

# Analysis of the Care Provided by a Primary Care Emergency Center (CUAP) to a Terrorist Attack Contiguous to the Area of the Barcelona Attacks

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## Abstract

On August 17, 2017, Barcelona suffered a terrorist attack, around 5:00 p.m., where a van ran into hundreds of pedestrians. The Ciutat-Vella Peracamps Primary Care Emergency Center (CUAP), located in the vicinity of the aforementioned attack, generally treats between 70 and 100 patients daily, level III and IV, according to the Spanish Triage System (SET); but that day he also received patients affected by the terrorist attack. The main objective of this study is to determine the profile of the demand and the response of the services provided at the CUAP Ciutat-Vella Peracamps in Barcelona between 5:00 p.m. on August 17, 2017 and 5:00 p.m. on August 18, 2017. Another objective will be to compare the day of the attacks with another random day, prior to August 17, 2017. It is a quantitative, observational and retrospective study. The data was obtained from the computerized clinical record of Nursing and from the Electronic Medical Record of the patients who came within the temporal scope of said study. In the first 24 hours after the attack, CUAP received a total of 70 patients, of which 25 were directly related to the attack. 41.6% of the patients visited were of Spanish nationality, 41.6% belonged to other European countries, while the remaining 16.8% belonged to other continents. Regarding nursing triage levels, 4% were level I ( $n = 1$ ), 40% were level III ( $n = 10$ ), and 56% were level IV ( $n = 14$ ). In the first 24 hours after the attack, there was no greater demand for care, but a higher level of severity. Regarding attendance times, there is no difference with other days either, but it must be considered that the number of health personnel increased, which optimized attendance.

**Keywords:** Disasters; Terrorist attack; Primary care emergency center; Nursing triage; Multiple incident affected

## Introduction

Disasters are situations that exceed the local response capacity, producing a significant number of victims. The extreme gravity of the situation forces health personnel to be prepared to face different types of disasters quickly and efficiently. To offer quality care, it should be borne in mind that most

emergency services bear great pressure for care due to the influx of patients who visit, for this reason, on some occasions, the quality of care that is offered cannot be offered. would or should. There is evidence showing that health personnel are very limited when these disasters occur and the evidence on effectiveness and care is very scarce. To be the maximum cash we have a sequence that includes several phases: prevention, prevention, intervention and rehabilitation. When the catastrophe produces human victims, planning is complex, since it must include a specialized health response [1]. The action in these cases is different from that carried out on a regular basis, that is, it is not focused on the patient individually, but rather is about providing quality care to as many victims as possible. If we want to give an adequate response to catastrophes, we must know the risk map. Different types of risks are known: natural risks, risks derived from industrial development and social risks, within which are the terrorist attacks. Terrorism is defined, according to the WHO as the instrumental use of violence, by people who identify themselves as members of a group, either transitory or long-term, in order to achieve certain political, economic and social objectives [2].

The violence caused by terrorist attacks affects health services and public health, increasing the mortality, morbidity and disability that it generates to the people affected in these attacks. Terrorism is currently a problem worldwide [3]. In recent years, various terrorist attacks with fatalities have taken place in western countries such as New York (September 11, 2001), Madrid (March 11, 2004), Paris (November 13, 2015), Brussels (September 22, March 2016), Nice (July 14, 2016), London (June 3, 2017) and Barcelona and Cambrils (August 17, 2017). In emergencies and disasters with multiple victims, it has been shown that the triage of those affected is an effective strategy that seeks to ensure survival, reduce waiting times for medical attention, and increase patient safety. It is for this reason that This process is of vital importance and requires having a staff of such characteristics, being nursing who carries out this work. There are different types of triage depending on the place, time and situation in which it is carried out, differentiating emergency triage from emergency triage in catastrophes [4].

At the Ciutat Vella - Peracamps Primary Care Emergency Center (CUAP) in Barcelona, the MAT-SET (Spanish Triage

System) methodology is used, a non-exclusive nursing triage model, which integrates the most relevant aspects of current models of triage of 5 categories, providing aspects of review and adaptation to our healthcare environment. This allows prioritizing the patient's urgency, over any other structural or professional approach, within an emergency specialization model. In addition, it provides a system of continuous quality improvement, which defines a standard of reasons for emergency consultation and allows, among others, to evaluate the casuistry of the service. The levels of prioritization are assigned thanks to the computer program to help clinical triage (web\_e-PAT). The levels go from 1 to 5 in decreasing order, according to the severity of the patient. On August 17, 2017, the city of Barcelona was the victim of a terrorist attack claimed by a jihadist group. Since March 11, 2003, where the attack took place in Madrid, Spain had not suffered an attack of this size. Around 5:00 p.m., a van ran over hundreds of pedestrians who were on the Ramblas in Barcelona, causing 13 deaths and 131 injuries [5].

The CUAP Ciutat Vella-Peracamps is located in the vicinity of Las Ramblas, a few streets where the event took place. This proximity caused a spontaneous demand for health care by people who were affected that day by the attack. CUAPs are equipped with professionals and technology to respond to emergencies of moderate complexity, which operate 24 hours a day. They were created with the intention of reducing the pressure of care in hospital emergency services. CUAP Ciutat Vella-Peracamps consists of a triage room, 4 visit boxes, a trauma box, an isolation box, a resuscitation box and 3 observation boxes. It has basic diagnostic, radiology and analytical support.

Shift (morning, afternoon and night) work an administrative assistant, a cleaning operator, a caretaker, a radiology assistant / technician (one more assistant is available in the afternoon shift), two nurses (in order to week, in the morning and afternoon shift one more nurse is included), and two doctors on call. On the day of the attacks, there was an increase in health personnel, with a total of 7 doctors, 8 nurses, 3 radiology technicians and a caretaker. The complementary health personnel that day came completely voluntarily [6].

## Methods

It is a quantitative, observational and retrospective study. The scope of the study was a Primary Care Emergency Center (CUAP), located 200 meters from the Ramblas in the city of Barcelona. The data collection of the study was carried out during the 24 hours after the attack that occurred on August 17, 2017; making a comparison with the usual daily activity [7].

### •inclusion criteria:

- all patients registered in the CUAP admission service, directly related to the attack.

### •Exclusion criteria:

- Patients who attended CUAP, in the aforementioned period, who were not related to the attack.

The variables were collected in a standardized table prepared with the Microsoft Excel 2010 program. All the registered data of the patients were obtained from an anonymous database of IMASIS (internal program for registering interventions and patient care in the Parc de Salut Mar). All the information was collected in a strictly confidential and exclusive handling by the research group during the phases of this work, from data collection to publication of results (according to the current regulations of Organic Law 15/1999 of 13 December on the protection of personal data [8]).

## Results and Discussion

In the first 24 hours, after the attack in the city of Barcelona, the CUAP Ciutat Vella-Peracamps received a total of 70 patients, of whom 25 had a direct relationship with the attack. The first patient visited at CUAP was at 17:09, which was brought in by the security forces. It was in the first three hours that the greatest influx of patients associated with the attack was received, reaching a total of 20. Of the 25 patients affected by the attack, 54% were men, while the remaining 46% were women; with a mean age of 33.37 years ( $SD=18.88$ ) 41.6% were of Spanish nationality, another 41.6% from other European countries, and the remaining 16.8% belonged to other continents. 14% of those affected went to CUAP accompanied by the security forces (mossos d'esquadra, urban guard), 14% did it by ambulance and 72% did it by their own means.

The average time from when the patient registered his arrival at the service until he was triaged by the infirmary was 12 minutes ( $SD=0.006$ ). Regarding triage levels, 4% level I, 40% level III, and 56% level IV were obtained; level II and level V were not obtained.

The average time from when the patient was triaged to receiving healthcare was 11 minutes. ( $SD=0.02$ ) Regarding the reason for consultation, 12% attended due to EESS trauma, another 12% due to LESI trauma, (% due to chest pain associated with contusion, 12% due to polyconcussions, 20% ankle entorsis, 8% incised contusion injury, 4 % cardiorespiratory arrest, 16% head trauma, 4% anxiety and nervousness and another 4% due to bruises on the face and neck. The mean time from when the patient was triaged to discharge was 45.30 minutes. Once visited, 33% of the patients were transferred to the Reference Hospital by ambulance, 62.5% were discharged home, and 4.5% were referred to the Reference Hospital by their own means.

## Conclusion

Given the extraordinary situation on this day, there was an under-registration in the computer program, which caused less information to be obtained for the study.

After analyzing the variables, there is no greater demand for care on the day of the attack, possibly due to the abstention of regular users, but a higher level of severity (**Table 1**).

TABLA COMPARATIVA		
	August 17, 2017	August 9, 2017
Number of patients visited	70 patients	80 patients
Average time from registration to triage	00:10:00h	00:40:38h
Average time you remain in the service	01:16:09h	01:38:36h
Triage levels	Level I: 1% (n = 1) Level II: 0% (n = 0) Level III: 33% (n = 23) Level IV: 52% (n = 36) Level V: 1% (n = 1) Unselected: 12% (n = 8)	Level I: 0% (n = 0) Level II: 0% (n = 0) Level III: 15% (n = 12) Level IV: 75% (n = 60) Level V: 5% (n = 4) Unselected: 5% (n = 4)

**Table 1:** Comparative table from August 17 to August 23.

Regarding attendance times, there was no difference with other days either, but it must be taken into account that the number of health personnel increased voluntarily and uncontrollably, which optimized attendance. Apart from optimizing vital assistance, other factors of confidentiality, privacy and registration should have been taken into account. The fact of being a retrospective study does not allow to assess unregistered quality indicators such as patient satisfaction, perception of confidentiality or comfort. This study provides information on the response to an exceptional event,

but we must be prepared both on a personal and resource level, so as not to forget the quality of care factors discussed. For this reason, in February 2018 an IMA Protocol (multiple incidents affected) was prepared.

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