

Center for Infectious Disease Research and Policy University of Minnesota

CIDRAP Leadership Forum 2018 Annual Meeting

October 9th, 2018

CLF BRIEFING

HOT TOPICS

- 1. Ebola
- 2. Pandemic and epidemic preparedness
- 3. Antimicrobial resistance and stewardship
- 4. Influenza update and vaccine
- 5. Monkeypox
- 6. Acute flaccid myelitis (AFM)

UPDATES

- 6. Cholera
- 7. Polio
- 8. Zika, Yellow fever
- 9. Foodborne diseases
- **10.** Measles
- **11. MERS**
- 12. Other (Roadmaps)



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DRC confirms new Ebola cluster days after outbreak declared over

Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | Aug 01, 2018

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Today the Democratic Republic of the Congo (DRC) said four people in the Eastern part of the country tested positive for Ebola virus, 1 week after the country declared an 11-week outbreak in the Western region over.

The DRC said there was no evidence to suggest the new outbreak was connected to the previous event, which resulted in 54 confirmed illnesses, 33 of them fatal.



UNMEER/Martine Perret / Flickr cc

Mobile lab team dispatched to outbreak site

Oly Ilunga, MD, of the DRC's health minister, took to Twitter today to announce the cases, which are centered around Beni in the Magina health district. He said a mobile team of 12 will be arriving in Beni tomorrow to set up a laboratory.

"We knew a #10 Ebola outbreak was inevitable because of the presence of the virus in the Equitoreal Forest but we did not know it would happen so quickly," a tweet from Ilunga said. The original tweet was in French.

WHO: Ebola DRC outbreak taking place in 'war zone'

Filed Under: Ebola; VHF

Stephanie Soucheray | News Reporter | CIDRAP News | Aug 03, 2018

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The new Ebola outbreak in the Democratic Republic of the Congo (DRC) is taking place in a war zone with difficult access, among other challenges, Peter Salama, MD, the World Health Organization's (WHO's) deputy director-general of emergency response, said in a telebriefing today.

While only four Ebola cases have been confirmed, Salama said there are 20 deaths near the town of Mangina that were possibly caused by the virus. So far 10 locations near Mangina have been identified as having possible cases.



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Corporal Paul Shaw, DFID / Flickr cc

"It's extremely likely that the it's Ebola-Zaire," said Salama, echoing the DRC's ministry of health's assessment of the species causing the illnesses. Salama said a full genetic analysis of samples will be available next Tuesday.

DRC Ebola outbreak climbs to 43 cases in 6 health zones

Filed Under: Ebola: VHF

Lisa Schnirring | News Editor | CIDRAP News | Aug 06, 2018

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Over the weekend, the number of confirmed Ebola cases in the new Democratic Republic of the Congo (DRC) outbreak in North Kivu province in the east of the country jumped from 4 to 13, and health officials said investigations are under way to see if sporadic illnesses and deaths in the area since May might be part of the outbreak.

The number of confirmed and probable cases hit 43, across six health zones, and include 33 deaths.

In other developments, the DRC's health ministry provided more details about the status of the response and the early cases, and an African media source said territorial officials are investigating a suspected Ebola case in yet another province-Haute Uele.

Tests on 33 more possible cases

The World Health Organization (WHO) said in an Aug 4 update that, as of Aug 3, 43 cases have been reported, including the 13 lab-confirmed illnesses and

30 probable cases. Also, tests are pending on 33 additional suspected cases. So far, 33 deaths have been reported.

Carl Osmond, Defence Images / Flickr cc



Genetic tests confirm separate DRC Ebola outbreak; vaccination begins tomorrow

Filed Under: Ebola; VHF Lisa Schnirring | News Editor | CIDRAP News | Aug 07, 2018 **f** Share **y** Tweet **in** LinkedIn **X** Email **Print** & PDF

A genetic analysis of the Ebola virus from a new outbreak of the disease in Democratic Republic of the Congo's (DRC's) North Kivu province confirms that it isn't related to a recent outbreak in Equateur province, and other lab testing has confirmed three more cases in the latest outbreak.

On Twitter today, Peter Salama, MD, the World Health Organization's (WHO's) deputy directorgeneral of emergency response, said the genetic testing at the National Institute for Biomedical Research (INRB) in Kinshasa has confirmed that the Ebola Zaire virus found in North Kivu isn't closely linked to the Equateur outbreak strain, confirming the North Kivu outbreak is a new event.



NIH/ Flickr cc

He also said the confirmation means that responders can start using the VSV-EBOV vaccine, which targets the Ebola Zaire strain, as early as tomorrow.

Oly Ilunga, MD, the DRC's health minister, who also announced the sequencing results on Twitter today, said the country's ethics committee has cleared a plan for vaccination to begin tomorrow. In a separate statement, the health ministry said the first vaccination teams will arrive in Beni tomorrow to vaccinate primary health providers before shifting to contacts and contacts of contacts.



WHO: 95% of Ebola case contacts in DRC now traced

Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | Aug 23, 2018

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As of Aug 20, 95% of case contacts in the latest Ebola outbreak in the Democratic Republic of the Congo (DRC) have been traced, according to a tweet today from Peter Salama, MD, the World Health Organization's (WHO's) deputy director-general for emergency preparedness and response.

In a graph showing the percentage of case contacts traced, Salama explained, "Dips in recent days show when work was needed to engage with communities before teams could access some areas. That work was done successfully. On 20 August, 95% of 1,782 contacts followed-up in 3 health zones."

The information comes from the WHO's third situation report on the outbreak, published yesterday. According to the WHO and the DRC, Ebola cases increased by just 1 yesterday, to 103, with 76 confirmed. The death toll rose by 2, to 61, and 7 cases are suspected.



UNMEER, Martine Perret / Flickr cc

The new case involved a healthcare worker from Mabalako health zone, the epicenter of the outbreak. There have been 14 healthcare workers infected during this outbreak.

Doctor infected with Ebola in DRC conflict zone

Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | Aug 24, 2018

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A physician in an area of the Democratic Republic of the Congo (DRC) held by rebel forces and difficult for responders to access has contracted Ebola, a World Health Organization (WHO) official said today in a worrisome development.

According to the DRC's ministry of health yesterday, Ebola case counts held steady from the previous day, at 103 (76 confirmed). Two more people have perished from the virus, bringing the death toll to 63, and the number of suspected cases has jumped to 13.

Early today Peter Salama, MD, the WHO's deputy director-general for emergency preparedness and response, said in a telebriefing that the outbreak, which began on Aug 1 in North Kivu province, is in one of the most dangerous places in the DRC. He explained that North Kivu is a United Nations (UN) security area "stage 4"; stage 5 requires UN evacuation.



CDC Global



WHO identifies critical window for curbing DRC Ebola spread

Filed Under: Ebola; VHF Lisa Schnirring | News Editor | CIDRAP News | Aug 29, 2018

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One new Ebola infection has been confirmed in the Democratic Republic of the Congo's (DRC's) latest outbreak, as a top World Health Organization (WHO) official warned that the next 7 to 10 days are critical for containing the outbreak to a relatively accessible security area.

In other outbreak developments, the country's health officials decided not to postpone the Sep 3 start of the school year in the outbreak-affected area.

On Twitter yesterday, Peter Salama, MD, the WHO's director-general of emergency preparedness and response, said the majority of new cases are from known contact lists and most are still confined to an area within 20 kilometers (km) to 30 km of the



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UNMEER, Martine Perret / Flickr cc

outbreak's epicenter. However, if responders can't turn the outbreak around over the next 7 to 10 days, the risk of the disease spreading to more dangerous conflict-ridden areas becomes greater, posing more difficult challenges for health teams.

The New York Times

GLOBAL HEALTH

Ebola Attacked Congo Again. But Now Congo Seems to Be Winning

New cases are dropping sharply, vaccination is going well and schools are about to open. But it is too soon to declare victory, experts said.



By Donald G. McNeil Jr.

Sept. 2, 2018



The **month-old Ebola outbreak** in the Democratic Republic of Congo, which emerged unexpectedly in a dangerous region and quickly soared to over 100 cases, now appears to be fading.

Only a handful of new cases appear each week, and the region's two treatment centers, full until recently, now have fewer than 30 patients in their 78 beds.

More than 3,500 contacts of known cases are being followed, more than 4,000 doses of vaccine have been given and officials feel hopeful enough to allow schools in the area — North Kivu Province, on the eastern border with Uganda — to open as usual on Monday.

However, it is far too early to relax, health experts warned.

"We cannot say the outbreak is under control yet," said <u>Dr. Oly Ilunga</u>, the country's health minister, <u>echoing a warning from Tedros Adhanom</u> <u>Ghebreyesus</u>, director general of the World Health Organization.



DRC: More confirmed Ebola cases in Beni, Mabalako

Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | Sep 04, 2018

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The Ebola outbreak in the Democratic Republic of the Congo (DRC) continued over the weekend, with officials reporting 5 more confirmed or suspected cases, bringing the total to 121—91 confirmed and 30 probable.

As of yesterday, 81 people have died since the outbreak began at the start of August; 51 of those deaths occurred in confirmed cases. Fourteen suspected cases are under investigation, officials said.

New data from the DRC released Sep 2 showed there have been more Ebola cases in women during this outbreak, and the most affected age-group among women is 25 to 34. Men ages 35 to 44 are most likely to have been infected.



EC / ECHO, Anouk Delafortrie / Flickr cc

School begins as teachers voice concern

Children in the DRC started school yesterday in Beni and Mangina, the epicenters of the outbreak where the new cases have occurred, officials said.



DRC Ebola outbreak expands to large city as Beni cases rise

Filed Under: Ebola; VHF Lisa Schnirring | News Editor | CIDRAP News | Sep 05, 2018

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In a pair of worrying developments in the Democratic Republic of the Congo (DRC) Ebola outbreak, a patient with the virus died in Butembo, a city of nearly 1 million people, and more cases were reported in Beni, an emerging hot spot where community resistance and violent incidents have recently been reported.

On Twitter today, Peter Salama, MD, director-general of emergency preparedness with the World Health Organization (WHO), said the patient who died in Butembo was from Beni. He said the case increases the risk of spread and added that having Ebola in an urban center makes ending the outbreak much harder.

Butembo, North Kivu province's second largest city, is a commercial center and transportation hub with an airport that is not far from the border with Uganda.



Conflict & Development, Texas A&M / Flickr cc

A patient has died in Butembo, a city of almost 1 million near the Uganda border.



Another Ebola case detected outside DRC's main hot spots

Filed Under: Ebola; VHF Lisa Schnirring | News Editor | CIDRAP News | Sep 07, 2018

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Signaling another extension of Ebola outside the main hot spots, a case has been detected in a village in Masereka health zone not far from the urban center of Butembo. The case involves a health worker from Beni who refused follow-up and vaccination after potential exposure, the Democratic Republic of the Congo (DRC) health ministry said yesterday.

The World Health Organization (WHO) said in its update today that the risk of spread is heightened by the movement of two cases from Beni, the one in Masereka Health Zone and a case confirmed earlier this week that marked the first spread to Butembo, home to nearly 1 million people.



MONUSCO, Alain Coulibaly / Flickr cc

The developments, however, aren't surprising, the WHO said. "Given the mobility of populations in the affected areas, these two cases were expected, rapidly detected, and additional response measures swiftly activated to interrupt further spread of the virus."

DRC reports second Ebola case from urban hub

Filed Under: Ebola; VHF Lisa Schnirring | News Editor | CIDRAP News | Sep 10, 2018 **f** Share **y** Tweet **in** LinkedIn **W** Email **c** Print & PDF

Over the past 4 days, the Democratic Republic of Congo (DRC) reported three more confirmed Ebola cases, two from Beni and one from Butembo, the second case to be detected in the large urban area.

World Health Organization (WHO) officials have said Beni, where community resistance has been reported in some areas, is an emerging hot spot in the DRC's latest outbreak, and the newly identified case from Butembo comes less than a week after the first case was found in the city, a commercial and transportation hub that has a population of about 1 million people.



UNMEER, Simon Ruf / Flickr cc

Butembo patient fled from Ituri

The two new cases in Beni were noted in the health ministry's report for Sep 8, which also noted another death in an earlier confirmed Ebola patient from Beni.

New Ebola cases, 3 more deaths recorded in DRC

Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | Sep 17, 2018

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The Democratic Republic of the Congo's (DRC's) 10th Ebola outbreak continued over the weekend, as officials reported three new deaths.

The outbreak, on the eastern border of the DRC, increased by 2 infections and now stands at 142 cases (111 confirmed, 31 probable), according to officials. Of the 142 total number of patients, 97 have died, the DRC Ministry of Health (MOH) said in yesterday's update.

The two new cases came from Beni and Butembo, and all three deaths occurred in Beni, which has been one of the epicenters of virus activity.

UN, Martine Perret / Flickr cc

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On Sep 15, the MOH traveled throughout Beni in a caravan to raise awareness about Ebola. The caravan made several stops at busy places in the city, and a broadcast of the visit will be played on the radio.

DRC announces Ebola case near Ugandan border

Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | Sep 21, 2018

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Health officials in the Democratic Republic of the Congo (DRC) today confirmed a case of Ebola virus on the Ugandan border, about 200 kilometers (125 miles) from the nearest known case in the country's current outbreak in North Kivu province.

According to Reuters, the case was reported in Tchomia, on the shores of Lake Albert, the closest the disease has come to Uganda during the outbreak. Tchomia is in Djugu territory, where violent ethnic clashes have caused mass migration across the Ugandan border.

Yesterday, the World Health Organization (WHO) confirmed that no cases of Ebola have been detected in Uganda, despite more than 100 investigations of suspicious illnesses. But Uganda, with help from the

WHO, is preparing to implement a ring vaccination strategy in the coming months in an effort to protect healthcare workers. About 3,000 doses of Merck's Ebola vaccine will be shipped in cold-chain compartments to Uganda, the WHO said in a news release.





Violence suspends response in DRC Ebola hot spot as cases rise

Filed Under: Ebola; VHF

Lisa Schnirring | News Editor | CIDRAP News | Sep 24, 2018 🕴 🛉 Share 🔰 Tweet 👖 LinkedIn 🌄 Email 🏮 Print & PDF

Deadly clashes over the weekend in the Democratic Republic of the Congo's (DRC's) main Ebola hot spot between rebels and armed forces suspended outbreak response activities, as six new cases were reported and more details emerged about a recent case detected near the Uganda border.

The violence in Beni on Saturday has killed 21 people, 17 of them civilians, with the DRC's army blaming the Allied Democratic Forces, a rebel militia, Agence France-Presse (AFP) reported today. The country's health ministry asked aid groups working in Beni to temporarily suspend their activities, but Doctors Without Borders (MSF) Ebola treatment centers located 20 to 30 miles outside the city were operating normally, the report said.



Jon_Brown / iStock

A rebel checks his gun in North Kivu.

Problems in Beni, where outbreak responders are already grappling with pockets of community resistance to steps such as contact tracing, vaccination, and medical treatment, come 3 months before an election to replace Joseph Kabila, the DRC's controversial president.

Ebola response faces 'grave obstacles' as count hits 150

Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | Sep 25, 2018

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Peter Salama, MD, director-general of emergency preparedness with the World Health Organization (WHO) said today at a press conference that the 2month-long Ebola response in the eastern reaches of the Democratic Republic of the Congo (DRC) is at a "critical juncture."

As of yesterday, the ministry of health in the DRC reported 150 confirmed and suspected cases of the hemorrhagic fever, with 9 cases under investigation. The death toll stands at 100, and there is a new case in Tchomia, the small town near Lake Albert and the Ugandan border. That patient was identified as the partner of the case-patient first diagnosed in Tchomia last week.

Tchomia is near the DRC's border with Uganda.



AU-UN IST, Ramadaan Mohamed / Flickr cc



Ebola response resumes in Beni, but protests spread to Butembo

Filed Under: Ebola; VHF Lisa Schnirring | News Editor | CIDRAP News | Sep 26, 2018

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Ebola response activities in the Democratic Republic of the Congo's (DRC's) hot spot in Beni started again slowly today, following talks yesterday among health, city, and community officials, but field activities slowed in the city of Butembo after a pressure group called for a community mourning period to protest deadly violence that flared last weekend in Beni.

In other developments, one new Ebola infection was confirmed in Beni, and researchers reported on adverse events following vaccination with VSV-EBOV —which were mild to moderate and of short duration —based on a ring vaccination trial in frontline workers in Guinea's outbreak.



GPE, Tabassy Baro / Flickr cc

Response pause spreads to Butembo

In an update yesterday, the DRC's health ministry said the civil society had called on Beni residents to observe a 5-day protest over a violent clash on Sep 22 between rebels and armed forces, which killed 21 people and suspended response activities. Several recent cases have resulted from a transmission chain Beni, where health officials have struggled to trace and vaccinate contacts amid pockets of community resistance.

More DRC Ebola cases as risk raised to 'very high'

Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | Sep 28, 2018

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As new Ebola cases continue in the Democratic Republic of the Congo (DRC), the World Health Organization (WHO) yesterday raised the risk assessment for spread of the disease within the country and regionally from "high" to "very high" while keeping the risk of international transmission of Ebola virus disease (EVD) low.

"This outbreak of EVD is affecting north-eastern provinces of the Democratic Republic of the Congo, which border Uganda, Rwanda and South Sudan," the WHO said in a statement. "Potential risk factors for transmission of EVD at the national and regional



USAID / Flickr cc

levels include the transportation links between the affected areas, the rest of the country, and neighbouring countries; the internal displacement of populations; and the displacement of Congolese refugees to neighbouring countries."

Recent violence by armed rebels in Beni, the site of the WHO's response efforts in eastern DRC, has led the agency to call this week a "critical juncture" in the outbreak.



Figure 1. Distribution of confirmed and probable EVD cases in North Kivu and Ituri Provinces, DRC, as of 30 September 2018



Source: Adapted from Ministry of Health, DRC.



Figure 2. Geographical distribution of Ebola virus disease cases by health zone, North Kivu and Ituri Provinces, DRC, as of 30 September 2018



Source: Adapted from Ministry of Health, DRC.

DRC reports 4 more Ebola cases over the weekend

Filed Under: Ebola; VHF Lisa Schnirring | News Editor | CIDRAP News | Oct 01, 2018

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The Democratic Republic of the Congo (DRC) health ministry reported four more Ebola cases Sep 29 and yesterday, three of them confirmed, and noted that two involved circumstances known to spread the disease: delayed treatment and unsafe burial.

All of the cases are from the most recent disease hot spots, Beni, which has experienced civil unrest and community resistance, and Butembo, a large city near the Uganda border.

Political overtones in Butembo

In its Sep 29 report, the DRC health ministry reported two new cases, one in Beni and one in Butembo.

The case-patient from Butembo is a woman whose symptoms began on Sep 20, but her family members initially refused to transfer her to an Ebola treatment center and instead hid her. They refused to meet with Ebola responders without the presence of members of the "Standing Parliament," a district political pressure group that they support.



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UNMEER, Martine Perret / Flickr cc

New Ebola cases highlight challenges in DRC

Filed Under: Ebola; VHF <u>Stephanie Soucheray | News Reporter | CIDRAP News</u> | Oct 02, 2018

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Health officials in the Democratic Republic of the Congo (DRC) reported two more cases of Ebola virus late yesterday, a fatal case in a patient whose family refused vaccination and an illness in a patient from a community marked by resistance to outbreak response efforts.

The cases illustrate the challenges facing DRC and World Health Organization (WHO) health workers in the conflict-ridden region.

Cases climb to 161

Officials have now reported 161 cases of Ebola in DRC, including 105 deaths. Nine cases are still under investigation. Though case counts have slowed in recent weeks, the outbreak is still ongoing in an insecure, unstable region, the WHO's regional office for Africa said in a weekly update.

MONUSCO, Alain Coulibaly / Flickr cc

WHO Director-General Tedros Adhanom Ghebreyesus, PhD, and other officials in the Beni outbreak region.

The first new case involved a woman from Beni who died. DRC officials said she was the daughter of another Ebola patient who passed away at the Beni Ebola treatment center on Sep 22. The family refused vaccination and follow-up care.

HEALTH

Officials fear Ebola epidemic may be spinning beyond their control, threatening regional spread

By HELEN BRANSWELL @HelenBranswell / OCTOBER 2, 2018

P ublic health officials are expressing deepening concern that the <u>latest</u> <u>Ebola outbreak</u> in the Democratic Republic of the Congo may be spinning beyond their control and could soon spill over into neighboring countries including Uganda and Rwanda.

With Ebola response teams facing restrictions on their movements in a conflict zone, officials fear containment efforts are falling further behind the virus. And if response teams lose sight of where the virus goes, it could spread undetected and unchecked in places where they cannot safely travel.

"At this point in an epidemic, we'd probably be peaking in terms of knowing where the virus is. And now with the insecurity, that's compromised," said Dr. Mike Ryan, assistant director-general of the World Health Organization's emergency preparedness and response program. HUMAN RIGHTS WATCH

DR Congo: Upsurge in Killings in 'Ebola Zone'

International Criminal Court Should Investigate Beni Massacres

(Goma) – Unidentified fighters have killed more than 1,000 civilians in Beni territory in eastern Democratic Republic of Congo in a series of massacres beginning four years ago, Human Rights Watch said today. On September 22, 2018, fighters killed 17 people in Beni town, bringing the number of civilians killed this year to at least 235. On September 24, fighters attacked the town of Oicha and abducted 16 people, mostly children, who remain missing.

The Office of the Prosecutor of the International Criminal Court (ICC) should expand its Congo investigation to cover the attacks that began in Beni on October 2, 2014, Human Rights Watch said. The United Nations peacekeeping mission in Congo (MONUSCO) should strengthen its analysis capabilities and community engagement to uncover responsibility for the attacks and improve protection for civilians.

"The brutal killings of Beni residents won't end until the commanders of the responsible forces are brought to justice," said Ida Sawyer, deputy Africa director at Human Rights Watch. "As Congolese authorities have not credibly investigated or prosecuted these atrocities, the International Criminal Court should investigate them for future trials."





DRC Ebola cases rise as security concerns continue

Filed Under: Ebola; VHF

Lisa Schnirring | News Editor | CIDRAP News | Oct 04, 2018 🕴 🕈 Share 😏 Tweet in LinkedIn 🌄 Email 👨 Print & PDF

In updates yesterday and today, the Democratic of Republic of the Congo (DRC) reported four more confirmed Ebola cases, three of them in the current hot spot in Beni, and groups today raised more concerns about insecurity in the outbreak area.

Violence includes another attack on a Red Cross safe burial team and escalating armed group attacks on Beni residents.

In a speech to the United Nations Security Council yesterday, World Health Organization (WHO) Director-General Tedros Adhanom Ghebreyesus, PhD, said the frequency and intensity of attacks by armed



MONUSCO/Force Flickr cc

UN peacekeeping troops on patrol in North Kivu in February.

groups near Beni seem to be increasing. And he said responders are also worried about pockets of mistrust and the spread of Ebola into inaccessible "red zones" held by armed groups.

"This spread is extending the long tail of the outbreak," he said, adding that the detection of cases near the Uganda border is also a big worry.

THE LANCET

Ebola virus epidemic in war-torn eastern DR Congo

Ebola virus disease is a highly contagious and frequently lethal infection. The largest epidemic to date occurred in west Africa in 2014–16 and killed more than 11000 people.¹ On Aug 1, 2018, the Ministry of Health of the DR Congo declared an outbreak of Zaire Ebola virus in the North Kivu province—the country's tenth outbreak since the discovery of Ebola virus disease in 1976. Since then, the Ebola virus epidemic has spread to the Ituri province and, as of Aug 25, 2018, 83 cases (28 more probable cases) and 44 deaths (28 more probable deaths) have been confirmed.²

Control strategies during an Ebola outbreak include timely case detection, contact tracing and management, safe and dignified burials, and prevention of new infections.^{3,4} Control strategy efforts might be improved with data on the knowledge, attitudes, and practices (KAP) in populations affected by Ebola virus disease.⁴⁻⁶ For example, during the 2014–16 outbreak, results of KAP surveys showed that although many people understood key aspects of transmission, some people engaged in high-risk behaviours, including an unwillingness to report Ebola virus and unsafe burial practices.³⁷ The 2018 outbreak in eastern DR Congo differs from the 2014–16 outbreak in several ways, including multiple previous Ebola outbreaks in the country, longstanding violent conflict, large numbers of internally displaced persons (IDPs) living in temporary camps, and availability of a new recombinant vesicular stomatitis virus-Zaire Ebola virus (rVSV-ZEBOV) vaccine.⁸

We rapidly mobilised research teams to survey Ebola-related KAP in purposively sampled groups living in Mangina (epicentre of the epidemic), Béni (30 km from the epicentre), Butembo (80 km from the epicentre), and the IDP camp of Komanda. We developed a 52-item questionnaire based on past KAP questionnaires used in Guinea^{7,9} and focused on several key constructs: Ebola-specific knowledge and misconceptions, affective response, prevention practices, health-seeking and burial intentions, and attitudes toward the rVSV-ZEBOV vaccine. We also collected complementary qualitative data in focus group discussions with key informants (residents of affected communities, IDPs, and health-care providers). The Comité d'Éthique du Nord Kivu (Centre Hospitalier Universitaire du Graben, Butembo, DR Congo) approved the study. Detailed methods are provided in the appendix.

Between Aug 4 and Aug 22, 2018, we surveyed 582 participants (demographics are described in the appendix). We extracted the most noteworthy items from the KAP survey (figure). Three focus group discussions involving 15 participants generated rich qualitative data. A thematic analysis of these discussions, with representative supporting quotations, is provided in the appendix. Here, we synthesise the mixed qualitative and quantitative findings, integrating representative focus group discussion quotations and survey data.

Between 2014 and 2016, burial practices involving touching or washing the dead were key drivers of transmission in Sierra Leone and Guinea.¹⁰ Knowledge of transmission via infected corpses was high (518 [89%] of 581 participants; figure) in our study and in KAP surveys in west Africa.⁷¹⁰ Despite this knowledge, 44 (8%) of 580 participants (compared with 3% in Guinea)⁷ would

Ministère de la Santé



DIRECTORATE GENERAL FOR DISEASE CONTROL

EPIDEMIOLOGICAL SITUATION IN THE PROVINCES OF NORTH KIVU AND ITURI

Monday, October 8, 2018

The epidemiological situation of the Ebola Virus Disease dated 7 October 2018 :

- A total of 181 cases of haemorrhagic fever were reported in the region, 146 confirmed and 35 probable.
- · Of the 146 confirmed, 80 died and 50 are cured .
- · 21 suspected cases are under investigation.
- · 4 new confirmed cases, 2 in Beni and 2 in Butembo.
- · 2 new confirmed cases, including 1 in Beni and 1 in Butembo.

DRC records 12 new Ebola cases over the weekend

Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | Oct 08, 2018

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The Democratic Republic of the Congo (DRC), in updates released Oct 5 through yesterday, detailed 12 new cases of Ebola in North Kivu province. All but 20f the cases were reported in Beni, the epicenter of the current outbreak.

There are now a total of 177 cases (142 confirmed and 35 probable), including 113 deaths. Eleven suspected cases are under investigation.

Second illness wave linked to challenging Beni cluster

United Nations/ Flickr cc

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In an Oct 5 update, DRC officials said the new cases

represent "a second wave of confirmed cases among refractory contacts" among residents of the Ndindi neighborhood of Beni, who have been resisting outbreak response efforts since August. Besides the 10 cases in Beni, 2 cases have also been reported in Butembo.

Late last week, the DRC's minister of health, Oly Ilunga Kalenga, MD, visited Beni to announce a new strategy.



CLF BRIEFING

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UPDATES

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- **11. MERS**
- **12.** Other (Roadmaps)





Medical News & Perspectives

September 28, 2018

Vulnerability to Pandemic Flu Could Be Greater Today Than a Century Ago

Rebecca Voelker, MSJ

Article Information

JAMA. Published online September 28, 2018. doi:10.1001/jama.2018.12966

M ichael Osterholm, PhD, MPH, didn't mince words when he wrote a love letter to his children and grandchildren. His dispatch, a book entitled *Deadliest Enemy: Our War Against Killer Germs*, was published last year as a guide for surviving emerging infectious disease threats. "[F]ailure is not an option here," said Osterholm, director of the Center for Infectious Disease Research and Policy at the University of Minnesota.

Concern for his loved ones' future prompted Osterholm to write the cautionary tale, but his intended audience is global. As the world observes the centennial of 1918's ruinous influenza pandemic, his message includes a societal call to arms for stepped-up flu vaccine research. "[I]t's not that we can't do this...it's will we do this?" he said.

A global immunization program using a universal flu vaccine that might be needed only once every 10 to 20 years "could do more for the world's public health than we even did with the eradication of smallpox, and it would surely have a major impact economically in terms of taking off the table future pandemics," Osterholm said.

The New York Times

OP-ED CONTRIBUTORS

We're Not Ready for a Flu Pandemic

By Michael T. Osterholm and Mark Olshaker

Jan. 8, 2018

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The influenza season is just getting started in the United States, and it already promises to be more severe than usual. Hospital emergency rooms are filling up with flu sufferers, and pharmacies have <u>reported</u> <u>medicine shortages</u>. Twelve children had died as of last month. To make matters worse, in Australia, which experienced its <u>flu season</u> four to six months ago, the current vaccine appeared to be only about 10 percent effective against this year's dominant strain.

Yet as bad as this winter's epidemic is, it won't compare with the flu pandemic that is almost certainly on the horizon if we don't dedicate energy and resources to a universal vaccine.

STAT

FIRST OPINION

Securing the U.S. from its most dangerous invader: infectious disease



By ASHLEY ARABASADI / AUGUST 31, 2018

A s the Democratic Republic of Congo works to contain the <u>latest</u> <u>outbreak of Ebola</u>, in what could be a test of the world's ability to contain the disease since the calamitous outbreak in West Africa in 2014 and 2015, it's a good time to think about the global infectious disease pandemic that happened in May.

In case you didn't hear about it, that pandemic killed 150 million people around the world, including 15 million Americans, within a year and caused the U.S. stock market to crash. Fortunately, the deaths and economic cataclysm were just on paper — or in electrons — the result of a <u>daylong simulation</u> with a group of high-ranking U.S. government officials that was organized by the Johns Hopkins Center for Health Security.

The simulation revealed just how dangerously unprepared the U.S. and the rest of the world are for a pandemic and provided experiential learning for decisionmakers in the Trump administration.

CIDRAP Center for Infectious Disease Research and Policy White House shines high-level spotlight on biodefense

Filed Under: Bioterrorism; Biosecurity Issues Lisa Schnirring | News Editor | CIDRAP News | Sep 18, 2018

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The Trump Administration today released a new National Biodefense Strategy, along with an order from President Donald Trump that directs the Department of Health and Human Services (HHS) to take the coordinating lead and establishes a cabinetlevel biodefense steering committee.

Some experts are praising the broad scope of the strategy, new elements that it covers, and the high-level attention and oversight built into the plan.

Presidential directive builds in high-level support

In a statement today, Trump said that implementing the steps would promote a more efficient, coordinated, and accountable biodefense enterprise. "Taken together, they represent a new direction in the Nation's defense against biological threats," he said.

The new strategy, spelled out in a 36-page document, covers deliberate attacks, accidental releases, and naturally occurring biological threats and pivots off lessons learned during the 2001 anthrax attacks, the 2009 H1N1 flu pandemic, and West Africa's 2014-16 Ebola outbreak.




News Scan for Aug 27, 2018

Senate passes big spending bill with increased public health funding

Late last week the US Senate passed an \$857-billion "minibus" package for the fiscal year beginning on Oct 1 that increases National Institutes of Health (NIH) funding by 5.4% (\$2 billion) to \$39.1 billion and includes historic amounts for the Department of Health and Human Services (HHS) and other departments.

The bill, which also funds the departments of education, defense, and ;abor, is considered a bipartisan success, passing on a vote of 85-7, according to Genetic Engineering & Biotechnology (GEN) News. The House has until Sep 30 to pass the bill.

The bill includes \$550 million dedicated to the National Action Plan for Combating Antibiotic-Resistant Bacteria (CARB), up \$37 million from last year's budget.

The Biomedical Advanced Research and Development Authority (BARDA) would get \$562 million, up \$25 million from last year, and \$120 million would go toward funding research on a universal flu vaccine. That's \$20 million more than was designated in last year's budget.

According to a story published by *Medpage Today*, NIH Director Francis Collins, MD, PhD, said at a Senate hearing on the bill that the funds will allow for 1,100 new grants to first-time investigators through the Next Generation Researchers Initiative.

SCIENTIFIC AMERICAN.

Viruses on a Plane: What Emirates Flight EK203 Teaches Us

We're good at responding to suspected disease outbreaks, but we're in danger of letting down our guard

By Marian W. Wentworth on September 27, 2018

Even before Emirates flight EK203 arrived in New York on September 5 carrying dozens of ill passengers, the crisis response was under way. Crew members alerted authorities about the sick travelers from the air. Health officials dispatched an emergency response team with mobile diagnostic equipment to the tarmac to await the plane's arrival. Ambulances waited nearby. EMTs notified hospitals about a potential influx of severely ill, potentially infectious patients. And after the flight landed, health officials evaluated more than 500 passengers at the airport and transported at least 10 to a local hospital for further testing.

It was an excellent dry run to test our capabilities for fast detection, reporting and interagency coordination. Luckily, this happened in the United States, a country with significant resources and one of the strongest health systems in the world.



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Analysis ties resistant E coli from poultry meat to human UTIs

Filed Under: Antimicrobial Stewardship; E coli; Foodborne Disease Chris Dall | News Reporter | CIDRAP News | Aug 28, 2018

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A new study has pinpointed a strain of *Escherichia coli* in poultry meat that could cause serious urinary tract infections (UTIs) in humans, a multicenter team of researchers reported today in the journal *mBio*.

After analyzing thousands of *E coli* samples from retail meat products and human urine and blood samples collected over the course of a year in a single town, the researchers concluded that *E coli* ST131-*H*22, a sublineage of a pandemic, multidrug-resistant *E coli* strain that has caused serious UTIs worldwide, is prevalent in chicken and turkeys meat and could be responsible for a small percentage of human UTIs.



nito100 / iStock

"Our results suggest that one ST131 sublineage—ST131-H22—has become established in poultry populations around the world and that meat may serve as a vehicle for human exposure and infection," the authors wrote.

US sees record STD cases, rising gonorrhea resistance

Filed Under: Sexually Transmitted Infections; Gonorrhea; Antimicrobial Stewardship

Chris Dall | News Reporter | CIDRAP News | Aug 29, 2018

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Preliminary data released yesterday by the US Centers for Disease Control and Prevention (CDC) show the number of sexually transmitted diseases (STDs) diagnosed in the United States hit a record high in 2017, marking a fourth straight year of "steep and sustained" increases.

The CDC data also highlighted rising resistance to one of the two antibiotics in the dual therapy for gonorrhea, a development that threatens the last remaining effective treatment for the disease.

"After decades of declining STDs, in recent years, we've been sliding backwards," Gail Bolan, MD, director of the CDC's Division of STD Prevention, said in a telephone briefing. "It is important for partners to come together to combat STD increases and the threat of antibiotic-resistant gonorrhea."

The data, presented yesterday at the National STD Prevention Conference in Washington, DC, show that nearly 2.3 million cases of chlamydia, gonorrhea, and syphilis were diagnosed in 2017, surpassing the previous record, set in 2016, by 200,000 cases. The combined number of STDs rose by 31% from 2013 through 2017, up from 1.8 million.



Wavebreakmedia / iStock



Experts brace for more super-resistant gonorrhea

Filed Under: Gonorrhea; Sexually Transmitted Infections; Antimicrobial Stewardship Chris Dall | News Reporter | CIDRAP News | Sep 04, 2018 **f** Share **y** Tweet **in** LinkedIn **y** Email **c** Print & PDF

In late March, an ominous report from England's public health agency described a case of gonorrhea that was resistant to both components of the dual antibiotic therapy of azithromycin and ceftriaxone the only remaining recommended treatment for gonorrhea.

The infection, which was also resistant to a slew of other antibiotics, was quickly dubbed "super gonorrhea" by the UK press. It was the first reported case in the world of gonorrhea with combined highlevel azithromycin resistance and ceftriaxone resistance.



Dr_Microbe / iStock

It certainly won't be the last. In the following months, two similar cases would be reported in Australia.

Ultimately, the British man's infection was cured. But not until the patient had received 3 days of intravenous (IV) treatment with ertapenem, a "last-resort" antibiotic normally reserved for severe, life-threatening infections and not intended for garden-variety sexually transmitted diseases (STDs).

CDC blames MDR Campylobacter outbreak on petstore puppy exposure

Filed Under: Campylobacter; Antimicrobial Stewardship Chris Dall | News Reporter | CIDRAP News | Sep 20, 2018

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The US Centers for Disease Control and Prevention (CDC) released further details today on an outbreak of multidrug-resistant *Campylobacter jejuni* linked to puppies bought from pet stores.

The outbreak, which began in January 2016, affected a total of 118 people in 18 states through Feb 4, including 29 pet store employees, with 26 hospitalizations and no deaths reported. In an article in today's *Morbidity and Mortality Weekly Report*, CDC investigators say epidemiologic, laboratory, and traceback evidence indicate that puppies from Petland pet stores and five other pet store chains were the source of the outbreak, and that the findings warrant a closer look at antibiotic use in the commercial dog industry. They also warn of the potential for further cases.



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Jan Truter / Flickr cc

"Although the investigation is completed, the risk for multidrug-resistant *Campylobacter* transmission to employees and consumers continues," they write.

Study cites 'contagion' as main factor in antimicrobial resistance levels

Filed Under: Antimicrobial Stewardship Chris Dall | News Reporter | CIDRAP News | Sep 05, 2018

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A new study by a team of international infectious disease researchers suggests that antibiotic consumption is not the biggest factor driving the global spread of antimicrobial resistance.

A bigger factor, according to the study, is "contagion," the spread of antimicrobial-resistant bacteria and resistance genes in people, animals, and the environment. Although antibiotic use starts the process, the authors argue, the spread of resistant strains of bacteria—fueled by poor sanitation, weak healthcare systems with poor infection prevention and control, and bad governance—is what's made antimicrobial resistance a global health crisis.

"Antibiotics are the 'fire' that starts up antibiotic resistance," lead author Peter Collignon, PhD, a professor at the Australian National University Medical School, told CIDRAP News in an email. "But spread (eg, by water, foods, poor infection controls, etc) is the 'wind' that really fans the fire and lets the resistant bacteria and genes spread and go out of control."



ePhotocorp / iStock

WHO report warns efforts to end TB are falling short

Filed Under: Tuberculosis; Antimicrobial Stewardship Chris Dall | News Reporter | CIDRAP News | Sep 18, 2018

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The number of new tuberculosis (TB) cases continued to decline in 2017, and fewer people died from the disease, according to the World Health Organization's (WHO's) 2018 Global TB Report. But efforts to make the world's deadliest infectious disease a "disease of the past" need to be ramped up, agency officials said today.

While an estimated 54 million deaths have been averted since 2000, the burden of TB remains high in many low- and middle-income countries, and WHO officials said ending TB as a major global health problem by 2030 will require countries to pick up the pace.

"Actions in some countries and regions show that progress can accelerate, but overall we're still off track," Teresa Kasaeva, MD, PhD, director of the WHO's Global TB Programme, said at a news conference held at the United Nations (UN) headquarters in New York.



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IN THE LAB

Experimental TB vaccine shows promise in clinical trials

By HELEN BRANSWELL @HelenBranswell / SEPTEMBER 28, 2018

s world leaders pledged support for the fight against tuberculosis at the United Nations this week, some good news in the effort to develop weapons to combat the bacterium nearly slipped under the radar.

An experimental TB vaccine showed solid protection in a clinical trial <u>reported</u> <u>Tuesday</u> in the New England Journal of Medicine. The vaccine is being developed by GSK and <u>Aeras</u>, a nonprofit organization working on affordable tuberculosis vaccines.

The vaccine was tested in volunteers with latent tuberculosis — in other words, people who had been infected, but who did not at the time of vaccination have active TB disease. People who received placebo vaccine progressed from latent to active disease at roughly twice the rate of people in the trial who received the active vaccine.



CIDRAP Center for Infectious Disease Research and Policy HHS, CDC issue AMR 'challenge' to public, private sectors

Filed Under: Antimicrobial Stewardship Chris Dall | News Reporter | CIDRAP News | Sep 26, 2018

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The US government is challenging world leaders, corporations, and non-governmental groups to step up their efforts against antimicrobial resistance (AMR).

In a kick-off event last night at the United Nations (UN) General Assembly in New York, US Department of Health and Human Services (HHS) Secretary Alex Azar called on public- and private-sector organizations around the world to make formal commitments to the AMR Challenge, a yearlong initiative led by HHS and the Centers for Disease Control and Prevention (CDC).

"This challenge invites stakeholders across the public and private sectors and around the world to identify ways in which they can contribute to the fight against AMR both locally and globally," Azar told the audience.

The challenge asks for at least one commitment in one of five areas: improving antibiotic use in humans and animals; reducing antibiotics and resistant bacteria in the environment; developing new antibiotics, vaccines, and diagnostics; enhancing data collection and sharing; and improving infection prevention and control.



Douglas Levere, University at Buffalo / Flickr cc

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Flu Scan for Oct 02, 2018

Flu shows signs of decline in some Southern Hemisphere regions

As the Southern Hemisphere's flu season winds down, disease levels in temperate South American and southern Africa countries decreased or have peaked in recent weeks, according to the latest global flu update from the World Health Organization (WHO).

In Australia, flu activity rose over the last month but still remained low, with levels in New Zealand remaining below the seasonal threshold. In recent weeks southern Africa experienced a second wave of flu activity, with influenza B the most commonly detected virus.

Elsewhere, some parts of South and Southeast Asia reported increasing flu activity, including India and Laos, both of which are reporting mainly 2009 H1N1 detections, and Thailand, which is reporting cocirculation of both influenza A viruses—H1N1 and H3N2.

In the Caribbean and Central America, flu activity remained low except in Haiti, El Salvador, and Nicaragua.

Globally, of flu viruses that tested positive during the first half of September, 84.4% were influenza A. Of subtyped influenza A viruses, 65.3% were 2009 H1N1 and 34.7% were H3N2. **Oct 1 WHO global flu update**

STAT

HEALTH

CDC: 80,000 people died of flu last winter in U.S., highest death toll in 40 years

By ASSOCIATED PRESS / SEPTEMBER 26, 2018

EW YORK — An estimated 80,000 Americans died of flu and its complications <u>last winter</u> — the disease's highest death toll in at least four decades.

The director of the Centers for Disease Control and Prevention, Dr. Robert Redfield, revealed the total in an interview Tuesday night with The Associated Press.

Flu experts knew it was a very bad season, but at least one found size of the estimate surprising.

"That's huge," said Dr. William Schaffner, a Vanderbilt University vaccine expert. The tally was nearly twice as much as what health officials previously considered a bad year, he said.





New single-dose antiviral cuts flu symptoms, viral loads

Filed Under: Influenza, General Stephanie Soucheray | News Reporter | CIDRAP News | Sep 05, 2018

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Baloxavir marboxil, a novel influenza antiviral treatment discovered in Japan and developed by Roche, reduced flu symptoms by 1 day in phase 2 and phase 3 trials published today in *The New England Journal of Medicine*.

US and Japanese researchers conducted the two double-blind clinical studies to measure baloxavir against placebo and oseltamivir (Tamiflu).

The phase 2 trial was conducted in Japanese adults ages 20 to 64 years who had acute influenza from December 2015 through March 2016. That trial tested single doses of baloxavir (10, 20, or 40 milligrams [mg]) against placebo.



Shibuya246 / Flickr cc

The phase 3 trial (CAPSTONE-1) enrolled outpatients aged 12 to 64 years who had influenza-like illness in

the United States and Japan from December 2016 through March 2017. Participants were assigned either a single oral dose of baloxavir (40 mg or 80 mg, depending on weight), oseltamivir at a dose of 75 mg twice daily for 5 days, or matching placebos.



CDC notes flu vaccine uptake down a bit in young kids

Filed Under: Influenza Vaccines; Influenza, General; Pertussis Lisa Schnirring | News Editor | CIDRAP News | Sep 27, 2018

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In an annual event to take stock of seasonal flu vaccination coverage trends and build support for immunization ahead of the upcoming flu season, health officials speaking at a National Foundation for Infectious Diseases (NFID) media briefing today said vaccination levels fell a bit last year in younger children, a worry, given they are at high risk for flu complications.

The 2017-18 flu season was a severe one that led to a record-breaking 900,000 hospitalizations and 80,000 deaths, according to the latest estimates from the US Centers for Disease Control and Prevention (CDC). Of



Judy Schmidt / CDC

the fatal cases, 180 were in children, the highest ever for a nonpandemic flu year since the CDC began tracking the data in 2004.



News Scan for Sep 07, 2018

Second report of flulike illness in air travelers prompts CDC reminder

Passengers and crew on two inbound flights to Philadelphia yesterday were held for medical evaluation after some passengers were sick with flulike symptoms, the airport said yesterday in a statement.

The news came just 1 day after similar illness reports prompted an investigation into an Emirates Airline flight that landed Sep 5 in New York City, which found flu and common cold viruses in 10 sick passenger and crew members.

The US Centers for Disease Control and Prevention (CDC), which responded to the airline incidents in both cities, said in a media statement today that the events are a reminder that the US flu season is fast approaching and that people who are sick should protect themselves and others by not traveling. It also repeated its recommendation that everyone age 6 months and older be vaccinated against flu, preferably by the end of October.

In Philadelphia, the two international American Airlines flights were each carrying about 250 people plus crew. One was coming from Paris, while the other was flying from Munich.



Flu Scan for Oct 02, 2018

Study: High-dose vaccine may offer advantages for seniors

The high-dose flu vaccine provided better protection against influenza hospitalization for seniors than the standard vaccine, according to a new study that matched study by age and residence.

To compare the vaccines, researchers from the Oregon Public Health Division examined immunization registry records and hospitalizations for lab-confirmed flu in the Portland area during the 2016-17 flu season. They published their findings yesterday in *Vaccine*.

Based on earlier studies comparing vaccines, they noted that the "healthy vaccine" phenomenon can inflate vaccine effectiveness (VE), while an "at-risk vaccinee" bias can deflate VE estimates. As another way to compare the two vaccines, they measured how they performed in groups matched by age, gender, residence type, race-ethnicity, provider bias, and zip code.

The first simple aggregate comparison of the two vaccine groups showed no added effectiveness against flu-related hospitalization. However, adding different categories increased VE, with the final analysis of 23,712 matched pairs suggesting that the high-dose vaccine was 30.7% more effective in preventing flu-related hospitalization (95% confidence interval, 8% to 48%).

The team suggested that VE studies include matching factors that reflect local geographic areas, age, and other potential provider biases. "As a caution, calculating vaccine effectiveness based on aggregate, non-matched methods from large datasets likely will produce distorted results and should be avoided," the authors wrote.

Oct 1 Vaccine abstract

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Figure 1: African countries reporting human and animal monkeypox cases from 2010 through 2018.





Figure 1. Number of monkeypox cases in Nigeria by year and week of reporting from September 2017 and as of 15 September 2018



Year and week of reporting



UK reports its first case of monkeypox

Filed Under: Monkeypox; Smallpox Stephanie Soucheray | News Reporter | CIDRAP News | Sep 10, 2018

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Public Health England (PHE) has confirmed the country's first case of monkeypox.

PHE said on Sep 8 that the patient was a resident of Nigeria and likely contracted the rare viral infection in that country before traveling to the United Kingdom. The patient is being treated at the Royal Free Hospital in London and was previously staying on a naval base in Cornwall.

Monkeypox does not transmit readily among humans; human disease is most often linked to eating contaminated bush meat or coming into contact with infected animals. But human-to-human transmission has been documented, and the PHE said it is tracking several case contacts, including people who sat near the patient on the flight to the United Kingdom.

"It is important to emphasise that monkeypox does not spread easily between people and the overall risk to the general public is very low," said Nick Phin, PhD, the deputy director of the National Infection Service at PHE.



UK monkeypox case exposed health workers, officials say

Filed Under: Monkeypox; Smallpox Jim Wappes | Editorial Director | CIDRAP News | Sep 20, 2018

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Editor's note: This story was updated on Sep 21 with comments from lead author Aisling Vaughan, PhD, of Public Health England.

Because monkeypox was not immediately suspected in the most recent UK monkeypox case, healthcare workers (HCWs) were not wearing adequate personal protective equipment (PPE) for the disease and may have been exposed to the virus, UK officials reported today in *Eurosurveillance*.

They also noted that the patient—the second recently reported by Public Health England (PHE), on Sep 11 had two potential exposures. He had contact with a



in LinkedIn

Ridofranz / iStock

person who had a "monkeypox-like rash," and he also ate bush meat while visiting Nigeria. Nigeria has had 262 suspected and 113 confirmed monkeypox cases since September 2017.

The officials also provide more details on the first case, which PHE first reported on Sep 8. The cases appear unrelated, PHE has said.

UK confirms monkeypox in healthcare worker

Filed Under: Monkeypox; Smallpox Jim Wappes | Editorial Director | CIDRAP News | Sep 26, 2018 **f** Share 🈏 Tweet **in** LinkedIn 🔀 Email 🖻 Print & PDF

Public Health England (PHE) today confirmed the first UK instance of monkeypox spread within the country, noting that a healthcare worker who cared for a recently treated patient has contracted the disease, and two other health professionals may have had similar exposure.

"Public Health England can confirm that a third individual has been diagnosed with monkeypox in England," the agency said in a news release. "This person was involved in the care of the case in Blackpool Victoria Hospital before monkeypox was diagnosed."



Akuppa John Wigham / Flickr cc Royal Victoria Infirmary in Newcastle.

The Blackpool case is the second one confirmed in

England, first noted by the PHE on Sep 11. PHE confirmed the first case on Sep 8. Both patients are men who likely contracted the disease in Nigeria, which has now confirmed 115 cases in an outbreak that began a year ago.

Emma O'Brien, a senior communications officer with PHE, told CIDRAP News that the infected health worker was "considered a high-risk contact, which is why they were being actively monitored. We understand two other healthcare workers may have had similar contact with this patient, and they are no longer at work for the remainder of their incubation."

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States and CDC probe reports of rare poliolike symptoms in kids

Filed Under: Enterovirus, Non-Polio Lisa Schnirring | News Editor | CIDRAP News | Oct 08, 2018

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Health officials in Minnesota and Colorado are among the states investigating acute flaccid myelitis (AFM) cases in children, raising concerns about another possible uptick in the rare condition, similar to steep rises seen in 2014 and 2016.

The hallmark of AFM is a sudden onset of limb weakness associated with spinal cord inflammation. In 2014, a large outbreak coincided with a national outbreak of severe respiratory illness causes by enterovirus D68 (EV-D68), but intensive investigations have not consistently found a specific pathogen in spinal fluid samples.



Wavebreakmedia/ iStock

The US Centers for Disease Control and Prevention (CDC) said as of Sep 30, there have been 38 cases reported from 16 states. In 2017 the CDC recorded only 33 cases, and in 2015 it confirmed only 22 cases. However, during the two seasons when cases spiked—2014 and 2016—there were 120 and 149 cases, respectively.



Acute Flaccid Myelitis

At a Glance

- CDC is concerned about AFM, a serious condition that causes weakness in the arms or legs.
- From August 2014 through August 2018, CDC has received information on a total of 362 cases of AFM across the US; most of the cases continue to occur in children.
- Even with an increase in cases since 2014, AFM remains a very rare condition. Less than
 one in a million people in the United States get AFM each year.
- It's always important to practice disease prevention steps, such as staying up-to-date on vaccines, washing your hands, and protecting yourself from mosquito bites.

Acute flaccid myelitis (AFM) is a rare condition. It affects a person's nervous system, specifically the spinal cord. AFM or neurologic conditions like it have a variety of causes such as viruses, environmental toxins, and genetic disorders.

Since August 2014, CDC has seen an increased number of people across the United States with AFM. We have not confirmed the cause for the majority of these cases. CDC has been actively investigating these AFM cases, and we continue to receive information about suspected AFM cases.



Number of confirmed U.S. AFM cases reported to CDC by month of onset, August 2014 - September $2018^{**\dagger}$



🖈 StarTribune

Six Minnesota kids suffer rare, polio-like disorder



By Jeremy Olson Star Tribune OCTOBER 5, 2018 - 8:06PM

State health officials have issued an alert to doctors after six Minnesota children were diagnosed with a rare, polio-like disorder that causes reduced mobility or paralysis in the arms and legs.

All six cases of acute flaccid myelitis (AFM) have been reported since Sep. 20, prompting the Minnesota Department of Health to ask doctors to be on the lookout for the disorder, which has severe consequences but mysterious origins.

The disease attacks the nervous system via the spinal cord, and may be transmitted by a virus. Symptoms usually include a sudden onset of arm or leg weakness and loss of muscle reflexes, but can also include drooping eyelids, slurred speech and difficulty swallowing. Treatment and therapy restores lost mobility in some children over time, but the syndrome can be fatal in those who lose the muscular function to breathe.



News Release October 5, 2018

Statement on cases of acute flaccid myelitis

The Minnesota Department of Health (MDH) is investigating six cases of a rare condition called acute flaccid myelitis (AFM) that occurred since mid-September in Minnesota children.

AFM is a rare but serious condition that affects the nervous system, causing muscles to weaken. It can be a complication following a viral infection, but environmental and genetic factors may also contribute to its development. AFM symptoms include sudden muscle weakness in the arms or legs, sometimes following a respiratory illness. Other symptoms may include:

- Neck weakness or stiffness
- Drooping eyelids or a facial droop.
- Difficulty swallowing or slurred speech.

MDH disease investigators are working aggressively with health care providers to gather information about the cases. The department is also in contact with the Centers for Disease Control and Prevention (CDC) to share information.

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Figure 3. Geographical distribution of the cholera cases reported worldwide, June to August 2018



WHO, Yemen Begin New Cholera Vaccination Drive As Cases Increase To 10K+ Per Week

Oct 03, 2018

Agence France-Presse: WHO launches second cholera vaccine drive in Yemen as cases surge "The World Health Organization said Tuesday it was helping Yemeni authorities with a second round of vaccination against cholera in three hard-hit districts, as cases surged across the war-ravaged country..." (10/2).

Reuters: Yemen cholera outbreak accelerates to 10,000+ cases per week: WHO "Yemen's cholera outbreak — the worst in the world — is accelerating again, with roughly 10,000 suspected cases now reported per week, the latest data from the World Health Organization (WHO) showed on Tuesday..." (Nebehay, 10/2).



Health workers in Yemen reach more than 306,000 people with cholera vaccines during fourday pause in fighting – WHO, UNICEF



Vaccination campaign covers war-torn areas of Hudaydah and Ibb

5 October 2018 | News Release | Geneva/New York

More than 306,000 people in Yemen, including over 164,000 children under the age of 15, were vaccinated against cholera as part of a joint WHO-UNICEF campaign that concluded today. The number are expected to go up as reports of the final day of the campaign come in. The six-day vaccination effort, carried out by 3,000 health workers in three districts in Hudaydah and Ibb, was made possible by a pause in fighting – known as 'Days of Tranquility' – agreed by parties to the conflict.



News Scan for Sep 13, 2018

Rapid cholera spread in Zimbabwe capital triggers stepped-up response

A quickly spreading cholera outbreak in Zimbabwe's capital city of Harare has prompted the WHO to scale up its response, according to a statement today from its Regional Office for Africa.

The outbreak began on Sep 1, and as of Sep 11, 2,000 suspected cases have been reported, 58 of them confirmed and 24 fatal. Zimbabwe's health ministry has declared a state of emergency and is working with its international partners to contain the spread of the disease.

According to the WHO, the outbreak is centered in Glenview, a high-density suburb of Harare that is an active trading center with a highly mobile population. Inadequate supplies of safe water have forced residents to turn to unsafe supplies, such as wells and bore holes. Cases have been reported in 5 of the country's 10 provinces.

Matshidiso Moeti, MD, who directs the WHO's African regional office, said in the statement, "When cholera strikes a major metropolis such as Harare, we need to work fast to stop the spread of the disease before it gets out of control." The WHO is helping the health ministry form a surge team and is providing cholera kits that contain oral rehydration solution, intravenous fluid, and antibiotics to cholera treatment centers.

The government is weighing the benefits of a possible oral cholera vaccine (OCV) campaign, and the WHO is deploying an expert in OCV campaigns to Harare. Zimbabwe experiences frequent cholera outbreaks and reported its largest outbreak in 2008, an event that led to more than 4,000 deaths.



HEALTH NEWS OCTOBER 4, 2018 / 10:37 AM / UPDATED A DAY AGO

Zimbabwe vaccinates 1.4 million to combat worst cholera outbreak in a decade

HARARE (Reuters) - Zimbabwe has started vaccinating people living in urban areas to contain the worst cholera outbreak to hit the country in a decade which has left 49 people dead and infected thousands more.

The southern African nation of more than 13 million people last month appealed locally for help to raise \$35 million to buy vaccines and medicines and to repair water and sewer pipes.

Some 1.4 million will be vaccinated, starting with those in the most densely populated areas.


News Scan for Sep 17, 2018

WHO: Cholera outbreak strikes Algerian capital area

A rapidly spreading cholera outbreak in northern Algeria in and around the capital province of Algiers that began in early August has hospitalized 217 people, including 83 confirmed case-patients and 2 deaths, the WHO said in a Sep 14 update.

The country's health ministry announced the outbreak on Aug 23, and since then, cases have been reported in 7 of Algeria's 48 provinces. The event marks Algeria's first cholera outbreak since 1996.

The Pasteur Institute in Algeria has confirmed *Vibrio cholerae* serogroup O1 Ogawa as the outbreak strain, and tests on 21 water sources in the affected areas found that 10 were inappropriate for human consumption. One well that was positive for *V cholerae* was condemned for human consumption. So far, the source of the bacteria and the transmission vehicle isn't known, but health officials said most cases are clustered within a family group.

An urban setting increases the risk of transmission, especially given that the source of the outbreak hasn't been identified, the WHO said. However, it noted that recent information from the health ministry suggests that the outbreak is slowing down. The WHO said further analysis of the *V cholerae* specimens should be done, including sequencing the cholera toxin gene, to see if an epidemic strain is fueling the outbreak.

Sep 14 WHO statement

CLF BRIEFING

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- 4. Influenza update and vaccine
- 5. Monkeypox
- 6. Acute flaccid myelitis (AFM)

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- 9. Foodborne diseases
- **10.** Measles
- **11. MERS**
- **12.** Other (Roadmaps)





News Scan for Aug 31, 2018

Four countries from 3 parts of the world report more polio cases

In its latest weekly update, the Global Polio Eradication Initiative (GPEI) reported new polio cases in four countries: Afghanistan, Nigeria, the DRC, and Papua New Guinea.

In Afghanistan, one more wild poliovirus type 1 (WPV1) case was reported, involving a patient from Nangahar province who had a Jul 17 paralysis onset. The country has now had 12 WPV1 cases in 2018.

Meanwhile, Nigeria, which is experiencing two separate circulating vaccine-derived poliovirus (cVDPV2) outbreaks, reported three new cases, two from different locations in Jigwa state that had Jun 27 and Jul 24 symptom onsets and one in Katsina state with a Jul 27 illness onset. Nigeria's cVDPV2 total for the year now stands at eight.

The DRC, which is affected by three separate cVDPV2 strains, said two patients who were contacts of negative acute flaccid paralysis case-patients from Mongala province have been classified as case-patients. The country has now reported 13 such cases in 2018.

Elsewhere, Papua New Guinea, which is experiencing a circulating vaccine-derived poliovirus type 1 (cVDPV1) outbreak, reported two new cases, one in Madang province with a symptom onset of Jul 11 and one in Eastern Highland province with a Jul 26 illness onset. The country has now reported six 2018 cVDPV1 cases from four provinces.

Aug 31 GPEI update



News Scan for Sep 07, 2018

Three new vaccine-derived polio cases in Papua New Guinea's outbreak

The polio outbreak in Papua New Guinea grew by 3 new cases, according to the latest update from the Global Polio Eradication Initiative (GPEI).

The new cases raise to the total number of circulating vaccine-derived poliovirus type 1 (cVDPV1) cases in this outbreak to nine. Papua New Guinea is currently in its second round of a vaccination outbreak response, with nationwide campaigns planned through November.

GPEI recorded 35 cases of cVDPV so far in 2018, and a total of 96 were reported in 2017. Before this current outbreak, Papua New Guinea hadn't reported a polio case since 1996 and the country and the rest of the WHO's Western Pacific region were certified as polio free in 2000.



News Scan for Sep 14, 2018

New polio cases in Afghanistan, Pakistan, Papua New Guinea, Somalia

In its latest weekly update, the Global Polio Eradication Initiative (GPEI) reported new polio cases in four countries, including wild poliovirus 1 (WPV1) in Afghanistan and Pakistan and vaccine-derived polio in Papua New Guinea (PNG) and Somalia.

Afghanistan's latest case involves a patient from Uruzgan province who had a Jul 8 paralysis onset, bringing the country's total for 2018 to 13 WPV1 cases. Pakistan's new case-patient is from Charsada province and had a paralysis onset of Aug 1, lifting the country's total to 4 for the year.

Elsewhere, PNG reported three new cases in its outbreak of circulating vaccine-derived poliovirus type 1 (cVDPV1). Two patients are from Eastern Highlands province and had paralysis onsets on Jul 24 and Jul 27, and one is from National capital district and had an Aug 2 onset. The country has now reported 12 cVDPV1 cases in its outbreak. A nationwide vaccine campaign is planned for October and November.

Somalia, which is experiencing separate outbreaks of cVDPV2 and cVDPV3, reported two new cVDPV2 cases, both in the same district in Lower Juba province. Paralysis onsets were Jul 29 and Jul 30. For 2018, the country has now recorded 4 cVDPV2 cases, 2 cVDPV3 cases, and 1 involving both types.

Sep 14 GPEI update



News Scan for Sep 21, 2018

Polio cases confirmed in Afghanistan, DR Congo

The Global Polio Eradication Initiative (GPEI) today reported one new case of wild poliovirus type 1 (WPV1) in Afghanistan and two new cases of circulating vaccine-derived poliovirus type 2 (cVDPV2) in the Democratic Republic of the Congo (DRC).

The WPV1 case in Afghanistan is in Kandahar province in the Kandahar district. The patient had onset of paralysis on Aug 11, and the case raises the 2018 total to 14, the same number the country had in all of 2017. At this point last year, Afghanistan had confirmed only 6 WPV1 cases.

Both of the DRC's cVDPV2 cases are in Mongola province, one in Yamaluka district and one in Bumba district. The Yamaluka patient experienced paralysis onset on Jul 30, and the other on Aug 5. Officials also detected the presence of cVDPV2 in a healthy community contact in the province. DCR is addressing three separate cVDPV2 outbreaks in separate provinces. The DRC has now confirmed 15 cVDPV cases this year, compared with 9 at this point last year and 22 for all of 2017.

Global totals of WPV1 now stand at 18 so far this year (Pakistan has had 4 cases), compared with 10 at this time last year. cVDPV cases number 36, compared with 49 at this point in 2017. Syria, however, accounted for 40 of the cVDPV cases year-to-date in 2017, and it has confirmed none so far this year.

Sep 21 GPEI update



News Scan for Sep 28, 2018

GPEI reports 10 more polio cases in 4 countries

The Global Polio Eradication Initiative (GPEI) reported a slew of new polio illnesses this week, with Nigeria, Niger, Somalia, and Papua New Guinea all recording cases of circulating vaccine-derived polio.

In Nigeria, three circulating vaccine-derived poliovirus type 2 (cVDPV2) cases were recorded in Katsina and Borno states, linked to the cVDPV2 outbreak centered around Jigawa. All patients experienced an onset of paralysis in August. Nigeria is experiencing two polio outbreaks, one in Jigawa state and one in Sokoto state. Nigeria now has 11 cases of polio reported in 2018.

GPEI also said two new two cases of cVDPV2 reported in Niger are genetically linked to the outbreak in Nigeria's Jigawa state. These are Niger's first cases reported in 2018.

"Since detection of the initial isolates in early 2018, outbreak response continues to be conducted across northern Nigeria. As the risk of potential international spread, in particular to Niger, is considered high, enhanced vaccination activities continue to be implemented in Niger," the GPEI said.

In Somalia, three new cases of cVDPV3 were reported in the past week, bringing the year's total to 11. In Papua New Guinea, two new cases of cVDPV1 were reported this week, bringing its 2018 total to 14.

Sep 28 GPEI report





Boy dies of polio in first fatal case in Papua New Guinea outbreak

Child has died in central Enga province, the WHO says, as the country battles the return of the disease

Guardian staff

Mon 1 Oct 2018 21.47 EDT

A boy has died from polio in <u>Papua New Guinea</u> in the first fatal case since an outbreak of the disease in June.

The World $\underline{\text{Health}}$ Organisation said on Tuesday that the boy died in Enga province, one of 14 confirmed cases across the country .

Speaking at the launch of a nationwide polio vaccination campaign on Monday, the WHO representative in the country, Luo Dapeng, said that there had been five confirmed cases in Eastern Highlands province, three in Morobe, two in Enga, two in Madang, one in Port Moresby and one in Jiwaka the Papua New Guinea Post Courier website said.

The country's health department said the child died when the muscles around their lungs became paralysed by the virus, Radio NZ said.

One of the other 14 victims died in September but he was also infected with meningitis and tuberculosis and his death was not attributed to polio.



THIS WEEK

Polio this week as of 02 October 2018

- Afghanistan

• One case of wild poliovirus type 1 (WPV1) was reported in the past week, with onset of paralysis on 27 August, from Kandahar. The total number of WPV1 cases in 2018 is 15.

- Nigeria

- Three cases of circulating vaccine-derived poliovirus type 2 (cVDPV2) cases were reported this week, bringing the total number of cVDPV2 cases in 2018 to 14.
- These latest reported cases had onset of paralysis in late August and early September, from Katsina and Yobe states, linked to the cVDPV2 outbreak centred around Jigawa.
- No cases of wild poliovirus type 1 (WPV1) were reported. The most recently-detected WPV1 case, from Borno state, had onset of paralysis on 21 August 2016.

CLF BRIEFING

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- 12. Other (Roadmaps)





CDC reports provisional Zika virus disease case counts reported to ArboNET in the United States and its territories on the first Thursday of each month.

Cumulative Zika Virus Disease Case Counts in the United States, 2015-2018

Provisional Data* as of September 5, 2018

Zika virus disease became a nationally notifiable condition in 2016. Cases are reported to CDC by state, territorial, and local health departments using standard case definitions. This web page contains cumulative provisional data reported to ArboNET for **January 1, 2015 – September 5, 2018**.

US States

- 5,723 symptomatic Zika virus disease cases reported[†]
 - 5,437 cases in travelers returning from affected areas
 - 231 cases acquired through presumed local mosquito-borne transmission
 - 55 cases acquired through other routes, including sexual transmission (N=52), laboratory transmission (N=2), and person-to-person through an unknown route (N=1)

US Territories

- 37,270 symptomatic Zika virus disease cases reported[†]
 - 147 cases in travelers returning from affected areas
 - 37,123 cases acquired through presumed local mosquito-borne transmission
 - O cases acquired through other routes[‡]



News Scan for Aug 29, 2018

Study finds link between congenital defects, maternal Zika infection

A small case-control study conducted during the Zika outbreak in French Polynesia shows an association between congenital defects with both maternal Zika virus seropositivity and symptomatic Zika virus infection during pregnancy. The study was published yesterday in *Emerging Infectious Diseases*.

The study tracked 21 cases and 102 controls in 2013 and 2014. Of the 21 case-patients, 7 had microcephaly, 5 had brainstem dysfunction characterized by an inability to suck and swallow, and 9 had other central nervous system defects.

"Maternal Zika virus seroprevalence was 95% among case-patients and 76% among controls (P = 0.07)," the authors said.

Thirty-eight percent of mothers of case-patients and 17% of controls had symptomatic Zika virus infection during pregnancy, and mothers of 57% of case-patients and 60% of controls had asymptomatic infection (timing unknown, P = 0.07.)

Among women who reported Zika symptoms in pregnancies for case-patients, 88% (7/8) reported it in the first trimester and 12% (1/8) in the second trimester. For controls, 71% (12/17) of mothers reported symptoms in the first trimester and 29% (5/17) in the second or third trimesters.



News Scan for Aug 30, 2018

Study of Zika-affected babies shows early epilepsy onset, treatment resistance

Clinical follow-up of 141 babies born with congenital Zika virus problems who were evaluated at a referral center in Brazil revealed that 67% experienced epilepsy, a prevalence that was higher than the 9% to 50% reported in earlier studies. Researchers from Brazil described their findings today in a letter to the *New England Journal of Medicine*.

The mean age of epilepsy in the group of infants was 4.9 months, and parents reported that seizures occurred during the first 6 months of life in 74% of the babies. The main seizure types were epileptic spasms (72%), followed by focal motor seizures (21%) and tonic seizures (4%). A single seizure type was noted in 77% of the infants.

All of the children received antiepileptic medication, with 56% receiving more than one drug. At the last clinic visit, 62 infants (65%)—24 on monotherapy and 38 on polytherapy—had experienced remission.

Electroencephalography (EEG) pattern analysis showed that classic or modified hypsarrhythmia or a burst-suppression pattern was associated with drug-resistant epilepsy. Only one child in the group that had those patterns experienced remission.



News Scan for Sep 13, 2018

Eye exams recommended for all children born during Zika outbreak

A study today in *Pediatrics* shows that 25.4% of children born to mothers with confirmed or suspected Zika infections during Brazil's 2015-16 outbreak had eye abnormalities. The authors said these findings should prompt universal eye screening for all children born after Zika outbreaks.

In the study, 224 infants born to Brazilian mothers who had symptomatic Zika infections, or infants with microcephaly or other signs of possible Zika infection or exposure, were tested with reverse transcriptase polymerase chain reaction and subsequently given eye examinations in 2016 and 2017.

According to the study, eye abnormalities were found in 57 of 224 infants (25.4%). Optic nerve (44 of 57; 77.2%) and retina abnormalities (37 of 57; 64.9%) were the most common abnormalities reported.

"CNS [central nervous system] abnormalities significantly increased the chances of eye abnormalities in our cohort by 15-fold," the authors wrote. "Nevertheless, we also examined infants who had no apparent clinical findings and were born to mothers with a diagnosis of ZIKV infection during pregnancy. Five infants had eye abnormalities identified in the absence of any CNS findings."

Thus, the authors recommend eye screenings in Zika outbreak settings regardless of the presence of microcephaly, other abnormalities, or laboratory confirmation of infection. **Sep 13** *Pediatrics* **study**



News Scan for Aug 29, 2018

Congo government warns of growing yellow fever outbreak

Officials from the Congo Republic warned on Monday of at least 70 suspected yellow fever cases, according to a post on ProMED Mail, on online infectious disease tracking message board.

The 70 cases are in five health districts, including a border district with Angola, according to the minister of health and population, Jacqueline Lydia Mikolo. Reuters reported that officials are suggesting there are as many as 186 suspected yellow fever cases, and they warned of "an emerging event of epidemic proportions."

Yesterday, the World Health Organization (WHO) reported one confirmed case of the mosquitoborne diseases in a Congolese man who traveled to and from Angola in July. The man, who was treated at a health center in Pointe Noire, had not been vaccinated against yellow fever.

In 2016, Angola and the Democratic Republic of the Congo, saw a major yellow fever outbreak, which killed more than 400 people, and put a run on the global supply of yellow fever vaccine.



News Scan for Sep 07, 2018

WHO weighs in on Congo yellow fever threat, potential urban spread

In an update today on a recent confirmation of a yellow fever case in the Republic of Congo, the WHO said the overall health risk to the country is high, given that the case was confirmed in the densely populated city of Pointe-Noire, which has a population of about 1.2 million.

It also warned that immunization coverage in the area is at suboptimal levels and that yellow fever activity poses a risk of spread within the country and to Brazzaville, the country's capital. The investigation also revealed high densities of Aedes aegypti populations in the affected area, which could fuel urban transmission and amplify the outbreak, the WHO said in an emailed statement.

On Aug 22, the Republic of Congo's health ministry declared a yellow fever outbreak in the Pointe-Noire area, following the confirmation of an illness in a 20-year-old man at a health center in the city. Two weeks before he got sick the man had traveled to two areas, one of which is a rural Pointe-Noire district located near the Angola border.

Investigators have identified 69 other suspected cases in the Pointe-Noire area, 56 of which were already in the surveillance system. Samples collected from 43 patients were all negative for yellow fever.

WHO said it is working with the country on an emergency response and officials have requested supplies for a mass yellow fever vaccination campaign that will target the Pointe-Noire area. It said the risk of regional spread is currently considered moderate, due to lack of information about the outbreak's scope. It notes, however, that Pointe-Noire is a port city and oil industry hub with an international airport and links to other large cities.



News Scan for Sep 27, 2018

Republic of Congo to vaccinate more than 1 million against yellow fever

Yesterday the Republic of Congo launched a 6-day yellow fever vaccination campaign targeting 1 million people in the port city of Pointe-Noire and surrounding areas, the World Health Organization (WHO) said in a press release yesterday.

The campaign was launched in response to an outbreak that began in late August, when yellow fever was confirmed in a 20-year-old man at a health center in the city, which has a population of 1.2 million.

"Since then, no other case has been confirmed in the country, but more than 200 suspected cases have been reported since the beginning of the year, with most of these notified by the health authority in Pointe Noire," the WHO said in the release. "It's possible that there are also undetected cases as a large proportion of the Pointe Noire population seeks care in the private system and the national surveillance system may not be receiving notification."

The population of Pointe-Noire has suboptimal yellow fever vaccine coverage and high-density *Aedes aegypti* populations, which could fuel urban transmission of the mosquito-borne virus.

According to the WHO, the campaign uses vaccines from the global emergency yellow fever vaccine stockpile managed by the International Coordination Group on Vaccine Provision and funded by Gavi, the Vaccine Alliance.

CLF BRIEFING

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- **10.** Measles
- **11. MERS**
- 12. Other (Roadmaps)





News Scan for Aug 24, 2018

Cyclosporiasis cases linked to McDonald's salads top 500

The CDC yesterday reported 31 more cases in a *Cyclospora* outbreak linked to McDonald's salads, pushing the illness total to 507.

Three more cyclosporiasis patients required hospitalization, putting that number at 24. No deaths have been reported. The number of affected states remained at 15.

Illness-onset dates range from May 20 to Jul 21. Ill people range in age from 14 to 91 years old, with a median age of 52. Two-thirds are female. The CDC notes that it can take 6 weeks between illness onset and when illnesses are reported in people infected with *Cyclospora cayetanensis*, the parasite that causes the disease.

In late July, the US Food and Drug Administration (FDA) identified Cyclospora in a romaine lettuce and carrot salad mix distributed to McDonald's by a Fresh Express processor in Streamwood, Ill. There is no evidence that the *Cyclospora* outbreak related to McDonald's salads is related to an earlier *Cyclospora* event connected to Del Monte fresh vegetable trays.

The FDA said yesterday in its own update that the investigation is ongoing and it is reviewing distribution and supplier information for romaine lettuce and carrots.



News Scan for Sep 13, 2018

CDC: Cyclospora investigation ends with 511 illnesses

Yesterday the US Centers for Disease Control and Prevention (CDC) released its final numbers on a *Cyclospora* outbreak tied to contaminated McDonald's salads, noting that 4 more cases had been added to outbreak totals, raising the final tally to 511 illnesses.

Sixteen states reported cases, and 24 people were hospitalized. There were no deaths. Illinois reported the most cases (274), followed by Iowa (99) and Missouri (52). During the investigation into the outbreak, ill people reported buying salads from McDonald's restaurant locations in the Midwest, the CDC said.

Case-patients ranged in age from 14 to 91 years, with a median age of 52. Sixty-six percent of patients were women. "This outbreak appears to be over," the agency said.

On Jul 13, McDonald's voluntarily stopped selling salads in 14 states. On Jul 26, the Food and Drug Administration confirmed that a bagged romaine lettuce and carrot mix from a Fresh Express processor in Streamwood, Ill., was contaminated with *Cyclospora*. **Sep 12 CDC update**



US officials probe Cyclospora spike, tainted US produce

Filed Under: Cyclospora; Foodborne Disease Lisa Schnirring | News Editor | CIDRAP News | Sep 19, 2018

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The US Centers for Disease Control and Prevention (CDC) said yesterday that 2,173 lab-confirmed domestically acquired *Cyclospora* cases in 33 states were reported from May through August, markedly higher than the past 2 years, and that some of the illnesses reflect several restaurant clusters linked to contaminated basil and cilantro.

In a separate development yesterday, Food and Drug Administration (FDA) Commissioner Scott Gottlieb, MD, said that testing of bagged salad mix ingredients revealed two positive samples in domestically grown romaine lettuce, marking the second such instance involving US-grown produce.



in LinkedIn

tesdei / iStock

Past outbreaks have involved a variety of imported produce, including basil, cilantro, mesclun lettuce, raspberries, and snow peas.

Illness clusters tied to basil, cilantro



News Scan for Sep 27, 2018

CDC: 135 Salmonella cases linked to Honey Smacks; outbreak probe over

In a final report on a *Salmonella* outbreak tied to Honey Smacks cereal, the Centers for Disease Control and Prevention (CDC) confirmed 135 cases in 36 states. The new total represents an increase of 5 cases since the previous CDC update on Aug 31.

There were no deaths reported in this outbreak, but 34 people were hospitalized. New York, Pennsylvania, and California reported the most cases, with 16, 12, and 11 cases, respectively. "As of September 26, 2018, this outbreak investigation is over," the CDC said.

Patients reported illness onset from Mar 3 to Aug 29, and patients ranged in age from less than 1 year to 95 years old. The median age was 57, and 69% of patients were female. Whole-genome sequencing from isolates collected from eight food samples and 91 patients did not show antibiotic resistance.

Lab testing showed the outbreak strain was*Salmonella* Mbandaka, which was identified in a sample of unopened Kellogg's Honey Smacks cereal collected from a retail location in California and in samples of leftover Honey Smacks collected from the homes of sickened patients in Montana, New York, and Utah.

On Jun 14, Kellogg Company recalled Honey Smacks cereal, and the CDC said that consumers should not eat Kellogg's Honey Smacks cereal with a "best if used by" date of Jun 14, 2019, or earlier. Honey Smacks has a shelf life of 1 year.

Sep 26 CDC report



News Scan for Sep 06, 2018

Final CDC report notes 101 Salmonella cases linked to Hy-Vee pasta salad

Late yesterday the US Centers for Disease Control and Prevention (CDC) issued its final update on a multistate *Salmonella* outbreak connected to pasta salad sold at Hy-Vee grocery stores and said the outbreak appears to be over.

A total of 101 people in 10 states were infected with *Salmonella* Sandiego (92 people), *Salmonella* enterica subspecies IIIb (7 people), or both (2 people). Twenty-five people were hospitalized, but no deaths were recorded.

Illness onsets ranged from Jun 21 to Aug 7, and the median case-patient age was 50. Most cases (61%) involved women. Iowa, where Hy-Vee is headquartered, had the most cases (37), followed by Minnesota (23), South Dakota (19), and Nebraska (11). Kansas and Missouri each had 3 cases, Illinois had 2, and North Dakota, Oregon, and Tennessee each reported 1 case.

On Jul 17, Hy-Vee removed all Spring Pasta Salad packages from its stores. According to the CDC, any recalled Spring Pasta Salad would now be expired. Sep 5 CDC update



News Scan for Sep 11, 2018

Eggs linked to Salmonella infections in 2 states

The US Centers for Disease Control and Prevention (CDC) yesterday warned consumers not to eat, sell, or serve Gravel Ridge cage-free large eggs because of potential contamination with *Salmonella* Enteritidis, following reports of 14 people infected in Alabama and Tennessee.

The producer, Gravel Ridge Farms of Cullman, Ala., recalled the eggs on Sep 8 after receiving reports of illnesses. According to the recall notice, the US Food and Drug Administration (FDA) notified the company of the illnesses on Sep 6. The products were distributed between Jun 25 and Sep 6, mainly to restaurants and retail stores in Alabama, Georgia, and Tennessee.

According to the CDC, illness start dates range from Jul 10 to Aug 7. Of 14 infected people, 2 were hospitalized. No deaths were reported.

CLF BRIEFING

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News Scan for Aug 27, 2018

PAHO urges measles vaccination ramp-up in South America

With an ongoing measles outbreak in Venezuela, the Pan American Health Organization (PAHO) urged member states to aggressively vaccinate against the disease.

"It is vital that we continue vaccinating in order to reach more than 95% of our children everywhere," said PAHO Director Carissa F. Etienne, MD, in a press release. "We must also strengthen national epidemiological surveillance and establish rapid response teams to expeditiously manage suspected cases, prevent new cases and halt outbreaks. These measures to sustain elimination were agreed to by Ministers of Health in 2017. These commitments must be renewed."

Endemic transmission of measles was reestablished in Venezuela in 2017. As of Aug 20 of this year, Venezuela confirmed 3,545 cases of measles, including 62 deaths.

Although measles remains eliminated from all other PAHO countries, 10 countries in South America besides Venezuela have reported 1,459 confirmed cases of measles and 6 deaths since the outbreak in Venezuela began: Antigua and Barbuda (1 case), Argentina (8), Brazil (1,237, including 6 deaths), Canada (19), Colombia (60), Ecuador (17), Guatemala (1), Mexico (5), Peru (4), and the United States (107).

In Brazil, most cases have been connected to the Venezuelan outbreak.



News Scan for Sep 24, 2018

PAHO reports more than 6,000 measles cases in Americas

Since the first of the year, the Pan American Health Organization (PAHO) has recorded 6,629 measles cases, including 72 deaths, in 11 countries in North, Central, and South America.

The strong majority of cases (4,605, 62 deaths) are from Venezuela, which has been battling a resurgence of the virus since last year. According to PAHO, the national incidence rate is 14.5 per 100,000 population, and the states with the highest incidence rates are Delta Amacuro (208.8 per 100,000 population), the Capital District (125.0), and Amazonas (77.3).

Brazil has recorded 1,735 cases, including 10 deaths, in an outbreak that's spilled over from Venezuela. Strains of measles in that country are identical to those circulating in Venezuela, PAHO said.

PAHO said the Brazilian outbreak is ongoing, but cases have decreased recently in Roraima state, one of the epicenters of the outbreak. Children under the age of 4 are the most likely to be infected in this outbreak, PAHO said.

The United States has recorded 124 cases this year, and Colombia has confirmed 85.

PAHO said all member states should emphasize measles, mumps, and rubella vaccination campaigns to achieve 95% coverage rates, especially among infants.



Figure 1. Number of measles cases by country, EU/EEA, July 2018 (n=758)





News Scan for Sep 12, 2018

Measles resurgence in Italy affected by public health cuts, study says

Cuts in public health funding—and not just the growing anti-vaccine movement—are to blame for the return of measles infections in Italy, according to a study today in the *European Journal of Public Health*.

The study, conducted by researchers at Bocconi University, looked at public health funding across different regions of Italy from 2000 to 2014, and found that for every 1% of funding cut from a region's healthcare budget, measles, mumps, and rubella (MMR) vaccination coverage decreased by 0.5 percentage points (95% confidence interval: 0.36–0.65 percentage points.)

MMR coverage rose from 74.1% in 2000 to 90.6% in 2012, which coincided with an increase in public health funding from 2000 to 2009 at an average rate of 3.5% per year. Between 2010 and 2014, funding dropped by about 2% per year. MMR coverage rose from 74.1% in 2000 to 90.6% in 2012, but by 2014 fell to 85.1%.

"The consequences can be illustrated by comparing two regions, Lazio, where public health spending fell by 5% and MMR coverage by over 3 percentage points, and Sardinia, a historically deprived region, where public health spending partly rose and MMR rates remained approximately steady," the authors said.



News Scan for Sep 18, 2018

Uptake of MMR vaccine falls to 91.2% in the UK

For the fourth year in a row, uptake of the measles, mumps, and rubella (MMR) vaccine has fallen in the United Kingdom, and now stands at 91.2%, well below the 95% uptake recommended to prevent transmission of the communicable diseases.

The statistics are published in a new report from the National Health Service (NHS). The data includes information on nine childhood vaccines offered by the age of 24 months. Only rotavirus uptake increased, from 89.6% in 2016-17 to 90.1% in 2017-18.

According to a story in *The Guardian*, the effects of this drop are already being seen, as 876 measles cases have been confirmed so far in 2018, more than three times the number recorded in all of 2017. Experts say the decline is because of logistical failures, a confusing recommended vaccine schedule, and growing anti-vaccine rhetoric in Europe.

The UK numbers are part of the bigger story of the resurgence of measles in Europe. According to the World Health Organization (WHO), more than 41,000 cases of measles were reported in Europe between January and June of 2018, compared with about 24,000 cases in all of 2017.

But new data from the European Centre for Disease Prevention and Control (ECDC) said the rate of measles cases have been dropping since March of this year.

CLF BRIEFING

HOT TOPICS

- 1. Ebola
- 2. Pandemic and epidemic preparedness
- 3. Antimicrobial resistance and stewardship
- 4. Influenza update and vaccine
- 5. Monkeypox
- 6. Acute flaccid myelitis (AFM)

UPDATES

- 6. Cholera
- 7. Polio
- 8. Zika, Yellow fever
- 9. Foodborne diseases
- **10.** Measles
- **11. MERS**
- **12.** Other (Roadmaps)





Geographical distribution of confirmed cases of MERS-CoV by probable region of infection in September 2018







Organization

Tunisia, Turkey, United Arab Emirates, United Kingdom, United States of America, Yemen

Please note that the underlying data is subject to change as the investigations around cases are ongoing. Onset date estimated if not available.



Emergencies preparedness, response

Middle East respiratory syndrome coronavirus (MERS-CoV) – Saudi Arabia

Disease outbreak news 3 October 2018

From 1 June through 16 September 2018, the International Health Regulations (IHR 2005) National Focal Point of Saudi Arabia reported 32 additional cases of Middle East Respiratory Syndrome (MERS), including 10 deaths.

Among these 32 cases, 12 cases were part of five distinct clusters (one health care and four household clusters). The details of these clusters are described below and detailed information concerning the cases reported can be found in a separate document (see link below).

- Cluster 1: From 1 through 8 June, four additional cases in a previously reported household cluster were reported in Najran, Saudi Arabia. The initial case reported in this cluster was reported on 30 May (aged 52 years old). One of the secondary cases was a health care worker.
- Cluster 2: From 9 through 14 July, a household cluster of two cases was reported from Afif city, Riyadh region. No health care workers were infected.
- Cluster 3: From 3 through 4 September, a health care facility in Buraidah City, Al-Quassim Region reported a cluster of two patients. No other patients or health care workers were infected.
- Cluster 4: From 1 through 16 September, a household cluster of two cases, including the suspected index case with reported dromedary exposure was reported from Buraidah City, Al-Quassim Region. No health care workers were infected.
- Cluster 5: From 10 through 16 September, a household cluster of two cases, including the suspected index case with reported dromedary exposure were reported from Riyadh City, Riyadh Region. No health care workers were infected.



South Korea reports MERS in Kuwait business traveler

Filed Under: MERS-CoV

Lisa Schnirring | News Editor | CIDRAP News | Sep 10, 2018

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South Korea on Sep 8 announced that a 61-year-old man who got sick during a business trip to Kuwait tested positive for Middle East respiratory syndrome coronavirus (MERS-CoV) after arriving home, marking the country's first imported case in 3 years.

In a statement yesterday, the World Health Organization (WHO) said the man had been in Kuwait between Aug 16 and Sep 6 and was hospitalized with fever, diarrhea, and respiratory symptoms shortly after he returned to South Korea.



in LinkedIn

Phillip Stewards / Flickr cc

"While this case is unusual, it is not unexpected that MERS will occasionally appear outside of the Middle

East," the WHO said, adding that implementing rapid response measures can minimize the spread of the disease. The WHO said it is in discussions with the Korea Centers for Disease Control and Prevention (KCDC) and is ready to provide support, if needed.

South Korea's case is the second recent exported MERS-CoV from the Middle East. About two and a half weeks ago, the United Kingdom announced an infection in a Saudi visitor who had a history of contact with camels.

CIDRAP Center for Infectious Disease Research and Policy

WHO details South Korea's imported MERS case

Filed Under: MERS-CoV Lisa Schnirring | News Editor | CIDRAP News | Sep 12, 2018 **f** Share 🈏 Tweet **in** LinkedIn 🔀 Email 📑 Print & PDF

So far all 21 close contacts of a South Korean man who was diagnosed as having MERS-CoV after returning from a business trip to Kuwait are asymptomatic, the World Health Organization (WHO) said today in a statement that covered investigation findings and its assessment of the risk of spread.

The case, announced by South Korea on Sep 8, marked country's first imported case in 3 years and the second MERS-CoV (Middle East respiratory syndrome coronavirus) case exported in recent weeks from the Middle East. The other involves a Saudi resident whose illness was detected in the United Kingdom following exposure to camels in his home country.



raksyBH / iStock

In 2015, South Korea's first imported MERS-CoV case sparked an outbreak that spread through hospitals, sickening 186 people, 36 of them fatally. The event prompted sweeping changes throughout South Korea's health system, and a WHO official said earlier this week that quick detection of the new case has probably averted another massive outbreak, though it wouldn't be surprising to see some secondary infections.



News Scan for Sep 13, 2018

Kuwait probe so far finds no source of Korean man's MERS exposure

Kuwait's health ministry said yesterday that an investigation so far hasn't turned up any evidence to suggest that a South Korean business traveler who was diagnosed with MERS-CoV (Middle East respiratory syndrome coronavirus) after returning to his home country was exposed in Kuwait, the *Korea Times* reported today.

At a media briefing, Mustafa Redha, MD, health ministry undersecretary, said 10 people who had close contact with the South Korean man in Kuwait have tested negative for the virus and the country has taken all steps needed to protect its citizens and visitors from the virus.

Kuwaiti health officials have asked the World Health Organization (WHO) to send a team to confirm its test results, and the Korea Centers for Disease Control and Prevention (KCDC) is slated to send two experts, according to the *Times*.

According to reports from South Korean health officials, a few days before the man flew back to South Korea he visited a hospital in Kuwait twice for worsening diarrhea. He flew through Dubai on the way to South Korea, and the news report said the man's transfer took less than 3 hours and he had not visited any other country. The incubation period for MERS-CoV is 2 to 14 days.



News Scan for Sep 17, 2018

MERS sickens 3 more in Saudi Arabia

Saudi Arabia yesterday reported three more MERS-CoV cases, including two from different cities who contracted the virus from a sick household contact.

In its yesterday report for epidemiologic week 38, the country's ministry of health (MOH) said two of the MERS-CoV (Middle East respiratory syndrome coronavirus) cases are in Riyadh province, one of which involves a 38-year-old man from Rumah, about 74 miles northeast of the capital city of Riyadh. The man's source of the virus is listed as primary, meaning he wasn't exposed to a patient diagnosed with the illness. The other is a 34-year-old man from the city of Riyadh who is listed as a household contact.



News Scan for Sep 17, 2018

South Korea passes day 10 with no new MERS cases

South Korea has gone 10 days without reporting any other MERS cases related to an imported case in a business traveler who was diagnosed with the virus after returning from business travel in Kuwait, according to a status report today from the Korea Centers for Disease Control and Prevention (KCDC).

The 61-year-old man's illness was confirmed on Sep 8, and he is hospitalized at Seoul National University Hospital. Health officials are following 21 close contacts who are on home quarantine. Also, health officials have identified 406 others who had less risky contact with the patient.

In a related development, the World Health Organization (WHO) continues to support South Korea with contact tracing, public communications, and information sharing under the International Health Regulations (IHRs), the WHO's Western Pacific Regional Office said today in a statement.

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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).

Questions, comments, and discussion





Center for Infectious Disease Research and Policy University of Minnesota

CIDRAP Leadership Forum 2018 Annual Meeting

October 9th, 2018

Thank you for attending!