ABSTRACT

Ten months after the earthquake in Haiti, the beleaguered public health system is worse than ever. In a country that spent $58 per person per year on health care prior to the earthquake, the Ministry of Health must now deal with the excess morbidity from the disaster with even fewer resources. The healthcare system will be burdened with the increased mortality rates of victims of traumatic injury for up to 40 years. Several models of temporary personnel supplementation of Haiti’s healthcare system are currently being implemented. The most effective way to address the dearth of personnel over the coming years is to supplement the local healthcare system with volunteer foreign health professionals while capacity building for the future by training more local personnel.

On our way to Port au Prince General Hospital, we drove by hills of concrete and rebar that were once the Haitian Ministry of Health. Upon entering the hospital, it was clear that more than just buildings had fallen; all coordination and organization of health care also collapsed on 12 January. Now, 10 months after the earthquake, the beleaguered public health system of Haiti is worse than ever. In a country that spent $58 per person per year on health care prior to the earthquake, the Ministry of Health must now deal with the excess morbidity from the disaster with even fewer resources.1 A recent cholera outbreak and a hurricane have only heightened the sense of urgency to find a way to rapidly address the public health emergency that exists in Port au Prince. The most effective way to address the dearth of personnel over the next year is to supplement the local healthcare system with volunteer foreign health professionals while capacity building for the future by training more local personnel.

As we entered Port au Prince General Hospital, we could see that the main building was condemned and several hundred patients inhabited steamy tents in the hospital courtyard. We labored in the Intensive Care Unit (ICU) tent, which had 18 beds full of pathology seldom seen by American doctors: cerebral malaria, post-partum dilated cardiomyopathy, a ruptured ileum from typhoid, and peritoneal tuberculosis. With a ratio of only 1 nurse per 18 ICU patients, we could have spent the majority of the day simply hanging Intravenous (IV) saline. Without the extra hands provided by foreign health professionals, many patients would have died from dehydration. The choking temperatures inside the tent made even the American doctors take their own re-hydration breaks to stave off bouts of lightheadedness.

Except for the tents, the hospital facilities closely resembled Haiti before the disaster. After 15 years of working in Haiti, veterans of Project Medishare had learned to expect very little in the way of resources, both in terms of supplies and personnel. The Haitian staff had not been paid in 6 months, including the 2 months prior to the earthquake, proof positive of the Haitian work ethic and dedication of the medical staff. How long would any of us have continued to work without pay in our own hospitals?

Much like before the earthquake, the small Haitian staff was overwhelmed by the lack of resources and the rustic working conditions. There was a laboratory, but it functioned so slowly, and was in such disarray that it was virtually impossible to get a simple complete blood count (CBC).
Medical supplies were so scarce that supplemental oxygen needed to be rationed away from young patients tragically deemed beyond rescue to other patients with more treatable conditions. Patients regularly received insulin that had not been refrigerated since it arrived in Haiti. Twice-daily antibiotics for serious illnesses such as meningitis were often only administered daily because of nursing shortages.

These shortages are not anything novel in Haiti. In 2005, there were 1949 doctors working in the entire of country of Haiti, only 730 of them working in the public sector. This breaks down to 3 doctors, 1 nurse and 8 hospital beds per 10 000 Haitians, and fell well short of the recommended WHO target of 23 health professionals per 10 000 population. Now, approximately 230 000 people, or 7% of Port au Prince’s population, perished in the earthquake and possibly double that number remain injured. The collapse of a nursing school killed 98 future nurses, an entire class. Many health professionals undoubtedly suffered the same fate, and many of those who survived have not yet returned to Port au Prince. As a result, fewer healthcare workers are now available to care for the injured, worsening the previous statistics.

The low numbers of healthcare workers will perpetuate the poor public health of Haiti. There is an inverse relationship between the number of nurses and in-hospital mortality, and the same relationship is true for the number of health workers and maternal mortality and under-five child survival. Fewer doctors and nurses mean less attended births, lower childhood vaccination rates, less treatment of tuberculosis and malaria, and increased wait times so patients are less likely to seek medical attention until they are very sick.

Rebuilding and replacing the health professional work force will take years, and in the short term there will be increased morbidity from earthquake-related sequelae. After Hurricane Katrina devastated the Gulf Coast, there was an increase in all-cause mortality compared to the prior several years. Previous disasters in developing countries where there have been overcrowded living conditions and poor sanitation have led to outbreaks of cholera, dysentery, tetanus, malaria and upper respiratory infections. The onset of vector-borne illness epidemics such as malaria and Dengue fever can take up to 8 weeks to begin and peak several weeks later. With the rainy season upon Haiti and 1.5 m homeless exposed to living outdoors, the malaria seasonal peak this summer could approach the rural prevalence of 2–3%, which would mean 60 000 additional cases of malaria in Port au Prince alone.

With 350 000 people injured and as many as 10 000 Haitians missing limbs according to the government, the long-term morbidity from the earthquake will be significant. The healthcare system will be burdened with the increased mortality rates of victims of traumatic injury for up to 40 years. In addition, future traumatic injuries that are not treated properly for lack of personnel will further erode the productivity of the working-age group and make economic recovery more difficult.

Several models of temporary personnel supplementation of Haiti’s healthcare system are currently being implemented. The University of Miami/Project Medishare field hospital consists of an entirely American volunteer medical staff of almost 100. In addition, more than 150 Haitian employees provide most ancillary services. They are working with the Haitian government to repair and staff a previously existing hospital and plan to employ and train Haitian nurses and physicians. There is a 2 year plan to raise the level of healthcare available by including a Neonatal ICU/Pediatric ICU (NICU/PICU), a trauma and critical care center, and a rehab hospital, all eventually entirely staffed with Haitian personnel trained by both Haitian and foreign professionals. International Medical Corps and Partners in Health volunteers both work at Port au Prince General Hospital. They help staff the emergency room, general medicine wards, the ICU and provide night coverage for most of the hospital departments. The majority of the nursing and ancillary staff are Haitians, and the hospital is desperately understaffed and will continue to be for the foreseeable future. The Quisqueya Christian School organizes and houses American medical volunteers from several American non-profit organizations. The school is in constant contact with a number of Haitian-run hospitals, and it redistributes the available American volunteer workforce based on the reported daily needs at each site. At some non-profits, there are waiting lists of literally thousands of healthcare professionals in queue to serve the Haitian people, and this kind of dedication by American professionals means that all the models will be sustainable for a few years.

The approaches that combine short-term assistance with a commitment to training the Haitian healthcare work force under the auspices of the Haitian Ministry of Health offers both sustainability and capacity building. It has been said that it is more cost-effective and will help capacity building to staff hospitals with Haitians for the on-going relief efforts. Indeed, there is an expectation that solutions incorporating foreign health professionals will first ensure full employment for all Haitian healthcare workers as a prerequisite. However, after years of political instability and woefully inadequate resources, there are simply too few Haitian health professionals to accomplish this gargantuan task alone. Any approach that utilizes strictly Haitian health professionals will be unable to address the sheer size of the problem and will fail the tens of thousands of patients over the coming years.
The ultimate solution requires logistical support from the Haitian government and financial support from donor governments in order to train and retain Haitian doctors and nurses over the next 5 years. Project Medishare operates a 100-bed hospital in Port au Prince and is training the first Haitian-trained neurosurgeon and trauma surgeon in the country’s history. Partners in health recently broke ground on a 320-bed training hospital in the central plateau to train the next generation of Haitian doctors and nurses. All solutions should be driven by the Haitian government with the cooperation of Haitian non-governmental organizations. A functioning national healthcare system will provide employment for a significant number of Haitians and, conversely, a lack of healthcare workers will adversely affect population health and further stagnate the economy.

As we pulled away from Port au Prince General at the end of the day, the rubble of the Ministry of Health stood as a metaphor for Haiti’s fragile healthcare system and a reminder how far Haiti must go to achieve adequate access to basic care. Until then, they will need sincere, hard-working partners with humble hearts to toil next to them in the long, hot days ahead.

References