

Disasters and Women's Health: Reflections from the 2010 Earthquake in Haiti

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Conflicts of interest: none

Keywords: disaster; earthquake; Haiti; women's health

Abbreviations:

CEDAW: Committee on Elimination of Discrimination against Women
ED: Emergency Department
HUEH: L'Hôpital de l'Université d'Etat d'Haiti
ICRC: International Committee of the Red Cross
IRC: International Rescue Committee
MISP: Minimum Initial Service Package
NGO: non-governmental organization
STI: sexually transmitted infection
UNHCR: United Nations High Commissioner for Refugees
UNFPA: United Nations Population Fund

Received: March 22, 2011

Revised: July 15, 2012

Accepted: August 31, 2012

Online publication: January 4, 2013

doi:10.1017/S1049023X12001677

Abstract

Introduction: Increasing attention is being focused on the needs of *vulnerable populations* during humanitarian emergency response. *Vulnerable populations* are those groups with increased susceptibility to poor health outcomes rendering them disproportionately affected by the event. This discussion focuses on women's health needs during the disaster relief effort after the 2010 earthquake in Haiti.

Report: The Emergency Department (ED) of the temporary mobile encampment in L'Hôpital de l'Université d'Etat d'Haiti (HUEH) was the site of the team's disaster relief mission. In February 2010, most of the hospital was staffed by foreign physicians and nurses, with a high turnover rate. Although integration with local Haitian staff was encouraged, implementation of this practice was variable.

Common presentations in the ED included infectious diseases, traumatic injuries, chronic disease exacerbations, and follow-up care of post-earthquake injuries and infections. Women-specific complaints included vaginal infections, breast pain or masses, and pregnancy-related concerns or complications. Women were also targets of gender-based violence.

Discussion: Recent disasters in Haiti, Pakistan, and elsewhere have challenged the international health community to provide gender-balanced health care in suboptimal environments. Much room for improvement remains. Although the assessment team was gender-balanced, improved incorporation of Haitian personnel may have enhanced patient trust, and improved cultural sensitivity and communication. Camp geography should foster both patient privacy and security during sensitive examinations. This could have been improved upon by geographically separating men's and women's treatment areas and using a barrier screen to generate a more private examination environment. Women's health supplies must include an appropriate exam table, emergency obstetrical and midwifery supplies, urine dipsticks, and sanitary and reproductive health supplies. A referral system must be established for patients requiring a higher level of care. Lastly, improved inter-organization communication and promotion of resource pooling may improve treatment access and quality for select gender-based interventions.

Conclusion: Simple, inexpensive modifications to disaster relief health care settings can dramatically reduce barriers to care for vulnerable populations.

Bloem CM, Miller AC. Disasters and women's health: reflections from the 2010 earthquake in Haiti. *Prehosp Disaster Med.* 2013;28(2):150-154.

Introduction

Increasing attention is being focused on the needs of *vulnerable populations* during humanitarian emergency response. A *vulnerable population* is generally defined as an individual or group with increased susceptibility to poor health outcomes rendering them disproportionately affected by the disaster event. Among the most commonly cited vulnerable groups are women, children, the elderly, patients living with HIV/AIDS or other chronic diseases, those with mental or physical disabilities, ethnic minorities, and socioeconomically disadvantaged groups.¹⁻³ A complete discussion of all vulnerable populations affected by the 2010 earthquake in Haiti is outside the scope of this manuscript. This manuscript focuses on the effects of the 2010 Port Au Prince earthquake on the women of Haiti.

Health Status of Women

Haiti is a country of nearly nine million people. Women 10-49 years of age represent nearly one-third of the population.⁴ Additionally, 39% of the total Haitian population is

under 15 years of age.⁴ Healthy life expectancy at birth is 63 years for women, and the under-5 year mortality rate is 80 per 1,000 live births. This stands in stark contrast to Haiti's island neighbor, the Dominican Republic, where the reported female life expectancy is 73 years, and the under-5 year mortality rate is 33 per 1000 live births.⁵ Maternal mortality in Haiti is equally dismal, with 630 deaths per 100,000 live births, compared to 86 per 100,000 live births in the Dominican Republic.⁵ These statistics highlight the *vulnerable population* status of Haitian women in the pre- and post-earthquake environment.

In locations such as Haiti, where the general baseline health status of women is poor, such a population may have little reserve to manage the health, socioeconomic, and other burdens thrust upon them during a disaster event such as an earthquake. For example, women in disasters may have to assume the role of head of household. This may include management of household finances and food supply, in addition to childcare and other responsibilities. Under these circumstances, a woman's choice to feed her children first may place her at increased risk of malnutrition or other co-morbidity.⁶ When the role of head of household is new or unfamiliar, and job opportunities are scarce, women may also be driven to exchange sex for money or food.⁷⁻⁹ Moreover, the resulting post-disaster social disruption, combined with increased population movement and military presence, has been associated with an increased incidence of sexual violence, as well as sexually transmitted infections (STIs).^{10,11}

Relief workers must be attuned to the disrupted familial and community support structures that women face in the aftermath of disasters. Concerns about exacerbating the emotional weight of traumatic experiences may lead to hesitation by health care workers in screening women for domestic violence, thereby missing the opportunity to offer an exit strategy from a situation of risk.⁶ Humanitarian workers must also use caution when interviewing female patients so as not to assume that a man who accompanies the woman is her husband or that he speaks on her behalf.⁶

At any given time, approximately four percent of women in Haiti are pregnant, of which an estimated 15% will suffer obstetrical or birthing complications.¹² Such events may be compounded in a post-disaster environment. For example, unwanted pregnancies during disaster events may lead to the increased practice of unsafe abortions.¹³ Appropriate services should be put in place to manage not only the consequences of unsafe abortions, but to offer options and support for women who are faced with unwanted pregnancies and/or who are victims of rape.¹³

Access to basic reproductive care must continue, even under disaster circumstances. The Minimum Initial Service Package (MISP) outlines important steps for humanitarian actors to prevent maternal and neonatal mortality and morbidity, and defines the approach and implementation of reproductive health services during crisis situations.¹⁴ Specifically the MISP calls for identification of an individual or organization to coordinate reproductive health activities; prevention of sexual violence; reduction of HIV transmission; reduction of maternal and neonatal morbidity and mortality; and provision of comprehensive reproductive health services.¹⁴ Increased awareness of MISP guidelines by non-governmental organizations has promoted implementation of improved reproductive health services in many disaster and refugee settings. For example, in Congo-Brazzaville, the International Rescue Committee (IRC) increased services for,

and community awareness of, sexual violence.⁸ The Mae Tao Clinic on the Thai-Myanmar border focuses on post-abortion family planning counseling, as well as community outreach on reproductive health issues.⁸ In war-torn Kajo Keji County in Southern Sudan, the American Refugee Committee made available more modern methods of contraceptives, where access previously was limited.⁸ Although the MISP guidelines have been acted upon in the setting of manmade disasters, conflict zones, and refugee populations, they have not been sufficiently implemented in post-natural disaster environments.

Sociocultural Specifics

Several social, economic, and cultural determinants were reported to impact the health status of women in pre-earthquake Haiti. Women in rural settings are not afforded legal rights to land ownership¹⁵ and often suffer from high levels of poverty and unemployment.¹⁶ The vast majority of working women have jobs in the informal sector, which often means lower pay, harsher working conditions, and exclusion from social security schemes.¹⁵ Additionally, workplace sexual harassment is common, with many reports of women forced into sexual relationships as a condition of employment.¹⁵

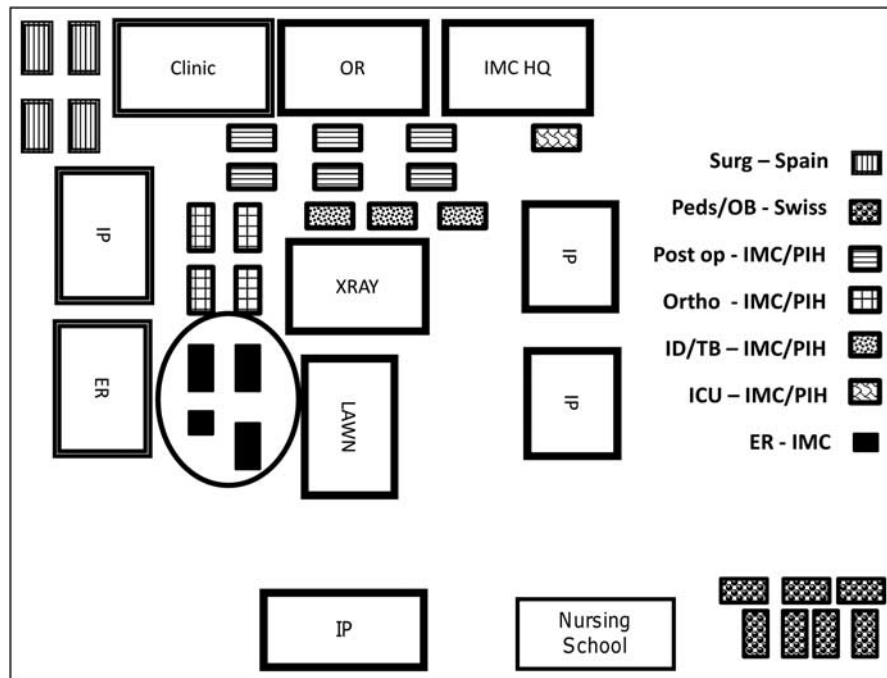
Additionally, the incidence of domestic violence is high, and further compounded by long-standing patriarchal stereotypes.¹⁶ Empowerment of women in Haitian society is hindered by high illiteracy rates. This is fueled by the preferential encouragement of boys to attend school, resulting in high drop-out rates among female students. Furthermore, women are under-represented in elected public office positions.¹⁶ This may augment government oversight of the needs of this vulnerable population when creating and addressing policy agendas.

The Earthquake

On January 12, 2010, a magnitude 7.0 earthquake centered in Port au Prince, Haiti, resulted in an estimated 222,570 deaths, 1.3 million displaced persons; the earthquake affected 3.7 million persons.^{17,18} According to the National Geophysical Data Center, 188,383 houses were damaged or destroyed,¹⁹ and damage has been estimated to be over US \$8 million.¹⁷ The World Health Organization estimated that approximately 49 health facilities were rendered unusable due to structural damage.²⁰ This level of destruction in a country with an already dismal health care infrastructure brought about an immediate and overwhelming need for external assistance.

L'Hôpital de l'Université d'Etat d'Haïti (HUEH) is centrally located in Port au Prince in the heart of the governmental district adjacent to *Champs Mars*. In the immediate earthquake aftermath, the structural integrity of the buildings had not been verified, thus a mobile encampment was erected for patient care on the hospital ground's center courtyard. This temporary tent hospital included an Emergency Department (ED), two functional operating rooms, an intensive care unit, a maternity ward, a pediatric ward, a tuberculosis/isolation ward, and inpatient wards (Figure 1). There was only one functioning ventilator, the use of which was restricted to the operating room.

As depicted in Figure 1, hospital wards were managed by various non-governmental organizations (NGOs), along with some of the original HUEH administrative staff. At the time of the team's visit in February 2010, most of the hospital was staffed by foreign physicians and nurses, with only limited numbers of contributing Haitian staff. Turnover of international staff



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Figure 1. L'Hôpital de l'Université d'Etat d'Haiti (HUEH), February 2010. *Sketch reproduced with permission of Dr. Trushar Naik.*

Abbreviations: ER, Emergency Room; HQ, Headquarters; ICU, Intensive Care Unit; ID, Infectious Diseases; IMC, International Medical Corps; IP, Inpatient Ward; Ortho, Orthopedics; Peds/OB, Pediatrics and Obstetrics; PIH, Partners in Health; POST-OP, Post-operative; Surg, Surgery; TB, Tuberculosis

was high, with most tours lasting no longer than two weeks. Integration with local Haitian staff was encouraged; however, implementation of this practice was variable.

The hospital was previously a referral center for pediatrics and many patients continued to view it as such. Patients requiring critical care, especially mechanical ventilation, were transferred to other facilities such as the University of Miami/Project Medishare tent hospital at the airport, or the US Navy ship hospital, the USNS Comfort. When available, patient transfer was accomplished on a case-by-case basis by employing military vehicles, an occasional ambulance, or more commonly by private vehicle or taxi.

The profile of patients seen during the team's time at HUEH mirrored in many ways what one would routinely expect in an ED. Common presentations included infectious diseases (eg, diarrhea, cellulitis, abscesses, malaria, and urinary tract infections), headaches, lumbar back pain, and dyspepsia. Traumatic injuries resulting from violence, such as lacerations and stab wounds, were also fairly frequent. The team treated many chronic disease exacerbations (eg, hypertension, diabetes, congestive heart failure, asthma, and chronic obstructive pulmonary disease) brought about by lack of medication and regular care. Patients sought follow-up of traumatic injuries (eg, casted fractures) treated immediately post-earthquake, as most patients did not have a plan for designated long-term follow-up and rehabilitation. Even at this stage, one month post-disaster, patients still presented with untreated post-earthquake wound infections. Women sought care for common symptoms such as vaginal bleeding, dysuria, vaginal discharge, breast pain or masses, and pregnancy-related concerns or complications. Women also were frequently targets of gender-based violence, and routinely

suffered the consequences of a limited water supply, poor sanitation, and overcrowded living conditions.

Recommendations

Small changes in the layout of the hospital tents could have improved the ability to address the gender-specific needs of female patients. An important and probably simple modification would have been to add a designated area or individual tent for pelvic and genitourinary exams (Figure 2). This could be accomplished by walling off an area of a tent with a separating device such as a curtain, by using draping, or by having separate emergency tents for men and women, as was reported during the response to South Asian Earthquake in Pakistan.² The team would often guide women patients away from the remaining patients and family members to obtain sensitive information, but private exams were significantly limited by camp geography and the relative lack of available draping materials. As a result, patients often received empirical therapy according to best-guess diagnosis, or would need to be redirected to the obstetrics tent, which only accepted selected cases.

Ensuring a minimum stock of essential materials for the care of women patients is not out of reach; deficiencies often result from poor planning or oversight. The ED lacked pregnancy tests, for example, which often led to diagnosis made by transabdominal ultrasound, no doubt missing some early gestational age pregnancies. Other useful materials would include female hygiene products, dipsticks for urine, and emergency obstetric kits. Distribution of clean delivery home kits¹⁴ to pregnant women may also be an appropriate measure for this setting, where access to health care facilities may be limited and local populations are

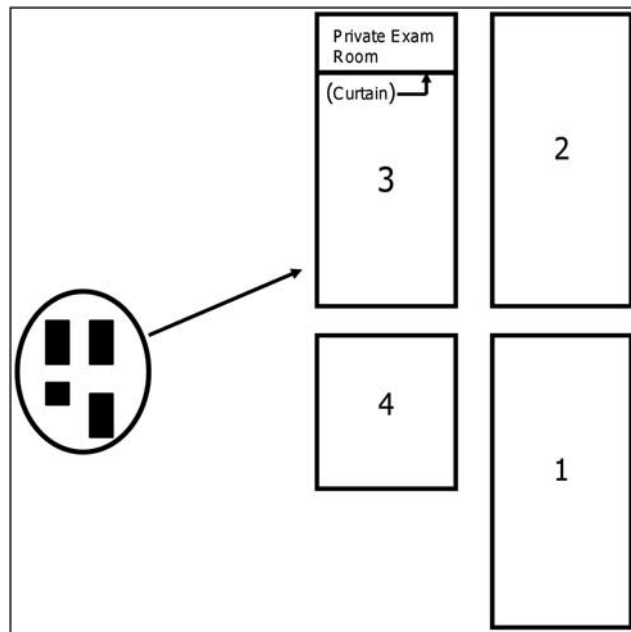


Figure 2. Emergency Department Modification for Pelvic Exam. 1: Critical Patients Tent. 2: Second ER Tent. 3: ER/Obs/Holding. 4: Fast Track. Abbreviations: ER, Emergency Room; Obs, Obstetrics

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|--|
| Drapes (for private exams) |
| Speculum |
| Urine pregnancy tests |
| Urine dipsticks for urinalysis |
| Antibiotics to treat STIs and UTIs |
| Clean delivery obstetric kits |
| Oral contraceptives and emergency contraception |
| Condoms |
| Female hygiene products |
| Ultrasound (if available, has many applications) |

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Table 1. Basic Women’s Health Supplies for Disaster Response Settings. Abbreviations: STI, Sexually Transmitted Infection; UTI, Urinary Tract Infection

more experienced with home birthing. A list of essential basic women’s health supplies is listed in Table 1.

The team was limited in its ability to obtain needed supplies for a number of reasons. Stocking of supplies was centrally managed and controlled. Hospital leadership and departmental leadership often belonged to different NGOs, limiting the capacity for smooth coordinated management of the hospital. Poor communication within the leadership also precluded the ability to effect change based on feedback from staff.

Cultural competency of practicing foreign staff in disaster situations impacts their ability to communicate well with patients and to decrease one of the many barriers patients have to

accessing care under already challenging circumstances. Making use of local personnel allows for an increased sense of patient trust and for improved understanding of culturally-sensitive topics. It also permits a simultaneous focus on building local capacity and creating a more sustainable environment of care. The need for translators for foreign staff in disaster settings requires judicious attention to their demographic profile. At General Hospital, the almost uniformly young adult male translator staff may have presented a barrier to accurate history-taking and created uncomfortable or embarrassing situations for female patients. This is in contrast to the South Asian earthquake response in Muzaffarabad, Pakistan, where women translators staffed the women’s emergency tent, thereby augmenting communication between the patients and physicians, both male and female.²

Coordination with other organizations specialized in women’s health issues would also likely be of benefit in creating a larger support network of services and access to care. Several groups, such as United Nations Population Fund (UNFPA), United Nations High Commissioner for Refugees (UNHCR), Committee on Elimination of Discrimination against Women (CEDAW), and the International Committee of the Red Cross (ICRC), have made women a priority, focusing on reproductive health, gender-based violence, and women’s rights. These groups serve through advocacy, training, and in many cases, direct service provision. Other humanitarian groups can benefit from their expertise and field guides, and may even be able to share in their material resources available for distribution in the real-time context of a disaster response. During the team’s stay in Port-au-Prince, for example, they encountered a representative of an NGO who offered to bring curtains and drapes to any facility needing to create a private exam area for women. Ideally, all agencies providing health care have a plan that includes the minimum basic supplies and services, and have trained their providers in the importance of screening for women-specific issues such as domestic violence and sexually transmitted infections.¹⁴ Effective inter-agency communication, however, also allows for referrals to be made and for sentinel information about at-risk women to be transmitted to organizations that have appropriate mechanisms to intervene.

Limitations

The observations made in this paper were based on the short-term, limited experience of this response team during the disaster in Haiti. The findings, therefore, may not be applicable to all disaster settings. However, this experience sheds an important light on the need for attention to special populations such as women in disaster response approaches. Indeed, a subsequent literature review revealed a very limited number of publications on the topic of women in disasters.

Many of the recommendations made in this paper could not be implemented in real time for a number of reasons. First, the team’s time in Haiti was limited to several days. Second, the leadership of the hospital and the ED, who held the power to make needed changes, was not easily accessible or clearly delineated. Third, there was inconsistent access to materials and resources due to lack of organization and high turnover of humanitarian response organizations present.

Conclusion

The effectiveness of disaster response is limited by a lack of recognition of the special needs of vulnerable populations such as women. The repercussions of inattention to women’s needs can

extend to affect the entire community. Humanitarian groups must fine-tune their approach to emergency relief to be inclusive of all members of the population, and in particular to groups

disproportionately affected by the disaster. Simple, inexpensive modifications to the health care setting can dramatically reduce barriers to care for vulnerable populations.

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