



CIDRAP

Center for Infectious Disease Research and Policy
University of Minnesota

CIDRAP Leadership Forum Infectious Disease BRIEFING

April 11th, 2019

HOT TOPICS

- 1. Ebola**
- 2. Influenza**
- 3. Measles**
- 4. Cholera in Yemen & Mozambique**
- 5. Antimicrobial resistance**

UPDATES

- 6. MERS**
- 7. Polio**
- 8. Acute Flaccid Myelitis**
- 9. Zika & Yellow Fever**
- 10. Chronic Wasting Disease (CWD)**
- 11. Foodborne disease**
- 12. Other**

HOT TOPICS

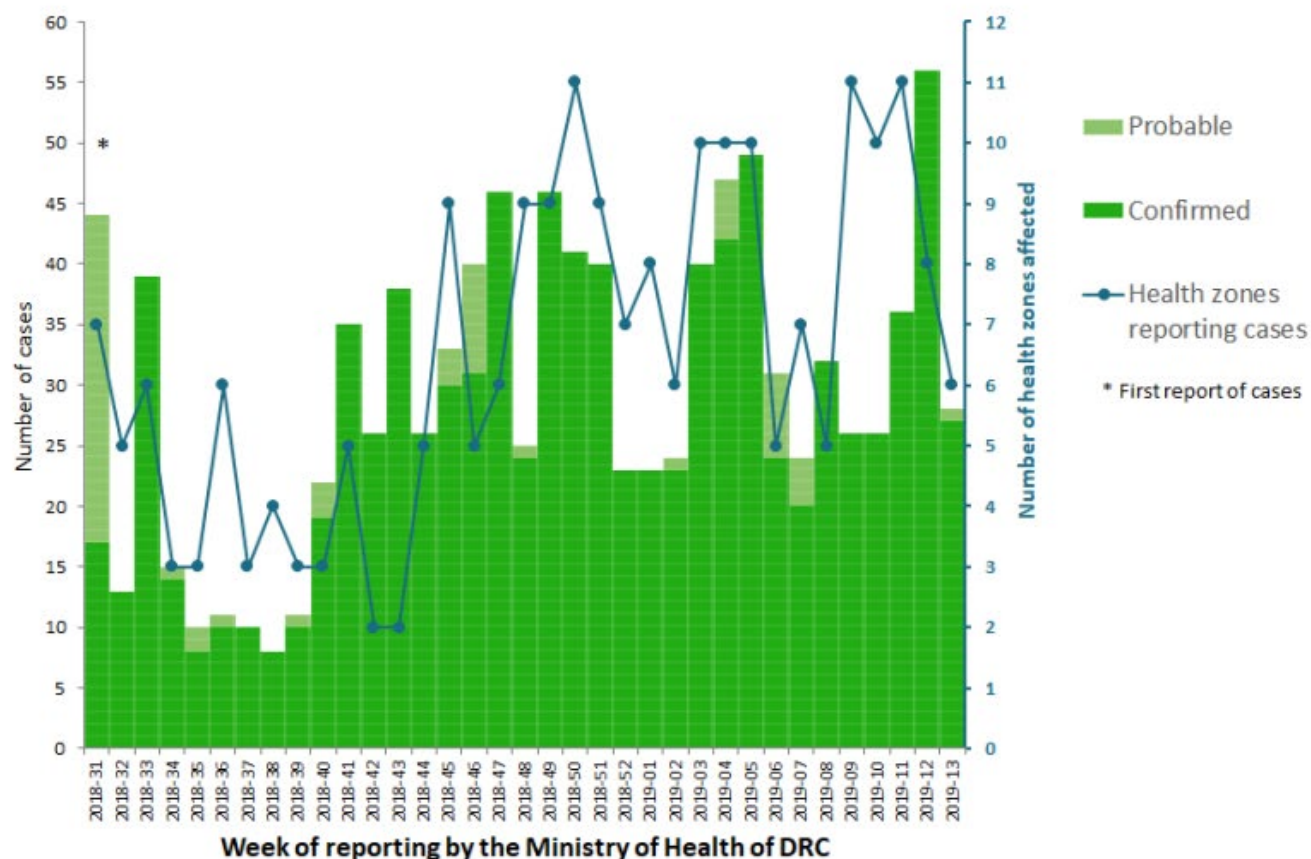
- 1. Ebola**
- 2. Influenza**
- 3. Measles**
- 4. Cholera in Yemen & Mozambique**
- 5. Antimicrobial resistance**

UPDATES

- 6. MERS**
- 7. Polio**
- 8. Acute Flaccid Myelitis**
- 9. Zika & Yellow Fever**
- 10. Chronic Wasting Disease (CWD)**
- 11. Foodborne disease**
- 12. Other**

Distribution of confirmed and probable cases of Ebola Virus Disease and health zones reporting cases, North Kivu and Ituri, Democratic Republic of the Congo, as of 27 March 2019

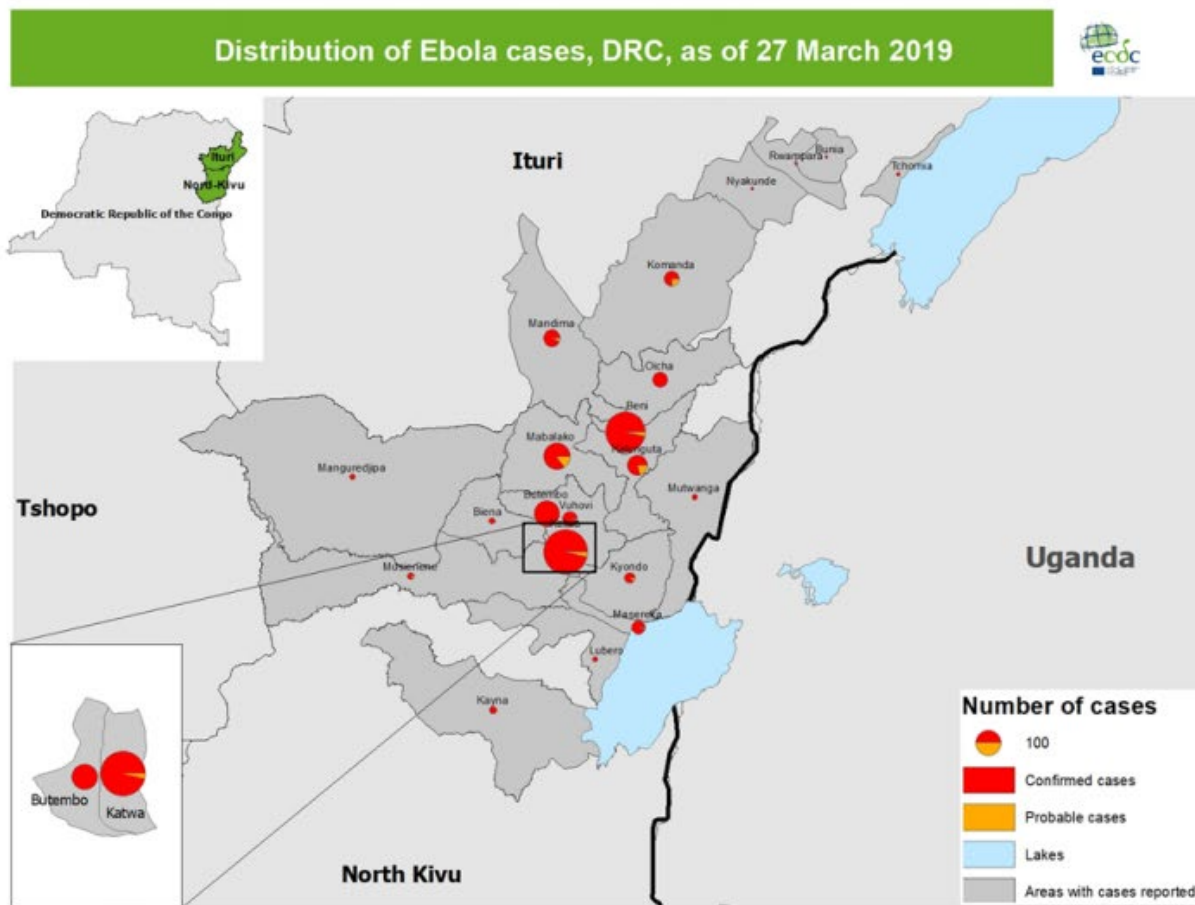
ECDC



The MoH of DRC are currently conducting data cleaning. Thus, these figures are likely to change over coming days as cases are being reclassified.

Geographical distribution of confirmed and probable cases of Ebola virus disease, North Kivu and Ituri Provinces, Democratic Republic of the Congo, as of 27 March 2019

ECDC



Date of production: 29-Mar-19



WHO leader says Ebola outbreak could last 6 more months

Filed Under: **Ebola**; **VHF**

Stephanie Soucheray | News Reporter | CIDRAP News | Nov 14, 2018



Share



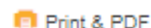
Tweet



LinkedIn



Email



Print & PDF

Peter Salama, MD, deputy-director for emergency preparedness and response for the World Health Organization (WHO), told Reuters that the Ebola outbreak in the eastern edge of the Democratic Republic of the Congo (DRC) could last at least another 6 months.

"It's very hard to predict timeframes in an outbreak as complicated as this with so many variables that are outside our control, but certainly we're planning on at least another six months before we can declare this outbreak over," Salama said yesterday.

The outbreak in North Kivu and Ituri provinces is now more than 100 days old, and the largest Ebola outbreak the DRC has ever seen.

Today, the DRC's ministry of health recorded two more cases and three more deaths since yesterday—all in Beni—bringing the total number of cases to 341 and the total number of deaths to 215. Fifty suspected cases are under investigation.

WHO details cases among newborns



Diego Gurgel, Secom / Flickr cc




Ebola cases surge to 419 as treatment trial launches

Filed Under: **Ebola**; **VHF**


Lisa Schnirring | News Editor | CIDRAP News | Nov 26, 2018

 Share

 Tweet

 LinkedIn

 Email

 Print & PDF

Over the Thanksgiving holiday period and through today, the Democratic Republic of the Congo (DRC) reported 33 more Ebola cases, vaulting the total past 400, as the country's health officials announced the launch of the first clinical trial of experimental drugs to treat the disease.

Meanwhile, in its latest weekly update on the outbreak, the World Health Organization (WHO) said transmission continues in several North Kivu province cities and villages. Currently, the three main hot spots are Kalunguta, located in a security "red zone," Beni, and the Butembo/Katwa area.

The WHO said the Ebola situation in the DRC remains complex and challenging, but it is still confident that the DRC and its partners can successfully contain the outbreak.

Health center exposures, infections in babies



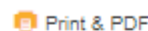
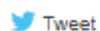
John Poole / Flickr cc



WHO expert: Ebola outbreak to continue at least 6 more months

Filed Under: **Ebola**; **VHF**

Stephanie Soucheray | News Reporter | CIDRAP News | Jan 17, 2019



In an interview with CIDRAP News, Peter Salama, MD, the World Health Organization's (WHO's) deputy director-general for emergency preparedness and response, said the current Ebola outbreak in the Democratic Republic of the Congo (DRC) is likely to continue for at least another 6 months, as DRC officials today confirmed 5 new cases.

"This is the most complicated setting we've ever experienced in order to stop an Ebola outbreak," said Salama. "At a minimum, it will take six further months to stop."

Salama made the sobering prediction alongside some promising developments, including a decrease of cases in Beni, the most active outbreak hot spot, which hasn't seen any new cases in nearly 2 weeks.

"If we can control the outbreak in Beni, we can do it anywhere," Salama said. Now, the focus is on Butembo and Katwa, areas with nearly 1 million people. Other hot spots include Komanda and Oicha, but Salama said case loads are lighter there.



Morgana Wingard, USAID / Flickr cc



Over 70,000 vaccinated against Ebola as outbreak marches on

Filed Under: [Ebola](#); [VHF](#)

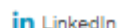
Stephanie Soucheray | News Reporter | CIDRAP News | Jan 31, 2019



Share



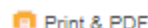
Tweet



LinkedIn



Email



Print & PDF

More than 70,000 people in the Democratic Republic of the Congo (DRC) have now been vaccinated with VSV-EBOV, Merck's unlicensed Ebola vaccine, according to today's update from DRC health officials.

The vaccine recipients span 28 health zones in four provinces of the DRC, mostly in North Kivu and Ituri provinces, where ring vaccination campaigns began last August. As of today, 70,611 people have been vaccinated, including 20,321 in Beni, 16,657 in Katwa, 7,939 in Butembo, 6,008 in Mabalako, 2,656 in Kalunguta, and 2,110 in Komanda.

Though experts have called the campaign a success, the outbreak shows no signs of slowing. Today, the DRC confirmed 7 new cases, bringing the total number to 759, including 468 deaths.

Nearly 200 cases under investigation

Of the seven new cases, six are in Katwa and one is in Butembo. Katwa is the latest hot spot for Ebola activity, where several cases have been confirmed each day in the past week.



© UNICEF / Nybo

Health workers at an Ebola treatment center in Butembo.



Guarded optimism as DRC Ebola outbreak hits 6-month mark

Filed Under: [Ebola](#); [VHF](#)

[Lisa Schnirring](#) | News Editor | [CIDRAP News](#) | Feb 01, 2019



Share



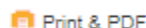
Tweet



LinkedIn



Email



Print & PDF

As the Democratic Republic of the Congo (DRC) reached the 6-month mark since declaring its latest Ebola outbreak, some top World Health Organization (WHO) officials expressed guarded optimism about the battle against the disease, while acknowledging ongoing challenges.

And in the latest developments, the country's health ministry announced four new cases, and the WHO expressed sadness over the death of a member of the outbreak response in Beni, where early indications suggest the man's death was not caused by Ebola or violence.



©Naftalin/UNICEF

On guard against complacency

Speaking at a media briefing in Geneva, Matshidiso Moeti, MD, the WHO's regional director for Africa, praised the WHO staff on the ground and the leadership of the DRC's health ministry. "We can clearly see the strategies that have been successful in controlling the outbreak in some of the affected areas, such as Mangina, Beni, Komanda, and Oicha, though we continue to face flareups in some of these areas and outbreaks in others."



With new cases, Katwa remains epicenter of Ebola outbreak

Filed Under: [Ebola](#)

Stephanie Soucheray | News Reporter | CIDRAP News | Feb 18, 2019



Share



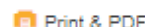
Tweet



LinkedIn



Email



Print & PDF

More cases recorded today and over the weekend underscore that Katwa, a city in the eastern reaches of the Democratic Republic of the Congo (DRC), remains the current epicenter of the 7-month-long Ebola outbreak in North Kivu and Ituri provinces.

On Saturday and Sunday, the DRC's health ministry said there were two new Ebola cases in Katwa, and one new case in Vuhovi. Today, the ministry reported two new cases, one each in Katwa and Butembo.

The new cases raise the outbreak total to 840 cases, of which 775 are confirmed and 65 are probable. There have been 537 deaths during the outbreak, and 185 suspected cases are still under investigation.

Seven deaths were recorded over the last 3 days, including three community deaths in Katwa, Butembo, and Vuhovi. Community deaths, which occur outside of a hospital or Ebola treatment center, raise the risk of Ebola transmission.

Vaccinations pass the 80,000 mark

Since August, a total of 80,989 people in the DRC and neighboring countries have been vaccinated with Merck's candidate VSV-EBOV vaccine, including 20,593 in Katwa.



UNMEER/Martine Perret/ Flickr cc



Ebola under control in Beni amid more cases in other hot spots

Filed Under: **Ebola**; **VHF**

Lisa Schnirring | News Editor | CIDRAP News | Feb 19, 2019

[f Share](#)

[t Tweet](#)

[in LinkedIn](#)

[✉ Email](#)

[🖨 Print & PDF](#)

In a promising development in the former Ebola hot spot of Beni, the Democratic Republic of the Congo (DRC) today announced that a full Ebola incubation period—21 days—have passed without any new cases.

The announcement came as the country's health ministry reported four new cases from the current epicenters, Katwa and Butembo.

Beni news comes with caution about reintroduction risk

In its statement today, the health ministry called the situation in Beni a "major breakthrough," following a peak in cases that occurred there between September and November.

As Ebola raged in Beni during those months, the city was not only the setting for clashes with armed rebel groups, resulting in community protests that temporarily brought the Ebola outbreak response to a halt. As with some other locations, responders in Beni have also grappled with community resistance to actions such as case finding, contact tracing, and vaccination.

The achievement means Ebola activity in Beni is currently under control, and it added that five other health zones have also gone more than 21 days without reporting any new confirmed Ebola cases. They are Kayina, Mandima, Musienene, Nyankunde, and Tchomia.



© UNICEF/Hubbard



More Ebola in DRC as nurse's murder halts efforts in Vuhovi

Filed Under: **Ebola; VHF**

Stephanie Soucheray | News Reporter | CIDRAP News | Feb 21, 2019



Share



Tweet



LinkedIn



Email



Print & PDF

The Ebola outbreak in North Kivu and Ituri provinces of the Democratic Republic of the Congo (DRC) grew by 5 cases today, according to the daily update from the country's ministry of health.

There are now 853 cases (788 confirmed and 65 probable), including 531 deaths, and 177 cases are still under investigation. The new confirmed cases include three in Katwa and one each in Kyondo and Kalunguta.

Also reported today were two community deaths in confirmed cases in Katwa. Community deaths raise the risk of transmission.

The ministry of health also detailed the temporary halting of surveillance activities in Vuhovi, after a nurse from the Bisongo health center was abducted and murdered. Officials said a group of unidentified people carried out the attack.

"Contrary to certain information that has circulated, the patients of the Vuhovi General Reference Hospital have not been hunted, and they continue to be cared for on site," the health ministry said, adding that it is encouraging health workers to resume outbreak activities.



© UNICEF/Nybo





Ebola returns to Beni—survivor transmission suspected

Filed Under: **Ebola**; **VHF**


Lisa Schnirring | News Editor | CIDRAP News | Feb 22, 2019

 Share

 Tweet

 LinkedIn

 Email

 Print & PDF

In a disappointing development today, the Democratic Republic of the Congo (DRC) health ministry reported a new Ebola case in Beni, coming just 2 days after the former outbreak epicenter had reached the hopeful mark of going a full 21-day incubation period without new illness.

Today's announcement also noted five other new cases, including four from two current hot spots.

In other Ebola developments, a research team from the United Kingdom and Guinea that conducted a detailed epidemiological investigation paired with antibody testing in the Guinea community where West Africa's outbreak began found evidence of eight more survivors and two probable deaths from the virus.

Survivor contact suspected

The newly confirmed patient from Beni was apparently exposed to the body fluids of an Ebola survivor, the ministry said in its statement today, adding that a thorough investigation and genetic sequencing is underway to determine the epidemiological links between the cases.



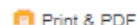
© UNICEF / Naftalin



New cases, torched center spotlight Katwa as Ebola hot zone

Filed Under: [Ebola](#); [VHF](#)

[Stephanie Southeray](#) | [News Reporter](#) | [CIDRAP News](#) | [Feb 25, 2019](#)



Late last night rebel forces set fire to a Doctors Without Borders (MSF) Ebola treatment center in Katwa, forcing MSF to evacuate patients and staff. The attack—coupled with new cases recorded in the city this weekend—have made Katwa the epicenter of the Democratic Republic of the Congo's (DRC's) Ebola outbreak.

"Attacks like this could undo the progress we have made. Despite this setback, we will keep working with the government, partners & communities to end this outbreak," said World Health Organization Director-General Tedros Adhanom Ghebreyesus, PhD, on Twitter earlier this morning.

According to Reuters, MSF announced on Twitter today that the treatment center is closed. Today the ministry of health said a nurse died while trying to escape the fire, but the 10 patients housed in the center had all been safely relocated to other treatment centers.

The attack is the latest setback to Ebola response efforts. Since the outbreak began last August, several rebel groups have attacked both health workers and clinics and spread misinformation about vaccination and Ebola transmission.



UN, Martine Perret / Flickr cc



MSF suspends work at Katwa Ebola center as WHO seeks more support

Filed Under: **Ebola**; **VHF**

Lisa Schnirring | News Editor | CIDRAP News | Feb 26, 2019

[f Share](#)

[Tweet](#)

[in LinkedIn](#)

[Email](#)

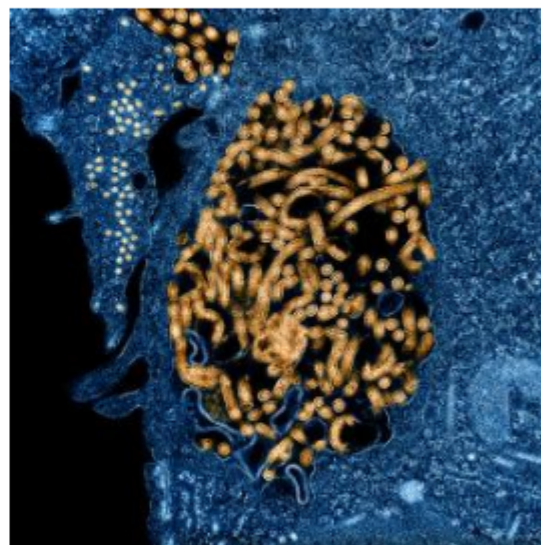
[Print & PDF](#)

Doctors Without Borders (MSF) said today that it has suspended all activities at the Ebola treatment center in Katwa, following a violent attack over the weekend, severely limiting access to care in the Democratic Republic of Congo's (DRC's) main hot spot.

And in other key developments, the DRC's health ministry reported three more cases, and World Health Organization (WHO) Director-General Tedros Adhanom Ghebreyesus, PhD, said \$148 million is urgently needed to support the Ebola response in the DRC. He also warned that without help from the global community, the country is at risk of backsliding in its efforts to contain the disease.

Work needed to build community trust

In a statement, MSF said the attack began at 10 pm on Feb 24 when unidentified assailants began throwing rocks at the 70-bed MSF-managed treatment center, which has admitted 602 patients, including 49 confirmed cases, since December.



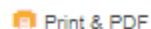
NIAID/ Flickr cc



Unknown forces attack Butembo Ebola treatment center

Filed Under: **Ebola**; **VHF**

Stephanie Soucheray | News Reporter | CIDRAP News | Feb 27, 2019



Today Doctors Without Borders (MSF) said an Ebola treatment center (ETC) in Butembo in the Democratic Republic of the Congo (DRC) was attacked, and reports on social media suggested the building had been set on fire.

"Tonight another deplorable attack on an Ebola treatment facility has taken place, this time in the city of Butembo," said Hugues Robert, MSF emergency desk manager, in a news release. "This follows the attack last week on another MSF Ebola treatment center in nearby Katwa. This attack has not only put the lives of Ebola patients and their families in danger, but also those of MSF and Ministry of Health staff."

Currently there is no word from MSF on the number of fatalities and injuries, if any. MSF's ETC in Katwa was set afire on Feb 24, and MSF was forced to suspend activities there yesterday.

The Butembo ETC is the largest built in the 8 months the DRC has battled an Ebola outbreak in North Kivu and Ituri provinces, with new cases announced daily.



UNMEER, Martine Perret / Flickr cc



MSF pulls staff from DRC Ebola hot spot after attacks

Filed Under: **Ebola**; **VHF**

Lisa Schnirring | News Editor | CIDRAP News | Feb 28, 2019

[f Share](#)

[t Tweet](#)

[in LinkedIn](#)

[Email](#)

[Print & PDF](#)

Attacks on Ebola treatment centers (ETCs) in the Democratic Republic of the Congo's (DRC's) outbreak epicenter continued to reverberate a day after the strike on the Butembo facility, with Doctors Without Borders (MSF) evacuating medical staff from the area amid a report of casualties in security services and efforts to find patients who fled the violence.

Along with fresh details about the attack, the World Health Organization (WHO) called the events deplorable and warned that the aftermath could increase transmission.

MSF suspends patient care in hot spot

MSF said assailants set some of the Butembo compound's facilities and vehicles on fire, and while the blazes were contained and no staff or patients were hurt, teams were forced to stop patient care. The nonprofit the ETC housed 57 patients at the time, including 15 with confirmed Ebola infections. All patients still in the ETC were transferred to a transit center.

Given a similar attack on an MSF facility in Katwa 3 days earlier that killed a caregiver, "MSF has evacuated staff from the area for their safety pending a thorough analysis of the risks associated with continuing to provide medical care there," the organization said in a news release.



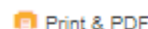
UNMEER, Martine Perret / Flickr cc



Ebola treatment center reopens after arson as cases near 900

Filed Under: **Ebola**; **VHF**

Stephanie Soucheray | News Reporter | CIDRAP News | Mar 04, 2019



The Ebola treatment center (ETC) in Butembo reopened Mar 2, just days after rebel forces set fire to the building, the ministry of health from the Democratic Republic of the Congo (DRC) said in a statement yesterday.

So far 12 patients confirmed to have Ebola have been admitted. Without Doctors Without Borders, who staffed the ETC before the attack, the center is being run by workers from the ministry of health, the World Health Organization (WHO), and UNICEF.

The ministry of health also said construction is set to begin today on a new ETC in Katwa. The former ETC was also targeted by arsons last week.

The DRC also noted today that it has implemented an action plan to end community disruptions to officials' outbreak response efforts.

The developments have occurred against a backdrop of 8 new cases and almost 900 since the outbreak began in August 2018.



UNMEER, Martine Perret / Flickr cc



MSF warns of DRC Ebola response losing upper hand

Filed Under: [Ebola](#); [VHF](#)

[Lisa Schnirring](#) | News Editor | [CIDRAP News](#) | Mar 07, 2019

[f](#) Share

[t](#) Tweet

[in](#) LinkedIn

[e](#) Email

[p](#) Print & PDF

At a press conference in Geneva yesterday, Doctors Without Borders (MSF)—a group with a long history of treating hundreds of patients in Ebola outbreaks—warned that the response in the DRC is losing the upper hand owing to deepening community mistrust.

In other developments, the Democratic Republic of the Congo (DRC) health ministry today reported seven new Ebola cases and responded to concerns about the response, which today included a visit from top World Health Organization (WHO) officials.

MSF: Community grievances increasing

During the briefing, MSF officials said that, since the first of the year, 40% of the newly reported cases are people who died from Ebola in their communities and that in the current epicenter of Katwa and Butembo, 43% of the patients confirmed with the virus in the past 3 weeks have no known links to other cases, a sign of undetected transmission chains, which is bad news.

MSF recently pulled its staff from Kawta and Butembo following violent attacks on its Ebola treatment centers (ETCs), but it has maintained its operations in other parts of North Kivu province and in neighboring Ituri province.



UN Geneva, Violaine Martin / Flickr cc

Joanne Liu, MD, international president of MSF.



New attack, case in high-risk village among latest Ebola perils

Filed Under: [Ebola](#); [VHF](#)

[Lisa Schnirring](#) | News Editor | [CIDRAP News](#) | Mar 11, 2019

[f](#) Share

[t](#) Tweet

[in](#) LinkedIn

[e](#) Email

[p](#) Print & PDF

An armed group 2 days ago struck the same Ebola treatment center in Butembo in the Democratic Republic of the Congo (DRC) that sustained an earlier attack, killing a police officer as the security team repelled the attackers.

Alongside the fresh violence, the DRC health ministry reported five new cases in updates over the weekend and through today, and an outbreak response team made headway tracking a transmission chain in a high-risk village south of Butembo.

Latest attack precedes high-level visit

The health ministry said in its Mar 9 update that early that morning, heavily armed men attempted to attack the Butembo's Ebola treatment center. But officials had been informed of a possible attack and security forces had prepositioned themselves around the treatment center, which helped repel the attackers and save lives.

Officials said a policeman protecting the treatment center died in the gun battle and that several assailants were captured.



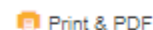
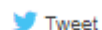
World Bank, Vincent Tremeau / Flickr cc



WHO: Ebola spread in DRC still 'moderate'

Filed Under: **Ebola**; **VHF**

Stephanie Soucheray | News Reporter | CIDRAP News | Mar 12, 2019



Today the Democratic Republic of the Congo (DRC) recorded two new cases and two new deaths in its ongoing Ebola outbreak in North Kivu and Ituri provinces.

The new cases occurred in Mandima and Masereka, and the deaths included a community death in Masereka and a death at an Ebola treatment center in Butembo.

With the latest report, cases have reached 925, of which 860 are confirmed and 65 are probable. In total, there have been 584 deaths, and 170 suspected cases are still under investigation.



World Bank, Vincent Tremeau / Flickr cc

'Constant disruption' slowing response

Today the World Health Organization's (WHO's) African regional office also released its latest update on the outbreak. It includes three reports of violent encounters slowing vaccination campaigns in Katwa, Butembo, and Kalunguta.

"In Kalunguta the vaccination team was temporarily held by an armed group, and vaccination teams in the Kivika area, Katwa were subjected to aggression, with destruction of chairs, tables and tents; vaccination sites in Butembo were also inaccessible due to insecurity," the WHO said.



WHO chief says much larger Ebola outbreak averted

Filed Under: [Ebola](#); [VHF](#)

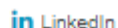
[Stephanie Soucheray](#) | [News Reporter](#) | [CIDRAP News](#) | [Mar 14, 2019](#)



Share



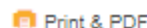
Tweet



LinkedIn



Email



Print & PDF

Today World Health Organization (WHO) Director-General Tedros Adhanom Ghebreyesus, PhD, in a press conference on the Ebola outbreak in the Democratic Republic of the Congo (DRC), said, "We have averted a much larger outbreak, and we will not leave when the outbreak ends."

Tedros, who goes by his first name, said, "We will stay and work with communities and government to stay and provide services for all health needs. This is what the community is asking for."

The press conference came on the heels of Tedros's visit to the DRC last week with Robert Redfield, MD the director of the US Centers for Disease Control and Prevention (CDC). It also comes on a day DRC officials added 5 new cases to the outbreak total and reported new acts of violence.



MONUSCO, Alain Coulibaly / Flickr cc

Community acceptance amid violence

At the start of the visit, Tedros said he spoke with health workers in Butembo who were targeted by violence. Their commitment to staying and fighting the outbreak gave him hope that the people on the ground in the DRC will be able to end the outbreak, and he confirmed that security is the number one challenge facing health workers in the DRC.

Ebola Epidemic in Congo Could Last Another Year, C.D.C. Director Warns

Returning from a trip to the Democratic Republic of Congo, the agency chief also worried that vaccine supplies could run out.

By Denise Grady

March 16, 2019

The Ebola outbreak in the Democratic Republic of Congo is not under control and could continue for another year, Dr. Robert R. Redfield, director of the Centers for Disease Control and Prevention, said in an interview on Friday.

“Let’s not underestimate this outbreak,” he said.

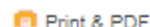
His outlook was less optimistic than that of the director general of the World Health Organization, Dr. Tedros Adhanom Ghebreyesus, who said at a [news conference on Thursday](#) that his goal was to end the outbreak in six months.



DRC: 24 Ebola cases confirmed in past 72 hours

Filed Under: [Ebola](#); [VHF](#)

[Stephanie Soucheray](#) | [News Reporter](#) | [CIDRAP News](#) | [Mar 18, 2019](#)



The Ebola outbreak in the Democratic Republic of the Congo (DRC) grew by 24 cases today and over the weekend, including several case-contacts who refused or delayed vaccination after family members fell ill.

Since Saturday, 8 new cases were reported in Katwa, 6 in Vuhovi, and 5 in Masereka. Butembo, Kyondo, and Kalunguta also reported cases. Twelve new deaths were reported, including eight community deaths.

The new cases bring the outbreak total to 960 cases, including 603 deaths. A total of 172 suspected cases are still under investigation.

As of today, 89,173 people have been vaccinated with Merck's VSV-EBOV, including 22,470 in Katwa, 20,956 in Beni, and 10,972 in Butembo.



World Bank, Vincent Tremeau / Flickr cc

Family cluster in Vuhovi refused vaccination

On Saturday, health officials in the DRC said the cases in Vuhovi likely came from a single family who refused follow-up care and vaccination after a family member contracted the virus.

"Following the last community death in this family, several neighbors and other villagers moved and asked to be vaccinated," health officials said, also noting that eventually the family members were treated at an Ebola treatment center.



Spike in Ebola cases continues in DRC

Filed Under: [Ebola](#); [VHF](#)

[Stephanie Soucheray](#) | [News Reporter](#) | [CIDRAP News](#) | [Mar 20, 2019](#)



Share



Tweet



LinkedIn



Email



Print & PDF

According to the World Health Organization's Ebola dashboard, officials today recorded 12 new Ebola cases in the ongoing outbreak in North Kivu and Ituri provinces in the Democratic Republic of the Congo (DRC).

The cases bring the outbreak's total to 980 cases, including 606 deaths.

The new cases have brought to an end the downward trend mentioned last week in a press conference held by World Health Organization (WHO) Director-General Tedros Adhanom Ghebreyesus, PhD. In mid-March, DRC officials were seeing 25 cases per week, half the number of cases seen in mid-January.

But in the past 5 days, the DRC has recorded 44 cases and several community deaths, which increase the probability of the virus spreading among family members and close contacts.

On Twitter, WHO director of the health emergencies program Mike Ryan, MD, said the increase is likely due, in part, to the security challenges. After violence on Mar 14 in Biena, outbreak response and disease surveillance activities were once again halted.



World Bank, Vincent Tremeau / Flickr cc



Ebola total approaches 1,000 as cases reappear in Beni

Filed Under: [Ebola](#); [VHF](#)

[Lisa Schnirring](#) | News Editor | [CIDRAP News](#) | Mar 21, 2019

[f](#) Share

[t](#) Tweet

[in](#) LinkedIn

[✉](#) Email

[🖨](#) Print & PDF

Continuing a recent surge in new Ebola cases, the Democratic Republic of the Congo's (DRC's) health ministry reported 11 more cases today, including 2 in Beni, an area that had been an epicenter earlier in the outbreak, bringing the outbreak total to 991 cases.

And in its weekly snapshot on the outbreak today, the World Health Organization (WHO) said the recent marked increase in cases that follows many weeks of decline isn't unexpected and partly reflects increased security challenges, especially direct attacks on Ebola treatment centers and pockets of community mistrust—events that bogged down the response for a few days.

DRC officials have logged 55 cases in the past 6 days.

Deaths include baby with unknown exposure

The 11 new cases announced today are in six locations, and all but Beni have reported other recent cases. They include Vuhovi (3), Beni (2), Mandima (2), Butembo (2), and 1 each in Katwa and Masereka.



World Bank, Vincent Tremeau / Flickr cc



Ebola cases pass 1,000 as DRC records 58 cases last week

Filed Under: **Ebola; VHF**

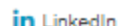
Stephanie Soucheray | News Reporter | CIDRAP News | Mar 25, 2019



Share



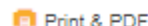
Tweet



LinkedIn



Email



Print & PDF

Over the weekend and through today, the ministry of health of the Democratic Republic of the Congo (DRC) recorded 25 new Ebola cases from towns and cities across North Kivu and Ituri provinces, including two in Beni and one in Lubero. The rest of the cases originated in current hot spots, including Katwa and Butembo.

The spike in cases pushed the outbreak total over the 1,000-case milestone as it enters its eighth month. This is the DRC's 10th and largest Ebola outbreak, and the second biggest in history.

The outbreak now stands at 1,016 cases, of which 951 are confirmed and 64 are probable. A total of 634 deaths have been recorded, and 226 suspected cases are still under investigation.

Call on community to end outbreak

On Sunday, DRC health minister Oly Ilunga Kalenga, MD, issued a statement on the 1,000 case milestone.



World Bank, Vincent Tremeau / Flickr cc



WHO names new Ebola chief in DRC as 7 more cases noted

Filed Under: [Ebola](#); [VHF](#)

[Stephanie Soucheray](#) | [News Reporter](#) | [CIDRAP News](#) | [Mar 27, 2019](#)



Peter Graaff is the new World Health Organization (WHO) special representative for the ongoing Ebola outbreak in the Democratic Republic of the Congo (DRC).

WHO Director-General Tedros Adhanom Ghebreyesus, PhD, appointed Graaff, who previously served as the WHO's director of Ebola emergency response in Liberia and West Africa.

Graaff, a Dutch national, will be based in Kinshasa and will coordinate the outbreak response with both the WHO and the DRC government. During a radio address made from Kinshasa today, Graaff said, "We are talking about 'cases' and 'containment' to use scientific terms, but behind every case there is a person, a family and a community that suffers."

Graaff's appointment comes just days after the DRC hit the 1,000-case mark amid a spike of virus activity.

'Daily challenges'

"Currently, response teams are facing daily challenges in ensuring timely and thorough identification and investigation of all cases amidst a backdrop of sporadic violence from armed groups and pockets of mistrust in some affected communities," the WHO said in a situation report issued yesterday.



World Bank, Vincent Tremeau / Flickr cc



As Ebola rages in DRC, survey highlights wide mistrust

Filed Under: [Ebola](#); [VHF](#)

[Lisa Schnirring](#) | News Editor | [CIDRAP News](#) | Mar 28, 2019

[f](#) Share

[t](#) Tweet

[in](#) LinkedIn

[e](#) Email

[p](#) Print & PDF

The Ebola total in the Democratic Republic of the Congo (DRC) grew by 14 today, amid a fragile security situation in an outbreak region that is still experiencing sporadic violence and pockets of mistrust, according to the latest updates.

In a new research development, a survey of residents of Beni and Butembo that was conducted 1 month after the outbreak was declared found a link between mistrust of institutions and misinformation and fewer efforts to protect against the disease, including accepting vaccination.

In addition, a quarter of respondents questioned whether the disease even exists.

New Katwa cases include health workers

In its latest update today, the DRC's health ministry said 6 of the newly confirmed cases are in Katwa and four in Vuhovi.

Of the new cases in Katwa, two involve health workers who cared for patients in a facility in the Muchanga health area where several confirmed patients have died since Mar 10. In its report yesterday, the ministry said possible nosocomial spread had occurred at the facility, but decontamination—a key step for curbing the spread of the virus—couldn't be carried out due to community refusal.



World Bank, Vincent Tremeau / Flickr cc



DRC Ebola total grows by 15; new antiviral clears hurdle

Filed Under: **Ebola**; **VHF**

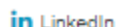
Lisa Schnirring | News Editor | CIDRAP News | Mar 29, 2019



Share



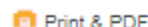
Tweet



LinkedIn



Email



Print & PDF

An ongoing surge of Ebola cases in the Democratic Republic of the Congo (DRC) saw another double-digit rise today, with 15 new cases, the health ministry said in its daily update.

In other developments, a US research team announced yesterday it has received Food and Drug Administration (FDA) clearance to use animal models in its development of remdesivir, one of the experimental treatments being used to treat patients in the DRC outbreak.



World Bank, Vincent Tremeau / Flickr cc

Infections push total to 1,059

All of the 15 newly confirmed cases are from the main epicenters and other smaller hot spots that have recently reported cases. Five are in Vuhovi and 4 in Katwa, and three locations each have 2 cases: Mandima, Oicha, and Beni.

The infections boost the country's overall case total to 1,059, including 993 confirmed and 66 probable cases. Yesterday the DRC confirmed 14 cases, so today's numbers make it the largest 2-day increase in the history of the outbreak.

Health officials are also investigating 225 suspected Ebola cases.



WHO: Butembo, Katwa remain hot spots of Ebola activity

Filed Under: [Ebola](#); [VHF](#)

[Stephanie Soucheray](#) | [News Reporter](#) | [CIDRAP News](#) | [Apr 02, 2019](#)



Share



Tweet



LinkedIn



Email



Print & PDF

As Ebola cases continue to pile up, the World Health Organization (WHO) today reiterated that the outbreak in the Democratic Republic of the Congo (DRC) will be defeated only with local communities at the helm of response efforts.

The message came from Ibrahima-Soce Fall, MD, WHO assistant director-general for emergency response, who held a brief teleconference this morning from Butembo.

With 72 Ebola cases reported last week and 56 in the previous week, March was a low point for responders, as activity spiked and the outbreak topped the 1,000-case milestone.

"But of 21 health zones with Ebola, we have only 13 recorded cases in recent weeks, which shows a kind of geographic limitation to the outbreak," Fall said. "We are continuing [to adapt] our tactics."

Fall said Butembo and Katwa remain the hot spots of virus activity. And the outbreak already approaches 1,100 cases, with 3 new infections noted today.



World Bank, Vincent Tremeau / Flickr cc




DRC Ebola total hits 1,100; study targets secondary spread

Filed Under: **Ebola; VHF**


Lisa Schnirring | News Editor | CIDRAP News | Apr 03, 2019

 Share

 Tweet

 LinkedIn

 Email

 Print & PDF

The Ebola outbreak in the Democratic Republic of the Congo (DRC) grew by 8 cases today, putting the total at 1,100, and in research developments, new findings from Guinea's outbreak shed light on the role of Ebola treatment units in preventing secondary spread.

In addition, another research team described how blood from vaccine trial participants might lead to new antibody treatments.

The new DRC cases are reflected in the World Health Organization (WHO) online Ebola dashboard, which notes that 277 suspected cases are still under investigation. The number of deaths held steady, at 683.

Treatment units tied to fewer infections

To help sift out which risk factors are linked to secondary Ebola spread, a research team from the London School of Hygiene and Tropical Medicine and their collaborators in Guinea analyzed 860 cases in 129 transmission during the last half of Guinea's Ebola outbreak. They described their findings today in an early online edition of the *American Journal of Epidemiology*.



World Bank, Vincent Tremeau / Flickr cc



Health worker among 7 new DRC Ebola patients

Filed Under: [Ebola](#); [VHF](#)

Stephanie Soucheray | News Reporter | [CIDRAP News](#) | [Apr 04, 2019](#)



Share



Tweet



LinkedIn



Email



Print & PDF

The health ministry of the Democratic Republic of the Congo (DRC) said a health worker in Musienene is one of seven new Ebola patients added to the outbreak today.

The 7 cases include 3 in Katwa and 1 each in Mandima, Vuhovi, Musienene, and Beni. In addition, officials noted 5 new deaths in confirmed patients, including community deaths in Vuhovi and Musienene.

The cases raise outbreak totals to 1,107, of which 1,041 are confirmed and 66 are probable. In total, there have been 695 deaths since the outbreak began last August in North Kivu and Ituri provinces.

Eighty-two infected health workers

The healthcare worker in Musienene brings the total number of health workers infected during the outbreak to 82 (7.4% of all confirmed or probable cases), and 29 of them have died, the DRC said.

In an update released late yesterday, the DRC recorded 8 new confirmed cases, and 7 deaths, including 5 community deaths. Butembo and Katwa each had a community death, and Mandima recorded 3.



World Bank, Vincent Tremeau / Flickr cc



Ebola cases grow by 37 in 3 days as DRC has record day

Filed Under: **Ebola**; **VHF**

Stephanie Soucheray | News Reporter | CIDRAP News | Apr 08, 2019



Share



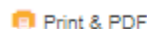
Tweet



LinkedIn



Email



Print & PDF

With 37 Ebola cases reported in the past 72 hours, the outbreak in the Democratic Republic of the Congo (DRC) raged on this weekend and today, and the 16 cases reported yesterday are the most for a single day during this 8-month outbreak.

The new cases raise the outbreak total to 1,154, including 731 deaths, for a case-fatality rate of 63.3%. Nineteen of the recently reported cases were in Katwa, the main hot spot of virus activity since Jan 1. Butembo recorded 6 cases, Vuhovi 5, Mandima 4, Beni 2, and Oicha 1.

Beginning Apr 6 and through today, 29 deaths were recorded, including 13 community deaths. Community deaths, which take place outside of Ebola treatment centers, increase the risk of transmission to family members and funeral attendees. Today, the DRC said that, in North Kivu and Ituri, 53% of patients have been infected by family members.



World Bank, Vincent Tremeau / Flickr cc

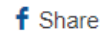
Ebola physician walks by decontamination room in Beni.



DRC sees record-setting day, with 18 Ebola cases

Filed Under: **Ebola**; **VHF**

Stephanie Soucheray | News Reporter | CIDRAP News | Apr 10, 2019



Share



Tweet



LinkedIn



Email



Print & PDF

Today the Democratic Republic of the Congo (DRC) recorded 18 new cases in the ongoing Ebola outbreak in North Kivu and Ituri province, the largest single-day jump since the outbreak began last August. The previous record was 16 cases, on Apr 7.

The spike in cases raises the outbreak total to 1,186, which includes 1,120 confirmed and 66 probable infections. Officials also confirmed 10 new deaths, raising the fatality count to 751. Ten of the new deaths occurred in the community, which raises the risk of disease spread.

Emergency committee to meet

In light of these developments, World Health Organization Director-General Tedros Adhanom Ghebreyesus, PhD, announced today he has reconvened an Emergency Committee under the International Health Regulations (IHR) on Ebola in the DRC.



World Bank, Vincent Tremeau / Flickr cc

Congo Ebola outbreak 'far from contained,' U.S. aid chief says

HEALTH NEWS APRIL 9, 2019 / 11:04 AM

WASHINGTON (Reuters) - The deadly Ebola outbreak in the Democratic Republic of Congo is far from contained, U.S. Agency for International Development Administrator Mark Green said on Tuesday.

The Ebola outbreak in the eastern Democratic Republic of Congo has killed more than 600 people.

But as the country grapples with the aftermath of Dec. 30 elections marred by fraud allegations, aid workers have faced mistrust in some areas as they seek to contain the outbreak, the most severe in Congo's history.

Green said there is enough money to fight the outbreak, and that the United States is pushing for more vaccinations and the production of more vaccines. He said he is in close contact with international health officials.

WHO asks panel to weigh whether Ebola outbreak is global emergency

By HELEN BRANSWELL [@HelenBranswell](#) / APRIL 10, 2019

With new case numbers rising at an alarming rate, the World Health Organization said Wednesday it will again look at whether the Ebola outbreak in the Democratic Republic of the Congo should be declared a global health emergency.

The announcement that a panel of outside experts — a so-called emergency committee — will meet Friday to debate the question came on a day when the DRC health ministry was expected to say 18 new Ebola cases had been identified. That marked the highest one-day increase in this epidemic, now in its ninth month.

“We’re at a critical time in this outbreak,” Michael Osterholm, director of the University of Minnesota’s Center for Infectious Diseases Research and Policy, told STAT.

HOT TOPICS

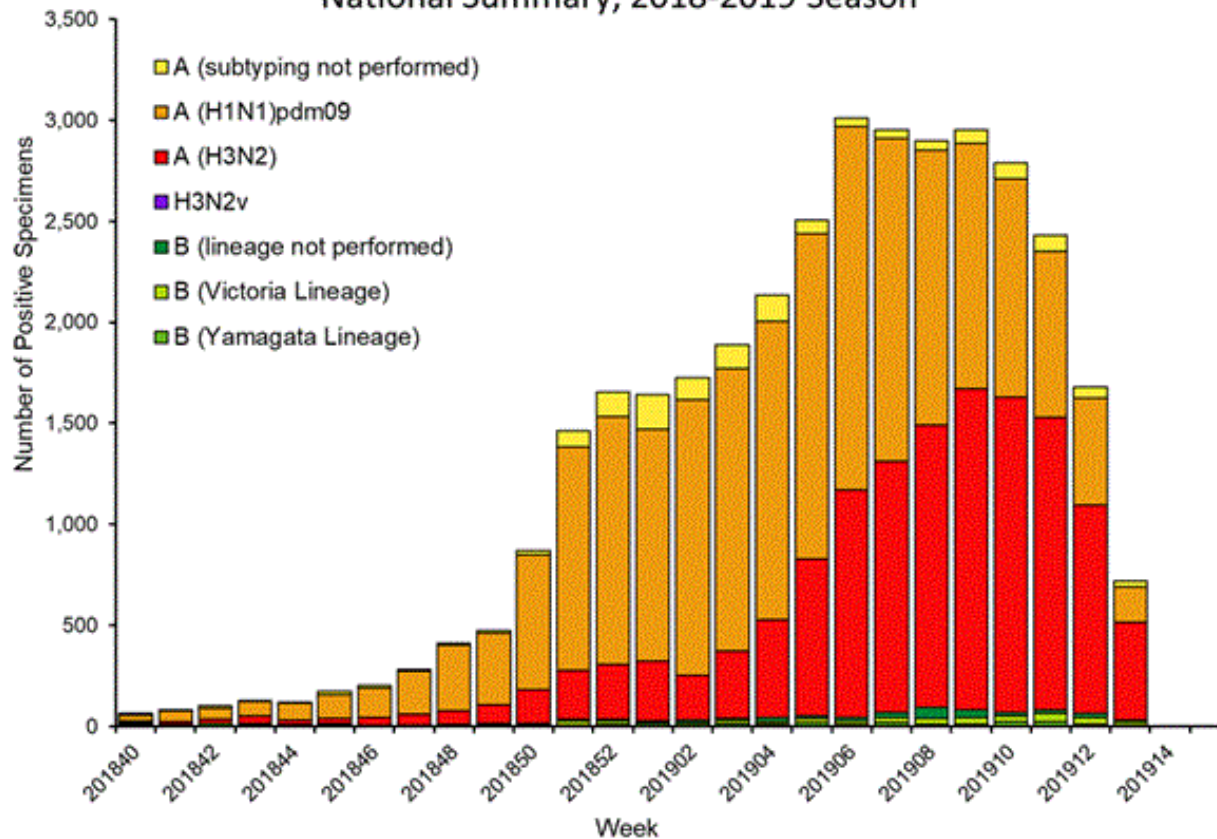
- 1. Ebola**
- 2. Influenza**
- 3. Measles**
- 4. Cholera in Yemen & Mozambique**
- 5. Antimicrobial resistance**

UPDATES

- 6. MERS**
- 7. Polio**
- 8. Acute Flaccid Myelitis**
- 9. Zika & Yellow Fever**
- 10. Chronic Wasting Disease (CWD)**
- 11. Foodborne disease**
- 12. Other**

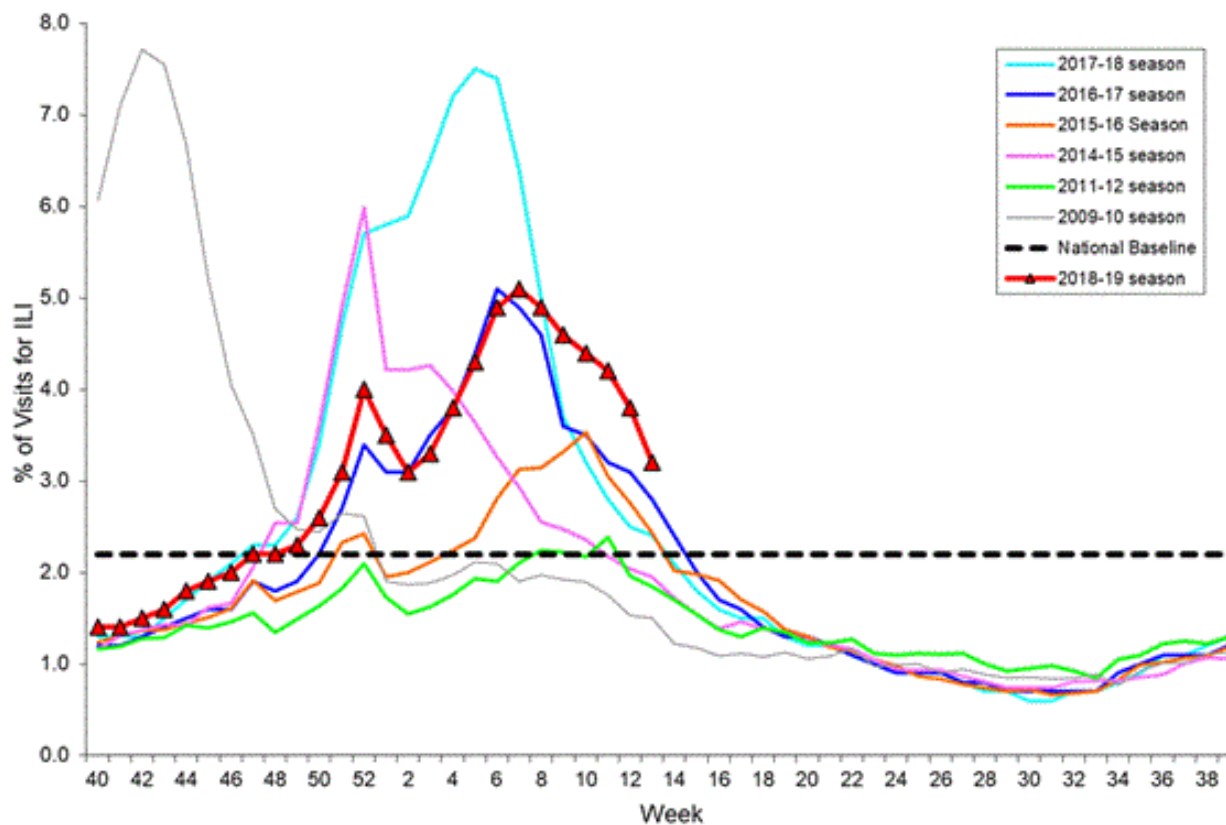
2018-2019 Influenza Season Week 13 ending March 30, 2019

Influenza Positive Tests Reported to CDC by U.S. Public Health Laboratories,
National Summary, 2018-2019 Season



2018-2019 Influenza Season Week 13 ending March 30, 2019

Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, 2018-2019 and Selected Previous Seasons

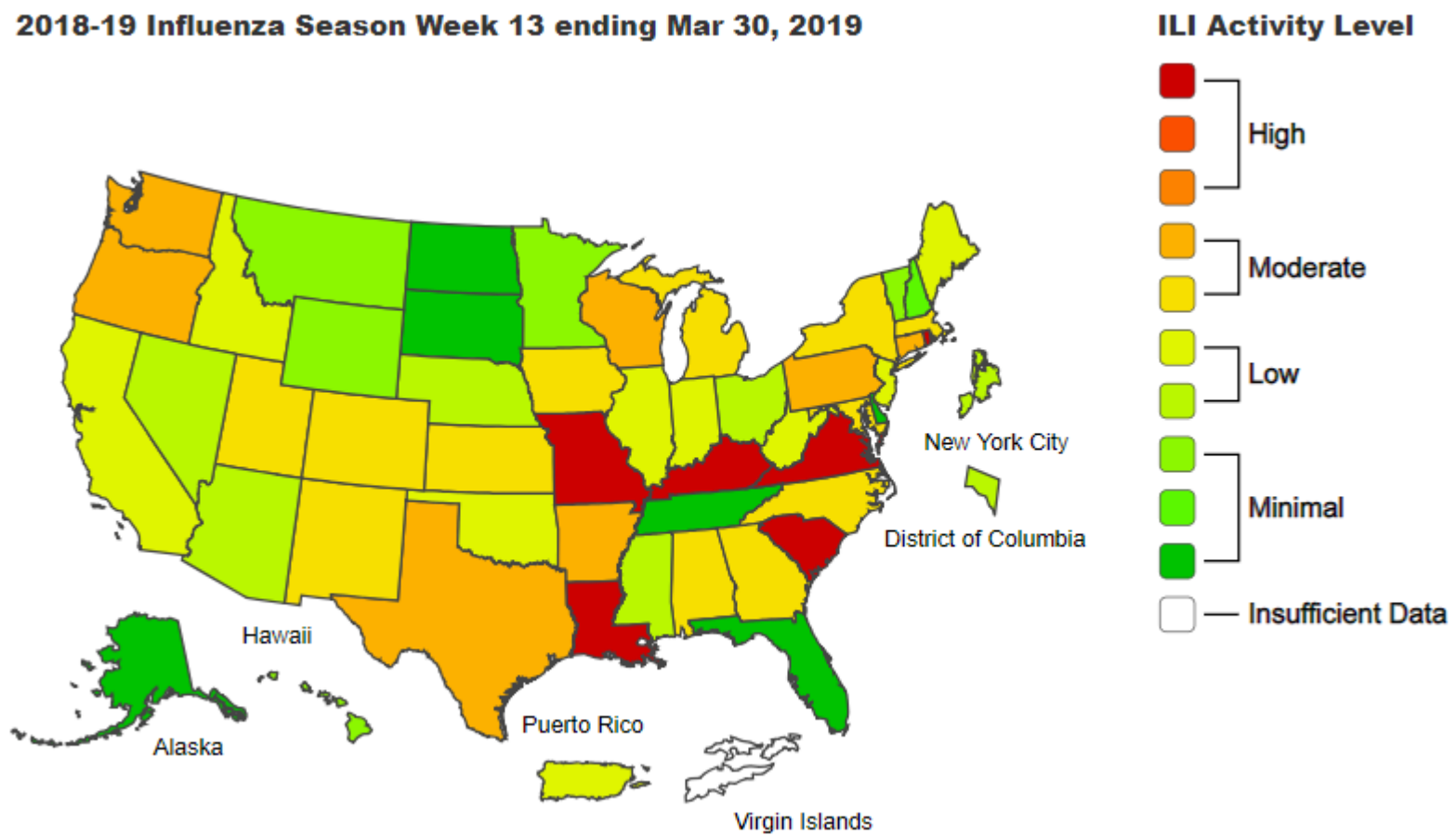


2018-2019 Influenza Season Week 13 ending March 30, 2019

A Weekly Influenza Surveillance Report Prepared by the Influenza Division

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet

2018-19 Influenza Season Week 13 ending Mar 30, 2019





US flu activity stays high as 15 new deaths in kids reported

Filed Under: [Influenza, General](#)

Jim Wappes | Editorial Director | CIDRAP News | Mar 01, 2019

[f](#) Share

[t](#) Tweet

[in](#) LinkedIn

[e](#) Email

[p](#) Print & PDF

Flu activity across the country remains at elevated levels but shows some signs of slowing, yet 15 influenza-related deaths in children were reported, bringing the season total to 56, the US Centers for Disease Control and Prevention (CDC) reported today in its weekly update.

In addition, the H₃N₂ strain—which typically causes more severe symptoms—has overtaken 2009 H₁N₁ as the predominant strain.

Europe is likewise seeing co-circulation of H₁N₁ and H₃N₂, according to a report yesterday from across the Atlantic.

US numbers still elevated

The proportion of people seeing a healthcare provider for influenza-like illness (ILI) was 5.0% last week, down a bit from 5.1% the week before but well above the national baseline of 2.2%. For comparison, last year the ILI rate peaked at 7.5%, but in 2016-17 it peaked at 5.1%.



Katarzyna Bialasiewicz / iStock



CDC: Flu activity still high, linked to 8 new kids' deaths

Filed Under: [Influenza](#), [General](#)

[Lisa Schnirring](#) | News Editor | [CIDRAP News](#) | Mar 08, 2019

[f](#) Share

[t](#) Tweet

[in](#) LinkedIn

[e](#) Email

[p](#) Print & PDF

The overall flu picture didn't change much last week, with activity remaining elevated and the H₃N₂ virus pushing the 2009 H₁N₁ strain out of its dominant spot in several parts of the country, the US Centers for Disease Control and Prevention (CDC) said today in its weekly update.

Overall, severity markers such as hospitalizations and deaths continue increase, as they typically do later in the flu season, but the levels are substantially lower than last season, which was severe.

Lab indicator details

The percentage of respiratory specimens that tested positive for flu slightly increased last week, from 25.9% to 26.1%, but clinic visits for flulike illness dropped a bit, from 5% to 4.7%, but remained well above the national baseline of 2.2%.

For the second week in a row, H₃N₂ viruses were reported more frequently than 2009 H₁N₁, which had been predominant across the season.



shironosov / iStock

The hospitalization rate is highest among the elderly.



Wave of H3N2 cases keeps US flu activity high

Filed Under: [Influenza, General](#)

[Stephanie Soucheray](#) | News Reporter | [CIDRAP News](#) | Mar 15, 2019



Share



Tweet



LinkedIn



Email



Print & PDF

Though flu activity decreased slightly last week, a wave of H3N2 virus activity has led to severe illnesses across the country and four more children have died from the disease, according to this week's FluView report from the Centers for Disease Control and Prevention (CDC).

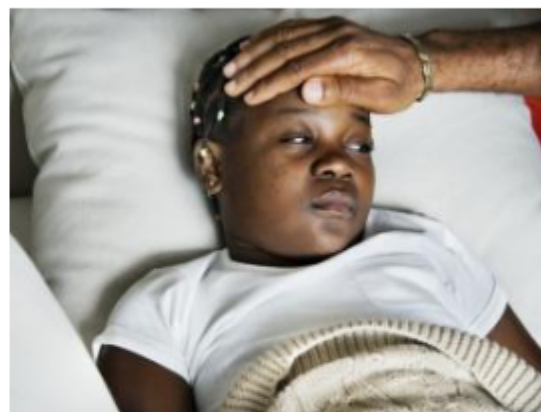
This is the second week in a row the CDC recorded more H3N2 cases than H1N1, the virus subtype that dominated the first part of the 2018-19 flu season.

"H3N2 viruses are typically associated with more severe illness in older adults, and flu vaccine may protect less well against H3N2 illness in older adults, making prompt treatment with flu antivirals in this age group especially important during the current period of H3N2 predominance," the CDC said today in a summary of the report.

Though seasonal flu vaccination is still recommended while influenza is circulating, the CDC said the use of antivirals is an important "second line of defense."

Four new kids' deaths, more hospitalizations

Last week brought with it 4 more pediatric deaths caused by flu, bringing the season's total to 68. At least two of the deaths were associated with an influenza A H3 virus, the CDC said.



Rawpixel / iStock



CDC: Flu season stretches on with late H3N2 push

Filed Under: [Influenza, General](#)

[Lisa Schnirring](#) | News Editor | [CIDRAP News](#) | Mar 25, 2019

[f](#) Share

[t](#) Tweet

[in](#) LinkedIn

[e](#) Email

[p](#) Print & PDF

The US flu season is already a long one, with illness activity still widespread in 44 states and expected to continue for several more weeks, the Centers for Disease Control and Prevention (CDC) said in its latest weekly update.

Though the level of clinic visits for flu peaked in February, the latest markers show little change from the previous week, with H3N2 viruses causing an increasing number of infections. Though 2009 H1N1 has been predominant for most of the season, H3N2 has caused more illnesses for 3 weeks in a row now.

The CDC said the most recent flu seasons have averaged 16 weeks above baseline for flulike illness, but so far this season, flu levels have topped baseline for 17 weeks. Also, the agency recorded eight new flu-related deaths in children.

H3N2 rise predicted to be tough on seniors

The CDC said it continues to recommend flu vaccination and antiviral drugs. In older adults, H3N2 typically causes more severe illness than in other age-groups, and in seniors, the vaccine doesn't protect as well against H3N2, the CDC warned.



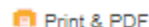
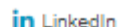
parinyabinsuk / iStock



US flu winding down, but 5 new deaths reported in kids

Filed Under: **Influenza, General**

Stephanie Southeray | News Reporter | CIDRAP News | Apr 05, 2019



The US flu season trails on, and though influenza activity decreased since last week, it remains relatively high for this time of year, the Centers for Disease Control and Prevention (CDC) said today in its weekly FluView update.

The week ending on Mar 30 was the 19th straight week with influenza-like illnesses (ILI) at or above the national baseline.

The proportion of patients seeking healthcare for ILI decreased from 3.8% to 3.2% last week. The most recent data indicate that ILI activity for the season peaked the week ending February 16 (week 7) at 5.1%, the CDC said. During the severe 2017-18 flu season, the peak ILI rate was 7.5%.

More weeks of flu expected

In another sign of flu's decline, the CDC reported that fewer lab-tested specimens were positive for influenza last week.



NeoPhoto / iStock

Table. Adjusted vaccine effectiveness estimates for influenza seasons from 2004-2018

Influenza Season [†]	Reference	Study Site(s)	No. of Patients [‡]	Adjusted Overall VE (%)	95% CI
2015-16	Jackson 2017 ↗	WI, MI, PA, TX, WA	6879	48	41, 55
2016-17	Unpublished final estimates.	WI, MI, PA, TX, WA	7410	40	32, 46
2017-18	Rolfes 2019 ↗	WI, MI, PA, TX, WA	8,436	38	31, 43
2018-19*	Doyle 2019	WI, MI, PA, TX, WA	3,254	47*	34, 57

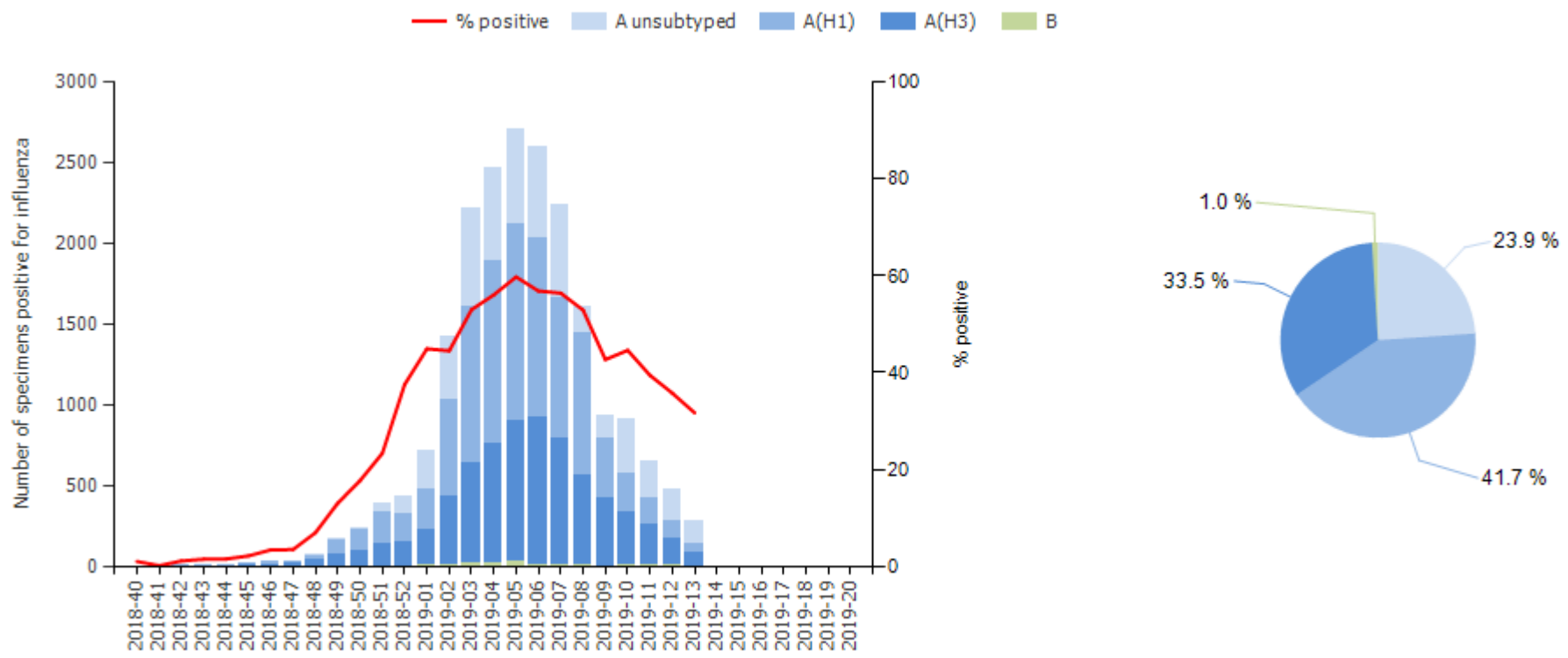
Week 13/2019 (25-31 March 2019)

- Of 45 countries reporting on geographic spread, 11, located in northern, southern, and western areas of the European Region, reported widespread activity. Specimens collected from individuals presenting with ILI or ARI to sentinel primary health care sites yielded an influenza virus positivity rate of 32%, a decrease for the third week in a row.
- Of 45 countries reporting on influenza activity, 42 reported baseline or low intensity levels and none reported high intensity.
- Influenza type A virus detections dominated with more A(H3N2) than A(H1N1)pdm09 viruses among sentinel and non-sentinel source specimens. Very few influenza B viruses were detected.
- Of the specimens from patients with severe acute respiratory infection (SARI) collected in week 13/2019 that were tested for influenza viruses, 33% were positive and all viruses were type A.
- Pooled data from 22 Member States and areas reporting to the [EuroMOMO](#) project indicated that the excess mortality observed in previous weeks has returned to normal levels.

2018/19 season overview

- Influenza activity in the European Region, based on sentinel sampling, exceeded a positivity rate of 10% in week 49/2018, exceeded 50% between weeks 3/2019 and 7/2019, and peaked in week 5/2019..
- Both influenza A virus subtypes have circulated, with co-circulation in some countries while others reported dominance of either A(H1N1)pdm09 or A(H3N2) viruses.
- Among hospitalized influenza virus-infected patients admitted to ICU wards, 99% were infected with type A viruses, and of those subtyped, 69% were A(H1N1)pdm09. Among influenza virus-infected patients admitted to other wards, 99% were infected with type A viruses, with 58% of those subtyped being A(H1N1)pdm09.
- Of the patient specimens from SARI surveillance that tested positive for influenza, 99% were infected with influenza type A virus, with 80% of those subtyped being A(H1N1)pdm09.
- A recent summary of regional activity from October 2018 to February 2019 was published in Eurosurveillance and can be found [here](#).
- Current influenza vaccines tend to work better against influenza A(H1N1)pdm09 and influenza B viruses than against influenza A(H3N2) viruses. For more detail, see the [Vaccine effectiveness](#) section
- WHO has published [recommendations](#) for the composition of influenza vaccines to be used in the 2019–2020 northern hemisphere season. The recommendation was that type B lineage viruses remain unchanged, while the A(H1N1)pdm09 and A(H3N2) viruses were updated.
- Circulating viruses in the European Region remained susceptible to neuraminidase inhibitors supporting use of antiviral treatment according to national guidelines.

Influenza virus detections in the region



Wednesday, April 3, 2019

NIH begins first-in-human trial of a universal influenza vaccine candidate

Investigational vaccine designed to provide broad, durable protection from flu.



The first clinical trial of an innovative universal influenza vaccine candidate is examining the vaccine's safety and tolerability as well as its ability to induce an immune response in healthy volunteers. Scientists at the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health, developed the experimental vaccine, known as H1ssF_3928.

H1ssF_3928 is designed to teach the body to make protective immune responses against diverse influenza subtypes by focusing the immune system on a portion of the virus that varies relatively little from strain to strain. The vaccine candidate was developed as part of a broader [research agenda](#) to create a so-called "universal" influenza vaccine that can provide long-lasting protection for all age groups from multiple influenza subtypes, including those that might cause a pandemic.



A healthy volunteer receives an experimental universal influenza vaccine known as H1ssF_3928 as part of a Phase 1 clinical trial at the NIH Clinical Center in Bethesda, Maryland. Scientists at NIAID's Vaccine Research Center (VRC) developed the vaccine. *NIAID*

Media Advisory

Monday, April 8, 2019

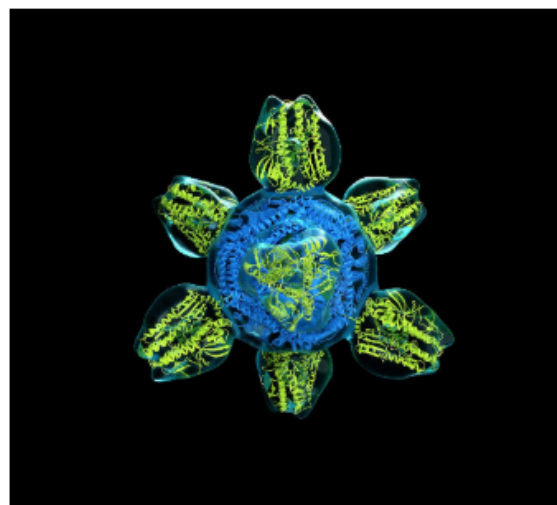
Scientists review influenza vaccine research progress and opportunities



What

In a new series of articles, experts in immunology, virology, epidemiology, and vaccine development detail efforts to improve seasonal influenza vaccines and ultimately develop a universal influenza vaccine. The 15 articles are part of a supplement in the April 15 issue of the *Journal of Infectious Diseases*. Researchers from the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health, and scientists supported by NIAID, are among the contributing authors. Barney S. Graham, M.D., Ph.D., deputy director of NIAID's Vaccine Research Center (VRC), and Michelle C. Crank, M.D., head of the Translational Sciences Core in the VRC's Viral Pathogenesis Laboratory, edited the supplement.

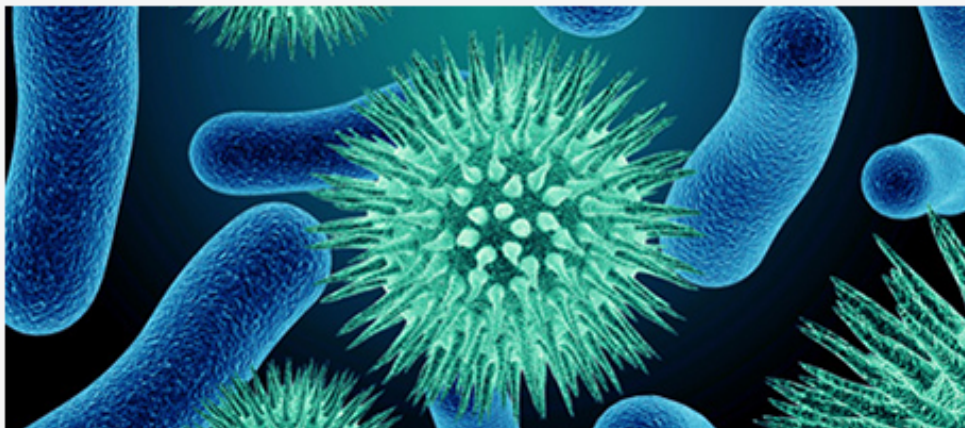
In an introductory article, NIAID Director Anthony S. Fauci, M.D. and Catharine I. Paules, M.D., an infectious disease physician at Penn State Health Milton S. Hershey Medical Center, underscore the public health need for improved influenza vaccines, noting the **approximately 291,000 to nearly 646,000 deaths worldwide each year** due to seasonal influenza. They also discuss the possibility of another influenza pandemic, which occurs when a novel influenza virus to which most people do not have immunity arises unpredictably. The 1918 influenza pandemic caused an estimated 50 million to 100 million deaths.



Colorized structure of a prototype for a universal flu vaccine. The nanoparticle is a hybrid of a protein scaffold (blue) and eight influenza hemagglutinin proteins on the surface (yellow). *NIAID*

R&D Blueprint

List of Blueprint priority diseases



For the purposes of the R&D Blueprint, WHO has developed a special tool for determining which diseases and pathogens to prioritize for research and development in public health emergency contexts. This tool attempts to identify those diseases that pose a public health risk because of their epidemic potential and for which there are no, or insufficient, countermeasures. The diseases selected through this process are the focus of the work of R&D Blueprint. This is not an exhaustive list, nor does it indicate the most likely causes of the next epidemic. It should be noted that diseases such as influenza, yellow-fever, cholera etc., which present significant health risks, are absent from this list because medical countermeasures are available for them or they are already the focus of dedicated R&D activities.

Revised list of priority diseases, January 2017

- Arenaviral hemorrhagic fevers (including Lassa Fever)
- Crimean Congo Haemorrhagic Fever (CCHF)
- Filoviral diseases (including Ebola and Marburg)
- Middle East Respiratory Syndrome Coronavirus (MERS-CoV)
- Other highly pathogenic coronaviral diseases (such as Severe Acute Respiratory Syndrome, (SARS))
- Nipah and related henipaviral diseases
- Rift Valley Fever (RVF)
- Severe Fever with Thrombocytopenia Syndrome (SFTS)
- Zika
- Disease X *



WHO Roadmap Development

Development of Roadmaps for Priority Pathogens of Concern

At the request of its 194 Member States, following the Ebola epidemic in West Africa, the World Health Organization (WHO) developed **A Research and Development (R&D) Blueprint for Action to Prevent Epidemics**. A key component of the blueprint is the creation of R&D roadmaps for **priority pathogens of concern**. Each roadmap will provide a framework that identifies the vision, strategic goals, and priority areas for accelerated R&D needed for disease prevention and control. The goal of each roadmap is to promote development and evaluation of medical countermeasures (diagnostics, therapeutics, and vaccines) for the pathogen.

CIDRAP has been selected to work closely with the WHO to develop R&D roadmaps for Ebola/Marburg, Nipah, and Lassa viruses. This work is being funded through support from Wellcome, a key partner in this undertaking.

Key steps for the development of each roadmap include the following:

- Conduct background research regarding the current status of medical countermeasure development for the pathogen.
- Conduct a gap analysis to determine where additional research and development are needed.
- Develop a roadmap draft, with input and support from a core group of selected subject matter experts (SMEs).
- Convene an in-person consultation with a larger group of diverse international SMEs, including representation from affected countries, to obtain input on the draft document.
- Revise the roadmap (again with support from a small group of key SMEs) and then complete a vetting and review process involving the primary partners and stakeholders.
- Finalize the roadmap for joint publication by CIDRAP and the WHO (anticipated to be in late summer 2018).

CIDRAP-related Universal Influenza Vaccine Efforts, 2018-2021

- The Center for Infectious Disease Research and Policy (CIDRAP) at the University of Minnesota, with funding support from the Wellcome Trust, is developing an influenza vaccines R&D roadmap

CIDRAP-related Universal Influenza Vaccine Efforts, 2018-2021

- The steering group for the project includes representatives from Wellcome Trust, the Global Funders Consortium for Universal Influenza Vaccine Development, the Sabin Vaccine Institute, the Bill and Melinda Gates Foundation and the World Health Organization

CIDRAP-related Universal Influenza Vaccine Efforts, 2018-2021

- The roadmap is aimed at accelerating progress toward development of universal or broadly protective influenza vaccines, balancing transformative and pragmatic changes in vaccine technology to improve the breadth and durability of protection from influenza infection and/or severe disease

CIDRAP-related Universal Influenza Vaccine Efforts, 2018-2021

- By highlighting key research gaps, identifying strategic goals and milestones, and encouraging synergistic R&D activities, the roadmap will serve as a valuable tool to advance the complex field of vaccine research
- The roadmap process will engage a wide range of key stakeholders representing multiple scientific disciplines, public and private sectors, and diverse international communities

CIDRAP-related Universal Influenza Vaccine Efforts, 2018-2021

- The aim of this effort is to develop a consensus regarding priorities for influenza vaccine R&D over the next 5 to 10 years
- The roadmap is expected to be completed by late 2020
- Our goal is to one day have an effective universal influenza vaccine available to the world

HOT TOPICS

1. Ebola
2. Influenza
3. Measles
4. Cholera in Yemen & Mozambique
5. Antimicrobial resistance

UPDATES

6. MERS
7. Polio
8. Acute Flaccid Myelitis
9. Zika & Yellow Fever
10. Chronic Wasting Disease (CWD)
11. Foodborne disease
12. Other



News Scan for Apr 09, 2019

NYC declares state of emergency, mandatory measles vaccinations

Today New York City (NYC) Mayor Bill de Blasio declared a state of emergency requiring mandatory vaccination for all unvaccinated people exposed to the measles virus in certain parts of Williamsburg, Brooklyn.

The emergency will allow the city's Department of Health and Mental Hygiene to check the vaccination records of any case contact and require unvaccinated individuals to receive the measles, mumps, and rubella (MMR) vaccine or pay up to \$1,000 in fines.

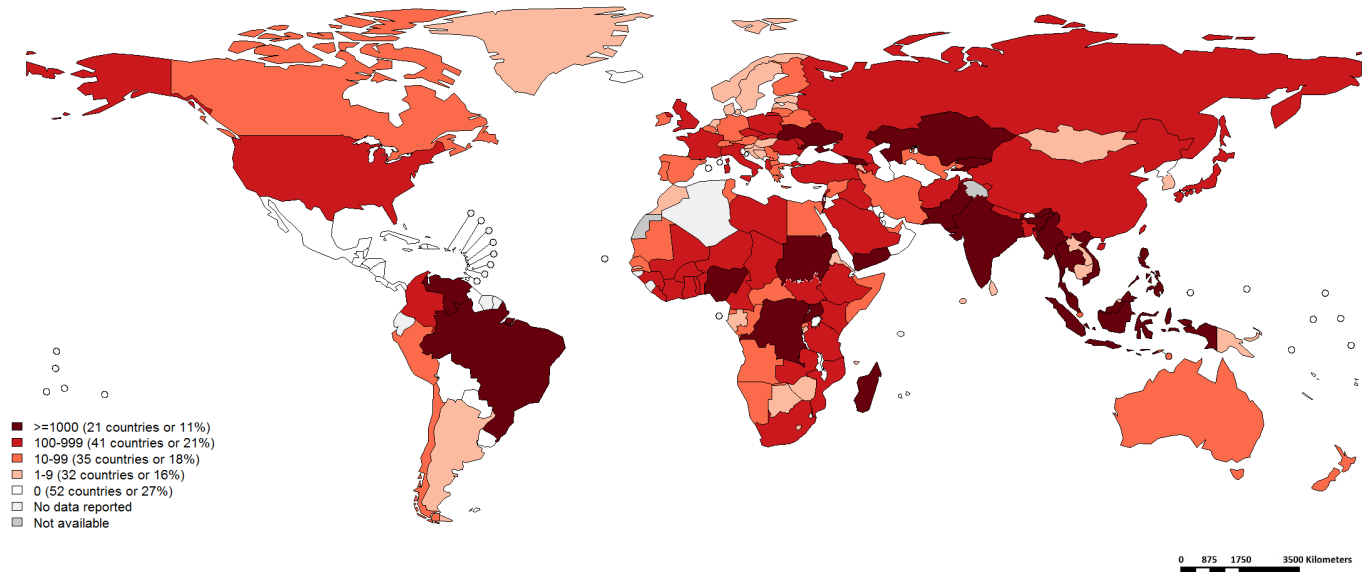
"As a pediatrician, I know the MMR vaccine is safe and effective," said city Health Commissioner Oxiris Barbot, MD, in an NYC press release. "This outbreak is being fueled by a small group of anti-vaxxers in these neighborhoods. They have been spreading dangerous misinformation based on fake science."

The 285-case outbreak began in Brooklyn's Orthodox Jewish neighborhoods last September and is connected to a measles outbreak in Israel. Children account for 246 cases, and 39 cases are in adults, with most patients being unvaccinated or incompletely vaccinated. There have been no deaths in the outbreak, but 21 case-patients have been hospitalized, including 5 admissions to the intensive care unit.

Apr 9 NYC [press release](#)

Number of Reported Measles Cases (6M period)

Top 10*	
Country	Cases
Madagascar	59388
Ukraine	40031
India	14304
Brazil	9198
Philippines	8212
Venezuela (Bolivarian Republic of)	5668
Thailand	4871
Pakistan	4775
Yemen	4057
Israel	3146

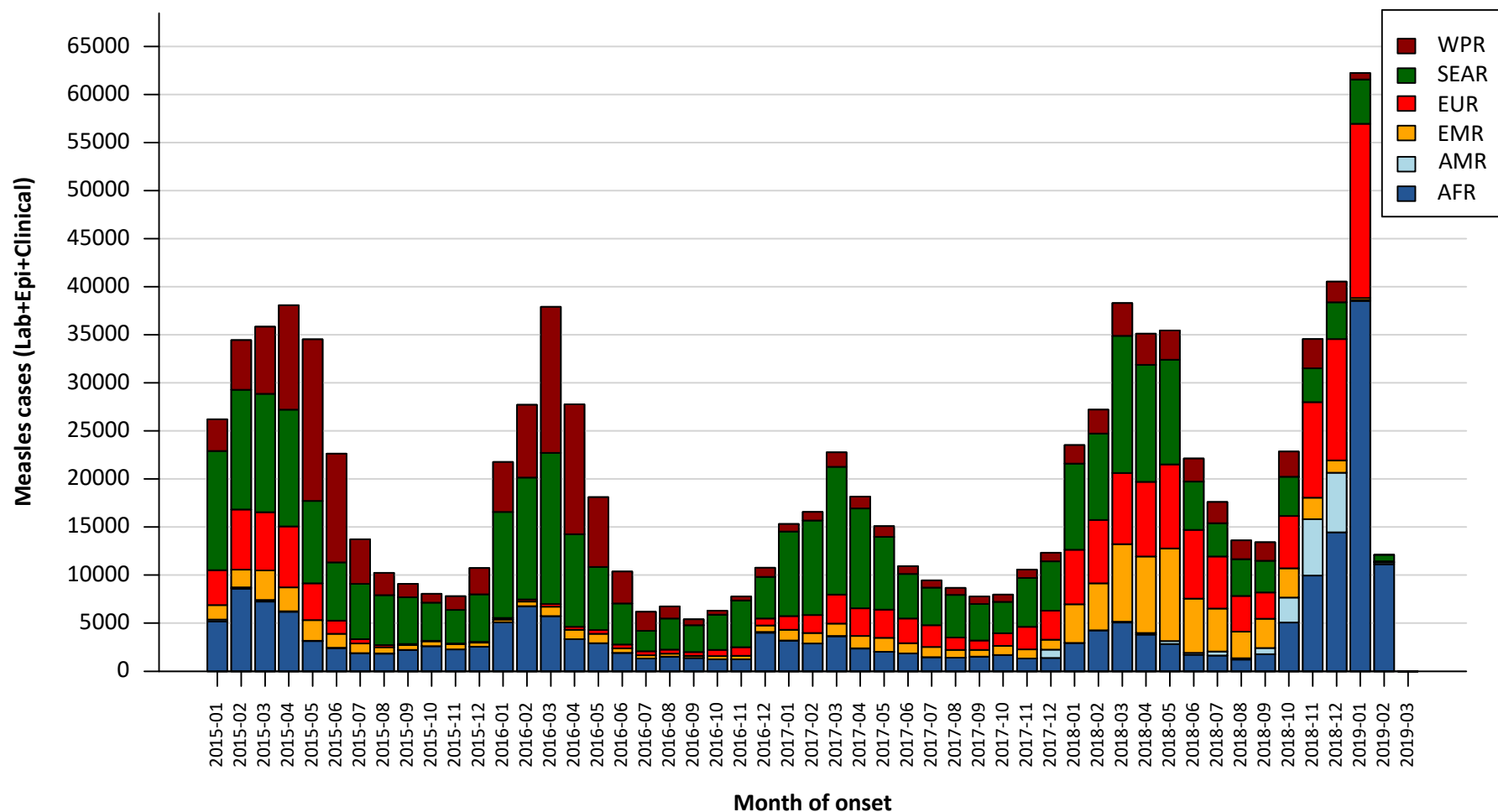


Disclaimer:

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Notes: Based on data received 2019-03 - Surveillance data from 2018-08 to 2019-01 - * Countries with highest number of cases for the period

Measles case distribution by month and WHO Region (2015-2019)



Notes: Based on data received 2019-03 - Data Source: IVB Database - This is surveillance data, hence for the last month(s), the data may be incomplete.

Number of measles cases, January 2019

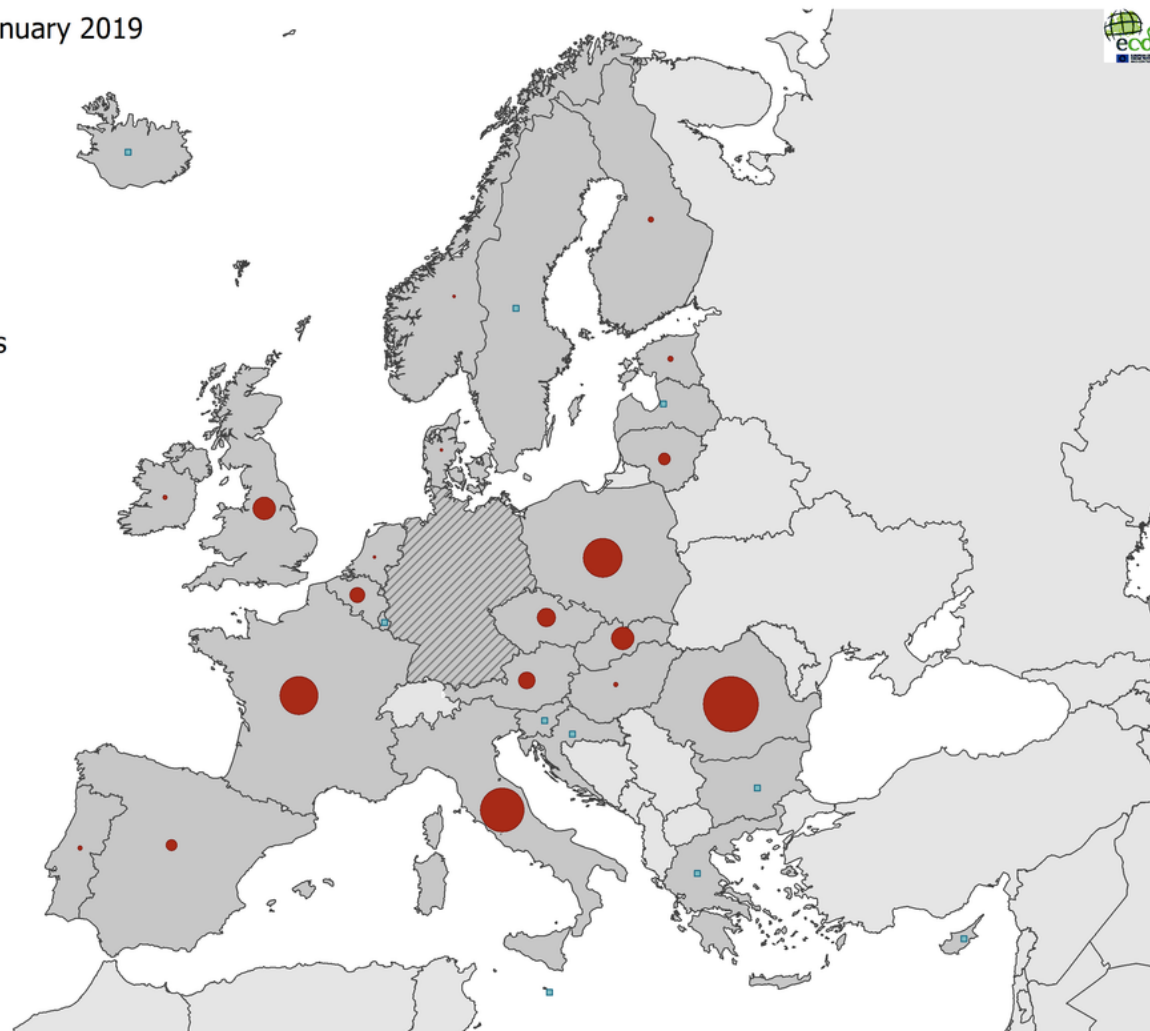
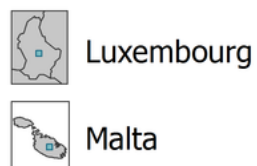
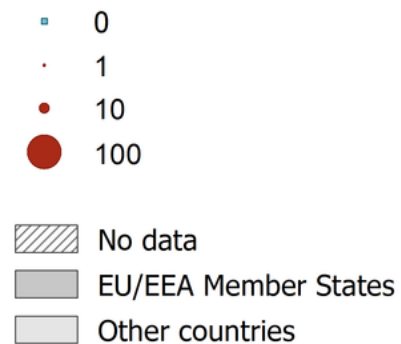
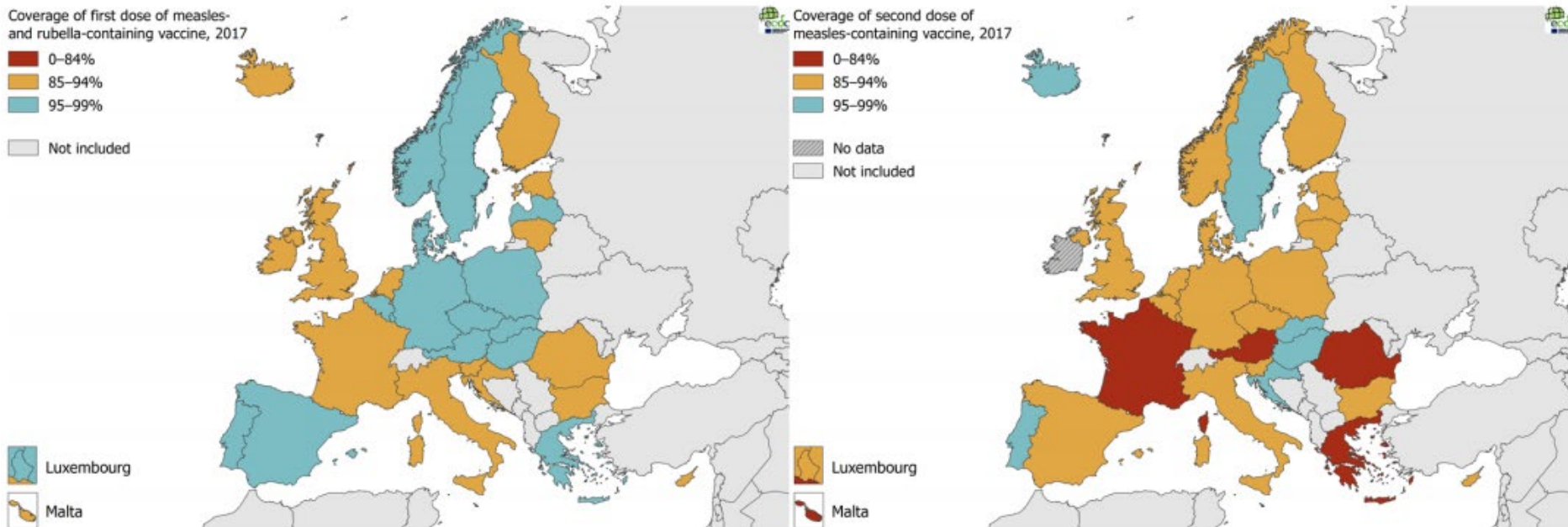


Figure 4. Vaccination coverage for first (left) dose of measles- and rubella-containing vaccine and second (right) dose of measles-containing vaccine, EU/EEA, 2017





US measles cases top 100; big outbreaks reported in Madagascar, Philippines

Filed Under: [Measles](#)

Lisa Schnirring | News Editor | [CIDRAP News](#) | Feb 12, 2019

[f](#) Share

[t](#) Tweet

[in](#) LinkedIn

[e](#) Email

[p](#) Print & PDF

The US Centers for Disease Control and Prevention (CDC) said yesterday that since Jan 1 it has received reports of 101 measles cases from 10 states. Internationally, Madagascar and the Philippines are reporting steep increases in their outbreaks.

In the United States, brisk measles activity in the first month of 2019 comes on the heels of 82 imported cases confirmed in 2018, the most imported cases reported to the CDC since the disease was eliminated from the country in 2000.

Last year, the CDC recorded 17 outbreaks, including three in New York State, New York City, and New Jersey, mostly involving unvaccinated people in Orthodox Jewish communities and associated with infected travelers who were exposed in Israel.

Five outbreaks in 3 states

The activity includes five outbreaks from five jurisdictions, including two New York counties (Rockland and Monroe), New York City, Washington, and Texas. The CDC defines a measles outbreak as three or more cases, and it said the events are linked to travelers who were exposed in other countries such as Israel and Ukraine where large outbreaks are underway.



CDC/ Molly Kurnit, MPH



CDC notes multiple outbreaks, 26 new measles cases

Filed Under: [Measles](#)

[Stephanie Southery](#) | [News Reporter](#) | [CIDRAP News](#) | [Feb 19, 2019](#)



Tweet



LinkedIn



Email



Print & PDF

A total of 127 measles cases in 10 states have been recorded thus far in 2019, and five outbreaks of 3 or more cases are occurring, according to an update yesterday from the Centers for Disease Control and Prevention (CDC).

The 2019 tally thus far has already surpassed total annual cases for both 2016 and 2017. Last year saw 372 cases, the most since the CDC confirmed 667 in 2014.

62 cases in Washington

Almost half of all cases recorded since the first of the year originated in Washington state's Clark County, which has seen 61 cases since early January.

On Jan 25, Washington Governor Jay Inslee declared the outbreak, which is centered around the Vancouver area in southern Washington, a state of emergency. King County, which is home to Seattle, has had one measles case.

The CDC said the current outbreaks are connected to travelers who have introduced measles into US communities after traveling to countries where large measles outbreaks are occurring. Last year the CDC confirmed 82 imported cases, the most imported cases reported to the CDC since the disease was eliminated from the country in 2000.



Dave Haygarth / Flickr cc



News Scan for Feb 28, 2019

2018 measles cluster shows stricter vaccine exemptions can be dodged

Today in the CDC's *Morbidity and Mortality Weekly Report (MMWR)*, California public health officials describe a cluster of seven measles cases in 2018 involving minors who were able to evade the state's stricter vaccine exemption requirements.

Five of the seven cases, including the index case, were teenage boys who were unvaccinated because of parental beliefs, despite that fact that in 2016 California passed Senate Bill 277, which stated children entering school in California may no longer receive exemptions from immunization requirements based on parental personal beliefs.

"Medical exemptions for reasons determined by individual physicians, including family medical history, rather than a uniform standard (i.e., a medical contraindication to vaccination), remain permitted," the authors wrote. "Interviews with local health authorities suggest that some students without contraindications to vaccination have received medical exemptions."

The index case, a 15-year-old boy, contracted measles while traveling to England and Wales in early 2018. He spread the disease to other unvaccinated contacts during scouting events.

The MMR (measles, mumps, rubella) vaccine, is recommended for all Americans born after 1957 who do not have a medical contraindication.

Mar 1 MMWR report



News Scan for Mar 01, 2019

UNICEF sounds alarm over measles surge

UNICEF today warned that measles cases this year are surging to alarmingly high levels, with 10 countries accounting for more than 74% of the total increase.

The United Nations agency notes that, for 2018, 98 countries reported more measles than the previous year, a sign of eroding progress against the highly preventable but potentially fatal and highly communicable disease. Countries with the 10 highest increases last year, in order of number of cases, are Ukraine, Philippines, Brazil, Yemen, Venezuela, Serbia, Madagascar, Sudan, Thailand, and France.

For 2018, the Ukraine reported 35,120 cases, and already this year the country has reported 24,042 measles cases. Similarly, the Philippines last year reported 15,559 cases in all of 2018 but has already recorded 12,736, including 203 deaths, in the first 2 months of 2019.

UNICEF highlighted several countries that had no reported measles cases in 2017, but reported cases in 2018. They are Brazil, Moldova, Montenegro, Colombia, Timor-Leste, Peru, Chile, and Uzbekistan.

Gaps in health infrastructure, civil unrest, low community awareness, complacency, and vaccine hesitancy have led to outbreaks in both developing and developed countries. The United States, for example, experienced a sixfold increase between 2017 and 2018.

In a statement, Henrietta Fore, UNICEF's executive director, said, "This is a wake up call. We have a safe, effective, and inexpensive vaccine against a highly contagious diseases—a vaccine that has saved almost a million lives each year over the last two decades." She also warned that a lack of action today will have disastrous consequences tomorrow.

UNICEF and its partners have stepped up efforts in several parts of the world, including the Ukraine, the Philippines, Brazil, Yemen, and Madagascar.

Mar 1 UNICEF press release



News Scan for Mar 18, 2019

US measles cases reach 268 as outbreaks grow in New York, New Jersey

The US Centers for Disease Control and Prevention (CDC) today said measles counts have now grown to 268 cases in 15 states—62 more cases than the agency reported in a Mar 4 update. For comparison, the CDC reported 372 cases for all of 2018.

Arizona, California, Colorado, Connecticut, Georgia, Illinois, Kentucky, Michigan, Missouri, New Hampshire, New Jersey, New York, Oregon, Texas, and Washington, have all recorded cases. So far, the CDC has identified six outbreaks that involve 3 or more cases, in New York City; Rockland County, New York; Washington state, Texas, Illinois, and California.

"These outbreaks are linked to travelers who brought measles back from other countries such as Israel and Ukraine, where large measles outbreaks are occurring," the CDC said. The United States had 17 outbreaks in 2018.

Over the weekend, both Sullivan County, New York, and Ocean County, New Jersey, reported measles cases for the first time this year. Local news outlets in both communities reported two cases in each locality.

Mar 18 CDC update

Mar 18 Hudson Valley Post story

Mar 18 New Jersey 101.5 story

The measles virus was down and out. Now it's primed for a comeback

By HELEN BRANSWELL @HelenBranswell / MARCH 26, 2019

Back near the start of this century, before the full damage of Andrew Wakefield's debunked study linking measles vaccine and autism became clear and social networking sites turbo-charged the disruptive power of vaccine opponents, some experts believed the world was ready to rid itself of measles once and for all.

These days, with massive outbreaks in the Philippines and Ukraine, more than 80,000 cases in the past year in Europe, and ongoing epidemics in New York, Washington, Texas, Illinois, and California, [measles](#) does not feel like an endangered virus.

There's less talk about measles eradication in 2019. In fact, projections about the future of measles are much more somber now than they were in the early aughts. More measles, not less, appear to be on the horizon, at least in the near term, experts glumly admit.

New York county, declaring emergency over measles, seeks to ban unvaccinated from public places

By HELEN BRANSWELL [@HelenBranswell](#) / MARCH 26, 2019

Caught in the grips of a persistent and long-running measles outbreak, a New York county on Tuesday took the extraordinary step of announcing it would ban children who have not been vaccinated against the disease from enclosed public places as part of a 30-day state of emergency.

Schools, houses of worship, shopping malls in Rockland County — anywhere that people who are not related to one another congregate indoors — will be off limits for unvaccinated children, officials said.

The county, located north of New York City, has been fighting measles since last October, when over a span of less than three weeks seven unvaccinated travelers who were infected with measles abroad returned home. So far there have been 153 cases in this outbreak, the largest of a number of outbreaks currently underway in the United States.

Court halts New York county's emergency order in response to measles outbreak

By ASSOCIATED PRESS / APRIL 6, 2019

NEW CITY, N.Y. — A state judge has issued a preliminary injunction against a suburban New York county's emergency order banning children from public places unless they've been vaccinated against measles.

Supreme Court Justice Rolf Thorsen ruled Friday in favor of several dozen parents challenging Rockland County Executive Ed Day's order, part of efforts to stop a measles outbreak that has infected 166 people since October.

The 30-day order enacted on March 26 bans unvaccinated people under 18 from gathering places including schools, stores, and churches. Civil rights lawyer Michael Sussman called Day's action "arbitrary and capricious." Many in the Jewish Orthodox community in the county [told STAT](#) last month they worried that the move would only exacerbate a fractured relationship with the local government.



News Scan for Mar 08, 2019

Measles, tetanus cases highlight true cost of anti-vaccine movement

Writing in a commentary in the *Journal of the American Medical Association (JAMA)*, several public health professionals enumerated the true cost of measles cases in present-day America, suggesting that responding to a single case of measles costs \$142,000—among other substantial impacts.

In 2000, the United States eliminated endemic measles, but communities with unvaccinated children, who are largely so because of religious or philosophical reasons, have fueled several recent outbreaks across the country. The authors of the commentary note that, in addition to the financial costs, measles sequelae last for 2 to 3 years post-infection. On a larger scale, outbreaks greatly disrupt public health offices and clinical practices.

"Policy makers must consider the long-term immunologic effects measles infection has on the individual, the complete financial cost associated with outbreak response, and the associated strain on health system infrastructure when resources are diverted at the individual, hospital, and community level," the authors conclude.

In another example of the true cost of refusing routine immunizations, *Morbidity and Mortality Weekly Report (MMWR)* today published a report on the first tetanus case recorded in Oregon in more than 30 years. The patient was a 6-year-old boy who contracted the bacterial infection in 2017 after suffering a laceration on his forehead. The boy had received no immunizations.

The boy suffered severe symptoms, including jaw clenching, muscles spasms, spasticity, and difficulty breathing, before he needed to be air-lifted to a hospital.

"The boy required 57 days of inpatient acute care, including 47 days in the intensive care unit. The inpatient charges totaled \$811,929 (excluding air transportation, inpatient rehabilitation, and ambulatory follow-up costs)," the authors said. "Despite extensive review of the risks and benefits of tetanus vaccination by physicians, the family declined the second dose of DTaP and any other recommended immunizations."

Mar 7 JAMA commentary

Mar 8 MMWR study



News Scan for Apr 01, 2019

CDC reports 73 new measles cases as US total tops 2018 levels

In less than 3 months, the United States has already surpassed the number of measles cases logged for all of 2018, the Centers for Disease Control and Prevention (CDC) said today as it confirmed 73 new infections.

In its weekly update, the CDC said officials in 15 states reported a total of 387 measles cases from Jan 1 to Mar 28—the second-highest total since measles was declared eliminated in 2000. In 2014 the agency recorded 667 measles cases, including at least 383 cases in an unvaccinated Amish community in Ohio. Last year saw 372 cases, now the third-most since 2000.

The CDC said six outbreaks, which it defines as 3 or more related cases, are ongoing, the same number it reported a week ago. The outbreaks are in New York City (214 confirmed cases); Rockland County, New York (157); Washington state (74); New Jersey (10); Butte County, California (6); and Santa Cruz County, California (3).

"These outbreaks are linked to travelers who brought measles back from other countries such as Israel, Ukraine, and the Philippines, where large measles outbreaks are occurring," the CDC said. "Make sure you are vaccinated against measles before traveling internationally."

Besides the states noted above, Arizona, Colorado, Connecticut, Georgia, Illinois, Kentucky, Michigan, Missouri, New Hampshire, Oregon, and Texas have recorded cases this year.

Apr 1 CDC update



News Scan for Apr 08, 2019

CDC confirms 78 new measles cases; US on track for record year

The US Centers for Disease Control and Prevention (CDC) recorded 78 more measles cases in the last week, a sign that ongoing outbreaks in several states are growing.

The 2019 total number of cases has jumped to 465 in 19 states, as Florida, Indiana, Massachusetts, and Nevada all reported their first cases of the year last week.

"This is the second-greatest number of cases reported in the U.S. since measles was eliminated in 2000," the CDC said. In 2014 the agency recorded 667 measles cases, and last year saw 372 cases, now the third-most since 2000. If the current pace of cases continues, the nation could top the 2014 total as soon as the end of this month or in May.

Arizona, California, Colorado, Connecticut, Florida, Georgia, Illinois, Indiana, Kentucky, Massachusetts, Michigan, Missouri, Nevada, New Hampshire, New Jersey, New York, Oregon, Texas, and Washington have all recorded cases.

Of note this week is a growing outbreak in Michigan, where 39 cases have been reported between Mar 13 and Apr 5 in Oakland and Wayne counties. As with outbreaks in New York and New Jersey, the Michigan outbreak is connected to an imported case of measles from Israel.

New York City recorded 45 more cases in an outbreak in Queens and Brooklyn that's been ongoing since October. There are now 259 cases in that outbreak, which began with an unvaccinated child who contracted the virus in Israel.

In addition to Michigan and New York City, the CDC is tracking five other measles outbreaks: Rockland County, New York (157 cases); Washington state (74); New Jersey (13); Butte County, California (6); and Santa Clara County, California (3).

Apr 8 CDC update

HOT TOPICS

1. Ebola
2. Influenza
3. Measles
4. Cholera in Yemen & Mozambique
5. Antimicrobial resistance

UPDATES

6. MERS
7. Polio
8. Acute Flaccid Myelitis
9. Zika & Yellow Fever
10. Chronic Wasting Disease (CWD)
11. Foodborne disease
12. Other

■ Yemen

Two years since world's largest outbreak of acute watery diarrhoea and cholera, Yemen witnessing another sharp increase in reported cases with number of deaths continuing to increase

Muscat/Amman/Cairo, 26 March 2019 – “In Yemen, since the beginning of the year until 17 March, nearly 109 000 cases of severe acute watery diarrhoea and suspected cholera were reported with 190 total associated deaths since January. Nearly one third of the reported cases are children under the age of 5. This comes 2 years since Yemen witnessed the world's largest outbreak when more than 1 million cases were reported.

“We fear that the number of suspected cholera cases will continue to increase with the early arrival of the rainy season and as basic services, including lifesaving water systems and networks, have collapsed. The situation is exacerbated by the poor status of sewage disposal systems, the use of contaminated water for agriculture, unreliable electricity to store food and the displacement of families as they flee escalating violence, especially in Hudaydah and Tai'z.

“Our teams in Yemen are working day and night with a wide network of local partners to respond and stop the further spread and transmission of disease. Focusing on 147 priority districts, additional health, water, hygiene and sanitation supplies are being mobilized. Rapid response teams have been deployed. A total of 413 diarrhoea treatment centres and oral rehydration centres are operational in all 147 priority districts. Partners are repairing water and sanitation systems. In the past weeks, we scaled up chlorination activities to disinfect water in 95 priority districts and provided fuel and spare parts to keep going water supply and sanitation networks. A round of oral cholera vaccine campaign reached over 400 000 people in several districts. Meanwhile, community-based awareness-raising efforts reached 600 000 people in house-to-house campaigns since early 2019 to provide families with information on hygiene practices and improve the reporting of symptoms and seeking of treatment.



Yemen cholera spike renews fears of another huge outbreak

Filed Under: [Cholera](#)

[Lisa Schnirring](#) | News Editor | [CIDRAP News](#) | Mar 27, 2019

[f](#) Share

[t](#) Tweet

[in](#) LinkedIn

[e](#) Email

[p](#) Print & PDF

The World Health Organization (WHO) Eastern Mediterranean Regional Office (EMRO) yesterday said a large increase in cholera activity has been under way in Yemen since the first of the year.

The outbreak comes 2 years after the country experienced the world's largest cholera outbreak ever recorded, an event that sickened more than 1 million people.

As of Mar 17, nearly 109,000 cases of watery diarrhea and suspected cholera have been reported in Yemen, along with 190 related deaths. The WHO said about a third of the illnesses are in children younger than 5.



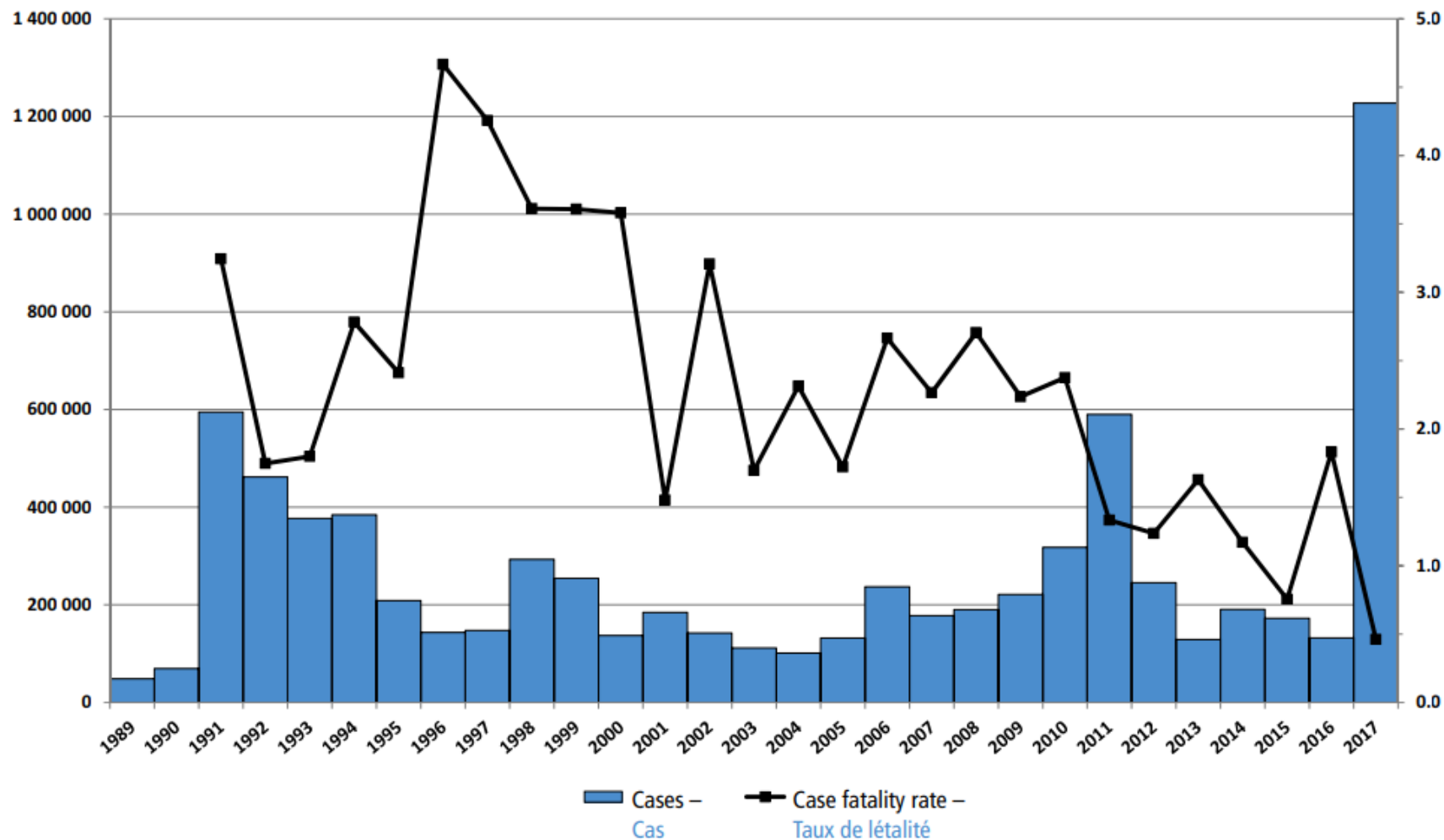
Rabiul Hasan, icddr,b / Flickr cc

MSF responds to 'exponential rise'

In a related development, Doctors Without Borders (MSF) said today that it has responded to an exponential rise in cholera cases across four of Yemen's governorates and is scaling up its response.

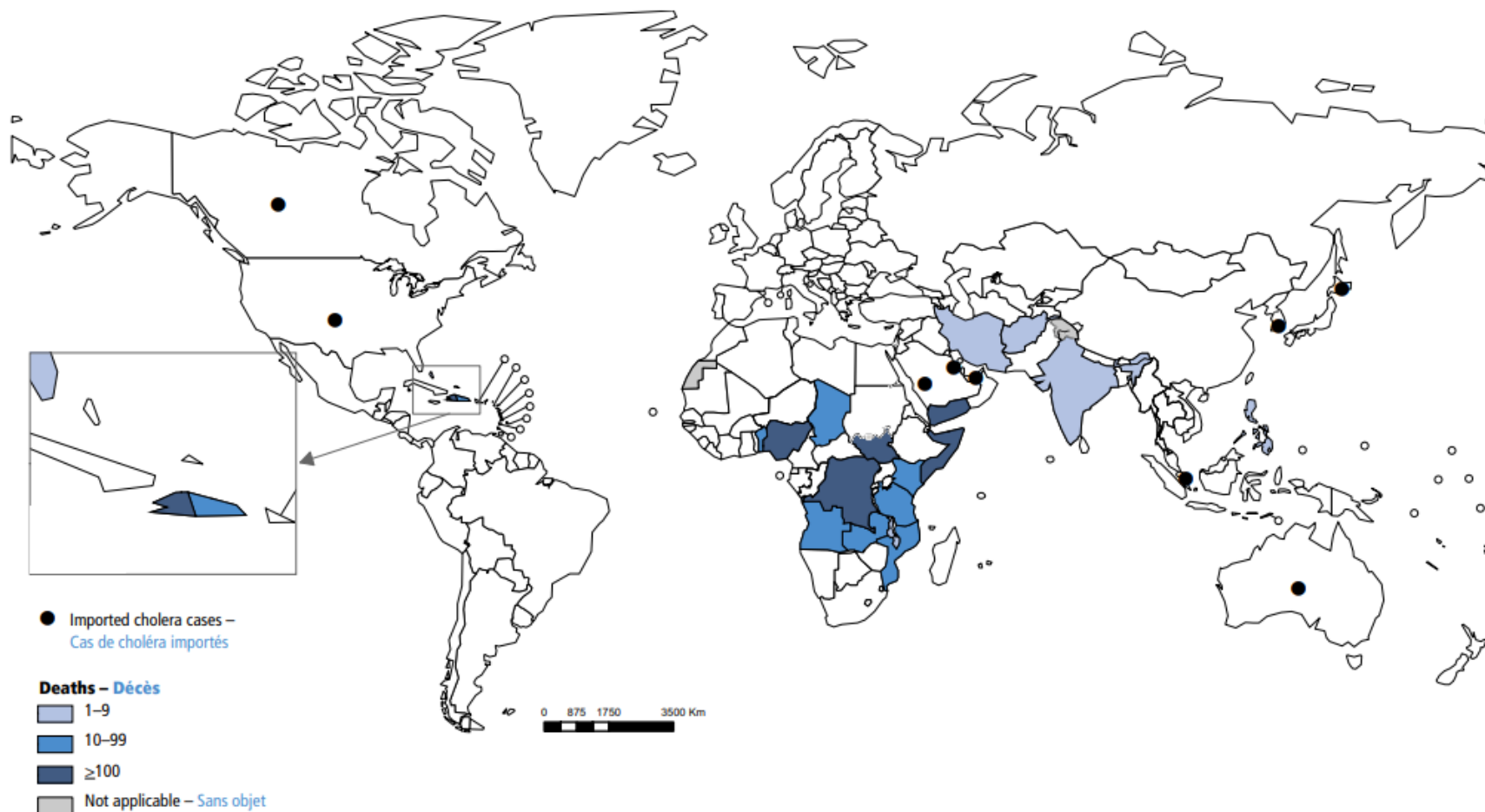
Figure 1 **Annual cholera cases and mortality reported by year, 1989–2017**

Figure 1 **Cas de choléra et létalité par année, 1989–2017**



Map 1 **Countries reporting cholera deaths and imported cases in 2017**

Carte 1 **Pays ayant déclaré des décès dus au choléra et des cas importés en 2017**





Cholera 101: Why This Ancient Disease Is Making Headlines In 2019

April 2, 2019 · 10:25 AM ET

Cholera is in the headlines again. Last fall, the World Health Organization declared an ongoing outbreak in Yemen the worst in recorded history, with more than 1 million cases. The outbreak first struck Yemen back in 2016, surged in May 2017 and has now flared up again. There have been more than 2,500 deaths so far.

"We have been confronted with a sharp increase since the beginning of this year," said Brienne Prusak of Doctors Without Borders (MSF). In that time, they've seen an increase from 140 to 2,000 cases per week to reach about 1.4 million cases since the outbreak began. Since January, the death toll has been 190.

Meanwhile, in the aftermath of Cyclone Idai, cases are surfacing in Mozambique and other affected countries. This week, [the first death from cholera in Mozambique was reported in the city of Beira.](#)

It's a reminder that an ancient disease – and one which is easily treatable – can still take a terrible toll in modern times.

Combating cholera in Mozambique

8 April 2019

Thousands of people received the oral cholera vaccine today as part of a six-day emergency vaccination campaign run by the Ministry of Health in Mozambique to help prevent spread of cholera.

At the 7 de Abril Primary School in Inhamayabwe village, near the town of Dondo, excited school children gather in their classrooms, pushing one another to the front of the crowded room where each child receives their dose.



Fast rollout of cholera vaccines for people in need in Mozambique

10 April 2019, Maputo - The Ministry of Health in Mozambique has concluded a successful six-day emergency cholera vaccination campaign that reached more than 800 000 people in four districts affected by Cyclone Idai.

The campaign was supported by around 1200 community volunteers and partners including the World Health Organization (WHO), UNICEF, Médecins Sans Frontières (MSF), International Federation of the Red Cross and Red Crescent Societies (IFRC) and Save the Children.

“From start to finish, this campaign was one of the fastest ever, thanks to experienced people at the Ministry of Health, who knew there was a high risk of a cholera outbreak and made a rapid request for the vaccines as soon as the cyclone hit,” says Dr Djamila Cabral, Head of the WHO office in Mozambique. “The Ministry did an excellent job organizing the campaign and reaching so many people in such a short time. The oral cholera vaccine is one of the vital measures that can help save lives and stop the spread of this terrible disease during an outbreak.”

HOT TOPICS

1. Ebola
2. Influenza
3. Measles
4. Cholera in Yemen & Mozambique
5. Antimicrobial resistance

UPDATES

6. MERS
7. Polio
8. Acute Flaccid Myelitis
9. Zika & Yellow Fever
10. Chronic Wasting Disease (CWD)
11. Foodborne disease
12. Other

DEADLY GERMS, LOST CURES

A Mysterious Infection, Spanning the Globe in a Climate of Secrecy

The rise of *Candida auris* embodies a serious and growing public health threat: drug-resistant germs.

By **Matt Richtel** and **Andrew Jacobs**

April 6, 2019

Last May, an elderly man was admitted to the Brooklyn branch of Mount Sinai Hospital for abdominal surgery. A blood test revealed that he was infected with a newly discovered germ as deadly as it was mysterious. Doctors swiftly isolated him in the intensive care unit.

The germ, a fungus called *Candida auris*, preys on people with weakened immune systems, and it is quietly spreading across the globe. Over the last five years, it has hit a neonatal unit in Venezuela, [swept through a hospital](#) in Spain, forced a prestigious British medical center to shut down its intensive care unit, and taken root in India, Pakistan and [South Africa](#).

Recently *C. auris* reached [New York, New Jersey](#) and Illinois, leading the federal Centers for Disease Control and Prevention to add it to a list of germs deemed “urgent threats.”



Novel antifungal shows early promise against *Candida auris*

Filed Under: **Candida auris**; **Antimicrobial Stewardship**; **Fungal Infection**

Chris Dall | News Reporter | CIDRAP News | Apr 10, 2019

 Share

 Tweet

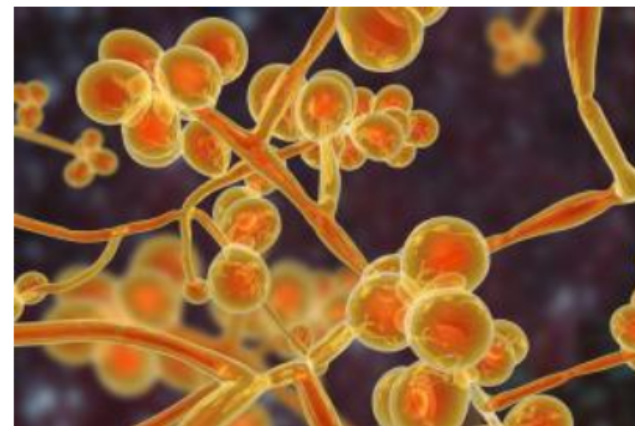
 LinkedIn

 Email

 Print & PDF

Biotechnology company Scynexis, Inc., is reporting early but promising results from a phase 3 trial of a novel drug for treating invasive *Candida auris* infections.

The company will present the results from the first two case studies in the CARES trial at the upcoming European Congress of Clinical Microbiology and Infectious Diseases (ECCMID) in Amsterdam. The single-arm trial is evaluating the efficacy and safety of oral ibrexafungerp in patients with candidiasis caused by *C. auris*, a multidrug-resistant fungus that has triggered deadly outbreaks in healthcare facilities around the world, with mortality rates as high as 60%.



Dr_Microbe / iStock



DEADLY GERMS, LOST CURES

In a Poor Kenyan Community, Cheap Antibiotics Fuel Deadly Drug-Resistant Infections

Overuse of the medicines is not just a problem in rich countries. Throughout the developing world antibiotics are dispensed with no prescription required.

NAIROBI, Kenya — Four days after her toddler's health took a turn for the worse, his tiny body racked by fever, diarrhea and vomiting, Sharon Mbone decided it was time to try yet another medicine.

By [Andrew Jacobs](#) and [Matt Richtel](#)

April 7, 2019

With no money to see a doctor, she carried him to the local pharmacy stall, a corrugated shack near her home in Kibera, a sprawling impoverished community here in Nairobi. The shop's owner, John Otieno, listened as she described her 22-month-old son's symptoms and rattled off the pharmacological buffet of medicines he had dispensed to her over the previous two weeks. None of them, including four types of antibiotics, were working, she said in despair.

Like most of the small shopkeepers who provide on-the-spot diagnosis and treatment here and across Africa and Asia, Mr. Otieno does not have a pharmacist's degree or any medical training at all. Still, he confidently reached for two antibiotics that he had yet to sell to Ms. Mbone.





Europe highlights rising resistance in zoonotic bacteria

Filed Under: [Antimicrobial Stewardship](#)


Chris Dall | News Reporter | CIDRAP News | Feb 26, 2019

 Share

 Tweet

 LinkedIn

 Email

 Print & PDF

A European report today on antimicrobial resistance in bacteria that can be transmitted between animals and people shows high levels of resistance to drugs commonly used to treat certain foodborne illnesses, along with worrisome levels of multidrug resistance.

The European Union (EU) summary report on antimicrobial resistance in zoonotic and indicator bacteria from humans, animals, and food, released today by the European Food Safety Authority (EFSA) and the European Centre for Disease Prevention and Control (ECDC), covers resistance data collected by EU member states in 2017 from humans, pigs, calves under 1 year of age, and beef and pork. The data focus on resistance levels in *Salmonella*, *Campylobacter*, *Escherichia coli*, and methicillin-resistant *Staphylococcus aureus*—the main infection-causing bacteria that can be acquired directly from animals through environmental exposure or consumption of meat.



Tim Geers / Flickr cc



UK primary care study finds overly long antibiotic courses

Filed Under: **Antimicrobial Stewardship**

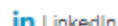
Chris Dall | News Reporter | CIDRAP News | Feb 28, 2019



Share



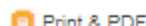
Tweet



LinkedIn



Email



Print & PDF

Most antibiotic prescriptions for several common infections treated in primary care in England are longer than they need to be, according to a study yesterday in the *British Medical Journal (BMJ)*.

Delving into a nationwide database of electronic medical records from primary care offices, a team led by researchers from Public Health England (PHE) found that more than 80% of antibiotic courses for upper respiratory tract infections and acute cough and bronchitis exceeded national guideline recommendations, resulting in 1.1 million days of treatment beyond the recommended durations for those conditions.

The authors of the study say the findings highlight poor adherence to guidelines on treatment duration, an important aspect of antibiotic stewardship in primary care that may get overlooked in the focus on whether the initial prescribing decision is appropriate. To date, limited research has been conducted on antibiotic durations for common infections in English primary care.



Rawpixel / iStock



EU study shows wide range in antibiotic prescribing for febrile kids

Filed Under: [Antimicrobial Stewardship](#)

Chris Dall | News Reporter | CIDRAP News | Mar 01, 2019

[f](#) Share

[t](#) Tweet

[in](#) LinkedIn

[e](#) Email

[p](#) Print & PDF

A new study of European emergency departments has found that antibiotic prescribing for children who show up with a fever varies widely across the continent, and many of those children are discharged with a broad-spectrum antibiotic. The findings appeared yesterday in *The Lancet Infectious Diseases*.

The cross-sectional, observational analysis of more than 5,100 children admitted to 28 emergency departments in 11 countries across Europe over a 16-month period found that about a third of the children who presented with a fever but no other illnesses received an antibiotic on discharge, with the prescribing frequency ranging from 19% in Switzerland to 64% in Turkey.

More than 60% of those prescriptions, which were written mainly for respiratory tract infections, were for second-line antibiotics.



Rawpixel / iStock



CDC: Progress stalled against staph, MRSA infections

Filed Under: [Antimicrobial Stewardship](#); [MRSA](#)

Chris Dall | News Reporter | CIDRAP News | Mar 05, 2019

[f](#) Share

[t](#) Tweet

[in](#) LinkedIn

[e](#) Email

[p](#) Print & PDF

The US Centers for Disease Control and Prevention said today that bloodstream infections caused by *Staphylococcus aureus* remain a significant and deadly problem in US hospitals, and that progress on reducing the most dangerous type of staph infection has stalled.

According to the agency's latest Vital Signs report, more than 119,000 people suffered from *S aureus* bloodstream infections in 2017, and nearly 20,000 died. In addition, the report found that while the rate of methicillin-resistant *S aureus* (MRSA) bloodstream infections in US hospitals fell by more than 17% annually from 2005 through 2012, the rates of decline has slowed since then.

The report also found that MRSA infections that originate in the community have been declining more slowly than hospital-onset cases, and community-onset methicillin-susceptible *S aureus* (MSSA) infections are on the rise.

"The bottom line is this: We have prevented many staph infections, but while we've made important progress, our data show that more needs to be done to stop all types of staph infections," CDC Principal Deputy Director Anne Schuchat, MD, said in a telebriefing.



vladans / iStock




Neighborhood antibiotic use tied to risk of resistant bacteria

Filed Under: **Antimicrobial Stewardship**


Chris Dall | News Reporter | CIDRAP News | Mar 07, 2019

 Share

 Tweet

 LinkedIn

 Email

 Print & PDF

A large new study by researchers in Israel indicates that increased use of antibiotics in certain neighborhoods is associated with increased risk of acquiring antibiotic-resistant bacteria, even in individuals without prior antibiotic use.

The study, published in *The Lancet Infectious Diseases*, specifically looked at fluoroquinolone-resistant *Escherichia coli* found in the urine cultures of Israelis in more than 1,700 neighborhoods across the country, and any association with personal and community use of fluoroquinolones.

The results showed that while higher personal use of fluoroquinolones was associated with increased risk of finding fluoroquinolone-resistant *E coli*, so was higher neighborhood use. And that risk remained even when the analysis looked at people who had not previously consumed fluoroquinolones.



Brian Holsclaw / Flickr cc




Sewage study highlights global antimicrobial resistance disparity

Filed Under: [Antimicrobial Stewardship](#)


Chris Dall | News Reporter | CIDRAP News | Mar 11, 2019

 Share

 Tweet

 LinkedIn

 Email

 Print & PDF

A new study by an international team of scientists suggests that analyzing the DNA of urban sewage in different countries may tell the full story of global antimicrobial resistance (AMR) levels and provide a cheaper and easier method of conducting global AMR surveillance.

In a paper published in *Nature Communications*, the scientists report that metagenomic analysis of untreated sewage from 60 countries revealed a clear geographic distinction in AMR levels, with countries in Asia, Africa, and South America having more AMR genes, and a larger variety of them, than countries in Europe, North America, and Oceania. Their analysis also found that high AMR gene abundance was related to poor sanitation and health in many of those countries.

"Our findings suggest that global AMR gene diversity and abundance vary by region, and that improving sanitation and health could potentially limit the global burden of AMR," the authors of the study write.



Vladimir Zapletin / iStock



Antibiotics before miscarriage surgery not tied to fewer infections

Filed Under: [Antimicrobial Stewardship](#)

Chris Dall | News Reporter | CIDRAP News | Mar 13, 2019

[f Share](#)

[t Tweet](#)

[in LinkedIn](#)

[✉ Email](#)

[🖨 Print & PDF](#)

The findings from a multi-country clinical trial published today in the *New England Journal of Medicine* show that the use of preventive antibiotics before miscarriage surgery did not result in a significantly lower risk of pelvic infection than the use of a placebo.

Roughly 10% to 20% of the 208 million pregnancies that occur each year globally end in miscarriage, and surgery is often required to remove the contents of the uterus. But whether prophylactic antibiotics help prevent post-surgical infection remains unclear.

And in low- and middle-income countries (LMICs), where rates of miscarriage and post-surgical infection are higher but antibiotics are frequently overused, more definitive evidence of the value of antibiotic prophylaxis is needed.

While the results suggest the value is limited, the international team of researchers who conducted the study and an outside expert say, however, that the broadening of the definition of pelvic infection in the middle of the trial muddies the picture.



ake1150sb / iStock



ASP Scan (Weekly) for Mar 29, 2019

Chinese surveillance study finds multidrug-resistant *E coli* in food

A surveillance study by Chinese scientists has found multidrug-resistant *Escherichia coli* strains in food products carrying the MCR-1 and *bla*NDM-1 resistance genes, and mobile genetic elements similar to those found in human strains, according to a paper yesterday in *Eurosurveillance*.

Among the 1,166 non-repeated cephalosporin-resistant *E coli* isolates recovered from 2,137 samples of pork, beef, chicken, and shrimp bought at markets in Shenzhen, China, from 2015 through 2017, the scientists identified 390 and 42, respectively, that were resistant to colistin and meropenem, and 5 isolates that were resistant to both antibiotics.

Among the 390 colistin-resistant *E coli* isolates, the rate of resistance to colistin rose from 26% in 2015 to 46% in 2017, while rates of meropenem resistance in the 42 meropenem-resistant isolates increased from 0.3% in 2015 to 17% in 2017.

Further screening found that all of the colistin-resistant isolates carried the MCR-1 gene and 36 of the 42 meropenem-resistant isolates carried the *bla*NDM-1 gene, with six harboring the *bla*NDM-5 gene; the five isolates that were resistant to both colistin and meropenem were carrying both MCR-1 and *bla*NDM genes. Notably, the scientists identified plasmids—in particular the ca 46kb IncX3 plasmid—that have been commonly reported in colistin- and carbapenem-resistant clinical isolates but not in isolates from animals and food. Conjugation experiments revealed that the colistin and meropenem resistance phenotypes of the 5 MCR-1 and *bla*NDM-bearing strains were transferable to other *E coli* strains of food origin.



Genetic sleuthing reveals rapid evolution of MDR *Klebsiella* outbreak

Filed Under: [Antimicrobial Stewardship](#)

Chris Dall | News Reporter | CIDRAP News | Apr 03, 2019

[f Share](#)

[t Tweet](#)

[in LinkedIn](#)

[Email](#)

[Print & PDF](#)

A genomic analysis of an outbreak of carbapenem-resistant *Klebsiella pneumoniae* (CRKP) in a Chinese hospital reveals some new insight into how highly pathogenic bacteria spread in clinical settings and acquire and share resistance.

In a study yesterday in *Microbial Genomics*, a team of scientists from the United Kingdom and China reported the findings after analyzing a CRKP outbreak at Peking University Hospital in Beijing that was first identified in 2016, when a patient died from a CRKP bloodstream infection after surgery.

Using whole-genome sequencing (WGS), the scientists were able to determine that the strain that had sickened the patient had been in circulation in the hospital for at least a year prior to the patient's death, spreading between patients and throughout the wards of the hospital. It even traveled among the three campuses of the hospital, which were miles apart.

The analysis also found that the isolates of the highly drug-resistant outbreak strain were carrying multiple antibiotic resistance genes and plasmids, the mobile genetic elements that share and spread resistance genes. In some cases, the number of copies of a resistance plasmid in an isolate correlated with the level of antibiotic resistance.



XiXinXing / iStock



ASP Scan (Weekly) for Apr 05, 2019

Global study of flu burden in tots shows 41% antibiotic prescribing rate

A study yesterday in *BMC Infectious Disease* of children under 3 years old shows not only the heavy burden of flu globally but also the continued misuse of antibiotics for the disease, as 41% of the patients received antibiotics.

French and Dutch investigators analyzed data from 2,210 participants included in the placebo arm of a phase 3 trial who had never been vaccinated for influenza and were observed for one or two flu seasons from 2014 to 2016. Among the group, who were from nine countries in both the Northern and Southern Hemisphere, 255 participants had virologically confirmed flu, for an attack rate of 11.5%. The children ranged in age from 6 to 35 months.

Most cases (57.0%) resulted in outpatient visits, but 1.1% required overnight hospitalization. Among all patients, 24.3% had grade 3 fever, 8.7% lower respiratory infection, 6.1% acute otitis media (AOM, or ear infection), and 1.9% pneumonia.

The vast majority of children (93.2%) received fever-reducing drugs, analgesics, or non-steroidal anti-inflammatory drugs. Fully 41.4%, however, received antibiotics for the disease, which is caused by a virus. The antibiotic prescribing rate was 23.5% in South Africa, 38.9% in European nations, and 45.7% in the Philippines.

The authors write, "A few of these antibiotic prescriptions could have been for influenza-associated AOM or acute lower respiratory infection, which were observed in 15% of influenza cases," but they add, "unnecessary antibiotic use in influenza appears to be a continuing problem and may be contributing to the spread of antibiotic-resistant bacteria."

Apr 4 *BMC Infect Dis* study



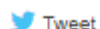
Study finds high rate of antibiotic prescribing in kids' telemedicine visits

Filed Under: [Antimicrobial Stewardship](#)

Chris Dall | News Reporter | CIDRAP News | Apr 08, 2019



Share



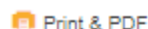
Tweet



LinkedIn



Email



Print & PDF

A study today in *Pediatrics* shows that children with acute respiratory infections were more likely to receive an antibiotic during a visit with a direct-to-consumer (DTC) telemedicine provider than those who visited an urgent care center or their own physician, and less likely to receive antibiotic care that hews to clinical guidelines.

The findings, which come from examination of claims data from a large national commercial health plan, suggest DTC telemedicine—a service in which parents can connect to a healthcare professional through a smartphone or tablet—may not always be a suitable option for children with respiratory infections.

Although the telemedicine visits represented only a small fraction of the encounters analyzed, the authors of the study say the high rate of prescribing observed in these encounters raises concerns.

"Unnecessary antibiotic use is not benign," lead study author Kristin Ray, MD, MS, a pediatrician with UPMC Children's Hospital of Pittsburgh, told CIDRAP News. "For individual children, antibiotic use has potential side effects such as diarrhea or allergic reactions. And for public health, unnecessary antibiotics contribute to antibiotic resistance concerns."



verbaska_studio / iStock



ASP Scan (Weekly) for Mar 01, 2019

CARB-X adds 6 new organizations to its Global Accelerator Network

Originally published by CIDRAP News Feb 26

The public-private partnership CARB-X today announced it has added six new life sciences organizations from around the world, expanding its Global Accelerator Network to 10 groups, according to a CARB-X news release.

"We are expanding our accelerator network to increase support for the development of new antibiotics, rapid diagnostics, vaccines and other life-saving products that the world so urgently needs to fight the rise of drug-resistant bacteria," said Kevin Outterson, JD, CARB-X executive director.

"Antibacterial product development is challenging, and CARB-X's portfolio is growing rapidly. This new network will provide a broader range of scientific, technical, and business support our innovative projects need to progress and succeed." The six new groups add expertise in the development of drugs and rapid diagnostics, business and regulatory strategy, and other highly specialized areas, CARB-X said.

Hailing from six nations, the six organizations are: BaselArea.swiss, the BioInnovation Institute, the Centre for Cellular and Molecular Platforms (C-CAMP), the Foundation for Innovative New Diagnostics (FIND), the German Center for Infection Research (DZIF), and the Institute for Life Sciences Entrepreneurship (ILSE). They join CLSI, MassBio, and RTI International in the United States and the Wellcome Trust in the United Kingdom as CARB-X accelerators.

Since it was established in 2016, CARB-X (the Combating Antibiotic Resistant Bacteria Biopharmaceutical Accelerator) has awarded more than \$107.4 million, plus additional funds if project milestones are met, to accelerate the development of antibiotics, rapid diagnostics and other life-saving antibacterial products. Its aim is to invest up to \$500 million by 2021.

Feb 26 CARB-X news release

Creating new antimicrobial drugs will require governments working with industry

By THOMAS B. CUENI / APRIL 9, 2019

As the number of infections resistant to antimicrobial drugs continues to rise around the world, and with it their huge human and financial toll, we urgently need new ways to preserve the effectiveness of existing antibiotics and to develop much-needed new ones.

Creating state-run or publicly owned pharmaceutical companies, an idea [recently floated](#) by British economist Jim O'Neill, isn't the way to proceed.

Back in 2014, the British government asked O'Neil to propose concrete actions to tackle the growing problem of resistance to antibiotics and other antimicrobial drugs. That work led to the 2016 publication of the [Review on Antimicrobial Resistance](#), which called for the use of market entry rewards and an innovation fund to generate more drugs.

HOT TOPICS

- 1. Ebola**
- 2. Influenza**
- 3. Measles**
- 4. Cholera in Yemen & Mozambique**
- 5. Antimicrobial resistance**

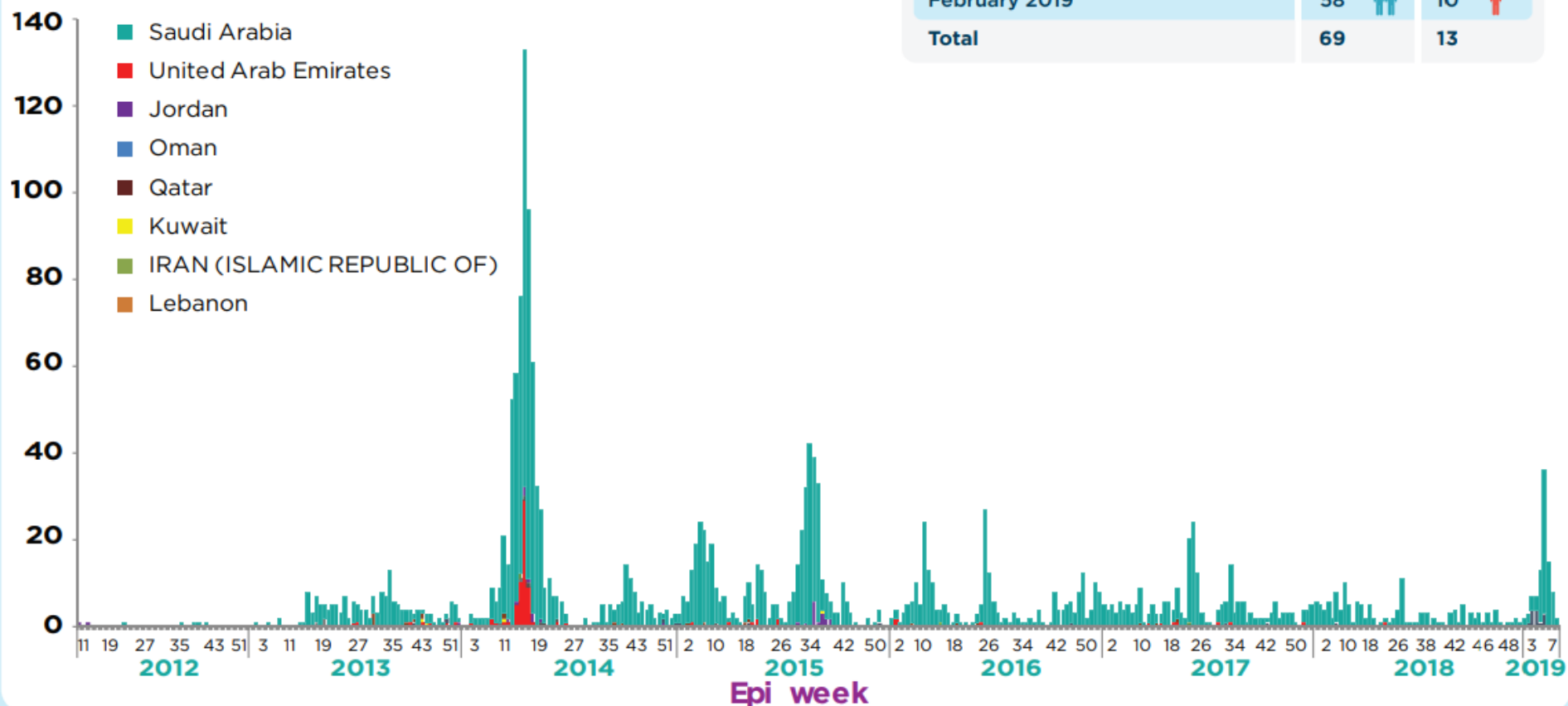
UPDATES

- 6. MERS**
- 7. Polio**
- 8. Acute Flaccid Myelitis**
- 9. Zika & Yellow Fever**
- 10. Chronic Wasting Disease (CWD)**
- 11. Foodborne disease**
- 12. Other**

Laboratory-confirmed cases of MERS reported in Eastern Mediterranean Region, April 2012-February 2019

MERS in Saudi Arabia (January-February 2019)

	Survived 	Died 
January 2019	11 	3 
February 2019	58 	10 
Total	69	13





News Scan for Feb 14, 2019

Oman reports 4 new MERS infections, Saudi Arabia 1

Several Arabic media outlets are reporting that the Omani ministry of health has confirmed 4 more MERS cases in Oman, while Saudi Arabia also noted a new, fatal case.

The Omani cases are part of an ongoing outbreak and bring the total to 10 recent cases of MERS-CoV (Middle East respiratory syndrome coronavirus) in that country, which had not seen the a MERS case since March 2018.

According to Avian Flu Diary, an infectious disease tracking blog, the Omani ministry of health said the 10 cases have resulted in 4 deaths in different provinces. If confirmed, that would mean the outbreak is no longer contained to a single family farm, as reported by the World Health Organization on Feb 11.

The Saudi Arabian Ministry of Health (MOH), meanwhile, today recorded another new MERS-CoV case for epidemiologic week 7 in Wadi ad-Dawasir.

The infection lifts the country's MERS-CoV cases since the first of the year to 61, which includes 38 from Wadi ad-Dawasir, the site of a possible hospital-based outbreak.

The patient is a 60-year-old man who died after acquiring MERS in a healthcare setting. He did not have camel contact, a known risk factor, the Saudi MOH said.

Feb 14 Avian Flu Diary [post](#)



WHO says 2 events boosted Saudi hospital MERS outbreak

Filed Under: **MERS-CoV**

Stephanie Soucheray and Lisa Schnirring | Staff Writers | CIDRAP News | Feb 26, 2019



Share



Tweet



LinkedIn



Email



Print & PDF

Nine healthcare workers are among the 39 MERS-CoV patients identified in a hospital-based outbreak of the virus in Wadi ad-Dawasir, Saudi Arabia, and according to the World Health Organization's (WHO) technical lead, and the outbreak features both human-to-human transmission patterns and spread from animals.

Maria Van Kerkhove, PhD, the WHO's technical lead for MERS-CoV (Middle East respiratory syndrome coronavirus), told CIDRAP News there have been two amplification events in the Wadi ad-Dawasir outbreak.

One occurred in the emergency department. Because of delays in suspicion and detection of MERS-CoV with the initial patient, the virus spread to other patients, healthcare workers, and household contacts.

One of those patients then transmitted the disease to other health workers, intensive care unit patients, and household contacts.



sudoka / iStock



Oman reports second MERS cluster, 8 new cases, 2 deaths

Filed Under: **MERS-CoV**

Lisa Schnirring | News Editor | CIDRAP News | Mar 04, 2019

[f Share](#)

[t Tweet](#)

[in LinkedIn](#)

[✉ Email](#)

[🖨 Print & PDF](#)

The World Health Organization (WHO) today detailed eight more MERS-CoV cases in Oman, some of which—including two fatalities—are part of a second illness cluster, and others apparently part of an earlier cluster.

Meanwhile, over the weekend and through today, Saudi Arabia's Ministry of Health (MOH) reported four more MERS-CoV (Middle East respiratory syndrome coronavirus) cases, mostly from Riyadh.

Two health workers among latest Oman patients

Last month, Oman reported a cluster of five MERS-CoV patients in Al Batinah North governorate, all of them women from the same family.

Today's WHO update notes four more cases from Al Batinah North, and all are in women ages 30 to 77 who had secondary exposure, meaning they likely contracted the virus from another patient. One is a healthcare worker with an asymptomatic infection, and two of the other women are likewise asymptomatic. The fourth is hospitalized.



Manakin / iStock



News Scan for Mar 11, 2019

Saudi Arabia reports more MERS in hot spots, hits 100 cases for year

In updates for epidemiologic weeks 10 and 11, the Saudi Arabian Ministry of Health (MOH) announced five new cases of MERS-CoV today and over the weekend, including two in Wadi ad-Dawasir, the site of an ongoing hospital-based outbreak.

Today the MOH said a 60-year-old man in Wadi ad-Dawasir contracted MERS-CoV (Middle East respiratory syndrome coronavirus). The man had no camel contact and is listed as a secondary case contact. A 51-year-old man from the same city was diagnosed as having MERS, according to a Mar 9 MOH report. He had camel exposure.

Also on Mar 9, a 39-year-old man from Uqlat As Suqur was diagnosed with the viral disease. He also had camel exposure.

Yesterday the MOH recorded two cases, the first in a 47-year-old man with camel contact from Hafar Al-Batin who is also a secondary case contact. A 64-year-old woman from Khamis Mushait was also diagnosed as having MERS yesterday. She is a secondary case contact, and did not have any exposure to camels.

With these 5 new cases, Saudi Arabia has now recorded 100 cases since Jan 1, including 56 in Wadi ad-Dawasir, many of which have been healthcare-related.

The World Health Organization's regional office for the Eastern Mediterranean (WHO EMRO) published a summary of MERS activity in February, noting 76 cases (68 in Saudi Arabia, 8 in Oman). The agency said that, through February, global MERS totals since 2012 had reached 2,374 lab-confirmed cases and 823 deaths, for a case-fatality rate of 34.6%. More than 83% of the cases have been in Saudi Arabia.



MERS-CoV infects 2 more in Saudi Arabia, 102 this year

Filed Under: **MERS-CoV**


Lisa Schnirring | News Editor | CIDRAP News | Mar 12, 2019

 Share

 Tweet

 LinkedIn

 Email

 Print & PDF

Saudi Arabia today reported two MERS-CoV cases, and, in the latest medical literature developments, researchers described new findings about mortality predictors, while another group profiled seroprevalence patterns in camels.

Human transmission, camel contact

Saudi Arabia's Ministry of Health (MOH) today reported two more MERS-CoV (Middle East respiratory syndrome coronavirus) cases, one of them apparently linked to an ongoing outbreak in Wadi ad-Dawasir, according to an update to its epidemiologic week 11 report.

The patient from Wadi ad-Dawasir is a 37-year-old man who is listed as a secondary contact, meaning he was likely exposed to the virus by another sick patient. He reported no camel contact.

Meanwhile, the other illness involves a 42-year-old man from Arar in northern Saudi Arabia. The man has a history of contact with camels, and his exposure is listed as primary.

The country has now reported 102 cases since the first of the year, of which 57 are linked to the outbreak in Wadi ad-Dawasir, most of which are linked to healthcare exposure, with some related to contact with camels.



sudoka / iStock



News Scan for Apr 02, 2019

MERS infects 2 more in Saudi Arabia, 1 fatally

Saudi Arabia today reported two more MERS-CoV cases, one of them fatal, according to a Ministry of Health (MOH) update to its epidemiologic week 14 report.

The fatal MERS-CoV (Middle East respiratory syndrome coronavirus) case involves a 39-year-old man from Jazan in southwestern Saudi Arabia. An investigation found the source of the man's virus to be primary, meaning he wasn't likely exposed to another sick person.

The second patient is a 50-year-old man from the city of Rania in Taif region, located in the west central part of the country. The man's exposure is also listed as primary. Neither man had recent camel contact, the MOH said.

So far this year Saudi Arabia has reported 116 MERS-CoV cases, 57 of them linked to a large outbreak in Wadi ad-Dawasir, including many healthcare-related cases.

Apr 2 MOH report

In other Saudi MERS-CoV developments, the country's agriculture ministry reported an outbreak in camels that began on Mar 11 at a farm in An Nabhaniyah, located in central Saudi Arabia, according to a notification today from the World Organization for Animal Health (OIE). The virus was found in two of five susceptible camels.

Apr 2 OIE report



News Scan for Apr 05, 2019

Saudi Arabia records 2 more MERS cases in Khafji, 7 total in that city

Saudi Arabia's Ministry of Health (MOH) today reported two more MERS-CoV cases in Khafji, more evidence suggesting the city may be the site of a household or healthcare cluster. These are the sixth and seventh cases reported in Khafji since Mar 29.

The patients, as with the previous five, are both men, one of whom was a 60-year-old who died from his MERS-CoV (Middle East respiratory syndrome coronavirus) infection, the MOH said in an update to its epidemiologic week 14 report. The other patient is 74 years old.

The source of the men's infections is not known at this time. Khafji is in northeastern Saudi Arabia near the Kuwaiti border.

The new cases raise the country's MERS total for the year to 121 infections, which includes 57 linked to a large outbreak in Wadi ad-Dawasir.

Apr 5 MOH update



News Scan for Mar 13, 2019

MERS-CoV detected in Kenyan camels

The World Organization for Animal Health (OIE) yesterday recorded six outbreaks of MERS-CoV among camel herds in Kenya in 2017 and 2018, resulting in 18 cases among 2,025 susceptible animals.

This is not the first time evidence of the coronavirus has been detected in Kenya. Studies conducted in 2015 and 2016 showed that the blood of nearly half of animals tested contained antibodies to MERS-CoV (Middle East respiratory syndrome coronavirus). And humans who worked with animals in Kenya have also tested positive for antibodies to the virus in 2016.

The OIE report, however, confirms detection of the virus itself. It is the agency's first report of MERS-CoV in Kenyan camels.

The current outbreaks occurred on four farms, in one village, and in Kora National Park on the Tana River. The two outbreaks from 2017 took place in Isiolo County, which is in the central part of the country. Other affected counties are Garissa, Marsabit, and Laikipia.

No animals died in the outbreaks.

Mar 12 OIE report

Mar 4, 2016, CIDRAP News story on antibodies in people

HOT TOPICS

1. Ebola
2. Influenza
3. Measles
4. Cholera in Yemen & Mozambique
5. Antimicrobial resistance

UPDATES

6. MERS
7. Polio
8. Acute Flaccid Myelitis
9. Zika & Yellow Fever
10. Chronic Wasting Disease (CWD)
11. Foodborne disease
12. Other



News Scan for Feb 20, 2019

With 26 cases, Papua New Guinea sees resurgence of polio

The World Health Organization (WHO) said today that Papua New Guinea has seen 26 cases of polio since the virus made a resurgence on the island nation last summer.

On Jun 26, 2018, the outbreak began when two healthy contacts of an index case contracted circulating vaccine-derived poliovirus type 1 (cVDPV1). Nine provinces have since recorded cases, the most recent of which involved symptom onset in October.

The WHO said there have been five rounds of supplementary immunization activities (SIA) conducted from July to December of 2018. The first SIAs targeted children under 5 years, and later activities have included children under the age of 15.

"WHO is working with partners to support the Government of Papua New Guinea to undertake appropriate outbreak response measures," the organization said.

Feb 20 WHO update



News Scan for Mar 01, 2019

More positive contacts found in Mozambique and Nigeria polio outbreaks

Mozambique and Nigeria reported more positive vaccine-derived polio samples, all in community contacts of earlier cases, according to a weekly update today from the Global Polio Eradication Initiative (GPEI).

Mozambique is currently experiencing a circulating vaccine-derived poliovirus type 2 (cVDPV₂) outbreak, and the latest positive sample was collected Dec 17 from a community contact in Zambezia province.

Nigeria reported eight positive cVDPV₂ samples collected Jan 13 and 14 from health contacts of a patient with acute flaccid paralysis in Kwara state. The country is experiencing two vaccine-derived polio outbreaks, the other involving cVDPV₁.

Feb 28 GPEI weekly report



News Scan for Mar 04, 2019

WHO agrees to extend public health emergency for polio

The 20th meeting of the Emergency Committee under the International Health Regulations of the World Health Organization (WHO) unanimously agreed late last week that the risk of international spread of poliovirus remains a Public Health Emergency of International Concern (PHEIC).

During the meeting, which convened in Geneva on Feb 19, the group considered several developments, including a rising number of wild poliovirus type 1 cases, the international spread of circulating vaccine-derived polio in several African countries, and population movement, before deciding the PHEIC status needed to stay in place.

"The current situation calls for unabated efforts and use of every tool available, to achieve the goal in these most challenging countries," the WHO said. "Particularly in the three remaining endemic countries, further engagement with senior levels of government and other key stakeholders is needed to advocate for polio eradication, and ensure all levels of government maintain a strong commitment until the job is done."

Polio is endemic in Afghanistan, Pakistan, and Nigeria. Several countries, including Indonesia, Papua New Guinea, and Somalia, have also reported recent cases.

Mar 1 WHO statement



News Scan for Mar 29, 2019

Pakistan and Nigeria report four more polio cases

In its weekly report today the Global Polio Eradication Initiative (GPEI) today noted four new polio cases, two from Pakistan involving wild poliovirus type 1 (WPV₁) and two from Nigeria involving circulating vaccine-derived poliovirus type 2 (cVDPV₂).

In Pakistan, the WPV₁ cases are in Khyber Pakhtunkhwa tribal district in a patient with a Feb 14 paralysis onset and in Karachi in a person with a Feb 25 paralysis onset. The country has now reported six polio cases for 2019.

Nigeria's cases are in Borno and Kwara states, with polio onsets of Feb 14 and Feb 20, respectively. The pair of new cases brings the country's total for the year to four. Nigeria is experiencing two cVDPV₂ outbreaks, one in Jigwa state that resulted in spread to other parts of Nigeria as well as to neighboring Niger, and one in Sokoto state.

Mar 29 GPEI report

Polio this week as of 3 April 2019

- The Strategic Advisory Group of Experts on immunization (SAGE) met on 2-4 April 2019 in Geneva, Switzerland. Among other immunization topics, SAGE was provided an update on the latest global epidemiology on polio eradication efforts and an overview of the GPEI Endgame Strategy 2019-2023. In addition, SAGE endorsed the guidelines for surveillance of vaccine-derived polioviruses in persons with primary immunodeficiency diseases.
- The Pakistan Regional Polio Laboratory is nearing completion with funding from Japan International Cooperation Agency. Read more [here](#).
- [Read](#) about the smart interactive visualization being used for disease surveillance and routine immunization assessments for polio eradication efforts in South Sudan.
- Summary of new viruses this week: Afghanistan— one wild poliovirus type 1 (WPV1) case; Pakistan –six WPV1-positive environmental samples; Nigeria— two circulating vaccine-derived poliovirus type 2 (cVDPV2)-positive environmental isolates. See country sections below for more details.

Wild poliovirus type 1 and Circulating vaccine-derived poliovirus cases

Total cases	Year-to-date 2019		Year-to-date 2018		Total in 2018	
	WPV	cVDPV	WPV	cVDPV	WPV	cVDPV
Globally	9	4	8	3	33	105
—In Endemic Countries	9	4	8	0	33	34
—In Non-Endemic Countries	0	0	0	3	0	71

Polio worker shot dead in Mohmand

The Newspaper's Correspondent | Updated April 09, 2019

GHALANAI: A union council polio officer associated with the World Health Organisation was shot dead by unknown persons in Ghazi Baig area of Haleemzai tehsil in Mohmand tribal district on Monday.

According to sources, the victim official, Wajid Khan, was on his routine duty in Ghazi Baig area near his home when unknown persons opened fire on him, injuring him seriously. He succumbed to his injuries while being shifted to the district headquarters hospital, Ghalanai.

After the incident, the local administration officials rushed to the spot and took a suspected man into custody and sent him to Ghalanai lockup for investigation.

HOT TOPICS

1. Ebola
2. Influenza
3. Measles
4. Cholera in Yemen & Mozambique
5. Antimicrobial resistance

UPDATES

6. MERS
7. Polio
8. Acute Flaccid Myelitis
9. Zika & Yellow Fever
10. Chronic Wasting Disease (CWD)
11. Foodborne disease
12. Other



News Scan for Mar 04, 2019

With 9 new acute flaccid myelitis cases, CDC will switch to monthly reports

In a separate update, the CDC today confirmed 8 more 2018 acute flaccid myelitis (AFM) cases in the past 2 weeks, raising 2018's total number of cases to 223 reported in 41 states, and 1 more for 2019, raising this year's cases to 2.

The 223 cases—which are by a large margin the most US cases in 1 year—were confirmed from 374 reports of patients under investigation (PUIs). The CDC said no deaths have been attributed to AFM in 2018 or 2019.

The 2019 AFM cases have been diagnosed in patients from North Carolina and Utah, with the latter being a new case since the CDC's previous update on Feb 15.

Texas has reported the most AFM cases in 2018, with 29. Colorado has 16 cases, Ohio and California have 14 each, and Washington state and New Jersey both have 11. Minnesota and Pennsylvania have each recorded 10.

As of today, the CDC said it will update AFM counts monthly instead of biweekly because of a reduction in the number of PUIs.

AFM affects the spinal cord, leaving patients—almost always children—with partial or total limb paralysis or muscle weakness. The cause of the disease is unknown, but 90% of patients report upper respiratory virus symptoms in the weeks prior to limb weakness. In previous years the syndrome has been tied to enterovirus infections.

Mar 4 CDC report



News Scan for Apr 01, 2019

Seven more acute flaccid myelitis cases noted in US

In a separate update, the CDC late last week reported 5 new cases of acute flaccid myelitis (AFM) in 2018 and 2 new cases this year, bringing last year's total to 228 and this year's to 4.

The 228 cases in 41 states—which are by a large margin the most US cases in 1 year—were confirmed from 378 reports of patients under investigation (PUIs). The CDC said no deaths have been attributed to AFM in 2018 or 2019.

The 2019 AFM cases have been diagnosed in Nebraska, North Carolina, Utah, and West Virginia, with Nebraska and West Virginia reporting cases for the first time this year. The 4 cases are among 25 PUIs. The CDC's previous update was on Mar 3.

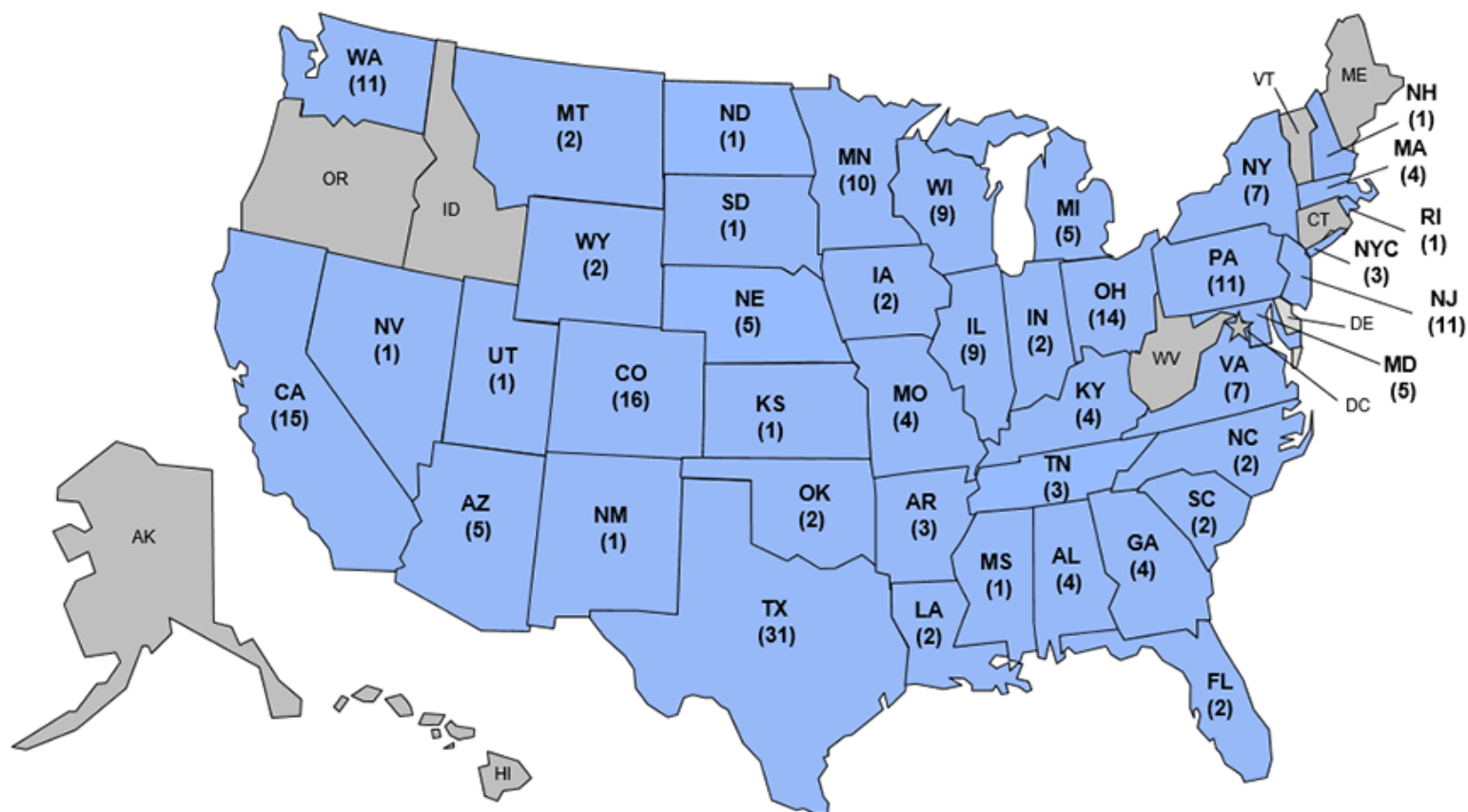
Texas has reported the most AFM cases in 2018, with 31, which is 2 more than in the previous update. Colorado has 16 cases, California 15 (1 new case), Ohio 14, and Pennsylvania (1 new case), New Jersey, and Washington state have 11.

AFM affects the spinal cord, leaving patients—almost always children—with partial or total limb paralysis or muscle weakness. The cause of the disease is unknown, but 90% of patients report upper respiratory virus symptoms in the weeks before limb weakness. In previous years the syndrome has been tied to enterovirus infections. So far, the condition has peaked in even-numbered years since 2014.

Mar 29 CDC update

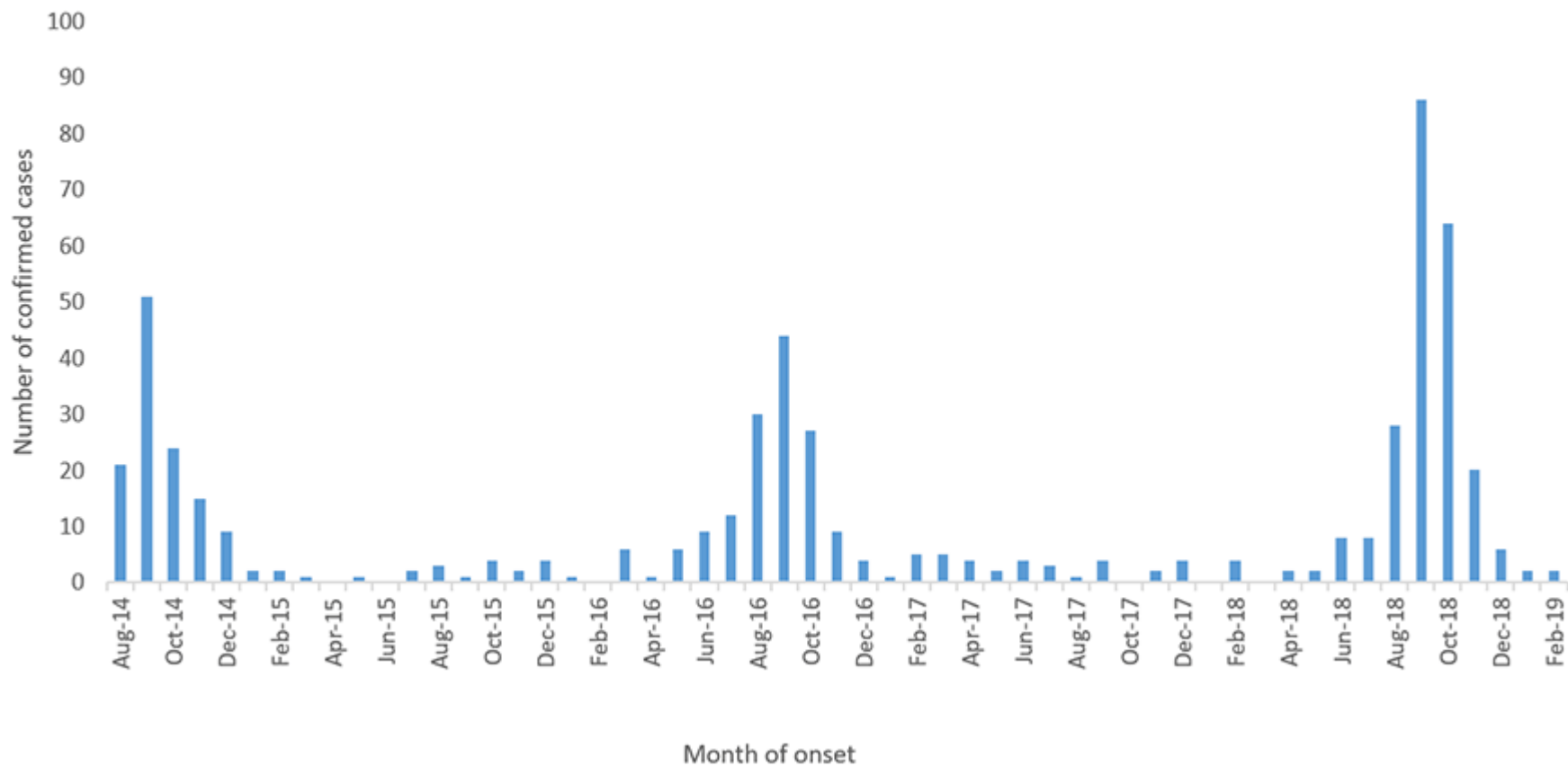


2018 confirmed cases of acute flaccid myelitis (AFM) by state (N=228)*



*Confirmed AFM cases as of March 29, 2019. Patients under investigation are still being classified, and the case counts are subject to change. One of the confirmed cases is a foreign resident (based on the country of usual residence) and therefore not included in the state map.

Number of confirmed U.S. AFM cases reported to CDC by month of onset,
August 2014 - February 2019^{^*†}



HOT TOPICS

1. Ebola
2. Influenza
3. Measles
4. Cholera in Yemen & Mozambique
5. Antimicrobial resistance

UPDATES

6. MERS
7. Polio
8. Acute Flaccid Myelitis
9. Zika & Yellow Fever
10. Chronic Wasting Disease (CWD)
11. Foodborne disease
12. Other



News Scan for Feb 12, 2019

Data from Mexico show Zika more widespread than thought

Using surveillance data from the Mexican Institute of Social Security (IMSS), researchers show that Zika prevalence was higher than previously thought in 2016. The analysis was published yesterday in *PLoS One*.

According to the authors, a total of 43,725 suspected cases of Zika virus disease (ZVD) were reported to the IMSS in 2016, of which 1,700 (3.9%) were confirmed by lab testing. The overall incidence of suspected Zika cases was 82.0 cases per 100,000 inhabitants, and the overall positive case estimate rate was 25.3 per 100,000.

Those findings put the Mexican incidence of Zika on par with Colombia, which had 4% of cases confirmed in the same year and are much higher than previously reported (5.9 per 100,000) prevalence estimates.

Women were more likely to have symptomatic Zika infections than men. The incidence of suspected Zika in pregnant women nationwide was 717 per 100,000 pregnant women, and the incidence of Zika-positive pregnant women was 186.1 per 100,000.

"Among pregnant women, the cumulative positive ZVD incidence rates were the highest in Guerrero, Chiapas and Yucatán, with considerable geographical variation, and we found higher incidence levels than have been reported by previous estimates," the authors said.

Feb 11 *PLoS One* study



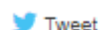
Study highlights early pregnancy Zika microcephaly risk

Filed Under: [Zika](#)

[Lisa Schnirring](#) | News Editor | [CIDRAP News](#) | Mar 05, 2019



Share



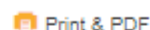
Tweet



LinkedIn



Email



Print & PDF

During Brazil's Zika outbreak, microcephaly cases were much higher in the country's northeastern tip than in other regions, raising questions about other possible cofactors, but a new analysis today of multiple databases found no suspicious red flags.

The study also confirms the Zika-microcephaly link, finding that women infected with Zika during the early stages of pregnancy are 17 times more likely to have a child with the condition compared with uninfected pregnant women. An international team of researchers based at the London School of Hygiene and Tropical Medicine published its findings in *PLOS Medicine*.



Leonardo Rattes, Ascom Sesab / Flickr cc

Heavy Zika toll in northeast Brazil

For the study, the scientists merged data from multiple Brazilian databases to gauge exposure to eight known or hypothesized causes of microcephaly for every pregnancy since the Zika outbreak began, covering 3.6 million to 5.4 million cases from January 2015 through May 2017.



News Scan for Mar 11, 2019

Study: Zika disease generally mild in children

Infection with Zika can cause severe malformations in children exposed to the virus prenatally, but it results in relatively mild illness in kids who contract it outside of the womb, according to a study today in *Clinical Infectious Diseases*.

The study is based on pediatric cases of the disease reported to the US Centers for Disease Control and Prevention in 2016 and 2017 from 10 states. A total of 144 cases in patients ages 1 through 17 were matched with adult patients, and all congenital and perinatal infections were excluded from the study.

Of the 141 pediatric patients, none experienced neurologic disease and none died. Only 1 patient was hospitalized, though 20 were seen in an emergency department. Almost all the patients (94%) presented with a rash, 74% had a fever, and 36% had conjunctivitis. Children older than 11 tended to present with higher fevers and more arthralgia and myalgia compared with younger patients.

"The symptoms frequently reported among children with Zika virus disease are common to many childhood illnesses and are not notably different than those experienced by adults," the authors concluded. "Healthcare providers should consider Zika virus disease in the differential diagnosis for children with acute onset of fever, rash, arthralgia, or conjunctivitis, who reside in or traveled to an area with active Zika virus transmission."

Mar 11 Clin Infect Dis study



News Scan for Mar 21, 2019

CDC eases travel restrictions for pregnant women looking to avoid Zika

The US Centers for Disease Control and Prevention (CDC) last month quietly downgraded its travel restriction guidelines for pregnant women, the *Washington Post* reported yesterday.

The dialing back occurred as Zika transmission has dropped in 88 countries—many in South America. According to the CDC, the only country pregnant women should avoid traveling to because of Zika is India. A CDC spokesperson told the *Post* that the World Health Organization (WHO) will soon follow suit.

The CDC advises that pregnant women or those attempting pregnancy talk to their doctors before traveling to countries that had high levels of Zika activity in 2015 and 2016. But the agency also said the risk of contracting Zika in these countries is ultimately unknown.

"If you decide to travel [to a country with a previous documented Zika outbreak], prevent mosquito bites and sexual exposure to Zika during and after travel. If traveling without male partner, wait 2 months after return before becoming pregnant," the CDC said on its travel page.

Zika is the only known mosquito-born virus to cause birth defects in fetuses and infants, which can include microcephaly, or a smaller-than-normal head and brain, with associated brain abnormalities.

Mar 20 *Washington Post* story

CDC Zika travel page



News Scan for Feb 22, 2019

Inovio targets Zika in first human trial of DNA monoclonal antibody

Inovio this week announced the launch of a trial of a DNA-encoded monoclonal antibody (dMAb) treatment, which will test its ability to prevent and treat Zika infection, the company said in a Feb 20 press release.

Inovio is collaborating with The Wistar Institute and the University of Pennsylvania, and the Bill and Melinda Gates Foundation is funding the trial.

The open-label, single-center dose-escalation trial will involve 24 healthy volunteers who will receive up to four doses of the dMAb, which is called INO-A002. According to the press release, the genetic codes provided by the synthetic dMAb trigger the body to make the therapeutic antibodies, meaning production of the monoclonal antibodies doesn't rely on manufacturing in bioreactors, a fact that can speed development and cut costs.

J. Joseph Kim, PhD, Inovio's president and chief executive officer, said the first human study of INO-A002 could provide important information about the platform, which could lead to production of other dMAbs targeting other infectious diseases, cancers, inflammation, and cardiovascular disease.

Feb 20 Inovio [press release](#)



News Scan for Mar 07, 2019

PAHO: Brazil, in midseason, reporting only 50 yellow fever cases

In its latest update on yellow fever in the Americas, the Pan American Health Organization (PAHO) said three South American countries have reported cases since December 2018: Bolivia, Brazil, and Peru.

Brazil, which is in the middle of yellow fever season, has recorded 50 cases in humans, including 12 deaths. That number is dwarfed by the previous two yellow fever seasons; in 2016-17, officials confirmed 778 confirmed human cases, including 262 deaths, and 2017-18 saw 1,376 confirmed human cases, including 483 deaths.

The large outbreaks—or waves — were caused by the virus spreading to parts of Brazil with unvaccinated populations, and PAHO said the cases in the current season still represent a geographic shift.

"The occurrence of cases and epizootics in the southern part of the state of Sao Paulo and in the state of Parana indicates the progression of transmission towards the Southeast and South regions of the country, with the possibility of reaching bordering countries such as Argentina and Paraguay," PAHO said.

Bolivia has recorded one yellow fever case so far this year, and Peru has recorded nine, with eight probable cases under investigation.

Mar 6 PAHO update

HOT TOPICS

1. Ebola
2. Influenza
3. Measles
4. Cholera in Yemen & Mozambique
5. Antimicrobial resistance

UPDATES

6. MERS
7. Polio
8. Acute Flaccid Myelitis
9. Zika & Yellow Fever
10. Chronic Wasting Disease (CWD)
11. Foodborne disease
12. Other

Health Officials Are Worried That ‘Zombie Deer Disease’ Could Someday Spread to Humans

BY JAMIE DUCHARME  FEBRUARY 19, 2019

Officials are worried that a prion disease spreading among deer in the U.S. may someday threaten the health of humans.

Chronic wasting disease (CWD), which is nicknamed “zombie deer disease,” gets its name from a range of symptoms. For deer, elk and moose, these include stumbling, listlessness, drooling and rapid weight loss. The fatal disease degrades the brains, spines and bodies of the animals it infects, and there are no known treatments or vaccines.

No cases of CWD have been recorded in humans. It has not even been definitely proven that humans can be infected by CWD, though [some research](#) has suggested it’s possible. But the [Centers for Disease Control and Prevention \(CDC\)](#) says that as of January 2019, the disease has been reported in deer, elk and moose in 251 counties in 24 U.S. states, primarily in the Midwest. It has also been found in two provinces in Canada. While CWD is still relatively rare, infection rates among deer and elk in areas where the disease is most common have been recorded at about 10-25%, the CDC says, and rates can be especially high among captive deer. CWD was first identified in Colorado in the late 1960s.

U of M launches Chronic Wasting Disease Program to address potential health crisis

March 19, 2019

The **Center for Infectious Disease Research and Policy** (CIDRAP) at the University of Minnesota announced today that it has launched the Chronic Wasting Disease Response, Research and Policy Program (CWD Program) to respond to this wildlife disease crisis and its potential for animal-to-human and human-to-human transmission.

CWD is a prion disease that affects several cervid species: deer, elk, reindeer, sika deer and moose. It has been found in some areas of North America, including three provinces in Canada and at least 26 states. Although CWD has not yet been found to cause infections in humans, numerous health agencies advise that people should not be consuming CWD-positive animals.

What are Prion Diseases?

Prion Diseases	Naturally Infects Animal(s)	Naturally Infects Humans
Scrapie	Yes (Sheep and Goats)	No
Creutzfeldt-Jakob Disease (CJD)	No	Yes
Bovine Spongiform Encephalopathy (BSE)	Yes (Cattle)	Yes
Variant Creutzfeldt-Jakob Disease (vCJD)	No	Yes
Chronic Wasting Disease	Yes (Cervids)	?

Chronic Wasting Disease

- **Prion disease in cervids**
 - Deer, elk, moose, reindeer
- **First described in 1967 in a Colorado research facility**
- **Symptoms of CWD**
 - Weight loss (wasting)
 - Excessive salivation
 - Apparent confusion
- **Always fatal**

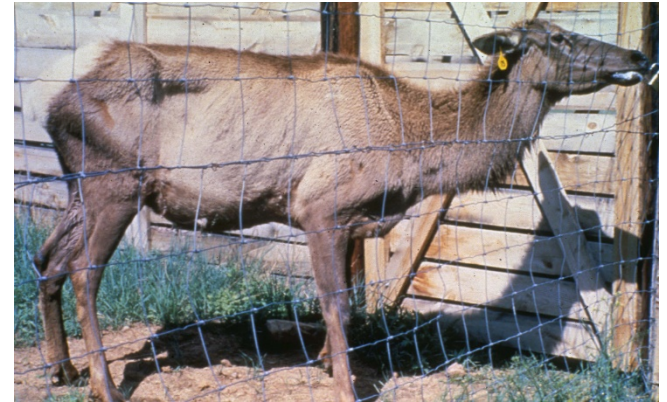


Image Courtesy of idfg.idaho.gov

Chronic Wasting Disease

- Horizontally transmitted
 - CWD prions are shed in bodily fluids
 - Ex. Saliva, urine, feces
 - Environmental contamination
- Incubation period: typically 18-24 months

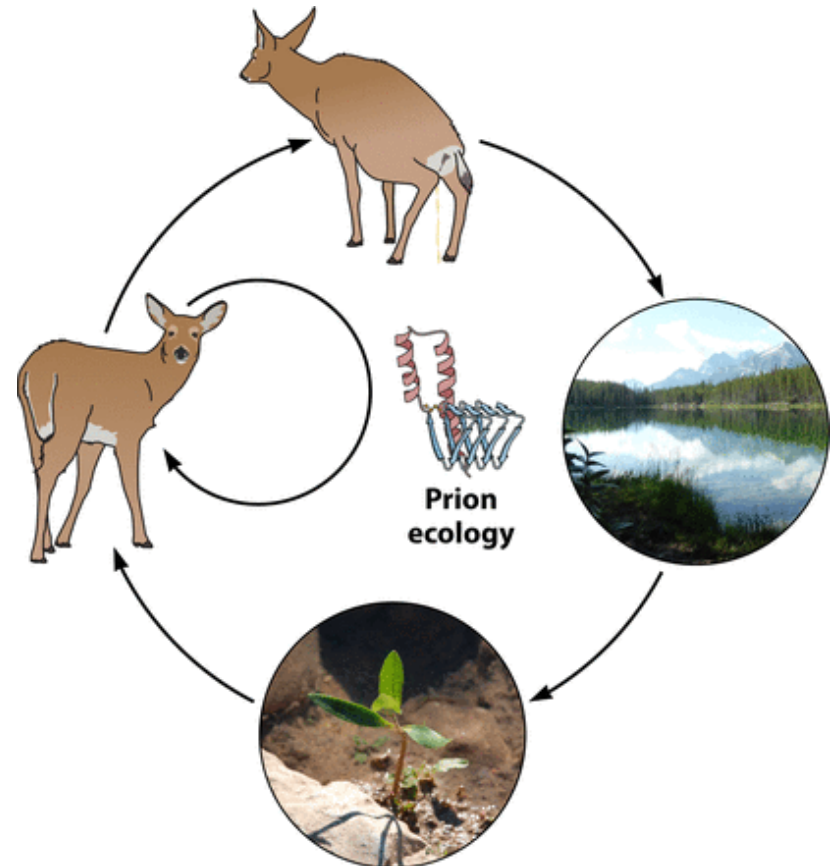


Image Courtesy of <https://mmbbr.asm.org/content/81/3/e00001-17>

Chronic Wasting Disease

- **Geographic range**
 - 26 US states
 - 3 Canadian provinces
 - South Korea
 - Finland
 - Norway
 - Sweden

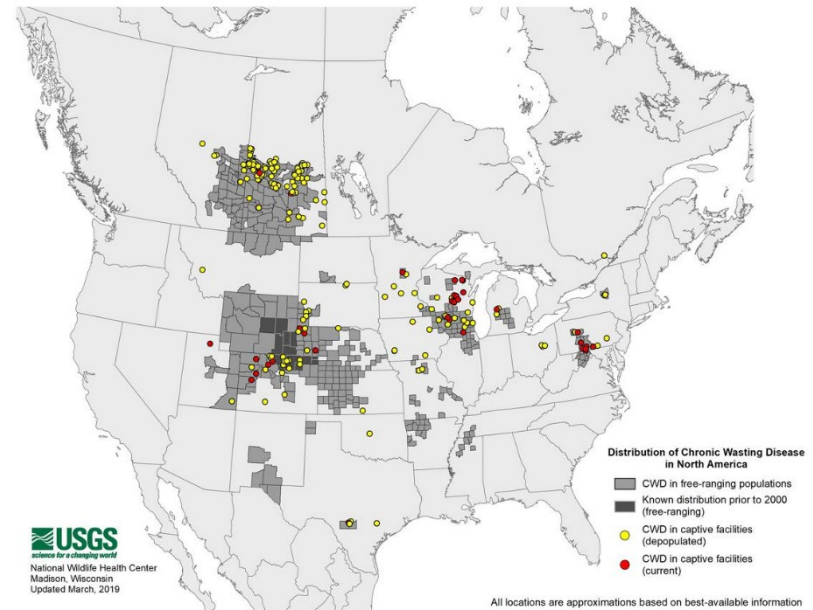
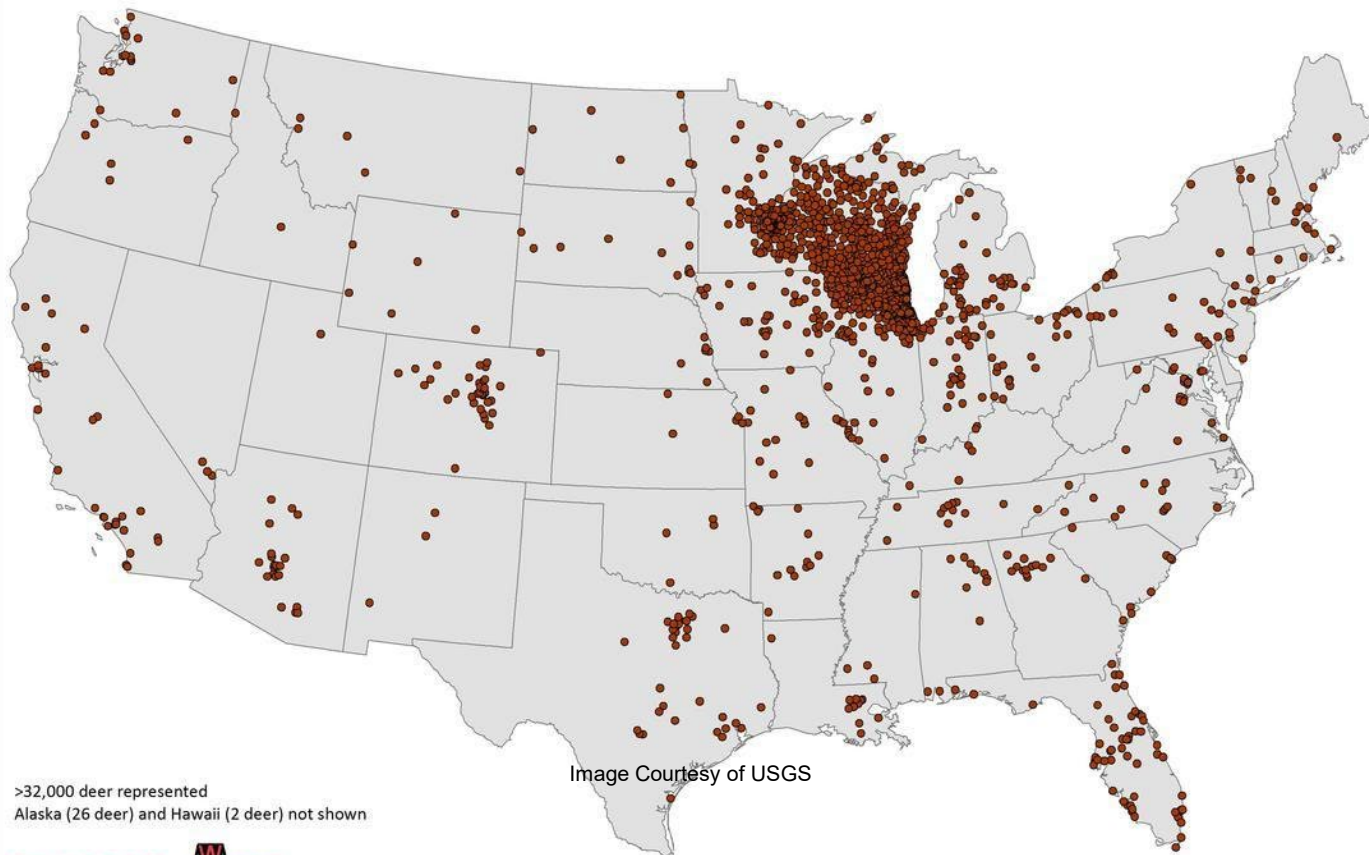


Image Courtesy of USGS

Why is CWD a Public Health Issue?

- No signs of slowing amongst hosts
- Growing environmental contamination
- Human exposure to CWD prions is likely increasing
 - 2017: Estimated 7,000 – 15,000 CWD-infected animals were consumed (Alliance for Public Wildlife)
- Evidence of interspecies transmission with BSE

Home Zip Codes of hunters harvesting deer in Dane, Iowa, Richland and Sauk Counties, Wisconsin, 2016-2017



>32,000 deer represented
Alaska (26 deer) and Hawaii (2 deer) not shown

HOT TOPICS

1. Ebola
2. Influenza
3. Measles
4. Cholera in Yemen & Mozambique
5. Antimicrobial resistance

UPDATES

6. MERS
7. Polio
8. Acute Flaccid Myelitis
9. Zika & Yellow Fever
10. Chronic Wasting Disease (CWD)
11. Foodborne disease
12. Other



News Scan for Apr 03, 2019

***E coli* O103 tied to 44 cases in Kentucky, spread to 3 other states**

Escherichia coli O103 has infected at least 44 people in Kentucky—24 more than were reported on Mar 29—and has also spread to Tennessee, Ohio, and Georgia, Kentucky officials said today, according to an NPR story.

The possible culprits are beef, chicken, and sliced American cheese, said Mel Bennett, MD, MPH, the manager of the Infectious Disease Branch of the Kentucky Department for Public Health. Six of the 44 patients have required hospitalization. *E coli* O103 is much less common than the O157:H7 strain, which causes the most foodborne disease illnesses. The 44 Kentucky cases would make it the largest O103 US outbreak since 2000, NPR reported.

Bennett also said the outbreak has spread to the three other states and that Kentucky health officials have been in daily contact with the Centers for Disease Control and Prevention (CDC).

Doug Hogan, spokesperson for the Kentucky Cabinet for Health and Family Services, said cases are spread across several counties, with five confirmed in Fayette County. Some sort of food distribution service may be the root cause, he said. Bennett said some early reports indicated fast food as a primary source of concern.

Apr 3 NPR story



Source still unknown in 72-case, 5-state E coli outbreak

Filed Under: [E coli](#); [Foodborne Disease](#)

[Lisa Schnirring](#) | [News Editor](#) | [CIDRAP News](#) | [Apr 05, 2019](#)

[f](#) Share

[t](#) Tweet

[in](#) LinkedIn

[✉](#) Email

[🖨](#) Print & PDF

The US Centers for Disease Control and Prevention (CDC) said today that federal and state health officials are investigating an *Escherichia coli* O103 outbreak that has now sickened 72 people in five states, but so far no source has been found.

Today's announcement follows recent health alert from Kentucky, where most of the cases have been reported, and earlier reports that cases has been found in three other states: Tennessee, Ohio, and Georgia.

Virginia joins list of affected states

The CDC said the, of the 72 cases, half (36) are in Kentucky. The others are in Tennessee (21), Georgia (8), Ohio (5), and Virginia (2).

The CDC's total marks an increase of 28 cases from earlier reports, and the agency said investigators are using PulseNet, the national subtyping network, to identify other related cases. The agency added that state officials are probing more illnesses that might be part of the outbreak.

So far, eight patients have been hospitalized, but the CDC hasn't received any reports of hemolytic uremic syndrome (HUS), a potentially fatal kidney complication. No deaths have been reported.



NIAID



News Scan for Apr 10, 2019

More sickened in multistate *E coli* O103 outbreak; source still unknown

A multistate *Escherichia coli* O103 outbreak from a still-unidentified source has sickened 24 more people, with 96 cases reported so far, the Centers for Disease Control and Prevention (CDC) said yesterday. The number of affected states remained at five: Kentucky (46 cases), Tennessee (26), Georgia (17), Ohio (5), and Virginia (2).

The latest illness onset is Mar 26, and the CDC said states are investigating more illnesses that may be part of the outbreak. Of 67 patients with available information, 11 (16%) were hospitalized. No cases of hemolytic uremic syndrome—a potentially fatal kidney complication—have been reported. None of the illnesses have been fatal.

No specific food item, grocery store, or restaurant chain has been identified, and state and federal health officials are interviewing sick people to determine what they ate or were exposed to in the week before their symptoms began. So far, the CDC isn't recommending that consumers avoid any particular food or that restaurants and retailers avoid serving or selling any particular food.

Earlier reports from Kentucky, the hardest-hit state, said possible sources might include beef, chicken, or sliced American cheese and that fast food is a source of concern.

Apr 9 CDC outbreak update

Apr 5 CIDRAP News story "[Source still known in 72-case, 5-state *E coli* outbreak](#)"

HOT TOPICS

- 1. Ebola**
- 2. Influenza**
- 3. Measles**
- 4. Cholera in Yemen & Mozambique**
- 5. Antimicrobial resistance**

UPDATES

- 6. MERS**
- 7. Polio**
- 8. Acute Flaccid Myelitis**
- 9. Zika & Yellow Fever**
- 10. Chronic Wasting Disease (CWD)**
- 11. Foodborne disease**
- 12. Other**

Upcoming: Pandemic influenza tabletop scenario for CLF members

- **Scenario:** H7N9 strain of avian influenza that originated in China and is spreading from person to person for the first time
- We will convene three situation update calls that will occur over a span of two weeks:
 - **September 10, 12, & 17 (tentatively)**
- This unique opportunity will help test your organization's emergency preparedness and response, and allow members to learn from each other
- Stay tuned for more information!

Questions, Comments and Discussion



CIDRAP

Center for Infectious Disease Research and Policy
University of Minnesota

**CIDRAP Leadership Forum
Infectious Disease BRIEFING**

April 11th, 2019

Thank you for attending!