

MSF surgical response to the mass casualty earthquake in Haiti - 2010

Within days MSF mobilised its worldwide capacity and resources in an unprecedented scale. The amount of funds, supplies and human resources involved made the Haiti response one of the biggest interventions in the history of the organisation.

Context

One of the worst natural disasters in recent history happened on 12 January 2010 in Haiti. A 7.0-magnitude earthquake struck near Haiti's capital Port-au-Prince and the city was virtually wiped out. More than 3 500 000 people were affected by the quake; 220 000 people estimated to have died and 300 000+ were injured; more than one million became homeless. Already before the earthquake Port-au-Prince was a densely populated city, with 86% of people living in slum conditions. Half of the people in Port-au-Prince had no access to latrines and only one third has access to tap water.

Intervention overview

The scale of the intervention and the challenges that MSF was facing in Haiti were unprecedented. Three MSF OCs (OCA, OCB, OCP) had surgical programmes in Haiti before the earthquake. Hence, MSF teams were immediately present in Port-au-Prince, but were also affected by the quake themselves. The main surgical challenge in Haiti was to provide good quality surgeries for maximum number of people in conditions of the limited resources and the huge needs. Medical and surgical supplies were available straightaway and many general and orthopaedic surgeons were employed.

During the first days after the earthquake the highest priority for MSF was providing immediate care to the large number of wounded people: organisation of triage, stabilising medical condition and referring for the immediate lifesaving surgery or providing end of life care. Available data indicate that MSF has been the main provider of surgery. impressive and effective large-scale surgical programme despite/against all challenges; providing trauma, basic and advanced orthopaedic surgery complemented by reconstructive surgery and effectively supported by postoperative care and physiotherapy.

The data below on the services provided by all OCs for the period from 12 January to end of April 2010 illustrates the scope of the intervention.

- 123 108 first line emergency consultations were provided;
- 34 044 treatments of wounds and dressing applications, 5707 major surgical interventions in 16 theatres were provided;
- 8353 prenatal care consultations, 38 consultations to victims of sexual violence, 4765 individual mental health consultations and 4310 group sessions were organised;
- 50 917 000 litres of treated water were distributed, 534 latrines and 302 showers built;
- Supplies for construction of 28 642 shelters were distributed;
- 10 hospitals were repaired and 4 new hospitals were built.

To achieve this MSF spent about 41 million euro, send 1800 tons of material by air and sea, and employed more than 800 international and over 3000 national staff in Haiti. Therefore, emergency response in Haiti provides important lessons regarding all the aspects of surgical response in disaster context, such as medical standards, supply of materials, coordination and professional ethics.



Figure 1: Map of Haiti and MSF surgery intervention

Emergency Forum – Web-based Platform – e-Snapshot

<p>Medical case management - emergency hospitals</p>	<p>Overall Medical Case Management and Emergency Hospitals Management. MSF has provided free access to emergency hospital facilities to all the patients without exception. Overall, the level of medical care provided, including surgical services, was highly appreciated by all stakeholders and appropriate to the emergency context. MSF's care also greatly appreciated by the community.</p> <p>Postoperative care was set up under enormous time pressure, it was organized both as inpatient and outpatient service. In addition to facilities attached or integrated within hospitals also specific post-operative centres were set up to deal with the overload of patients requiring prolonged care. Post-operative care also included:</p> <ul style="list-style-type: none"> - Physiotherapy services, including prosthesis preparation and training; provided either by MSF staff or through collaboration with other actors (i.e. Handicap International); - Renal Disaster Relief Task Force managed to restart their operations in less than one week after the earthquake; - Kidney dialysis was provided in the University Hospital to treat crush syndrome patients with acute kidney injury (as well as patients with pre-existing chronic kidney disease); <p>MSF teams had also set up Outpatient Department (OPD) services linked to or integrated within the emergency hospitals and postoperative care centre. Both fixed and mobile OPD services in several IDP camps or supported existing clinics inside and outside Port au Prince were established.</p> <p>The evaluation results have shown that the postoperative care needs were of an excellent quality, but their scale was overestimated. Links between the post-operative medical centres and support services for disabled patient in the community were often missing. This had contributed to adjustment disorders and anxiety when patients returned to the communities.</p>	<p>++</p> <p>++</p> <p>++</p> <p>+-</p>
<p>Medical case management - surgery</p>	<p>Overall Surgical Treatment. In the circumstances of enormous workload and restricted resources after the earthquake, the <i>definitive repair surgery</i> treatments could only be provided to a limited number of patients. One of the main problems was that the <i>initial surgery</i> was performed too late, days rather than hours after the trauma. Compartment syndromes often were already fully established. All of these had increased mortality rate and led to complications. The main surgical challenge following the Haiti earthquake was to provide sufficiently good surgery for maximum number of people while optimally balancing the limited resources to the huge needs. Emergency obstetric care was integrated in most of the MSF centres and hospitals.</p> <p>Strategy and Management of Surgical programme. The Operational Sections' strategy was rolled out with limited inputs from the surgical and anaesthesia support units. Only one OC immediately sent their surgical advisor to the field, but due to the situation this person became directly involved in practicing surgeries rather than participated in forming the strategy and overall management of the surgical programme. Due to lack of surgical leadership (such as a surgical coordinator) there was a lack of consistent surgical operational strategy. This meant that individual surgeons had to define their own strategy. Furthermore, the data recording surgical activities were not collected effectively.</p>	<p>+-</p> <p>+-</p>
<p>Public health, logistics & WatSan</p>	<p>The MSF logistic teams were mobilised very quickly to set up temporary facilities, to repair and expand existing infrastructure. MSF teams were too optimistic regarding other actors' commitments, particularly in regards to WatSan activities and distribution of shelters in the IDP camps. In practice, a few weeks after the earthquake the first priority needs were still unaddressed.</p> <p>All OCs focused their operational strategies on providing surgeries. It resulted in limited capacity to provide other services, such as NFI supply and WatSan management.</p>	<p>+-</p> <p>+-</p>
<p>Mental health</p>	<p>From the very beginning of the emergency response all OCs mobilised mental health care teams or reinforced the existing teams, which were already in place. The first focus of the mental health specialist was on the national staff. Then mental health care consultations were also provided in the postoperative care services targeting patients, many of whom were mutilated, and their family members. As of early February the mental health care activities expanded to outpatient department services and later into several communities of displaced, as well as to the neighbouring communities.</p>	<p>++</p>
<p>Others</p>	<p>Cultural identity issues were not sufficiently addressed. Many patients expressed a deep regret that, during their long hospital stay, there had been no space for their spiritual needs. Religion is of the utmost importance for almost all Haitians, and would therefore have been a key mechanism for coping with grief, loss and trauma. Patients spoke about the "dishonour" when being given a knee prosthesis with a "white" skin tone.</p> <p>At the same time, patients appreciated arrangement of separate toilets and showers for men and women, and also painting them in local colours by an indigenous artist. Patients underlined that it them helped to have more dignity, which was crucial for Haitian culture.</p> <p>In addition, social and educational activities inside the hospital and post-operative structures were usually absent. There had been some initiatives such as expatriate teams buying books for children and adults, but apparently the number of those activities was not sufficient. It is therefore important for MSF to take into account local socio-cultural aspects and address them during the intervention to the best of ability. This would help to reduce their suffering and to increase acceptance of MSF's activities among population.</p>	<p>--</p> <p>++</p> <p>+-</p>

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Intersectional and external collaboration	The scale of the disaster and the number of wounded determined the mobilisation of all MSF's operational capacity and hence the presence of five OCs in Haiti. Stronger intersectional collaboration could have improved the impact of the movements operations. Collaboration was good in terms of sharing supplies and human resources.	++
	Particular areas for improvement were: <ul style="list-style-type: none"> - A joint strategic analysis and review of medical/operational priorities after the immediate emergency phase was missing - Strategic discussions and planning were very limited. Five coordination offices in Port-au-Prince were carrying out similar administrative and support activities. There was doubling-up on various tasks and overlapping responsibilities. - There was a serious security incident in early March involving two expats of OCG kidnapped for 6 days. The planned reflection exercise after the incident hadn't been organised and no lessons were shared. 	--
	Collaboration with other actors. Engagement and coordination with others was limited. There was a lack of understanding and mapping other actors' activities, their medical facilities and services provided. Analysis of other actors' strategic and operational plans was not performed. As a key actor in the Haitian health sector, MSF could have better used its weight to lobby the aid community about the required response to priority needs.	--

++ well done and good practice +- appropriate but requires improvement -- unsatisfactory or implemented late

Lessons learnt and recommendations

- Ensure Hand-carrying of critical medical equipment by (first) medical teams for immediate availability of key items.
- Ensure proper triage in mass-casualty emergencies, e.g. through assigning an emergency service coordinator
- Assign a surgery coordinator, who is included in operational strategy definition.
- Use the "Epicentre Excel Form" to register surgical activities is good and should be used by all sections for uniform data collection in order to evaluate output and patient outcome.
- After an earthquake, plan for communication/sensitisation and adequate capacity for early detection and triage for victims with crush syndrome (for either conservative fluid management or kidney haemodialysis)
- Decentralise psychiatric care in large scale emergency mental health programmes through guidelines and involvement of medical staff in the use of psychotropic drugs.
- Plan and follow up on the use of chronic disease (HIV/TB, non-communicable) kits
- Ensure flexibility in the set-up of OPD services (e.g. focus on chronic diseases, short-duration hospitalisation) depending on gaps in respective health care services.
- Use a patient charter to regulate information flow and register patients' consent. The charter should be compiled in a local language and be available in all facilities.
- Pay attention to socio-cultural and spiritual needs, especially for long-term patients and provide locally adjusted responses to such needs
- Follow up on (disabled) patients and establish links with communities to improve mental health, facilitate the adaptation process and help to handle stigma issues.
- Organise timely feedback from patients and other key stakeholders for appropriate response to specific needs.

References: (this document summarise the contents of the reports below)

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