On admission to Bichat–Claude-Bernard Hospital, the patient's temperature was 38·4°C, with a blood pressure of 120/70 mm Hg, and an arterial oxygen saturation of 98%. She reported headaches, rhinorrhea, and a dry cough. Malaria diagnostic testing was negative. The white blood cell count was 4400 per mm³, lymphocyte cell count 360 per mm³, and platelet count 144 000 per mm³. The C-reactive protein concentration was 26 mg/L. Liver and renal functions were normal. She was given ceftriaxone 1 g/day and atovaquone-proguanil taken since her arrival in Guinea was continued. Two real-time reverse-transcription PCR tests, one targeting the Ebola virus nucleoprotein,[2] and the other (RealStar filovirus screen kit, Altona Diagnostics, Hamburg, Germany) targeting the L gene of Filoviruses, were done on admission. Both were negative. Ebola was excluded and protective measures stopped on Oct 20, when apyrexia had been stable for 24 h without antipyretic drugs. A nasopharyngeal sample was positive for influenza B virus in a multiplex respiratory pathogen real-time PCR test (FilmArray kit; BioFire, UT, USA). The patient was discharged on Oct 21, 6 days after symptom onset.

This case shows that like other infectious diseases such as malaria, influenza can mimic Ebola. Influenza virus circulates in countries neighbouring those with Ebola. To reduce the number of cases classified as possible Ebola, measures to prevent infectious diseases should more than ever be applied to travellers—particularly malaria prophylaxis and influenza vaccination. These measures are essential for health-care workers and volunteers handling suspected, possible, or confirmed cases of Ebola. Such measures could minimise unnecessary and costly hospitalisation of caregivers, especially in west Africa, where resources are limited.

In countries with a high Ebola incidence, such as Liberia, Médecins Sans Frontières is considering malaria chemoprevention in areas where population density is very high to avoid occurrence of Ebola-like symptoms and their consequences on already stretched health systems.[3] Influenza vaccination might also be considered in these areas to prevent an influenza epidemic.

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Primary and index cases

Scientists—and journalists—are increasingly using the term index case when they actually mean primary case. Both terms are well defined for outbreaks,[1] and should not be confused. The term primary case can only apply to infectious diseases that spread from human to human, and refers to the person who first brings a disease into a group of people—a school class, community, or country. The index case, however, is the patient in an outbreak who is first noticed by the health authorities, and who makes them aware that an outbreak might be emerging. Even outbreaks of disease that is not spread from human to human, such as Legionnaire's disease, might have an index case.

For many outbreaks, the primary case will never be known—the worldwide HIV epidemic is one example. In an outbreak that goes unnoticed, no index case is present, but for all outbreaks that are discovered, there will always be one (or more).

In the present terrible outbreak of Ebola virus disease in west Africa, the child who might have had contact with an infected animal in December last year would be the primary case. The index case would be the first person (or probably group of people) diagnosed with Ebola in the following March, which led to notification to WHO on March 26.

In some instances, the primary case is also the index case, but often they are not the same. The first term is linked to the basic epidemiology of the outbreak, the second rather to the surveillance system and public health action. Both are quite straightforward, and they deserve not to be mixed up.

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Psychotropics and risk of violent crime

Seena Fazel and colleagues have done an impressive epidemiological study (Sept 27, p 1206),[1] which shows that patients with schizophrenia or mania profit from individualised appropriate drugs, not only in highly aggressive outbursts, but also in less aggressive