Serving HIV/AIDS Patients in Rural Southeastern Liberia with Tiyatien Health, Inc.
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OVERVIEW OF ELECTIVE

Daily, 6800 people are infected with HIV, and more than five thousand die from this disease. In sub-Saharan Africa, AIDS continues to be the leading cause of death. Yet, recent studies reveal that nearly half of HIV-infected sub-Saharan Africans are lost-to-follow-up or die after two years of beginning antiretroviral treatment. This scenario is compounded in Liberia where war-induced devastation and inadequate human resources result in poor outcomes for HIV/AIDS patients. In response, Tiyatien Health, a 501(c)3 organization, working in southeastern Liberia where HIV prevalence is estimated to be the highest in the country, partnered with the Liberian Ministry of Health to create Liberia’s first comprehensive, community-based HIV treatment program called the HIV Equity Initiative (HEI).

I worked with Tiyatien Health’s Liberia Team to provide inpatient and outpatient medical care to HIV/AIDS patients enrolled in the HEI Clinic. I also rounded daily on the inpatient male, female, and pediatrics wards at Martha Tubman Memorial Hospital, a seventy-bed government hospital. Additionally, I collected data for my research regarding whether the use of comprehensive, community-based HIV care, delivered by specially trained community health workers (called accompaniers), coupled with transportation and food support, improves the likelihood of patient retention and survival in southeastern Liberia. I also collected data on health outcomes, including nutritional status and number of hospitalizations, to identify whether patients with accompaniers have better health outcomes than patients without accompaniers. In addition to clinical and research responsibilities, I also assisted in writing grant proposals for Tiyatien Health and conducted a needs assessment in Fish Town, Liberia for Tiyatien Health’s possible expansion into this area.

IMPORTANT OUTCOMES

Several important outcomes resulted from my two months in Zwedru, Liberia:

Clinical
The most common reasons for admission at Martha Tubman Memorial Hospital were the following: new HIV/AIDS diagnosis or complications of HIV/AIDS; tuberculosis; malaria; and malnutrition. Complications of chronic diseases were less seen in the hospital. The hospital had no radiology capacity and only the following available labs: hemoglobin, Paracheck, malaria smear, urinalysis, urine microscopic study, urine pregnancy tests, AFB smears, and HIV test. Due to limited resources, one important outcome from my clinical experience in Zwedru was that I had to rely on physical
examination skills much more than I would have in the United States. I also had to learn to work with limited diagnostic testing and medications.

Additionally, I also worked at Tiyatien Health’s HIV Equity Initiative (HEI) Clinic, where I provided outpatient care to HIV/AIDS patients. In this setting, I managed antiretroviral therapy, addressed any general medical issues as well as acute illnesses, and performed HIV counseling and adherence counseling. I also admitted patients to the general medicine wards as needed from clinic.

While working in the hospital and clinic, I noted that the Tuberculosis (TB) Clinic and the HEI Clinic did not have an adequate system to refer each clinic’s patients to the other for further testing. Patients with tuberculosis should be immediately referred to HIV Counseling and Testing and vice versa; however, this system had collapsed a few years ago, and now there is little way to ensure that testing is occurring. While in Zwedru, I worked with the TB Clinic, the hospital laboratory, and the HEI Clinic to start implementing a system so that all TB patients would get referred to HEI Clinic for HIV Counseling and Testing. It is my hope that this system will allow greater identification of co-infection in susceptible patients.

Research
Much of my time in Zwedru was spent collecting data for my study entitled, “The Effect of Community-based Care on HIV Treatment Outcomes in Southeast Liberia.” I reviewed two hundred HEI Clinic patients’ medical records. These patients had enrolled in care from March 2007 through September 2009. Preliminary data appears to demonstrate that those with accommoders are less likely to be lost to follow up; however, data is limited by poor record keeping by the HEI Clinic and Martha Tubman Memorial Hospital. Health outcomes data has yet to be analyzed, but again, this data is limited by poor records.

Health Care Systems Management
During this international health elective, Tiyatien Health was actively working to expand its clinical staff as well as to identify another clinical site for HIV/AIDS programmatic activity. Due to my clinical background, I assisted Tiyatien Health’s Liberia Team in the recruitment and hiring process of clinical staff. I assisted in drafting job descriptions for Zwedru-based positions, including a clinical nurse, physician assistant, and medical director. I reviewed applications and interviewed candidates, which resulted in the hiring of a physician assistant as well as the impending hiring of a new Liberian Medical Director for Tiyatien Health. The clinical nurse position is still being recruited.

As stated above, I assisted in identifying that active tuberculosis patients at the hospital that were not being adequately referred to HIV Counseling and Testing. One of the possible outcomes is that another HIV Counselor will be hired or that a TB Clinic employee will be trained to perform counseling and testing. The hospital, HEI Clinic, and Tuberculosis clinic are currently attempting to work to find a solution.

A major outcome included the creation of a database / electronic medical record for the HIV Equity Initiative Clinic. Currently, the Clinic relies on paper charts that are easily lost or missing portions of the medical record. I assisted in the creation and testing of a
new database / electronic medical record system. The implementation of this system will likely occur this summer 2009. In the meantime, I will continue to work on this database while in the United States in hopes that it may be operational in the next few months.

Lastly, I traveled to Fish Town in River Gee County to perform a needs assessment for Tiyatien Health. The purposes of this needs assessment were to identify whether Fish Town could benefit from Tiyatien Health’s expansion into this location and what specific services Tiyatien Health could provide. Tiyatien Health’s Program Coordinator and I spent one day in Fish Town meeting with the County Health Team as well as potential partners, including international agencies like the United Nations Military and local non-governmental organizations. Upon completion of this site visit, the Program Coordinator and I wrote a needs assessment and made formal recommendations on next steps and strategy on entering Fish Town. Using our recommendations, Tiyatien Health is currently pursuing grants for expansion into Fish Town with a focus on providing HIV/AIDS services to this community.

Medical Education and Training

Unfortunately, medical education and training is relatively poor in Liberia. Currently, the medical school is not accredited, and there are only about twenty Liberian doctors in the country. During my time in Zwedru, I taught physician assistants, nurses, and nursing students “on-the-fly” on inpatient rounds at Martha Tubman Memorial Hospital. The nurses and nursing students now know how to trend vital sounds, how to manage septic shock, and how to identify unconscious patients vs. conscious patients. Additionally, teaching on chronic diseases like congestive heart failure and diabetes was completed using inpatients as examples.

Another important outcome included computer training for the Tiyatien Health staff. Only one staff member currently has access to a computer, and the rest have very little experience with computers. I led twice weekly computer trainings for the staff and taught the basics of Windows, Microsoft Word, and Microsoft PowerPoint.

LESSONS LEARNED

The experience in post-conflict Liberia was simultaneously inspiring, disheartening, frustrating, invigorating, challenging, and exciting. Post-conflict, Liberia’s infrastructure continues to need much improvement. The lack of running water, inadequate food, little electricity, and poor transportation networks continue to hinder the ability of Liberia to rise from the ashes of war. This is felt even more in the rural areas, including Zwedru. In order for the health status of Liberians to improve, the basics of living need to be provided in an equitable, accessible manner.

The medical system in Zwedru and Liberia is also in disarray. Hospitals and health centers across Liberia continue to struggle to employ health professionals. With no accredited medical school in the country, the country will continue to struggle in providing health care for its citizens. While recruiting foreign doctors is helpful, it is not a sustainable solution as many become overworked and leave the country for other places.
positions. In fact, while I was in Zwedru, one of the two physicians at Martha Tubman Memorial Hospital decided to end his contract early and return home to Ethiopia, leaving only the County Health Administrator as the only physician aside from myself and my colleague from Beth Israel Deaconess Medical Center. The root of the problem must be addressed in that the Liberia Ministry of Health must be more aggressive in recruiting Liberian students to the medical field and to provide a sound medical education. As long as the hospitals and clinics continue to rely on ex-patriates as the work force, the health care system will continue to be fragmented with continued turnover of these foreign physicians.

Clinically, I learned that family planning was a significant issue that needs to be further addressed, particularly in the rural areas like Zwedru. It was not uncommon for a female patient to have five children before the age of thirty (if not even twenty-five). I also found that both patients and the clinical staff at the hospital did not understand chronic diseases well. Many patients in Zwedru were diagnosed with hypertension, but did not know that they needed to take their anti-hypertensives daily; instead, they would be admitted to the inpatient service with hypertensive emergency and irreversible damage. This lack of education on chronic diseases is an area that needs to be addressed by the Liberian Ministry of Health, the medical education system, and possibly, even by Tiyatien Health.

In regards to HIV/AIDS, my preliminary data demonstrates that patients with accompaniers are less likely to be lost to follow up. While health outcomes data have yet to be analyzed, I am hopeful that the data will also show that patients with accompaniers have better nutritional status and less hospitalizations.

While Tiyatien Health works to promote HIV/AIDS awareness, there is still much more room for education. Patients and community members still believed that HIV/AIDS is a death sentence and that nothing can be done. Now that antiretroviral therapy is available, we know that this is not true. The stigmatization of HIV/AIDS exists, and patients continue to be afraid to start life-long medication due to the possibility of being “found out.” Continued activities in education and awareness must be a priority, particularly in the rural areas of Southeastern Liberia.

Lastly, I learned most about my own resiliency, my limitations, and my strengths. I learned how to live outside my comfort zone. I learned to diagnose and treat with limited resources. I learned that politics plays a large role in every decision that is made within any and every organization, no matter how large or small. I learned that I am not as flexible as I considered myself to be in that I still could not break from my Western beliefs to accept the Liberian beliefs in some occasions. Most importantly, though, I learned that this will be my career and that this is my passion. This experience solidified my pursuing global health as a career and continuing to work in resource-poor settings through non-governmental organizations.
Martha Tubman Memorial Hospital, Zwedru, Liberia

Martha Tubman Memorial Hospital
An Inventive Use of Lawn Chairs as Wheelchairs

Free Care at Martha Tubman Memorial Hospital
Clinical Staff at Martha Tubman Memorial Hospital

On the Pediatrics Wards
A Patient and Othello, the HIV Equity Initiative Clinic Physician Assistant

Staff Training
HIV Awareness Photography Exhibit

HIV Awareness Skits
In African Dress with a Patient and her Son