CDC Developing Guidelines for Wastewater Workers Handling Ebola-Contaminated Waste

By Amena H. Saiyid

Nov. 5 — Hospital waste contaminated with the Ebola virus can be disposed into sanitary sewers without posing a significant risk to wastewater utility workers wearing protective gear, a Centers for Disease Control and Prevention official said Nov. 4, announcing that the CDC will soon unveil guidelines intended to keep those workers safe.

“Transmission only arises from direct contact with the blood and other bodily fluids of a patient,” Matthew Arduino, chief of the CDC Clinical and Environmental Microbiology Branch, said during a Nov. 4 webcast addressing wastewater utility worker safety arising from Ebola-contaminated wastewater.

During the webcast, Arduino previewed key recommendations to be included in interim guidelines the CDC is developing to protect wastewater workers and deactivate the virus in wastewater.

The guidance would be written for workers who perform sewer maintenance, construction workers who repair or replace live sewers, plumbers, and workers who clean portable toilets.

Risk to Treatment Workers Called Low

Arduino emphasized that health-care workers who are directly caring for Ebola patients or those returning from countries affected by the virus were most at risk, while the risk for wastewater utility workers was low.

But wastewater utility workers, particularly those cleaning out sewer lines that may contain Ebola-contaminated waste, and plumbers can minimize exposure by wearing face shields, rubber shoes, rubber gloves and impermeable suits, he said.
The CDC recommends wastewater workers avoid eating or drinking in the vicinity of such waste, or smoking or chewing gum when dealing with such waste. It also advises washing with soap and water after any contact with waste, Arduino said.

Arduino said more detailed guidelines are undergoing an internal clearing process and would be released to the public shortly. He didn't give a date.

Guidelines Based on WHO Recommendations

The guidelines are based on recommendations by the World Health Organization, but will be classified as interim because new data and information about Ebola is becoming available frequently, Arduino said.

While acknowledging that little data is available on the persistence of the virus in wastewater, Arduino encouraged the use of disinfectants, such as bleach and quaternary ammonium compound to deactivate the virus in hospital waste prior to discharging to sewer lines and wastewater treatment plants.

Chris Stacklin, an engineer with the Orange County Sanitation District and chairman of the Water Environment Federation Reuse Committee, said precautionary protocols were necessary because there isn't enough data to track Ebola in wastewater and wastewater treatment systems.

Lawrence Jaworski, interim executive director for the Water Environment Research Foundation, said there is no conclusive evidence linking the spread of the Ebola virus with wastewater, “But there is no evidence not to link it either.”

Jaworski said water groups have been meeting with the Environmental Protection Agency, the National Institutes of Health and the CDC since September to help the CDC develop guidelines.

More Research Needed

Key questions concerning the persistence of the Ebola virus remain unresolved and more research is needed, said Naoko Munakata of the Sanitation Districts of Los Angeles County, who chairs the Water Environment Federation's disinfection and public health committee.

Current information on the survivability of the virus is based on three laboratory studies that looked at the persistence of Ebola under controlled conditions. But how it survives under environmental conditions remains unknown, Munakata said.

She said it was unclear how much disinfectant is needed to deactivate the Ebola virus.
Different hospitals across the country have chosen to treat Ebola-contaminated waste in a variety of ways. According to Arduino, some municipal wastewater utilities have prescribed pretreatment methods, while others have left it up to the hospitals.

The webcast was hosted jointly by the Water Environment Federation and Water Environment Research Foundation. Co-sponsors included the American Water Works Association, the American Metropolitan Water Agencies, the Association of Clean Water Administrators, National Association of Clean Water Agencies and the WateReuse Association.