

Coming back home

Step 1

“It’ll all be alright,
I’ll be home tonight
I’m coming back home.”

Ann, a British midwife, is on a plane flying back from Conakry airport after a month working in the Ebola Emergency Aid Team. She is listening to one of her favourite songs but then pulls her earplugs out as they seem to be bothering her. ‘I have a splitting headache and I need to sleep a little, the month’s work has finally caught up with me. Compared to the pace of my work in London I have had an enormous number of deliveries, which all those protective measures against Ebola make even more tiring’.

Q1 – Which of the followings better describes Ann’s risk profile for Ebola?

high, because she is coming from Guinea

high, because she is an healthcare worker involved in invasive procedure in affected countries

low, because she has worked for a short time on the field

low, because she has worked where control measures were implemented

Source: Dossier– Ebola virus disease.

1.4.2 Exposure in healthcare settings

The risk of being exposed to the Ebola virus is higher for healthcare workers or volunteers. They are potentially exposed not only through direct contact with cases but also through contaminated hospital materials, medical waste and diagnostic samples.

Transmission to healthcare workers may occur after close contact with EVD patients in settings where infection control measures were either not in place or not strictly adhered to. The high number of infected healthcare workers indicates that infection control measures have not been successfully implemented.^{20,21}

Anyway, the infection risk is not limited to hospitals that provide care to known EVD cases because infectious cases may initially seek medical attention at any healthcare provider. Furthermore, the risk of exposure in healthcare settings also exists in areas that have not yet reported cases because it is suspected that not all cases of EVD are being detected and reported. While the risk is very low for a consultation requiring non-invasive tests and prescription of oral drugs, it may be increased if invasive procedures are required.

The risk of the exposure resulting in infection depends on the availability and consistent use of Personal Protection Equipment (PPE)

Step 2

Soon after she wakes up and is shivering: she immediately realises her situation is critical, a situation she was already mentally prepared for. ‘No, this is not just me being tired. I must act as we were taught and consider the possible scenario’.

Ann rings for the flight assistant. The plane is half empty and there is nobody in the seat next to Ann’s. The two women speak quietly so that there is little chance others might hear spreading panic on the plane. Ann briefly explains where she has come from and what she has been doing.

‘Did you undergo the exist screening?’ asks the airline hostess.

‘Of course I did’ Ann replies.

Q2 – What happened to Ann confirms what is known from the experience in Conakry airport: exit screening...

is not reliable

cannot detect an incubating passenger

is not performed with an adequate accuracy

has to be associated to physical examination

Source: Dossier– Ebola virus disease.

2.2.3. Importation to Europe

Affected countries are requested to conduct exit screening of all persons at international airports, seaports and major land crossings for unexplained febrile illness consistent with potential Ebola infection. There should be no international travel of Ebola cases or contacts of cases, unless the travel is part of an appropriate medical evacuation.

...

Exit screening could potentially prevent a febrile EVD case from boarding a flight but it would not detect an incubating passenger who has not yet developed fever.

Step 3

‘... but a few hours ago I was not running a high temperature.’

‘I see, it happened to us last week too’

‘And what was the outcome?’ asks Ann who is a little concerned about her condition.

‘In fact the passenger had not informed us of his own free will but I had to assist him when he wasn’t well. In any case it was a false alarm otherwise I wouldn’t be here.’

Q3 – What does the hostess mean with her sentence?

“otherwise, I would be still under monitoring”

“otherwise, all the crew would be on quarantine”

“otherwise, the most of us would be seriously ill”

“otherwise, some of us could be dead”

Source: Dossier– Ebola virus disease.

2.2.3. Importation to Europe

A traveller on-board an airplane may be already ill or become ill during the flight, showing symptoms compatible with EVD. In this situation, the possibility of transmission to co-passengers and crew should be assessed using the ECDC RAGIDA guidelines.

If an investigation concludes that the passenger has symptoms compatible with EVD and was exposed to EVD in the previous 21 days, all passengers and crew who report direct contact, as well as all passengers seated one seat away from the sick person, should be monitored for 21 days. In addition, all passengers, crew members and cleaning staff who had direct contact with the suspected case’s bodily fluids or potentially contaminated fomites such as contaminated clothing, towels, or utensils should be investigated and monitored.

Any person who was exposed to Ebola viruses and develops symptoms while on board a freighter/passenger ship sailing to the EU should be declared in a Maritime Declaration of Health form and in accordance with article 37 of the 2005 International Health Regulations. Affected crew members or passengers should be taken care of appropriately in order to prevent any further spread of the disease.

Step 4

“Otherwise, I would be still under monitoring”

“I know, three long weeks under observation, quite probably in isolation. I am sure I will have to follow the strictest procedures... I had high risk exposure, no doubt... Knowing it is one thing, experiencing it, quite another matter.” Says Ann thinking outloud, knowing that the what awaits her will be more taxing for her.

In the meantime the airline hostess has informed the flight crew and the airport authorities as stated in the International Health Regulations.

On landing she is driven away in an ambulance with all the necessary precautions and taken to a hospital ward equipped for the diagnosis and treatment of EVD. Lab tests indicated she was positive to EVD.

Q4 – According to currently available evidence, which kind of treatment should Ann receive?

new experimental Ebola vaccines

serum from the patient travelling on the previous flight

supportive care with intravenous fluids and balancing electrolytes

second-line antibiotics

Source: Dossier– Ebola virus disease.

2.4 Treatment

As to October 2014, no approved drugs or vaccines against EVD were available.

There is evidence that early and effective treatment of symptoms – like the use of supportive care, in order to prevent dehydration – may significantly reduce the fatality rates and improve the chance of recovery. However, such a timely intervention is challenging due to the difficulties of an effective diagnosis and, in Africa, to the lack of healthcare resources and facilities.

The Centre of Disease Control and Prevention (CDC) listed some basic interventions that, if timely applied, might increase the chances of survival:

- providing intravenous fluids and balancing electrolytes
- maintaining oxygen status and blood pressure
- treating other infections if they occur.

Ann is promptly isolated and provided supportive care with intravenous fluids and balancing electrolytes. Her condition developed as expected, and she got much worse on day 3, so much so that the healthcare staff feared for her life and she was given oxygen. Subsequently Ann improved a little with a slow recovery and at a later stage was completely cured.

In the meantime the members of the flight crew and the passengers that had come in contact with Ann were kept under observation for the regular 21 day period (consistently with contact tracing rules).

Q5 – According to currently available evidence, the risk of Ebola virus spreading in the EU if the recommended precautions and procedures are adopted is:

- none
- high, anyway
- there is no sufficient evidence at the moment
- very low

Source: Dossier– Ebola virus disease.

1.4.3. Importation to Europe

Risk of importation of EVD to the EU will not be eliminated until transmission stops in affected countries. This risk is linked to the number of patients presenting with symptoms and seeking medical attention in the EU. They may arrive while incubating the disease (i.e. without showing symptoms and not being detectable through screening at points of exit or entry) or when sick because they developed symptoms while travelling.

The risk of Ebola viruses spreading from an EVD patient who arrives in the EU as result of a planned medical evacuation is considered extremely low. If a patient show first symptoms after landing in an EU Member State, secondary transmission to family and friends and in healthcare facilities cannot be ruled out. Once the possibility of EVD has been recognised and healthcare providers have taken precautions to stop transmission, the risk of spread is reduced to a minimum.

Decreasing the risk of Ebola virus transmission is dependent on early detection and isolation of cases, and

the early detection and isolation of new EVD cases among their contacts, through contact tracing and monitoring. There is a risk of transmission in the period between the onset of the first symptoms, the recognition of the possibility of EVD by healthcare professionals and the subsequent isolation of the patient. ECDC has published and regularly updates documents to provide guidance on the management of those returning from Ebola affected area and/or having had contacts with EVD cases both there on in the EU.

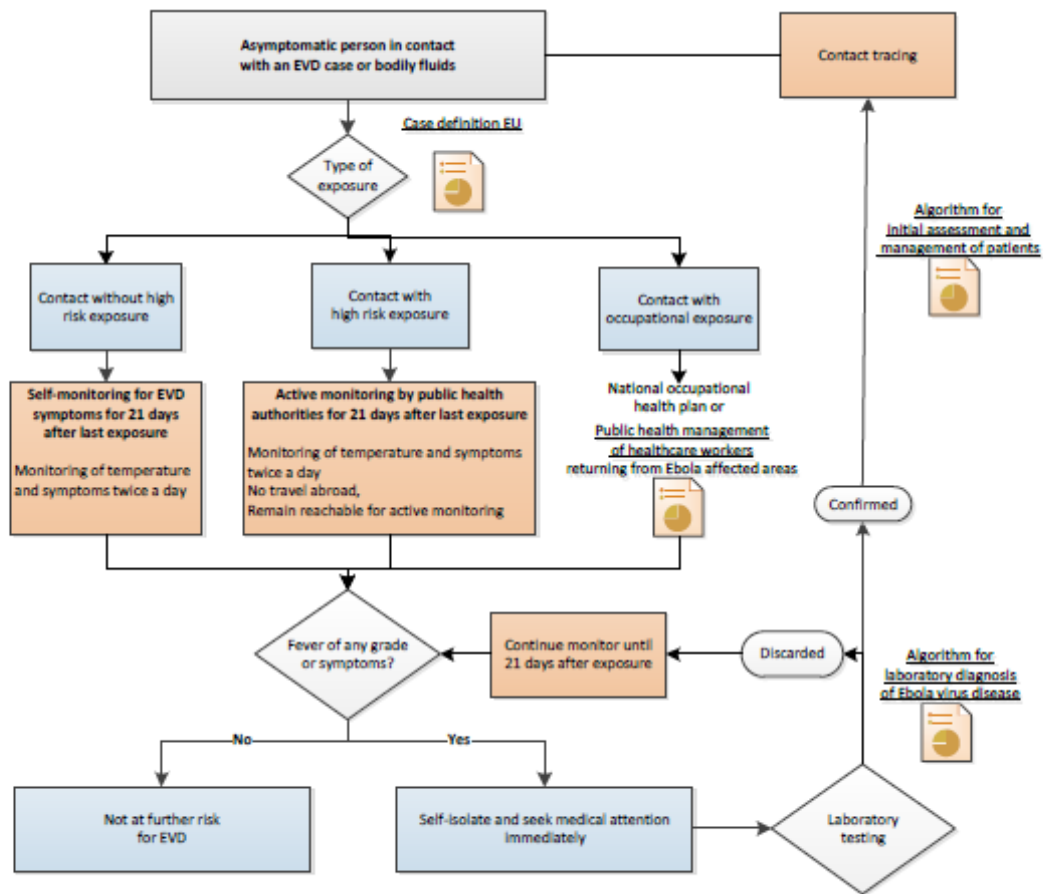
2.2.3. Importation to Europe

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After identification and management of confirmed and/or probable EVD case(s) and potential chain of transmission in EU, effective contact tracing and contact management should reduce the risk of spreading EVD in the EU. The aim is to identify all contacts of each EVD case, assess their level of exposure, actively

monitor their health for the maximum incubation period of 21 days, and isolate, diagnose and treat all contacts who develop symptoms.

ECDC algorithm for EVD contact management



No one developed signs or symptoms during the quarantine thus ruling out any further infection. Given Ann’s prompt information and the fact that the recommended procedures were followed, there were no other at risk contacts with crew members’ family and friends.