

World Health Report February 2019



EBOLA | Is Ebola becoming an international concern?



This is the tenth outbreak of Ebola in the Democratic Republic of Congo (DRC), after first being identified in what was then Zaire in 1976. The outbreak has until now been largely contained in the North Kivu region in the north east of the country in the cities of Beni and Mangina. However, it has recently spread to the nearby cities of Katwa and Butembo, which have seen around two thirds of the new cases of the disease over the last two months.

Since the Ebola outbreak was declared in August 2018 there have been 789 confirmed cases and 488 deaths - over 60% of those admitted to the Ebola Treatment Centres (ETCs) have died. This is the second largest outbreak in history but it has remained contained within the DRC despite the high risk that the outbreak will cross into the neighbouring countries of Uganda, Rwanda and South Sudan.

The DRC is currently experiencing other epidemics such as cholera, vaccine-derived poliomyelitis and malaria. It is also in the midst of a long-term humanitarian crisis, and measures to control the outbreak continue to be hampered by the unstable security situation, resistance to accept the prevention measures and the recent general election.

One of the major turning points in any major disease outbreak occurs when the World Health Organisation (WHO) declares the

outbreak to be a "Public Health Emergency of International Concern"- this has not yet been announced. This would not necessarily allow any more funds to be released but would act as a signal to the international community that more widespread resources and a coordinated international response was needed. During the 2014-16 West African Ebola outbreak, the WHO came under heavy criticism for the delay before declaring an international emergency - there were eventually 30,000 cases including 11,000 deaths. For a while there was no clear strategy, no coordinated information programme and in those days there were no drugs or vaccines available to control the disease.

By contrast today, international agencies have at their disposal a vaccine (that remains unlicensed), four experimental treatments for patients as well as a tried and tested containment strategy. Many leading medical and public health experts from the West African Ebola outbreak are in the DRC helping to coordinate efforts to contain and control the outbreak.

As of 17 January 2019, the WHO assessment is that the risk of spread is low at the global level, but remains very high at national and regional levels. Currently, there is no advice to restrict travel to, and trade with, the DRC.

EBOLA | Ebola's lost blood samples...

During the 2014-16 West African epidemic, more than 269,000 blood samples were taken from patients for diagnosis. Many of these samples were destroyed but tens of thousands were exported abroad to governments, health laboratories and pharmaceutical companies for ongoing research. The samples have enormous value to researchers involved in creating new vaccines and medicines.

Attempts by the WHO to create a global inventory have been unsuccessful, largely due to a lack of international cooperation.

There is a growing drive among African scientists and Ebola survivors to recover these samples for their own research - there was no consent given to distribute these blood samples to the numerous research bodies, and in many cases the samples remain linked to the clinical and personal data of the patients. Huge fees are commanded by laboratories able to sell the virus isolate that was originally derived from West African Ebola patients without their consent.

In October 2014, the international community of 116 countries ratified the "Nagoya Protocol". This is an agreement that guides how benefits derived from research on biological materials should be shared with

their countries of origin. Although blood is excluded from the agreement because it is human genetic material, the pathogens contained within it are included. This has frustratingly put all sharing of samples on hold for the time being, while organisations debate how to ensure that benefits flow back to the countries of origin of the samples.

Enormous stakes hang on the application of the protocol because valuable pharmaceutical products can be developed using pathogens collected in human blood. The vaccine against Ebola that is being used right now in the DRC - *rVSV-ZEBOV* - was developed with a strain of Ebola exported from the country in 1995. Another Ebola vaccine, *GamEvac-Combi*, was developed using the genetic information of the virus isolated from blood taken from a patient during the 2014-16 outbreak, but before the Nagoya agreement came into force.

While several studies have shown the vaccine to be safe and protective against the virus, additional research is needed before it can be licensed. Consequently, the WHO reports that it is being used under a ring vaccination strategy with what is known as "compassionate use" to protect persons at highest risk of the Ebola outbreak.



MEASLES | Measles cases continue to rise across Europe

Cases of measles continue to rise across Europe amidst a growing anti-vaccine movement.

It is estimated that measles cases across Europe rose to 60,000 in 2018, double the number of cases in 2017. A growing anti-vaccine movement in Europe, fuelled by social media and anti-establishment populists, is putting lives at risk and may be to blame for measles outbreaks surging to a 20-year high. The same is the case for other vaccines such as HPV for cervical cancer, and influenza vaccine.

During 2018, 34 deaths attributable to measles were reported by the European Surveillance System. The majority were reported from Romania with 22 deaths, with the rest spread between Italy, Greece and France.

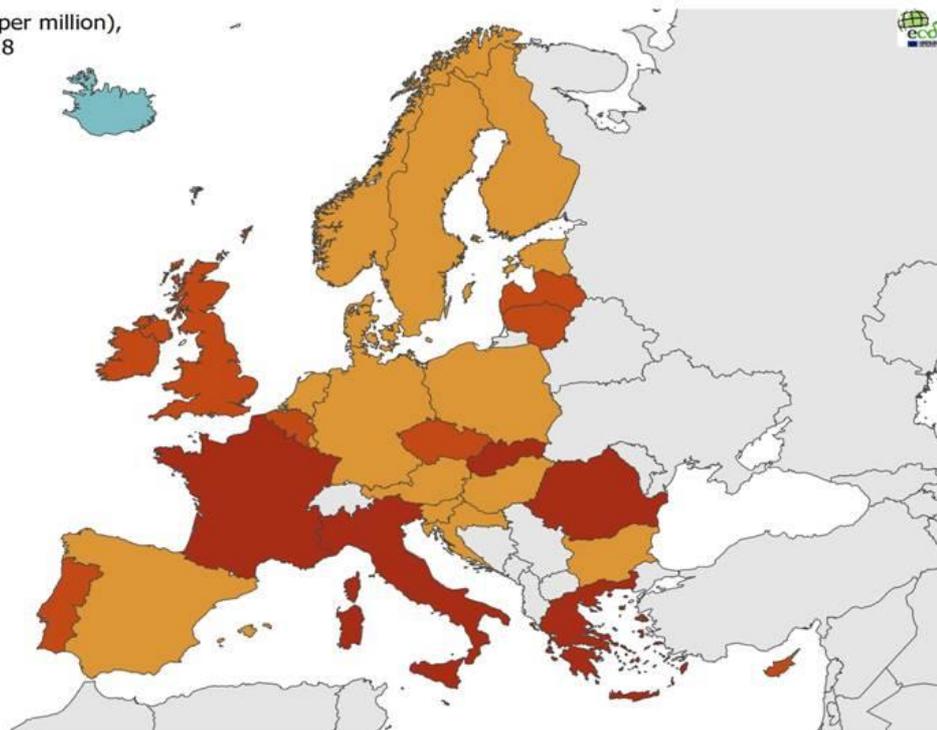
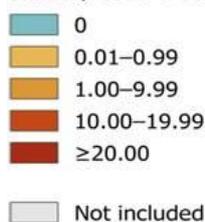
Case numbers of measles continue to rise across Europe. In December 2018 there were reports of 457 cases by 21 countries - nine countries reported no measles. The highest case counts were reported in Poland, Romania, Italy, France and Slovakia. The highest notification rates occurred in children

under one year of age, too young to have received the first dose of measles-containing vaccine. Infants under one year are particularly vulnerable to measles complications and are best protected by 'herd immunity'- this arises when a high percentage of the population is protected through vaccination against a virus or bacteria, making it difficult for a disease to spread because there are so few susceptible people left to infect.

Measles continues to spread across Europe because vaccination coverage in many countries is sub-optimal. The latest estimates of national immunisation coverage for the first and second doses of measles-containing vaccine show that only four EU countries (Hungary, Portugal, Slovakia and Sweden) reported at least 95% vaccination coverage for both doses in 2017- this is the minimum level of coverage required to interrupt measles circulation.

If the elimination goal is to be reached, vaccination coverage for children and adults needs to increase in the majority of European countries.

Notification rate of measles (per million), January 2018–December 2018



Produced 06 Feb 2019 using ECDC map maker: <https://emma.ecdc.europa.eu>

MEASLES | Growing Measles crisis in the Philippines

There have been at least 70 deaths from measles in the Philippines, mainly of children, in the past month. In January, there were 4,302 reported cases of measles in the country, an increase of 122% on the same period last year, which followed a year-on-year increase of 500% of cases between 2017 and 2018.

Measles is a highly contagious disease, but 'herd immunity' (see above) can be achieved if more than 95% of the population is vaccinated. However, in the Philippines, vaccination rates are currently at only 55%, down 15% on last year. This has been blamed mainly on fear-mongering over inoculations, similar to the situation in Europe. UNICEF is assisting both local and national government in an emergency national vaccine drive.

The measles crisis in the Philippines has been mounting since early last year, after a scandal around a dengue vaccination that has made parents hesitant about vaccinating their children. *Dengvaxia*, which was given to

school children across the country, was suspected of increasing the risk to children of contracting a more serious form of the disease. Links were made to the deaths of several children, though nothing has ever been proven.

The outbreak in the Philippines follows an [alarming wave of measles cases worldwide](#), which has been blamed mainly on conspiracies and misinformation around vaccinations, particularly in Europe and the US. Worldwide, there has been a 30% increase in measles cases since 2016, according to the WHO.

Measles can be prevented by having the measles, mumps and rubella (MMR) vaccine. This is given in two doses: the first dose when the child is around 13 months old, and the second dose between three years and school age. Adults and older children can be vaccinated at any age if they haven't been fully vaccinated before.

DENGUE FEVER | to reach 'epidemic' levels in Jamaica

Dengue fever is on course to reach 'epidemic' levels in Jamaica. In the first three weeks of 2019, the Jamaican Health Authority reported a significant increase in cases of dengue fever. They notified the WHO that there have been 339 suspected and confirmed cases, including six deaths - this equals the total number of deaths in 2017 and is already half the number of deaths in 2018, and if this rate continues, this will exceed the epidemic threshold. Other countries in the Caribbean that have also reported increased numbers of dengue cases include Martinique, Guadeloupe and St Marten.

The Jamaican Health Authorities have put in place measures to:

- ▢ control 'vector' (mosquito) breeding areas
- ▢ reduce vector populations
- ▢ enhance surveillance

- ▢ public health messages to educate the population about bite-prevention techniques and to identify symptoms of the disease
- ▢ strengthen lab diagnostic capability.

The *aedes aegypti* mosquito, the primary vector of transmission of dengue, is a [day-biting mosquito](#) that often resides indoors in low areas. Bite prevention measures should include both personal protection and vector control measures as follows:

- ▢ use insecticide in dwellings, along with door and window screens, air conditioning where available, mosquito coils and insecticide-treated bed nets
- ▢ wear permethrin-impregnated clothing that minimises skin exposure, especially during daylight hours, and apply approved repellents at regular intervals.

YELLOW FEVER | Continuing spread south in Brazil

The peak season for yellow fever in Brazil stretches from December through May. Over the last couple of years the areas of yellow fever transmission have spread from the historical areas to the south-east of the country along the Atlantic coast, previously risk-free areas. There were 778 cases, including 262 deaths in 2016-2017, and another significant rise during the 2017–2018 seasonal period, with 1,376 cases, including 483 deaths.

The 2018-2019 season has introduced a further wave of outbreaks towards the south-east and south regions of the country. The virus transmission continues to spread to the states of Paraná, Rio Grande do Sul, and Santa Catarina, all of which are vulnerable areas with low population immunity. These areas were previously unaffected but have ecosystems favourable for yellow fever

transmission and borders with other countries such as Argentina, Paraguay, and Uruguay.

The Brazilian Public Health Department has adopted a targeted immunisation programme with a single dose vaccination scheme for yellow fever, in line with WHO guidelines. Coverage rates in Sao Paulo, Rio de Janeiro and Bahia states have been achieved.

Currently, based on available information, the WHO assesses the overall risk as high at the national level, moderate at the regional level, and low at the global level. Yellow fever can easily be prevented through immunisation of international travellers above nine months of age, provided that vaccination is administered at least 10 days before travel. Yellow fever vaccination is safe, highly effective and provides life-long protection.



PREPARING FOR RIO CARNIVAL...

Rio Carnival is considered the largest carnival in the world, and it is expected that at least one million visitors from around the globe will be travelling to Brazil in the first week of March to experience the vibrant parades and elaborate costumes.

As with all such mass gatherings of people, the most common illnesses are related to:

- ☞ vaccine-preventable diseases
- ☞ gastrointestinal illnesses
- ☞ vector-borne diseases.

The following precautions are recommended for travellers to Brazil:

- ☞ National immunisation schedules to be checked and updated - these include MMR, rubella, diphtheria, tetanus and polio
- ☞ Hepatitis A, typhoid and yellow fever vaccinations are recommended
- ☞ Mosquito bite prevention measures to prevent exposure to dengue, Chikungunya and Zika viruses
- ☞ Malaria prophylaxis to be taken prior to entering malaria regions of Brazil (and continued after leaving the malaria zone for the prescribed period)
- ☞ Good hygiene measures to be taken throughout Brazil to prevent exposure to gastrointestinal illnesses such as typhoid, Hepatitis A and traveller's diarrhoea
- ☞ Safe sex practices and the use of condoms should be promoted in order to avoid sexually transmitted infections such as gonorrhoea, syphilis, HIV and hepatitis B and C
- ☞ Hepatitis B vaccine may be considered if there is the possibility of exposure to infected bodily fluids.

QUICK READ | Anopheles mosquito found in amber dating back 100 million years



Researchers at Oregon State University have published research that shows that the *anopheles* mosquito, the 'vector' that transmits malaria, was present 100 million years ago.

They identified a new genus of mosquito that has characteristics consistent with an early lineage of the *anopheles*, in amber from Myanmar dating back to the mid-Cretaceous period. To put this in context, this dates back to before the Tyrannosaurus Rex rose to prominence.

It was previously thought that the *Plasmodium* protozoa that causes malaria was carried by midge-like insects, but now it becomes more plausible that the *anopheles* mosquito could have been the vector transmitting malaria at least 100 million years ago. The first confirmed discovery of a fossilised mosquito infected with plasmodium was found in a 15-20 million year old fossil from the New World (now the Dominican Republic).

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