

# Behavior of pediatric medical residents during a clinical simulation of a violent mother in a pediatric emergency

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## ABSTRACT

**Introduction.** Physicians are frequently victims of both physical and verbal violence. Specific training is required for staff so that they are able to deal with these situations.

**Objective.** To assess the clinical management and behavior of pediatric medical residents towards a violent mother during a pediatric emergency simulation.

**Materials and methods.** Observational, retrospective and descriptive study. Video recordings of a pediatric emergency simulation with the participation of medical residents working at a public children's hospital between March and July 2014 were reviewed. The case mother was verbally violent and interfered with participants, both physically and orally. During debriefing, discussions were recorded.

**Results.** Sixty-eight pediatric medical residents divided into 15 groups were observed. Twelve handled the episode appropriately; only two groups asked the security staff to remove the mother from the scene (recommended behavior). Other two groups managed to remove the mother from the clinical scenario but in the midst of struggles. Out of all physicians, 54.4% (n = 37) came into physical contact with the mother, and 95.6% had not previously received guidelines on how to manage violent situations.

**Conclusions.** Only a few groups managed to remove the violent mother from the scene. Unconsented physical contact with the mother was one of the most commonly observed behaviors. A lack of institutional guidelines on how to handle violent situations was detected.  
**Key words:** patient simulation, violence, workplace violence.

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## INTRODUCTION

The medical and nursing professions have been increasingly associated with a high rate of both physical and verbal assaults and violence, and indicators show, in some cases, four times more violence than in other professions.<sup>1-5</sup> The World Health Organization (WHO) and the International Labour Organization

(ILO) agree that 25% of workplace violence occurs in emergency departments and health care centers.<sup>6,7</sup>

In Argentina, the Argentine Society of Pediatrics (*Sociedad Argentina de Pediatría*, SAP) and UNICEF have reported that 47% of 15 461 surveyed pediatricians stated that they felt unsafe in their workplace.<sup>8</sup>

In spite of being common, violence against health care workers as a topic has rarely been implemented in training programs offered by most Argentine institutions, although there are multiple tools and guidelines available.<sup>9-11</sup>

Simulation-based case studies in medical education have been more frequently used because they improve manual skills and facilitate the consolidation of the information necessary to take action.<sup>12-15</sup> In turn, this methodology allows to act as a human behavior observation laboratory.

The main objective was to assess the clinical management and behavior of pediatric medical residents towards a violent mother during a pediatric emergency simulation. The secondary objective was to describe participants' opinions during debriefing.

## MATERIALS AND METHODS

Observational, retrospective and descriptive study. Video recordings of a simulation conducted by pediatric medical residents of the case of a child with supraventricular tachycardia over a 5-month period (March-July 2014) at the Roemmers simulation center (Simulación Médica Roemmers, SIMMER) were reviewed. All first-year interns through third-year

medical residents from a public children's hospital located in the Autonomous City of Buenos Aires (CABA) were invited to participate in the context of a joint training program. Participants were selected by convenience, based on the extent to which their presence was required at the hospital. This was also the criterion to establish how each group was made up.

Before taking part in this training session, each medical resident signed a consent form to allow recorded images to be used anonymously in future research studies and to have results disseminated. In addition, their identity was protected by implementing an information technology strategy.

All steps required by clinical simulation were performed, starting with a briefing (demonstration of the simulation model, patient setting, emergency room and all the tools and drugs necessary to solve the case). At no time during this period did medical residents receive any clues on the diagnosis of the simulated case, only that the patient's health was severely compromised. The simulation was done using the SIMNewborn model (Gaumard®) and the session ended with a debriefing, which is basically a space to share reflections on their experience in the simulation scenario led by a facilitator. It might include having groups watch the recorded simulation.

For the simulation scenario, the mother (a member of the simulation center staff) of a 38 day-old baby acted aggressively towards the physicians caring for the patient. During the simulation, she would verbally attack them and, in case of physical contact or an attempt to remove her from the setting, she would threaten to be physically violent.

The simulated mother interacted with participants both physically and orally, tried to obstruct their clinical performance and, at all times, took up a physical space where she interfered, to a great extent, with the normal course of the proposed medical activity.

While watching video recordings, parameters related to the type of contact between participating physicians and the mother were entered into a database. For this investigation, video recordings were used to observe physical contact with the different body segments between physicians and the mother, in addition to its intended purpose and duration. A struggle was defined as physical contact strong enough to overcome the resistance posed by the mother. Eye contact was defined as a look given by a physician

directly into the mother's eyes. Verbal contact was defined as a physician clearly talking to the mother (actress).

The following were considered adequate behaviors:

- Refrain from reacting to aggressions, insulting or becoming violent against the attacker.
- Always try to manage the situation through dialog.
- Maintain a safe distance from the attacker.
- Call security.

The following outcome measures were recorded: participants' gender, duration of clinical case, number of physicians who made eye, verbal or physical contact with the mother, number of struggles and number of minor physical contacts. Medical findings related to an adequate diagnosis and treatment and an appropriate management of the mother in this context were also recorded.

Finally, participants' opinions were put on record during debriefing. Information was collected on the history of violence suffered by participants and how similar situations in the context of a medical emergency were managed, in addition to data on the existence of institutional guidelines or specific training in relation to this issue or received during professional education.

Results were characterized using descriptive statistics.

## RESULTS

One simulation session was excluded because the actress playing the mother was absent; so 15 video recordings corresponding to 15 groups were reviewed, with the participation of 68 pediatric medical residents (94.1% were female). Half of medical interns were in their first year, and the other half were medical residents in their third year. Nine groups were made up of five pediatric medical residents, four groups included four medical residents, and only one group, three.

The clinical simulation scenario lasted 6 minutes in average (minimum: 3, maximum: 10). The clinical case was adequately diagnosed and treated, from a strict medical perspective, by 12/15 groups.

Four out of all groups managed to remove the mother from the clinical scenario: two called security, and the other two, by means of physical force exerted by the health team members.

Table 1 describes how participating physicians conducted eye, verbal and physical contact with the mother. In total, contact with the mother occurred a median of 5 times (minimum: 2,

maximum: 10), and each group struggled with the mother twice (minimum: 0, maximum: 4).

During debriefing, 96% (n: 65) of physicians indicated that they had not received previous guidelines on how to manage a violent situation in the setting of a medical emergency. None of the participating physicians had experienced a similar situation to that of the simulation scenario or explicitly violent episodes. Some medical residents referred that they had sometimes felt verbally intimidated.

Participating physicians spontaneously underscored the fact that there were no institutional guidelines available on this issue and that they had not received training on violence against health care workers during their professional education.

## DISCUSSION

In this study conducted in the context of a training program, more than half of physicians came into physical contact with the mother without her consent. Should such behavior occur in real life, it may lead to an escalation of physical violence against physicians and nurses.

Only 2/15 groups decided to call security during the simulation with the aggressive mother. Pediatric medical residents assessed in this study admitted that no attention is paid to violence against health care workers, neither at an institutional level nor during their residency training program.

The recommended behavior during verbal and physical violence includes refraining from reacting to aggressions, calling security and establishing a safe distance from the attacker, but it was followed by very few participants in this study.<sup>11</sup>

Measures and actions taken by health care workers may positively or negatively impact on how a situation with a violent patient or family member is handled. Although it may not be 100% effective, it has been contemplated that keeping a distance from the violent person, seeking help

in a timely manner and maintaining a composed communication may help to reduce the likelihood of being assaulted.<sup>3</sup> These items are not routinely and formally included in the curricular contents of residency training programs.

As per international reports, medicine has been described as the profession with the highest rates of violence and assaults. Certain indicators have suggested that medicine has the highest rate of violence: 8 out of every 10 000 (2 out of every 10 000 for workplace violence in general).<sup>1,3</sup>

In Argentina, violent episodes are becoming increasingly more common. Some reports have described an unending insecurity and violence at health care centers located in the city of Buenos Aires, and that one physician, technician or health care provider working in hospitals from the city of Buenos Aires suffers physical or verbal aggressions or a robbery, in average, every 48 hours.<sup>16,17</sup>

Violence against physicians and nurses is not exclusive of Argentina. In Great Britain, a national survey conducted in 2012 revealed that 15% of nurses had suffered physical violence from patients or their family, and that 30% of hospital workers had been threatened or insulted.<sup>2</sup> In the USA, an anonymous survey was administered to 11 000 health care workers and completed by 50%; out of them, 39% stated having suffered some sort of physical violence in the past year.<sup>3</sup>

In a recent study conducted in Iran with a random sample of more than 5000 health care workers, it was observed that 74% had suffered some level of psychological aggression in the past year.<sup>18</sup> In Egypt, a study that included nurses from the perinatology department from eight hospitals observed that 86% of them had suffered one violent episode in the past six months, and that one third of these assaults had been physical.<sup>5</sup> In Spain, a study conducted in 2009 showed that 11% of health care workers had been the victim of a physical assault, and that 64% had been threatened, intimidated or insulted.<sup>19</sup>

TABLE 1. Description of contact with the violent mother

Type of contact	In the total series of groups (68 pediatric medical residents)		Median	Minimum	Maximum
Number of physicians who made eye contact with the mother	38	55.9%	2	2	5
Number of physicians who made verbal contact with the mother	36	52.9%	2	1	5
Number of physicians who touched the mother (physical contact)	37	54.4%	2	1	5

Anthropologist Edward T. Hall described, more than 40 years ago, the measurable distances between people as they interact.<sup>20</sup> Naturally, interpersonal distances depend on the type of culture and persons, and what may be a comfortable distance for certain people, may be considered a clear threat by others. Body distance indicates a personal safety threshold necessary for people to feel good in their comfort zone.<sup>21</sup> Keeping such body distance is critical so as not to confuse roles and respect other people's intimacy and thus avoid discomfort and/or a feeling of threat. Disrespecting such personal space may result in violent reactions, which, if combined with the emotional status of the attacked person, may become very dangerous.<sup>2</sup>

Different cultures have different interpersonal space standards. For example, Latinos have relatively smaller distances and tend to feel more comfortable when closer to other people. Nordic cultures are quite the opposite. Noting such cultural differences helps to improve interpersonal understanding and eliminate any discomfort that people may feel. In addition, personal distances also depend on social context, gender and individual preferences.<sup>20</sup>

Another components described as facilitators of violent reactions are the level of stress and the lack of support from the health team.<sup>22</sup>

Different health care centers have developed programs to prevent these situations and created systems to classify health care units by the risk of suffering violence.<sup>23,24</sup>

A recent study conducted in Norway using focus groups detected four priorities related to the health system to help managing an aggression: 1. minimize the risk of working alone; 2. be ready (take precautions when noting a warning sign and be trained); 3. reduce the gap between the patient's expectations and what the system may offer; and 4. be supported by authorities (especially with follow-up of the aggression).<sup>25</sup>

We would like to stress the importance of reflecting on this situation because, on the one side, workers—especially nurses—tend to assume violence as a natural feature of their duties and fail to report most aggressions.<sup>26</sup> On the other side, security is increased or access to critical sectors is restricted without considering the role of personal interaction as a source of aggression.

Although first-year medical interns may not have had a chance to get trained because of the date they are usually admitted to the residency program and the date of the study period, we

can assure that they were exposed to the health system for at least nine months.

Preliminary results of this study have been shared with the Department of Teaching and Research of our hospital, whose members showed their gratitude for such valuable contribution, which in the future may be used as the foundation to improve training of pediatric medical residents.

## CONCLUSIONS

Only a few groups managed to remove the violent mother from the clinical scenario, in spite of having resolved the clinical case favorably. Unconsented physical contact with the mother was the most common behavior observed during the proposed simulation. A lack of institutional guidelines and staff training on how to manage violent situations was detected. More studies are required to complete the interpretation of these observations. ■

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