

## Epidemiological profile of care for violence in public urgency and emergency services in Brazilian capital, Viva 2014

Rayone Moreira Costa Veloso Souto <sup>1</sup>  
Laura Augusta Barufaldi <sup>1</sup>  
Lucélia Silva Nico <sup>2</sup>  
Mariana Gonçalves de Freitas <sup>1</sup>

**Abstract** *Injuries and deaths resulting from violence constitute a major public health problem in Brazil. The article aims to describe the profile of calls for violence in emergency departments and emergency Brazilian capitals. This is a descriptive study of Violence and Accident Surveillance System (VIVA), carried out in public emergencies Brazilian cities, from September to November 2014, a total of 4406 calls for aggression. We considered the following categories of analysis: 1) sociodemographic characteristics (gender, age, race / skin color, education, place of residence, vulnerability, alcohol intake); 2) Event feature (probable author, nature and means of aggression); and characteristics of care (getting to the hospital, prior service, evolution). Of the total calls for violence (n = 4406), the highest prevalence was among young people 20-39 years (50.2%), male, black and low education. As for the event characteristics it stands out that 87.8% were physical assaults; 46.3% cut/laceration and 13.7% involved a firearm. The results point to the need to strengthen intersectoral actions to expand the network of care and protection.*

**Key words** *Violence, External causes, Emergencies*

<sup>1</sup> Departamento de Vigilância de Doenças e Agravos não Transmissíveis e Promoção da Saúde, Secretaria de Vigilância em Saúde, Ministério da Saúde. SRTVN 701, Via W5 Norte, Ed. PO700, 6º andar – DANTPS. 70723-040 Brasília DF Brasil.  
rayone.costa@saude.gov.br

<sup>2</sup> Coordenação de Saúde da Pessoa Idosa, Departamento de Ações Programáticas Estratégicas, Secretaria de Atenção à Saúde, Ministério da Saúde. Brasília DF Brasil.

## Introduction

Violence is a global problem, which has social, psychological, economic and social-security effects, overburdens the health services, and affects millions of people and communities worldwide<sup>1</sup>. It is a multi-causal and complex phenomenon, in which all people are susceptible<sup>1-4</sup>, especially young men in urban centers<sup>5</sup>.

It is responsible, together with accidents, both worldwide and in Brazil, for a leading position in the ranking of morbimortality, and is a challenging problem which continues into the new century and millennium<sup>6</sup>.

It is an important challenge for public health because it affects individual and collective health, and its prevention in treatment calls for formulation of specific policies and organization of practices and services particular to the sector<sup>6</sup>.

Understanding of this phenomenon requires a wide-ranging analysis based on the determining and conditioning factors of politics, society and the environment, which have a strong association with social inequalities. Understanding it makes us examine the structures of social relationships and relationships of power, such as issues of culture, behavior, inter-gender relations<sup>7</sup>, and issues of race/skin color and age.

Public Health to deal with and confront violence calls for expanded knowledge, in which a fundamental point is to carry out the maximum possible research and systematically unite data on scope, characteristics and consequences at local, national and international levels<sup>8,9</sup>.

Thus, this paper aims to describe the profile of care given for injuries arising from violence in urgent and emergency medical services in the capitals of the Brazil's states and its Federal District, with a view to contributing to systemization, dissemination, scientific, social and strategic use of the information, to support actions in healthcare, health promotion and protection of victims – in an approach articulated with vigilance, and also enhancement of public policies. In addition, the study aimed to: make the same analysis for each gender; show the distribution of events over the days of the week, and times of day; and relate this distribution to consumption of alcohol.

## Methods

This is a cross-sectional descriptive study of health care given to victims of violence, in the

VIVA Survey, which was made in 86 urgent and emergency health facilities of the Brazilian Health System (SUS) in Brazil's Federal District and the 24 Brazilian state capitals, in 2014. Two state capitals – Florianópolis of Santa Catarina, and Cuiabá of Mato Grosso – did not participate due to local limitations relating to technical-operational management and support.

In each participating state capital, establishments that met the following criteria were included: (a) services considered as benchmarks for referral for emergency care due to external causes based on consultation of the National Health Establishments Registry (CNES) and the Hospital Information System (SIH) of the SUS; and (b) services that took part in the survey in one or more of its previous versions: 2006, 2007, 2009 and/or 2011. The services selected were validated by the coordinators of the Non-Transmissible Diseases Supervision Unit (DANT) of the Health Departments of the states and municipalities participating in the survey, because they know the local flows in healthcare that are provided for urgent cases due to external causes. More information can be obtained in specific publications<sup>10,11</sup>.

The size of the sample was a minimum of 2,000 healthcare operations for external causes in each one of the state capitals and the Federal District, assuming a coefficient of variation less than 30% and standard error less than 3. In each capital, data was collected only on shifts chosen by random lottery method, over a total of sixty 12-hour shifts covering a period of 30 consecutive days, over the months September–November, 2014. The procedure for random choice of 12-hour shifts was probabilistic sampling by conglomeration in a single stratified stage by type of establishment (general emergency, first aid units, specialized emergency units) with the shift being the primary sampling unit. All the healthcare actions due to external causes carried out in the randomly chosen shift in each establishment selected were considered eligible for interview. Cases in which the patient sought the same service for the second time or more, for the same reason, and also return visits and complications of the care, were excluded.

The data were extracted using a specific form, called the VIVA Inquiry Form (*Ficha de Notificação de Violências e Acidentes em Unidades de Urgência e Emergência*), in uninterrupted shifts of 12 hours, during 30 consecutive days. The period of collection considered was of 30 days in the months from September through November

2014, divided into shifts of 12 hours, totaling 60 shifts. All victims of external causes (Chapter XX of ICD-10) who sought care from the urgent and emergency services selected and who agreed to take part in the survey, were considered eligible for interview.

The analysis was restricted to the victims of aggression (codes X85 to Y09 of the ICD-0) and the following were considered as categories for analysis: (1) characteristics of the victim: gender, age group, race/color, level of schooling, zone of residence, health insurance plan, disablement, population with vulnerability, and ingestion of alcohol; (2) characteristics of the event: nature of the violence, means of aggression, nature of the injury, location of the occurrence, and probable perpetrator.

The variables were described for the total of the victims, and by gender, since the manifestation of violence varies – as to type, means, nature of the aggression, and other factors – as a function of gender. A chi-square test was made to verify whether there was statistically significant difference between the proportions by gender. The use of alcohol by the victim and the day and time of the occurrence, and of the care, were presented separately in graphs due to their relevance for the health intervention actions. Ingestion of alcohol is a modifiable risk factor for violence, both for the aggressor and for the victim, who becomes more vulnerable to aggression, especially sexual aggression. In the case of the description of the occurrences and care events for violence by time of day and day of week, the aim was to contribute, in practice, to local management, since this is information that supports reorganization of services and prevention measures. The SVY module of the Stata program, Version 14, was used to obtain non-biased estimates when the data came from complex sampling plans.

Although the study permitted comparability between capitals, due to the sampling weights attributed an option was taken in favor of a grouped analysis of the state capitals as a whole, aiming to achieve a profile of the totality, and avoid undesired comparisons such as ‘violence rankings’, for example.

The 2014 VIVA Survey project was evaluated and approved by the National Research Ethics Commission (Conep), of the Brazilian Health Ministry. Data was collected after receiving consent from the victims or their persons responsible or companions, when less than 18 years of age or when the victim was unconscious.

## Results

The VIVA Inquiry reported a total of 4,406 healthcare actions for victims of violence in urgent and emergency care hospitals of 24 state capitals and the Federal District, of Brazil. The highest prevalence of care actions was for people aged 20-39 (50.2%), and males (72.3%). However, there was an important percentage of children and adolescents who were victims of violence, jointly representing 29.5% of the cases. In this group the male gender is more affected, in both children and adolescents.

Violence against people of dark skin (black or mixed-race) was higher (67.6%) than among those in the category white (28.7%) and indigenous/‘yellow’ (1.6%). Violence was more prevalent among those with between 0 and 8 years of schooling (53.0%). This percentage was 31.1% among those with 9 or more years of schooling. A large proportion (92.1%) of the victims were not disabled, nor were characterized as a vulnerable population (92.3%). Only 7.7% of the individuals had a health insurance plan (Table 1).

Of all victims, 32.7% self-reported ingestion of alcoholic beverage in the 6 hours prior to the event – this percentage was 36.1% among males and 18.8% among females (Table 1). Violence against those that did not consume an alcoholic beverage remained practically stable over the whole week; but for those who self-reported having consumed an alcoholic beverage prior to the aggression the events increased at the weekends (Figure 1).

Almost the totality of the victims (94.8%) live in an urban area, 3.5% in the countryside, 0.5% on the perimeter of cities, with 1.2% ‘unknown’ (Table 1).

The principal type of aggression was physical (87.8%), followed by negligence/abandonment (8.1%), then sexual (1.5%) and psychological (0.7%) aggression. These characteristics were similar for both sexes, although the proportion of sexual violence was greater in females than males. The principal means of aggression were: bodily force/hitting 45.9%; perforating or cutting object 18.3%; firearms 13.7%, and blunt instrument 10.3% (Table 2).

As to the nature of the injury, the most frequent characteristics were: cuts or lacerations (46.3%), bruises (14.0%), traumatic injuries (11.6%). (Table 2).

The probable perpetrator of the violence was unknown in 40.7% of the cases, followed by identification of: a family member (29.9%), com-

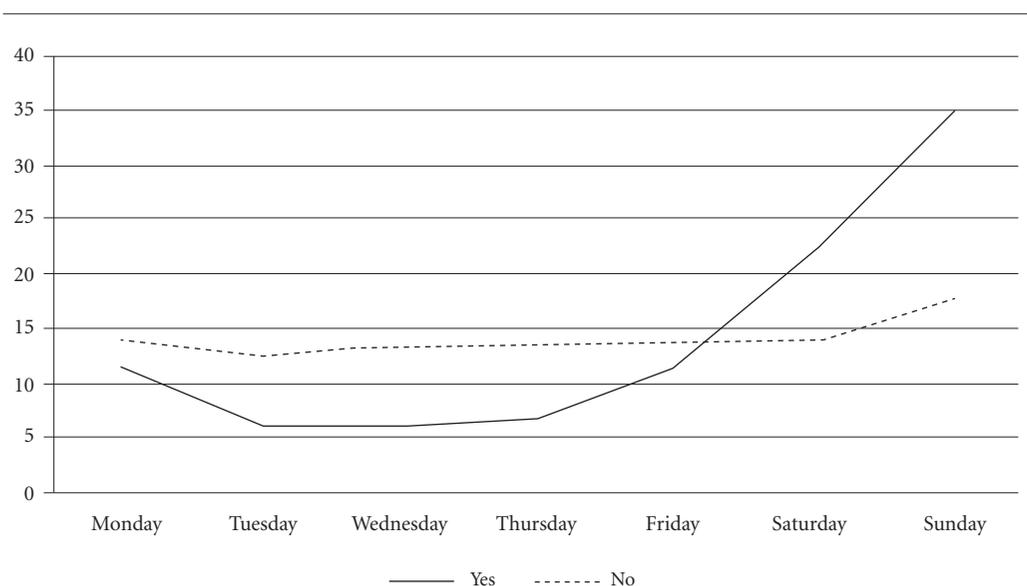
**Table 1.** Urgent and emergency care provided for incidents of violence, by victim characteristics and gender – selected services in 24 Brazilian state capitals and the Federal District, September-October, 2014.

Characteristics	Male		Female		Total		P <sup>##</sup>
	(n = 3.187)		(n = 1.219)		(n = 4.406)		
	n	% <sup>#</sup>	n	% <sup>#</sup>	n	% <sup>#</sup>	
Sociodemographic data							
Age group (years)							0.0008
0-9	255	10.3	149	15.4	404	11.8	
10-19	580	17.9	235	17.3	815	17.7	
20-39	1,716	51.5	605	47.1	2,321	50.2	
40-59	510	16.5	184	16.9	694	16.6	
60 and over	78	2.6	41	3.0	119	2.8	
Not known	48	1.2	5	0.3	53	0.9	
Race/skin color							0.0000
White	617	25.6	331	35.8	948	28.7	
Black/mixed race	2,459	70.5	848	61.1	3,307	67.6	
Indigenous/‘yellow’	68	1.8	29	1.2	97	1.6	
Not known	43	2.1	11	1.9	54	2.1	
Years of schooling							0.0152
0-8	1,779	54	645	50.7	2,424	53.0	
9 and more	889	29.4	404	35.0	1,293	31.1	
Not known	519	16.6	170	14.3	689	15.9	
Zone of residence							0.0377
Urban	2,863	94.1	1,147	96.5	4,010	94.8	
Rural	178	4.2	38	1.9	216	3.5	
Perimeter of convocation	42	0.6	11	0.3	53	0.5	
Not known	104	1.1	23	1.3	127	1.2	
Has health plan							0.0122
Yes	189	7.5	75	7.9	264	7.7	
No	2,708	82.9	1,075	86.3	3,783	83.9	
Not known	290	9.6	69	5.8	359	8.4	
Has any type of disability <sup>a</sup>							0.0405
Yes	96	2.8	29	2.1	125	2.6	
No	2,906	91.2	1,141	94.1	4,047	92.1	
Not known	185	6.0	49	3.8	234	5.3	
Population in vulnerable situation <sup>b</sup>							0.0115
Yes	97	3.5	19	1.7	116	3.0	
No	2,973	91.2	1,165	94.9	4,138	92.3	
Not known	117	5.3	35	3.4	152	4.7	
Ingestion of alcohol beverage within 6 hours before the occurrence							0.0000
Yes	1,190	36.1	253	18.8	1,443	32.7	
No	1,722	54.5	890	75.2	2,612	59.2	
Not known	275	9.4	76	6.0	351	7.5	

Source: Health Ministry, Health Supervision Department, Violence and Accident Vigilance VIVA System, 2014 Inquiry.

<sup>\*</sup> Except Cuiabá (Mato Grosso State) and Florianópolis (Santa Catarina). <sup>\*\*</sup> For some variables the number of care events was different due to some lack of data (unknown/blank). <sup>#</sup> Percentage weighted for sample design. <sup>##</sup> Chi-square test (Rao-Scott). a) Includes physical, mental, visual, auditive and other disabilities/syndromes. b) Includes gypsies, quilombolas, villagers, homeless, sleeping in the streets, others.

prising partner or ex-partner 11.8%, father or mother 7.8% and other relations 10.3%; a friend or acquaintance 21.7%; and a public agent of the law 1.7%. Among females alone, an acquaintance



**Figure 1.** Distribution of care given in urgent and emergency care facilities due to violence in individuals who used alcohol, compared to those who did not, by days of the week – 24 Brazilian state capitals and Federal District; September–October 2014.

Source: Health Ministry, Health Supervision Department, Violence and Accident Vigilance (VIVA) System, 2014 Inquiry. \*Except Cuiabá (Mato Grosso State) and Florianópolis (Santa Catarina).

was in first place among perpetrators of the aggression (71.1%), led by a partner, with 26.9% (Table 2).

In general, the act of aggression took place most frequently in public streets (42.5%), and at home (33.0%). There was a difference between the sexes: for females the principal location was the home (53.0%), followed by the street (29.0%); in males this was the other way around, with the higher percentage in the street (48.4%), followed by at home (24.2%) (Table 2).

To reach the hospital from the location of the event, 38.1% of victims used a private vehicle; the second category being 'on foot or by bus or minibus' (38.1%), followed by 'Samu/ambulance/rescue service' (28.3%). Among males the principal means of transport was Samu/ambulance/rescue (33.3%), while among females the means most used was on foot / bus or minibus (42.1%). We note that 24.0% of victims received care in other health services before care in the hospital. 65% of cases evolved toward discharge, 19.2% to hospitalization, and 3.2% were referred within the network to other services. A higher percentage of males than females were hospitalized – 23.2% vs. 10%.

The distribution of urgent and emergency healthcare actions due to violence over the days of the week shows the highest frequency at the weekend – Saturday and Sunday (23.2%), with little variation between the days of the week. The provision of care follows the same pattern as the events, but on Monday through Wednesday there was a higher number of treatments than violent events (Figure 2-A).

As to time of day: the highest incidence of violence was at night (between 4pm and 11:59pm), with a peak around 7pm (7.2%), and an abrupt reduction after 11pm, followed by the lowest percentage throughout the small hours (14.2%). Events of aggression had similar proportion in the morning (24.7%) and in the afternoon (27.4%). Care provided followed the pattern of events, with peaks at 8pm and 11pm (Figure 2-B).

## Discussion

The predominant profile of the victims of violence receiving care in the urgent and emergency services of the SUS was: race: black; aged 20-39;

**Table 2.** Urgent and emergency service care given in cases of violence, by event characteristics, possible perpetrator and care given, and gender – selected services in 24 Brazilian state capitals<sup>a</sup> and Federal District; Brazil, September–October 2014.

Characteristics	Male		Female		Total		P <sup>##</sup>
	(n = 3,187)		(n = 1,219)		(n = 4,406)		
	n	% <sup>#</sup>	n	% <sup>#</sup>	n	% <sup>#</sup>	
Data on the event							
Nature of the violent act							0,000
Physical	2,951	91.3	1,013	79.9	3,964	87.8	
Sexual	10	0.4	41	4.1	51	1.5	
Psychological	5	0.2	24	2.0	29	0.7	
Negligent/abandonment	139	6.4	102	11.9	241	8.1	
Other	9	0.1	3	0.2	12	0.2	
Not known	73	1.6	36	1.9	109	1.7	
Form of aggression							0.000
Bodily force/hitting	1,166	40.6	669	57.9	1,835	45.9	
Firearms	629	17.7	68	4.5	697	13.7	
Perforating or cutting object	804	21.4	183	11.3	987	18.3	
Blunt instrument	358	11.0	125	8.8	483	10.3	
Other <sup>a</sup>	201	8.2	158	16.7	359	10.8	
Not known	29	1.1	16	0.8	45	1.0	
Probable perpetrator							0.000
Father/mother	131	5.8	110	12.1	241	7.8	
Present or former partner	156	5.1	350	26.9	506	11.8	
Other family member	266	8.7	167	13.9	433	10.3	
Friend/acquaintance	789	23.3	241	18.2	1,030	21.7	
Public law agent	76	2.2	7	0.5	83	1.7	
Unknown	1,551	48.3	288	23.8	1,839	40.7	
Other	47	1.5	32	2.7	79	1.9	
Not known	171	5.1	24	1.9	195	4.1	
Nature of injury							0.000
No physical lesion	120	4.5	121	11.0	241	6.5	
Contusion	305	11.7	204	19.2	509	14.0	
Cut/laceration	1,816	51.6	496	34.2	2,312	46.3	
Torsion/contusion	148	5.6	102	9.3	250	6.7	
Fraction	202	6.4	83	6.7	285	6.5	
Trauma (dental, cranial/cephalic, multiple)	360	12.0	115	10.7	475	11.6	
Others <sup>b</sup>	162	5.4	79	7.1	241	5.9	
Not known	74	2.8	19	1.8	93	2.5	
Place of occurrence							0.000
Home	739	24.2	645	53.0	1,384	33.0	
School/recreation area	206	6.4	70	6.1	276	6.3	
Bar/similar	340	10.1	76	6.0	416	8.9	
Street	1,532	48.4	357	29.0	1,889	42.5	
Other <sup>c</sup>	274	8.0	56	5.2	330	7.1	
Not known	96	2.9	15	0.7	111	2.2	
Care given							0.000
Travel to the hospital							
On foot/bus/minibus	406	16.9	255	26.2	661	19.7	
Private vehicle	1,185	36.2	523	42.1	1,708	38.1	
Samu/ambulance/rescue	1,198	33.3	286	17.1	1,484	28.3	
Others <sup>d</sup>	332	11.3	129	12.8	461	11.8	
Not known	66	2.2	26	1.8	92	2.1	

it continues

Table 2. continuation

Characteristics	Male		Female		Total		P <sup>##</sup>
	(n = 3,187)		(n = 1,219)		(n = 4,406)		
	n	% <sup>#</sup>	n	% <sup>#</sup>	n	% <sup>#</sup>	
Prior care in other service							0.463
Yes	763	23.7	276	24.6	1,039	24.0	
No	2,322	72.9	914	72.9	3,236	72.9	
Not known	102	3.4	29	2.5	131	3.1	
Development							0.000
Discharge	1,841	60.0	869	76.4	2,710	62.0	
Hospitalization	767	23.2	148	10.0	915	19.2	
Referrals <sup>e</sup>	377	10.3	147	9.1	524	9.9	
Others <sup>f</sup>	101	3.7	22	2.1	123	3.2	
Not known	101	2.8	33	2.4	134	2.7	

Source: Health Ministry, Health Supervision Department, Violence and Accident Vigilance VIVA System, 2014 Inquiry.

<sup>^</sup> Except Cuiabá (Mato Grosso State) and Florianópolis (Santa Catarina). <sup>^^</sup> For some variables the number of care events was different due to some lack of data (unknown/blank). <sup>#</sup> Percentage weighted for sample design. <sup>##</sup> Chi-square test (Rao-Scott).

a) Includes poisoning, threat, hot substance/object and others. b) Includes amputation, intoxication, burning and others.

c) Includes collective habitation, retail/service location, industry/construction and others. d) Includes police vehicle and others.

e) Referral to outpatient and other services. f) Includes evasion, flight and death.

with low level of schooling; and dependent on the SUS. The fact that males were the higher proportion of victims of aggression can perhaps be associated with the sociocultural patterns crystalized in the notion of gender, which expose them to situations or behaviors with a risk for violence<sup>9</sup>, as well as the greater exposure to firearms.

Understanding of the violence against Brazilian people should make it possible to assist the work of managers of public policies, public safety professionals, health professionals, government and elected officials, and researchers in Brazil and other countries in combating violence<sup>12</sup>.

Violence causes tragic consequences for individuals, communities and society, such as illness, consequent complications and death. Homicides – the most perverse and extreme face of violence, are the principal cause of death in people aged 15-29, especially including young male black people, and residents of the peripheries of major cities, and metropolitan centers of the great cities<sup>12</sup>.

In terms of race/color, the black population is the greatest victim of socioeconomic inequities<sup>13</sup>, which relate to the social inequalities, prejudice and discrimination present in society<sup>14</sup>. Of all deaths due to aggression in 2014, 69% were of black individuals<sup>15</sup>.

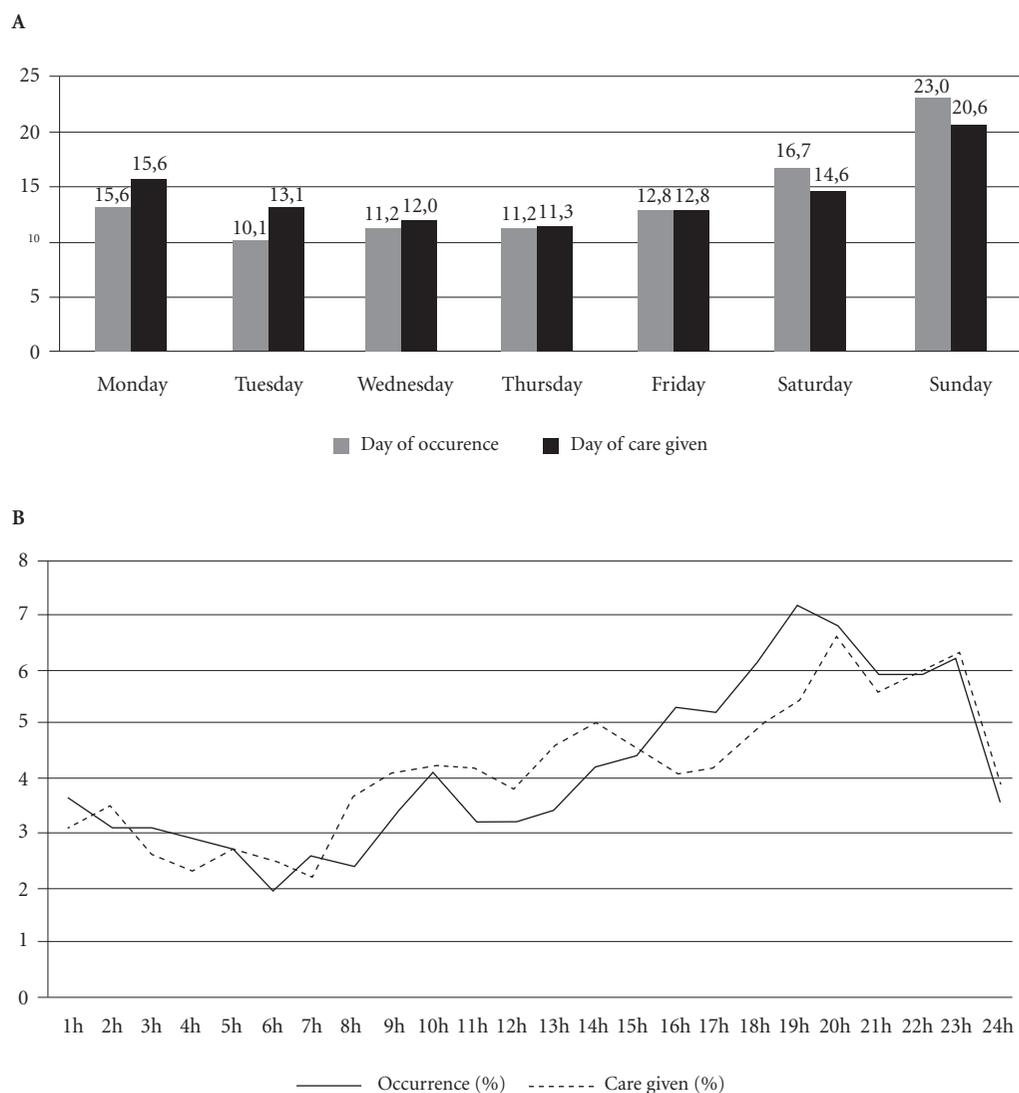
Although there is this predominance in the profile of young and black people, violence takes

all manner of forms, and affects all genders, races, economic classes and age groups. It is a world problem, present in families of all classes, of different creeds and religions, the effects of which result from interaction from different levels of citizenship in a society<sup>16</sup>.

The high percentage of children and adolescents among victims of violence (29.5%) shows the vulnerability of these groups, who depend on basic care<sup>5,13</sup> for healthy development, and for this reason are more susceptible to suffer violation of their rights, directly or indirectly affecting their physical, mental, and emotional health<sup>9,17</sup>.

In Brazil, external causes are the largest factor in death and illness of adolescents, with a tendency to violence-related death increasing as from age 15<sup>18-21</sup>. There is an association between aggressive behaviors and victimization in adolescent and domestic violence<sup>22-24</sup>, physical violence being the most frequent type committed against children and adolescents<sup>25</sup>.

A study in a municipality of Greater São Paulo revealed a 20% prevalence of severe physical punishment of children and adolescents by one or both parents in a period of 12 months<sup>25</sup>. It was observed that 14.6% of adolescent school pupils in the São Gonçalo region of Rio de Janeiro suffered physical violence perpetrated by their parents at least once in their life<sup>23</sup>. Approximately 71% of adolescents in a selected group of public



**Figure 2.** Distribution of urgent and emergency healthcare given for events of violence, by (A) day and (B) time of occurrence and care given – selected services in 24 Brazilian state capitals\* and Federal District, September–October 2014.

Source: Health Ministry, Health Supervision Department, Violence and Accident Vigilance VIVA System, 2014 Inquiry. \*Except Cuiabá (Mata Grosso State) and Florianópolis (Santa Catarina).

schools in Porto Alegre (State of Rio Grande do Sul) reported having been victims of physical violence in the community – the most frequent situation reported was robberies<sup>26</sup>.

The National School Health Survey (PeNSE) for 2015, carried out among adolescents in the 9<sup>th</sup> grade of basic schooling, showed 23.4% of

the interviewees answering that they had been involved in a fight in the last 12 months, the percentage being higher among boys (30.3%) than girls (16.8%). Further, 14.8% said that they had missed school for at least one day in the prior 30 days due to not feeling safe on the way from home to school. Use of firearms was reported by 5.7%

of pupils, more frequently among boys (7.9%) than girls (3.7%). Of the total, 14.5% mentioned violence inflicted by an adult in the family<sup>27</sup>.

Violent actions, even when they do not leave marks, cause mental suffering and deep trauma that can accompany an individual for his/her whole life<sup>16,28</sup>. Physical violence applied to a child as a disciplinary measure is described, in various studies, as a mechanism of violation of the child's rights<sup>16,18</sup>. As well as Brazil's Children's & Adolescents' Law, built on the basis of the country's 1998 Constitution, which expresses the inviolable right to physical, psychic and moral safety, covering identity, autonomy, values, ideas and opinion<sup>28</sup>, recently the *Menino Bernardo* ('Boy Bernardo') law was passed, which seeks to change the culture of educational practices that violate the rights of children as citizens, based on prohibition of use of physical punishments or cruel or degrading treatments in the education of children and adolescents<sup>29</sup>.

Men and boys, in the masculine universe of symbols and power, are the most exposed and susceptible to other types of violence such as physical violence, which in this study show a dominant percentage of 91.3%. The principal means of aggression used, in this group – bodily force/hitting, perforating or cutting objects, and firearms – reinforce this thesis. It is noted that the male sex is more exposed to firearms than the female, which explains the high levels of death of young people – currently with the profile of an epidemic – which together with traffic accidents comprise the most frequent cause of deaths in the young population. According to Souza (2005), the higher occurrence of aggression between men is related to one of the great symbols of masculinity today: firearms as materialization of power, and submission of the Other to one's desires and interests, under the power of life and death<sup>30</sup>. Thus, dealing with violence against men involves action on a broader front, with a focus on the macro-determinant social factors, control of and access to firearms being an important component.

Important findings on violence against women show a dramatic situation, corroborated by various studies, showing that the most affected are black females, of a low level of schooling (less than 9 years of study), who are dependent on the SUS. They are victims, principally, of physical and sexual aggression, mostly practiced by family members/acquaintances/friends and especially by their partner in their own homes.

In these cases, what is seen is gender violence, the nature and patterns of which are different

from other forms, leaving women more vulnerable to physical aggressions (principally traumas and sexual aggression), and family and social aggression, resulting in permanent stress and lack of hope of breaking out of the condition of victim<sup>31</sup>.

The study shows inequality in the relationships of gender imposed transculturally, to which women are subject<sup>28,32</sup>. The home has a significant importance in the high level of violence, because it is the *locus* where the relationships of domination and power are a process which contribute to the perpetuation of repetition of violence. The *Maria da Penha* law has been an important legal advance for women in relation to this problem of violence which is, in most cases, silenced.

Further, a wider approach to confronting violence against women calls for a strengthening by the health services of strategies for acceptance, humanization and integral care for women, articulated on a between-sectors basis with the partner institutions, within the protection network, so that cycles of violence can be interrupted, and lives saved. One highlight is the strategy currently in progress of collection of biological material in cases of sexual abuse, as part of the Public Policies for Women, which we believe should be stimulated.

The fact that 19.2% of total injuries with hospitalization were cuts or lacerations, fractures or multiple trauma shows the seriousness of the injuries and the need for integrated organization of the services for delivery of appropriate, qualified and humanized care to the victims. According to Health Ministry data, there were 52,095 hospital admissions in 2014 for aggression, with a cost of R\$ 78.9 million<sup>33</sup>. As well as the financial impact, there is an overburdening of the health services, mainly of specialized and surgical services, and this has the effect of reducing the quality of the network, principally in relation to elective procedures.

The high level of use of Samu/ambulance/rescue service for transport of victims to the hospital also shows the seriousness of the injuries and the importance, the coverage and the access of these services for pre-hospital care for victims.

In the analysis, it is seen that there is a high percentage of victims that have ingested alcohol in the 6 hours prior to the aggression (32.7%). In males this was 36.1%, almost twice the percentage in females (18.8%). The percentages of violence with victims that had consumed alcohol, which was higher at the weekends, indicate that this is an important risk factor for violent events. This same factor also refers to the aggress-

sor, as amply described in the literature<sup>10,34,30,35</sup>. The high number of occurrences of aggression in bars also suggests the relation between alcohol and violence.

The association between consumption of alcohol and domestic violence has been observed in surveys carried out in various countries<sup>36</sup>. A study involving some cities of Latin America, including Salvador and Rio de Janeiro, shows that 68% of those that committed aggressions consumed alcohol before attacking their female partners<sup>37</sup>. Alcohol functions as a de-inhibitor, facilitating the occurrence of aggression<sup>38,39</sup>. In relation to adolescents, the PeNSE (2015) survey showed that the consumption of alcoholic beverages by 9<sup>th</sup>-grade pupils in the 30 days prior to the survey was 23.8%, with girls consuming more (25.1%) than boys (22.5%) – and 21.4% of pupils reported as having had at least one episode of drunkenness in their lives [IBGE, PeNSE, 2015]. The raw analysis of the 2012 PeNSE indicated that involvement of pupils in situations of physical violence in the 30 days prior to the study was associated with bullying, consumption of alcoholic beverages and use of unlawful drugs in both sexes<sup>19</sup>.

Alcohol is recognized as being a modifiable risk factor for violence, and for this reason it's important that dealing with this subject is increasingly included in actions for promotion of health, with emphasis on basic healthcare, in the Psychosocial Care Centers (the CAPs) and in specific programs that work with children and adolescents. It is also important to interfere in the social macro-determinants, involving public safety, control of traffic of firearms and their illegal possession, since violence by firearms persists.

In general, the most frequent location of aggression was in the street. The literature indicates public spaces (streets, bars, etc.) as the main scenario for the occurrence of violent events, principally in relation to aggressors and victims of the male sex<sup>30</sup>. Home is the space where the majority of violence against women, children, adolescents and elderly people takes place, because it is where they spend a greater part of their time and where the majority of aggressors live<sup>40</sup>. Any member of a family can, in certain circumstances, become victim or aggressor<sup>41</sup>.

International studies with enquiries also estimate high levels of participation in fights with physical aggression in the period of 12 months: 13.5% in the United States, 31.3% in Argentina, 31.1% Venezuela, 42% in Turkey, 40.7% in Chile<sup>18,42-45</sup>.

The profile of the victims of violence, of the event and of the healthcare given in the urgent and emergency health services reveals the need for integration of services and professionals for care to protect the victims of violence<sup>46</sup>. Considering the pattern of the occurrences of aggression, especially its increase at weekends (care for which continues over the period Monday through Wednesday), there is a greater need for re-dimensioning of urgency teams for care that is appropriate to the frequency and the profile of injuries.

For all these reasons, health assumes an important role in the leadership and construction of public policies and the sectorial networks of healthcare, health promotion and prevention for increasing the effect of individual and collective actions<sup>3,47,48</sup>. The Supervision (Vigilance) services, in which the Brazilian Case Registry Database System (*Sistema de Informação de Agravos de Notificação* – SINAN) is a highlight, should be strengthened, not only in the sense of producing and qualifying information, but of being capable of taking action and placing victims, at opportune times, in the healthcare and health protection networks, with intersector articulation. Actions such as these lead to potent tools for breaking the silence on the invisibility of violence<sup>49</sup>.

Among the limits of the study is the inclusion only of public urgent and emergency healthcare services, in view of the role that they assume within the pre-hospital and hospital urgency networks, although these hospitals concentrate the great majority of the care given for external causes, able to be a proxy for the universe. The centrality of healthcare for urgent cases also means a limitation, because it finishes up identifying only the most serious cases, thus painting an only partial picture of the epidemiological situation of the problem in the population, impeding a deeper analysis of the network as a whole, which would consider the assessment of actions of promotion and prevention.

## Conclusion

The study showed that violence assumes different characteristics in relation to gender and stage of life: for women, domestic violence predominates; for young men, urban violence, with aggressions, and a high percentage of use of firearms, predominates. The group most affected after young people as a whole was children and adolescents.

Physical violence was the most prevalent, with a high percentage of cuts and lacerations,

contusions and traumatic injuries, with a significant percentage of the care given evolving into hospitalization, showing the seriousness of the injuries. The Samu had an important role in transporting the victim to the hospital, but in the great majority of cases, in both sexes, transport was in private vehicles.

The percentage of violence among victims that had consumed alcohol, and its higher level at the weekend, reemphasizes that this is an important risk factor for violent events. These events, and the associated urgent and emergency health-care, were more frequent at the weekend, and at night, with a peak around 7pm, and a rapid fall after 11pm, with a lower percentage continuing during the small hours until the morning.

Thus, considering that the knowledge of the profile of care is an important tool in organization of the healthcare services, both in supervision and in care and prevention, we believe that the results presented here can make a contribution to public health, principally through qualification, dissemination and use of information for action. Further, the study emphasizes the need to strengthen intersector action with a view to expanding the network of healthcare and protection, especially with a focus on the more vulnerable groups. Finally, we highlight the intersector and complex character of the subject, which places health once again in the strategic position, in the articulation of forces for dealing with the problem.

### **Collaborators**

RMCV Souto was responsible for the conception and scope of the study, article write-up and approval of the final version for publication. LA Barufaldi was responsible for data extraction and participated in the analysis and interpretation of data, critical revision of the article and approval of the final version for publication. LS Nico made a substantial contribution to write-up, analysis and approval of the final version of the article. MG Freitas participated in the critical revision of the article and approval of the final version for publication.

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