Editorial

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Disasters in Rio Grande do Sul: Performance of the UFRGS School of Nursing

Desastres no Rio Grande do Sul: registro da atuação da Escola de Enfermagem da UFRGS

Desastres en Rio Grande do Sul: actuación de la Escuela de Enfermería de la UFRGS

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Climate disasters are increasing worldwide and there is an urgent need to adopt measures focused on global health and well-being of those who live in our ecosystem; the alternative is the risk of experiencing new humanitarian catastrophes similar to, or more serious than, those we have already experienced.

Extreme temperatures, earthquakes, and the large volume of rainfall in short periods of time are increasingly frequent and they impact the health of the population in the short and long terms. In this adverse scenario, damage to city structures, commerce, and basic services, as well as jobs, essential activities and health care logistics,[1,2] added to problems caused by environmental damage,[3] urge us to devise strategies that may foresee the impacts caused by major disasters.

According to the World Health Organization (WHO), a disaster is any incident that can cause health-related damage, loss of lives while disrupting city structures and causing irreparable losses to the population. It requires immediate response from different agencies, including the healthcare system,[3] in terms of human resources, preparation, planning, and recovery.

Brazil has already gone through a number of meteorological (cyclones and extreme temperatures), geological (landslides), climatological (drought and forest fires), and hydrological (floods and inundations) natural disasters.[4] Providing healthcare in such unexpected situations is very challenging. Hardships involve situations such as setting up structures that meet demands, as well as the organization, management, and communication on the availability of human resources, improvising solutions to tackle emergencies, team expertise and previous experience in dealing with such situations.[5] Another crucial point is to maintain services in face of adversities, dealing with the feelings of anxiety, fear, sadness, difficulties maintaining emotional resilience, and burn-out among health professionals as days go by and post-disaster care continues.[6]

Nurses make up the largest group of healthcare providers and are regarded by other professionals as a reference when it comes to professionally managing and coordinating healthcare teams, as well as being regarded as those in charge of steering patient care. In the School of Nursing, management is a cross-cutting theme throughout the training, covering direct care, promotion, prevention, rehabilitation, and maintenance of care, as well as the management of resources and processes needed for care. From its very beginning, Nursing has been about organization, prevention, and care based on defined guidelines and standards, according to the principles of Florence Nightingale.[7]

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In dealing with natural disasters, the School of Nursing at the Federal University of Rio Grande do Sul (UFRGS) has shown that its professors and students play a leading role in different fields, based on technical skills and professional competence, as well as on collaborative, ethical, and innovative teamwork. In 2009, for the first time the H1N1 epidemic led us to tackle a situation in the midst of a crisis, when we expanded our work beyond the university walls.

On that occasion, considering its role in society, the UFRGS School of Nursing became a guiding agent for biosafety practices, when professors began to implement practices, including among family members and friends. Such practices included changing habits when introducing yourself to others, setting healthy distances during conversations, as well as guidance on how to change old cultural habits, such as sharing *chimarrão* (a local beverage) with everyone in a circle, convincing people to drink from their own recipient instead. In addition, it was one of the first times we identified that our health institutions didn't have the structure needed to deal with a sudden increase in demand, which ended up leading to the need of organizing and implementing field hospitals. At the time, screening facilities in front of Hospital de Clínicas de Porto Alegre (HCPA), an institution academically linked to UFRGS, provided support with material and human resources.

A new lesson was learned on a summer night in 2013, when no one could imagine that the joy of so many youngsters, gathering together to celebrate life, would bring so much pain and tears the next morning to the city of Santa Maria and the whole state of Rio Grande do Sul (RS). Human beings understand that life is a cycle: we are born, utter our first cry, take our first steps and speak our first words, have our first dates, different achievements, and, as we get older, it seems acceptable that it will eventually end, some a little earlier, others later, but after a life full of experiences, and not like those young people gathered at the now infamous Kiss nightclub. After the nightclub caught fire, many patients were sent to HCPA, where professors and Nurses from the UFRGS School of Nursing, along with multidisciplinary teams, worked together to provide extracorporeal membrane oxygenation (ECMO) to patients on a large scale. In this process, professors and students helped to plan and set up intensive care facilities.

When we had already forgotten the H1N1 epidemic, by the end of 2019 we heard the first news about a new emerging pathology, COVID-19, unprecedented in its transmission and devastation of populations, leading to the collapse of health systems. At that time, professors and Nurses once again went to the front line, setting up field hospitals, intensive care centers, drawing up patient positioning protocols and organizing support teams. And once again, there was synergy between nurses, faculty, and students at the UFRGS School of Nursing. Support to large-scale vaccination was another major contribution made by our faculty and students. COVID-19 has made us rethink our practices regarding response plans to crisis management and the lack of human and material resources. These two very long years of experience left us with physical and emotional scars.

Nurses played a key role in the COVID-19 pandemic, showing power of resilience, coordination, and workforce. They have made many actions in favor of human health feasible, mitigating losses that sometimes could be irreparable.

At the end of yet another crisis, we thought that due to past experiences we would be prepared for any situation, when in May 2024 another disaster struck Rio Grande do Sul (RS). The rapid and devastating advance of rivers and lakes on account of heavy rains raised doubts as to whether our state would be ready to deal with yet another public calamity situation.

Since July 2023, the State of Rio Grande do Sul has suffered more intensely with environmental complications related to cyclones and intense rainfall in a short period of time. Considering the characteristics and consequences of these events, it can be said that RS has gone through a period of very frequent disasters. However, in the morning of May 1, 2024, amid warnings and news of rapidly rising waters in rivers and lakes, with people calling for help and being rescued on rooftops, the professors of the UFRGS School of Nursing felt that the population of Rio Grande do Sul needed urgent care and health assistance.

The flood caused 161 deaths, affected over 2.3 million people in our state and also impacted the healthcare system. According to a survey led by the Oswaldo Cruz Foundation,[8] more than 3,000 health facilities were potentially affected in some way. It should be noted that hundreds of nurses, technicians, and nursing assistants were affected by the rains, which led to compromised care in many health institutions. Around 1,000 temporary shelters were opened to accommodate approximately 20,000 people in a situation of social and health vulnerability; however, many places had incipient structures and little organization. Most of the shelters were set up during the first 30 days of the climate disaster, with improvised healthcare structure, covering 75% of the affected sites.[9]

The UFRGS School of Nursing faculty had immediate empathy for the situation and offered to listen, welcome, and organize actions with the support of students and nurses, who promptly answered the call voluntarily amidst a situation of chaos. The first consultations entailed multiple initiatives, but there were mismatched guidelines amid the chaos, as we were

working without the structure of the health institutions that we are familiar with. It was a bleak scenario in these spaces, where rescued people and animals were wet, apathetic, hypothermic, and often came in with serious injuries.

Quickly, the faculty of the UFRGS School of Nursing organized so they could receive the population in the most orderly way possible, guided by principles of leadership and organization. Specialists in urgency and emergency, obstetrics, mental health, clinical, surgical, critical care, management, public health providers, and pediatricians came together with a common goal, and worked with other professionals so that each one, within their expertise, could assist that population coming from different parts of the surrounding cities, engaging a significant number of undergraduate and graduate students and colleagues from the health sector.

We had our responsibility as leaders, working in sports venues turned into shelters, organizing requests for the donation of clothes, blankets, mattresses, and food, always having in mind how to meet basic human needs, just as we had learned in our academic training. Among the activities in which the School of Nursing took part, there was an assessment of the people in the shelters, checking their physiological functions and needs (nutrition, hydration, temperature, consciousness), medical history, attention to skin lesions, and information about exposure to contaminated water, treatment for comorbidities, chronic diseases, and mental health issues, as well as meetings with representatives from the state and municipal health departments. Nurses and faculty, who were used to work in renowned health institutions, found themselves in the midst of facilities that had to be set up with tables, chairs, stretchers, places for medical records, and storage of medical and hospital supplies, personal protective equipment, immunization logistics, organization of work schedules, and everything else that goes into setting up an urgent and improvised facility, but one that was geared towards the social and health needs of the victimized population.

In this context, there is an emerging need to analyze perspectives and develop resilience strategies aimed at training and preparing nurses for a rapid health response to climate disasters. Our students from different stages in their undergraduate degree, as well as graduate students, were crucial players in the mobilization to deal with floods, acting in individual and collective care actions.

We were essential in assisting with the H1N1 epidemic, in caring for and supporting the victims of the Kiss nightclub fire, during the COVID-19 pandemic, and in assisting and providing healthcare during the climatic disasters we have experienced over the last two years. These experiences allow us to learn and strengthen our professional performance. However, it is imperative that we increase our capacity to respond to disasters as professionals, by implementing a curricular structure in undergraduate education that covers the training of nurses to carry out management actions in disaster situations.

In the United States, after the September 11 attacks, there was an increase in investment and an improvement in disaster preparedness plans, including organizations, regulatory bodies and the training of professional nurses.[10] In addition to the United States, in Europe, Asia, the Middle East, and in some Pacific Islands, changes were made in their undergraduate Nursing curricula to include disaster preparedness. Since 2006, the WHO has advised that Nursing Schools should include preparing for and responding to climate or conflict/war emergencies. Ratifying the WHO guidelines, in 2019 the International Council of Nurses published guidelines for integrating disaster response into Nursing education curricula, including prevention, preparedness, response, and rehabilitation. Nurses must be trained in these areas to perform eight competencies related to disaster response: preparation and planning, communication, incident management, safety and security, assessment, intervention, recovery, as well as legal and ethical principles in a multi-professional approach.[11]

Education in management, leadership, resource mobilization, risk analysis, and epidemiological principles are key elements. As professors, we understand the relevance of thinking about an innovative curriculum that is compatible with current social demands and that prepares future nurses for disaster situations, as well as developing graduate courses aimed at providing care in such situations.

Nurses must be able to provide guidance and assistance in disaster situations in the fields of pediatrics, obstetrics, mental health, critical care, and toxicological emergencies, in addition to the competencies mentioned here, and be able to carry out simulations and develop disaster bundles, implementing strategies to reduce post-event consequences, thus preventing emerging epidemics resulting from the event. In view of what we have experienced, as professors we understand that it is urgent to review the training of nurses in Brazil, otherwise in the next disasters we will have mismatched information in the organizational conduct related to healthcare with consequent irreparable losses.

Our most sincere thanks go to all the Nursing staff (faculty, students, and Nursing professionals) who, in a spirit of solidarity, ethics, and commitment, took the lead in caring for the population of Rio Grande do Sul.

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