

## BRIEF ORIGINAL

## SUHCAT study, part 5: Comparison of staff and chiefs' perceptions of emergency department quality in Catalonia

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**Objective.** To study the perceptions of Societat Catalana de Medicina d'Urgències i Emergències (SoCMUE) members who staff hospital emergency departments regarding measures taken to cope with overcrowding, staff rest areas, and staff size.

**Methods.** Descriptive cross-sectional analysis of a survey sent to SoCMUE members. We compared opinions expressed by physicians and nurses in this survey and also compared them to opinions expressed by heads of departments in prior SUHCAT studies.

**Results.** Responses were received from 363 members who worked in hospital departments. More nurses than physicians expressed the opinion that ambulance unloading was habitually blocked ( $P=.045$ ), patients were being redirected ( $P<.001$ ), and staffing was inadequate ( $P=.007$ ). When the results of our SoCMUE survey were compared to those of the earlier SUHCAT surveys of department chiefs, we found that more SoCMUE members believed that measures to cope with overcrowding are frequently applied, quality in rest areas is poorer, and staffing is inadequate.

**Conclusion.** Physicians and nurses who are members of SoCMUE and work in hospital emergency departments have different views on measures taken to cope with overcrowding, quality of rest areas, and staff size. In addition, the SoCMUE members' opinions differed from those of respondents in prior SUHCAT studies.

**Keywords:** Emergency health services. Health care quality. Overcrowding. Survey. Opinion.

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### *Estudio SUHCAT-5: comparación de la percepción de la calidad de los servicios de urgencias de Cataluña entre los profesionales sanitarios y sus responsables*

**Objetivo.** Conocer la percepción de los socios de la Societat Catalana de Medicina d'Urgències i Emergències (SoCMUE) con actividad laboral en servicios de urgencias hospitalarios (SUH) respecto a las medidas frente al colapso, las áreas de descanso y la dimensión de la plantilla, y compararla con la de sus responsables.

**Método.** Estudio descriptivo transversal mediante encuesta enviada a los socios de SoCMUE. Se compararon las respuestas dadas entre el estamento médico y enfermero, y con los resultados de los estudios SUHCAT 1 y 2.

**Resultado.** Participaron 363 socios. Los enfermeros opinan más frecuentemente que los médicos que es habitual impedir la descarga de ambulancias ( $p = 0,045$ ), redireccionar pacientes ( $p < 0,001$ ) y que sus plantillas son insuficientes ( $p = 0,007$ ). Los socios de SoCMUE perciben mayor frecuencia en la puesta en marcha de todas las medidas para hacer frente al colapso, peor calidad de las áreas de descanso y una plantilla insuficiente en comparación con la opinión de los responsables de los SUH.

**Conclusión.** Los médicos y enfermeros socios de la SoCMUE que trabajan en los SUH tienen una percepción diferente en aspectos relacionados con las medidas frente al colapso, áreas de descanso y dimensión de la plantilla, que difiere también de la opinión de sus responsables.

**Palabras clave:** Servicios de urgencias. Calidad. Colapso. Encuesta. Opinión.

### Introduction

The SUHCAT<sup>1-4</sup> studies, promoted by the Societat Catalana de Medicina d'Urgències i Emergències (SoCMUE), provided information about the situation of the hospital emergency services (HES) in that territory during the year 2012 and covered multiple aspects that included a physical map (SUHCAT-1)<sup>1</sup>, a functional map

(SUHCAT-2)<sup>2</sup>, a teaching and research map (SUHCAT-3)<sup>3</sup> and the opinion about the creation of the specialty of Emergencies and Emergency Medicine (MUE) (SUHCAT-4)<sup>4</sup>.

Some of the aspects studied in the SUHCAT were the measures to deal with the saturation of emergencies. The causes and measures before saturation are widely known and discussed<sup>5-7</sup>. This situation has led to a

progressive increase in demand with a decrease in resources. In the US between 1994 and 2004, emergency room visits had increased by 26% while the number of HES had dropped by 9% and hospitals had closed 198,000 beds<sup>8</sup>. This same trend occurs in Spain<sup>9</sup> and has even motivated the intervention of the Ombudsmen<sup>10</sup>.

Taking into account that in a significant number of HES in Catalonia, the care coverage is structured in the form of guards<sup>2</sup>, it is important to have adequate rest areas, which often become the place to share doubts about diagnoses, treatments and aspects of the social environment of patients, prior to making important decisions.

Spanish public health is the least financed of the group of 15 countries of the European Union (EU-15) with a similar economic development to Spain. In 2008, when the crisis began, in Spain 6.5% of the gross domestic product was spent on health, compared to 7.3% on the EU-15 average, a circumstance that impacts the size of the workforce<sup>11</sup>. These three aspects previously mentioned, the measures to cope with the collapse in the emergency department, the quality of the rest areas and the size of the staff, have a direct impact on HES professionals. The SUH-CAT-5 study aims to know the opinion of the SoCMUE partners working in the HES, in these three aspects of the MUE, and contrast it with the opinion of those responsible for the HES presented in the studies SUH-CAT 1 and 2.

## Method

The SUH-CAT-5 study is a substudy carried out within the framework of the OPEN-CAT study, which is a survey work by SoCMUE to its members, whose methodology is already published<sup>12</sup>. The universe of study was constituted by all the SoCMUE partners, who at the time of the study were 1,273. To carry out the SUH-CAT-5 study, the members of the The Board of Directors of SoCMUE included a series of questions that had already been raised to those responsible for HES in Catalonia in the SUH-CAT studies. The project was approved by the Ethics Committee of the Hospital Universitari de Bellvitge.

The survey responses were tabulated individually in a database using the SPSS 18.0 program. The results of the qualitative variables were summarized in absolute values and percentages, and the quantitative ones in mean and standard deviation, normal distributions (which was verified with the Kolmogorov-Smirnov test) or in medians and percentiles 25 and 75 (p25-75) for non-normal distributions. For the comparison between groups, the chi-square test was used for the qualitative variables (linear trend if they were ordinal and made clinical sense), and the one-way variance analysis or the Kruskal-Wallis test if the normality of the distribution for quantitative variables. In all cases, it was accepted that there were significant differences when the p-value was less than 0.05.

## Results

Of the 1,273 SoCMUE members, 616 answered the survey (48.4%), of which 363 had their activity in HED, whose answers are those that have been included in the SUH-CAT-5 study (Table 1). Of these, 275 (75.8%) were doctors and 88 (24.2%) nurses. In relation to measures to cope with the collapse in the emergency room, the majority opinion of the partners was that it is usual to double the boxes (57.6%) and to relocate patients in the corridors, both in the care process and after discharge (52.5 % and 52.9%, respectively). There is an appropriate rest area (45.1%) and a shared rest area (66.4%). The majority thought that the size of the workforce is frequently insufficient (43.3%). When comparing the opinions of doctors and nurses (Table 1), it was found that these two groups differed in three of the questions posed: nurses more frequently say that it is usual to prevent patients from being discharged ( $p = 0.045$ ), redirect patients to primary care ( $p < 0.001$ ) and that the templates are insufficient (0.007). The opinion of the members of SoCMUE differed in multiple aspects to the perception expressed in the SUH-CAT studies (Figure 1). In relation to measures to cope with the collapse, they perceived that all the measures surveyed were implemented more frequently than expressed in the SUH-CAT. Regarding the rest areas, the perception of their existence and their use did not show differences between both groups, but instead the quality of the rest spaces for doctors and nurses was always worse valued by the SoCMUE partners than by those responsible for the HES. Finally, with regard to the staff, both the doctors and nurses associated with SoCMUE reported more frequently than those responsible for emergencies that these were frequently insufficient.

## Discussion

The conclusion of the SUH-CAT-5 study is that there are differences between doctors and nurses partners of the SoCMUE in several of the aspects surveyed, and also if they are compared with the results of the SUH-CAT studies. Regarding the measures surveyed to deal with the collapse in emergencies, SoCMUE partners working in HED perceive that they are implemented more frequently than those responsible for the services referred to in the SUH-CAT-1<sup>1</sup> report. It is difficult to know what is the real point of activation of these measures, since it depends on the time of year and the presence in each hospital of resources and strategies aimed at coping with increases in urgent demand<sup>7</sup>. It is plausible that the perception of greater frequency of activation, by the SoCMUE partners, is due to the negative impact of these measures, not only in terms of work overload and the potential generation of a hostile environment, but also because of the moral consequences derived but also because of the moral consequences derived from their perception of loss of dignity and privacy of the patient<sup>5</sup>. In relation to the rest areas, doctors and nurses have a

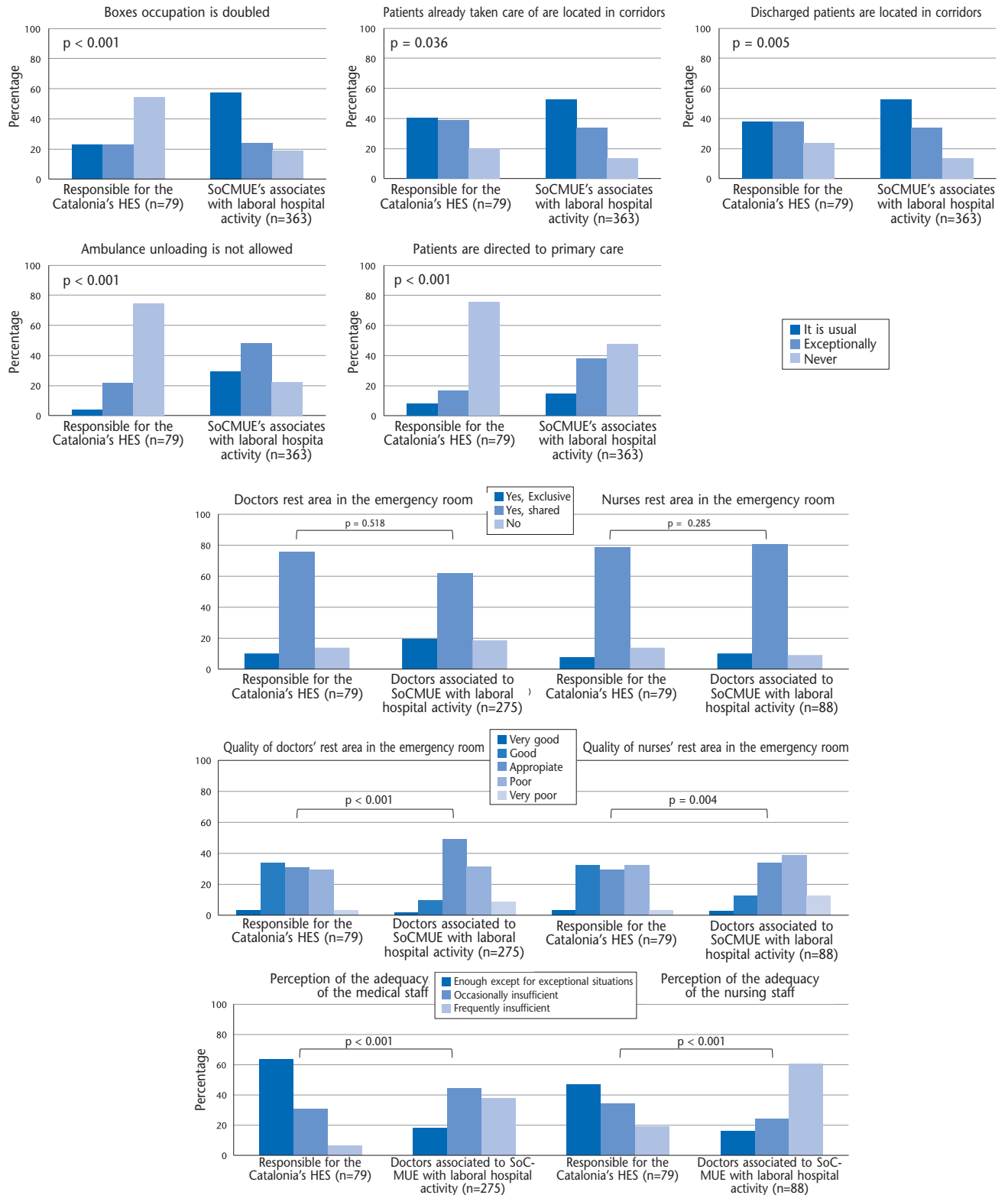
**Table 1.** List of questions asked in the survey to the members of the Catalan Society of Medicine of Urgencies and Emergencies (SoCMUE) with hospital work activity, and comparison of the answers between doctors and nurses

	Total N = 363 n (%)	Physicians N = 275 n (%)	Nurses N = 88 n (%)	p Value
<b>Measures in case ED collapses</b>				
Boxes are doubled				0.286
It is usual when it is necessary	209 (57.6)	154 (56.0)	55 (62.5)	
Only exceptionally	86 (23.7)	67 (24.4)	19 (21.6)	
Never	68 (18.7)	54 (19.6)	14 (15.9)	
Patients already taken care of are located in corridors				0.193
It is usual when it is necessary	191 (52.6)	140 (50.9)	51 (58.0)	
Only exceptionally	123 (33.9)	95 (34.5)	28 (31.8)	
Never	49 (13.5)	40 (14.5)	9 (10.2)	
Discharged patients wait for exit in corridors				0.152
It is usual when it is necessary	192 (52.9)	139 (50.5)	53 (60.2)	
Only exceptionally	122 (33.6)	97 (35.3)	25 (28.4)	
Never	49 (13.5)	39 (14.2)	10 (11.4)	
Ambulance unloading is not allowed				0.045
It is usual when it is necessary	107 (29.5)	71 (25.8)	36 (40.9)	
Only exceptionally	175 (48.2)	141 (51.3)	34 (38.6)	
Never	81 (22.3)	63 (22.9)	18 (20.5)	
Patients are redirected to primary care				< 0.001
It is usual when it is necessary	52 (14.3)	32 (11.6)	20 (22.7)	
Only exceptionally	138 (38.0)	100 (36.4)	38 (43.2)	
Never	173 (47.7)	143 (52.0)	30 (34.1)	
<b>Rest area in the emergency room</b>				
They have a rest area				0.995
Yes, exclusive	63 (17.4)	54 (19.6)	9 (10.2)	
Yes, shared	241 (66.4)	170 (61.8)	71 (80.7)	
No	59 (16.3)	51 (18.6)	8 (9.1)	
Quality of the rest area				0.949
Very good	6 (2.0)	4 (1.8)	2 (2.5)	
Good	31 (10.2)	21 (9.4)	10 (12.5)	
Appropriate	137 (45.1)	110 (49.1)	27 (33.8)	
Deficient	101 (33.2)	70 (31.3)	31 (38.8)	
Very poor	29 (8.0)	19 (8.5)	10 (12.5)	
<b>Workload</b>				
Perception of the sizing of your workforce				0.007
Enough, except for exceptional situations	63 (17.4)	49 (17.8)	14 (15.9)	
Occasionally insufficient	143 (39.4)	122 (44.4)	21 (23.9)	
It is often insufficient	157 (43.3)	104 (37.8)	53 (60.2)	

superimposable perception, but together they perceive that the quality is worse than that reported by those responsible for the HES. The fact that there are no differences between partners and responsible for their existence and the way of using (exclusive or shared) of these rest areas speaks in favor of the comparison between both groups is relevant, because they are possibly being evaluated, globally, the same HES. Finally, the estimation of the size of the templates has been made based on subjective perceptions. The quantification of the template should not be the only element to have to assess workloads. Aspects of structure, the existence of residents or students or the age and work experience of the staff has been shown to have an impact on the amount of work that the team of professionals can develop<sup>13,14</sup>. In this scenario, we think it is relevant for professionals working in the emergency department to perceive that the workforce is insufficient, especially in nursing. This is consistent with the SUH-CAT-2<sup>2</sup> study, which also perceived that this deficit was greater in the nursing community. However, both doctors and nurses feel that the problem of the dimension of templates is greater than that perceived by those responsible for

emergencies. Given that more than 3 years have passed between the interviews that were conducted for the SUH-CAT study (2012)<sup>1-4</sup> and the SoCMUE partners survey (2016), it is possible that the constant adjustments of health spending in Catalonia may have worsened the working conditions<sup>11,14</sup> and that such perception difference would have been less or neutral if the survey had been coeval.

Our study has several limitations, the main one is that the universe surveyed are the partners of the SoCMUE that work in HES, and we cannot know to what extent they are representative of the real universe of HES professionals. On the other hand, the response percentage was less than 80%, since the survey answered about 50% of members, and the most committed or most critical partners could have answered, which would be a bias. In addition, they have also participated in the SUH-CAT. There may be a temporary effect, since the survey was conducted in 2016 and the SUH-CAT studies in 2012. However, we believe that this study complements the previous SUH-CAT reports, offering the vision that a group of MUE professionals have who work in the Catalan HES.



**Figure 1.** Comparison of the opinion of those responsible for emergencies and the partners of the Catalan Society of Medicine of Urgencies and Emergencies (SoCMUE) with hospital activity in the different aspects surveyed.

### Conflicting interests

The authors declare no conflict of interest in relation to this article.

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## Ethical Responsibilities

The Ethics Committee of the University Hospital of Bellvitge approved the study. Informed consent was obtained from the participants.

All authors have confirmed the maintenance of confidentiality and respect for patients' rights in the author's responsibilities document, publication agreement and assignment of rights to EMERGENCIAS.

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