	143 \pm 48.9	< 0.05
22-8 h	105 \pm 43.5	99 \pm 32.4	130 \pm 71.7	< 0.05

On analysis of frequentation by basic healthcare areas, the higher rates were observed in the healthcare areas of the city of Zaragoza (Table 4 and Figure 3). When frequentation was stratified by sex, the rates of frequentation adjusted for age in the province of Zaragoza were higher in women than in men ($p < 0.05$) except in the sector of Calatayud (Table 5). In the provinces of Huesca and Teruel, the rates were higher in men than in women ($p < 0.05$) (Table 5).

The variability of frequentation by basic healthcare areas adjusted for age was greater in women than in men (CV women = 0.94; CV men = 0.70) (Table 6). Since home care was only provided in the capital, Zaragoza, the coefficients of variation were lower and similar in men and women on differentiating this city from the remaining areas.

Although the variability explained by the logistic regression model is low ($r^2 = 0.004$), the variables found to significantly raise the probability of requesting the service on Sunday were the lesser severity of the call (non urgent call compared to vital urgency (OR = 1.396; CI 95%: 1.298-1.501; $p < 0.001$) and the interaction between sex and age. The probability of service demand on Sunday was reduced for men and being under the age of 20 years (OR = 0.899; CI 95%: 0.831-0.973; $p = 0.009$) or being male and from 20 to 59 years of age (OR = 0.931; CI 95%: 0.892-0.971; $p = 0.001$).

Table 3. Type of resource mobilised

	N	%
MUs	10,679	9
MICU	6,063	5
BVS AMB	19,900	17
Conventional AMB	21,358	18
Medical HCU	216	0
Nursing HCU	43,292	37
Total	6,393	6

MUs: Mobile units (primary assistance); MICU: Mobile Intensive Care Unit (interhospital transfers; BVS AMB: Basic vital support ambulances; Conventional AMB: Conventional ambulances; Medical HCU: physician providing home care in the city of Zaragoza; Nursing HCU: Nurses providing home care in the city of Zaragoza.

Discussion

The present study reports a descriptive analysis of the use of an extrahospital emergency care service which was created six years ago, fruit of the development of the integral urgent care and emergencies plan of the autonomous community of Aragón.

The number of calls received to 061 ARAGÓN has increased annually by 25%-30% with nearly 300,000 calls having been made in 2003, thereby indicating that the population is increasingly more aware of this service. Assistance from trained professionals through this telephone number provides answers to many questions, mainly related to the

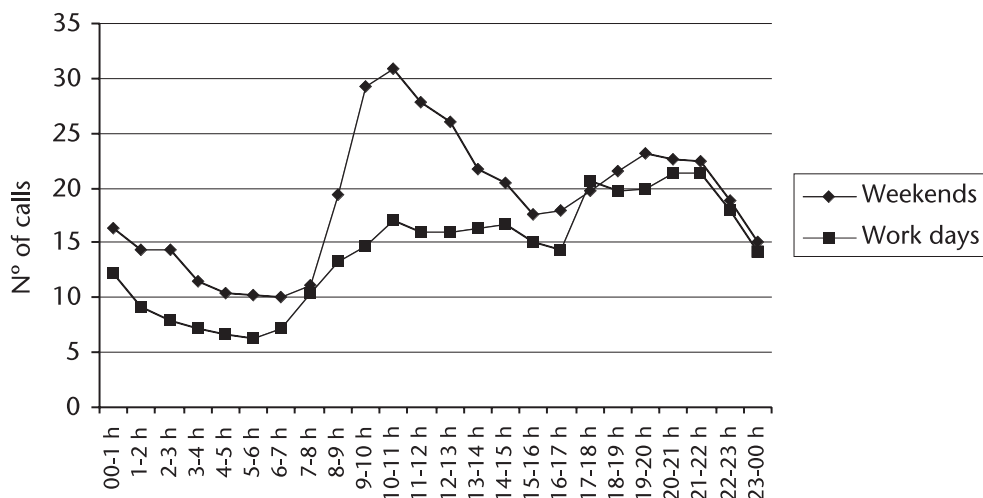
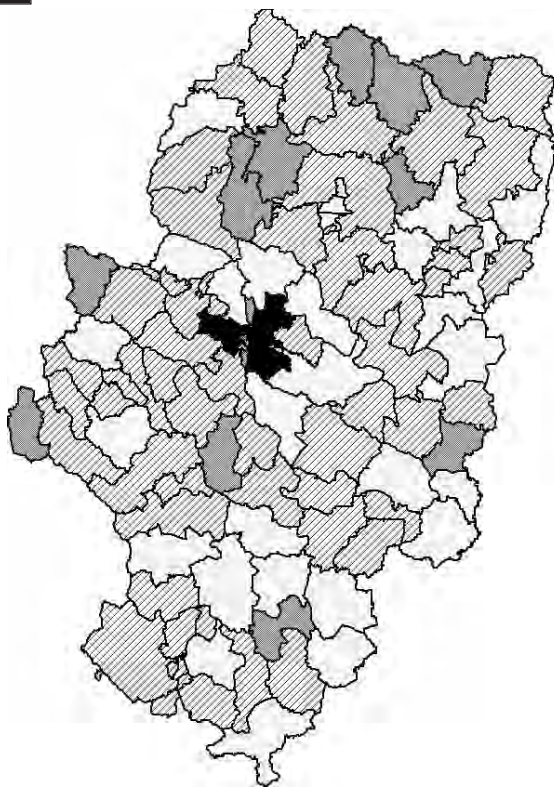
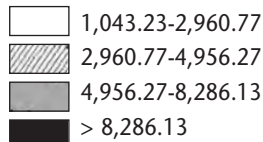
**Figure 2.** Distribution of the calls by times of the day.

Table 4. Rates of frequentation in the capital, Zaragoza and the remaining healthcare areas

	Gross rate (GR)	CI 95% GR	Rate adjusted for age	CI 95% (AR)	p
Capital Zaragoza	11,102.29	11,020.66-11,183.92	8,844.05	8,771.73-8,916.37	< 0.05
Remainder	3,114.27	3,069.07-3,159.47	1,952.49	1,917.99-1,986.99	< 0.05
DR	3.56		4.56		

Rates per 100,000 inhabitants. DR: differences in rates; AR: rates adjusted for European age of population model using direct method.

Gross rate

**Figure 3.** Gross rates of frequentation by healthcare area per 100,000 inhabitants.

functioning of the healthcare system, healthcare education, resources available, which up to now had remained unanswered by many users. On the other hand, it is of note that 25% of the calls for healthcare were solved by phone and of these 35% did not require the patients to go to any healthcare centre. It may therefore be considered whether the generalisation of the use of this service would redound in lesser frequentation of the emergency services of other healthcare centres at present frequently used by patients with banal problems.

It was observed that the time of use of this service was mainly just before the weekend which may be explained by the lack of coverage in most of the primary healthcare centres during this time and was confirmed on analysing the different distribution of the time of the calls on week days compared to weekends. The distribution changes on weekends with the greatest percentage of calls being produced from 08:00 to 15:00 h with an upturn from 19:00 to 22:00 h. The availability of a home medical care service through 061 from 17:00-09:00 h on week days and 24 hours on weekends in the city of Zaragoza may explain the greater demand for this service during these time periods. The same reason could explain the finding that Sunday was the day receiving the highest percentage of calls being, on many occasions, an alternative or complementary resource to that provided by continued care points for solving non urgent or "de-layable" problems.

Table 5. Differences in adjusted rates of frequentation between men and women in healthcare sectors

Healthcare sectors	Rate adjusted for age (AR) Men	CI 95% AR Men	Rate adjusted for age (AR) Women	CI 95% AR Women	DRA
Huesca	1,966.18	1,850.82-2,081.55	1,400.16	1,305.12-1,495.21	1.40
Barbastro	2,285.44	2,157.10-2,413.77	1,597.47	1,489.60-1,705.34	1.43
Zaragoza I	6,422.27	6,252.66-6,591.88	7,741.38	7,559.06-7,923.70	0.83
Zaragoza II	8,240.84	8,107.91-8,373.77	9,427.31	9,290.51-9,564.11	0.87
Zaragoza III	5,151.98	5,030.76-5,273.19	5,711.40	5,583.50-5,839.29	0.90
Calatayud	1,821.76	1,665.72-1,977.80	1,564.57	1,416.75-1,712.39	1.16
Teruel	1,936.91	1,800.31-2,073.50	1,523.72	1,400.00-1,647.44	1.27
Alcañiz	2,040.57	1,902.37-2,178.78	1,641.64	1,514.45-1,768.84	1.24

Rates per 100,000 inhabitants. AT: rates adjusted for European age of population model using direct method. DRA: differences in rates adjusted for European age of population: men/women.

Table 6. Coefficient of variation of the rates of frequentation by basic healthcare areas

	Total areas	Areas of the Capital Zaragoza	Remaining areas
Men			
CV gross rate	0.58	0.23	0.38
CV adjusted rate	0.70	0.19	0.45
Women			
CV gross rate	0.78	0.23	0.38
CV adjusted rate	0.94	0.20	0.42

With respect to the seasons of the year, greater demand was detected in the winter similar to what has been observed in the remaining healthcare levels very probably being conditioned by the seasonality of certain diseases with a greater incidence in these months.

Special attention should be given to the age of the patients requesting assistance through the 061 telephone, since more than 50% were over the age of 60 years and consultations were of the type related to re-exacerbations of chronic diseases or problems of the social-healthcare type. This suggests that our present healthcare system may have gaps in this area which may be resolved by reinforcing home care and social care to elderly patients with chronic diseases. Indeed, interventions of this nature have been reported involving multiple hospital admissions or hyper emergency department users^{21,22}.

It is also of note that 52.5% of the calls were for non urgent processes thereby demonstrating that this service is not only considered by the population as a vital emergency care resource but also as another doorway to the healthcare system thereby increasing its accessibility. This is in parallel to the fact that the most resource most frequently mobilised was the home medical visit while the percentage of vital urgencies requiring mobilisation of more specialised teams was of only 12%.

Analysis of frequentation by provinces and basic healthcare areas has also provided interesting data. The highest rates of frequentation were observed in the province of Zaragoza and were even greater in the healthcare areas of the capital, Zaragoza, than in the remaining areas. The greater availability of 061 resources and the possibility of home medical care provided in the city of Zaragoza but not in the rural healthcare areas of the province of Zaragoza or in the provinces of Huesca and Teruel may explain, in part, the greater use of 061 in this population.

The most frequent reasons for consultation in the provinces of Huesca and Teruel were for vital problems requiring the mobilisation of specialised

resources with the capacity to provide healthcare en route for patients who must be transferred from primary healthcare levels to hospital centres.

The greater variability in the frequentation of this emergency service by women in the different healthcare areas is difficult to explain. This effect may be accentuated by the weight of the healthcare areas of the city of Zaragoza over the remaining areas with higher frequentation rates among women than men.

With respect to the probability of demand on the weekend, the adjusted logistic regression model does not provide a clear explanation for the variability thereby indicating that other factors possibly related to the information and preference of the patients and the structure and availability of other healthcare levels may determine the demand for this service. Non urgent calls and being a woman over 20 years of age simply increases the probability of demand on a weekend.

The implementation of urgent care and emergency services at an extrahospital level has not only allowed the centralisation of the coordination of care to urgent processes but has also raised the accessibility of the users to the healthcare systems for reasons such as: being available 24 hours a day, providing solutions by telephone for an important percentage of problems without the need for the patient to go to any healthcare centre and finally, the availability of a resource which may be useful as a means of healthcare information diffusion with educational or public healthcare objectives.

One challenge which remains to be met is the perfecting of the information systems for the study of the typology of the diseases and healthcare problems attended which allow analysis of whether the implementation of these services really contributes to a reduction in the pressure on hospital emergency departments for inadequate processes or transfer to other healthcare areas of processes not requiring specialised care¹⁷⁻¹⁹ or to the contrary, the bad utilisation of these emergency services is becoming a direct and more rapid route of access of patients to other levels of care.

Another future challenge is to study whether patients with determined processes attended at an extrahospital level through 061 and derived to a hospital service for continued care, obtain better results in terms of health (lower rate of mortality, fewer complications during hospital stay...) and the use of healthcare services (fewer days of admission) than patients arriving to the hospital on the own or without previous intervention of other healthcare services.

Coordination between the different care levels is a basic element to guarantee the effectiveness and the continuity of care. Improvement in the health of the individual and the population is achieved by increasing the power of resolution power of the healthcare systems not individually but rather by guaranteeing the interrelation and integration of its different levels and dialogue between the professionals providing services at these different levels.

References

- 1 Defensor del Pueblo. Informe sobre Urgencias Hospitalarias. Madrid: Oficina del Defensor del Pueblo, 1988.
- 2 Plan Estratégico (1998). El libro Azul. Madrid: Instituto nacional de la Salud, 1998.
- 3 Peiró S, Sempere T, Oterino D. Efectividad de las intervenciones para reducir la utilización inapropiada de los servicios hospitalarios de urgencias. Revisando la literatura 10 años después del Informe del Defensor del Pueblo. Economía y salud. Boletín Informativo 1999;33:1-16.
- 4 Escobedo F, González L, Salarichs M, Manzano A, López I, Martín JA, et al. Evaluación de las urgencias hospitalarias desde un área básica de salud (ABS). Aten Primaria 1997;19:169-75.
- 5 Sox CM, Burstin HR, Edwards RA, O'Neil AC, Brennan TA. Hospital Admissions through the emergency department: Does insurance status matter? Am J Med 1998;105:506-12.
- 6 Baker DW, Stevens CD, Brook RH. Regular source of ambulatory care and medical care utilization by patients presenting to a public hospital emergency department. JAMA 1994;1:1909-12.
- 7 Cantero J, Sánchez-Cantalejo E, Martínez J, Maeso J, Rodríguez JJ, Prieto MA, et al. Inadecuación de las visitas a un servicio de urgencias hospitalario y factores asociados. Aten Primaria 2001;28:326-32.
- 8 Kellermann AL, Haley L. Hospital emergency departments. Where the doctor is always "in". Med Care 2003;41:195-7.
- 9 Kellermann AL. Nonurgent emergency department visits. Meeting an unmet need. JAMA 1994;271:1953-4.
- 10 Grumbach K, Keane D, Bindman A. Primary care and public emergency department overcrowding. Am J Public Health 1993;83:372-8.
- 11 Llorente S, Alonso M, Buznego B. Papel de la atención primaria en la frecuentación al servicio de urgencias de un hospital comarcal. Aten Primaria 1996;18: 243-7.
- 12 Tamborero G. Hospitalizaciones inadecuadas: un nuevo reto para la atención primaria. Aten Primaria 2003;31:15-7.
- 13 Sempere MT, Peiró S, Sendra P. Utilización inadecuada de las urgencias hospitalarias. Identificación, causas y determinantes. XIX Jornadas de Economía de la Salud. 615-616.
- 14 Lang T, Davido A, Diakité B, Agay E, Viel JF, Flicoteaux B. Non-urgent care in the hospital medical emergency department in France: how much and which health needs does it reflect? J Epidemiol Community Health 1996;50:456-62.
- 15 Murphy AW. Inappropriate attenders at accident and emergency departments II: health service responses. Fam Pract 1998;15:33-7.
- 16 Brogan C, Pickard D, Gray A, Fairman S, Hill A. The use of out hours health services: a cross sectional survey. BMJ 1998;316:524-7.
- 17 Alonso JP, Febrel M, Huelin J. Factores asociados a la derivación inadecuada entre atención primaria y especializada: estudio cualitativo en médicos de atención primaria. Gac Sanit 2000;14:122-30.
- 18 Caminal J, Silvestre F. Actividad hospitalaria, pacientes y atención primaria. Rev Calidad Asistencial 2003;18:166-72.
- 19 Caminal J, Morales M, Sánchez E, Cubella MJ, Bustins M. Hospitalizaciones prevenibles mediante una atención primaria oportuna y efectiva. Aten Primaria 2003;31:6-17.
- 20 Jekel JF, Elmore JG, Fatz DL. Epidemiology, Biostatistics and Preventive Medicine. Philadelphia: Saunders 1996:28-9.
- 21 Roland M, Dusheiko M, Gravelle H, Parker S. Follow up of people aged 65 and over with a history of emergency admissions: analysis of routine admission data. BMJ 2005;330:289-92.
- 22 Holland R, Lenaghan E, Harvey I, Smith R, Shepstone L, Lipp A, et al. Does home based medication review keep older people out of hospital? The HOMER randomised controlled trial. BMJ 2005;330:293-7.

Estudio de la frecuentación de un servicio de urgencias extrahospitalario

Cano del Pozo MI, Rabanaque Hernández MJ, Feja Solana C, Martos Jiménez MC, Abad Díez JM, Celorrio Pascual JM

Fundamento y objetivo: La masificación y uso inadecuado de las urgencias hospitalarias se mantiene, a pesar de la aplicación de medidas como la creación de servicios de emergencia extrahospitalarios. El objetivo del estudio es conocer la utilización de este servicio en Aragón y analizar si existe variabilidad en su uso, en función de diferentes variables.

Método: Estudio observacional sobre la utilización del Servicio 061 ARAGÓN, durante el año 2003. Se realizó un análisis bivariante, en el que se comparaban las tasas de frecuentación de urgencias por grupos de edad, sexo y zona de salud y un estudio de variabilidad de las tasas de frecuentación por zona de salud, mediante la medida del coeficiente de variación (CV). Se ajustó un modelo de regresión logística para identificar qué variables influyen en la probabilidad de que la llamada se realice en día festivo.

Resultados: Las tasas de frecuentación más altas se observaron en las zonas de la ciudad de Zaragoza y, en éstas, en mujeres, a diferencia de lo observado en las provincias de Huesca y Teruel. La variabilidad por zonas de salud fue mayor en mujeres. Aumentó la probabilidad de solicitar el servicio en domingo la menor gravedad del aviso y la redujo el tener menos de 60 años y ser hombre.

Conclusiones: Los servicios de emergencias extrahospitalarios han centralizado la coordinación de la atención a los procesos urgentes y han aumentado la accesibilidad al sistema sanitario, pero se observa una variabilidad en su uso cuyas causas deberían ser analizadas. [Emergencias 2008;20:179-186]

Palabras clave: Servicios de emergencia. *Triage*. Utilización.