Epidemiological Characteristics of Ebola Virus Disease for Health Care Providers

Clinical Characteristics	• Sudden disease onset consistent with a non-specific flu-like syndrome: fever, chills, fatigue, myalgia, arthralgia, malaise, headache, and sometimes sore throat. Cough may occur, but it is not a primary feature of this illness (average 8-10 days post-exposure).
	• Frequently, other signs or symptoms approximately 5 days after the initial symptoms:
	  ○ maculopapular erythematous rash on face, neck, trunk and limbs;
	  ○ conjunctival injection
	  ○ gastrointestinal symptoms (e.g. nausea, vomiting, diarrhea, abdominal pain);
	  ○ respiratory symptoms (e.g. cough, chest pain);
	  ○ neurological symptoms (e.g. prostration, confusion).
	• Delayed-onset haemorrhagic manifestations in a third of patients:
	  ○ petechiae, ecchymosis, oozing at vein puncture sites, mucous membranes bleeding (hematemesis, melena, gingival bleeding, epistaxis, hemoptysis).
	• 50% to 90% fatality rate.

Treatment	• Supportive care
Virus Characteristics	• Member of the Filoviridae family, RNA virus with a lipid membrane. • Low infectious dose: 10 virus particles can cause infection. • Immunosuppression following infection. • Impairment of the coagulation system. • Survival time in the environment: several days (in liquid or dried material), with infectivity remaining stable at room temperature or at 4 °C. Can be inactivated by heating for 30 minutes to 60 minutes at 60°C, or boiling for 5 minutes. • Sensitive to disinfectant with a broad spectrum virucide claim and with a Drug Identification Number (DIN) including 3% acetic acid, 1% glutaraldehyde, alcohol-based products, and dilutions (1:10-1:100 for ≥10 minutes) of 5.25% household bleach (sodium hypochlorite), and calcium hypochlorite (bleach powder).
Period of Incubation	• 2 to 21 days, with an average of 4 to 10 days.
Modes of Transmission	• Direct contact (through broken skin or mucous membranes) with the blood, body fluids, secretions or excretions (e.g. stool, vomit, urine, sweat, saliva, sperm, breast milk, tears, etc.) of an infected person (living or deceased). Blood, vomit and feces appear to be the most infectious fluids. Indirect contact, through objects, surfaces, clothing or bedding contaminated by the blood, body fluids, secretions or excretions of an infected person (living or deceased). • Possibly airborne when performing aerosol generating procedures (e.g. intubation, bronchoscopy); although, airborne transmission has never been demonstrated in human cases. • Transmission reported among family members and friends who took care of infected persons or their remains and in staff not wearing appropriate personal protective equipment.
Period of Communicability	• As soon as symptoms appear. • Not contagious during the incubation period, when the patient is asymptomatic. • Contagiousness increases as the disease progresses, particularly with the onset of haemorrhagic manifestations. • Contagious as long as blood, body fluids, secretions or excretions contain the virus. There are documented cases of viral shedding in sperm up to 90 days after illness onset.

Adapted from Ebola Virus Disease: Prevention and Control Measures for Hospitals, Institut National de Santé Publique du Québec, August 2014, http://www.inspq.qc.ca/pdf/publications/1890_Ebola_Prevention_Control_Hospitals.pdf; PHAC, Pathogen Safety Data Sheet Infectious Substances Ebola virus, August 2014, http://www.phac-aspc.gc.ca/lab-bio/res/psds-ftss/ebola-eng.php; PHAC, Interim Guidance - Ebola Virus Disease: Infection Prevention and Control Measures for Borders, Healthcare Settings and Self-Monitoring at Home, September 2014, http://www.phac-aspc.gc.ca/id-mi/vhf-fvh/ebola-ipc-pci-eng.php