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Ebola: transmission risks, treatment and prevention

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Ebola or Marburg haemorrhagic fever outbreaks constitute a major public health threat in the Central and West Africa, especially in Kongo, Uganda, Sudan. Of the 2870 Marburg and Ebola cases documented up to date about 9% of Ebola or Marburg victims have been health-care workers.

Ebola transmission risks include:

- wild animal-to-human transmission
- human-to-human transmission in the community through contact
- human-to-human transmission in the community during funerals
- human-to-human transmission through inappropriate use of injection material

Treatment is based on:

- Palliative care: rehydration, maintenance of electrolyte balance, kidney and liver function support.
- Symptomatic treatment: pain-killers, antiemetics against vomiting, anxiolytics to combat anxiety, antibiotics, antimalarial remedies.
- Intensive care: use of oxygen.
- In the event of severe bleeding and if intravenous therapy is on option: transfusion of blood or previously-tested blood components (red blood cells, platelet concentrates, fresh frozen plasma).
- Use of equipment to monitor biochemical and blood values of patients to maintain electrolyte balance.
- Exclusion of products containing salicylates or other nonsteroidal anti-inflammatory drugs as these cause the blood to thin and increase the risk of bleeding.

Severely ill patients must be given symptomatic treatment and intensive care. There is no specific treatment or vaccine for either Ebola or Marburg. Several candidate vaccines are being developed, but it will be several years until they are available for utilization. Similarly, several candidate drugs show promise but their safety and efficacy in humans is not yet known.

Health-care workers have been infected while treating Ebola and Marburg patients, through close contact without correct infection control precautions and inadequate barrier nursing procedures. During Ebola and Marburg outbreaks, only strict compliance with biosafety guidelines can prevent the epidemic from spreading and reduce the number of victims.

These include: appropriate laboratory practices, infection control precautions, barrier nursing procedures, use of personal protective equipment by health-care workers handling patients, disinfection of contaminated objects and areas, safe burials, etc.

Key words: ebola, haemorrhagic fever

