

HURRICANE KATRINA: THE CHALLENGE TO THE ACADEMIC INSTITUTION

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Natural disasters such as the recent Hurricanes Katrina and Rita and their associated severe flooding have been said to be a “once in a lifetime” (or still more rare) happening. Not only has this recent catastrophe dramatically devastated an entire city and region, but its effects have been so great that it has and will continue to change the entire city of New Orleans for many years. The city’s population, no doubt, will be drastically diminished, the rebuilding of the city and its infrastructure will take many years, and its long-term medical and psychological effects will plague the population and its clinical resources for an indeterminate number of years or decades.

On August 28, 2005, the entire population of New Orleans, one of the nation’s largest cities, was ordered to evacuate by way of a single major highway that serves the city. This was accomplished, albeit slowly for those leaving the last day, but there were those who were unable to leave (for a number of reasons) and who were moved into the city’s major sports arena and exhibition center for the duration of the immediate hurricane crisis. The retention of people in these large centers and prevention of those who evacuated from leaving was unfortunately extended because of the associated flooding of large areas of the city as a result of the rupture of several levees which, in prior hurricanes, had protected the city.

Obviously, the medical problems that beset the entire population and, more specifically, its medical resources, were tremendous and unprecedented. Public health facilities were immediately established for those who did not evacuate, and the medical support system was eventually reinforced by the National Guard, as was widely reported by the media. It is of particular note that both of the city’s medical schools and their clinical faculties were forced to leave the city, Tulane University to Houston, Texas, and Louisiana State University to Baton Rouge, Louisiana. Further, all but three hospitals in the greater New Orleans area were closed because of the damages sustained, the severe flooding, and the reduced manpower to maintain their vital functions. Less reported by the media was the remarkable response of those three remaining healthcare institutions - two community hospitals in nearby Jefferson Parish, and the third, Ochsner Clinic Foundation, an independent academic medical center.

Ochsner’s resources in New Orleans had sustained less hurricane damage and the flooding was also less extensive than at other healthcare institutions in the area. Fortunately, a well-devised emergency plan, worked out well in advance of the disaster and employed successfully in previous natural disasters, was promptly instituted as

soon as the emergency situation was announced. Indeed, essential medical teams were immediately brought into service at its three facilities in New Orleans, Baton Rouge, and in Covington (on the North Shore of Lake Ponchartrain). Of interest, with the large shift of the New Orleans population to Baton Rouge, its population doubled within 72 hours, further complicating communications, transportation, and access to gasoline. Similarly, the necessary satellite clinics, situated in important communities in the nearby areas, were also mobilized to provide clinical care for established and new patients to Ochsner. As a result, the overall clinic and

its resources remained in continuous function throughout the disaster and thereafter. It is noteworthy that not only were acute facilities made available continuously, but the invasive and non-invasive cardiac laboratories, the hemodialysis activities, and the necessary surgical programs remained available. Even during this time, necessary organ transplantations were accomplished, and the less dramatic services provided by the institution remained uninterrupted.

There were some of us who remained in the city who also participated on a voluntary basis in providing whatever

healthcare needs were required. Four invited reports of the unusual “perspectives” of the catastrophe were published in the *New England Journal of Medicine* (1-4). One physician who chose to stay in one of the city’s larger hotels, remained in the downtown area and helped provide medical assistance in the hotel and in the nearby area and Convention Center using whatever resources that he could gather (1,2). Another described the necessary means available for patients with end-stage renal disease requiring dialysis therapy (3). Still another pursued “vertical evacuation” to an upper floor of a large hotel, a common practice for many New Orleans residents in this and prior hurricanes. However, because of the drastic situation and the widespread damage and flooding, he and his wife were obliged to remain in the exhibition hall of that hotel for the ensuing six days until evacuation was then possible. Their personal experiences were also detailed in a fourth article (4).

Meanwhile, at our Baton Rouge facility, the latter two authors (of this report) worked on the team leading the overall institutional administrative core. In addition to its responsibilities for coordinating clinical care, the team was responsible for the graduate medical education training programs and research activities. All training programs remained intact, but different, providing a vastly important and necessary learning experience in New Orleans and Baton Rouge while assuring that all educational guidelines and training require-

During Hurricanes Katrina, red plastic trash bags on Ochsner’s parking deck were used to spell “OPEN” to military helicopters flying overhead.



ments were maintained. Clinical research activities remained intact because of the committed staff providing management and follow-up for patients on drug and device studies. A 1-800 telephone contact and e-mail address were established and publicly posted to help enrolled patients access the Ochsner system for assistance. A database was created to log issues and adverse events. Close attention was paid to federally regulated research practices, and federal officials were appropriately kept informed of all research-related activities. Furthermore, basic science research laboratories remained intact since prior to the storm essential animals were evacuated and all cell lines were preserved.

Heartwarming to witness in the immediate post-catastrophe time-frame was the teamwork, positive morale, and commitment rising above the devastation. The keys to this spirit were the dedicated staff, an integrated healthcare system, electronic medical records, access to databases providing necessary information, and security. Notwithstanding the devastation, many of us lost all personal belongings - homes, cars, lifetime possessions, heirlooms - and, most importantly, some lost family members and friends. Those displaced from homes, schools, offices, churches, social and professional networks, or culture suffered greatly; but it was the dedicated staff who worked together triumphantly to reestablish community. Efforts are already underway to prepare for future hurricanes and other disasters. Key to our success will be the ability of our leadership (medical, public health, economic, political, and legislative) to prepare a new unified national program to ensure that we anticipate other disasters, both natural and manmade.



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