

# Actions and joint efforts of a public school of medicine to promote health and well-being during a climate disaster: a journey toward community resilience

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Recent extreme weather events have severely affected millions globally, leading to family separations, displacement from homes, loss of possessions, feelings of insecurity, and substantial health challenges.<sup>1</sup> This year, in southern Brazil, the state of Rio Grande do Sul experienced the worst flood in its history. The latest official report on rescue activities in the affected areas states the following: 478 cities were affected, with a total affected population of 2,398,255. There were 806 injured, 29 missing, and 182 confirmed deaths.<sup>2</sup> These numbers highlight the severity of the disaster and the extensive efforts required for recovery. The impact of such a dramatic extreme weather event extends beyond immediate damage and will certainly last for many years, requiring consistent and solid community efforts to mitigate its effects and support recovery. Such events are likely to recur, both in our region and globally. It is imperative that our communities, institutions, and the broader society harness the best of our scientific knowledge and our innate human capacity to support one another in confronting these extreme challenges. Collaborative efforts to foster resilience within our communities are essential.<sup>3</sup>

With this in mind, and in close collaboration with local government and independent organizations, faculty and students from the School of Medicine at the Universidade Federal do Rio Grande do Sul (UFRGS) endeavored to apply the best available international

evidence to promote health and well-being for those affected by the climate disaster and within their own community. To effectively coordinate these efforts, two task forces were established: the first, the School of Medicine Supporting Group, comprised volunteers – including professors, residents, medical students, and physicians from the university hospital – who provided assistance to those affected at shelters. The second, the Students and Staff Supporting Group, focused on aiding the university community (including other students, professors, administrative staff, and workers) who were impacted by the floods.

As requested by the Porto Alegre Health Department, the first task force was responsible for organizing the healthcare system across four shelters. The largest shelter accommodated over 700 individuals, while the smallest housed 250. The health teams, each led by a medical doctor, comprised physicians, nurses, psychologists, pharmacists, nutritionists, and students from these fields. Team leaders were tasked with managing situations that required specialized assistance, while a professor supervised the on-duty schedule, ensuring coverage by clinicians, surgeons, pediatricians, and other specialists. The psychiatry team operated under a separate on-duty schedule for faculty and residents. The UFRGS School of Medicine coordinated the efforts of over 500 volunteers, including 60 professors, 200 medical students, 100 residents,

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and 140 physicians from the university hospital. All care provided was based on best clinical practices and supported by scientific evidence.

In May, more than 1,500 medical appointments were conducted, and 800 individuals were evaluated by various professionals. The psychiatry team developed a psychological first-aid protocol focused on listening and addressing basic needs. Protocols for common issues like drug intoxication or withdrawal, psychomotor agitation, sleep problems, and acute stress were also established to prevent post-traumatic stress disorders. Infectious disease specialists provided protocols for common scenarios, and the faculty telehealth team supported professionals in all Rio Grande do Sul shelters. Sheltered individuals received previously prescribed medications, with special attention to known health conditions. For example, ophthalmological exams were conducted, and glasses were donated to those who lost them in the flood. Post-crisis, professors and students initiated an extension action to promote health among those with chronic diseases and offered four scholarships for students to continue supporting this population.

While many students, professors, and other volunteers from the academic community contributed at the shelters, gaining valuable knowledge, enhancing their sense of community, and finding purpose during the disaster, others were significantly impacted by the flood. Consequently, the second task force was mobilized to support these affected members of the community. This initiative, driven by student-led efforts, coordinated various actions targeting the needs of students,<sup>4</sup> as well as the broader academic community – many of whom were severely affected by the flood. This undertaking required a concerted effort across all levels of the community, including administrative staff, faculty, students, and university leadership.

Alongside the support campaign, additional assessments were conducted to monitor the evolving conditions of students over time. The first screening, conducted between May 15th and May 17th, revealed that 16.5% of medical students were directly affected by the floods, with many displaced or experiencing severe damage to their homes. During this initial assessment, 35.4% of students reported being unable to access the medical school, 38.9% lacked transportation, 6.2% were without electricity, and 30.5% experienced unstable or no internet connection. Due to disruptions in the water supply, 32.9% of the students reported having no access to piped water in their homes. Additionally, bottled water was scarce in supermarkets, making the

provision of drinking water for affected students and their families a key focus of the support campaign. This initiative remained active until the essential needs of all 28 affected students were met.

In the weeks following the first screening, further evaluations were conducted from June 3rd to 4th and June 21st to 23rd to assess ongoing conditions for students, including those less directly affected by the disaster, and any improvements in their post-flood circumstances. By the end of June, the data indicated that 70% of students had regained access to the university, and 88% had restored access to electricity, piped water, and internet services. Notably, 84% of students reported a return to their pre-flood conditions. In response to this updated information, the School of Medicine established direct communication with student representatives to facilitate the resumption of regular activities, taking into account the city's limited transportation options and the psychological well-being of the students.

The response to the May floods in Rio Grande do Sul underscored the critical importance of community resilience in preparing for, adapting to, and recovering from extreme weather events and natural disasters. Our community – including faculty, students, and staff – collaborated effectively, developing and implementing innovative strategies swiftly, which fostered a heightened sense of belonging. This coordinated effort nurtured empathy and care for others, reflecting the humanitarian ethos that should be at the core of all medical education. Building resilience is fundamental for social cohesion, sustainable development, and the maintenance of both physical and mental health. In the context of a changing global climate, where recurring environmental catastrophes are becoming increasingly common, there is an urgent need for continuous planning and adaptation to address collective needs in this new reality. This process necessitates the active involvement of various societal sectors, effective communication, strategic planning, collaboration, and social participation. By working together, we could avoid drowning in hopelessness, but rather swim to a safe and dry path to rebuild not only houses and buildings but also dignity, health, and well-being.

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