Briefing paper – Health Committee

Topic: The issue of controlling the spread of Ebola

Key facts

- **Vaccines to protect against some types of Ebola have been used to control the spread of Ebola in outbreaks. Other vaccines are in development.**
- **Early supportive care with rehydration and the treatment of symptoms improves survival.**
- **The average Ebola case fatality rate is around 50%. Case fatality rates have varied from 25–90% in past outbreaks, depending on circumstances and the response.**
- **Good outbreak control relies on taking many types of actions: care of patients, infection prevention and control, disease surveillance and contact tracing, good laboratory services, safe and dignified burials, and social mobilization.**
- **Community engagement is key to successfully controlling outbreaks.**

Overview

Ebola virus disease (EVD or Ebola) is a rare but severe illness in humans. It is often fatal.

People get infected with Ebola by touching:

- infected animals when preparing, cooking or eating them
- body fluids of an infected person such as saliva, urine, faeces or semen
- things that have the body fluids of an infected person like clothes or sheets.

Ebola enters the body through cuts in the skin or when touching one's eyes, nose or mouth.

Early symptoms include fever, fatigue and headache.

Some types of Ebola can be prevented with vaccines and treated with medicines.

Ebola first appeared in 1976 in 2 simultaneous outbreaks, one in what is now Nzara, South Sudan, and the other in Yambuku, Democratic Republic of the Congo. The latter occurred in a village near the Ebola River, from which the disease takes its name.

Transmission

It is thought that fruit bats of the Pteropodidae family are natural Ebola virus hosts. Ebola is introduced into the human population through close contact with the blood, secretions, organs or other bodily fluids of infected animals such as fruit bats, chimpanzees, gorillas, monkeys, forest antelope or porcupines found ill or dead or in the rainforest.

Ebola then spreads through human-to-human transmission via direct contact (through broken skin or mucous membranes) with:

- blood or body fluids of a person who is sick with or has died from Ebola; and
- objects that have been contaminated with body fluids (like blood, faeces, vomit) from a person sick with Ebola or the body of a person who died from Ebola.

Health-care workers have frequently been infected while treating patients with suspected or confirmed Ebola. This occurs through close contact with patients when infection control precautions are not strictly practiced.

Burial ceremonies that involve direct contact with the body of the deceased can also contribute to the transmission of Ebola.

People remain infectious as long as their blood contains the virus. After recovery, there is the possibility of sexual transmission, which can be reduced with support and information for survivors.

Pregnant women who get acute Ebola and recover from the disease may still carry the virus in breastmilk, or in pregnancy related fluids and tissues.

Symptoms

The symptoms of Ebola infection can be sudden and include fever, fatigue, muscle pain, headache and sore throat. These are followed by vomiting, diarrhoea, rash, and internal and external bleeding.

The time from when someone gets infected to having symptoms is usually from 2 to 21 days. A person with Ebola can only spread the disease once they have symptoms. People can spread Ebola for as long as their body contains the virus, even after they have died.

After recovering from Ebola, some people may have symptoms for two years or longer. These symptoms can include:

- feeling tired
- headache
- muscle and joint pain
- eye pain and vision problems
- weight gain
- belly pain and loss of appetite
- hair loss and skin problems
- trouble sleeping
- memory loss
- hearing loss

- depression and anxiety.

People should speak to a health-care professional if they have:

- symptoms and have been in an area known to have Ebola, or
- been in contact with someone who may have had Ebola.

Treatment

People with symptoms of Ebola should get medical care immediately. Early care improves a person's chances of surviving Ebola.

Treatment includes oral or intravenous fluids and medicines provided in the hospital.

It is not safe to care for people with Ebola at home, because the person may make other people sick. At home, they will not receive the same level of care they can get from professionals.

There is an effective vaccine for the Zaire type of Ebola, which is mostly found in Guinea and the Democratic Republic of the Congo. It is treated with antibodies. These antibody medicines are given intravenously and increase the chances of survival.

Research is ongoing to find vaccines and treatments for other types of Ebola.

For all types of Ebola, supportive treatments save lives and include the following:

- oral or intravenous fluids
- blood transfusions
- medicines for other infections the person may have, such as malaria
- medicines for pain, nausea, vomiting and diarrhoea.

WHO has guidance that outlines the optimized supportive care Ebola patients should receive, from the relevant tests to administer, to managing pain, nutrition and co-infections (such as malaria), and other approaches that put the patient on the best path to recovery.

Prevention and control

People can protect themselves from getting Ebola by:

- washing hands
- avoiding touching the body fluids of people who have, or may have, Ebola
- not touching the bodies of people who have died from Ebola
- getting the Ebola vaccine if they are at risk for the Zaire type of Ebola.

The Ervebo vaccine has been shown to be effective in protecting people from the species Zaire ebolavirus and is recommended by the Strategic Advisory Group of Experts on Immunization as part of a broader set of Ebola outbreak response tools.

WHO prequalifies Ebola vaccine, paving the way for its use in high-risk countries

Good outbreak control relies on applying a package of interventions, including case management, surveillance and contact tracing, a good laboratory service, safe burials and social

mobilisation. Community engagement is key to successfully controlling outbreaks. Raising awareness of risk factors for Ebola infection and protective measures (including vaccination) that individuals can take is an effective way to reduce human transmission. Risk reduction messaging should focus on several factors:

- reducing the risk of wildlife-to-human transmission
- reducing the risk of human-to-human transmission
- outbreak containment measures, including safe and dignified burial of the dead
- reducing the risk of possible sexual transmission
- reducing the risk of transmission from pregnancy related fluids and tissue.

Health-care workers should always take standard precautions when caring for patients, regardless of their presumed diagnosis. These include basic hand hygiene, respiratory hygiene, use of personal protective equipment (to block splashes or other contact with infected materials), safe injection practices and safe burial practices.

Health-care workers caring for patients with suspected or confirmed Ebola virus should apply extra infection control measures to prevent contact with the patient's blood and body fluids and contaminated surfaces or materials such as clothing and bedding.

Laboratory workers are also at risk. Samples taken from humans and animals for investigation of Ebola infection should be handled by trained staff and processed in suitably equipped laboratories.