

AFTER-ACTION REVIEW
FOR
JANUARY 16, 2012
PORT-AU-PRINCE MASS CASUALTY INCIDENT



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Corps Médical International
International Medical Corps

**Hôpital de l'Université
d'état d'Haiti**

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INTRODUCTION TO AFTER ACTION REPORTS

The completion of an After Action Report is a standard process in improving emergency and disasters response, most frequently completed within 90 days of an incident. To the extent possible, After Action Reports should be developed jointly by all relevant stakeholders and should emphasize improvement of emergency management and systems at all levels.

After Action Reports serve to:

- Document response activities
- Analyze the current emergency and disaster care systems
- Identify problems and successes during emergency operations
- Propose measures to counteract problematic elements and mitigate future disasters

WORKSHOP OVERVIEW

On January 26, 2012, Dr. Pierre Pierre, acting director of *Hôpital de l'Université d'Etat d'Haiti* (HUEH), with the support of International Medical Corps (IMC), held a workshop to prepare an After Action Report of the recent Mass Casualty Incident (MCI) in Port-au-Prince. HUEH and IMC endeavored to include as many stakeholders as possible. Those able to attend included representatives of MSPP, the Haitian Red Cross, HUEH, IMC, MSF, Port-au-Prince Firefighters, and Project Hope. See Reference 1 for a list of participants and their contact information.

This After Action Report was prepared from the notes and discussion at that workshop. This draft copy is then to be circulated among participants and other stakeholders for feedback, before finalization of the report.

INCIDENT BACKGROUND

On January 16, 2012, shortly before midnight, around 26-30 people were killed and 56-57 injured after a truck lost control on one of Port-au-Prince's busiest streets. A dump truck full of gravel was traveling down from Delmas 40B when it lost control. Witnesses say the driver jumped from the truck after hitting the first obstacle. He is still wanted for questioning, however speculation centers on vehicle brake failure as the inciting cause. The truck crashed into a small bus before careening onto the sidewalk, striking cars, motorcycles, and vendors. It finally crashed in front of the Delimart supermarket, near the national television headquarters.

DISCUSSION OF RESPONSE BY LEVEL

COMMUNITY FIRST AID

Summary of Response

Multiple community members were on-scene to provide the initial response. The community members helped rescue people. It is unclear the extent to which the community members provided first aid according to evidence-based guidelines. Community members brought multiple patients directly to health facilities.

Conclusions

It is unclear the current status of first aid knowledge and training among community members in PAP.

Recommendations

- Perform a Knowledge, Attitude and Practice (KAP) study of emergency care and first aid in Port-au-Prince.
- Provide increased community first aid training.

DISPATCH

Summary of Response

The different responding agencies each found out about the Mass Casualty Incident (MCI) via different mechanisms. One of the advantages of this MCI was that it was in front of the national television and radio station, which quickly broadcast the news. In other and future cases, disseminating information and notifying response parties would not have this benefit.

It is unclear how the CRO was initially notified. However, it then called the police and the firefighters.

The Haitian Red Cross was called on their general line. This was called by a Red Cross member (unclear if this member was on the scene or found out by television). The phone number is available to call for free.

MSF learned of the accident from the general radio news. MSF-Holland then sent their ambulances to the scene.

Conclusions

Port-au-Prince lacks a unified and well-publicized emergency dispatch system.

Recommendations

- The Government of Haiti (GOH) should work toward having one unified emergency line for police, fire, and medical
 - This unified phone number should be heavily publicized (implement media campaign)
 - This coordination center should have a system to disseminate information to all the groups (governmental and non-governmental) involved in an MCI
 - Medical phone calls can then be transferred to a medical dispatch center
- All medical dispatch should be unified under one agency in MSPP
 - There should be one medical dispatch center for PAP
 - There should be a MSPP designee in charge of the emergency medical dispatch center
 - This can be patterned/adapted from cholera dispatch activities

- This single agency should have the contact information and be in regular contact with all personnel able to respond

PRE-HOSPITAL CARE

Summary of Response

The following agencies responded to the scene: police, DPC, Haitian Red Cross, MSF-Holland, National Equipment group, EDH (Electricity group), and national government (including President and Prime Minister).

The scene was “chaotic.” There was no clear Incident Commander or unified protocols for Mass Casualty Incidents (MCIs). There are unclear regulations or an unclear understanding of regulations regarding which agency is in charge during MCIs. Most responders, with the exception of those that had recently undergone IMC’s large-scale disaster simulation, were not familiar with the Incident Command System. There was no Information Officer and the media interviewed whomever they found.

The police attempted to maintain scene security. However, they had limited success due to limitations in personnel, equipment, and training. Community members were able to move around the scene without significant impediment. No areas were cordoned off. The police have not been previously involved with MSPP or other agencies in trainings and simulations. There is a radio communication system between police and firefighters.

There was no formal triage system in place or used amongst the first responders. Each group did their own procedures with minimal communication. Each group picked up who they could and took them to hospitals. Some of the injured were taken directly to hospitals by community members via private car.

The Haitian Red Cross chief of mission, as well as other high-level HRC staff, was present at the scene. This included drivers, the coordinator for the ambulances, the first-aid responders, the director, and other volunteers. They followed their guidelines for providing care. They inspected the patients and controlled bleeding if necessary. No patients in the response needed an IV, but they did practice bleeding control, immobilization and rapid transport. Other

responders note providing minimal care on scene and during transport, due to training and equipment limitations.

The hospitals reported that no patients were receiving basic airway measures (Ambu bag, oxygen, or airway placement) upon receipt at the hospital. At HUEH, some patients were received with major limb amputations that did not have tourniquets placed. MSF noted very minimal pre-hospital care for the patients they received by ambulance.

Conclusions

There are multiple groups responding to emergencies and MCIs in Haiti; however, there is poor coordination among groups. PAP lacks training and use of an Incident Command System and standardized triage system for MCIs. Pre-hospital care is minimal due to deficiencies in training and equipment. There is no standardization of pre-hospital care.

Recommendations

- The police should be trained in basic emergency medical care techniques, as they are frequently first on scene (scheduled, per report)
- Laws/regulations should be clarified and/or publicized regarding agency command during MCIs
- All potentially responding agencies should be trained in the Incident Command System, including relevant government
 - Haiti should adopt as standard MCI triage system
 - This should be the internationally-recognized START system
 - All responding agencies should have regular joint training exercises and regular contact between agencies
- There should be a unified communication system among responding pre-hospital providers
- Responding health groups (Haitian Red Cross, firefighters, etc.) should have improved training and equipment for first response
 - Haiti should adopt Standard Operating Procedures for all pre-hospital personnel

- The GOH should adopt a standardized and uniform emergency training curriculum for all organizations working in Haiti
 - There should be standardized levels of care, based on training
- GOH should explore innovative ways of finding additional pre-hospital surge capacity for emergencies and disasters without increasing the number of expensive ambulances; this should include the use of Tap-Taps or other commercial vehicles (with training of their drivers)

TRANSPORT TO HEALTH FACILITIES

Summary of Response

Bystanders with vehicles took many of the injured to nearby hospitals. Amongst other responders, there was no triage system and responders took their patients to facilities with which they were most familiar.

The Haitian Red Cross transported 5 injured people to Ofatma. HUEH received 17 patients. MSF-France received 12 patients from private cars and MSF-Holland ambulances.

Although some pre-hospital groups have informal means of notifying receiving hospitals of incoming patients, there is no overarching system for PAP. Both HUEH and MSF-France only knew to expect incoming patients due to the general television and radio news broadcasts.

Conclusions

Triage and transport decisions in PAP are made on an individual and ad hoc basis. There is no unified system for hospital notification.

Recommendations

- There should be a unified call list for all hospitals in PAP, with a number that is always available in case of patient transport.
- Ambulances should have a system and equipment to call receiving hospitals to warn them of incoming patients.
 - They need phones and radios to do this.

- Hospitals should have a phone available 24-7 to receive such calls.

HOSPITAL-BASED CARE

Summary of Response

MSF-France had a team of attending doctors ready upon presentation to the hospital. Because most were transported via MSF-Holland, who got to the scene slightly delayed from the other responders, their patients may have been less ill than others received elsewhere. However, several patients were taken to the Operating Room. All patients who reached MSF survived.

Conclusions

MSF-France provided emergency care to the patients that they received.

Recommendations

- A future triage and dispatch system should better distribute patients to receiving hospitals, so that facilities receive patients corresponding to their capacity.

HUEH

Summary of Response

HUEH received 17 patients, five of which were dead on arrival. There was no formal nursing or other triage of patients. The initial receiving team was all residents, primarily the 8 people on the surgery team that night (divided into 2 groups of 4). Two senior residents were present and in charge. There are no Emergency Medicine residents at HUEH (or in the country) and Emergency Medicine is not currently a recognized specialty in Haiti.

Attending physicians later arrived to assist, as well as IMC's emergency care expert (Dr. Khodabakhsh). HUEH physicians provided advanced emergency care, including intubation, chest tube placement, and FAST ultrasound scans, which they had learned from recent IMC trainings at HUEH. There is limited information regarding the patients due to the use of antiquated and non-specialized charts for trauma.

The HUEH ER, as is almost universally the case, was overcrowded with patients and family members, which led to difficulty caring for new MCI patients. Many of the patients have been in the ER for weeks or months. In addition to the patients, there are frequently multiple family members per patient in the ER. Security is an ongoing issue. One part of the ER is used as a “jail” ward.

Improvements to the ER had been made over the last year, under IMC’s program. However, this was limited by the new ER administrators not yet starting their new jobs. Also, the ER doctors are currently paid low salaries. Additionally, the ER is not its own “service” and is generally viewed as inferior to other services by other staff and residents.

One (intubated) patient with a large pelvic fracture was initially stabilized. However, the family requested transfer to another facility and the patient died en route. Per report, the transferring ambulance stopped at several facilities before finding one capable and willing to care for the patient.

Conclusions

Although there have been recent and ongoing improvements, the emergency services are currently under-prioritized at HUEH, without an Emergency Medicine department status or Emergency Medicine residents. Overcrowding is a significant issue, although is likely due less to space constraints and more due to the lack of patient flow to other services.

Recommendations

- HEUH should strive to reduce ER overcrowding
 - Patients should be in the ER for a maximum of 24-48 hours (those needing to stay longer should be transferred to an appropriate ward bed)
 - Patients should not be kept in the ER just because they are under arrest
 - The ER should have improved security, especially at night
 - The ER should establish a system to allow only one family member per patient present in the ER at a time
 - The ER should adopt standard hospital-based nursing triage
 - HUEH should separate its entrances for ambulances and walk-in patients

- Emergency medicine should become its own service at HUEH
 - Emergency Medicine should be made its own department
 - HEUH and MSPP should start a residency program at HUEH to produce specialists in Emergency Medicine
 - HEUH nurses and doctors should have continued training in emergency care
 - MSPP should increase pay for emergency physicians, in return for increased coverage including nights
- Improve resuscitation
 - At least one resuscitation bed should always be left open for new emergent patients
 - There should be a standardized call panel with numbers to reach specialists
 - HUEH should improve its access to emergent blood transfusion
 - HUEH should expand its Operating Room capabilities, with one always available for emergency surgery
- HUEH should ensure the use of the developed Health Information Systems (HIS) for Injury Surveillance and Emergency Medicine
 - The developed chart should be used for all trauma patients and support should be given for ongoing data collection and analysis
 - The Haitian Red Cross pre-hospital data collection system should be integrated with HUEH's hospital-based system
 - HUEH's Emergency Medicine Working Group and administration should use the HIS for continuous quality improvement in the ER
- HUEH should improve its coordination with pre-hospital providers
 - HUEH should have improved equipment for communication with pre-hospital providers
 - HUEH should continue to incorporate Haitian Red Cross and Port-au-Prince emergency personnel into disaster drills
 - HUEH should serve as a center of excellence for training pre-hospital providers in PAP, through its new training center

- HUEH should pilot the training of Tap-Tap drivers and other community members as an informal pre-hospital care network in PAP
- MSPP should establish guidelines for inter-facility transport in PAP (and Haiti)
 - There should be a universal phone list of facilities
 - Facilities should be available for contact 24-7
 - Facilities should be called and accept patients before transport

GOVERNMENT LEVEL

Summary of Response

There was a large presence of GOH personnel on the scene of the MCI. President Michel Martelly, Prime Minister Garry Conille, and other personnel personally responded. They later went to HUEH to assess care at the hospital facilities.

There was no formal Emergency Operations Center (EOC) initiated. In general, the GOH does not have significant training on the Incident Command System (ICS).

Conclusions

The GOH was very responsive to the MCI, swiftly sending multiple members to the scene of the crash and later referral hospitals. However, their good-will was mitigated by a lack of training, clear administrative guidelines, and an actionable emergency plan.

Recommendations

- The GOH should receive training on MCIs and the ICS
- The GOH should have an actionable emergency plan and an Emergency Operations Center
- Administrative guidelines should be clarified regarding operational command during MCIs
- The GOH and/or its partners should hold future After Action Review s after subsequent MCIs, to assess progress and further areas for improvement

- The GOH should ensure that there is a Formal Action Plan for implementing the recommendations made in this After Action Review
 - This should include:
 - Description of actions to be taken
 - Assignments
 - Associated costs and budget
 - Timetable for completion
 - Follow up responsibility
- The GOH and MSPP should send representatives to HUEH's Emergency Medicine Working Group (which meets monthly)

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REFERENCES

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International Medical Corps

International Medical Corps deployed its Emergency Response Team to Port au-Prince within 22 hours of the January 2010 earthquake, establishing operations in a makeshift clinic at Villa Creole and at the *Hôpital de l'Université d'Etat d'Haïti* (HUEH). Since then, International Medical Corps' interventions in Haiti have included primary health care, nutrition, child protection, mental health and psychosocial support, WASH sector activities, cholera response, and emergency medicine development. International Medical Corps focuses on capacity building with strong cooperation and collaboration with the Government of Haiti and local NGO partners.



HUEH nurses learn airway skills.



Physicians at HUEH learn to use an ultrasound as part of emergency care training.

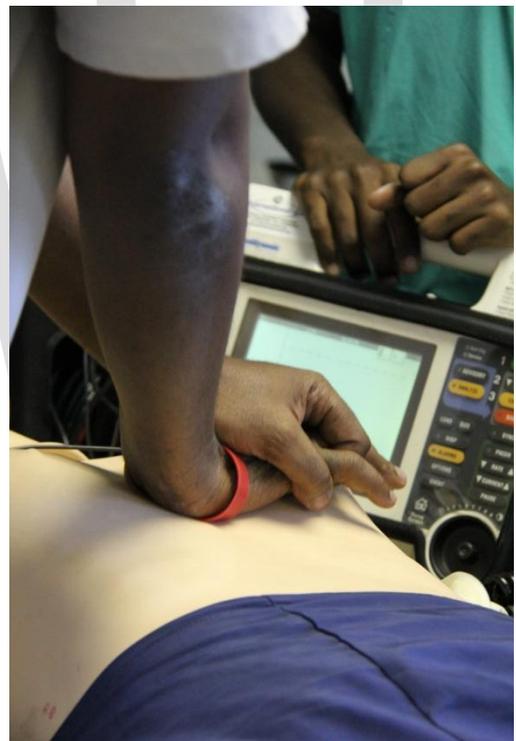
International Medical Corps' response in Haiti has been responsive to the various challenges presented post-earthquake. This scalable model has provided lifesaving assistance for thousands of affected Haitians. True to its overarching vision, IMC has quickly transitioned its immediate emergency response following the earthquake toward development support leading to Haitian self-reliance.

To date, IMC has focused much of its emergency medical care development efforts at *Hôpital de l'Université d'Etat d'Haiti* (HUEH), under funding from the Clinton Bush Haiti Fund. IMC has used its global team to carry out trainings for physicians and nurses in life-saving emergency medicine skills, while sustainably changing the practice environment at this key Haitian teaching facility.

Highlights of International Medical Corps' Emergency and Disaster Care Programming at HUEH include:

- Creation of an Emergency Medical Care Working Group at HUEH
- Establishment of a Emergency Medicine Center of Excellence at HUEH
- Training 85 physicians in emergency medical care
- Training 146 nurses in emergency medical care
- Training 31 ambulance staff, fire-fighters, and medics as first-responders
- Two large-scale mass casualty disaster drills held at HUEH
- HUEH emergency department renovation
- Establishment of a acute resuscitation area in the emergency department for HUEH's sickest patients
- Provision of emergency equipment including ultrasound, defibrillators, vital sign monitors, EKG machine, gurneys, hospital beds, and ventilators
- Development of a trauma Health Information System for HUEH

IMC looks forward to continued efforts to collaborate with HUEH, MSPP, and other partners to further emergency medical care development in Haiti. Based



Physician practice using defibrillators on mannequins in the Center of Excellence

on its established successes in Emergency and Disaster Care (EDC) development in numerous other countries, IMC is confident that Haiti can become a regional leader and a model for other countries.

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