

SCIENCE

Using a Tactic Unseen in a Century, Countries Cordon Off Ebola-Racked Areas

By DONALD G. McNEIL Jr. AUG. 12, 2014

The Ebola outbreak in West Africa is so out of control that governments there have revived a disease-fighting tactic not used in nearly a century: the “cordon sanitaire,” in which a line is drawn around the infected area and no one is allowed out.

Cordons, common in the medieval era of the Black Death, have not been seen since the border between Poland and Russia was closed in 1918 to stop typhus from spreading west. They have the potential to become brutal and inhumane. Centuries ago, in their most extreme form, everyone within the boundaries was left to die or survive, until the outbreak ended.

Plans for the new cordon were announced on Aug. 1 at an emergency meeting in Conakry, Guinea, of the Mano River Union, a regional association of Guinea, Sierra Leone and Liberia, the three countries hardest hit by Ebola, according to Agence France-Presse. The plan was to isolate a triangular area where the three countries meet, separated only by porous borders, and where 70 percent of the cases known at that time had been found.

Troops began closing internal roads in Liberia and Sierra Leone last week. The epidemic began in southern Guinea in December, but new cases there have slowed to a trickle. In the other two countries, the number of new cases is still rapidly rising. As of Monday, the region had seen 1,848 cases and 1,013 deaths,

according to the World Health Organization, although many experts think that the real count is much higher because families in remote villages are avoiding hospitals and hiding victims.

Officials at the health organization and the Centers for Disease Control and Prevention, which have experts advising the countries, say the tactic could help contain the outbreak but want to see it used humanely.

“It might work,” said Dr. Martin S. Cetron, the disease center’s chief quarantine expert. “But it has a lot of potential to go poorly if it’s not done with an ethical approach. Just letting the disease burn out and considering that the price of controlling it — we don’t live in that era anymore. And as soon as cases are under control, one should dial back the restrictions.”

Experts said that any cordon must let food, water and medical care reach those inside, and that the trust of inhabitants must be won through communication with their leaders.

The phrase *cordon sanitaire*, or sanitary barrier, appears to date from 1821, when France sent 30,000 troops into the Pyrenees to stop a lethal fever raging in Spain from crossing the border.

In Sierra Leone, large sections of the Kailahun and Kenema districts, an area the size of Jamaica, have been cut off by military roadblocks. Soldiers check the credentials and take the temperatures of those trying to go in or out. In Liberia, similar restrictions have been imposed north of the capital, Monrovia.

Nigeria is not involved because its small Ebola outbreak is hundreds of miles away. All 10 confirmed cases there are in Lagos, the financial capital, and all are apparently linked to a Liberian-American who arrived there on a flight and later died.

Inside the cordoned area of Sierra Leone and Liberia, alarmed residents have told reporters that they fear starving because food prices are rising. Many farmers have died, and traders who cannot travel cannot earn money.

It is not clear whether plans to deliver food, water and care are underway.

When cordons are imposed, “human rights have to be respected,” said Gregory Hartl, a spokesman for the World Health Organization, which last week declared the outbreak an international public health emergency.

The agency will work with the World Food Program and other agencies to make sure food and supplies get in, he said.

W.H.O. officials attended the Conakry meeting but did not join the Aug. 1 announcement of the planned cordon. They have not opposed it, either.

“It seems like a reflexive movement by the governments to show that they’re doing something, and since they have armies more elaborate than their health care systems, they use the army,” said Dr. William Schaffner, the head of preventive medicine at Vanderbilt University’s medical school.

There have been nearly 20 Ebola outbreaks in Africa since the disease was discovered in 1976, and all previous ones were beaten by the same tactics: Teams of outside health experts, usually from Europe and the United States, flew in, recruited local health workers and set up field hospitals where all known victims were quarantined and treated. The teams also took over burials, disinfecting and bagging bodies. They traced all contacts of known victims and hospitalized any people who fell ill. Health workers protected themselves with gloves, coveralls, masks, bleach spray and the burning of used gear.

This time, however, the outbreak quickly spread among the three contiguous countries, all battered by political dysfunction and civil wars. None had seen the virus before, and the global response was initially slow and inadequate. Protective equipment quickly ran out; leading local doctors fell ill and even died, stirring panic.

Now, experts say, the epidemic is too big to control with the old tactics. Tracing contacts requires many health care workers, because any victim — especially a nurse or a market trader — could have had physical contact with dozens of people.

And health care workers are often fearful of helping people who may have Ebola. It may become necessary, Dr. Cetron suggested, to pay people within the

cordon to report cases and victims' contacts.

Before the modern era of vaccines, antibiotics and infection control, cordons sanitaires were far more common.

As louse-borne typhus swept through post-revolutionary Russia, the victors in World War I closed Poland's eastern border. Travelers wanting to cross had to be interned, bathed, shaved and deloused, and their clothes had to be treated with steam and chemicals.

The most famous voluntary cordon, according to Joseph P. Byrne, a historian at Belmont University in Nashville, was of the English village of Eyam. In 1665, the plague reached it from London, probably in fleas on cloth shipped to a local tailor, the first to die. The village, which had about 350 people, voluntarily cordoned itself off from the spring until November to prevent the plague from spreading to the rest of Derbyshire. Grateful people from other villages left food outside a circle of stones around Eyam. Only a quarter of the village survived, but the plague did not spread.

The United States has its own history of cordons, some with racial overtones. In 1899, a 35-acre area of Honolulu housing its Chinese and Japanese residents was sealed off by the Hawaii National Guard and white vigilantes because of the plague. Workers with outside jobs had to pass through showers. Ultimately, a blaze started by the Fire Department to burn flea-infested buildings got out of control and destroyed much of the district, leaving 8,000 people homeless.

Adam Nossiter contributed reporting from Freetown, Sierra Leone.

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