News

Ebola Update in West Africa

(Prepared by the Section Editor)—The number of weekly new cases of Ebola virus disease in both Guinea and Sierra Leone has increased once more. In the week ending 7 June 2015, there were 16 new cases in Guinea and 15 new cases in Sierra Leone. This reflected a gradual increase in cases since the week ending 24 May 2015. Liberia remains Ebola free. Clearly the Ebola epidemic continues.

Middle East Respiratory Syndrome in South Korea

(Prepared by the Section Editor)—As of 14 June 2015, there are 145 cases of Middle East respiratory syndrome (MERS) in South Korea, with 15 deaths, all related to the original case described in the article below or related to a secondary or tertiary case. What is most important is that this is real-time reporting of the cases and chains of transmission. We presume that there have been fourth-generation cases in the outbreaks in Saudi Arabia, but information on this has been sparse. We also presume that there have been super-spreaders in Saudi Arabia, but again, information on this has been sparse. The presence of super-spreaders in South Korea seems to be obvious. Although the South Korean outbreak appears to suggest the possibility of an increase in the virulence of the virus, isolates (that have been sequenced) indicate that the virus seems not to have changed. The large increase in the number of cases may be due to intensive case finding by the South Koreans, which may be picking up mild or even asymptomatic cases. A great deal of the spread has been attributed to crowding and poor ventilation in the hospitals, as all but the index case, and perhaps his wife, acquired the infection in relationship to a hospital. There are reports that there are multiple patients in each hospital room and that family members, rather than nurses, tend to the patients’ needs and sleep in the rooms. Also, there are limited facilities for adequate infection control, such as single-bed rooms and negative-pressure rooms. Another possibility that must be considered is that South Koreans have a genetic susceptibility to MERS.

Tracing the Path of South Korea’s MERS “Patient Zero”

4 June 2015 (Reuters [Ju-min Park])—Eight days after returning from a trip to the Middle East, a 68-year-old South Korean man developed a cough and fever. He visited 4 health facilities seeking treatment and inadvertently triggered the biggest outbreak of Middle East respiratory syndrome (MERS) outside that region, and what is verging on national panic at home.

Hundreds of schools have locked their gates as the outbreak rekindled fears of a similar coronavirus that caused severe acute respiratory syndrome in 2002, and killed about 800 people as it spread around the world.

The South Korean “index patient” was running a farm equipment company in Bahrain, according to a South Korean official, and had visited the region before returning on 4 May.

More than half of South Korea’s infections have been traced to a hospital in Pyeongtaek city, 65 km (40 miles) southwest of Seoul, where the man shared a room with another patient.

“It appears that more infections took place as he went out of the room for checks, sneezing and coughing in the hall,” said Kim Woo-joo, an infectious disease specialist advising the government.

Others became infected at 3 of the 4 health facilities the man visited, authorities said.

A nurse there said there was a lack of knowledge about the virus when the man was hospitalized. Health officials have said hospital staff had not been aware of the man’s Middle East trip.

When the man was admitted at another hospital, where he was finally diagnosed, he at first only told staff he had visited Bahrain, which is not considered a MERS danger zone, health officials said.

In fact, the man had also been to Saudi Arabia and the United Arab Emirates, the countries with the most MERS cases and most of its approximately 440 fatalities.

The person the index patient shared a room with at the Pyeongtaek hospital contracted MERS, as did that person’s son, who had visited. The son broke voluntary quarantine and travelled to Hong Kong and mainland China, where he was diagnosed with MERS. He is in hospital in China.

The 63-year-old wife of the index patient also contracted the virus, but authorities said her condition had improved.

Authorities believe that other than the index patient, most of the MERS infections in South Korea came from the health facilities the index patient visited.

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Editorial comment. Up to now, there has been no indication that there were super-spreaders of MERS as there had been of severe acute respiratory syndrome. This patient certainly suggests super-spreader status.
Global Health Leaders Ask G7 for Post-Ebola Rapid Response Unit

5 June 2015 (Reuters [Kate Kelland])—Global health leaders will ask G7 leaders to back the creation of a specialist rapid response unit to tackle outbreaks of infectious killer diseases.

The move reflects how the World Health Organization (WHO) in particular was caught unprepared last year by Ebola, which spread through 3 West African countries, has killed 11,000 people, and will not be stamped out before the end of this year.

Jeremy Farrar, director of the Wellcome Trust global health charity, said the unit should come under the WHO, but be free of bureaucracy and able to act independently “in days” when a potentially fatal epidemic begins.

Global health specialists, including Peter Piot, director of the London School of Hygiene and Tropical Medicine and a co-discoverer of the Ebola virus, foresee a rapid response operation that could cost $100–$200 million a year, but Farrar said this paled beside the hundreds of millions being spent on fighting Ebola, and regional economic losses that the World Bank has estimated at around $500 million.

Editorial comment. A great idea, but one unlikely to succeed due to bureaucracy and politics. The money might be better spent in supporting and enabling an existing group such as the Centers for Disease Control and Prevention or Doctors Without Borders.

Outbreaks of Shigella sonnei Infection With Decreased Susceptibility to Azithromycin Among Men Who Have Sex With Men

(MMWR 64: 597–8, 2015)—Increasing rates of shigellosis among adult males, particularly men who have sex with men (MSM), have been documented in the United States, Canada, and Europe, and MSM appear to be at greater risk for infection with shigellae that are not susceptible to ciprofloxacin or azithromycin. Azithromycin is the first-line empiric antimicrobial treatment for shigellosis among children and is a second-line treatment among adults. Isolates collected in 2014 in 2 US cities (Minneapolis-St Paul, Minnesota, and Chicago, Illinois) from outbreaks of shigellosis among MSM displayed highly similar pulsed-field gel electrophoresis (PFGE) patterns and decreased susceptibility to azithromycin (DSA).

In February 2015, the Minnesota Department of Health Public Health Laboratory determined that 14 Shigella sonnei isolates obtained during 13 May–8 December 2014, displayed DSA (minimum inhibitory concentration >16 μg/mL). All 13 isolates (1) were susceptible to nalidixic acid and ciprofloxacin, (2) were resistant to ampicillin and trimethoprim/sulfamethoxazole, (3) displayed DSA, and (4) harbored macrolide resistance genes mphA and ermB. The 14 isolates yielded 5 similar PFGE patterns.

Five were treated with ciprofloxacin, 3 with metronidazole, 1 with azithromycin, and 1 with an unknown antimicrobial agent. Of the 4 remaining patients, 2 were not treated with antimicrobial agents, and 2 had no available treatment information. Eight of 9 with such information self-identified as MSM. Thirteen (93%) had received a diagnosis of sexually transmitted infection at least once during 2012–2015 (chlamydia [16 infections], gonorrhea [10], and syphilis [2]). Six (43%) were infected with human immunodeficiency virus (HIV); 3 had CD4 counts of 467, 516, and 899, respectively, in late 2014.

During 31 July–31 October 2014, the Chicago Department of Public Health detected 23 cases of S. sonnei infection. Among 17 (74%) isolates that underwent PFGE analysis, 10 displayed patterns highly similar to or indistinguishable from patterns in the Minneapolis-St Paul outbreak and are included in this analysis. The Centers for Disease Control and Prevention laboratory performed antimicrobial susceptibility testing on 8 Chicago isolates; all 8 displayed the same antimicrobial susceptibility profile as the Minneapolis-St Paul isolates and harbored mphA and ermB. Seven (88%) patients self-identified as MSM among 8 who provided this information, and 6 (60%) were infected with HIV. Five (50%) patients were hospitalized; HIV infection was not associated with hospitalization (Fisher exact test, P = 0.5).

Editorial comment. This supplements the recent MMWR report of ciprofloxacin resistance in Shigella sonnei (MMWR 64:318–20, 2015).