The Importance Of Preparation: An Examination Of The Principle Health Concerns Encountered On A Medical Relief Mission To Central Honduras With Implications For Future Relief Missions

M Stevens, G Bearman

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Abstract

Background: The successful delivery of medical care via medical relief trips is dependent on an understanding of the political, economic and social climate of the country in question. Information gathered from a July 2006 medical relief trip to Honduras was examined and the implications of this data are considered.

Methods: Data on age, sex and presenting complaints was evaluated and complaints were assigned to various categories.

Results: The data yielded many complaints due to chronic health conditions such as osteoarthritis, syndromes of chronic musculoskeletal strain, hygiene-related dermatologic disorders and chronic gastrointestinal conditions.

Conclusions: In a politically stable, yet poor, country such as Honduras, many people may be employed in physically demanding jobs. In this setting, many complaints are secondary to chronic health conditions. This has important implications regarding both personnel and formulary selection for future relief missions to countries under similar conditions.

BACKGROUND

The successful delivery of medical assistance to populations in developing countries requires understanding of the culture, demographics and health needs of the population of concern.1 This article highlights the most common presenting complaints in the adult population of the Comayagua district of Honduras during a medical relief mission in July 2006.

METHODS

In July 2006, healthcare professionals working with the Remote Area Medical Group (RAM) travelled to the city of Siguatepeque, Honduras to deliver medical care. The city of Siguatepeque, with a population of 75,000, is located in the central Honduran district of Comayagua, and is at an elevation of approximately 1,100 meters.2 A total of eleven different clinics were set up at various schools in proximity to this city, with patients being seen at each of these sites on eleven separate days. Information was collected on patient's names, ages, sex, presenting complaints and treatment. Data was collected at all eleven sites by the members of the healthcare team, which included physicians at various stages of training, medical students, a nurse practitioner, a nurse, pharmacists, dentists, a physical therapist and various translators. Data for all patients aged 18 years and greater was analyzed.

RESULTS

A total of 2,124 patients ages 18 years and greater were evaluated by the medical team. Ages ranged from 18 to 95, with a mean of 42, a median of 38 and a mode of 40. There were 1,660 female patients (78%) and 464 male patients (22%). There were a total of 3,378 complaints with the majority of complaints related to pain (56%), dermatologic complaints (7.5%), gastrointestinal complaints (6.7%), constitutional symptoms (5.8%) and respiratory complaints (5.2%).

Of the pain complaints, 36% were of headache, 35% were of musculoskeletal, joint, extremity-related and “bone” pain,

14% were of abdominal and pelvic pain, 2% related to chest complaints and 13% of the total complaints were either not classifiable or labelled as miscellaneous.

Within the dermatologic complaint category 29% of complaints related to rash, 23% were pruritus, 21% involved various dermatophytoses related complaints, and 20% of complaints were labelled as "other."

In the respiratory complaint category, 68% of complaints were related to cough, 13% involved complaints of asthma, 9% of complaints related to miscellaneous upper respiratory complaints, and 5% of the complaints were related to sinus issues.

Regarding gastrointestinal complaints, 26% involved gastro-esophageal reflux (GERD) related symptoms, 24% involved gastritis, 16% were related to dyspepsia, 8% involved diarrhea and 7% related to nausea and vomiting.

Of the constitutional complaints, 42% involved dizziness, 13% related to "cold," 13% were secondary to "fever," 10% were due to "flu," 7% of complaints were from decreased appetite and 7% of complaints were secondary to weakness.

Of the 2,124 medical patients, 52% presented with only one complaint, 32% had 2 complaints and 16% had three or more complaints. Additionally, 346 patients aged 18 years and greater received dental evaluations with 256 patients undergoing tooth extraction.

Figure 1

Figure 1: Breakdown of Presenting Complaints

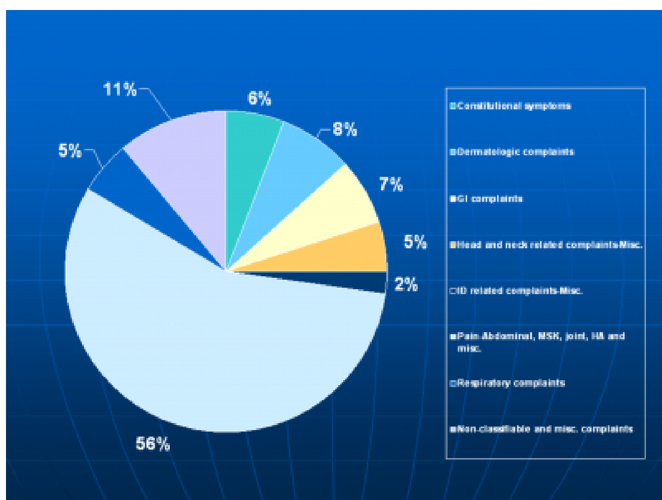
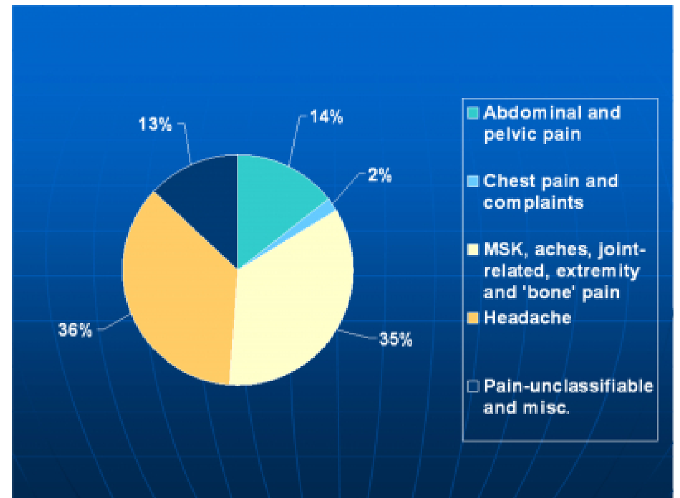


Figure 2

Figure 2: Breakdown of Pain Complaints



DISCUSSION

When planning a medical relief trip to a developing country, it is important to consider the culture, demographics and health needs of the country in question.1 This knowledge has critical implications regarding the make-up of the medical team and in the selection of services and medications. Although Honduras enjoys relative political and economic stability, it is one of the least developed countries in Latin America, with approximately two-thirds of its citizens impoverished and having qualified for debt relief under the World Bank's Heavily Indebted Poor Countries (HIPC) program. The per-capita income is $1,035 with approximately 36% of the population working in agriculture and with various natural resources.3 An understanding of the social and economic infrastructure of Honduras is important in the contemplation of the types of problems that may be encountered in a medical relief setting. Importantly, many Hondurans are faced with poor access to basic health care and a large number are employed performing physically demanding labor. Many of the complaints we encountered were chronic in nature, including complaints consistent with repetitive, multiple use disorders such as osteoarthritis and syndromes of chronic musculoskeletal strain, and these issues could largely be attributed to the types of manual, field labor in which these patients participated. Additionally, many patients had complaints that involved hygiene-related dermatologic disorders and chronic gastrointestinal conditions, as well. Symptoms attributable to GERD, gastritis and dyspepsia were more frequently encountered than those that could be attributed to acute infectious diarrhea, for example. Many of these problems could be

anticipated with an understanding of the country's current social, economic and healthcare framework. Many Hondurans are limited by both their access to and the quality of medical services that are available.4 Access to healthcare in Honduras is tied directly to income levels. Those who can pay high costs benefit, yet for the majority of citizens adequate healthcare is limited. Many government facilities lack equipment and other essential resources. 5 As such, the presence of an international relief group with free services and medicines is likely to induce demand.

The health concerns treated during this medical brigade can be contrasted to those following the 1998 natural disaster of Hurricane Mitch. In October and November of 1998 Hurricane Mitch devastated Honduras, causing country-wide flooding that critically affected the country's infrastructure, including its systems for water supply and sewage management. It is estimated that 75% of the country's population lost access to potable water following the storm. In this setting of poor sanitation and limited access to drinking water communicable infectious illnesses became a principal health issue. For example, in the period following the hurricane the reported number of cases of cholera, leptospirosis and dengue increased.6

One article describes the experiences of two Israeli physicians in post-Mitch Honduras in an emergency care setting at a government hospital in La Ceiba. Of the emergency department visits, 20% were adults. The adult provider was noted to have encountered an “unusually high number of cases of infectious gastrointestinal diseases,” and saw such illnesses as malaria, hookworm and pneumonia, as well. It is important to note that 15% of all patients encountered in this setting were victims of various forms of trauma.7 One Canadian mission to the Aguan valley area of Honduras following Hurricane Mitch encountered cases of respiratory infections, conjunctivitis and cholera, which were attributed to overcrowding and contaminated water supplies following the storm.8 These reports provide anecdotal evidence that in the aftermath of Hurricane Mitch issues related to poor sanitation and communicable infections became principle health concerns in Honduras.

There are numerous limitations in terms of the data collection on which our analysis was based. A wide variety of health professionals at various stages of training were asked to fill the forms out and the “chief complaints” recorded may have included actual clinical impressions and diagnoses. Additionally, communication may have been a limitation in some cases with consequent effects on the quality of information recorded. As well, when multiple complaints were presented all of these may not have been recorded. Errors may have also occurred at the level of classification, as well. In terms of the information presented regarding patients who underwent dental evaluation, some of the collected data did not allow for the full identification of all patients who underwent extractions, and therefore this specific data may not be fully inclusive.

CONCLUSIONS

The successful delivery of medical care via relief missions depends upon understanding and identifying the principle health needs and pressures of the population in question. In our medical brigade, most of the visits were for the evaluation of multiple, chronic, non-urgent issues by a population with limited access to medical care due to poverty. Importantly, medical care focused predominantly on symptom control. Whereas many of the problems following Hurricane Mitch involved more acute, communicable infectious diseases, a large percentage of the complaints detailed herein involved repetitive, chronic use disorders, and chronic dermatologic disorders and gastrointestinal conditions. Although there is overlap between the two groups being contrasted (i.e., the dermatologic and gastrointestinal complaints in our analysis may encompass communicable infectious processes), the rates and acuity of acute infectious processes between the two groups seems to be significantly different. Such distinctions serve to support the idea that the identification of health pressures facing populations for whom medical services will be provided is essential. Medical brigades to a rural Central American country, such as Honduras, during times of peace and not during the aftermath of a natural disaster, should be focused on providing care to a population that is suffering predominantly from chronic diseases. Trip preparation should focus on providing the necessary primary care personnel and necessary pharmaceutical supplies to best address the needs of the population in question.

COMPETING INTERESTS

The authors declare that they have no competing interests.

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CORRESPONDENCE TO

Michael P. Stevens, M.D.

Virginia Commonwealth University,

West Hospital, 1200 E. Broad St.

P.O. Box 981609, Richmond,

VA 23298-0257

References

1. Walsh DS: A framework for short-term humanitarian health care projects. Int Nurs Rev 2004, 51(1):23-26.
2. Siquatepeque Tips http:www.honduras.com/hondurastips/English/siguatepeque.htm
3. Background Note: Honduras http://www.state.gov/r/pa/ei/bgn/1922.htm
4. Consular Information Sheet Honduras http://travel.state.gov/travel/cis_pa_tw/cis/cis_1135.html
5. Honduras http://www.uscis.gov/graphics/services/asylum/ric/documentation/Honduras1.htm
6. No authors listed: Impact of Hurricane Mitch on Central America. Epidemiol Bull 1998, 19(4):1-13.
7. Waisman Y: Integration of foreign and local medical staff in a disaster area: the Honduras and El Salvador experiences. Eur J Emerg Med 2003, 10(2):124-129.
8. Sibbald B: Canada's "Disasters-R-Us" medical platoon a hit in Honduras. CMAJ 1999, 160(3): 391-392.

Author Information

Michael P. Stevens, M.D.
Virginia Commonwealth University

Gonzalo Bearman, M.D., M.P.H.
Virginia Commonwealth University