

## RHC Case Study 2 Text

### The Sarvo Refugee Influx Part II: *Communicable Diseases Appear in the Ratta Refugee Camps*

Three months have elapsed since the URC began services to refugees in the Ratta camps. In this time, refugees have been moved to the side of the river adjacent to the old Site 1. Two feeding centers have been established. Site visits by consultants drawn from the JHU Refugee Health Care class convinced URC to make provision of adequate water and sanitation at priority. Tables 1 show how this work has gone.

Week of the Emergency	Liters of Water Supplied per Person	Latrine to Population Ratio
1	Unknown	Defecation fields
2	4.0 est	1:500
3	5.2	1:432
4	4.7	1:359
5	7.0	1:405
6	6.5	1:432
7	9.3	1:360
8	11.8	1:296
9	13.1	1:221
10	13.8	1:122
11	14.6	1:86
12	12.9	1:49

*Table 1. Sanitation provision*

Two separate health centers have been established, each with a catchment area of about 6,000. These are staffed by medical assistants and nurses from Kovali and from among the Sarvoland refugees themselves. In addition, there are two expatriate medical officers who deal with administrative issues and see patients referred by medical assistants. The senior medical officer serves as the overall Health Coordinator for the Ratta camps. A referral system using Oketo Catholic Hospital has been established, with UNHCR assisting in the additional costs. HCR has signed a contract with URC for the provision of health services to the Ratta camps for 18 months.

Since the emergency began, there has been a steady influx on new refugees, usually about 250 per week. In the past three weeks, this has accelerated to as many as 150 persons per day. In general, the new arrivals have been in poorer condition than those who arrived at the beginning. They bring stories of deteriorating living conditions and increasing conflict in Sarvoland. They have had to follow a more circuitous route to the border, one in which food and water have been scarce. Estimated camp population is now about 12,000.

Services in the camps have improved greatly since the beginning. However, there is concern about the time necessary to put latrines in place and to provide adequate amounts of water. At times, it has been difficult to keep ahead of the new arrivals. Furthermore, soap supplies have lagged behind in delivery. The most recent food basket calculations have been around 1,850 Kcal, with an SD of 820.

As Health Coordinator, you are now faced with the outbreak of several diseases. Please consider the following circumstances and any predisposing factors related to the previous residence of the refugees or conditions to which the refugees may have been exposed while in transit.

### An Outbreak of Malaria

The refugees in the Ratta camps come from the mountainous area of Camu, adjacent to the border with Kovali. Recently, your clinic staff has expressed their concern to you over the rapidly increasing number of clinical malaria cases. Staff members tell you that although malaria is known to exist in that area, few cases were diagnosed among

refugees during the first weeks after their arrival. Thereafter, the increase has been rapid and the small supply of drugs has not been adequate to treat all suspected cases. The staff of the Ratta health center, which serves the people of Ratta village, tells you that there has also been a rapid increase in the number of cases among the villagers. Clinic staff says they are seeing many refugees among their village patients nowadays. This means they often do not have enough time and drugs to treat all the local cases. At times, the clinic has been forced to close to all cases except malaria and emergencies, and this looks like it will become more common.

In the Oketo hospital, the staff has also seen a large increase in malaria. The hospital laboratory notes that the most common type of malaria is *P. falciparum* (70%), the rest being *P. vivax*. Because of the distance from the camps and control of movement by SPF forces within the camps, the only access to the hospital is by patient transport by the White Fathers. Therefore, these hospitals are not yet overwhelmed. The staff estimated they have sufficient workers and drugs to treat the present case load but no more. Treatment consists of chloroquine for all except severe cases, which receive IV quinine. At present, treatment seems to be effective in 95% of cases.

On returning to the camps, you take a walk around to assess the situation firsthand. You observe piles of uncovered solid trash in several pits dug by the camp's sanitary staff. Through a translator, you talk to some of the refugees. They are worried about the rise in malaria and some are angry at being turned away from the Ratta clinic. When you ask why they go to Ratta rather than the URC clinics, they say that the medical assistants there don't know how to treat malaria as well as those at the Ratta health center. In one hut, you find a febrile old man with an IV line inserted and the fluid bag hanging from a nail on the wall. He tells he got the equipment from the Ratta clinic and one of the local people put the line in for him. He controls the fluid rate himself.

At the URC clinic, the staff is overwhelmed by the number of cases of malaria on top of the other problems. They have a microscope and stains but not the time to take blood smears on all suspected malaria cases. Therefore, they are treating by clinical impression, using chloroquine for all who can swallow, and transferring cases requiring IV therapy. The staff tells you that many of the people buy drugs from the Ratta clinic even though URC supplies drugs free. They have not had time to look into this in more detail. They are also aware that the patients often stop taking the chloroquine when they feel better and either sell the rest or keep it for later.

## Dealing with an Outbreak of Measles

The refugees in the Ratta camps come from the mountainous area of Camu, adjacent to the border with Kovali. They first moved into the Ratta area at the beginning of the rainy season and now number approximately 12,000. Two weeks after the first URC clinic opened, cases of measles began to be noted by the staff, mainly among children of around five years of age. Three days after the first report, the staff at this clinic estimate they have seen 20 cases in total. Many are severe, and so far four deaths have been confirmed. The staff blame this on the poor state of nutrition of the children as well as a concurrent outbreak of malaria, and on-going diarrhea.

It is known that Camu has an active EPI campaign and that the uptake of measles vaccination in Sarvoland before the war was 80 percent. On touring the camp, many of the refugees you meet say that still have their vaccination cards. On questioning, most claim that their children have received at least some immunizations. At the time the URC carried out the initial assessment, there were plans to carry out mass measles immunization. However, several advisors at URC HQ and in the Kovali MOH were felt that the good EPI program in Camu had adequately protected its population; therefore, a mass campaign was not necessary.

## Increase in Suspected Tuberculosis Cases

Medical assistants and nurses from both URC clinics have been noticing an increasing number of adults presenting to the health centers with a productive cough. In some cases, hemoptysis has been associated. On clinical grounds, the associated weight loss and occasional night sweats convinced health workers that they were dealing with a major upswing in tuberculosis cases. The clinic staff think they are seeing about four or five such patients each week. The clinical diagnosis was confirmed when several patients were seen at the Oketo Catholic hospital and cavitary disease was noted on chest film. Because the clinics lacked the personnel and drugs to treat tuberculosis, all cases have been referred to Oketo hospital for management according to host country protocol. The Sisters of Mercy say that among

the refugees referred, there is a much higher proportion of extrapulmonary tuberculosis than they are used to seeing in the local Kovali population. They are particularly struck by the number of pleural effusions they are seeing. The Kovali National Tuberculosis and Leprosy Programme (KNTLP) uses a standard treatment course of two months in hospital on streptomycin, rifampicin, INH, and pyrazinamide (2SHRZ). This is followed by ten months of INH and thiacetazone (10HTH). So far, refugees diagnosed with TB have been registered through the national program and hospitalized in the TB ward of Oketo Catholic Hospital for two months, as is the standard practice. Soon the first of these patients will be discharged for return to Ratta camps to begin the 10-month ambulatory treatment course. Furthermore, hospital administrators have made it clear that they cannot accommodate increased numbers of TB patients; the administrators wish to cease TB diagnosis and treatment for the refugees because they are losing money on each patient. The provincial KNTLP supervisor says she can supply you only streptomycin and INH on a consistent basis.

In response to your sitreps (situation reports), URC headquarters indicates that it hesitates to countenance a TB treatment program, adhering to the MSF policy. It is willing to consider any suggestions from you on why this policy should not apply to the Ratta camps. Particularly, headquarters is fearful about the costs of prolonged treatment. UNHCR says that funds for TB treatment may be available to you if URC headquarters can agree on a proposal.

## Bloody Diarrhea

Diarrhea has been common since medical records began being kept by the URC team (in the third week). Generally, this has been watery diarrhea. At various times, samples were cultured at Oketo Catholic Hospital and the Tataba National Reference Laboratory. None of these samples contained *V. cholera*. In week five, five of the first cases of bloody diarrhea were seen in the URC clinics. These cases were in general, but not exclusively, among newly arriving refugees. As the outbreak grew, the clinics, which were mostly being held in tents, were becoming overwhelmed. As many as 170 persons a day were being seen. Each was given a five-day course of Nalidixic acid. Stool cultures from 28 patients showed infection was due to *Shigella dysenteriae* type one, 16 of which were resistant to nalidixic acid. All were sensitive to fluoroquinolones (Ciprofloxacin, Norfloxacin). Two weeks ago, a generous donation of 14,000 tablets of ciprofloxacin from the Mammon Pharmaceutical Company arrived. Substituting this for nalidixic acid produced an immediate drop in case fatality rates from eight to four percent. So far, there has been little change in incidence. Your staff tells you that ciprofloxacin has become widely available on the open market and clinic staff feel that many patients are not completing their treatment. Health center data seems to suggest that many of the cases are coming from areas of the camps housing new arrivals, or where the poorer refugees are living. Furthermore, the health workers from Ratta health center have come to complain that dysentery is now appearing in Kovali people from the surrounding communities and they hear you have ciprofloxacin, and would you please share with them.