

Responding to the 2014 West African Ebola Outbreak From Wisconsin

Vijay Aswani, MD, PhD

The 2014 West Africa Ebola epidemic was the largest in history. As of July 22, 2015, Wisconsin had monitored 170 travelers from countries in which Ebola was circulating. Of those, only 5 (including this author) were health care providers. The rest traveled for a variety of reasons—business, school, mission trips, as non-governmental organization (NGO) workers, and simply to visit family.¹ Coincidentally, all 5 of the health care providers from the state—1 physician, 1 physician assistant/midwife, and 3 nurses—served as short-term clinicians with Partners In Health in their Ebola response.²

A Personal Journey

When I first heard of the Ebola outbreak in West Africa, I began looking for ways to go. I felt that I could help care for patients and be of service. I was moved to go for several reasons: I grew up in West Africa—I was born in Nigeria and lived in Monrovia, Liberia until age 10—and I was appalled by the death and fear of Ebola, unexpectedly, even by people in health care. When a building is on fire, most people run out—but firefighters, trained and prepared, go in. I felt that as a physician, I should be going to rather than running away from a disease. By around October 2014, various professional

• • •

Corresponding Author: Vijay Aswani, MD, Department of Internal Medicine and Pediatrics, Marshfield Clinic, 1000 N Oak Ave, Marshfield, WI 54449; phone 715.387.5600; fax 715.389.3322; e-mail aswani.vijay@marshfieldclinic.org.



Vijay Aswani, MD, PhD, dons Personal Protective Equipment (PPE)—except the boots—during World Health Organization (WHO) training in Freetown, Sierra Leone.

societies (American College of Physicians, American Academy of Pediatrics, United States Agency for International Development) had put up links on their websites where one could volunteer.³

Partners in Health (PIH) contacted me regarding an opportunity to work as a short-term clinician in Sierra Leone as part of their Ebola Outbreak Response. PIH paid its short-term clinicians a salary for the period we worked and the 3-week quarantine period that followed. They also provided traveler's insur-

ance and ensured a medical evacuation if we contracted Ebola or anything else for which better treatment could be provided in the United States.

One of the first questions everyone at work asked me when I announced my interest was, "What does your wife think?" My wife is an intelligent, informed woman with a strong sense of social justice. She had volunteered for a year in college to go to Croatia after the war and help relocate refugees. She was very supportive.

My employer was very empathetic and applauded my willingness to go to West Africa and help. However, since it involved a 9-week absence (6 weeks in country with 3 weeks of subsequent quarantine), it was difficult to work out leave for that long. My options were limited, and I resigned my position and hoped to be rehired upon return. (My employer offered me a rehire contract to sign before I left.) In order to have health insurance coverage for my family while I was off work in the States, I paid for COBRA.

After a week of training at PIH headquarters in Boston and a few days additional training by the World Health Organization (WHO) in Freetown, Sierra Leone, I worked for 2 weeks in an Ebola Community Care Center in the Kono district of Sierra Leone and then for the remaining time in an Ebola Treatment Center in Port Loko.

Working in an Ebola Treatment Unit (ETU) was not unlike working in a hospital here: we worked in round-the-clock 8-hour shifts, had sign-outs, and rounded on our patients



Above: The Community Care Center for holding Ebola patients in Kono, Sierra Leone.

Left: The Ebola Treatment Unit in Port Loko, Sierra Leone.

twice each shift. We started the shift with a report from the outgoing team on admissions, deaths, and current status of our patients. Patients were divided into a suspect ward (those with Ebola-like symptoms but not yet tested or whose test results were not back yet) and a confirmed ward (those whose reverse transcription polymerase chain reaction [RT-PCR] results confirmed Ebola virus disease [EVD]). The suspect ward was divided into “dry” and “wet” patients. Wet meant that the patients had vomiting, diarrhea, urine or stool incontinence, and/or bleeding. Before going into the high-risk zone (the areas where patients were), we prepared our medications, gathered supplies, and divvied up the tasks and patients.

The time we could spend in the high-risk zones was limited to anywhere from 45 to 90 minutes depending on the heat index that day. Working in full protective personal equipment (PPE) was exhausting and led to dehydration quite quickly, so vigorous hydration was necessary before and after working in the high-risk zone. Our work in the high-risk zone consisted of administering oral medications (antimalarials, antibiotics, analgesics, and antipyretics) and administering intravenous (IV) fluids (vigorous IV hydration is a main-

stay of EVD that produces shock). Assessing patients was made challenging by the fact that we could not use stethoscopes (since our ears were covered by PPE). Starting IVs also was challenging; finding veins in dehydrated African patients meant relying on feel rather than visual landmarks, and we were wearing 2 to 3 pairs of gloves, a facemask, and a face shield that often fogged up with sweat and humidity from our breath. In some cases, especially with children, we had to use intraosseous lines. Children were often scared and sought to be held, cuddled, and comforted, which was difficult in full PPE during rounds. One flailing child’s hand knocked my face mask off as I tried to hold him.

Patients sometimes died between times when there was a caregiver in the high-risk zone, and we would have to remove the bodies from the wards. Others died while we were providing care. Making the most use of our limited time in PPE with the limited number of caregivers led to some difficult triage situations. We had a debriefing meeting once a week and spent our time away from the ETU either sleeping, getting some exercise, or trying to connect with family back home.

The experience was intense; there was a lot of death and some saves. On our last day, we

visited the Port Loko graveyard where most of the Ebola patients were buried. I was moved by the sight of the graves of children and young people there. To me there is no greater reason to invest in research on Ebola or to respond to the epidemic with all we can.

I came back to the United States in early March. After going through immigration at Newark,⁴ I was walked back to an office where representatives of the Centers for Disease Control and Prevention (CDC) and the US Public Health Service screened me for Ebola with a temperature check and a symptoms checklist. I was given an Ebola Care Kit, which included sheets to record my temperature and symptoms for the next 21 days, a prepaid cell-phone, and information on the monitoring program. I was monitored through the Marathon County Public Health Department, whose staff was polite, pleasant, and very respectful of my privacy. They thanked me for my service, and acquainted me with the details of the home quarantine and monitoring program. In the mornings, I connected with them via a secure iPad video application to take my temperature and show them the reading. In the evenings, I was contacted by phone and reported my temperature and any symptoms I did or did not have. I was asked to limit my movements



Graves in the Port Loko Ebola Graveyard.

and keep a roster of anyone who visited the home.

I returned to work as a physician on March 23, 2015, after being cleared by the public health department. I was grateful for the quarantine period in one sense: it gave me time to process some of what I had experienced. Patients and colleagues asked about my experience and I would find myself tearing up when talking about some of what I saw and lived through. I presented a grand rounds at my institution on May 29, 2015 to inform and educate while sharing my personal experience with Ebola.⁵ Response to my having worked with Ebola in West Africa was unanimously one of gratitude and some admiration.

I would encourage more health care providers to respond! Doing so will build expertise dealing with Ebola and other tropical diseases through the clinical exposure to cases in the course of the work, which will be useful when they return.

I had to resign my position to take on the work of being a short-term clinician, which involved some financial loss and upheaval in my job. I missed being away from my family for 6 weeks and then being in quarantine for 3 more weeks. However, I had the adventure of a lifetime and learned lessons in medicine, ethics, public health, and life that I do not think I could have learned elsewhere. I would certainly do it again.

REFERENCES

1. James Kazmierczak, DVM, State Public Health Veterinarian, Wisconsin Division of Public Health [e-mail communication]. July 22, 2015.
2. Ebola. Partners in Health website. <http://www.pih.org/priority-programs/ebola/>. Accessed August 24, 2015.
3. Medical Volunteers. USAID website. <http://www.usaid.gov/ebola/volunteers>. Accessed August 24, 2015.
4. Centers for Disease Control and Prevention. Enhanced Ebola Screening to Start at Five US Airports and New Tracking Program for all People Entering US from Ebola-affected Countries [press release]. <http://www.cdc.gov/media/releases/2014/p1008-ebola-screening.html>. Accessed August 24, 2015.
5. Aswani V. Ebola Grand Rounds Handout with more information. <http://vijayaswani.blogspot.com/2015/05/ebola-grand-rounds-handout-with-more.html>. Accessed August 24, 2015.

PHYSICIANS

SERVE YOUR COMMUNITY AND YOUR COUNTRY WHILE TAKING ADVANTAGE OF WORLD-CLASS BENEFITS



Physicians serving part-time in the Army National Guard are eligible for the following benefits:

- ~Up to \$240,000 Student Loan repayment
- ~Up to \$25,000/year in Special "bonus" Pay
- ~Up to \$2500/year CME Reimbursement
- ~Low Cost Health, Dental, and Life Insurance
- ~Exclusive Service Member Privileges



Contact CPT Cheryl Shefchik for more information
cheryl.l.shefchik.mil@mail.mil | (608) 242-3172

advancing the art & science of medicine in the midwest

WMJ

WMJ (ISSN 1098-1861) is published through a collaboration between The Medical College of Wisconsin and The University of Wisconsin School of Medicine and Public Health. The mission of *WMJ* is to provide an opportunity to publish original research, case reports, review articles, and essays about current medical and public health issues.

© 2015 Board of Regents of the University of Wisconsin System and The Medical College of Wisconsin, Inc.

Visit www.wmjonline.org to learn more.