**Sanitary Struggles in an Urban Ebola Treatment Centre**

**Background:**

You are a generalist health officer working with a US NGO and you have been sent to their Sierra Leone office to join the emergency response to the Ebola outbreak. When you arrive at your post in Freetown, you are asked to work with a new 20 bed facility that has been built in conjunction with and right next to a long established health clinic. It is in a very crowded urban area but remarkably the facility has a big area around it (perhaps 60m x 60m total) and most of the land is empty. There are some huge rocks behind the facility but on each side and across the street sloping down towards the ocean there are crowded slum-like neighborhoods. Your NGO has fenced-off an area beside the clinic, put up two large tents, and has had 20 EVD patients in treatment for the past two weeks.

 No one has experience doing what they are doing so there is not much you can say when you are told that you need to solve the sanitation issues for the facility. The Red Cross takes care of dead bodies. The piped system and Oxfam seem to be providing enough water (~8,000) liters per day. You just need to address the waste water and the human waste issues. Now there is a small pit just below the tents, about 1m wide, 3 meters long, and 1 meter deep where all the rinse water from the two tents is directed by little canals that someone made with a hoe. The buckets of vomit and feces from the patients get poured into this pit as well or into one of two simple latrines made for the patients. Most of the water used is spray and shower water in an area closer to the government facility than just flows away on the ground but because chlorine spray is used as people are doffing, no one is worried about that.

 Almost all solid waste is burned which is primarily about 20 sets of sheets and other cloth materials and about 80 PPE (Personal Protective Equipment) suits each day. Perhaps 1 or 2 kilograms of plastic materials are also burned per day. The tiny amount of ash & residue and the sharps from the incinerator are also buried in a small pit.

The problems are:

* when it rains, the pit overflows and you can see the wastewater flushing out, crossing the street, and flowing down the dirt road across the street.
* There are flies constantly swarming in and out of the pit.
* neighbors hate the smell when you burn the PPE.

**Question 1:** What will be your priority actions and why. Please have at least three tasks.

While dressed in PPE, workers create ditches to keep most rainwater from reaching the pit, dig a new much bigger and deeper pit just beside the old one. Then you remove the dirt in-between so that the waste from the old pit flows into the new pit and build a tarp cover. You also arrange for staff to spread a scoop of chlorine powder over the pit once an hour in the daylight hours. As soon as you are done, the overflow problem when it rains has stopped, the flies are less numerous, the pit smell is less noticeable, and everyone gives you high marks for solving the waste problems.

Your NGO is so impressed that in the month to come, you and your local 22 year-old out-of-school student partner move on to two other facilities like this one and upgrade the drainage and solid waste infrastructure. By the end of two months, most of the expatriate co-workers you started with are gone, and you are seen regionally as your NGO’s Ebola sanitation officer. Thus, after so much success and appreciation, it comes as some surprise when you are summoned to the Department of Justice and learn that you have been named in a class action civil suit for causing EVD in the neighborhood of your first clinic. The Regional NGO, Imperialism Watch, has named you as being negligent in controlling waste. They have a case location map-by-date PowerPoint presentation that shows the rate of EVD high around the clinic and going down as you move away from that clinic and that most of the cases arose after your revised drainage and pit system was in place. The case accuses you and your NGO of contaminating a wells just 80 meters downhill (and you did not know it was there) and of not controlling fly-borne Ebola.

**Question 2:** How would you assess the merits of this accusation (spend < 5 minutes).

**Question 3:** If either EVD is found in your wells or fly transport to the local households can be measured, would you be likely found negligent under the exact same circumstances in your home town? If so, should you be held to the same standard in Sierra Leone?