

Center for Infectious Disease Research and Policy University of Minnesota

# **CIDRAP Leadership Forum Infectious Disease Briefing**

**December 4, 2019** 

CLF BRIEFING

### **HOT TOPICS**

- 1. Influenza
- 2. Ebola
- **3.** Foodborne illness
- 4. Measles

### **UPDATES**

- 5. Polio
- 6. Zika
- 7. Yellow Fever
- 8. Rift Valley Fever (RVF)
- 9. Antimicrobial resistance
- **10.** Vaccine legislation
- **11.** Chronic Wasting Disease (CWD)



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# Flu Scan for Nov 26, 2019

### WHO: Flu levels still low in North America, rising in Middle East

In its latest global flu update, the World Health Organization (WHO) said flu levels are at interseasonal levels throughout most of Northern Hemisphere, but activity is rising in the Middle East.

"Respiratory illness indicators started to increase in some countries of the WHO European region, Eastern Asia, and in North America, but influenza detections remain below seasonal thresholds," the WHO said.

Influenza A is still the dominant strain globally, with fairly equal proportions of influenza 2009 H1N1 and H3N2 among the "A" strains, the WHO said. Of the sub-typed influenza A viruses, 47% were influenza H1N1 and 53% H3N2.

In the Middle East, Bahrain, Kuwait, and Saudi Arabia reported increased influenza A activity. Reports of influenza remain low throughout Southern Asia, Central America, and the Caribbean. **Nov 25 WHO update** 



## US flu picks up pace ahead of Thanksgiving

Filed Under: Influenza, General Lisa Schnirring | News Editor | CIDRAP News | Nov 22, 2019

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As the nation heads into the Thanksgiving holiday week, flu levels continue to rise, with most of the activity occurring in southern and western states, the US Centers for Disease Control and Prevention (CDC) said in its latest update today.

The CDC said the flu season is just getting started, and it's not too late to be vaccinated. Annual flu vaccination is recommended for everyone age 6 months and older.

### Flu markers rise; influenza B still high

Nationally, the percentage of clinic visits for flulike illness last week rose to 2.5%, putting it above the

overall baseline of 2.4% for the first time. However, some regions of the country have been above their specific baselines for a few weeks now, and currently, 4 of 10 are above their baselines.

Another key indicator that rose last week is the percentage of respiratory specimens that tested positive for flu, which rose to 7.3%, up from the previous week.



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## Weekly U.S. Influenza Surveillance Report



**ILI Activity Level** 

#### 2019-20 Influenza Season Week 47 ending Nov 23, 2019



Virgin Islands

## Weekly U.S. Influenza Surveillance Report





## Weekly U.S. Influenza Surveillance Report







# Flu Scan for Nov 26, 2019

### Study: Baloxavir-resistant influenza A can spread without virulence loss

An analysis of flu viruses during Japan's 2019 flu season suggests that 2009 H1N1 and H3N2 viruses can rapidly acquire the I38T mutation in the polymerase acidic (PA) protein, which has been linked to reduce susceptibility to baloxavir marboxil, a new antiviral. A team based Japan reported their findings yesterday in *Nature Microbiology*.

Baloxavir, which targets the flu virus' polymerase complex, is approved for use in Japan, the United States, and Hong Kong. Earlier studies had identified the mutation linked to baloxavir resistance and hinted that such viruses can spread person-to-person and reduce replication fitness. However, the mutation's impact on viral fitness wasn't known.

For the study, the team looked for the mutation before and after patients were treated with baloxavir in Japan. Before treatment, two patients had flu viruses that carried the I38T mutation. One was from a household of a patient who had been treated with baloxavir.

They assessed the impact on virus replication for four influenza A viruses that harbored the mutation, finding that the mutation impacts the replication of 2009 H1N1, though compensatory mutations can develop. However, the mutation in H3N2 viruses didn't seem to affect fitness.

Virulence testing that compared the effect of mutant viruses with wild-type viruses in hamsters, mice, and ferrets found that virulence was similar for both. Transmissibility experiments with ferrets found that transmission is similar for both the mutant and wild-type viruses, suggesting that the mutant versions have the potential to spread.

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# Figure 1: Health zone of reported Ebola virus disease cases by week of illness onset, as of 24 November 2019





## DRC Ebola total rises as South Sudan clash kills screeners

Filed Under: Ebola; VHF

Lisa Schnirring | News Editor | CIDRAP News | Oct 30, 2019

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The Democratic Republic of the Congo (DRC) today reported one new Ebola case, alongside a new report of a security clash in South Sudan that killed three aid workers who were staffing an Ebola screening checkpoint.

In other developments, a new assessment from the World Health Organization (WHO) of the outbreak said the incidence of new cases over the past week remained steady, but the movement of patients from the few remaining hot spots still pose a risk of spread to other areas.



CDC Global, Emily Jentes / Flickr cc

#### New cases include 1 in Beni

The 1 new case reported today, reflected on the WHO's online Ebola dashboard, raises the overall outbreak total to 3,269 cases, which includes 117 probable infections. Health officials are still investigating 475 suspected Ebola cases.



## Ebola continues decline, but mobile patients still pose a risk

Filed Under: Ebola; VHF

Lisa Schnirring | News Editor | CIDRAP News | Nov 20, 2019

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A steady decline in the number of Ebola cases in the Democratic Republic of the Congo (DRC) outbreak continued last week, with just nine new cases reported from three health zones, but a new illness was reported from Oicha, which recently passed 30 days with no new cases, according to the latest update from the World Health Organization (WHO).

In other developments, the DRC reported 2 more cases, lifting the outbreak total to 3,298, according to the WHO's online Ebola dashboard.



World Bank / Vincent Tremeau/ Flickr cc

### WHO's latest detailed assessment

Over the past 3 weeks, the three remaining hot spots are Mabalako, Beni, and Mandima. Though the number of cases this week continues to fall, the WHO warned that the outbreak response will continue to face complex challenges, which include rural and hard to reach locations.



## DRC Ebola cases hit 3,285 as transmission rate slows

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Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | Nov 06, 2019

From Oct 28 to Nov 3, only 10 new Ebola cases from five health zones were confirmed in the Democratic Republic of the Congo (DRC), but the World Health Organization (WHO) warns that security issues and poor access continue to hinder the response in rural hot spots.

In research findings, a study today highlighted serious long-term symptoms among Ebola survivors.

### Activity centered around Biakato Mines

In the latest situation report on the 14-month-long outbreak—the world's second largest—the WHO said 90% of new cases are linked to transmission chains in the Biakato Mines health area, and 80% of confirmed cases were registered as contacts.



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# New violence suspends Ebola response in key hot spots

Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | Nov 21, 2019

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Ebola response operations were suspended in Beni and disrupted in Butembo today, following an attack on civilians yesterday in the eastern part of the Democratic Republic of the Congo (DRC) that left eight civilians dead.

On Twitter Mike Ryan, MD, the World Health Organization (WHO) executive director of health emergencies, warned that violence always increases the risk of further transmission of the virus.

"This is a double tragedy for the civilians there, as gains against Ebola could be lost if this violence continues," Ryan tweeted.



MONUSCO, Martine Perret / Flickr cc

Tedros Adhanom Ghebreyesus, PhD, WHO director-general, also tweeted, "Deeply troubled by developments in DRC. We have seen these violent events not only traumatize communities and responders but also expand the Ebola outbreak. Our teams cannot reach contacts or potential patients when access is limited."



### WHO official highlights Ebola security challenges: 'We are so close'

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Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | Nov 22, 2019

Today Mike Ryan, MD, the World Health Organization (WHO) executive director of health emergencies, spotlighted recent violence in the Democratic Republic of the Congo (DRC) and its impact on the Ebola outbreak response and issued a dire warning.

"We just want to express how alarmed we are that a lack of access and security is now preventing us from ending the outbreak," Ryan said. "At this stage of the outbreak, one case matters, one case can reignite the outbreak, and means the virus can get ahead of us again."

#### 40 dead in recent violence

Over the past weeks, the number of new Ebola cases in North Kivu and Ituri provinces have dropped significantly, and transmission chains have been winnowed to a select handful carefully followed by DRC and WHO response workers. As of today, only five health zones in the DRC have confirmed Ebola cases.



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## More violence continues to stall Ebola response in DRC hot spots

Filed Under: Ebola; VHF

Lisa Schnirring | News Editor | CIDRAP News | Nov 25, 2019

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The head of the World Health Organization (WHO) today said Ebola response operations in two hot spots remain paralyzed for the sixth day in a row, which could prolong the outbreak, amid a report of an attack on a United Nation peacekeeping office in Beni.

In other developments, 4 new cases were reported over the weekend and through today, raising the outbreak total past 3,300 to 3,303.

### Violence strikes Beni UN peacekeeping facility

MONUSCO / Alain Wandimoyi/ Flickr cc

Last week, the WHO said violence between the Democratic Republic of the Congo's (DRC's) military

and local members of the Allied Democratic Forces (ADF), which is considered a rebel terrorist organization, is on the rise. Civilian deaths have occurred following the clashes over the past few weekends, including in Beni.

# CIDRAP Center for Infectious Disease Research and Policy

### WHO, UNICEF evacuate staff in DRC amid growing unrest

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Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | Nov 26, 2019 f Share

Yesterday both the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) evacuated staff fighting the Ebola outbreak in Beni in the Democratic Republic of the Congo (DRC) amid growing political unrest.

"Ebola responders in Beni DRC are on lockdown amidst gunfire, riots & civil strife, but still trying to protect people at risk of contracting the virus," WHO Director-General Tedros Adhanom Ghebreyesus, PhD, tweeted yesterday. "Teams are arranging contact follow-up by phone and remotely guiding community health workers in places we can't reach."

Outbreak response activity in and around Beni and Oicha has been halted for 7 days after conflicts

between the DRC's military and the Allied Democratic Forces, a terrorist militia, resulted in several civilian deaths throughout the region. Today Reuters reported that protesters, angry at the continued violence, set fire to the mayor's office in Beni yesterday and clashed with police. At least two civilians were killed.



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MONUSCO, Michael Ali / Flickr cc



# 'It Was Unmistakably A Directed Attack': 4 Ebola Workers Killed In Congo

November 28, 2019 · 2:26 PM ET

At least four Ebola response workers are dead and six others injured after a pair of attacks overnight against health facilities in the Democratic Republic of Congo. A World Health Organization official on Thursday described the killings as "unmistakably a directed attack at the [Ebola] response."

The dead include a vaccinator and two drivers stationed at Biakato Mines — an Ebola response camp used by WHO, government officials, UNICEF and other aid agencies — while a police officer died in the attack on a health coordination office in the small town of Mangina. No WHO staff died; one was among the injured.

"Though no WHO staff were killed, our Ministry of Health and partner colleagues are all members of the same family. We've been in the trenches together to stop this outbreak for a year and a half," Mike Ryan, WHO's executive director for health emergencies, said on a call with journalists Thursday. "We grieve for them as we would for one our own. We are heartbroken that they died as they worked to save others."



### Attacks in eastern Democratic Republic of the Congo

28 November 2019 | News release

Two attacks in eastern Democratic Republic of the Congo (DRC) have killed 4 workers responding to the Ebola outbreak and injured 5 others.

The attacks occurred overnight on a shared living camp in Biakato Mines and an Ebola response coordination office in Mangina.





### Ebola workers targeted in 2 new DRC attacks as cases rise

Filed Under: Ebola; VHF

Stephanie Soucheray | News Reporter | CIDRAP News | Dec 02, 2019

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Ebola response efforts in both Biakato Mines and Mangina in the Democratic Republic of the Congo (DRC) have been halted in the wake of two violent attacks late last week that left four people dead and six injured. Among the dead are a vaccinator, two response taxi drivers, and a police officer.

The attacks took place the night of Nov 27, when unidentified armed attackers targeted a camp housing Ebola outbreak response staff in Biakato Mines, and others attacked the Ebola coordination office in Mangina.



UN, Sylvain Liechti / Flickr cc

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According to the World Health Organization (WHO), the recent violence is part of approximately 390 attacks on health facilities that have killed 11 and injured 83 health care workers and patients in the DRC as the country faces the second-largest Ebola outbreak in history.



# More snags for DRC Ebola response; rebel attack in Oicha

Filed Under: Ebola; VHF

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

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With the Ebola response at a standstill due to recent attacks in two Democratic Republic of the Congo (DRC) hot spots, a 2-day general strike has now sidelined all response activities in North Kivu province, according a World Health Organization (WHO) African regional office weekly update and the daily report from the DRC's Ebola technical committee (CMRE).

#### Attack in Oicha, demonstrations in Goma

A pair of attacks on Nov 27 left six outbreak workers dead and shuttered response operations in Biakato Mines and Mangina.



MONUSCO / Force / Flickr cc

Along with news of a general strike (ville mort) in North Kivu, which was declared yesterday, the WHO's African regional office said today that a new rebel incursion in Oicha led to civilian casualties. In addition, demonstrations have been reported in Goma, the capital of hard-hit North Kivu province.



### European Commission grants final approval to Merck's Ebola vaccine

PDF

Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | Nov 11, 2019 f Share

The European Commission has granted full licensure to Merck's VSV-ZEBOV, Ebola vaccine, a first for the product, which is currently being used in the Ebola outbreak in the Democratic Republic of the Congo (DRC).

"This is great news: @EU\_Commission approved licensing the rVSV-ZEBOV-GP Ebola vaccine, the first time an Ebola vaccine has been licensed anywhere in the world," tweeted World Health Organization (WHO) Director-General Tedros Adhanom Ghebreysus, PhD, today. "I am proud of the dedication & collaboration of all involved. Next step is WHO prequalification, expected within days."

The vaccine, which Merck has named Ervebo, was first tested in humans during the Ebola outbreak in West Africa in 2014, and has been used since then in ring vaccination campaigns during active outbreak settings. The campaigns have targeted case contacts



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UN peacekeepers received the vaccine this summer in North Kivu province as a step to boost public confidence.

and healthcare workers. In the current outbreak, almost 250,000 people have been vaccinated with the vaccine since August 2018.



## WHO OKs Merck Ebola vaccine, paving way for stockpile

Filed Under: Ebola; VHF

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

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The World Health Organization (WHO) announced today that it has prequalified Merck's Ebola vaccine, a move that comes just 1 day after the European Commission granted full approval for VSV-EBOV, which is in use on a compassionate basis and under further study in the current Ebola outbreak in the Democratic Republic of the Congo (DRC).

According to a statement sent to journalists, the WHO said prequalification means the vaccine meets the WHO's quality, safety, and efficacy standards, paving the way for United Nations agencies and Gavi, the Vaccine Alliance, to buy the vaccine for use in at-risk countries.



©UNICEF / Mark Naftalin

Tedros Adhanom Ghebreyesus, PhD, the WHO's director-general, said in the statement that prequalification marks a historical step toward ensuring that the people who most need the vaccine are able to receive it. "Five years ago, we had no vaccine and no therapeutics for Ebola. With a prequalified vaccine and experimental therapeutics, Ebola is now preventable and treatable," he said.

# CIDRAP Center for Infectious Disease Research and Policy

### European regulators consider 2nd Ebola vaccine

Filed Under: Ebola; VHF Lisa Schnirring | News Editor | CIDRAP News | Nov 07, 2019

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Bavarian Nordic today announced that it and its partner Janssen Pharmaceuticals, part of Johnson & Johnson, have submitted an application to the European Medicines Agency (EMA) for approval of their investigational two-dose Ebola vaccine regimen (Ad26.ZEBOV, MVA-BN Filo).

The news comes as one new Ebola case was reported today in the Democratic Republic of the Congo (DRC) outbreak, part of a fluctuating pattern that the World Health Organization (WHO) noted today in its weekly snapshot of the event.



NIAID

### J&J vaccine before European regulators

The application submission to the EMA for the Johnson & Johnson Ebola vaccine comes less than a month after the agency conditionally approved VSV-EBOV, the vaccine currently used in a ring vaccination campaign in the outbreak-affected areas.



## New data highlight promise of 2 Ebola treatments

Filed Under: Ebola; VHF Lisa Schnirring | News Editor | CIDRAP News | Nov 27, 2019

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A research group today published full results from a clinical trial of four Ebola therapies in the Democratic Republic of the Congo (DRC) outbreak, in which preliminary findings in August led health officials to push the pause button to steer patients into groups to receive two treatments that stood out as most promising.

An international research group, which includes renowned Ebola researcher and DRC health official Jean-Jacques Muyembe-Tamfum, MD, published its findings in the *New England Journal of Medicine* (*NEJM*).



XiXinXing / iStock

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### Study fleshes out preliminary findings

In August, an independent board that was monitoring the study in people treated in DRC Ebola treatment units took an early look at the data and saw that mortality rates were significantly lower in those who received the monoclonal antibody cocktail REGN-EB3 (made by Regeneron of Tarrytown, New York) and the single monoclonal antibody mAb 114, developed from antibodies of an Ebola survivor.

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- **11.** Chronic Wasting Disease (CWD)



# CIDRAP Center for Infectious Disease Research and Policy

### Unusual Salmonella widespread in turkeys still sickening people

Filed Under: Salmonella; Foodborne Disease Lisa Schnirring | News Editor | CIDRAP News | Nov 21, 2019

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Though the investigation into a *Salmonella* Reading outbreak with several unusual features and linked to raw turkey products ended in April, the outbreak strain has become widespread in the turkey production industry, and cases continue to be reported, according to a new report today.

Public health officials from the US Centers for Disease Control and Prevention and health partners from several states and the District of Columbia fleshed out more details about the investigation and the unique outbreak in the latest issue of *Morbidity and Mortality Weekly Report (MMWR)*. Given the



Myles Tan / Flickr cc

lingering threat, they also urged the industry and consumers to continue taking steps to reduce contamination.

#### Cases first noted in early 2018

Minnesota health officials first identified the outbreak in January 2018, based on genetic analysis of samples from four patients infected with *Salmonella* Reading, and their investigation pointed to different types of raw turkey exposure. In addition, lab analysis found the outbreak strain in a sample from retail ground turkey.

# CIDRAP Center for Infectious Disease Research and Policy

# CDC reports foodborne illnesses tied to salad, ground beef

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Filed Under: E coli; Salmonella; Foodborne Disease Stephanie Soucheray | News Reporter | CIDRAP News | Nov 20, 2019

*Editor's note:* This article was updated on Nov 21, 2019, with new information from Ready Pac Foods to correct misinormation about the product that tested positive.

Yesterday and today the Centers for Disease Control and Prevention (CDC) announced a new *Escherichia coli* outbreak linked to pre-packaged chicken Caesar salads, and a new case in an ongoing *Salmonella* outbreak tied to tainted ground beef.

#### Kidney failure in salad outbreak

Today the CDC said 17 people in eight states have been sickened in an outbreak of Shiga toxin-producing *E coli* O157:H7 infections. Seven people have been hospitalized, including two patients who have developed hemolytic uremic syndrome, a type of kidney failure. No deaths have been reported.

Officials from the Maryland Department of Health identified *E coli* O157 in an unopened package of Ready Pac Foods Bistro Chicken Raised Without Antibiotics Caesar Salad 2/6.25 ounce collected from a



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agreentravel / iStock

sick person's home in that state, the CDC said. Ready Pac is based in Irwindale, California. According to a statement from Bonduelle Fresh Americas, home of Ready Pac Foods, the salad in question was sold only at Sam's Club retailers.



# E. coli outbreak sickens 17 people; 75K pounds of packaged salad sold at Target, Walmart, other stores recalled

Jessica Guynn USA TODAY

Published 8:15 p.m. ET Nov. 21, 2019 | Updated 6:55 p.m. ET Nov. 26, 2019

More than 75,000 pounds of packaged salad is being recalled after seven people were hospitalized with E. coli and two of them developed <u>kidney failure</u>, the <u>U.S.</u> <u>Department of Agriculture</u> said Thursday.

A New Jersey company, Missa Bay, issued the voluntary recall, worried that the romaine lettuce may be <u>contaminated</u> with the bacteria following an investigation by the Centers for Disease Control and Prevention.

On Tuesday, the CDC issued an updated safety alert advising consumers to not eat <u>any romaine lettuce harvested in Salinas, California</u> and said it was continuing to investigate an E. coli outbreak that has infected 67 people from 19 states.

Related to the recall announced Nov. 21, the CDC reported 17 people have been infected with E. coli in eight states. No one has died.





Sources: Author's calculations using data from Centers for Disease Control and Prevention (CDC, 2018a) for 1998– 2017 and from CDC (2018b, 2018c, 2019) for 2017 and 2018. Notes: STEC: Shiga toxin-producing *Escherichia coli*. Hep A: Hepatitis A.

# Why romaine lettuce keeps getting recalled for E. coli contamination

By Kimberly Kindy and Joel Achenbach

November 26, 2019 at 3:00 p.m. CST

O nce again, just in time for Thanksgiving, millions of people have been told their <u>romaine lettuce might be contaminated</u> with a toxic strain of E. coli bacteria, that it's potentially deadly, and that they should throw it away immediately and sanitize the fresh-produce drawer of their refrigerator.

No one knows why this is happening, exactly. There are inferences, speculation and intriguing clues, but the best minds of the U.S. government, the lettuce-growing states of California and Arizona, and the leafy greens industry have failed to figure out why romaine keeps getting contaminated — or how they can stop it from happening again and again.



# Publisher's Platform: Should romaine lettuce carry warning labels?

By Bill Marler on November 26, 2019

### <u>2019</u>

**41 people sickened, 28 hospitalization and 5 with HUS.** A total of 40 people infected with the outbreak strain of E. coli O157:H7 have been reported from 16 states: Arizona, California, Colorado, Idaho, Illinois, Maryland, Michigan, Minnesota, Montana, New Jersey, Ohio, Pennsylvania, Virginia, Washington and Wisconsin. A total of 28 hospitalizations have been reported. Five people have developed hemolytic uremic syndrome, a type of kidney failure. No deaths have been reported. Canada has reported one illness.

**23 people sickened and 11 hospitalized.** The FDA, CDC, along with state and local partners, investigated the illnesses associated with the outbreak. A total of 23 people infected with the outbreak strain of E. coli O157:H7 were reported from 12 states: Arizona, California, Florida, Georgia, Illinois, Maryland, North Carolina, Nevada, New York, Oregon, Pennsylvania and South Carolina. Eleven people were hospitalized, and no deaths were reported. Illnesses started on dates ranging from July 12, 2019 to Sept. 8, 2019. No illnesses were reported after CDC began investigating the outbreak on Sept. 17, 2019.



### NARMS report shows rising resistance in foodborne bacteria

Filed Under: Antimicrobial Stewardship Chris Dall | News Reporter | CIDRAP News | Nov 25, 2019

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The latest data from a national surveillance system that monitors foodborne bacteria for antibiotic resistance shows rising resistance to the drugs commonly used to treat *Salmonella* infections.

The findings come from the 2016-2017 National Antimicrobial Resistance Monitoring Systems (NARMS) Integrated Summary, which combines data from the Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), and the US Department of Agriculture (USDA). The report provides a snapshot of antibiotic resistance patterns found in bacteria isolated from humans, raw retail meats (chicken, ground turkey, ground beef, and pork chops), and healthy animals at slaughter.

In addition to finding rising resistance to first-line antibiotics in human isolates of *Salmonella*, the NARMS data also show an increase in multidrugresistant (MDR) *Salmonella* recovered from chickens and multidrug-resistant *Campylobacter coli* isolated from beef and dairy cattle.



USDA / Keith Weller

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Figure 1: Measles case distribution by month and WHO Region (2015-2019), Data as of 8 November 2019\*




# News Scan for Nov 27, 2019

#### Global measles count tops 440,000 cases

The World Health Organization (WHO) today released new information about the global reach of measles in 2019, and said so far this year member nations have reported 440,263 measles cases.

The Democratic Republic of the Congo has been hit especially hard, with an 250,270 suspected cases and 5,110 associated deaths. Guinea, Chad, Madagascar, and Nigeria are also experiencing large outbreaks.

In the WHO's European region, which includes parts of Asia, Ukraine has reported the most cases, with 56,802 cases, followed by Kazakhstan with 10,126 cases and Georgia with 3,904 cases. The Ukrainian outbreak has been tied to cases in the United States this year.

Elsewhere, outbreaks in Brazil, Bangladesh, and the Philippines also drove up global case counts.

"Even with implementation of routine immunization, measles continues to circulate globally due to suboptimal vaccination coverage and population immunity gaps. Any community with less than 95% population immunity is at risk for an outbreak," the WHO said. Many of the nations facing outbreaks have conducted ongoing vaccination campaigns with the measles, mumps, and rubella vaccine.

According to WHO data, there were 408,225 confirmed measles cases worldwide at the same time in 2018.

Nov 27 WHO measles update WHO measles and rubella surveillance data

### The New York Times

# Measles Cases Continue to Rise Around the World

Nearly a quarter of a million people in the Democratic Republic of Congo are thought to have been infected by measles in 2019 alone, the World Health Organization said.

#### By Abdi Latif Dahir

Nov. 26, 2019

There has been a rapid increase in the global measles outbreak, with reported cases <u>jumping 300 percent</u> in the first three months of 2019 compared with the same period last year, according to the World Health Organization.

As reasons for the increase, the organization has cited a deep mistrust of vaccines, gaps in immunization coverage and lack of access to health care facilities or routine checkups.

This month, the W.H.O. sounded the alarm over the diseases's grip on the Democratic Republic of Congo, where nearly 5,000 people with measles died in the first 10 months of this year.



# 4,500 children under the age of five died from measles in the Democratic Republic of the Congo so far this year

Statement by UNICEF Representative in the DRC Edouard Beigbeder

27 November 2019

**KINSHASA, 27 November 2019 -** "Since the beginning of the year, more than 5,000 people have died due to measles, over 90 per cent of them children under the age of five.

"While the Ebola outbreak, which has claimed more than 2,000 lives in the Eastern DRC, has commanded sustained international attention, measles, which has claimed more than twice as many lives, continues to be underreported.

"Violence and insecurity, lack of access to healthcare and shortages of vaccines and medical kits in the worst-affected areas have meant that thousands of children have missed out on vaccinations, with potentially deadly consequences. Cultural beliefs and traditional healthcare practices also often get in the way of vaccinating children against measles and treating those with symptoms.



WORLD NEWS NOVEMBER 16, 2019 / 8:19 PM / 17 DAYS AGO

# Samoa declares state of emergency as measles spreads across Pacific

Lidia Kelly

3 MIN READ

MELBOURNE (Reuters) - Samoa declared a state of emergency this weekend, closing all schools and cracking down on public gatherings, after several deaths linked to a measles outbreak that has spread across the Pacific islands.

The island state of just 200,000, south of the equator and half way between Hawaii and New Zealand, declared a measles epidemic late in October after the first deaths were reported.

Since then, at least six deaths, mostly infants under the age of two, have been linked to the outbreak, the health ministry said in a statement late last week. Of the 716 suspected cases of measles, 40% required hospitalization.

# Samoa government to close for two days amid measles outbreak that has killed dozens of children

Dec. 2, 2019 at 9:51 a.m. CST

Samoa announced it would shut down its government for two days so that public officials can combat a dangerous measles outbreak that has killed <u>53</u> people and infected 3,728.

The Pacific island nation has raced to vaccinate its children and other residents since an outbreak was declared on Oct. 16. Its youngest citizens are at the greatest risk, as 48 of the deaths so far have been children under the age of 4.

On Sunday, Samoan Prime Minister Tuilaepa Aiono Sailele Malielegaoi announced "all public service and all government services will be closed" on Dec. 5 and 6 "in order to allow all public servants to assist with the mass vaccination campaign throughout the country."

# A Measles Outbreak in Samoa Has Killed 53 People and Infected 2% of the Population

Cases of measles reported in Samoa, 1980-2018



#### Official final WHO data

Chart: Elijah Wolfson for TIME · Source: World Health Organization · Created with Datawrapper



# Skipping measles vaccine tied to triple risk of disease spread

PDF

Filed Under: Measles

Lisa Schnirring | News Editor | CIDRAP News | Nov 18, 2019

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An analysis of 16 years' worth of confirmed measles cases in the United States to better understand transmission patterns found that unvaccinated people are about three to four times more infectious than those with measles who have gotten one or two doses and that pockets of unvaccinated people are fertile ground for superspreading events.

Factors apart from vaccination—such as contact patterns, high population density, and reduced or declining antibody levels—can contribute to measles transmission. The authors said the goal of the study was to more clearly tease out transmission, which could help target public health resources for preventing and controlling the disease.



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© UNICEF Ethiopia, Balasundaram / Flickr cc

A team led by experts from the US Centers for Disease Control and Prevention (CDC) and including researchers from Britain and Australia, reported its findings today in *JAMA Pediatrics*.



# Measles does long-term damage to immune system, studies show

Filed Under: Measles

Stephanie Soucheray | News Reporter | CIDRAP News | Nov 01, 2019

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Two studies published yesterday in *Science* and *Science Immunology* illustrate how the measles virus causes long-term damage to the immune system, creating a form of immune amnesia that can leave children at an increased risk of illness from other diseases for years.

Lead authors of the studies say the findings bring a new level of urgency in the fight against the resurgence of measles infections seen in the United States and other countries where elimination of the virus was once a given.



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"Our study suggests that, more than a rash or a high

fever, a measles infection is playing Russian roulette with a child's immune system," said Michael Mina, MD, PhD, assistant professor of epidemiology at the Harvard T.H. Chan School of Public Health.

CLF BRIEFING

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- 8. Rift Valley Fever (RVF)
- 9. Antimicrobial resistance
- **10.** Vaccine legislation
- **11.** Chronic Wasting Disease (CWD)





# World Polio Day: Wild poliovirus type 3 declared eradicated

Filed Under: Polio

Stephanie Soucheray | News Reporter | CIDRAP News | Oct 24, 2019

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Wild poliovirus type 3 (WPV3) has been eradicated worldwide, according to an independent commission of experts. The news comes today—World Polio Day and means two of the three wild poliovirus strains are now eradicated.

The last case of WPV3 was detected in northern Nigeria in 2012. In 2015, wild poliovirus type 2 was declared eradicated from the world

"The achievement of polio eradication will be a milestone for global health. Commitment from partners and countries, coupled with innovation, means of the three wild polio serotypes, only type one remains," said Tedros Adhanom Ghebrevesus, PhD,



Sanofi Pasteur / Flickr cc

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director-general of the World Health Organization (WHO) and chair of the Global Polio Eradication Initiative (GPEI) polio oversight board, according to a WHO story. "We remain fully committed to ensuring that all necessary resources are made available to eradicate all poliovirus strains."



## Polio this week as of 27 November 2019

- A four-day regional emergency preparedness workshop is currently underway in Lomé, Togo, for senior public health officials to strengthen the capabilities within West African countries to respond to polio outbreaks. Read more about the workshop.
- "It was good to know that a country like India could eradicate polio. It gives us hope that Pakistan can do it too, and we will soon be polio free." These are the words of Aziz Memon, a Rotarian who has dedicated his life to fight polio in Pakistan. Read about his journey.
- Summary of new viruses this week (AFP cases and ES positives): Pakistan— five WPV1 cases, two cVDPV2 cases and one cVDPV2 positive environmental sample; Democratic Republic of the Congo (DR Congo)- five cVDPV2 cases; Benin – four cVDPV2 cases; Ghana— four cVDPV2 cases and two cVDPV2 positive environmental samples; Philippines – three cVDPV2 cases and five cVDPV2 positive environmental samples; Togo – two cVDPV2 cases.

## Wild poliovirus type 1 and Circulating vaccine-derived poliovirus cases

Total cases	Year-to-date 2019		Year-to-date 2018		Total in 2018	
	WPV	cVDPV	WPV	cVDPV	WPV	cVDPV
Globally	112	177	29	102	33	104
—In Endemic Countries	112	29	29	33	33	34
—In Non-Endemic Countries	0	148	0	69	0	70



### Case breakdown by country

Countries	Year-to-date 2019		Year-to-d	Year-to-date 2018		Total in 2018		Onset of paralysis of most recent case	
	WPV	cVDPV	WPV	cVDPV	WPV	cVDPV	WPV	cVDPV	
Afghanistan	21	0	21	0	21	0	17-0ct-2019	NA	
Angola	0	42	0	0	0	0	NA	1-0ct-2019	
Benin	0	6	0	0	0	0	NA	15-0ct-201	
Central African Republic	0	16	0	0	0	0	NA	6-0ct-2019	
Chad	0	1	0	0	0	0	NA	9-Sep-2019	
China	0	1	0	0	0	0	NA	25-Apr-201	
Democratic Republic Of The Congo	D	50	D	20	D	20	NA	7-Oct-2019	
Ethiopia	0	3	0	0	0	0	NA	8-Aug-2019	
Ghana	0	9	0	0	0	0	NA	23-0ct-201	
Indonesia	0	0	0	1	0	1	NA	27-Nov-201	
Mozambique	0	0	0	1	0	1	NA	21-Oct-201	
Myanmar	0	6	0	0	0	0	NA	9-Aug-2019	
Niger	0	1	0	9	0	10	NA	3-Apr-2019	
Nigeria	0	18	0	33	0	34	NA	9-Oct-2019	
Pakistan	91	11	8	0	12	0	7-Nov-2019	3-Nov-2019	
Papua New Guinea	0	D	0	26	D	26	NA	18-0ct-201	
Philippines	0	6	0	0	0	0	NA	2-0ct-2019	
Somalia	0	3	0	12	0	12	NA	8-May-2019	
Togo	0	3	0	0	0	0	NA	16-0ct-201	
Zambia	0	1	0	0	0	0	NA	16-Jul-2019	



# Six nations report more polio cases; Pakistan tops 90

Filed Under: Polio

Lisa Schnirring | News Editor | CIDRAP News | Dec 02, 2019

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Countries experiencing recent polio outbreaks saw no letup in activity, with Pakistan reporting five new wild poliovirus type 1 (WPV1) cases and four African nations, Pakistan, and the Philippines reporting more circulating vaccine-derives poliovirus type 2 (cVDPV2) cases, according to the latest update from the Global Polio Eradication Initiative (GPEI).

Also, the World Health Organization (WHO) posted new updates on cVDPV2 in Africa and Pakistan.

#### Pakistan grapples with WPV1, cVDPV2

Of the five new WPV1 cases reported from Pakistan, three were from different locations in Sindh province with the other two from separate cities in Khyber



© Sanofi Pasteur / DV Photography / Flickr cc

Pakhtunkhwa province. Paralysis onsets ranged from Oct 9 to Oct 7. The country has now reported 91 WPV1 cases this year, a sharp increase from 2018's 12 cases.

### The New York Times

# More Polio Cases Now Caused by Vaccine Than by Wild Virus

Published Nov. 25, 2019 Updated Nov. 27, 2019

LONDON — Four African countries have reported new cases of polio linked to the oral vaccine, as global health numbers show there are now more children being paralyzed by viruses originating in vaccines than in the wild.

In a report late last week, the World Health Organization and partners noted nine new polio cases caused by the vaccine in Nigeria, Congo, Central African Republic and Angola. Seven countries elsewhere in Africa have similar outbreaks and cases have been reported in Asia. Of the two countries where polio remains endemic, Afghanistan and Pakistan, vaccine-linked cases have been identified in Pakistan.

In rare cases, the live virus in oral polio vaccine can mutate into a form capable of sparking new outbreaks. All the current vaccinederived polio cases have been sparked by a Type 2 virus contained in the vaccine. Type 2 wild virus was eliminated years ago.



WORLD NEWS MAY 2, 2019 / 9:38 PM / 7 MONTHS AGO

# Monstrous rumors stoke hostility to Pakistan's anti-polio drive

PESHAWAR, Pakistan (Reuters) - His bearded face was half-covered by a shawl, but Hameedullah Khan's fear and ignorance was on full display as he delivered a chilling message for anyone who tries to vaccinate his children against polio.

"I will stab anyone who comes to my house with polio drops," Khan growled, refusing to be filmed or photographed as he shopped in a fly-blown bazaar on the outskirts of Peshawar, a city scarred by years on the frontline of Islamist militancy in Pakistan.

This dangerous hostility to immunization teams flared last week after religious hardliners in the city spread false rumors, raising a scare on social media that some children were being poisoned and dying from contaminated polio vaccines. CLF BRIEFING

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# Study implicates Asian Zika strain in African microcephaly cases

Filed Under: Zika

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

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In a follow-up investigation into Angola's unusual rise in microcephaly cases in 2017, an international research group today reported that the Asian Zika virus strain that cause birth defects in the Americas

outbreak was the cause, a first for an African country.

A team from Oxford University and Angola's health ministry reported their findings in *The Lancet Infectious Diseases*. Zika virus has been circulating in Africa for centuries, but only the African lineage. So far, only the Asian lineage has been linked to large epidemics and a related rise in microcephaly in the Americas.



In December 2017, the World Health Organization's (WHO's) African regional office warned that Angola was experiencing a slow but steady rise in microcephaly that might be related to Zika virus, especially in the suburbs of Luanda, the country's capital. At that point, there were 42 cases since September 2017, 39 involving live births.



# News Scan for Oct 31, 2019

#### France reports third local Zika case

Active investigation of local Zika virus cases in France has turned up a third case, according to an update today from the European Centre for Disease Prevention and Control (ECDC).

The patient, who had no history of travel to Zika-endemic countries, lives near the first two casepatients in from the city of Hyeres in Var department in the country's southeast.

All three patients were sick in early to mid-August and have recovered.

Identification of a third case reinforces the hypothesis that the virus was spread locally by mosquitoes in August. The patients' symptoms began only a few days apart, suggesting that the cases are part of the same transmission cycle.

The cases are Europe's first known instance of vectorborne spread of Zika virus by Aedes albopictus.

Health officials have stepped up surveillance and vector control activities in the affected area, and health providers in an around Hyeres have been given instructions on managing pregnant patients who lived in or visited the area between July and September.

# First native Zika cases in Europe confirmed as experts warn climate change could bring more

By Rob Picheta, CNN

Updated 9:25 AM ET, Thu November 7, 2019

**(CNN)** — The first native cases of Zika in Europe have been confirmed after three people became infected with the virus in France. Experts warn that climate change could lead to more cases emerging across the continent.



Related Article: How climate crisis is accelerating the global spread of deadly dengue fever

While Europe dealt with hundreds of imported cases during the outbreak of the virus three years ago, it never had a native case -- where local mosquitoes developed and spread the virus -- before now.

All three patients developed symptoms within a few days of each other, the ECDC said, meaning they were likely part of the same transmission cycle. They have recovered, and the risk to residents and travelers to the region is low, the organization added.

# Aedes aegypti



# **Aedes aegypti Distribution in the Americas**



Adapted from Gubler, 1998

# Aedes albopictus Female



# World Distribution of the Aedes albopictus Mosquito



Charrel R et al. N Engl J Med 2007;356:769-771



The NEW ENGLAND JOURNAL of MEDICINE









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# News Scan for Nov 19, 2019

#### Yellow fever outbreak in Nigeria continues amid challenges

A yellow fever outbreak in Nigeria that began in 2017 saw a surge in cases in September, and though cases are starting to decline, the WHO said gaps in surveillance and vaccination are worrisome.

So far this year, 3,620 suspected cases have been reported in 36 states and the Federal Capital Territory, according to a weekly outbreaks and health emergencies report from the WHO's African regional office. Further lab testing has confirmed 144 cases. In addition, 150 deaths have been reported, including 11 among confirmed case-patients.

For the first 3 weeks of September, 190 weekly cases were reported. In October, 839 suspected cases were reported, 72 confirmed as positive, with two new states affected: Plateau and Taraba. Since then, health officials have reported a stepwise decrease in cases, with fewer than 10 reported during the last week of October.

Nigeria's Center for Disease Control activated its emergency operations center on Nov 5, and three rapid response teams have been sent to help investigate cases and support activities in affected states. Health officials have enhanced surveillance activities and are working on finalizing a new testing algorithm. Doctors Without Borders is supporting case management in Ebonyi and Bauchi states, and mass yellow fever vaccination campaigns are under way in seven states.



# News Scan for Nov 22, 2019

#### Venezuela confirms first locally transmitted yellow fever case since 2005

A 46-year-old man from Venezuela's Bolivar state has become the country's first case of locally transmitted yellow fever since 2005, according to an update yesterday from the WHO.

"Most of the territory of Venezuela is considered as at risk for sylvatic [occurring in animals] yellow fever, and this case marks the first confirmed autochthonous case of yellow fever diagnosed in Venezuela since 2005," the WHO said. "The origin of the infection of this case is likely to be sylvatic, in an area determined as at risk for yellow fever."

The patient experienced symptom onset on Sep 14, and as of Nov 13 he remains hospitalized with chronic renal failure and moderate anemia.

Yellow fever can spread quickly among people exposed to the mosquito-borne virus, and can be deadly. There is no cure for the disease, but the virus can be prevented through vaccination. A single dose of the yellow fever vaccine provides immunity for life.

#### Nov 21 WHO report

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# Rift Valley fever outbreak reported in Sudan

Filed Under: Rift Valley fever; VHF Lisa Schnirring | News Editor | CIDRAP News | Nov 14, 2019

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The World Health Organization (WHO) today detailed a Rift Valley fever (RVF) outbreak affecting six states in Sudan, which follows heavy rains and flash flooding in August that affected nearly all of the country.

The mosquito-borne disease mainly affects livestock, but the virus can spread to humans through contact with blood, organs, or milk from infected animals.

Heavy rains on Aug 13 amplified mosquito populations, and the outbreak in humans began on Sep 19, the WHO said. As of Nov 11, officials have reported 293 suspected cases, 11 of them fatal.

#### Two heavily affected states

Most of the cases have been reported in Red Sea and River Nile states in northeastern Sudan, with other reported from Kassala, White Nile, Khartoum, and Al Qadarif states.



Albert Gonzalez Farran, UNAMID / Flickr cc

# Rift Valley fever: Uganda reports fatal case in Obongi district

#### December 3, 2019

In late November, Uganda health authorities notified the World Health Organization of a fatal Rift Valley fever (RVF) case from Obongi district.



Uganda Image/Robert Herriman

The case was a 35-year-old man from South Sudan who was living in Palorinya Refugee camp in Obongi district, Uganda. The case had travel history to South Sudan between 12 and 19 November 2019 to harvest cassava.

While in his home country, he developed fever and other symptoms and was treated for malaria; however, his condition got worse.

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He later returned to the refugee camp in Uganda and his symptoms progressed and he was hospitalized. Viral hemorrhagic fever was suspected.

Samples were collected and sent to the Uganda Virus Research Institute; however, the patient died.

A safe and dignified burial was performed on 22 November 2019. As of 24 November, a total of 19 contacts were recorded during the active case search including 10 healthcare workers.

CLF BRIEFING

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# UK report cites lack of progress on AMR Review steps

Filed Under: Antimicrobial Stewardship Chris Dall | News Reporter | CIDRAP News | Oct 09, 2019

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A paper issued yesterday by policy institute Chatham House concludes that not enough progress has been made on recommendations from a series of reports that alerted the world to the rising threat of antimicrobial resistance (AMR).

The AMR Review, commissioned in 2014 by former UK Prime Minister David Cameron and chaired by British economist Lord Jim O'Neill, outlined the threat of AMR to global public health and highlighted the potential costs of inaction in eight separate reports issued over 2 years. Among the highlights from the first AMR Review paper were two startling figures—



iStock

that drug-resistant infections could cause the deaths of 10 million people by 2050 and could cost the global economy up to \$100 trillion if the problem was not addressed in the coming years.



# Experts urge better antimicrobial resistance messaging

Filed Under: Antimicrobial Stewardship Chris Dall | News Reporter | CIDRAP News | Oct 29, 2019



A new report suggests clinicians, public health professionals, and journalists need to rethink the way they talk about antimicrobial resistance to increase public understanding and engagement and promote action by policy makers.

The report, released today by UK-based philanthropy organization the Wellcome Trust, concludes that while antibiotic resistance has gained political traction in recent years, few concrete steps have been taken, in part because the public is not championing the issue and forcing governments to act. And one of the reasons for the lack of public engagement is that



stakeholders haven't effectively communicated the dangers of antimicrobial resistance in a way that makes sense or conveys the urgency of the problem.

"The public do not see the true scale and severity of antimicrobial resistance, and therefore it is not an issue the public is calling for political action on," the authors of the report write.
# CIDRAP Center for Infectious Disease Research and Policy

#### SHEA white paper outlines stewardship research needs

Filed Under: Antimicrobial Stewardship Chris Dall | News Reporter | CIDRAP News | Oct 30, 2019

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Antibiotic stewardship is no longer in its infancy. Across the country, hospitals of all sizes have committed to using antibiotics appropriately and giving patients the right antibiotic, at the right dose, and the right time.

According to a 2017 survey from the Centers for Disease Control and Prevention, 76% of 4,900 US acute care hospitals now have an antibiotic stewardship program (ASP) that meets all seven of the agency's "core elements" for hospital ASPs—nearly doubling the number from 2014. And with new federal requirements mandating ASPs in all US hospitals and health systems, that number is likely to rise.

But while antibiotic stewardship is becoming the norm, questions about the practice remains. Do ASP professionals know how exactly to define appropriate antibiotic use for most conditions that warrant antibiotic therapy? Or what type of ASP interventions work best and are sustainable across different settings? How many resources need to be devoted to stewardship? And what's the best method of measuring the success of an ASP?



XiXinXing / iStock

# CIDRAP Center for Infectious Disease Research and Policy

### Report gives fast food chains low grades on antibiotics in beef

Filed Under: Antimicrobial Stewardship Chris Dall | News Reporter | CIDRAP News | Nov 01, 2019

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A new report card on the nation's major restaurant chains shows that most continue to get a failing grade when it comes to serving beef raised without the routine use of medically important antibiotics.

The fifth annual Chain Reaction report, which evaluates and grades the top 25 US restaurant chains on their policies and practices on antibiotic use in the meat they serve, finds that only two—Chipotle and Panera—are serving beef raised under responsible antibiotic use practices, earning them grades in the "A" range. Fifteen other chains earned "F" grades for not having any public policy to source beef raised without routine use of antibiotics.



igorbondarenko / iStock

Four other chains—McDonald's, Wendy's, Subway, and Taco Bell—earned low but passing grades for making moves toward more responsible use of antibiotics in their beef supply. The most significant of these moves came in December 2018, when McDonald's announced that it would begin measuring antibiotic use in its global beef supply chain and set reduction targets by 2020, which earned the company a "C" grade. Wendy's received a "D +" for committing to reduced use of only one medically important antibiotic used in cattle.



### Report shows drug-resistant infections climbing in England

Filed Under: Antimicrobial Stewardship Chris Dall | News Reporter | CIDRAP News | Nov 04, 2019

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A new report from Public Health England (PHE) shows an increase in antibiotic-resistant infections in England, despite a decline in antibiotic consumption.

According to PHE's latest English Surveillance Programme for Antimicrobial Utilisation and Resistance (ESPAUR) report, there were an estimated 60,788 antibiotic-resistant infections in England in 2018, a 9% increase from 2017, when 55,812 drugresistant infections were reported. That's the equivalent of 165 new antibiotic-resistant infections every day.



The ESPAUR report also found that the number of

bloodstream infections caused by seven priority bacterial pathogens rose by 15,000 from 2014 through 2018, an increase of 21%. And the number antibiotic-resistant bloodstream infections grew by more than 4,100—an increase of 32%—over that period.



### Drug resistance threatens Canada's health, economy, report says

Filed Under: Antimicrobial Stewardship Chris Dall | News Reporter | CIDRAP News | Nov 12, 2019



A report today from a multidisciplinary panel of Canadian researchers estimates that 15 Canadians died each day last year as a direct result of antibioticresistant infections.

And unless action is taken to address rising antimicrobial resistance (AMR), that number will grow substantially in the coming years, with additional impacts to the country's economy and quality of life, the panel concludes.



Les Palenik / iStock

The report from the Council of Canadian Academies (CCA), titled "When Antibiotics Fail," found that an average of 26% of bacterial infections reported in

Canada in 2018 were resistant to first-line treatment, with 14,000 deaths linked to those infections and 5,400 deaths directly attributable to antibiotic resistance. Longer hospital stays and longer courses of treatment associated with drug-resistant infections cost the Canadian healthcare system more than \$1 billion (in Canadian dollars), and the resulting impact on labor productivity cost the country's economy \$2 billion.



### CDC spotlights 'deadly threat' of antibiotic resistance

Filed Under: Candida auris; Antimicrobial Stewardship; Clostridium difficile; MRSA; Fungal Infection Chris Dall | News Reporter | CIDRAP News | Nov 13, 2019

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New data today from the Centers for Disease Control and Prevention (CDC) show that antibiotic-resistant bacteria and antimicrobial-resistant fungi cause more than 2.8 million infections and 35,000 deaths a year in the United States.

An additional 223,900 people suffer from *Clostridoides difficile* infections and at least 12,800 people die from that bacterium, according to the CDC's updated report on antibiotic resistance threats.

The new numbers, based on electronic health data from more than 700 US hospitals, indicate that the burden of drug-resistant infections is significantly greater than suggested in the CDC's 2013 report,



CDC / Dan Higgins, James Archer

which estimated 2 million infections and 23,000 deaths a year from antibiotic-resistant bacterial and fungal infections.



# The post-antibiotic era is here

In the US, one person dies every 15 minutes because of drug resistance. By Sigal Samuel | Nov 14, 2019, 2:20pm EST

Every 15 minutes, one person in the US dies because of an infection that antibiotics can no longer treat effectively.

That's 35,000 deaths a year.

This striking estimate comes from **a major new report**, released Wednesday by the Centers for Disease Control and Prevention (CDC), on the **urgent problem of antibiotic resistance**.

Although the report focuses on the US, this is a global crisis: 700,000 people around the world die of drug-resistant diseases each year. And if we don't make a radical change now, that could rise to **10 million** by 2050.



### Older adults concerned about antibiotic overuse until they get sick

Filed Under: Antimicrobial Stewardship Chris Dall | News Reporter | CIDRAP News | Nov 05, 2019

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A new national survey indicates that most older Americans are concerned about overuse of antibiotics and antibiotic resistance, but many still expect an antibiotic prescription for illnesses that don't require them.

The results from the University of Michigan National Poll on Healthy Aging show that 92% of US adults age 50 to 80 agreed that they are cautious about the use of antibiotics, and 89% agreed that overuse can result in antibiotics not working when they are needed. Fiftysix percent agreed that doctors overprescribe antibiotics.



Wavebreakmedia / iStock

Still, 41% of respondents said they would expect an antibiotic if they had a cold that lasted long enough for them to see doctor, and 34% agreed that antibiotics would help for a cold or flu, even though those illnesses are primarily or exclusively caused by viruses. One in four (23%) said doctors don't prescribe antibiotics when they should.



### CDC: Medical devices key source of antibioticresistant infections

Filed Under: Antimicrobial Stewardship Chris Dall | News Reporter | CIDRAP News | Nov 26, 2019

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A new report from the US Centers for Disease Control and Prevention (CDC) shows that antibiotic resistance is more prevalent in bacterial infections linked to medical devices such as catheters and ventilators than in the bacteria associated with surgical infections.

Data from more than 5,600 hospitals in the CDC's National Healthcare Safety Network (NHSN) also show that healthcare-associated infections (HAIs) acquired in long-term acute care facilities are more likely to be antibiotic resistant than those in short-stay acute care hospitals, while data from a separate report indicate that antibiotic resistance is more prevalent in adult HAIs than it is in pediatric hospital infections.



Pong Moji / iStock

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The lead author on the two reports, which appeared yesterday in *Infection Control and Hospital Epidemiology*, says the findings should be a wake-up call for hospitals and public health officials.

CLF BRIEFING

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- **10. Vaccine legislation**
- **11.** Chronic Wasting Disease (CWD)



#### The New York Times

### Germany Mandates Measles Vaccine

All children attending preschool or higher in the country must be immunized, with fines for parents who do not comply, under a law that is to take effect next spring.

Nov. 14, 2019

BERLIN — Parents in Germany must vaccinate their children against measles or face fines of several thousand euros under a law passed on Thursday that aims to stop the spread of a disease that has returned in recent years after decades of decline.

<u>The law</u>, which is to take effect from March next year, will require all children seeking to attend preschool to prove that they have been immunized or risk losing their placement. Children aged 6 and older, who are required by law to attend school, must also show proof of having received a vaccine.

Health officials in Germany have recorded 501 cases of measles this year, despite the existence of vaccines that are proven to be safe and effective. <u>According to the World Health Organization</u>, outbreaks of the disease have increased in recent years across the globe, including in developed countries where it had largely been eradicated. CLF BRIEFING

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## News Scan for Oct 30, 2019

#### Minnesota officials scramble for deer carcass plan amid CWD worries

Ten days before Minnesota's deer hunting firearms season opens, state officials are scrambling to create a disposal plan for animal carcasses among growing concern over chronic wasting disease (CWD), a fatal neurologic prion disease that affects cervids like deer and elk.

According to the *St. Paul Pioneer Press*, Waste Management, a private waste disposal company, told the Department of Natural Resources (DNR) it would not be hauling deer carcasses from two areas of the state where CWD has been detected in deer.

Officials from the DNR said they fear Waste Management's decision will stoke the public's fear over CWD, which is still relatively rare in Minnesota. They also note the decision will limit the DNR's "Adopt-a-Dumpster" program, which sought to collect deer skulls and spines, the most contaminated parts of CWD-infected deer.

CWD has been found in two areas of Minnesota, Crow Wing County, in the north-central part of the state, and in the southeastern corner of the state. Only 52 wild deer in the state have tested positive for CWD, far fewer than in neighboring Wisconsin.

The firearm deer hunting season is likely the largest hunting event each year in Minnesota. The *Pioneer Press* estimates half a million hunters will kill up to 200,000 deer when the season starts on Nov 9.



### News Scan for Nov 22, 2019

#### Chronic wasting disease detected in another Wisconsin deer

Wisconsin's Department of Natural Resources (DNR) announced today that a wild white-tailed buck harvested during the state's recent archery season in Dunn County near Menomonie in the western part of state has tested positive for chronic wasting disease (CWD).

News of the CWD detection comes on the eve of the opening of Wisconsin's 9-day gun deer season.

The deer was tested as part of the DNR's surveillance efforts, and the area is 18 miles outside of the existing Chippewa Valley CWD area where five wild white-tailed deer tested positive in Eau Claire County in 2018 and 2019.

Last year, testing of 373 samples from Dunn County were all negative, and the DNR said the comprehensive nature of the effort and the latest detection suggest that CWD probably isn't distributed throughout the county. The disease isn't usually spread evenly, however, and the DNR said more samples are needed to better understand its spread in the newly affected area.

Wisconsin law requires the DNR to ban deer baiting and feeding in counties or portions of counties within 10 miles of where wild or farm-raised deer test positive for CWD or tuberculosis. Dunn and Chippewa counties are already subject to the bans because of their location near positive detections in Eau Claire County.



## News Scan for Nov 25, 2019

#### Chronic wasting disease detected in another Tennessee county

Animal health officials in Tennessee on Nov 21 announced that chronic wasting disease (CWD) has been detected for the first time in a deer harvested in Shelby County in the far southwestern part of the state near Memphis.

Chuck Yoest, CWD coordinator for the Tennessee Wildlife Resources Agency (TWRA) said in a news relese that the deer was a 2<sup>1</sup>/<sub>2</sub>-year-old buck that was harvested in the Shelby County part of the Wolf River Wildlife Management area, and that the new detection isn't surprising, given that CWD had already been detected in neighboring Fayette County.

Shelby County is already part of a Unit CWD, and hunting regulations specific to the disease already apply there, along with carcass exportation and wildlife feeding restrictions. The TWRA said the only change is that Shelby County will be reclassified as CWD-positive, which will trigger slight modification of carcass export restrictions.

In May, the Tennessee Fish and Wildlife Commission changed deer hunting regulations after CWD was found in three southwestern counties—Fayette, Hardeman, and Madison—last winter. The commission approved the TWRA's recommendation to establish a new CWD deer hunting unit for the three affected counties, plus counties within a 10-mile radius of a positive CWD deer location: Chester, Haywood, McNairy, Shelby, and Tipton.

Nov 21 TWRA press release May 24 TWRA press release CLF BRIEFING

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