ISSN: 2318-8413 DOI: 10.18554/refacs.v8i1.4447

REFACS

Realistic simulation of incident handling with multiple victims by the nursing residency program

Simulação realística de atendimento a incidentes com múltiplas vítimas pelo programa de residência em enfermagem

Simulación realista de atención a incidentes con múltiples víctimas por el programa de residencia de enfermería

Received: 31/07/2019
Approved: 29/11/2019
Published: 17/02/2020

Luana Vilela Vilaça[1]
Bianca Vechia Penido[2]
Marielle Aparecida dos Santos Inocencio[3]
Cíntia Machado Dutra[4]
Lúcia Aparecida Ferreira[5]
Suzel Regina Ribeiro Chavaglia[6]

This is an experience report developed in the first half of 2018, which aims to discuss the experience in the organization and development of the realistic simulation of care for multiple victims. The Simple Triage And Rapid Treatment method was used, so that professionals had the opportunity to highlight their limitations. Forty professionals participated, 15 from the fire brigade team, 20 professionals from the Mobile Emergency Care Service and 5 students from the uniprofessional nursing residency in urgency, emergency and trauma. Aspects ranging from the call, classification and mode of service were addressed. The learning process through simulated situations proved to be useful and effective to assess performance and skills, in addition to enabling and encouraging mutual cooperation between teams.
Descriptors: Emergency medical services; Mass casualty incidentes; Simulation; Rescue personnel; Education, training.

Este é um relato de experiência desenvolvido no primeiro semestre de 2018, que tem como objetivo discorrer sobre a vivência na organização e desenvolvimento da simulação realística de atendimento a múltiplas vítimas. Utilizou-se o método *Simple Triage And Rapid Treatment*, de modo que os profissionais tiveram a oportunidade de evidenciar suas limitações. Participaram 40 profissionais, sendo 15 da equipe do corpo de bombeiros, 20 profissionais do Serviço de Atendimento Móvel de Urgência e 5 alunos da residência uniprofissional em enfermagem em urgência, emergência e trauma. Foram abordados aspectos que vão desde a chamada, classificação até modo de atendimento. O processo de aprendizagem por meio de situações simuladas se mostrou útil e efetivo para avaliar desempenhos e habilidades, além de viabilizar e incentivar a cooperação mútua entre as equipes.
Descritores: Serviços médicos de emergência**;** Incidentes com feridos em massa; Simulação; Equipe de busca e resgate; Educação continuada.

Este es un relato de experiencia desarrollado en la primera mitad de 2018, cuyo objetivo es discurrir la experiencia en la organización y el desarrollo de la simulación realista de la atención para múltiples víctimas. Se utilizó el método *Simple Triage And Rapid Treatment*, de modo que los profesionales tuvieron la oportunidad de evidenciar sus limitaciones. Participaron 40 profesionales, siendo 15 del equipo de bomberos, 20 profesionales del Servicio de Atención Móvil de Urgencia y 5 estudiantes de la residencia uniprofesional de enfermería en urgencias, emergencias y traumas. Se abordaron aspectos que van desde la llamada, la clasificación hasta la manera de atender a las víctimas. El proceso de aprendizaje a través de situaciones simuladas demostró ser útil y efectivo para evaluar el desempeño y las habilidades, además de hacer viable e incentivar la cooperación mutua entre equipos.
Descriptores: Servicios médicos de Urgencia; Incidentes com víctimas em masa; Simulación; Personal de rescate; Educación continua.

1. Nurse. Specialist in Urgency, Emergency, Trauma and Intensive Care. Master's student in Health Care from the Federal University of Triângulo Mineiro(UFTM), Uberaba, MG, Brazil. ORCID: 0000-0002-0809-1256 E-mail: Lua_vilela@yahoo.com.br
2.Nurse. Specialist in urgency, emergency and trauma. Nurse at SOS Cardio Hospital in Florianópolis, SC, Brazil. ORCID: 0000-0001-5349-7063 E-mail: biancavecchia@hotmail.com
3.Nurse. Specialist in urgency, emergency and trauma. Hospital de Clínicas (HC) / UFTM, Uberaba, MG, Brazil. ORCID: 0000-0003-4767-5331 E-mail: marielleap@hotmail.com
4. Nurse. Specialist in Intensive Care. Specialist in Pedagogy. Master of Science. Tutor of the Uniprofessional Nursing Residency in Urgency and Emergency and Head of the Emergency Room of HC, Uberaba, MG, Brazil. ORCID: 0000-0001-5120-6111 E-mail: cintia.dutra@uftm.edu.br
5.Nurse. Specialist in Professional Education. Master in Psychiatric Nursing. PhD in Nursing. Associate Professor of the Postgraduate Program in Health Care at UFTM, Uberaba, MG, Brazil. ORCID 0000-0001-6469-5444 E-mail: lap2ferreira@yahoo.com.br
6. Nurse. Master, Doctor and Post Doctor in Nursing. Full Professor of the Postgraduate Program in Health Care and Coordinator of the Lato Senso Course of Urgency and Trauma at UFTM, Uberaba, MG, Brazil. ORCID: 0000-0001-0733-0185 E-mail: suzel.ribeiro@yahoo.com.br

INTRODUÇÃO

Trauma occupies a worrying position in morbidity and mortality rates worldwide, with traffic accidents being the main cause of death in the age group between 15 and 29 years old[1]. In Brazil this ranking is no different, car accidents are the leading cause of death in the population of young adults between 10 and 39 years old[2]. Many of these victims evolve with complications that can result in transient or permanent incapacity for work or activities of daily living. Government spending on pensions and health care for this population is also huge. Such conditions make trauma an important public health problem[2].

In trauma, pre-hospital care is definitive for a good prognosis, which may imply survival and permanent or temporary complications.[3.] In order for the victim to have a better chance of survival, care must be started on the spot, right after the event and continued in a hospital environment to ensure the preservation of the body's ability to produce energy and maintain the functions of vital organs. This period is known as the "Golden Hour" and is the time interval in which the pre-hospital team must initiate the appropriate interventions to improve oxygenation and control bleeding so that the patient does not progress to irreversible shock.[4].

The care becomes even more complex in incidents with mass injuries. In this situation, the number of individuals who require assistance, within a given period of time, exceeds the resources needed for their care and the service capacity of the team involved. The key principle of the prehospital response is to do the best for the greatest number of people with the resources available[5].

In order to organize and optimize care, it is recommended that the team use a primary screening tool for victims before proceeding with care. Triage is the process of systematically assessing and classifying each individual according to the severity of their injury and providing health care to treat conditions that confer an immediate risk of life and limb loss[6].

In accident situations with multiple victims, a method used worldwide to define the priority of care is the START (Simple Triage and Rapid Treatment) screening protocol. The algorithm involves a quick assessment of the individual's physiological condition, such as: ability to walk, breathing pattern, capillary perfusion and level of consciousness. Using these parameters, victims are divided into four care priorities, represented by the colors red, yellow, green and black - gray in Brazil, according to a review made by the Ministry of Health[7].

Even a technical level professional with experience and knowledge in the field can perform the primary classification. The method is considered fast and practical since the screening is ideally done in 30 seconds and does not require specialized medical equipment[7].

The “START” method follows the following algorithm: at first, the victims are guided and helped to walk towards the rescuers. Whoever is able to walk and obey the command is classified as green. Those who remain in place, should have the ventilatory pattern checked. If the victim is in respiratory arrest, one of the airway clearance maneuvers must be performed. In case it is not reversed, the victim is classified as black or gray[6].

At this first moment, cardiopulmonary resuscitation maneuvers are not performed until the other victims are screened and stabilized. Also for those who remained in the place, if they present respiratory movements, the frequency of respiratory incursions per minute (for 15 seconds) is observed, if greater than 30 incursions, it is classified as red. Then, the perfusion is evaluated through capillary filling by pressing the nail bed and observing the venous return. If it is longer than 2 seconds it is classified as red, if it is less, the next procedure is an assessment of the level of consciousness. If the victim does not obey simple commands, the classification is red; if the victim does, it is yellow[6].

After primary screening, medical (re) assessment and screening is carried out in order to stabilize the victims. Then evacuation screening is carried out, that is, referral for definitive treatment at the hospital or appropriate emergency care unit. For all of these, the red, yellow, green and gray decreasing risk priorities are followed[8].

The second article of the National Emergency Care Policy, Ordinance no. 1863, clarifies that the health service must allow the qualification of assistance and promote the continuous training of the health teams of the Unified Health System in Emergency Care[9].

Since permanent health education is a premise of the Ministry of Health and a critical and decisive point for the assistance of trauma victims, the challenge arises to educate and train professionals and enable them to act assertively and make decisions in critical situations. For this, the training by realistic simulation allows the development of critical thinking as well as the increase of the ability for decision making, since it replicates real aspects of the clinic in a learning environment, allowing to simulate various situations[10]. Such teaching strategy allows to integrate the team, besides reducing anxiety, lack of experience, fear of making mistakes and offers cognitive, psychomotor experiences and knowledge transmission of a possible reality[11].

In view of this scenario, a partnership was made between the Mobile Assistance Service (SAMU) and the Fire Department of the city of Uberaba with the residency in Urgency/Trauma Nursing at the Federal University of Triângulo Mineiro (UFTM) to perform a simulation realistic approach to care for multiple victims.

Theoretical-practical training aimed to facilitate and encourage mutual cooperation between teams and enable residents to work in this type of service. This article aims to discuss the experience in the organization and development of realistic simulation of care for multiple victims.

METHOD

This is a descriptive study written in the form of an experience report, which describes a realistic simulation of attending to incidents with mass injuries by pre-hospital care teams.

The training took place in two periods. In the morning there was a theoretical presentation to support the practice regarding the handling of incidents with mass injuries using the START method. The explanation was given by the technical responsible for training at SAMU. In the second moment, in the afternoon, the practical part of the training took place through realistic simulation.

To simulate the scene, two vehicles were placed in an uninhabited area. Rojons and smoke devices simulated the crash bang and the explosion of the fuel tank of one of the cars on the scene. Four live mannequins participated, which were prepared with different types of bodily injuries, artificially produced using paints and a low-fidelity simulation mannequin.

The situation of each victim on the scene and their respective clinical picture was designed by the coordination of the Mobile Emergency Care Service (SAMU) in conjunction with nursing residents. The simulation took place in the following sequence: after the organization of the physical structure, the victims were positioned on the scene and each one of them received specific diagnoses: victim 1: closed fracture in the right upper limb; victim 2: fracture of the pelvis and femur with grade II hypovolemic shock; victim 3: severe traumatic brain injury; victim 4: chest trauma with pneumothorax and victim 5: low-fidelity simulation mannequin ejected from the car during cardiorespiratory arrest.

The SAMU's advanced support ambulance is equipped with a multi-victim care kit using the START protocol, such as: materials and devices for isolating the scene, the operation leader's helmet, victim identification plates - red, yellow, green and black and canvas with the color code for mounting the service area on the floor. The fire brigade rescue car/unit also had all the necessary equipment and instruments to guarantee the safety of the environment, neutralization and restriction of vehicles.

RESULTS

The experience took place in the afternoon from 1 pm to 6 pm on March 16, 2018. Forty professionals participated, being; 15 from the fire brigade team, 20 professionals from the

Mobile Emergency Care Service (SAMU) and 5 students from the uniprofessional nursing residency in urgency, emergency and trauma at UFTM.

The service started after a call on line 192 (SAMU call center) reporting the automobile accident. The regulator, through radio operation, activated the response team, which is made of: 1 advanced support unit, 1 basic support unit and 1 fire brigade car.

Some members of the SAMU team, firefighters and nursing residents, Urgency and Trauma modality provided assistance to victims following the START protocol, having SAMU's assistant physician as the leader. The other members would watch the simulation taking notes for further discussion.

The simulation started, the fire brigade team evaluated the scene prioritizing the safety of the place, neutralization and tightening of the vehicle. At the same time, the SAMU's attending physician assessed the victims to choose whether to use the quick withdrawal technique or not.

After ensuring a safe environment, the other team members such as nurses, nursing technicians and rescuers were allowed to act on the scene. Priority was given to the performance of newly hired professionals, while the rest of the team observed and took notes. The simulation was coordinated by the instructor responsible for training the SAMU team and the captain of the military firefighters.

The victims were classified according to the risk of injury and used the START protocol correctly. Those who obeyed the command and walked were instructed and helped to go to the green area. Only 1 patient fit this priority. Those who remained on the scene were reevaluated, immobilized and sent to the yellow (2 victims) or red (1 victim) area for emergency interventions and procedures to be carried out according to the primary assessment mnemonic (airway and cervical collar), B (ventilation), C (circulation), D (neurological status disorders) and E (hypothermia exposure and control) which guides trauma care. Finally, 1 of the victims was classified with black priority, was in cardiorespiratory arrest, with no return of respiratory movements after an airway clearance maneuver. Cardiopulmonary resuscitation maneuvers were performed after stabilization of the other victims.

To organize the service wing, canvas with the color code for risk classification were placed on the floor. The green wing was assisted by 1 nursing technician under the nurse's supervision. The yellow and red areas were arranged next to each other with the direct assistance of the nurse and the doctor as well as other two rescuing drivers. Patients were evaluated by the physician according to the risk priority. If any victim evolved with a worsening of the condition, it would be reassessed and reclassified.

Through the radio communicator, the doctor on the scene passed on the clinical status of the victims to the regulator, who could then refer them to the emergency services, emergency care unit or emergency room, according to their severity.

After the end of the simulation, the team went on to discuss it. The positive points of the team care judged as correct primary and secondary screening and assertive interventions in the primary evaluation were identified. The potential problems were difficulties in communication, coordination and leadership, organization and systematization of care in addition to reinforcement of the importance and role of each professional involved during care providence.

Still in the moment of debriefing, the intrinsic characteristics of the teams were discussed, such as difficulty/resistance to following orders and obeying superiors. It became evident after discussion and critical analysis that the team made up of civilians had major problems with communication and acceptance of functions and hierarchy.

DISCUSSION

The use of realistic simulation provided resolution of issues related to the care of victims and integration of the team by allowing the analysis of whether the implemented practices are close to the expected results or not.

A study conducted in Espirito Santo evaluated the performance of the prehospital team in attending to a bus accident involving 40 victims through the analysis of a checklist based on the Disaster Assistance Training Manual produced by the Brazilian Society for Integrated Trauma Care. As with the current study, assertive practices were found in the initial screening, which was correct in 92.5% of cases and also considered that more investments were needed to improve care, especially with regard to exposure and protection against hypothermia[4].

In a large simulation carried out in Italy with 112 victims, it was identified that 81% of the screenings were assertive. Secondary screening was a critical point at which several victims were approached repeatedly, revealing a failure in organization and communication. As for the interventions related to the trauma "ABCDE" mnemonic, item "C" related to circulation, hemorrhage control and volume replacement, was more affected, with only 57.4% of correct interventions[12]. The use of technological devices and applications made it possible to map the area, use footage and photographs to track and evaluate the team's response activity, but this investment was limited in our study.

Among the gains identified by the team in the context, there was an improvement in knowledge, development of communication skills, self-confidence, decreased anxiety and ability to understand the role of the other. Communication was the gain that assumed greater prominence after the simulation. Accordingly, this conformation was addressed in a simulation carried out in a hospital in São Paulo, capital, in which the participants considered as a positive aspect the possibility of discussing the performance and training of the team with the leaders, standardizing the referral of patients and correcting failures[13].

In the current study, at the time of debriefing, observations were made regarding difficulty / resistance in following orders and obeying superiors. The leadership profiles in emergency situations of prehospital care are discussed in an integrative review study when considering that the characteristics of an autocratic leader can be viable as the team is disorganized and afraid in its performance due to characteristics and gravity of the scenario itself[14]. For a liberal or democratic leadership profile, greater trust, harmony and preparation of the entire team is required to act in extreme environments that can put the victim and the entire work team at risk[14,15]. Thus, it is important that the leader knows the weaknesses and strengths of the team involved so that he can manage the service in an organized manner and with a lower level of stress[15].

Another point observed was satisfaction with the scenario involving an automobile accident, expressed by all leaders. The same was praised due to the high incidence of occurrences with such a reality in the municipality. Studies show high mortality rates in Brazil due to land transport accidents[3,16], adding up to more than 68 thousand deaths in 2017, according to the last DATASUS census[17]. Functional training associated with accurate assessment represents an important bridge between education and the response to such incidents.

Participants expressed that realistic simulation provided greater motivation for performance and learning than purely theoretical activities, in addition to the opportunity to improve practical skills and train communication and decision making at critical moments. Accordingly, studies show that realism benefits the learning of technical as well as non-technical skills, as it leads those involved to view the scenario as legitimate, causing the same psychological responses that they would have in practice[18].

There is no validated standard protocol for conducting simulations involving multiple victims[4,5,12]. However, there is a study[18] listing some essential components for success in realistic simulation activities, such as: feedback from experience and attitudes, repetitive practices and with progressive increase in the level of difficulty, clinical variations, controlled environment, individualized learning, clarity in the objectives and expected results and realism in simulation. The activity addressed was considered positive, as it met most of the listed requirements. For further improvement activity, another simulation to care for multiple victims

was scheduled by the authorities involved, with more participants and at a higher level of difficulty.

CONCLUSION

After the simulation, the professionals showed several problems in the organization of care, mainly related to communication and leadership. Difficulties were raised in interdisciplinary team work, with a focus on identifying limits and respecting the role of the other professional.

The study had limitations as it was conducted in a single moment and was unable to understand all the work teams. The analysis of the conducts and procedures performed was limited due to the non-application of an instrument or check list to standardize the evaluation of the service, which will be reviewed for the next activities.

However, even with such limitations, the learning process through simulated situations proved to be useful and effective to assess performance and skills, as it promoted practical learning in addition to reflections on behaviors and teamwork.

REFERENCES

1. Organização Pan Americana de Saúde. Traumas matam mais que as três grandes endemias: malária, tuberculose e AIDS [Internet]; 2017 [cited in 06 jul 2018]. Available at: https://www.paho.org/bra.../index.php?option=com_content&view=article&id=2989:traumas-matam-mais-que-as-tres-grandes-endemias-malaria-tuberculose-e-aids&Itemid=839

2. Ministério da Saúde (Brasil). Secretaria de Vigilância em Saúde, Departamento de Vigilância de Doenças e Agravos Não Transmissíveis e Promoção da Saúde. Saúde Brasil 2014: uma análise da situação de saúde e das causas externas no Brasil [Internet]. Brasília, DF: Ministério da Saúde; 2015 [cited in 06 jul 2018]. Available at: http://bvsms.saude.gov.br/bvs/publicacoes/saude_brasil_2014_analise_situacao.pdf

3. Valentim ALE, Paes GO, Carvalho SM. Utilizando serviços de emergência do Sistema Único de Saúde mediante simple triage and rapid treatment. Rev Enf Profissional [Internet]. 2014 [cited in 06 ago 2018];1(1):194-04. Available at: https://pt.slideshare.net/EduardoFranciele/revista-enfermagem-profissional

4. Simões RL, Duarte Neto C, Maciel GSB, Furtado TP, Paulo, DNS. Atendimento pré-hospitalar à múltiplas vítimas com trauma simulado. Rev Col Bras Cir. [Internet]. 2012 [cited in 28 mar 2018]; 39(3):230-7. Available at: http://www.scielo.br/pdf/rcbc/v39n3/a13v39n3.pdf.DOI: http://dx.doi.org/10.1590/S0100-69912012000300013

5. Campos AL. Atendimento de emergência realizado por profissionais de enfermagem, médico, bombeiros e demais profissionais treinadas a vítimas de acidentes e catástrofes. Rev Med Saúde [Internet]. 2015 [cited in 05 ago 2018]; 4(1):84-6. Available at: https://portalrevistas.ucb.br/index.php/rmsbr/article/view/5514

6. American College of Surgeons. PHTLS: Prehosp Trauma Life Support. 9thed. Chicago: National Association of Emergency Medical Technicians; 2018.

7. Oliveira FAG. Análise do Método START para triagem em incidentes com múltiplas vítimas: uma revisão sistemática [Internet]. [monografia]. Salvador: Universidade Federal da Bahia; 2013 [cited in 05 jul 2018]. 39 p. Available at: https://repositorio.ufba.br/ri/bitstream/ri/13977/1/Fernando%20Antonio%20Gouveia%20Oliveira.pdf

8. Intrieni ACU. O enfermeiro no APH e o método START: uma abordagem de autonomia e excelência. Rev UNILUS Ens Pesqu. [Internet]. 2017 [cited in 18 jul 2018]; 14(34):112-28. Available at: http://revista.lusiada.br/index.php/ruep/article/view/793

9. Ministério da Saúde (Brasil). Gabinete do Ministro. Portaria nº 1863, de 29 de setembro de 2003. Institui a Política Nacional de Atenção às Urgências [Internet]. Brasília, DF: Ministério da

Saúde; 2003 [cited in 20 ago 2018]. Available at: http://bvsms.saude.gov.br/bvs/saudelegis/gm/2003/prt1863_26_09_2003.html
10. Teixeira CRS, Kusumota L, Braga FTMM, Gaioso VP, Santos CBS, Silva VLS, et al. O uso de simulador no ensino de avaliação clínica em enfermagem. Texto Contexto Enferm. [Internet]. 2011 [cited in 01 ago 2018]; 20(Esp):187193. Available at: http://www.scielo.br/pdf/tce/v20nspe/v20nspea24.pdf. DOI: http://dx.doi.org/10.1590/S0104-07072011000500024
11. Negri EC, Mazzo A, Martins JCA, Pereira Junior GA; Almeida RGSA, Pederlosi CE. Simulação clínica com dramatização: ganhos percebidos por estudantes e profissionais de saúde. Rev Latinoam Enferm. [Internet]. 2017 [cited in 18 jul 2018]; 25:e2916. Available at: http://www.scielo.br/pdf/rlae/v25/pt_0104-1169-rlae-25-e2916.pdf. DOI: 10.1590/1518-8345.1807.2916
12. Ingrassia PL, Prato F, Geddo A, Colombo D, Tengattini M, Caliggaro S, et al. Evaluation of medical management during a mass casualty incident exercise: an objective assessment tool to enhance direct observation. J Emerg Med. [Internet]. 2010 [cited in 24 ago 2019]; 39(5):629-36. Available at: https://www.sciencedirect.com/science/article/abs/pii/S0736467909003072
13. Kaneko RM, Couto TB, Coelho MM, Taneno AK, Barduzzi NN, Barreto JK, et al. Simulação *in situ*, uma metodologia de treinamento multidisciplinar para identificar oportunidades de melhoria na segurança do paciente em uma unidade de alto risco. Rev Bras Educ Med. [Internet]. 2015 [cited in 11 ago 2018]; 39(2):286-93. Available at: http://www.scielo.br/pdf/rbem/v39n2/1981-5271-rbem-39-2-0286.pdf. DOI: http://dx.doi.org/10.1590/1981-52712015v39n2e00242014
14. Freire GV, Araújo ETH, Araújo EB. Liderança do enfermeiro nos serviços de urgência e emergência: revisão integrativa. Bras J Health Rev. [Internet]. 2019 [citado 25 ago 2019]; 2(2):2029-41. Available at: http://www.brjd.com.br/index.php/BJHR/article/view/1542
15. Bueno AA, Bernardes A. Percepção da equipe de enfermagem de um serviço de atendimento pré-hospitalar móvel sobre o gerenciamento de enfermagem. Texto & Contexto Enferm. [Internet]. 2010 [cited in 25 ago 2019]; 19(1):45-53. Available at: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-07072010000100005&lng=en. DOI: http://dx.doi.org/10.1590/S0104-07072010000100005
16. Diniz AS, Alvez GCQ, Amaral EMS, Ferreira LA, Dutra CM, Ohl RIB, et al. Vítimas de acidente motociclístico atendidas em hospital público de ensino. Rev Min Enferm. [Internet]. 2018 [cited in 24 ago 2019]; 22:e1075. Available at: http://www.reme.org.br/artigo/detalhes/1213. DOI: http://www.dx.doi.org/10.5935/1415-2762.20180005
17. Departamento de Informática do SUS (Brasil). DATASUS [Internet]. Brasília, DF: DATASUS; 2017 [cited in 24 ago 2019]. Available at: http://datasus.gov.br
18. Kaneko RMU, Lopes MHBM. Cenário em simulação realística em saúde: o que é relevante para a sua elaboração? Rev Esc Enferm USP. [Internet]. 2019 [citado 06 ago 2018]; 53:e03453. Available at: http://www.scielo.br/pdf/reeusp/v53/pt_1980-220X-reeusp-53-e03453.pdf. DOI: http://dx.doi.org/10.1590/s1980-220x2018015703453

CONTRIBUTIONS
Bianca Vechia Penido, **Luana Vilela Vilaça**, **Marielle Aparecida Santos** have contributed to the project conception, data collection and analysis, writing and critical review. **Cíntia Machado Dutra** e **Lúcia Aparecida Ferreira** have participated in the project conception and design. **Suzel Regina Ribeiro Chavaglia** has collaborated with writing and proofreading.

How to cite this article (Vancouver)
Vilaça LV, Penido BV, Santos MA, Dutra CM, Ferreira LA, Chavaglia SRR. Realistic simulation of incident handling with multiple victims by the nursing residency program. REFACS [Internet]. 2020 [cited in *insert day, month and year of access*]; 8(1):147-154. Available at: *insert day, month and year of access*. DOI: *insert DOI link*.

How to cite this article (ABNT)
VILAÇA, L. V.; PENIDO, B. V.; SANTOS, M. A.; DUTRA, C. M.; FERREIRA, L. A.; CHAVAGLIA, S. R. R. Realistic simulation of incident handling with multiple victims by the nursing residency program. **REFACS**, Uberaba, MG, v. 8, n. 1, p. 147-154, 2020. Available at: *insert day, month and year of access*. Accessed: *insert day, month and year of access*. DOI: *insert DOI link*.

How to cite this article (APA)
Vilaça, L.V., Penido, B.V., Santos, M.A., Dutra, C.M., Ferreira, L.A. & Chavaglia SRR. (2020). Realistic simulation of incident handling with multiple victims by the nursing residency program. *REFACS*, 8(1), 147-154. Retrieved on: *insert day, month and year of access* from *insert access link*. DOI: *insert DOI link*.