

# Prevention of Falls in Patients Attended in the Out-of-Hospital Emergencies of the Sierra De Cádiz

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## ARTICLE INFO

**Received:**  September 18, 2025

**Published:**  October 07, 2025

**Citation:** María de los Santos Oñate Tenorio and Antonio Oñate Tenorio. Prevention of Falls in Patients Attended in the Out-of-Hospital Emergencies of the Sierra De Cádiz. Biomed J Sci & Tech Res 63(3)-2025. BJSTR. MS.ID.009900.

## SUMMARY

**Introduction:** Falls are the most common safety incident among patients treated, with out-of-hospital patients being more vulnerable to harm. The prevention of these generates great benefits and significant economic savings. Objective: To determine the incidence of falls in patients treated in out-of-hospital emergencies by professionals at the UGC Urgencias Sierra de Cádiz.

**Methods:** This is a descriptive, observational, and cross-sectional study conducted in May 2024. A random sample of 150 participants was selected who responded to an anonymous telephone questionnaire of voluntary participation of 9 semi-structured questions as a data collection tool.

**Results:** The average age of those surveyed is 62 years, with 41% being male and 59% female. 97% acknowledged that there were no physical barriers and 94% answered that the transfer was comfortable, 98% stated that there was good lighting. 100% did not suffer any injuries and 96% do not consider that they were at risk of falling. In 98% of cases, restraint measures and other measures were used in 98% to prevent falls.

**Discussion:** The patients treated by the professionals belonging to the UGC Urgencias Sierra de Cádiz did not suffer injuries during their out-of-hospital health care, and measures were taken to prevent them. It is important to identify risks in the out-of-hospital environment and prevent falls.

**Keywords:** Falls; Prevention; Patient Safety; Sierra De Cádiz; Out-Of-Hospital Emergencies

## Introduction

Since 2019, on September 17 of each year, "World Patient Safety Day" has been celebrated around the world. About 1 in 10 patients are harmed while receiving health care, and more than 3 million people die each year. Investing in preventing these damages can be generating great economic savings and important benefits, observing that when patients are involved in the care they receive, the frequency of harm is reduced by 15% [1]. The high vulnerability of out-of-hospital patients, due to their clinical situation, a complex, dynamic and unpredictable environment, increase the possibility of incidents that this patient may suffer [2]. The identification and assessment of risks in out-of-hospital settings is a fundamental process in out-of-hospital emergencies to guarantee the safety of patients, in this sense a key aspect is to consider the specific characteristics of patients and all those

conditions that may influence emergency care, this care always poses an added risk to the process by which they are treated, since the risk of falls is within the group of adverse effects, endangering the safety of patients [3]. The World Health Organization (WHO) [4] defines a fall as the consequence of any event that precipitates the individual to the ground against his or her will. At this point, the question that arises is: why is it important to prevent falls during the patient's care process in out-of-hospital emergencies? For all these reasons, and given the scarcity of specific literature on the risk posed by patient falls in out-of-hospital urgent care, it has been considered significant to study the prevention of falls of patients in out-of-hospital emergencies in the Sierra de Cádiz. The objective of this study is to determine the incidence of falls in patients treated in out-of-hospital emergencies by the professionals of the Clinical Management Unit (UGC) Sierra de Cádiz Emergency Department.

Material and Methods

A descriptive, observational and cross-sectional study was carried out. The study is carried out in the province of Cádiz, specifically in the Sierra region, during the month of May 2024. In relation to the total study population, it was limited to the year 2023. In this period of time, 4,978 people were attended.

Inclusion and Exclusion Criteria

From this universe population, no user was ruled out since no criteria, nor reason for inclusion, or exclusion have been set, and therefore no user from the universe population has been discarded, the choice being based on randomness.

Sample Size

Once the universe population was defined, it was decided to follow the indications given by Fisher [5] and Pineda [6] where a random sample of 150 participants was selected, patients who were attended by the mobile teams in out-of-hospital emergencies, where a sample of 3% or even less may be suitable for any type of analysis that is desired to be performed. We have also been motivated by Gallego [7] where the sample size is conditioned by the objectives of the study, which will determine its design, the variables to be considered and the method proposed. To calculate the sample size, we used the EPIDAT@ software developed by the Epidemiology Service of the General Directorate of Public Health of the Ministry of Health (Xunta de Galicia) with the support of the Pan American Health Organization (PAHO-WHO) and the CES University of Colombia [8].

Preparation of the Questionnaire

An anonymous telephone questionnaire of voluntary participation of 9 semi-structured questions was carried out, previously they were informed of the purpose of the study and previously showed their agreement to participate. The data collected studied the following variables, which are detailed:

- Age.
- Sex.
- Comfort in the transfer.
- Physical accessibility and barriers.
- Suffering from injury.
- Lighting.
- Risk of falling
- Subjection.
- Prevention measures.

The questionnaire consists of three distinct parts depending on the question blocks:

1. On the one hand, it collects general and sociodemographic data: age, sex and person answering the questionnaire, as well as the date on which it is carried out.
2. On the other hand, it has 7 questions with closed answers with dichotomous answers.

Two open questions have also been incorporated into this questionnaire, in which we inquire about the most valued aspects and the least in the attention received by our unit, so that the person who answers the questionnaire can freely express their opinion and provide us with their perception. This questionnaire was designed by the authors, according to the models used by the Andalusian Health Service (SAS) and 061, it is not a validated questionnaire and no pilot study was carried out. The inclusion criteria for the participants were to be of legal age and minors were excluded. Table 1 shows the questionnaire carried out on the degree of satisfaction of the people treated urgently by the UGC Urgencias Sierra de Cádiz.

Table 1: Questionnaire.

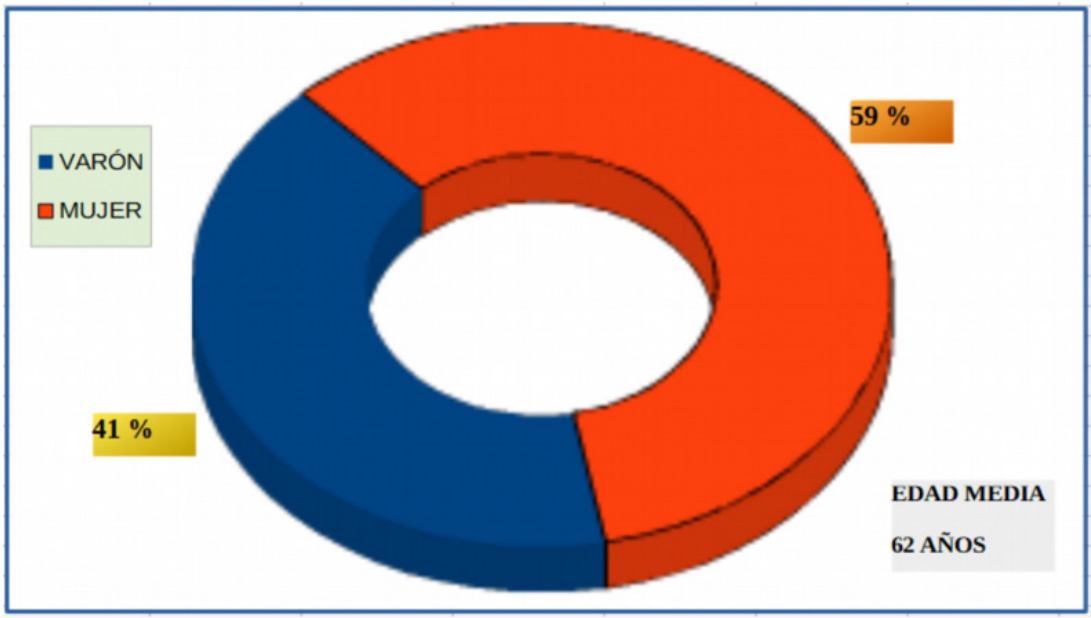
Questionnaire: Prevention of Falls in Patients Treated in the Out-Of-Hospital Emergency Department of the Sierra De Cádiz	
This survey is completely anonymous, voluntary and confidential, please answer with complete sincerity	
AGE: SEX: DATE:	
1.	Was your transfer comfortable during care? Yes  No
2.	Did you encounter physical barriers during the race?  Yes  No
3.	Did you suffer any injuries during service? Yes  No
4.	Do you think you were at risk of falling during care? Yes  No
5.	Were fall prevention measures taken during assistance? Yes  No
6.	Was the lighting adequate during the service? Yes  No
7.	Was restraint used as a fall prevention measure during assistance? Yes  No
8.	Could you highlight the best during attendance?
9.	Could you highlight the worst during attendance?

Note: Source: Authors.

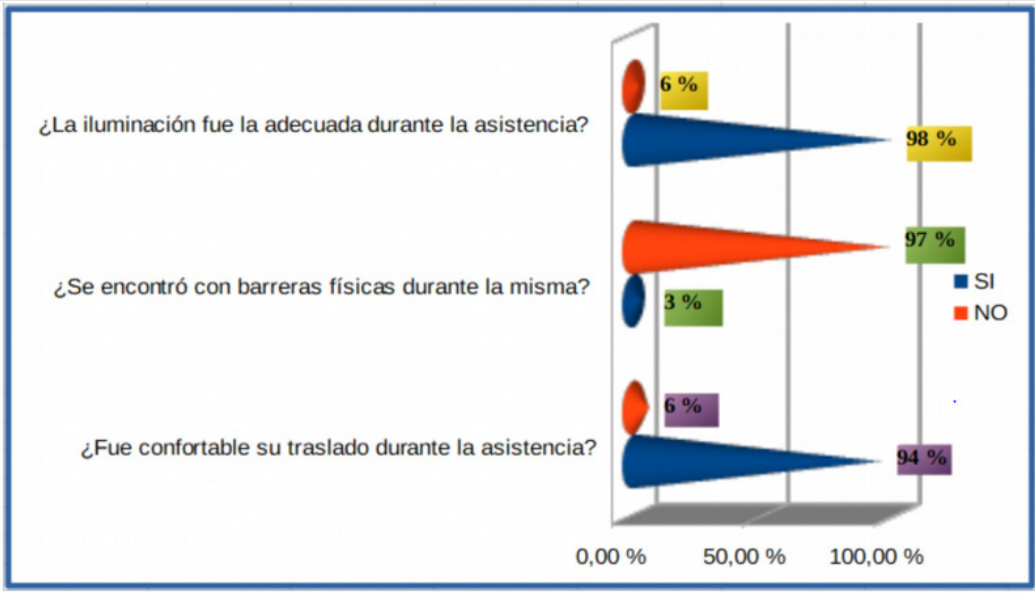
Results

The sociodemographic data can be seen in Figure 1 where the gender distribution of the surveyed patients is detailed. Next, three questions were asked about the context as reflected in Figure 2. Figure 3 considers two key questions about incidents and, in our case,

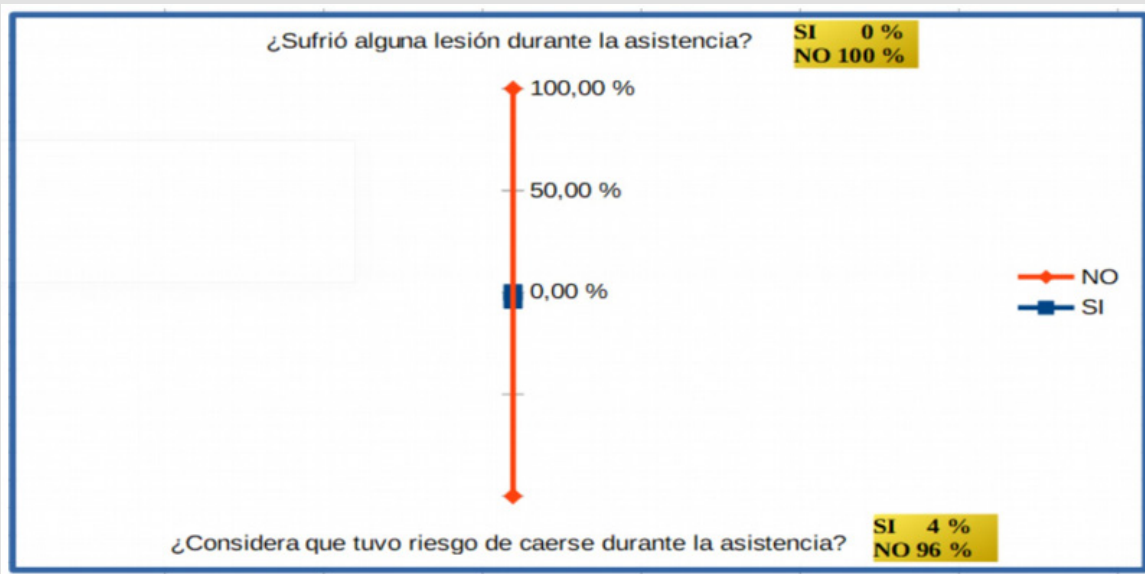
falls. Figure 4 shows the results obtained on the measures adopted to prevent falls. As for the open questions, the best thing about the assistance would be the kindness, involvement and attentive nature of the professionals and the worst thing about the long transport time.



Note: Source: Own elaboration  
Figure 1: Socio-demographic data.

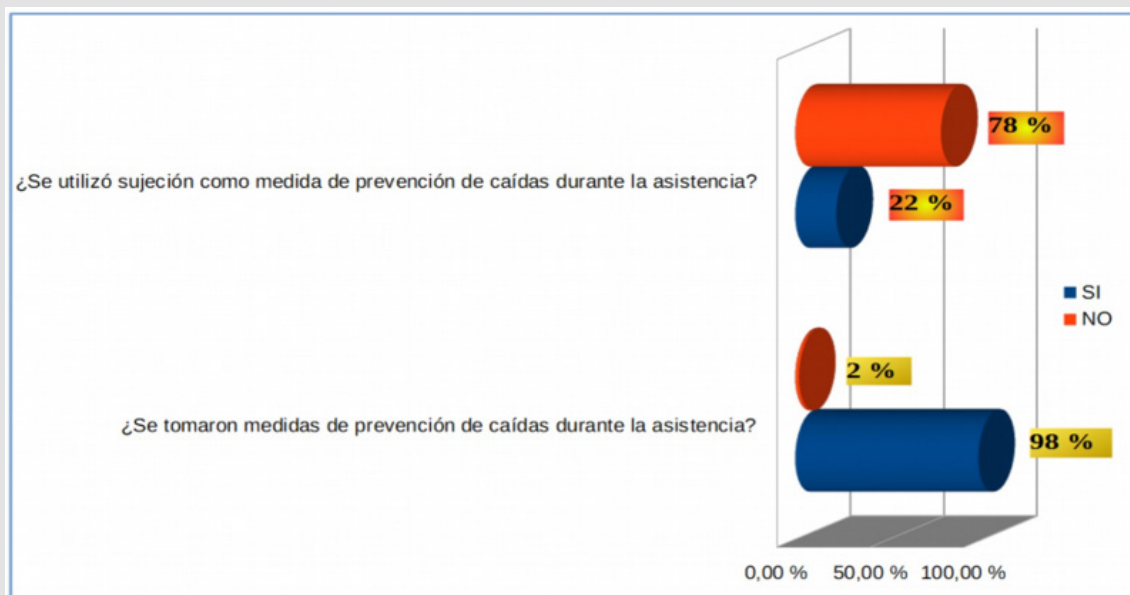


Note: Source: Authors.  
Figure 2: Data relating to the context.



Note: Source: Authors.

Figure 3: Data on falls.



Note: Source: Authors.

Figure 4: Data on the measures taken to prevent falls.

## Discussion

Although a multivariate analysis showed that loss of functionality and transfer to hospital by out-of-hospital emergency teams were the predictors with the greatest association with the diagnosis of fall risk [9], patients treated by the UGC Urgencias Sierra de Cádiz have not suffered the same. In addition, falls are the most common safety incident among patients treated, accounting for 32% of incidents related to patient safety<sup>4</sup>. And between 5% and 10% of falls, although they do not cause the death of the patient, do cause serious injuries [10]. It is recommended as a first step to achieve safe clinical practice, to promote and develop knowledge and culture of patient safety among the professionals of an organization [11], in addition to setting as an objective strategy number 8 of the Health System Quality Plan<sup>12</sup>. All this leads us to affirm that the perception of patient safety is conditioned by multiple factors, among which Patient Safety Related Incidents (PSIs) must be highlighted, including falls of patients and that worsen their perception, and overall satisfaction with care, which improve it [12]. It should also be noted that patients have a greater sense of security when they are assisted and transferred by emergency teams, composed of physicians, emergency health technicians, and nurses, compared to teams composed of emergency health technicians and/or nurses [13]. It should be noted and emphasized that Pécuro-Carrasco et al. stress the importance of communication between professionals while the patient is present on his or her stretcher, as an element that generates security and tranquility [14]. The patients treated by the professionals belonging to the UGC Urgencias Sierra de Cádiz did not suffer injuries during their out-of-hospital health care, and measures were taken to prevent them. It is important to identify risks in the out-of-hospital environment and prevent falls.

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ISSN: 2574-1241

DOI: 10.26717/BJSTR.2025.63.009900

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