

# Emergency care provided in a large-scale emergency department to unidentified patients who were victims of physical assault

Atendimentos em um pronto-socorro de grande porte a pacientes não identificados vítimas de agressão física

Atenciones en un servicio de urgencias de gran porte a pacientes no identificados víctimas de agresión física.

## ABSTRACT

**Objective:** To characterize care provided in a large public emergency department to unidentified patients who were victims of physical assault. **Method:** A quantitative, descriptive, and retrospective study that analyzed 129 medical records, considering sociodemographic data, initial care, admission procedures, outcomes, and identification methods, with descriptive statistical analysis. **Results:** The median age of the patients was 30 years, with 73.6% recorded as brown race. Admissions were more frequent in the months of February and September, on weekends, and during the early morning hours, with most patients referred by the police. The predominant clinical priority level was orange/very urgent, and the median length of hospital stay was two days. Identification was achieved in 75.2% of cases. **Final considerations:** The patients in this study represent a vulnerable group with a high degree of severity and mortality, requiring more effective identification protocols and humanized care to ensure safe and dignified emergency assistance.

**Descriptors:** Violence; Emergency nursing; Records; Emergency medical services.

## RESUMO

**Objetivo:** Caracterizar os atendimentos em um pronto-socorro público de grande porte a pacientes não identificados vítimas de agressão física.

**Método:** Estudo quantitativo, descritivo e retrospectivo que analisou 129 prontuários, considerando dados sociodemográficos, atendimento inicial, condutas na admissão, desfechos e métodos de identificação, com análise estatística descritiva. **Resultados:** A mediana de idade dos pacientes foi de 30 anos, sendo 73,6% registrados como pardos. As admissões foram mais frequentes nos meses de fevereiro e setembro, fins de semana e de madrugada, a maioria encaminhados pela polícia. O nível de prioridade clínica predominante foi laranja/muito urgente e a mediana de permanência hospitalar foi de dois dias. A identificação ocorreu em 75,2% dos casos. **Considerações finais:** Os pacientes do estudo representam um grupo vulnerável, com alto grau de gravidade e mortalidade, exigindo protocolos mais eficazes de identificação e atendimento humanizado para garantir cuidados emergenciais seguros e dignos.

**Descriptores:** Violência; Enfermagem em emergência; Registros; Serviços médicos de emergência.

## RESUMEN

**Objetivo:** Caracterizar la atención a pacientes no identificados víctimas de agresión física en un servicio de urgencias público de gran porte. **Método:**

Estudio cuantitativo, descriptivo y retrospectivo que analizó 129 historiales clínicos, considerando datos sociodemográficos, atención inicial, conductas al ingreso, desenlaces y métodos de identificación, con análisis estadístico descriptivo. **Resultados:** La mediana de edad fue de 30 años y el 73,6% fueron registrados como mestizos. Las admisiones fueron más frecuentes en febrero y septiembre, durante los fines de semana y la madrugada, en su mayoría derivadas por la policía. El nivel de prioridad clínica predominante fue naranja/muy urgente y la mediana de estancia hospitalaria fue de dos días. La identificación ocurrió en el 75,2% de los casos. **Consideraciones finales:** Los pacientes representan un grupo vulnerable, con alta gravedad y mortalidad, lo que exige protocolos más eficaces de identificación y atención humanizada para garantizar cuidados de urgencia seguros y dignos.

**Descriptores:** Violencia; Enfermería de urgencia; Registros; Servicios médicos de urgencia.

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## INTRODUCTION

External causes represent one of the main reasons for morbidity and mortality in Brazil and worldwide. In 2017, they were responsible for 8% (4.48 million) of global deaths<sup>(1)</sup>. In Brazil, in 2021, 8.1% (149,322) of deaths were due to external causes, occupying the fourth position in proportional mortality<sup>(2)</sup>.

Among external causes, trauma, characterized by injuries resulting from external events, is one of the main global health concerns<sup>(3)</sup>. It is the leading cause of illness and death in individuals under 35 years of age and the sixth leading cause of death worldwide<sup>(4)</sup>, mainly affecting young people aged 15 to 29 years<sup>(5)</sup>.

In this context, violence has currently been an important source of trauma, with a significant increase in recent years, including incidents with multiple injuries and traumas of various kinds<sup>(6)</sup>. Data from the Brazilian Yearbook of Public Security shows that there were 46,328 intentional violent deaths in 2023 (corresponding to 22.8 deaths/100,000 inhabitants). Brazil accounts for about 10% of the world's homicides, with victims being mostly male (90.2%), black (78%) and young<sup>(6)</sup>.

The contemporary scenario of violence in Brazil highlights physical assault as one of the main forms of trauma. Among the more than 40,000 intentional violent deaths that occurred in Brazil in 2023, 73.6% involved firearms, followed by bladed weapons (16.3%), other instruments (4.7%), aggression (3.5%) and blunt objects (1.8%), with public roads being the main location where the events occurred (56.6%)<sup>(6)</sup>.

Given this scenario, people who are victims of physical assaults and, consequently, trauma, may suffer serious and

severe injuries, which may even lead to altered levels of consciousness, requiring care in a high-complexity health facility<sup>(7)</sup>. In addition to the severity, when admitted to the hospital Emergency Department (ED), patients may be classified as "unidentified patients" due to the inability to identify them and/or the absence of documents proving their identity. This condition represents an additional challenge for the health team, especially with regard to patient safety (PS)<sup>(8)</sup>.

In this sense, one of the international goals of PS is the correct identification of the patient, which is fundamental to avoid medical errors and ensure the quality of care. Correct patient identification is a process that involves verifying at least two pieces of personal information, such as full name and date of birth, before any medical procedure<sup>(8)</sup>. This process is crucial to ensure the right care, for the right patient.

Thus, unidentified patients are those who arrive at the emergency department without any form of identification, making it impossible to confirm their identity before initiating care or providing rapid access to treatment<sup>(9-11)</sup>. As a result, these patients may experience compromised medical diagnosis, lower quality of care, and a poorer prognosis<sup>(9,11)</sup>. Unidentified patients frequently present with more critical health conditions, poorer hospitalization outcomes, and, in many cases, remain unidentified throughout their stay<sup>(12)</sup>.

International literature indicates that the admission of unidentified patients is more frequent among men<sup>(7,12)</sup>. A study conducted in an adult emergency department in the city of Konya, Türkiye, involving 1,324 patients, found that the primary reason for admission among these individuals

was injury resulting from physical assault or sharp objects, accounting for 43.4% of admissions<sup>(13)</sup>.

In this context, specific data in Brazil on this topic remain scarce. A study carried out in a large hospital in the municipality of Belo Horizonte, Minas Gerais, analyzed the care provided to unidentified patients admitted between 2019 and 2022 and found that physical assault was the main cause of admission among these patients<sup>(14)</sup>. However, the characteristics of this specific group were not examined in greater depth.

Therefore, a gap is evident in the Brazilian literature regarding studies that address victims of physical assault admitted as unidentified patients in emergency services. In view of this, it becomes relevant to develop research that analyzes this phenomenon.

Accordingly, the present study aimed to characterize the care provided in a large public emergency department to unidentified patients who were victims of physical assault, given that their presence in hospitals represents a complex scenario that raises a series of ethical, medical, and administrative challenges.

Therefore, the results of this study can contribute to a better understanding of who the unidentified victims of physical assault are and what their health needs are when seeking emergency services. Furthermore, the findings can help health-care professionals and managers understand the various aspects of this population served, in order to improve safer and more evidence-based care strategies. Knowing the patient profile also makes it possible to improve the identification process.

## METHOD

This is a quantitative, descriptive, and retrospective study on the care provided in the Emergency Department of a large hospital to unidentified patients who were victims of physical assault, defined as the use of physical force that causes or is intended to cause harm, injury, or abuse<sup>(15)</sup>.

For the study, the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) checklist was used, an instrument used for the construction of observational studies<sup>(16)</sup>.

### Population and sample

The population consisted of all patients who were victims of physical assault and sought care in the ED between January 1, 2019, and December 31, 2022, who did not have identification documents and/or were unable to confirm their identity at the time of hospital admission. Patients who received initial care at another health unit were excluded. At the institution where the research took place, the patient's identity is confirmed exclusively by presenting an official document. In the absence of this document, the patient is registered in the system as "unidentified" and receives only a care number as identification. However, it should be noted that during the covid-19 pandemic, self-declaration was accepted as a form of identification, due to the local protocol in force at the time.

This study is part of a broader research that investigated care in an emergency department between January 1, 2019 and December 31, 2022<sup>(14)</sup> to unidentified patients. The target population of the main investigation consisted of all unidentified patients admitted to the institution's emergency department during the analyzed period, totaling 2,425 visits. For

sample composition, a sample calculation was performed for a finite population, considering a confidence level of 95% and a margin of error of 5%, resulting in 332 sample units. In order to guarantee temporal representativeness, the sample was stratified proportionally between the four years of the study. The specific sample for this study consisted of patients included in the general sample whose reason for admission to the emergency room was physical assault, totaling 129 cases.

### Variables and definitions

The definition of variables related to care data was based on the institutional structure and on the literature related to the topic of unidentified patients treated in the emergency department (ED)<sup>(9,10,12)</sup>.

With regard to risk classification (RC), the variables were defined according to the Manchester Triage System (MTS). This protocol allows the professional to assess the user's chief complaint that led them to seek care through clinical flowcharts, which contain discriminators that guide the determination of care priority. Based on this assessment, the color category and the maximum response time for the first medical evaluation, in minutes, are defined. The categories are: 1. Emergency (red, response time of 0 minutes). 2. Very Urgent (orange, response time of 10 minutes). 3. Urgent (yellow, response time of 60 minutes). 4. Less Urgent (green, response time of 120 minutes). 5. Non-Urgent (blue, response time of 240 minutes)<sup>(18)</sup>.

The variables related to the first care provided to unidentified patients at admission were based on literature on emergency department care, including Advanced Trauma Life Support (ATLS)<sup>(3)</sup> for trauma patients and the manual Emer-

gency Medicine: Practical Approach for clinical patients<sup>(19)</sup>. The ABCDE approach was used, a mnemonic presented by ATLS that aims to standardize and guide the initial care of patients with multiple trauma, establishing priorities in the approach and reducing mortality. The mnemonic was created with a focus on injuries with the greatest potential for mortality, with ABCDE standing for: A (airways) – airway management and cervical spine control; B (breathing) – breathing and ventilation; C (circulation) – circulation; D (disability) – neurological status; E (exposure) – exposure with control of body temperature<sup>(3)</sup>. This same mnemonic also guides clinical care in another study<sup>(21)</sup>.

On the other hand, regarding the race/color variable, it should be noted that the information was provided by third parties during completion of the patient registration form at the institution, and not by patient self-report.

The study variables collected for analysis were:

- Sociodemographic data: sex, age (in years), race/color (reported by third parties), place of residence and type of housing.
- Emergency Department admission data: time of admission; day of the week; month of admission; person responsible for referring the patient to the hospital; flowchart, according to the MTS; discriminator, according to the MTS; clinical priority level, according to the MTS; and first medical specialty to attend to the patient.
- Initial care data:
  - restriction of cervical spine mobility: with/without cervical collar;
  - airway assessment: patent or obstructed airway;
  - ventilation and breathing: apnea,

room air, nasal cannula, non-rebreather mask, bag-valve-mask, intubation, surgical airway, laryngeal mask;

- circulation: exsanguinating hemorrhage (yes, no), palpable or non-palpable peripheral pulses, cardiorespiratory arrest, stable or unstable pelvis, use of vasoactive drugs, hemorrhage;

- Neurological assessment: isochoric pupils, pupillary changes, limb movement, Glasgow Coma Scale (score from 3 to 15);

- Environmental exposure and control: laceration, gunshot wound, stab wound, abrasions, traumatic tattoo, fractures (closed and open), absence of apparent injury, use of immobilizers.

- Outcome of care in the ED: length of stay in the ED (in days) and outcome of care in the ED.

- Outcome of hospital care for inpatients: length of hospital stay (in days) and outcome of hospitalization.

- Patient identification data: identification during ED admission, patient discharged without identification, length of stay as unidentified (in days), person responsible for identification, method of patient identification, and reason for remaining unidentified.

## Data collection

For data collection, an instrument containing the study variables was developed using the Research Electronic Data Capture (REDCap<sup>®</sup>) digital platform, whose functionality includes the construction and management of databases and online surveys. Five medical records randomly selected from hospital records of unidentified patients from 2019 to 2022 were used in a pilot test of the instrument. After analysis, the instrument was adjusted to better meet the objectives of the study.

The medical records selected for the pilot test were part of the study population.

Accordingly, data collection was carried out in two phases: (a) identification of the record numbers of unidentified patients using data provided by the Medical Records and Statistics Service (SAME) of the institution, as well as access to the network folder entitled "Unidentified Patients," after authorization from the technical supervisor and the manager of the multiprofessional team—once in possession of the record numbers, the medical records that comprised the sample were subsequently selected by random draw; and (b) collection of the variables from the electronic medical records accessed through the hospital's computerized system. The data were collected by six researchers, who were guided and trained by the principal investigator, thus ensuring the standardization and accuracy of the collected data.

The study was conducted in the emergency department of a large public hospital classified as a Level I Trauma Center, located in Belo Horizonte, Minas Gerais, Brazil. This hospital is a state reference for the care of polytraumatized patients, as well as for clinical urgencies and emergencies, severe burns, and intoxications. Fully integrated into the Brazilian Unified Health System (SUS), the emergency department has a comprehensive infrastructure, including trauma care rooms, outpatient clinics of various specialties, imaging services, and toxicology services, providing care to patients of all age groups<sup>(17)</sup>. The choice of the institution was based on its care profile, which is aligned with the scope of the present study.

## Data analysis

Data derived from the electronic medical record were imported directly into REDcap®. Subsequently, they were exported to a Microsoft Excel® spreadsheet and subjected to descriptive statistical analysis using Statistical Software for Professional® (Stata), version 21. For categorical variables, absolute values and proportions were calculated; for continuous variables, measures of central tendency and dispersion were calculated. The Shapiro-Wilk normality test was applied to assess the normality distribution of continuous variables.

### Ethical Aspects

The study complied with the guidelines of Resolutions 466/2012 and 510/2016 of the National Health Council, guaranteeing the principles of non-maleficence, beneficence, justice, equity, and autonomy. This is a segment of a larger research project linked to a master's the-

sis, which analyzed unidentified patients admitted to the institution in question. For this reason, the project was submitted to the Research Ethics Committees of the Federal University of Minas Gerais (CAAE: 69465223.9.0000.5149, Opinion number 6.129.008) and the institution where the project was conducted (CAAE: 69465223.9.3001.5119, Opinion number 6.297.301).

### RESULTS

Of the 129 unidentified patients treated for physical assault, the majority were male (86.8%). Age ranged from 12 to 89 years, with a median of 30 years (IQR: 16-64 years). The predominant age group was 18 to 39 years (65.6%). It should be noted that only 32 patients (24.8%) had their age recorded in their medical records. Other sociodemographic data are presented in Table 1.

**Table 1** - Sociodemographic characterization of unidentified patients treated in the emergency room as victims of physical assault. Belo Horizonte-MG, Brazil, 2019-2022

Variables	N	%
<b>Sex</b>	<b>129</b>	
Female	112	86.8
Male	17	13.2
<b>Age (years)</b>	<b>32</b>	
12 to 17	3	9.4
18 to 29	12	37.5
30 to 39	9	28.1
40 to 49	6	18.8
60 or more	2	6.3
<b>Race/color</b>	<b>129</b>	
Brown	95	73.60
Black	20	15.50
White	14	10.90
<b>City</b>	<b>33</b>	
Belo Horizonte	23	69.7
Metropolitan Region	9	27.3
Minas Gerais, outside the metropolitan region of Belo Horizonte	1	3

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Variables	N	%
Housing		
House/apartment	28	56
Homelessness	22	44

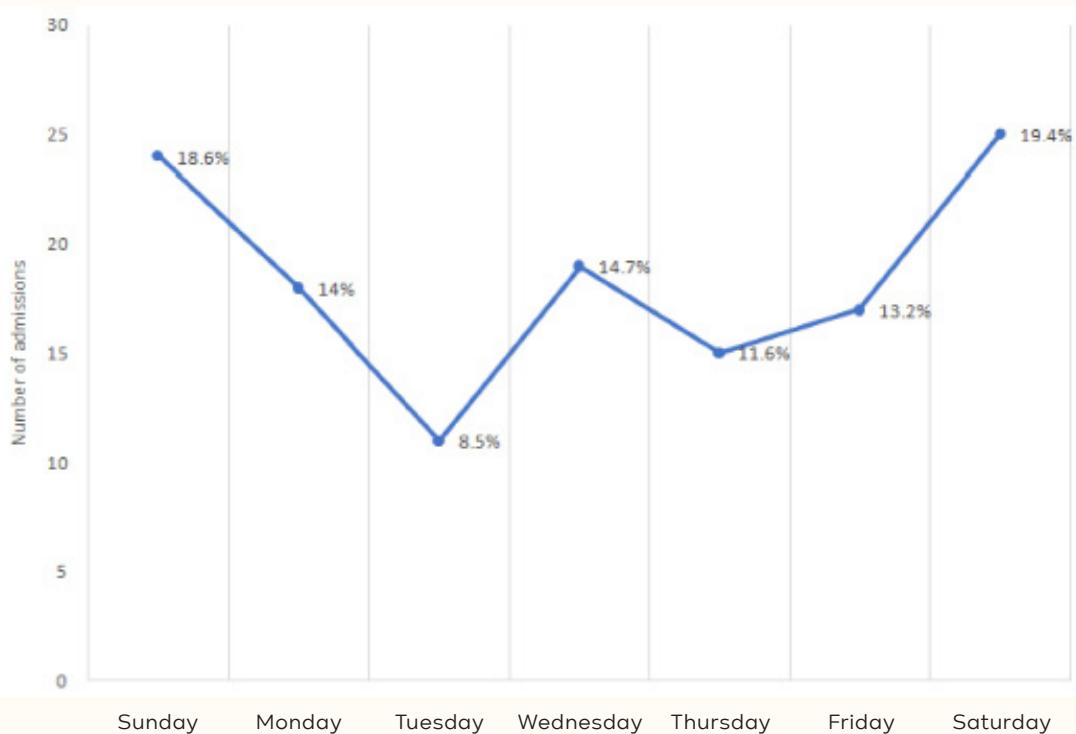
Source: Prepared by the authors.

Regarding the admission of these patients to the ED, the months of February and September showed the highest frequency of admissions, both with 13.2% of patients, followed by the months of October (12.4%), March (10.9%), January and June (both with 8.5%), November (7.8%),

May (7%), April and August (both with 5.4%), and December (3.9%).

In this context, the weekend stood out with the highest number of admissions, totaling 38% of patients. The distribution of admissions can be seen in Figure 1.

**Figure 1** - Distribution of admissions of unidentified patients treated, according to the day of the week, in the emergency department for victims of physical assault. Belo Horizonte-MG, Brazil. 2019-2022



Source: Prepared by the authors.

Regarding the admission times of unidentified patients, the early morning period predominated (31.8%), followed by the night (30.2%), afternoon (25.6%), and

morning (12.4%) periods.

In relation to the mode of arrival at the ED, the Military Police of Minas Gerais referred most patients (45%), followed by

those referred by SAMU 192 teams (38%), own means (11.6%), the Military Fire Department of Minas Gerais (3.9%), by civilians (0.8%), and by private ambulance (0.8%).

Regarding the Risk Classification (RC), 121 (93.8%) patients were triaged according to the MTS. The most accessed flowcharts were "assault" (73.6%), "major trauma" (14%), and "wounds" (5.8%). Regarding discriminators, the most frequent were "significant trauma mechanism" (36.4%), "altered level of consciousness" (24%), and "inadequate breathing" (9.1%). Physical assault accounted for 51.2% of cases, followed by physical assault with stab wound (27.1%) and physical assault

with gunshot wound (21.7%). As for the level of clinical priority, level 2 – Orange/Very urgent predominated (62.8%), followed by level 1 – Red/Emergency (28.1%).

The first medical specialty to attend to the patient was general surgery, in 94.6% of cases.

There was data loss for all letters of the ABCDE mnemonic used to analyze the initial patient care in the emergency department, with the greatest loss for C – Circulation (79.1%), followed by D – Neurological dysfunction (32.6%), B – Ventilation and respiration (17.8%), A – Cervical spine restriction (14%), and E – Exposure and environment (3.1%). Data regarding the initial patient care are presented in Table 2.

**Table 2** – Characterization of the clinical conditions of unidentified patients at the time of admission to a large public emergency department who were victims of physical assault. Belo Horizonte-MG, Brazil, 2019-2022

Variables	N	%
<b>A: Cervical spine restriction</b>	111	
With cervical collar	25	22.5
Without cervical collar	86	77.5
<b>A: Airway Assessment</b>	118	
Patent Airway	105	89
Obstructed Airway	13	11
<b>B: Ventilation and breathing</b>	107	
Ambient air	82	77.4
Apnea	13	12.3
Face mask placed in pre-hospital care	5	4.7
Intubation performed in pre-hospital care	3	2.8
Nasal catheter placed in pre-hospital care	2	1.9
Bag-valve-mask	2	1.9
<b>C: Circulation</b>	50	
Exsanguinating hemorrhage	17	14.4
Non-palpable peripheral pulses	16	59.3
Cardiopulmonary arrest	11	40.7
Other*	6	22.2
<b>D: Neurological dysfunction</b>	87	
Isophotoreactive pupils	70	80.5
Spontaneous limb movements	41	47.1
Abnormal pupils	3	3.4
Other†	7	8
<b>E: Exposure and environment</b>	125	
Cut/Contusion injury	59	47.2
Gunshot wound	31	24.8
Stab wound	30	24

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Variables	N	%
Abrasions	20	16
Hematoma	20	16
Fractures	14	11.2
Immobilization	7	5.6
Traumatic tattoo	4	3.2
No apparent injuries	3	2.4
Other <sup>#</sup>	4	3.2

Source: Prepared by the authors.

Notes: \*Other circulatory conditions: abdominal pain, abdominal evisceration, and active bleeding. †Other neurological dysfunctions: mental confusion, seizure, and sedation. ‡Other exposures and environments: edema, emphysema, epistaxis, and conjunctival hemorrhage.

The Glasgow Coma Scale (GCS) at the time of admission to the ED was recorded in 101 (78.3%) cases, ranging from 3 to 15 points, with a median of 14.

Regarding the association of alcohol and drugs with care, it was found that, in 47 medical records, there was a record of alcohol and/or drug use by patients. Of these, 24 (51%) reported exclusive alcohol

use, 13 (27.7%) used only illicit drugs, and 10 (21.3%) used alcohol and drugs concomitantly.

Regarding the outcome of care in the ED, 125 patients had their data recorded in medical records, which can be seen in Table 3. The length of stay of patients in the ED ranged from zero to 12 days, with a median of two days.

**Table 3** - Characterization of the outcomes of care in the ED. Belo Horizonte-MG, Brazil, 2019-2022

Variables	N	%
Outcome of emergency room visit	129	100
Hospital discharge	57	44.2
Surgical block	20	15.5
Death	15	11.6
Escape	11	8.5
Inpatient unit	10	7.8
Hospital discharge with outpatient monitoring	8	6.2
Medical record without outcome	4	3.1
Discharge at request	2	1.6
Intensive Care Unit	1	0.8
Hospital transfer	c	0.8

Source: Prepared by the authors

Regarding the outcome of hospital care, it was found that 60 (46.5%) patients were hospitalized at some point during their hospital stay. Hospital outcome data

can be seen in Table 4. The length of stay ranged from zero to 453 days, with a median of two days.

**Table 4** - Characterization of hospital care outcomes. Belo Horizonte-MG, Brazil, 2019-2022

Variables	N	%
<b>Hospital Care Outcome</b>		
Death	19	31.7
Hospital Discharge	18	30
Hospital Discharge with Outpatient Follow-up	12	20
Escape	3	5
Hospital Transfer	3	5
Referral to another institution after discharge	2	3.3
Patient remained hospitalized during data collection	1	1.7
Hospital Discharge at Patient's Request	1	1.7
Medical Record without Outcome	1	1.7

Source: Prepared by the authors

In this sense, during the hospital stay, of the 129 patients, only 32 (24.8%) were identified. Of these, the majority (62.5%) were identified in the emergency department, with family members presenting identification documents. Among the 97

patients who were discharged from the hospital without identification, in 36 (37.1%) cases there was no record of the reason for non-identification. Data on the identification process are presented in Table 5.

**Table 5** - Characterization of the identification process of unidentified patients who were victims of physical assault and admitted to the emergency room. Belo Horizonte-MG, Brazil, 2019-2022

Variables	N	%
<b>Patient remained unidentified</b>		
Yes	97	75.2
No	32	24.8
<b>Reason for continued non-identification of the patient</b>		
Self-declared without identification document	28	45.9
Deceased	20	32.8
Refused to contact family	4	6.5
Patient remained mentally confused	2	3.3
Other*	7	11.5
<b>Sector where the patient was identified</b>		
Emergency Department	20	62.5
ICU	8	25
Inpatient Unit	3	9.4
Surgical Block	1	3.1
<b>Patient identification method</b>		
Identification document	19	63.3
Self-declaration (pandemic)	9	30
<b>Responsible for patient identification</b>		
Family members	19	59.4
Self-identification	11	34.4
Police service	1	3.1
Social service	1	3.1

Source: Prepared by the authors.

Note: \*Other reasons for the patient remaining unidentified: escape, patient did not wish to be identified, identification only through verbal declaration by third parties, identification after death, and unspecified reason.

## DISCUSSION

The present study reveals an alarming profile of unidentified patients who were victims of physical assault in a large public emergency department, highlighting a critical public health issue. The results indicate that young, brown men, residents of Belo Horizonte, Minas Gerais, with fixed housing, constitute the predominant profile of patients admitted as unidentified.

In this regard, the analysis of the profile of unidentified patients reveals not only the severity of the problem but also the need to understand the factors contributing to this situation. The predominance of young men among the victims reinforces the vulnerability of this group to urban violence, reflecting a profile already described in the literature<sup>(5,6)</sup>.

In this context, physical violence is characterized as a complex problem with significant implications for health and public safety. Recent studies indicate that men are more prone to risk behaviors, such as involvement in fights and excessive alcohol consumption—factors directly associated with increased urban violence<sup>(6,20)</sup>. This same demographic profile is observed among unidentified patients in other studies, which also point to a higher incidence among male individuals and young age groups<sup>(7,9-13)</sup>, reinforcing the need for specific strategies for the identification and reception of this group within emergency services.

The absence of precise age data in medical records represents a significant obstacle, both for the quality of health care and for the production of knowledge about the population served. Despite this limitation, among the data available for analysis, the young adult age group was

predominant in this study. This finding is consistent with national data: between 2016 and 2021, more than 1.8 million cases of violence were reported in Brazil, of which 30.17% (over 560,000) of the victims were individuals aged 15 to 29 years. Physical violence was the most frequent type in this age group, accounting for 46.17% of the records<sup>(5)</sup>. The profile of unidentified patients who were victims of physical assault observed in this study reinforces the national epidemiological scenario, confirming that youth remains the group most affected by this type of violence in the country.

In this sense, the predominance of brown and black individuals among victims of physical violence reinforces racial inequality in violence and mortality statistics, with the black population in Brazil being disproportionately affected by urban violence<sup>(5,6)</sup>. In the present study, this information was obtained through third-party reports, which highlights the limitations in recording accurate data on unidentified patients, especially in emergency contexts. This weakness compromises not only the sociodemographic characterization of the population served, but also the planning of public policies to address violence with a racial focus.

On the other hand, a significant loss of data related to housing conditions was observed in the analyzed medical records, which limits a more comprehensive understanding of this aspect. However, among the available records, most patients had fixed housing and resided in the capital. This shows that the local population seeks the hospital as a reference for meeting its demands, probably because it is a reference hospital in urgency, emergency and trauma, and operates on

an open-door policy for serving the population.

From another perspective, analysis of ED admission data reveals a seasonal pattern, with peaks in demand, especially on weekends and in specific months, such as February and September. This fluctuation is associated with several factors, such as increased urban violence, social interactions and traffic accidents on weekends<sup>(21)</sup>, and the concentration of festive events in certain months, such as Carnival in February, which generates a considerable increase in admissions related to external causes<sup>(22)</sup>.

The way patients are referred to the hospital also provides important information about the nature of the violence suffered. The involvement of the Military Police in referring most patients to the hospital suggests a strong association between cases of assault and urban violence with sufficient severity to require immediate police intervention. Similar results were found in a study in Nigeria, in which 92% of unidentified patients were referred to the health service by the police<sup>10</sup>.

However, other studies<sup>(9,12)</sup> have shown a different profile, with most patients being transported by ambulances or healthcare teams. Dependence on these institutions for the transportation of unidentified patients suggests that these individuals often present with extremely severe injuries, requiring rapid and effective interventions already in the pre-hospital setting.

In this context, the analysis of admissions of unidentified individuals to the emergency department as victims of physical assault highlights both the severity and the complexity of the clinical profiles characteristic of this population. The lack

of cervical spine immobilization may indicate the need for rapid transport of the victim at the expense of spinal motion restriction, since in victims of isolated penetrating trauma the time spent performing this procedure may double mortality<sup>(23)</sup>, making rapid transport to the hospital a priority. In addition, considering the violent scenarios in which physical assaults occur, it can be inferred that removing the victim from the scene also aims to preserve the safety of the professionals involved in care.

Thus, circulation was also severely compromised in several cases, including patients admitted already in cardiorespiratory arrest, a condition that, in the context of trauma, is associated with an extremely unfavorable prognosis. Traumatic cardiac arrest presents characteristics distinct from cardiac arrest of clinical origin and is often secondary to potentially reversible causes, such as hypoxia, severe hypovolemia, and cardiac tamponade<sup>(24)</sup>.

In this scenario as well, exsanguinating hemorrhage, identified in a portion of the patients treated, stands out as one of the main causes of preventable death in trauma. Early identification and immediate control of this condition are decisive for survival, reinforcing the importance of well-trained teams, well-established protocols, and a systematic approach from pre-hospital care through hospital admission<sup>(25)</sup>.

Furthermore, neurological dysfunction was a relevant finding, with some patients presenting signs of severe traumatic brain injury. Despite the severity of the cases, most patients maintained a high level of consciousness at admission, as identified by the Glasgow Coma Scale (GCS). The correct use of the GCS in tra-

ma is essential to predict prognosis and guide interventions. The literature indicates that most unidentified patients referred to the hospital with lower GCS scores have death as the outcome<sup>(7,9)</sup>.

With regard to injuries observed during exposure, incised-contused wounds, gunshot wounds, and stab wounds stood out—all characteristic of penetrating trauma. These types of injuries are strongly associated with high mortality rates, especially when specialized care is not made available immediately. The literature corroborates these findings by indicating that unidentified patients frequently arrive at the emergency department with multiple therapeutic challenges, including airway obstruction, extensive lacerations, contusions, and other injuries that require rapid and complex interventions<sup>(7,9)</sup>.

Another critical factor observed was the association of alcohol and drugs in the care provided. Alcohol and drug use is associated with risky behaviors, increased predisposition to physical assault, traffic accidents, and other types of traumatic injuries. Intoxication by these substances can also directly affect the initial management of patients in emergencies, as they can impair cognition, affect memory, and lead to aggressive behaviors, complicating triage and delaying critical interventions<sup>(20)</sup>.

The outcomes of care in the ED indicate a critical situation with high mortality. In a study with 1,324 unidentified patients, conducted in an emergency department in Konya, Türkiye, the mortality rate in the ED was significantly lower, at 2.9%<sup>(13)</sup>.

In addition, hospital dropout occurred with some of the patients. Although just over half of the patients were discharged home, only a portion were referred for

outpatient monitoring. ICU admission was necessary in less than 10% of cases. In this sense, another study carried out in Konya obtained a similar result, in relation to discharge after treatment, with 68.2% of patients in this condition and showed a dropout rate of 26.5%<sup>(13)</sup>, significantly higher than the data obtained in this study.

Thus, the data on the hospital outcome of unidentified patients reveal a heterogeneous scenario, suggesting that, although some cases required prolonged hospitalizations, most remained in the hospital for relatively short periods. Mortality among those hospitalized was high, possibly reflecting the severity of the injuries.

On the other hand, dropout and hospital transfer together represented less than 10% of cases. These findings are consistent with the literature, which points to high mortality among unidentified trauma victims, as in studies carried out in India, in which the death rate exceeded 50% and 30%<sup>(7,11)</sup>. Such data reinforce the vulnerability of this group and demonstrate that unidentified patients have a high risk of mortality.

Thus, during hospital care, most patients were not identified. The median period without identification was one day. The main entities responsible for identification were family members, followed by self-identification (which occurred during the pandemic), police service, and social services. However, it is noteworthy that there were cases where self-identification was accepted outside the pandemic period, demonstrating the absence of a standardized protocol for this process within the institution.

Thus, proper identification becomes essential to ensure faster and more

targeted care, especially in emergency contexts. The present study corroborates data from another investigation conducted in India, in which the majority of patients were identified within the first five hours of care, that is, on the first day of hospitalization<sup>(9)</sup>.

Another concerning finding is that 32.8% of patients died before being identified, which likely indicates the severity of their clinical condition at the time of admission. Similarly, a study conducted in India found a rate of 41.2% of unidentified patients who died without identification<sup>(7)</sup>. These findings reinforce the vulnerability of this population and highlight the urgency of strategies that combine rapid clinical care with effective mechanisms for early identification.

Difficulties in identification are also evident in cases involving patients with mental confusion, underscoring the importance of specialized protocols to manage these individuals. Patients with neurological disorders or in a state of mental confusion have greater difficulty being identified and require increased attention from healthcare teams<sup>(12)</sup>. The lack of identification in such cases may delay the initiation of life-saving treatments, contributing to the deterioration of the patient's health status.

Therefore, the present study is the first Brazilian work to describe the profile and characterize the care provided to unidentified patients who are victims of physical assault. By addressing a topic of great importance and limited exploration in the emergency care field, this research offers valuable insights into the profile, clinical conditions, and care practices directed at a vulnerable patient group. Furthermore, data collection encompassed

a wide range of information, from initial care to hospital outcomes, enabling the identification of these individuals' specific needs and highlighting key points for improving care practices, thereby promoting safe and effective care.

## FINAL CONSIDERATIONS

Despite the significant contributions, this study has limitations that should be considered. Data collection in a single hospital may restrict the generalizability of the findings to other hospital and regional contexts. The retrospective design and the use of free-text medical records also pose challenges, since incomplete and subjective notes can compromise the standardization and reliability of the information. In addition, the lack of a well-defined institutional flow for the recognition of unidentified patients limits more precise analyses of the identification process.

The results showed that unidentified patients who were victims of physical assault were mostly young adult males residing in Belo Horizonte-MG and referred mainly by the Military Police, reflecting the severity of urban violence. It was also observed that some patients remained unidentified until hospital outcome, with most being recognized by family members, followed by the presentation of personal documents or self-declaration during the pandemic period. These findings reinforce the need for clear institutional protocols to ensure early identification and continuity of care.

Therefore, this study makes relevant contributions to Nursing, a professional category directly involved in the reception, registration, and identification of patients in emergency services. Strengthening care flows and training the Nursing

team can improve the accuracy of the identification process and promote more humanized and safe care. In this sense, investing in solid clinical and administrative protocols is fundamental to reducing risks, optimizing emergency care, and ensuring greater dignity for victims of violence in vulnerable situations.

## REFERENCES

1. Roth GA, Abate D, Abate KH, Abay SM, Abbafati C, Abbasi N, et al. Global, regional, and national age-sex-specific mortality for 282 causes of death in 195 countries and territories, 1980–2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*. 2018;392(10159):1736–88. DOI: 10.1016/s0140-6736(18)32203-7
2. Ministério da Saúde (BR); Ministério da Justiça e Segurança Pública (BR). Mortes por causas externas: qualificação dos registros inespecíficos. 2024:1-114. Disponível em: [https://bvsms.saude.gov.br/bvs/publicacoes/mortescausase\\_xternasqualificacaoregistros.pdf](https://bvsms.saude.gov.br/bvs/publicacoes/mortescausase_xternasqualificacaoregistros.pdf)
3. American College of Surgeons. ATLS advanced trauma life support. 10th ed. Chicago: ACS; 2018.
4. Simon LV, Lopez RA, King KC. Blunt force trauma. StatPearls [Internet]; 2023. Disponível em: <https://www.ncbi.nlm.nih.gov/books/NBK470338/>
5. Fiocruz (BR). Panorama da situação de saúde de jovens brasileiros 2016 a 2022. Fundação Oswaldo Cruz; 2024. Disponível em: [https://www.epsjv.fiocruz.br/sites/default/files/files/DOSSIEj\\_uventude.pdf](https://www.epsjv.fiocruz.br/sites/default/files/files/DOSSIEj_uventude.pdf)
6. Fórum Brasileiro de Segurança pública. Anuário Brasileiro de Segurança Pública 2024. São Paulo: Fórum Brasileiro de Segurança Pública; 2024. Disponível em: <https://forumseguranca.org.br/wp-content/uploads/2024/07/anuario-2024.pdf>
7. Vijayasekhar MV, Rajesh P, Swaroop KH, Nagendra MPAB, Kadali S. Practical challenges in the management and outcome of unknown patients with head injury. *IJNT*. 2023;20(01):033–6. DOI: 10.1055/s-0042-1759871
8. Ministério da saúde Agência Nacional de Vigilância Sanitária (BR). Anexo 02: Protocolo de identificação do paciente. 2013:1-11. Disponível em: <https://www.gov.br/saude/pt-br/composicao/saes/dahu/pnsp/protocolos-basicos/protocolo-de-identificacao-do-paciente/@/download/file>
9. Khantal N, Kankane VK, Sharma A. Management and outcome of unknown patients with head injury in tertiary health-care center. *AJMS*. 2023 Sep;14(9):270–274. DOI: 10.3126/ajms.v14i9.54880
10. Eni UE, Nnadozie UU, Ulebe AO, Obayi O. Care of the “unknown patient” in a Nigerian tertiary hospital setting. *Edorium J Public Health*. 2020;7:1–6. DOI: 10.5348/100027P16UE2020RA
11. Singh R, Sachdeva MK, Koushal V, Kumar A, Singh Y, Goyal M, et al. Study of the Unknown Patients at Advanced Trauma Centre of a Tertiary Care Hospital in North India. *Journal of Trauma & Treatment*. 2022;11(8):1–4. DOI: 10.37421/2167-1222.2022.11.522
12. Tastad K, Koh J, Goodridge D, Stempien J, Oyedokun T. Unidentified patients in the emergency department: a historical cohort study. *Canadian Journal of Emergency Medicine*. 2021;23(6):772–7. DOI: 10.1007/s43678-021-00165-0
13. Acar D, Tekin FC. The problem of unconscious and unidentified patients in emergency department admissions; a 3-year retrospective study. *PLOS ONE*. 2024;19(7):e0307540. DOI: 10.1371/journal.pone.0307540

pone.0307540

14. Sousa FCP. Análise dos atendimentos e do fluxo de identificação de pacientes não identificados em um hospital público de ensino [Programa de Pós-Graduação em Enfermagem da Escola de Enfermagem da UFMG]. Universidade Federal de Minas Gerais; 2024. Disponível em: [https://repositorio.ufmg.br/bitstream/1843/72534/1/dissertacao\\_Fernanda\\_Coura.pdf](https://repositorio.ufmg.br/bitstream/1843/72534/1/dissertacao_Fernanda_Coura.pdf)
15. Descritores em Ciências da Saúde: DeCS [Internet]. ed. 2023. São Paulo (SP): BIREME/OPAS/OMS. 2024 [atualizado 2023 Maio 31; citado 2025 Jan 17]. Disponível em: [https://decs.bvsalud.org/ths/resource/?id=15158&filter=ths\\_exact\\_term&q=AGRESS%C3%83O%20F%C3%8DSI-CA](https://decs.bvsalud.org/ths/resource/?id=15158&filter=ths_exact_term&q=AGRESS%C3%83O%20F%C3%8DSI-CA)
16. Von Elm E, Altman DG, Egger M, Pocock SJ, Gøtzsche PC, Vandebroucke JP. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. *Journal of Clinical Epidemiology*. 2008;61(4):344-9. DOI: 10.1016/j.jclinepi.2007.11.008
17. Drumond DAF, Vieira HM Jr. Protocolos em trauma: Hospital de Pronto Socorro João XXIII. Rio de Janeiro: Medbook; 2009.
18. Mack-Jones K, Marsden J, Windle J. Sistema Manchester de Classificação de Risco. 2a ed. Belo Horizonte: Folium; 2017.
19. Velasco IT, Brandão RA Neto, Souza HP, Marino LO, Marchini JFM, Alencar JCG. Medicina de Emergência. 16a ed. São Paulo: Manole; 2022.
20. Sontate KV, Rahim Kamaluddin M, Naina Mohamed I, Mohamed RMP, Shaikh MF, Kamal H, et al. Alcohol, aggression, and violence: from Public Health to Neuroscience. *Frontiers in Psychology*. 2021;12. DOI: 10.3389/fpsyg.2021.699726
21. Khurana B, Prakash J, Loder RT. Assault related injury visits in US emergency departments: an analysis by weekday, month and weekday-by-month. *Chronobiol Int*. 2022;39(8):1068-77. DOI: 10.1080/07420528.2022.2065285
22. Silva PCD, Camacho LAB, Carmo CND. Impacto do efeito calendário na morbimortalidade por causas externas em municípios turísticos no estado de São Paulo, Brasil, no período de 2004 a 2014. *Cadernos de Saúde Pública*. 2021;37(1). DOI: 10.1590/0102-311X00174019
23. Secretaria Municipal de Saúde (MG). Protocolo. Restrição de movimento de coluna (RMC) vertebral para vítimas de trauma. 2022:1-23. Disponível em: [https://prefeitura.pbh.gov.br/sites/default/files/estrutura-de-governo/saude/2023/protocolo\\_mc - 12 - 06 - 23.pdf](https://prefeitura.pbh.gov.br/sites/default/files/estrutura-de-governo/saude/2023/protocolo_mc - 12 - 06 - 23.pdf)
24. Schober P, Giannakopoulos GF, Bulte CSE, Schwarte LA. Traumatic cardiac arrest: a narrative review. *Journal of Clinical Medicine*. 2024;13(2):302. DOI: 10.3390/jcm13020302
25. Park Y, Lee GJ, Lee MA, Choi KK, Gwak J, Hyun SY, et al. Major causes of preventable death in trauma patients. *Journal of Trauma and Injury*. 2021;34(4):225-32. DOI: 10.20408/jti.2020.0074

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