

Humanitarian Response Following the Earthquake in Haiti: Reflections on Unprecedented Need for Rehabilitation

Toronto Rehabilitation Institute – Team Haiti

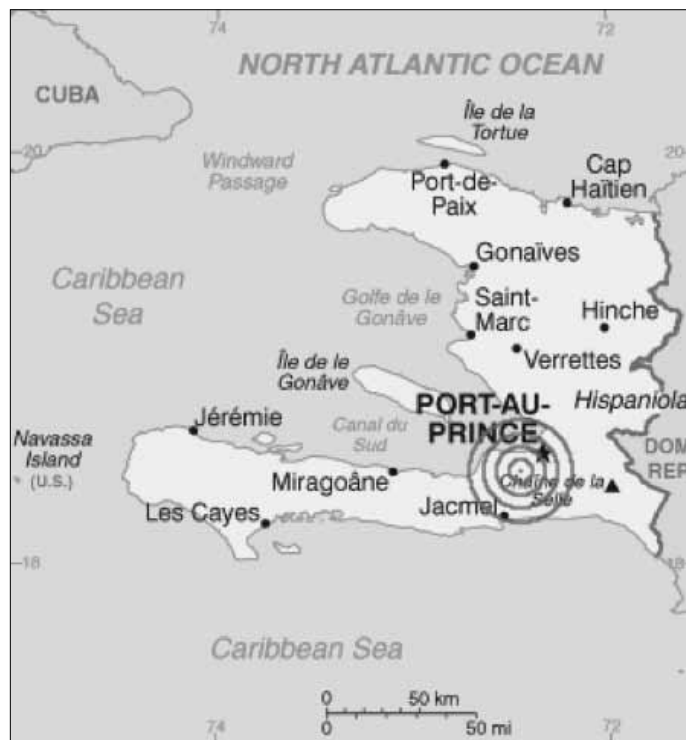
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In the late afternoon of January 12, 2010, an earthquake measuring 7.0 on the Richter scale struck the nation of Haiti. The epicentre of the earthquake was the coastal community of Léogane, approximately 25 kilometres south west of the densely populated capital city of Port-au-Prince (PAP). The devastation was enormous. An estimated 220,000 people died, over 300,000 were injured and more than 1.3 million were rendered homeless and are now living in temporary shelters in PAP (Pan American Health Organization 2010). Based on current predictions, this event led to the fifth-highest single-day loss of life due to an earthquake in modern history (United States Geological Society [USGS] 2010). Approximately 80% of schools in the PAP area were destroyed, and hundreds of thousands of structures including

dwellings, government buildings and hospitals were damaged (USGS 2010). The future infrastructure and economic needs are colossal; however, the greatest tragedy is the number of casualties and the human toll on future generations of Haitians. Haiti's ranking on the United Nations Human Development Index¹ was relatively low prior to January 2010, and the aftermath of the earthquake will further complicate long-term development in one of the poorest countries in the world (United Nations Development Program [UNDP] 2010).



Map of Haiti showing the epicentre and heavily affected zones. <<http://globalvoicesonline.org/specialcoverage/haiti-earthquake-2010/>>.

Despite the large number of casualties that resulted from the earthquake, many organizations hypothesize that the numbers would have been much higher without the immediate response from the global community. The pace at which humanitarian aid and emergency response workers arrived into earthquake-affected zones ultimately saved many lives that would not have otherwise been preserved. However, decreasing mortality often creates greater morbidity in the form of functional impairment and disability. The critical issue now in Haiti is to what degree those who *were* initially saved can be rehabilitated and reintegrated into their communities. Even before the earthquake, Haiti was a rather hostile environment for people with disabilities, and now discharge planning from healthcare facilities to old (and new) communities has become a convoluted scenario for those living with disabilities from burns, amputation, multiple fractures, spinal cord injuries and other injuries. Factors that complicate the transition back into the community include the destruction of infrastructure, limited access to health and social services, and the challenge of locating family members displaced by the earthquake. Moreover, while many Haitians lived discreetly with disabilities pre-earthquake, the current health system may not be equipped to meet the rehabilitation needs of people with complex injuries.

The demand for specialized rehabilitation services in post-earthquake Haiti is not driven only by the absolute number of people with disabilities, but also by the status of rehabilitation expertise within Haiti to effectively address such complex needs. Within a month of the earthquake, the Toronto Rehabilitation Institute (Toronto, Ontario, Canada) recognized that despite the staggering mortality rates, thousands of survivors would need rehabilitation to regain function and mobility. As part of a humanitarian response, Toronto Rehab sent an initial team to work at Hôpital Albert Schweitzer in Deschapelles, Haiti. Deschapelles is a rural setting located in the Artibonite Valley and was not directly affected by the event. However, in the days following the earthquake many Haitians left (or were evacuated from) PAP, the capital, for rural communities such as Deschapelles in order to seek healthcare outside of the heavily damaged earthquake zone.



Jamie Young (physical therapist) working with a patient with an incomplete spinal cord injury. (Photo: Lisa Carnie)

The goals of this initial mission were threefold: first, to provide direct clinical care to persons injured in the earthquake; second, to provide clinical education to Haitian healthcare providers regarding rehabilitation services; and third, to assess the broader rehabilitation needs in Haiti. During this first 2-week visit, well over 300 units of service were provided, and close to 25 educational sessions were conducted. In addition, one of the team members travelled the country to meet and discuss rehabilitation needs with other local and international non-governmental organization (NGOs) providing rehabilitation services in Haiti. It was during one of these encounters that we met with an NGO called Healing Hands for Haiti. Following a series of discussions on required resources and expertise, Healing Hands for Haiti requested that Toronto Rehab assist with the provision of spinal cord rehabilitation in the northern city of Cap-Haitien. In response, Toronto Rehab organized four interdisciplinary teams to rotate every 2 weeks in Cap-Haitien for an 8-week commitment.

The typical trajectory of spinal cord injury (SCI) patients in Cap-Haitien was as follows: people were injured during the earthquake either by falling from a building or having a building/wall fall onto them; they were trapped under the rubble for a period of time ranging from a few minutes

to days; then their family, neighbours or friends managed to remove them from the rubble in any way that they could (ironically, this gesture of good samaritanism may have adversely affected the patient's ultimate prognosis). After being pulled from the rubble, they were often taken to local emergency field hospitals within the immediate vicinity of where they were injured. Because of the severe nature of their injuries, many individuals with spinal cord injuries were triaged as a low priority due to likelihood of death. However, survivors of the acute phase were often triaged to another medical centre for surgical care. In the case of our patients in Cap-Haitien, they were triaged in the acute phase to one of three sites: a hospital in the Dominican Republic; a hospital in the northern town of Milot, Hôpital Sacré Coeur, operated by the CRUDEM Foundation; or to the USNS Comfort, the United States Navy's floating Medical Treatment Facility that was docked two miles off the coast of Haiti and that served as a tertiary care centre (Etienne et al. 2010).

After injured individuals received urgent medical care and became medically stable, they were discharged to a small United Kingdom-based NGO called Haiti Hospital Appeal (HHA) in Cap-Haitien. HHA was originally designed to be a maternity and pediatric facility, but due to the tremendous need to find a suitable location for the people now living with spinal cord injuries, HHA transformed their facility into a spinal cord rehabilitation unit. The importance of this offer by HHA cannot be overstated. It is truly a reflection of the compassion and dedication of the NGO community in the post-earthquake phase across Haiti.

When Toronto Rehab's first interdisciplinary team arrived at HHA, they found 19 patients, the majority of whom had active medical issues such as neurogenic bowel and bladder dysfunction with associated impaction and urinary retention, as well as severe pressure ulcers that predated admission to HHA. During the initial evaluation, each individual's story of survival in the chaos and aftermath of the earthquake was devastating. However, despite the grave implications, the narratives that were heard were also inspiring, as these patients had survived against all odds. One story that particularly resonated is that of Solange, a 21-year-old second-year nursing student from PAP. On the day of the earthquake she decided that she would not write her final-year examinations. When the earthquake struck, Solange was at her parent's house, and she sustained a complete thoracic SCI when the walls of the home fell on her. Unfortunately Solange's nursing classmates were not so lucky. They were writing their exams at the time of the event, and subsequently all perished when the university building collapsed. Solange's story is tragic but not unique.

Our initial team in HHA focused on assessing injury severity, achieving medical stability and embarking on initial patient and staff education. The teams that followed worked in unison with Haitian colleagues to progress recovery and function. During the short 8-week period, four individuals were discharged back to PAP, and at the time this editorial was written, an additional three patients were being prepared for their transitions back to the community. Patients discharged thus far have been those with incomplete SCI, meaning those who are able to ambulate independently with mobility aids such as walkers, canes and crutches. The discharge plan for these people included providing air and ground transportation, and offering tents for shelter. Given education on safety and compensatory strategies, we feel these people will be able to manage their self-care activities; but life will still be challenging, especially as it relates to their future ability to work and re-establish societal roles in the community.

The remaining 12 patients have complete spinal cord lesions, and the prognosis for independent walking is poor. Many people in this cohort also have significant pressure ulcers and difficulty managing the neurogenic bowel and bladder dysfunction that occurs subsequent to an SCI. Under these circumstances, discharging a patient with a tent is simply not an option. The Haitian and international communities are currently exploring housing options ranging from constructing accessible and integrated homes in the community to creating dedicated communities or facilities that would house groups of people with mobility impairments. The latter option is often met with resistance, and it is often suggested that institutionalization of persons with disabilities is not an appropriate measure; however, given the unique challenges that exist in post-earthquake Haiti, considering and evaluating all options may ultimately prove to be a wise approach.

Rebuilding post-earthquake will be a difficult road for Haiti (Bayard 2010). Our collective experiences in Haiti have served as a reminder that decreasing mortality rates subsequent to timely and effective emergency response following a natural disaster results in higher morbidity rates. Preserving life following significant trauma often means that the person will survive with significant disabilities. We do not wish to debate the ethics of preserving life following natural disasters in this editorial; we do, however, highlight that if a life is preserved through “heroic means,” there is a moral imperative to also ensure that a continuum of care is initiated and implemented. This continuum of care is crucial for the injured so that they can maximize their quality of life. Rehabilitation has often been left out of mainstream humanitarian aid and emergency relief, but the outcomes of the earthquake in Haiti may signal to the global community the clinical and moral necessity for rehabilitation.

Our experiences may also serve as a reminder that despite the pessimism that is commonly expressed regarding the enormity of the problem following natural disasters, the actions and contributions of individuals, small groups and hospitals can make a difference. The involvement of Toronto Rehab made a difference in the lives of a small group of patients in Cap-Haitien and moved them along the trajectory from medical crisis to rehabilitation, and in some cases discharge back into the community within a few months of the event. We also made a measurable difference to the health providers with whom we worked and provided education. It is often said that “we” gain more from working in such settings than we give; and although it is a cliché, we believe it to be true in our case. On the one hand, the clinical teams provided direct services that saved lives, and we shared our knowledge and clinical expertise with our Haitian colleagues; but on the other, the patients whom we worked with have let us into their lives, albeit briefly, and have made an indelible mark on our hearts and souls. In Antoine de Saint-Exupéry’s *The Little Prince* (1943), he writes, “*On ne voit bien qu’avec le cœur. L’essentiel est invisible pour les yeux.*” The English translation would be roughly, “It is only with the heart that one can see rightly. What is essential is invisible to the eye.” While we may not have known it at the time, the people we worked with in Haiti taught us about courage and confirmed our belief in the human condition, and we are better people and clinicians for having known them. To use the analogy from *The Little Prince* ... they have helped us “see” rightly again.

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Notes

¹ The Human Development Index was developed by the UNDP and is a composite measure that uses three equally weighted dimensions of human development, including life expectancy at birth, adult literacy and average years of schooling, and income. The 2009 Human Development report ranked Haiti 142 out of 182 countries (just ahead of Sudan, which ranked 143) (UNDP 2010).