CIDRAP Leadership Forum
Infectious Disease BRIEFING

February 13th, 2019
Welcome to CLF!

Reinsurance Group of America (RGA)
HOT TOPICS
1. Ebola
2. Influenza
3. Measles
4. MERS
5. Lassa fever
6. WHO top 10 global public health threats

UPDATES
7. Antimicrobial resistance
8. Polio
9. Zika & Yellow Fever
10. Acute Flaccid Myelitis (AFM)
11. Government shutdown & public health
12. Other
HOT TOPICS
1. Ebola
2. Influenza
3. Measles
4. MERS
5. Lassa fever
6. WHO top 10 global public health threats

UPDATES
7. Antimicrobial resistance
8. Polio
9. Zika & Yellow Fever
10. Acute Flaccid Myelitis (AFM)
11. Government shutdown & public health
12. Other
Distribution of confirmed and probable cases of Ebola Virus Disease and health zones reporting cases, North Kivu and Ituri, Democratic Republic of the Congo, as of 6 February 2019
Geographical distribution of confirmed and probable cases of Ebola virus disease, North Kivu and Ituri Provinces, Democratic Republic of the Congo, as of 6 February 2019
UN calls down international law in DRC Ebola outbreak

As the Democratic Republic of the Congo (DRC) continues to battle an Ebola outbreak in North Kivu and Ituri provinces, the United Nation (UN) Security Council yesterday passed a resolution demanding that all armed rebel groups in outbreak zones respect international law.

The council passed the measure to "ensure full, safe, immediate, and unhindered access for humanitarian and medical personnel, and their equipment, transport and supplies to the affected areas," according to a UN news release.

In adopting resolution 2439 (2018), the UN also officially condemned attacks by armed groups in the region. The resolution was sponsored by Ethiopia and Sweden, and the Security Council said negotiations on the text were influenced by two recent briefings to the council from the WHO director-general.

The Security Council, made up of 15 UN members, also encouraged the DRC government and countries in the region to "continue efforts to address and resolve the wider political, security, socioeconomic and humanitarian consequences of the Ebola outbreak, as well as to provide sustainable and responsive public health mechanisms," according to a the release.
WHO leader says Ebola outbreak could last 6 more months

Filed Under: Ebola; VHF
Stephanie Soucheray | News Reporter | CIDRAP News | Nov 14, 2018

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

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

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

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

WHO details cases among newborns
Ebola cases surge to 419 as treatment trial launches

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

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

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

Health center exposures, infections in babies
Malaria spike in Ebola zone prompts mass treatment efforts

A surge in malaria infections—with symptoms that can mimic Ebola—in the Democratic Republic of the Congo's (DRC’s) main Ebola hot spot prompted the launch today of a 4-day mass malaria drug administration campaign, the World Health Organization (WHO) announced.

Meanwhile, the DRC’s health ministry today reported 1 more illness, raising the overall total to 422 cases.

**Malaria campaign to reach 450,000**

The malaria efforts are designed not only to treat widespread malaria illnesses and deaths, it is also geared toward relieving pressure on the medical clinics, given that 50% of people screened in Ebola treatment centers have been found to have malaria instead of Ebola, the WHO said.

The campaign is similar to one launched in Sierra Leone during its outbreak in 2014 and is led by the DRC’s malaria control program with support from the WHO, UNICEF, the Global Fund, and the US President’s Malaria Initiative.
Guidance seeks to increase outbreak vaccines in pregnant women

The ongoing Democratic Republic of the Congo's (DRC's) Ebola outbreak has exposed the consequences of excluding pregnant and breastfeeding women from receiving a potentially lifesaving vaccine, which experts say is a health and fairness issue that applies to other infectious diseases.

To turn the tide, a multidisciplinary working group today formally released guidance on including pregnant women in vaccine development and deployment, which includes 22 recommendations aimed at policymakers, researchers, and global health groups.

The Pregnancy Research Ethics for Vaccines, Epidemics, and New Technologies (PREVENT) Working Group published the recommendations on its web site. The group, funded by Wellcome Trust, is a 17-member international team that includes experts in bioethics, maternal immunization, maternal-fetal medicine, obstetrics, public health, and vaccine research and policy. The group is based at the Johns Hopkins Berman Institute of Bioethics and the Center for Global Development, a nonprofit think tank based in Washington, D.C.
Protests disrupt response operations in two Ebola hot spots

Demonstrations in the wake of an announcement that general election voting will be delayed in certain Democratic Republic of the Congo (DRC) cities included vandalism at some of Beni's Ebola facilities that sent some patients awaiting test results fleeing into the community.

In its daily update today, the DRC health ministry said protests in Beni and Butembo severely disrupted the Ebola response, hampering vaccination, safe burials, and lab functions in Beni, and the usual volume of follow-up on health alerts.

Vandals damage facilities in Beni

According to a CNN report today, police fired tear gas to break up protestors who blocked roads and burned tires in Beni, a day following an announcement from the country’s election commission that voting in the long-delayed general election will be pushed from Dec 30 to March in three cities, including Beni and Butembo in North Kivu's outbreak area.

On Twitter today the health ministry said demonstrators vandalized facilities inside the transit center in Beni where 24 patients with suspected infections were under evaluation. It said the damaged unit is separate from the Ebola treatment center (ECT) where patients with confirmed illnesses are treated.
DRC Ebola total tops 600; vaccination team attacked

With 10 new Ebola infections reported on New Year's Day and today, the Democratic Republic of the Congo (DRC) Ebola outbreak passed the 600-case mark, as a fresh round of violence—this time in Komanda—inflicted a member of a health ministry vaccination team.

In other developments, Samaritan's Purse, a group that was instrumental in treating Ebola patients in West Africa's outbreak, announced plans to open an Ebola treatment center in the outbreak region, and Oxfam announced a suspension in activities due to continuing unrest.

Wounded vaccination worker airlifted

WHO Director-General Tedros Adhanom Ghebreyesus, PhD, was in the outbreak region yesterday to spend time with Ebola responders, according his Twitter account. "While the rest of the world is celebrating, Ebola responders are still hard at work, away from their families doing everything they can to control the outbreak," Tedros said. "Honoured to welcome the new year with them."
Refugees flee DRC to Uganda, escalating Ebola fears

Filed Under: Ebola; VHF
Stephanie Soucheray | News Reporter | CIDRAP News | Jan 03, 2019

After Sunday’s tumultuous national presidential elections, refugees from the Democratic Republic of the Congo (DRC) are fleeing to neighboring Uganda, prompting fears of cross-border Ebola spread, according to the Associated Press.

The DRC is now entering its sixth month of the country’s largest Ebola outbreak ever, in North Kivu and Ituri provinces. So far, the disease has been contained in the eastern region of the DRC, but the election chaos increases the chance of international spread.

Irene Nakasiita, a spokeswoman for the Red Cross in Uganda, told the Associated Press (AP) that dozens of refugees began crossing the border on Dec 30. Some were made to return to the DRC after refusing Ebola screening implemented by Ugandan officials.

**Internet shut down after election**
The AP also reported that the internet in the DRC has been cut off all week to curb speculation about the election results. On Twitter today, the DRC said there would be no daily update from the ministry of health on Ebola cases. Instead, the ministry said today’s update will be published tomorrow morning.
DRC Ebola total climbs to 649 led by spike in Katwa cases

In daily updates over the past 4 days, the Democratic Republic of the Congo (DRC) health ministry reported 19 more Ebola cases in five locations, though most were from Katwa, one of the latest outbreak hot spots.

In other Ebola developments, an American health worker who may have been exposed to Ebola in the DRC was released from monitoring after remaining symptom-free, and another security incident was reported, affecting responders working in Ituri province.

The continued rise of cases and community resistance is occurring against a backdrop of continuing controversy over the country’s recent general election, which officials fear could fuel more protests, especially in outbreak areas where voting was delayed.

Six more community deaths
Of the latest 19 cases, 18 are confirmed and 1 is listed as probable, which the ministry said in its daily report yesterday involves a person who died in Butembo who had an epidemiologic link to a confirmed case, but who could not be tested before burial. The new developments bring the overall outbreak total as of today to 649 cases, which includes 600 confirmed and 49 probable infections.
WHO expert: Ebola outbreak to continue at least 6 more months

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

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

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

"If we can control the outbreak in Beni, we can do it anywhere," Salama said. Now, the focus is on Butembo and Katwa, areas with nearly 1 million people. Other hot spots include Komanda and Oicha, but Salama said case loads are lighter there.
With 14 more cases, DRC Ebola outbreak tops 700

Today the ministry of health in the Democratic Republic of the Congo (DRC) reported 14 newly confirmed cases of Ebola, which lifts outbreak totals to 713, including 439 deaths. Officials are still investigating 203 cases.

Of the newly confirmed cases, 9 were recorded in Katwa, 2 in Mangurujipa, and 1 each in Bienia, Butembo, and Kayina. Among 6 newly recorded deaths, 4 took place in the community, which increases the risk of transmission.

Today, the World Health Organization (WHO) published its latest situation report on the outbreak. The WHO notes that 13 of 18 health zones identified in the outbreak are active, meaning there has been at least 1 confirmed case recorded in the past 21 days.

"Trends in case incidence reflect the continuation of the outbreak across a geographically widely dispersed area with a decline in the number of cases in Beni and increase of reported cases, especially in Katwa," the WHO said.

WHO: 15% of cases in young kids
Congo Ebola cases rise to 736 as problems noted in Katwa

Over the weekend and through today, the Democratic Republic of the Congo (DRC) reported 15 more Ebola cases, including 5 earlier probable infections from Komanda, one of the areas where responders had faced security challenges.

Also, the country's health ministry shed more light today on factors that have fueled a steep rise in cases in Katwa, which has become the current hot spot, and South Sudan today launched a campaign to immunize health workers and frontline responders with VSV-EBOV vaccine.

Case count climbs to 736
In the latest three daily updates, the latest cases were from a several locations. Of the 10 confirmed cases, 4 are in Beni, an area where cases have declined but was once the outbreak's epicenter. Two others are in Oicha, and four are in Katwa, the current hot spot.

The five probable cases in Komanda were added after investigations into deaths that occurred in November and December concluded that they were likely due to Ebola.

The new cases boost the overall outbreak total to 736 cases, which include 682 confirmed and 54 probable infections. In its update today, the ministry said health officials are still investigating 161 suspected Ebola cases.
Ebola infects 9 more in DRC as ill traveler sparks response measures

The number of people infected in the Democratic Republic of the Congo (DRC) Ebola outbreak grew by nine today, as health officials in the neighboring Haut Uele province took steps to prevent the spread of a disease from a resident who was exposed to the virus in Katwa.

**Spike in Katwa cases continues**

Of the nine newly confirmed cases announced today by the DRC health ministry, eight are in Katwa, the current hot spot where authorities face complex challenges, including insecurity, community resistance, and the after effects of a response slowdown in late December caused by election-related protests.

The other case is in Beni. Investigations are under way into 187 suspected Ebola cases. Today’s developments push the outbreak total to 752 cases, including 698 confirmed and 54 probable cases.

The health ministry also said 4 more people died from their Ebola infections, 3 of them in community settings in Katwa and 1 in the Butembo Ebola treatment center. The new fatalities lift the outbreak’s death count to 465.
Over 70,000 vaccinated against Ebola as outbreak marches on

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

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

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

Nearly 200 cases under investigation

Of the seven new cases, six are in Katwa and one is in Butembo. Katwa is the latest hot spot for Ebola activity, where several cases have been confirmed each day in the past week.
Six months after the ongoing Ebola outbreak in the Democratic Republic of the Congo began, efforts to stop spread of the disease are producing signs of progress, a senior World Health Organization official told STAT on Thursday.

Transmission has either been halted or significantly reduced in a number of the areas where the disease has spread, said Dr. Mike Ryan, assistant director of the WHO’s emergency preparedness and response program.

But there is still intense transmission in a large city, Katwa, and stopping the disease there is not going to be an easy task, said Ryan. He described the outbreak as more of a series of linked epidemics than one large outbreak.

“The real challenge now is containing the disease and suppressing it there before it does what it’s done before and bounced to somewhere else,” said Ryan, who recently returned to WHO headquarters in Geneva from the latest of several stints in the outbreak zone.
Guarded optimism as DRC Ebola outbreak hits 6-month mark

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

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

On guard against complacency
Speaking at a media briefing in Geneva, Matshidiso Moeti, MD, the WHO’s regional director for Africa, praised the WHO staff on the ground and the leadership of the DRC’s health ministry. "We can clearly see the strategies that have been successful in controlling the outbreak in some of the affected areas, such as Mangina, Beni, Komanda, and Oicha, though we continue to face flareups in some of these areas and outbreaks in others."
Today the Democratic Republic of Congo (DRC) ministry of health confirmed one new Ebola infection in Katwa and reported two new deaths from Katwa and Butembo.

And in other developments, two more infections were reported in healthcare workers, according to a weekly situation report yesterday from the World Health Organization (WHO).

**Ministry details latest case and deaths**

Today the DRC’s ministry of health confirmed one new case in Katwa, and two new deaths in Katwa and Butembo. The Katwa fatality was a community death. With these new cases, the outbreak totals stand at 789 cases, including 488 deaths.

A total of 199 suspected cases are still under investigation.

Of the two new deaths, the one in Katwa occurred in the community, a factor known to increase the risk of virus spread, and one occurred at Butembo’s Ebola treatment center.
HOT TOPICS
1. Ebola
2. Influenza
3. Measles
4. MERS
5. Lassa fever
6. WHO top 10 global public health threats

UPDATES
7. Antimicrobial resistance
8. Polio
9. Zika & Yellow Fever
10. Acute Flaccid Myelitis (AFM)
11. Government shutdown & public health
12. Other
US flu levels on the rise before year-end holidays

The US Centers for Disease Control and Prevention (CDC) said national levels of influenza-like illness (ILI) are on the rise, signaling the start of the 2018-19 flu season.

For the previous 3 weeks, ILI rates had been near or at the national baseline, which is 2.2% at this time of year. This week, the rate jumped to 2.7%. During last year's severe flu season, ILI rates reached 7.5% before flu activity peaked, the highest it has been since the 2009-10 flu pandemic.

The percent of specimens testing positive for flu at clinical laboratories reached 11.0% during week ending on Dec 15, up from 6.5% the week before. Of those specimens, 94.6% were influenza A, and 5.4% were influenza B. Of subtyped influenza A samples last week, 81.9% were H1N1, and 18.1% were H3N2.

Eight of 10 regions reported ILI at or above their region-specific baseline level, the CDC said. Colorado and Georgia noted high ILI activity. New York City and nine states (Alabama, Arizona, Arkansas, Kentucky, Louisiana, Missouri, New Jersey, South Carolina, and Virginia) experienced moderate ILI activity.
# 2018-2019 Influenza Season Week 5 ending February 2, 2019

## National and Regional Summary of Select Surveillance Components

<table>
<thead>
<tr>
<th>HHS Surveillance Regions*</th>
<th>Outpatient ILI†</th>
<th>Number of jurisdictions reporting regional or widespread activity§</th>
<th>% respiratory specimens positive for flu in clinical laboratories¶</th>
<th>Predominant flu virus reported by public health laboratories for the most recent three weeks□</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nation</td>
<td>Elevated</td>
<td>50 of 54</td>
<td>21.6%</td>
<td>Influenza A(H1N1)pdm09</td>
</tr>
<tr>
<td>Region 1</td>
<td>Elevated</td>
<td>6 of 6</td>
<td>24.8%</td>
<td>Influenza A(H1N1)pdm09</td>
</tr>
<tr>
<td>Region 2</td>
<td>Elevated</td>
<td>3 of 4</td>
<td>19.0%</td>
<td>Influenza A(H1N1)pdm09</td>
</tr>
<tr>
<td>Region 3</td>
<td>Elevated</td>
<td>5 of 6</td>
<td>14.6%</td>
<td>Influenza A(H1N1)pdm09</td>
</tr>
<tr>
<td>Region 4</td>
<td>Elevated</td>
<td>8 of 8</td>
<td>14.4%</td>
<td>Influenza A(H3)</td>
</tr>
<tr>
<td>Region 5</td>
<td>Elevated</td>
<td>6 of 6</td>
<td>16.6%</td>
<td>Influenza A(H1N1)pdm09</td>
</tr>
<tr>
<td>Region 6</td>
<td>Elevated</td>
<td>5 of 5</td>
<td>25.5%</td>
<td>Influenza A(H1N1)pdm09</td>
</tr>
<tr>
<td>Region 7</td>
<td>Elevated</td>
<td>4 of 4</td>
<td>16.5%</td>
<td>Approximately equal Influenza A(H1N1)pdm09 and Influenza A(H3)</td>
</tr>
<tr>
<td>Region 8</td>
<td>Elevated</td>
<td>6 of 6</td>
<td>22.5%</td>
<td>Influenza A(H1N1)pdm09</td>
</tr>
<tr>
<td>Region 9</td>
<td>Elevated</td>
<td>3 of 5</td>
<td>13.7%</td>
<td>Influenza A(H1N1)pdm09</td>
</tr>
<tr>
<td>Region 10</td>
<td>Elevated</td>
<td>4 of 4</td>
<td>19.3%</td>
<td>Influenza A(H1N1)pdm09</td>
</tr>
</tbody>
</table>
2018-2019 Influenza Season Week 5 ending February 2, 2019

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

- Graph showing the number of positive specimens and percent positive for weeks from 2018-2019.
2018-2019 Influenza Season Week 5 ending February 2, 2019

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

- A (subtyping not performed)
- A (H1N1)pdm09
- A (H3N2)
- H3N2v
- B (lineage not performed)
- B (Victoria Lineage)
- B (Yamagata Lineage)
2018-2019 Influenza Season Week 5 ending February 2, 2019

Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, 2018-2019 and Selected Previous Seasons
2018-2019 Influenza Season Week 5 ending February 2, 2019

A Weekly Influenza Surveillance Report Prepared by the Influenza Division
Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet

2018-19 Influenza Season Week 5 ending Feb 02, 2019

ILI Activity Level
- Red: High
- Orange: Moderate
- Yellow: Low
- Green: Minimal
- Black: Insufficient Data

Map showing the activity level of influenza across the United States for Week 5 of the 2018-2019 season.
CDC: flu activity hits highest level this season

The percentage of people visiting the doctor for influenza-like illness (ILI) last week jumped from 3.8% to 4.3%, the highest of the 2018-2019 flu season, according to today’s weekly FluView update from the Centers for Disease Control and Prevention (CDC).

Though a doubling of the national baseline (2.2%), the ILI level is still much lower than last year's peak of 7.5%, the CDC said. For the fifth consecutive week, all 10 geographic regions in the United States reported ILI levels at or above region-specific baselines.

"For comparison purposes, over the past five flu seasons, the peak percent of visits due to ILI has ranged between 3.6% (2015-2016) and 7.5% (2017-2018)," the CDC said in its summary.

**Severity indicators rise across nation**
All severity indicators rose in the last week, and CDC said it expected flu activity to remain elevated for a number of weeks.

All 10 geographic regions of the country recorded high ILI activity, a measure of clinic visits for flu, for the fourth week of 2019.
**Week 5/2019 (28 January-3 February 2019)**

- Influenza activity is widespread in the European Region and continues to increase. Samples collected from individuals presenting with ILI or ARI to sentinel primary health care sites yielded an influenza positivity rate of 54.7%.

- Influenza type A virus detections dominated with A(H1N1)pdm09 viruses and A(H3N2) viruses co-circulating. Very few influenza B viruses were detected.

- Over 50% of specimens from patients hospitalized with severe acute respiratory infection (SARI) collected in week 5/2019 were positive for influenza, and >99% were type A.

- Pooled data from 22 Member States and areas reporting to the EuroMOMO project indicated excess mortality in a elderly populations overall. However, this result was driven by data from only a few countries.

**2018/19 season overview**

- Influenza activity in the European region, based on sentinel sampling, exceeded a positivity rate of 10% in week 49/2018 and has increased continuously into week 5/2019, but may be levelling off. The positivity rate has exceeded 50% since week 3/2019.

- Both influenza A virus subtypes are circulating widely, with co-circulation in some countries while others report dominance of either A(H1N1)pdm09 or A(H3N2) viruses. Countries should continue to promote vaccination. In addition, countries are encouraged to use antivirals in accordance with national guidelines.

- Among hospitalized influenza virus-infected patients admitted to ICU wards, 76% of influenza A virus detections were subtyped; of these 78% were A(H1N1)pdm09 virus. Among influenza virus-infected patients admitted to other wards, 26% of influenza A virus detections were subtyped and 70% were A(H1N1)pdm09 virus.

- Over 90% of influenza A virus positive cases detected from SARI surveillance since week 40/2018 were subtyped and 82% were A(H1N1)pdm09 virus.

- In general, current influenza vaccines tend to work better against influenza A(H1N1)pdm09 and influenza B viruses than against influenza A(H3N2) viruses. Preliminary results from Canada where the predominate circulating viruses are influenza A(H1N1)pdm09 viruses, indicate good vaccine effectiveness. These results are supported by recent preliminary vaccine effectiveness results from Hong Kong, where the vaccine was very effective at preventing A(H1N1)pdm09 related hospitalizations in children.

- The high vaccine effectiveness against A(H1N1)pdm09 viruses is consistent with genetic characterization reports indicating that all circulating viruses belong to clade 6B.1 and remain antigenically similar to the vaccine virus, despite the emergence of a number of subgroups. The lower vaccine effectiveness against A(H3N2) viruses likely reflects the circulation of multiple genetic clades some of which contain viruses that display low antigenic similarity to the vaccine virus, particularly with egg-propagated vaccine virus as compared to cell culture-propagated vaccine virus.
Effects of Influenza Vaccination in the United States during the 2017–2018 Influenza Season

Melissa A Rolfes, Brendan Flannery, Jessie Chung, Alissa O’Halloran. Published: 02 February 2019

Results

The VE against outpatient medically-attended, laboratory-confirmed influenza was 38% (95% CI: 31–43%) including 22% (95% CI: 12–31%) against influenza A(H3N2), 62% (95% CI: 50–71%) against influenza A(H1N1)pdm09, and 50% (95% CI: 41–57%) against influenza B. We estimated that influenza vaccination prevented 7.1 million (95% CrI: 5.4 million–9.3 million) illnesses, 3.7 million (95% CrI: 2.8 million–4.9 million) medical visits, 109,000 (95% CrI: 39,000–231,000) hospitalizations, and 8,000 (95% CrI: 1,100–21,000) deaths. Vaccination prevented 10% of expected hospitalizations overall and 41% among young children (6 months–4 years).

Conclusions

Despite 38% VE, influenza vaccination reduced a substantial burden of influenza-associated illness, medical visits, hospitalizations, and deaths in the U.S. during the 2017–2018 season. Our results demonstrate the benefit of current influenza vaccination and the need for improved vaccines.
Flu science points to another culprit when vaccines fail — us

By HELEN BRANSWELL @HelenBranswell / JANUARY 24, 2019

If you’ve ever gotten a flu shot — and then, later that season, gotten the flu — you were more than likely, and rightly, miffed. Your doctor might have explained that the problem was possibly that the influenza vaccine wasn’t well matched that year to the strains people coughed and sneezed in your direction.

But increasingly influenza researchers are offering another explanation: The problem, at least partly, could be you.

A growing body of evidence suggests that sometimes our immune systems simply don’t follow the instructions a vaccine tries to give them — that is, make antibodies to fight a particular H3N2 or H1N1 virus. The reason? We all have flu baggage that shapes the way our immune systems respond to both infections and vaccines.

“We’ve all been trained on different influenza viruses,” explained Scott Hensley, an associate professor of microbiology at the University of Pennsylvania who studies the factors that influence response to flu vaccine. “If you vaccinate 100 people, guess what? They’re all going to respond differently. We think a large part of that is that we all have a different immunological imprint.”
Experts on watch for resistance to new flu drug

Japanese researchers yesterday described two H3N2 flu viruses with mutations that may increase resistance to the new flu antiviral baloxavir marboxil (Xofluza), approved by the US Food and Drug Administration (FDA) in October, a development they say bears watching.

And in another article, US researchers reported on efforts already under way to watch for signs of resistance to the drug as it enters the US market. Both studies were published yesterday in the latest issue of *Eurosurveillance*.

Baloxavir is the first novel flu treatment approved by the FDA since it cleared oseltamivir and zanamivir, both neuraminidase inhibitors, in 1999. The FDA approved baloxavir in October 2018.

Sporadic resistance to oseltamivir has been reported over the years, and experts have said flu drugs with different mechanisms of action are needed to provide more options for treating resistant flu.

The new drug, discovered by Japan-based Shionogi and developed by Roche, is a single-dose treatment approved in the United States for uncomplicated flu in patients ages 12 and older.
A Flu Drug Was Called ‘Silver Bullet,’ but Some Doctors Prescribe Caution

Researchers in Japan find evidence that some strains of the virus are resistant to the new Xofluza pill

By Megumi Fujikawa and River Davis
Feb. 11, 2019 5:30 a.m. ET

TOKYO—A new pill that can kill the flu virus in 24 hours with a single dose has become the most-prescribed influenza treatment in Japan, which is suffering through its worst flu season in two decades.

But some doctors are backing away from the drug after new evidence emerged about mutant viral strains that prevent it from working well in some patients.

The pill, called Xofluza, was discovered by Osaka-based Shionogi & Co. and it was approved last year by regulators in Japan and the U.S. In the U.S., it is marketed by Roche Holding AG’s Genentech unit.

The drug quickly gained the top share in Japan, according to Shionogi’s data, in part because of its ease of use. Roche’s Tamiflu, the best-known competitor, is generally taken twice a day for five days, while Xofluza is taken just once.
EXCLUSIVE: Controversial experiments that could make bird flu more risky poised to resume

By Jocelyn Kaiser | Feb. 8, 2019, 8:45 PM

Controversial lab studies that modify bird flu viruses in ways that could make them more risky to humans will soon resume after being on hold for more than 4 years. ScienceInsider has learned that last year, a U.S. government review panel quietly approved experiments proposed by two labs that were previously considered so dangerous that federal officials had imposed an unusual top-down moratorium on such research.

One of the projects has already received funding from the National Institutes of Health’s (NIH’s) National Institute of Allergy and Infectious Diseases (NIAID) in Bethesda, Maryland, and will start in a few weeks; the other is awaiting funding.

The outcome may not satisfy scientists who believe certain studies that aim to make pathogens more potent or more likely to spread in mammals are so risky they should be limited or even banned. Some are upset because the government’s review will not be made public. “After a deliberative process that cost $1 million for [a consultant’s] external study and consumed countless weeks and months of time for many scientists, we are now being asked to trust a completely opaque process where the outcome is to permit the continuation of dangerous experiments,” says Harvard University epidemiologist Marc Lipsitch.
HOT TOPICS
1. Ebola
2. Influenza
3. Measles
4. MERS
5. Lassa fever
6. WHO top 10 global public health threats

UPDATES
7. Antimicrobial resistance
8. Polio
9. Zika & Yellow Fever
10. Acute Flaccid Myelitis (AFM)
11. Government shutdown & public health
12. Other
In the most comprehensive estimate of measles trends that covers the last 17 years of data, health groups said today that illness reports surged in 2017, reflecting severe and long outbreaks in many countries, along with gaps in vaccine coverage.

Outbreaks touched all regions of the world, and researchers estimated that measles caused about 110,000 deaths in 2017.

In the United States this year, Kansas City, Mo., reported two measles clusters, and parts of New Jersey and New York are currently experiencing measles outbreaks linked to people infected during overseas travel.

Researchers from the US Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) published their findings today in *Morbidity and Mortality Weekly Report* and the *WHO Weekly Epidemiological Record*.

In a statement today, Soumya Swaminathan, MBBS, MD, deputy director-general for programs at the WHO said measles resurgence is concerning, especially in countries that had achieved or were close to achieving measles elimination.
Cases of imported measles in US have doubled in recent years
A new retrospective analysis of imported measles cases in the United States from 2001 to 2016 shows that almost two thirds of cases occurred in US residents who were infected with the virus while traveling abroad, and the rate of imported measles has more than doubled in recent years. The study appeared yesterday in *The Journal of Infectious Diseases*.

During the 16-year study period, 553 cases of measles were imported to the United States, an average of 28 per year, based on data collected by the CDC. Patients' ages ranged from 3 months to 75 years, with a median age of 18 years. Eighty-seven percent of the 553 case-patients were unvaccinated.

"U.S. residents (as opposed to foreign visitors) accounted for 62% of imported measles cases. Overall, 62% of all imported case-patients reported travel to countries in the Western Pacific and European Regions of the World Health Organization during their exposure periods," the authors said. India, China, and the Philippines, were the most common source countries.

The proportion of imported cases in US residents more than doubled during the study period, from 31% in 2001 to 67% in 2016.

The study authors said this finding highlights the importance of measles vaccination prior to international travel for all Americans 6 months of age and older.

*Dec 9 J Infect Dis study*
Measles clusters reported in and around New York City
State and local health officials in New York are reporting clusters of measles infections, one in an Orthodox Jewish community in Brooklyn and the other in Rockland County, a suburb of New York City.

In an Oct 17 statement, NYC Health said six cases have been confirmed this month in the Williamsburg neighborhood in Brooklyn, with the first case a child who contracted the virus on a visit to Israel, where a large outbreak is occurring. Patients range from 11 months to 4 years. Five were unvaccinated before they were exposed, four due to delayed vaccination and one who was too young to be vaccinated. The sixth child had received one dose before exposure but was not yet immune.

Some of the children have experienced complications, including a child hospitalized with pneumonia and another who acquired an ear infection.

According to the report, there are seven confirmed measles cases in people from outside of New York City—five who were exposed during travel to Israel and two with secondary infections.

Meanwhile, Rockland County health commissioner Patricia Ruppert, DO, MPH, said in an Oct 17 Facebook post that 11 cases have been confirmed, six of them secondary cases.

NYC health held a meeting in Williamsburg with rabbis and elected officials and will place ads in newspapers to raise awareness and distribute posters to health providers. Rockland County is hosting free measles, mumps, and rubella (MMR) vaccine clinics.
News Scan for Dec 13, 2018

Measles clusters expand in New York and New Jersey
The number of cases in New York and New Jersey measles clusters sparked by international travelers continues to grow, according to updates from county and state health departments.

In Brooklyn, where an outbreak is centered in an Orthodox Jewish neighborhood, 42 cases have now been reported since October, NYC Health reported in a recent update. The total reflects an increase of 13 cases since CIDRAP’s last update on Nov 28. The initial case-patient was a child who contracted the infection during a visit to Israel, which is experiencing a large outbreak. The report notes cases also include other unvaccinated children who were exposed in Israel.

Elsewhere in New York, Rockland County, in lower Hudson Valley, yesterday reported 91 cases, an increase of 11. The illnesses are clustered in eastern Ramapo, but health officials said the county is small and exposure to measles could occur anywhere in the county.

Orange County, part of the New York City metropolitan area, has now confirmed five cases, two of them involving school children, according to a local media report that cited the county health department. And Erie County, which includes Buffalo, yesterday reported one case in an international traveler who visited multiple locations and may have exposed others.

Two New Jersey counties—Ocean and Passaic—have also reported measles cases. In an update yesterday, Ocean County said 19 cases have been confirmed and 1 more is under investigation. The New Jersey Department of Health (NJDH) said three cases have been confirmed in a Passaic County household and that the patients have a direct epidemiological link to Ocean County’s outbreak.
News Scan for Jan 18, 2019

Washington state sees 16 measles cases as NJ declares end to outbreak
Yesterday health officials in Clark County, Washington, confirmed 16 cases of measles, 14 of which occurred in unvaccinated minors since Jan 1.

According to a press release, 13 of the cases occurred in children under the age of 10, and the other 3 cases occurred in kids ages 10 to 18. Several healthcare facilities and schools are listed as possible exposure sites. At this time, it is unclear if the cases are connected. Five additional cases are suspected.

"Clark County Public Health is urging anyone who has been exposed and believes they have symptoms of measles to call their health care provider prior to visiting the medical office to make a plan that avoids exposing others in the waiting room," officials said in a press release.

In other domestic measles news, health officials in Ocean County, New Jersey, said a measles outbreak in that state is officially over as no new cases have been recorded in the past 42 days. A total of 33 people were infected in the outbreak.

New York City officials, meanwhile, have confirmed 58 measles cases of measles in an Orthodox Jewish community in Brooklyn since October. The outbreak began when an unvaccinated child contracted the disease during a trip to Israel.

The Borough Park neighborhood has been hardest hit, with 35 cases, including 3 diagnosed in the last week. Officials in New York urge anyone traveling to Israel to get vaccinated with the measles-mumps-rubella (MMR) vaccine at least two weeks prior to their trip.
News Scan for Jan 22, 2019

Washington state measles outbreak sickens 22; exposures in Portland area
Washington state’s Clark County, which is part of the Portland, Ore., metropolitan area, has declared a public health emergency related to a measles outbreak, with 22 cases confirmed so far, along with 3 more suspected cases.

The outbreak began in the Vancouver, Wash., area in early January, with exposure risks at various locales in the Portland metro area, including a Portland Trailblazers basketball game on Jan 11.

Most of the illnesses have been in children ages 1 to 10, and one patient has been hospitalized, county officials said. Nineteen people were unvaccinated, and immunization status was unverified in the three other cases.

The county is requiring that students and staff without documented immunity be excluded from schools identified as possible exposure sites, and it has set up a call center for questions about the investigation and possible exposure. In a Jan 18 statement announcing the public health emergency, Clark County said the step is needed to ensure that it has enough resources to continue its response and access to resources outside of its region.
News Scan for Jan 28, 2019

Washington state measles outbreak prompts emergency declaration

Washington Governor Jay Inslee on Jan 25 declared a public health emergency as a step to boost its response to a measles outbreak that has now sickened 34 in the Vancouver area, with 1 case confirmed in King County in the Seattle area.

The outbreak in Vancouver began in early January, and since Jan 21, Clark County Public Health has reported 12 more cases, raising the total to 34. Officials are also investigating 9 more suspected cases.

In an update yesterday, Clark County said 24 of the cases have been in children ages 1 to 10 years old and that 30 of the patients were unimmunized, with status unverified for the remaining 4. So far one person has been hospitalized. Clark County officials had declared a public health emergency because of the outbreak on Jan 18, and the Inslee declaration expanded the state of emergency to all Washington counties.

The outbreak area borders Portland, Ore., and the Oregon Health Authority has confirmed one case in Multnomah County that is linked to Washington’s Clark County outbreak.

Meanwhile, King County said in a Jan 23 update that tests have confirmed measles in a suspected patient, a man in his 50s who was hospitalized but has since recovered. So far it’s not clear where the man was exposed, but he reported recent travel to Vancouver.
More suspected measles cases in Washington’s Clark County
Washington’s Clark County officials have confirmed 7 more measles cases, bringing the outbreak total to 41, plus 15 suspected infections, according to the latest update from the county’s public health department.

Thirty-seven of the confirmed cases were in unvaccinated patients. Clark County authorities said 30 cases were in children 10 years old or younger, 10 cases were in those ages 11 to 18, and only 1 case was in an adult 19 to 29 years old.

The outbreak began on Jan 1. On Jan 18, Clark County Council Chair Eileen Quiring declared a public health emergency in response to the outbreak.

A week ago, Washington Governor Jay Inslee declared a state of emergency, and today the North Dakota Department of Health said it was sending a five-member team to Washington to help fight the outbreak in the Pacific Northwest, the Associated Press (AP) reported. Washington has confirmed 43 measles cases, mostly clustered in the southwest corner of the state, the story said.

"Washington submitted a request for the specialized team through the Emergency Management Assistance Compact," the AP reported. "The mutual aid agency enables a disaster-impacted state to request and receive aid from other member states swiftly and efficiently."

Officials have not reported new measles cases in Oregon or in Washington’s Seattle-King County this week.
News Scan for Feb 05, 2019

Five cases reported in Texas measles cluster; Washington outbreak grows by 8

Texas health officials are reporting five confirmed measles cases in three neighboring counties in the region around Houston, according to official statements and media reports.

Three of the cases are from Harris County, according to a statement yesterday from Harris County Public Health (HCPH). The patients are two boys who are younger than 2 years old and a woman between ages 25 and 35. All live in the northwestern part of Harris County.

Umair Shah, MD, MPH, executive director at HCPH, said measles is highly contagious and spreads to others through coughing and sneezing. "However, it is easily preventable. Parents and caregivers have the power to protect their children and themselves from this disease by getting vaccinated," he said.

Also, the Galveston County Health District (GCHD) yesterday reported one case involving a boy ages 12 to 24 months who was tested Jan 28 and is part of a measles cluster in the region. And the Associated Press (AP) reported today that Montgomery County, on Harris County’s northern border, has confirmed one case and that a possible sixth case in Texas has been identified with testing underway.
Four more measles cases confirmed in Washington state outbreak

Four more measles cases have been reported in an outbreak in the Vancouver, Wash., area, including three in Oregon’s Multnomah County and one in Washington’s Clark County, according to official updates.

The three new case-patients in Oregon all had close contact with Multnomah County’s first confirmed case, which was reported on Jan 25. The Oregon Health Authority (OHA) said yesterday that the three people have remained at home and are in regular contact with county health officials. The initial case-patient is part of a larger outbreak in Washington’s Clark County.

Meanwhile, Clark County has confirmed one new case, raising its total to 50. In an update yesterday, Clark County Public Health said 11 suspected cases are still under investigation. All but two of the cases involve children younger than 18. Of those with measles, 43 were unvaccinated, 6 had unverified immunization status, and 1 had been vaccinated.

In a related development, demand for measles, mumps, and rubella (MMR) vaccine is surging in Clark County, even among people who had avoided vaccination, Kaiser Health News (KHN) reported yesterday. Orders were up nearly 500% in January compared with the same month last year. According to the report, health officials had worried about the potential for a measles outbreak in the region, given that only 76.5% of kindergarteners had received all recommended shots for the 2017-2018 school year.
A quarter of all kindergartners in this county in Washington aren’t immunized. Now there’s a measles crisis

Ken Alltucker, USA TODAY   Published 8:15 a.m. ET Feb. 11, 2019

Measles outbreaks in New York and Washington state have public health officials scrambling to contain a disease that was eliminated in the USA nearly two decades ago.

Washington state declared a public emergency in the wake of an outbreak in Clark County that has infected at least 53 people, mostly children. Four cases have been confirmed in neighboring Multnomah County, Oregon. Another case has been identified in King County, which includes Seattle.

Clark County public health officials have long feared a measles outbreak could spread rapidly given the county’s cluster of non-vaccinated children.

Nearly one in four Clark County kindergarten students during the 2017-18 school year did not get all their immunizations, according to data from the Washington Department of Health. At three schools in the county, more than 40 percent of kindergartners did not receive all recommended shots before starting school.
## Number of Reported Measles Cases (6M period)

<table>
<thead>
<tr>
<th>Country</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ukraine</td>
<td>16932</td>
</tr>
<tr>
<td>India</td>
<td>14926</td>
</tr>
<tr>
<td>Brazil</td>
<td>9669</td>
</tr>
<tr>
<td>Philippines</td>
<td>5936</td>
</tr>
<tr>
<td>Madagascar</td>
<td>4327</td>
</tr>
<tr>
<td>Thailand</td>
<td>3576</td>
</tr>
<tr>
<td>Yemen</td>
<td>3310</td>
</tr>
<tr>
<td>DR Congo</td>
<td>2672</td>
</tr>
<tr>
<td>Sudan</td>
<td>2591</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1508</td>
</tr>
</tbody>
</table>

Notes: Based on data received 2019-01 - Surveillance data from 2018-06 to 2018-11 - * Countries with highest number of cases for the period
News Scan for Feb 07, 2019

Report details Europe's 2018 measles surge; Philippines declares outbreak
New data for 2018 released today by the World Health Organization (WHO) European regional office shows the highest number of cases in a decade, but that more children than ever before have been vaccinated.

In a statement today, the WHO said the numbers point to uneven progress within countries, leaving pockets of people unprotected. In 2018, 82,596 people in 47 of the region’s 53 countries had measles, and 72 died from the disease. Nearly two-thirds of people infected with measles were hospitalized. The total for 2018 was the highest this decade—three times higher than in 2017 and 15 times the record low reported in 2016.

However, the WHO said the surge followed a year (2017) that marked the highest ever estimated coverage (90%) for the second dose of measles vaccine. Coverage of first-dose vaccination also reached a high of 95% in 2017.

The WHO said achievements at the national level can mask gaps at the subnational level, which aren’t often recognized until outbreaks occur. It notes that most countries struggling with suboptimal immunization coverage are middle-income countries and that the office is working with them to implement targeted strategies to improve vaccine coverage.

Feb 7 WHO Europe statement

In other international measles developments, the Philippines Department of Health yesterday declared a measles outbreak in the National Capital Region of Luzon island, with 196 cases reported through the first half of January, compared with 20 reported in the area for the same period in 2018. The region includes Manila and has 16 cities and 1 municipality.

In an update today, the health department expanded the outbreak declaration to other regions, including other parts of Luzon and the Central and Eastern Visayas (Visayan Islands). As of Jan 26, the country had recorded 575 cases, 9 of them fatal. Health Secretary Francisco Duque, MD, said in the statement, "We are expanding the outbreak from metro Manila to the other regions as cases have increased in the past weeks and to strengthen surveillance of new cases and alert mothers and caregivers to be more vigilant.”

Feb 6 Philippines DOH statement
Measles outbreak in Philippines kills 70, with vaccine fearmongering blamed

The deaths, mostly of children, are part of an alarming wave of measles cases worldwide over the past few years

Hannah Ellis-Petersen, south-east Asia correspondent
Tue 12 Feb 2019 00.09 EST

The Philippines is in the midst of a growing measles crisis, with at least 70 deaths, mainly of children, in the past month.

In January, there were 4,302 reported cases of measles in the country, an increase of 122% on the same period last year. The outbreak has been blamed on a backlash against vaccinations.

The outbreak has continued into February. Last week, a measles outbreak was declared in Metro Manila - populated by 12 million people with many living in poverty-stricken slums. This follows 196 reported cases in January, compared to just 20 recorded in the same period last year. In Manila, 55 children under the age of four have died of measles since the beginning of the year.

The department of health has subsequently also declared a “red alert” outbreak in the regions of Luzon and parts of the Visayas.
Nearly 20,000 measles cases recorded in Madagascar since October

Yesterday the World Health Organization (WHO) described an unusually large measles outbreak in Madagascar, which has resulted in 19,539 cases and 39 deaths since Oct 4, 2018.

"Madagascar last experienced measles outbreaks in 2003 and 2004, with reported number of cases at 62,233 and 35,558, respectively. Since then, the number of reported cases had sharply declined until the current outbreak," the WHO said.

Cases have been reported in all 22 regions of Madagascar, including densely populated cities such as Toamasina, Mahajanga, Antsirabe, Toliara, and the capital city, Antananarivo.

Children ages 1 to 14 years account for 64% of cases, and 51% of patients have not been vaccinated against the disease, or have unknown vaccination status. According to the WHO, the estimated measles immunization coverage in Madagascar was 58% in 2017.

The agency said the outbreak is occurring at the same time plague has made a resurgence in Madagascar, stretching public health resources. The Ministry of Public Health of Madagascar is conducting vaccination campaigns in the hardest-hit communities.

Jan 17 WHO statement
Notes: Based on data received 2018-12 - Data Source: IVB Database
Figure 1. Number of measles cases by country, EU/EEA, December 2018 (n=457)

Number of measles cases, December 2018
- 0
- 1
- 10
- 100

Legend:
- EU/EEA Member States
- Other countries

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

Coverage of first dose of measles- and rubella-containing vaccine, 2017
- 0–84%
- 85–94%
- 95–99%
- Not included

Coverage of second dose of measles-containing vaccine, 2017
- 0–84%
- 85–94%
- 95–99%
- No data
- Not included
HOT TOPICS
1. Ebola
2. Influenza
3. Measles
4. MERS
5. Lassa fever
6. WHO top 10 global public health threats

UPDATES
7. Antimicrobial resistance
8. Polio
9. Zika & Yellow Fever
10. Acute Flaccid Myelitis (AFM)
11. Government shutdown & public health
12. Other
News Scan for Jan 29, 2019

Oman and Saudi Arabia report new MERS cases
Two Middle East countries reported new MERS-CoV cases today, including four in Oman and one in Saudi Arabia, according to separate health ministry announcements.

Oman’s health ministry didn’t have many details about the cases, but said they are receiving care at a reference hospital, according to a statement translated and posted by Avian Flu Diary (AFD), an infectious disease news blog. The ministry said the new MERS-CoV (Middle East respiratory syndrome coronavirus) cases raise Oman’s total since 2013 to 18. The country reported its last case in March of 2018.

Meanwhile, Saudi Arabia’s health ministry in its epidemiological week 5 report, noted one more case, which involves a 38-year-old man from the city of Wadi Aldwasir in the south-central part of the country. The man is hospitalized, and an investigation found that he had contact with camels before he got sick.
News Scan for Jan 30, 2019

Camel contact linked to new Saudi MERS case
Saudi Arabia’s Ministry of Health (MOH) reported another case of MERS-CoV today, this time in a man who had contact with camels.

In an update to its epidemiologic week 5 report, the MOH said the patient was a 65-year-old man from Buraydah. He is hospitalized for his MERS-CoV (Middle East respiratory syndrome coronavirus) infection.

In the World Health Organization’s most recent MERS-CoV update, it said that, as of Dec 31, it had received reports of 2,279 MERS-CoV cases since 2012, at least 806 of them fatal.

Saudi officials have now reported 12 MERS cases this month.
Jan 30 MOH report
Saudi Arabia, Oman report more MERS cases

As part of a steady stream of recent MERS-CoV cases in Saudi Arabia, the country reported eight more illnesses over the past few days, including some people infected in healthcare settings, as Oman reported one more illness in its spike in cases.

The latest reports from the Saudi Ministry of Health (MOH) epidemiologic weeks 5 and 6 reports bring the number of MERS-CoV (Middle East respiratory syndrome coronavirus) cases reported so far this year to 22, mostly in Riyadh and Wadi ad-Dawasir.

Healthcare, household contacts infected

One of the two illnesses added to the epi week 5 report involves a 31-year-old man from Al Kharj whose infection is classified as secondary and contracted in a healthcare setting, meaning he acquired it from another patient. But the man also had recent contact with camels.

The other case involves a 62-year-old man from the capital city of Riyadh who had contact with camels before he got sick. Both men are hospitalized.
Saudi Arabia reports more MERS in Wadi ad-Dawasir outbreak

Saudi Arabia’s health ministry today reported seven more MERS-CoV cases, all of them linked to what appears to be a hospital-related outbreak in Wadi ad-Dawasir.

The country has reported a steady rise in Middle East respiratory syndrome coronavirus (MERS-CoV) cases since the first of the year, with 40 reported so far. Of those, 22 cases are from Wadi ad-Dawasir, located in the south-central part of Saudi Arabia. Though many of had secondary healthcare or household exposure, two from the city had recent camel contact.

**WHO monitoring outbreak developments**

Maria Van Kerkhove, PhD, the technical lead for MERS-CoV at the World Health Organization (WHO), said the agency is following the hospital outbreak closely.

She said the transmission patterns are not unusual and that amplification in health settings occurs when cases aren’t identified and isolated early and when infection prevention and control steps aren’t administered properly.
Saudi MERS total grows; WHO details Oman cluster

Over the weekend and through today, the ministry of health (MOH) of Saudi Arabia recorded 10 more cases of MERS, including 7 in an ongoing outbreak in Wadi ad-Dawasir, and the World Health Organization (WHO) shared details about an investigation into 5 recent cases reported from Oman.

**Saudi cases from three different locations**
The latest cases from Saudi Arabia were announced in the MOH’s epidemiologic week 7 report.

In Wadi ad-Dawasir, two case-patients (a 36-year-old and 44-year-old man) contracted Middle East respiratory syndrome coronavirus (MERS-CoV) after camel exposure. They are both hospitalized for their infections. A 37-year-old woman is described as a primary case, and she is currently in home isolation. The other primary case, a 39-year-old man, is hospitalized for his infection.

Two men who acquired MERS in healthcare settings are also in home isolation in Wadi ad-Dawasir. And a 28-year-old man who is a household contact of a case in Wadi ad-Dawasir is in home isolation.
MERS in Saudi Arabia and Oman

February 12, 2019

The spike in Middle East respiratory syndrome coronavirus (MERS-CoV) infections in Saudi Arabia continues with the kingdom’s health ministry reporting seven additional cases yesterday, bringing the total cases for the year to 50.

The town of Wadi Aldwasir has been hit particularly hard reporting 30 cases in just the past two weeks.

Oman has reported five MERS cases in January, the first cases reported there in nearly a year. According to the World Health Organization (WHO), all five laboratory confirmed cases are females from the same family and range in age from 30-59 years. The source of infection in this cluster is under investigation in Oman and four of the five cases appear to be secondary cases resulting from human-to-human transmission.

Including these five additional cases, a total of 16 laboratory confirmed cases of MERS-CoV infection have been reported by Oman since 2013.

Globally, as of 8 February 2019, 2,311 laboratory-confirmed cases of infection with MERS-CoV including at least 811 related deaths have been reported to WHO.
Figure 2. Distribution of confirmed MERS cases by place of probable infection, as of 24 August 2018 (n=2,253)

ECDC. Numbers in the map indicate the total number of local and imported MERS cases. Map produced on: 24 Aug 2018
HOT TOPICS
1. Ebola
2. Influenza
3. Measles
4. MERS
5. Lassa fever
6. WHO top 10 global public health threats

UPDATES
7. Antimicrobial resistance
8. Polio
9. Zika & Yellow Fever
10. Acute Flaccid Myelitis (AFM)
11. Government shutdown & public health
12. Other
Predicted geographical distribution of the rodent *Mastomys natalensis*
**HIGHLIGHTS**

- In the reporting Week 05 (January 28 - February 03, 2019) **sixty-eight** new confirmed cases were reported from Edo(20), Ondo(22), Ebonyi(7), Bauchi(4), Plateau(4), Nasarawa(1), Taraba(3), Benue(1), Kaduna(1), Kwara(1), Oyo(2), Delta(1), and Rivers(1) States with **fourteen** new deaths in Edo(2), Ondo(1), Rivers(1) Plateau(2), Oyo(1), Ebonyi(4), Enugu(1), Taraba(1) and Nasarawa(1)

- From 1st January to 3rd February 2019, a total of 731 suspected cases have been reported from 19 States. Of these, 275 were confirmed positive, 3 probable and 453 negative (not a case)

- Since the onset of the 2019 outbreak, there have been 57 deaths in confirmed cases. Case fatality rate in confirmed cases is **20.7%**

- Nineteen States (Edo, Ondo, Bauchi, Nasarawa, Ebonyi, Plateau, Taraba, FCT, Adamawa, Gombe, Kaduna, Kwara, Benue, Rivers, Kogi, Enugu, Imo, Delta and Oyo) have recorded at least one confirmed case across 51 Local Government Areas - **Figure 1**
Figure 1. Distribution of Confirmed Lassa Fever cases in Nigeria as at 3rd February, 2019
Guinea Reports First Confirmed Case of Lassa Fever

By Ougna Camara
February 3, 2019, 2:02 AM CST

Guinea’s government has reported one case of 35-year-old man with Lassa fever in the central town of Mamou, some 260-kilometers from the country’s capital of Conakry.

An investigative mission will be deployed to the region to support health authorities, the government said on Saturday in statement posted on the website of the National Health Security Agency. No other Lassa fever cases were reported.

Lassa fever is an acute viral hemorrhagic illness, transmitted to humans through contact with food or household items contaminated by infected rodents.
WHO supports five countries to fight lassa fever outbreaks

8 February 2019, Brazzaville – With five countries in Western Africa reporting outbreaks of Lassa fever, the World Health Organization (WHO) has scaled up its efforts to support the region’s response to the disease.

While these outbreaks are occurring during the Lassa fever season in countries where the disease is endemic, the speed of escalation is of concern.

The largest outbreak thus far has affected 16 states in Nigeria. The Nigeria Centre for Disease Control (NCDC) declared an outbreak of Lassa fever on 22 January 2019. The 213 confirmed cases to date, including 42 deaths, mark a significant increase – already a third of the total cases for all of last year, when Nigeria experienced its worst outbreak of Lassa fever. Four health workers have been infected so far in this latest outbreak.

In Nigeria, WHO is scaling up its efforts to support the Federal authorities, NCDC and the affected Nigerian states in responding to the outbreak. An important focus is on early detection and confirmation of suspected cases, providing optimal supportive care and ensuring infection prevention and control measures in designated health care facilities in the affected states. WHO has intensified its technical assistance and is supporting coordination, enhanced surveillance, epidemiological analysis and risk communication. WHO is also mobilizing experts to support case management and infection prevention and control.

A total of 12 cases have been confirmed to date in Benin, Guinea, Liberia and Togo, including two deaths, with more suspected cases being investigated. WHO is assisting health authorities in these countries with contact tracing and providing medical and non-medical supplies and technical and financial resources as needed for case management, risk communication and logistics.
HOT TOPICS
1. Ebola
2. Influenza
3. Measles
4. MERS
5. Lassa fever
6. WHO top 10 global public health threats

UPDATES
7. Antimicrobial resistance
8. Polio
9. Zika & Yellow Fever
10. Acute Flaccid Myelitis (AFM)
11. Government shutdown & public health
12. Other
Ten threats to global health in 2019

1. Air pollution and climate change
2. Noncommunicable diseases
3. Global influenza pandemic
4. Fragile and vulnerable settings
5. Antimicrobial resistance
Ten threats to global health in 2019

6. Ebola and other high-threat pathogens
7. Weak primary health care
8. Vaccine hesitancy
9. Dengue
10. HIV
Anti-vaccine movement 'a top threat to global health in 2019' says WHO

Chris Baynes | Thursday 17 January 2019 16:41

The anti-vaccine movement is one of the worst health threats facing humanity in 2019, the World Health Organisation (WHO) has warned.

Reluctance or refusal to immunise “threatens to reverse progress” made in tackling preventable diseases, the UN health body said.

The warning comes after a 30 per cent spike in measles cases worldwide, including in several countries were the virus had been virtually eliminated.

“The reasons for this rise are complex, and not all of these cases are due to vaccine hesitancy,” the WHO said. “However, some countries that were close to eliminating the disease have seen a resurgence.”

Measles cases hit a record high in Europe last year, with more than 41,000 people infected in the first six months of 2018. Thirty-seven of those died.
HOT TOPICS
1. Ebola
2. Influenza
3. Measles
4. MERS
5. Lassa fever
6. WHO top 10 global public health threats

UPDATES
7. Antimicrobial resistance
8. Polio
9. Zika & Yellow Fever
10. Acute Flaccid Myelitis (AFM)
11. Government shutdown & public health
12. Other
FDA reports major drop in antibiotics for food animals

New data released yesterday by the US Food and Drug Administration (FDA) shows the amount of medically important antibiotics sold for use in food-producing animals in the United States is on the decline.

The FDA report shows that domestic sales and distribution of medically important antibiotics for use in livestock decreased by 33% from 2016 through 2017, and by 43% since sales peaked in 2015. Since 2009, the first year the FDA started collecting and reporting the data, sales have declined by 28%. The totals represent only sales and distribution data and don’t reflect how the drugs were used in animals.

The 2017 summary report is the first issued since the FDA’s new rules on the use of medically important antibiotics in food-animal production were fully implemented. Under Guidance for Industry (GFI) #213, which went into effect Jan 1, 2017, antibiotics that are important for human medicine can no longer be used for growth promotion or feed efficiency in cows, pigs, chickens, turkeys, and other food animals.

In addition, 95% of the medically important antibiotics used in animal water and feed for therapeutic purposes now require veterinary oversight and can no longer be purchased over the counter.
Dermatologists have been identified as the most frequent prescribers of oral antibiotics in medicine, handing out more antibiotics per clinician than any other specialty. But a study today in *JAMA Dermatology* shows that antibiotic prescribing by the specialists has substantially decreased over the past decade.

The study, by researchers with the University of Pennsylvania Perelman School of Medicine and the US Centers for Disease Control and Prevention, found that oral antibiotic prescribing by dermatologists fell by 37% from 2008 through 2016. Much of the decrease, they report, has occurred in the extended courses of antibiotics that are typically prescribed for patients with acne and rosacea to lessen inflammation.

The researchers estimate that the decrease translates to nearly 480,000 fewer antibiotic courses being prescribed in 2016 than in 2008.

But within that good news there was a note of concern, as the researchers also found a nearly 70% increase in antibiotic prescribing by dermatologists to prevent infections after surgical procedures, even though the risk of infection resulting from dermatologic procedures is low and guidelines don’t support prolonged antibiotic courses after surgery.
An international collection of technical experts, government officials, and other key stakeholders has issued a report that identifies knowledge gaps in efforts to address antimicrobial resistance (AMR) in the environment.

The report, which highlights key themes from an April 2018 meeting hosted by the US Centers for Disease Control and Prevention, the UK Science and Innovation Network, and the Wellcome Trust, begins with the premise that scientific evidence shows that antimicrobials and antimicrobial-resistant microbes are present in the environment and can travel through waterways and soil.

The main sources of this environmental contamination are human waste from homes and hospitals, animal waste from farms, pharmaceutical manufacturing waste, and antimicrobial pesticides used in agriculture.

But while several studies in recent years have identified antibiotics, drug-resistant organisms, and resistance genes in agricultural soil, river and lake sediment, tidal estuaries, and wastewater facilities, the authors of the report note that the scale and risk associated with this contamination is not fully understood, nor is its impact on human health.
Data show significant antibiotic overprescribing for kids in ERs

A new study has found that children receive more than 2 million unnecessary antibiotic prescriptions a year in US emergency departments (EDs), with most inappropriate prescribing occurring in nonpediatric EDs. The findings appeared yesterday in the journal Pediatrics.

The study also found that nonpediatric ED clinicians are more likely to prescribe macrolide antibiotics for children and less likely to follow national prescribing guidelines for common pediatric respiratory infections. While these findings were not necessarily surprising, given the amount of antibiotic overprescribing that goes on in pediatric outpatient clinics, the authors say they highlight a significant gap in efforts to promote more judicious use of antibiotics in children.

"There's over 2 million courses of antibiotics prescribed to children in emergency departments that we know are not necessary," lead study author Nicole Poole, MD, MPH, a pediatric infectious disease specialist at Seattle Children's Hospital, told CIDRAP News. "So we need to be thinking about the guidelines that are more relevant to outpatient diagnoses in the emergency department, and how to improve the number of prescriptions that are going out to children from these settings."
Study finds late-career docs prescribe longer antibiotic courses

A large retrospective study of family physicians in Canada has found that prolonged antibiotic treatments are common, especially among physicians in the later stages of their career.

The study, published in *Clinical Infectious Diseases*, looked at antibiotic courses prescribed over the course of a year by more than 10,000 family physicians in Ontario, Canada’s most populous province, and found that more than one third of the courses exceeded 8 days. Physicians in practice more than 25 years were the most likely to prescribe prolonged courses, and, to a lesser extent, physicians in rural areas and those with large pediatric practices.

The findings are significant because numerous studies have shown that shorter antibiotic courses, especially for the type of common bacterial infections frequently treated by family physicians, are just as effective as prolonged courses, associated with fewer adverse effects, and could reduce selection pressure for resistant bacteria.

"Decreasing unnecessary antibiotic consumption through shorter durations of therapy is a potentially effective strategy to reduce bacterial resistance," researchers from the Ontario Public Health and the University of Toronto write in the paper.
Nearly a fourth of outpatient antibiotics unneeded, study finds

New data published yesterday in the *British Medical Journal* indicate that nearly a quarter of all US outpatient antibiotic prescriptions filled by adults and children with private insurance in 2016 were unnecessary, with 1 in 7 filling at least one inappropriate prescription for an antibiotic.

But the authors of the study say the true number of inappropriate antibiotics doled out that year is likely much higher.

The study, conducted by researchers from the University of Michigan Medical School, Brigham and Women's Hospital, and Northwestern University Feinberg School of Medicine, looked at antibiotic prescriptions and associated diagnostic codes for more than 19 million patients with private health insurance and found that 13% of those prescriptions were appropriate and 23% were inappropriate. But the rest were either labelled as "potentially appropriate" or were not associated with a recent diagnostic code—two categories that could also contain many unnecessary antibiotic prescriptions.
UK aims to cut antibiotics 15% in 5-year AMR plan

The UK government today released a new plan to tackle antimicrobial resistance (AMR) that aims to reduce drug-resistant infections, cut human and animal antibiotic use, and provide incentives to pharmaceutical companies for developing new antibiotics.

The 5-year national action plan calls for a 10% reduction in the number of antibiotic-resistant infections in people by 2025, a 15% decrease in human antibiotic use by 2024, and a 25% decrease in the use of antibiotics in food-producing animals by 2020. To encourage development of new antibiotics, the government will test a new payment model that will reimburse pharmaceutical companies based on how valuable their drugs are to the National Health Service (NHS), rather than on the quantity of antibiotics sold.

"Through this plan we are setting out our challenge to ourselves and to other countries to continue our excellent work together to preserve and develop these essential medicines for generations to come and help us address one of the most pressing global health challenges we face this century," Michael Gove, the UK's secretary of state for environment, food and rural affairs, and Matt Hancock, MPhil, health and social care secretary, write in the foreword to the plan.
Allergic to penicillin? Review calls for deeper probe

A paper today in the *Journal of the American Medical Association* recommends evaluation of reported penicillin allergy as an important tool for antimicrobial stewardship.

An estimated 10% of the US population, some 32 million people, have a documented penicillin allergy. In many cases, patients receive the label as children, as penicillin and other beta-lactam antibiotics are frequently prescribed for common pediatric infections. Hives, benign rashes, and gastrointestinal issues are among the most commonly reported reactions.

Yet studies have shown that more than 95% of patients reporting penicillin allergy are not truly allergic to this class of antibiotics, and the incidence of serious anaphylactic reactions is extremely low. Furthermore, in roughly 80% of patients who've had an anaphylactic reaction, the allergy wanes after 10 years.

**Consequences of mislabeling**

When people are labeled as having a penicillin allergy, the clinical consequences can be significant. For one, patients with infections that would typically be treated with penicillin or other beta-lactam drugs instead receive antibiotics that aren't as effective and may be more expensive. Additionally, treatment with broader-spectrum agents can increase the risk of *Clostridium difficile* and other adverse reactions.
WHO: XDR typhoid outbreak in Pakistan tops 5,200 cases

Health officials in Pakistan say an outbreak of extensively drug-resistant (XDR) typhoid that began in 2016 has now affected more than 5,200 people, according to an update from the World Health Organization (WHO).

The circulating strain of XDR *Salmonella enterica* serovar Typhi, which is resistant to five classes of antibiotics, was first reported in the Hyderabad district of Sindh province in 2016 and has been spreading throughout the province since then. After health officials formally agreed to case definitions for non-resistant, multidrug-resistant (MDR), and XDR typhoid, a review of typhoid cases reported from Nov 1, 2016 through Dec 9, 2018 identified 5,274 XDR cases in Sindh province.

The majority of cases (69%) have been reported in Karachi, the capital city of Sindh province, and 27% have been reported in Hyderabad district. Four percent are in other districts of the province. In addition, six cases of XDR typhoid have been reported in people believed to have travelled to Pakistan. One of the travelers is from the United Kingdom, and the other five are from the United States.
ASP Scan (Weekly) for Jan 11, 2019

CDC reports 5 US cases of XDR typhoid infections
Enhanced surveillance has identified five US cases of extensively drug-resistant (XDR) typhoid infections associated with travel to Pakistan, according to a report today from the Centers for Disease Control and Prevention (CDC).

In *Morbidity and Mortality Weekly Report (MMWR)*, the researchers report that, from 2016 through 2018, 29 patients with typhoid fever—a highly infectious illness caused by *Salmonella enterica* serotype Typhi—reported travel to or from Pakistan and had isolates tested for antimicrobial susceptibility. Five of those patients had XDR *Salmonella* Typhi, which is resistant to five classes of antibiotics (chloramphenicol, ampicillin, trimethoprim-sulfamethoxazole, fluoroquinolones, and third-generation cephalosporins). All patients were children aged 4 to 12 years and had traveled to or from Pakistan from late 2017 through mid-2018.

The World Health Organization recently reported that an XDR *Salmonella* Typhi outbreak that began in Pakistan’s Sindh province in 2016 has now affected 5,372 people in Pakistan. It’s the first widespread outbreak of an XDR *Salmonella* Typhi strain to be reported. The WHO has warned that the risk of acquiring XDR typhoid in Pakistan is high because of poor sanitation and hygiene and insufficient access to clean water.

In March 2018, the CDC enhanced surveillance for typhoid fever in the United States by asking state and local health departments to interview every patient with typhoid fever about travel to or from Pakistan and to expedite submission of *Salmonella* Typhi isolates from these patients to CDC.
ASP Scan (Weekly) for Jan 18, 2019

CARB-X provides additional funds for phage lysin to treat Pseudomonas

Contrafict Corporation announced yesterday that it has received an additional $2.3 million in funding over the next 2 years from CARB-X for the development of a phage lysin therapy to treat drug-resistant Pseudomonas aeruginosa infections.

Contrafict, of Yonkers, N.Y., was among the first wave of companies to receive funding from CARB-X (the Combating Antibiotic Resistant Bacteria Biopharmaceutical Accelerator) in March 2017, when it was awarded $2.1 million for development of a lysin that would selectively kill P aeruginosa. Lysins are enzymes produced by bacteriophages, the viruses that infect and destroy bacteria, to cut through the bacterial cell wall. The therapy is one of more than 30 projects targeting drug-resistant bacteria that CARB-X is funding.

"We view this additional funding from CARB-X as continued validation of our novel lysin platform, which underscores the opportunity to combat highly resistant Gram-negative pathogens, considered to be the greatest threats to global health by both the CDC and WHO, with our proprietary lysin candidates," Steven C. Gilman, PhD, chairman and CEO of ContraFect, said in a press release.

Earlier this month, Contrafict announced that another lysin candidate, execebase (CF-301), had shown positive results in a phase 2 clinical trial in patients with Staphylococcus aureus bacteremia, including endocarditis. Execebase, when used in combination with standard-of-care antibiotics, improved clinical outcomes compared with antibiotics alone and demonstrated safety and tolerability. The company said the data support progression to a phase 3 trial.
Public-private effort launched to boost animal antimicrobial stewardship

The Foundation for Food and Agriculture Research (FFAR) this week announced a $15 million investment in the launch of the International Consortium for Antimicrobial Stewardship in Agriculture (ICASA), a public-private partnership to advance research on antimicrobial stewardship in animal agriculture and improve animal health and welfare.

ICASA was established "to accelerate innovation and improve antibiotic stewardship by building the cross-sector partnerships critical to making advances on a broad scale," FFAR said in a news release. ICASA scientists will field-test new technologies and management practices. Ultimately, the consortium aims to publish data that improve animal health and welfare and promote responsible use of antibiotics, FFAR said.

The consortium includes three of the world’s largest meat companies, along with two livestock associations that together represent more than 85,000 producers. Collectively, ICASA member organizations represent about 40% of all beef cattle sold in the United States.

ICASA members are matching FFAR’s initial $7.5 million investment. ICASA projects will initially focus on animal health issues that drive antimicrobial use in beef and pork. ICASA will also support cross-species projects focused on animal health and welfare monitoring, with the aim of boosting knowledge of diseases that drive antibiotic use.

"ICASA has the potential to have extraordinary impact. The collaborative framework brings together exceptional expertise and significant resources to tackle major challenges in livestock production. Working together is critical to improving animal health and welfare and preserving the efficacy of antibiotics for both animals and people," Timothy Kurt, DVM, PhD, scientific program director at FFAR, said in the release.
New estimates aim to define the true burden of superbug infections

By September of 2013, disease had already punished Meredith Littlejohn’s body. A drug-resistant infection was the last thing she needed.

Nearly 10 months earlier, Meredith, a high school senior in St. Louis with college plans and a bright future, had been diagnosed as having acute myeloid leukemia.

After four rounds of chemotherapy, her cancer went into remission, and it looked as though she would be able to resume her path. She attended her senior prom, graduated with her class in the spring, and start planning for her freshman year at Emory University in Atlanta.

But the cancer returned in June, and with more rounds of chemotherapy, Meredith’s immune system became more and more compromised. In August she contracted a fungal infection, which her doctors were able to control only after trying several different combinations of drugs. Then in September the doctors found a *Pseudomonas* infection under her arm.
HOT TOPICS
1. Ebola
2. Influenza
3. Measles
4. MERS
5. Lassa fever
6. WHO top 10 global public health threats

UPDATES
7. Antimicrobial resistance
8. Polio
9. Zika & Yellow Fever
10. Acute Flaccid Myelitis (AFM)
11. Government shutdown & public health
12. Other
News Scan for Dec 21, 2018

Nigeria records one new vaccine-derived polio case
According to the latest weekly update from the Global Polio Eradication Initiative (GPEI), Nigeria recorded a new case of vaccine-derived poliovirus type 2 (cVDPV2), in Katsina state.

The case-patient had an onset of paralysis on Nov 5. The total number of cVDPV2 cases in 2018 in Nigeria has now reached 32.

"The country continues to be affected by two separate cVDPV2 outbreaks, the first centered in Jigawa state with subsequent spread to other states as well as to neighbouring Republic of Niger, and the second in Sokoto state," the GPEI said. "Recent confirmation of spread of one of the cVDPV2 outbreaks, both within Nigeria and internationally, underscores the urgent need to fill remaining vaccination gaps in the ongoing outbreak response, and to optimize the geographic extent and operational quality of mOPV2 response."

Last year Nigeria did not record any cases of polio. Nigeria, along with Afghanistan and Pakistan, is one of three countries in the world where polio transmission remains endemic.
Fourth vaccine-derived polio outbreak emerges in DRC

The World Health Organization (WHO) said yesterday that two new genetically linked circulating vaccine-derived polio type 2 (cVDPV2) cases from Haut-Katanga province in the Democratic Republic of the Congo (DRC) mark the country's fourth distinct outbreak of cVDPV2 since June 2017. So far 42 cVDPV2 have been confirmed, including 20 in 2018.

The new cases from Haut-Katanga's Mufunga-Sampwe district involve an 11-year-old child whose acute flaccid paralysis symptoms began in Oct 6 and a 29-month-old child—a known contact of the first—whose symptoms began on Oct 7.

In response to the ongoing outbreaks, the WHO and partners have taken response steps, including deploying monovalent oral polio vaccine type 2, but operational problems and underimmunization of high-risk populations continue to hamper full implementation, preventing the response from adequately controlling the outbreak and preventing its spread. "The recent emergence of the fourth outbreak of cVDPV2 from Haut Katanga can potentially be attributed to the prior use of mOPV2 and may be related to the response program's current limited capacity to adapt effectively and implement necessary corrective measures in a timely manner," the WHO said in its statement.

Two large campaigns in September and October targeted 12 million children in 16 of 26 DRC provinces with monovalent vaccine. The WHO added that the national risk from the outbreaks is very high and the threat of international spread, especially to the DRC's neighbors, is also high because of circulation near international borders.

Jan 8 WHO statement

In other polio developments, WHO Director-General Tedros Adhanom Ghebreyesus, PhD, just wrapped up a 4-day visit to Afghanistan and Pakistan, and polio eradication was a major agenda item, the WHO said today in a separate statement. The two countries are the only ones that reported wild poliovirus cases in 2018.
News Scan for Jan 11, 2019

Mozambique records 2 cases of vaccine-derived polio, first in 2 years
Mozambique declared an outbreak of circulating vaccine-derived poliovirus type 2 (cVDPV2) after two cases were detected in the Zambezi province. Details of the outbreak are published today in the latest weekly update from the Global Polio Eradication Initiative (GPEI).

These are the first polio cases in Mozambique since January of 2017. The case-patients include a 6-year-old girl with no history of vaccination, and a community contact of that patient. The girl experienced an onset of paralysis on Oct 21, 2018.

"The GPEI and partners are working with country counterparts to support the local public health authorities in conducting a field investigation (clinical, epidemiological and immunological) and thorough risk assessment to discuss planning and implementation of immunization and outbreak response," the GPEI said.

These are the first polio cases GPEI has recorded in 2019.
News Scan for Jan 25, 2019

Pakistan, Nigeria report more polio cases
Pakistan has reported two more wild poliovirus type 1 (WPV) cases, and Nigeria has reported another circulating vaccine-derived polio type 2 case (cVDPV2), according to the latest weekly update today from the Global Polio Eradication Initiative (GPEI). In all three instances, symptom onsets were in December, meaning the cases are counted in 2018 totals.

In Pakistan, the illnesses involve a patient from Lakki Marwat district in Khyber Pakhtunkhwa province who had a Dec 16 paralysis onset and one from Banjour Agency in the Federal Administered Tribal Areas with a Dec 25 paralysis onset. The country now has 12 WPV1 cases for 2018.

Also, there were five positive WPV1 environmental samples in the past week in Pakistan, two from different cities in Khyber Pakhuntnkhwa province, one from Lahore in Punjab province, one from Quetta in Balochistan province, and one from Sindh province.

Nigeria’s latest cVDPV2 case involves a patient from Baruten in Kwara state near the border with Benin who had a Dec 5 paralysis onset, lifting the country’s total to 34 for 2018. In addition, three more environmental samples positive for cVDPV2 were reported in the past week, one from Borno state and two from Kaduna state. Nigeria is experiencing two separate cVDPV2 outbreak.
Distrust of polio vaccine plagues Afghanistan

Many parents in rural areas suspect that polio vaccines are used for spying or contain questionable ingredients.

2 Feb 2018

The Taliban will not target a new vaccination campaign in Afghanistan, according to tribal chiefs and clerics.

However, distrust of the vaccination programme remains rife among the populace and could hinder efforts to eradicate the disease.

After a fake polio vaccination programme was used as cover to search for Osama bin Laden in neighbouring Pakistan, rumours in Afghanistan began to spread that the vaccination is used for spying and that the ingredients are not halal.

In the end, the fake programme may have dealt real harm to Afghanistan's battle against polio.
News Scan for Feb 08, 2019

New polio cases reported from Afghanistan, Pakistan, Niger
In the latest polio developments, Afghanistan and Pakistan have reported new wild poliovirus type 1 (WPV1) cases, their first of 2019, and Niger has reported one circulating vaccine-derived poliovirus type 2 (cVDPV2) case, according to a weekly update from the Global Polio Eradication Initiative (GPEI).

Pakistan's case was reported from Bajour Agency in the Federally Administered Tribal Area in a patient whose paralysis symptoms began on Jan 18. Also, the country reported six more WPV1 environmental positives from samples collected during the first half of January: two from Lahore district, one from Faisalabad in Punjab province, one each from Quetta and Killa Abdulla districts in Balochistan province, in one from DI Kahn in Khyber Pakhtunkhwa.

Afghanistan's latest case was reported from the Spin Boldak district of Kandahar province in a patient whose symptoms began on Jan 4. The detection of a human case follows the recent identification of WPV1 environmental positives in Kandahar and Helmand provinces.

Elsewhere, Niger's latest cVDPV2 case was reported from Magaria district in Zinder province in a patient whose paralysis symptoms began on Dec 5, 2018. The new case brought Niger's cVDPV2 total for 2018 to 10 in an outbreak genetically linked to circulation in Nigeria's Jigawa state.
3 Countries Report Polio Cases in 2019
Poliovirus cases reported by Afghanistan, Niger, Pakistan

February 9th, 2019 – New polio cases continue to be reported in Afghanistan and Pakistan during 2019, according to the February 6, 2019 update from the Global Polio Eradication Initiative (GPEI).

Afghanistan and Pakistan each reported 1 new wild poliovirus type 1 (WPV1) cases.

Additionally, the country of Niger reported 1 circulating vaccine-derived poliovirus type 2 (cVDPV2) case in 2019.

These new cases indicate the polio outbreaks are continuing in these 3 countries. If you are traveling to one of these countries, that local government may require you to show proof of polio vaccination prior to exiting that country.
HOT TOPICS
1. Ebola
2. Influenza
3. Measles
4. MERS
5. Lassa fever
6. WHO top 10 global public health threats

UPDATES
7. Antimicrobial resistance
8. Polio
9. Zika & Yellow Fever
10. Acute Flaccid Myelitis (AFM)
11. Government shutdown & public health
12. Other
A new study published today in *Science* shows that prior dengue infection may have protected some Brazilians from severe Zika infections during the 2015-2016 epidemic in the Americas. The study findings could have major implications for both Zika and dengue vaccine developments.

The research was based on a community prospective study of 1,453 residents of a favela in Salvador, Brazil. The residents of the favela— an urban slum— were already being studied as part of a long-term community health project when Salvador became one of the epicenters of the Zika outbreak.

Initially blood samples collected showed the rapid and pervasive spread of Zika: Samples collected in October of 2014 and March 2015 were almost entirely negative for Zika, but by October 2015, 63% of study participants showed evidence of Zika infection.

Because Salvador is a dengue-endemic region, researchers were also able to assess what, if any, impact previous dengue infections had on a person's susceptibility to Zika. According to the study, 642 samples collected in March of 2015 were tested for markers of prior dengue infection, and 86% of samples showed a previous infection.
More than 400 new yellow fever cases reported in Nigeria
Since the previous update issued on Dec 18, Nigeria has recorded 494 new suspected cases and 31 additional deaths in an ongoing yellow fever outbreak.

According to an update today from the WHO African regional office, there have been 4,004 suspected cases of the virus recorded in Nigeria since September of 2017, including 33 deaths (case fatality ratio 0.8%). Among confirmed cases, the case-fatality rate is 16%.

All 36 of Nigeria’s states have recorded cases, with Edo state recording 46 suspected cases in the last 3 weeks.

"The outbreak in Edo state is occurring close to the state capital, Benin city, which is densely populated with high population movements due to national and international trade. The high population mobility and suboptimal vaccination coverage within Nigeria and in neighbouring countries, represent risk factors for the continued transmission and further spread of the disease," the WHO said.

During the last week of December, more than 1.4 million Nigerians in Edo state and other targeted areas received the yellow fever vaccine as part of a broad campaign to stop the outbreak. Nigeria introduced the yellow fever vaccine into routine immunizations in 2016, but much of the population is still at risk for contracting the mosquito-borne virus.
WHO details yellow fever cluster in Edo state, Nigeria
The WHO today released new details on the cluster of yellow fever cases in Edo state, a Nigerian region about 250 miles east of Lagos.

According to the WHO, from Sep 22, 2018, through Dec 31, 2018, a total of 146 suspected (32 confirmed cases), including 26 deaths (case-fatality rate of 18%), have been reported across 15 of 18 local government areas in Edo.

"The current outbreak of YF in Edo State in Nigeria is unusual in scale and severity, and the number of cases in time and place is very high in the context of the current national outbreak," the WHO said. "The seasonal timing of the outbreak, in a period where many travellers enter the state from other states and countries for the holidays in December–January, adds to the risk for potential spread."

Initially, the recent spike of yellow fever cases in Edo was assumed to be Lassa fever, which is endemic in that region. The cluster of yellow fever cases in the state is part of a broader yellow fever outbreak that has been ongoing in Nigeria since September of 2017.

Despite a recent vaccination campaign, the WHO said overall immunity against yellow fever is low in Edo state, and recommends that all residents and visitors to the region over 9 months of age be vaccinated against the virus.
News Scan for Jan 28, 2019

PAHO: Possible yellow fever outbreak brewing in Brazil
In its most recent update on yellow fever in the Americas, the Pan American Health Organization (PAHO) reported 12 new cases of the disease in Brazil, possibly marking the beginning of the country’s third wave of yellow fever activity in the past 2 years.

Twelve confirmed cases, including 6 deaths, have been reported in Sao Paulo state since the beginning of January. Historically, yellow fever transmission is at its highest rates between December and May, PAHO said.

"Human cases reported during the current 2018-2019 seasonal period in four municipalities in Sao Paulo State, as well as the confirmation of epizootics in the state of Paraná, mark the beginning of what could be a third cycle and a progression of the outbreak towards the Southeast and South regions of the country," PAHO said.

In the 2016-17 yellow fever transmission cycle, Brazil saw 778 yellow fever cases, including 262 deaths. In 2017-18, that number grew to 1,376 cases, including 483 deaths, as the disease spread to regions with low vaccination rates.

Brazil has been using fractional dosing to stretch its supply of yellow fever vaccine and has launched numerous campaigns to vaccinate people in Sao Paulo, Rio de Janeiro, and Bahia states.
HOT TOPICS
1. Ebola
2. Influenza
3. Measles
4. MERS
5. Lassa fever
6. WHO top 10 global public health threats

UPDATES
7. Antimicrobial resistance
8. Polio
9. Zika & Yellow Fever
10. Acute Flaccid Myelitis (AFM)
11. Government shutdown & public health
12. Other
CDC confirms 16 new acute flaccid myelitis cases, including 7 for 2019

The US Centers for Disease Control and Prevention (CDC) today confirmed 16 new cases of the polio-like condition known as acute flaccid myelitis (AFM), boosting the 2018 numbers to 210 cases and bringing 2019’s totals to 7.

Forty-one states have confirmed AFM cases in 2018, which is one more than the CDC reported in its most recent update on Jan 22. Texas has reported the most, with 29. Colorado has 16 cases, Ohio has 13, and Washington state and California have 11. Minnesota and New Jersey have recorded 10.

The condition has been following an every-other-year pattern, but 2019 could change that if the pace continues. The CDC first started tracking the disease in August of 2014, and that portion of the year saw 120 cases. In 2015 the agency confirmed 22 cases, in 2016 there were 149, and 2017 saw 35 cases. The 210 cases confirmed so far for 2018 have set a record.

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

Feb 4 CDC update
Acute flaccid paralysis in Argentina in 2016 linked to enterovirus D68

A study yesterday in *Emerging Infectious Diseases* describes a cluster of 14 suspected cases of acute flaccid myelitis/paralysis (AFM) reported in Buenos Aires from April to August of 2016 and finds a connection between the mysterious disease and enterovirus D68 (EV-D68).

The prospective study analyzed fecal, serum, nasal, and cerebrospinal fluid samples taken from the 14 patients. Six of the 14 were confirmed to have AFP, and 4 of those 6 also tested positive for EV-D68.

The median age of patients with AFM was 3.9 years, and 50% had asthma. All had symptoms of an upper respiratory tract infection in the days prior to AFM symptom onset, which appeared 1 to 11 days after the respiratory symptoms. All confirmed AFM cases showed gray matter lesions on spinal cord imaging.

"Our findings contribute to global evidence of EV-D68 as a possible cause of localized polio-like illness," the authors concluded.

*Jan 2 Emerg Infect Dis* study
News Scan for Jan 04, 2019

**Enterovirus D68 linked to 29 acute flaccid myelitis cases in Europe**

According to a study today in *The Pediatric Infectious Disease Journal*, 29 cases of acute flaccid myelitis (AFM) reported in 12 European countries in 2016 were related to infections with enterovirus D68 (EV-D68).

The study was based on questionnaires sent to 66 virologists and clinicians in Europe in October of 2016. Five cases of AFM linked to EV-D68 were recorded in France, five in Scotland, and three each in Sweden, Norway, and Spain in 2016. Twenty-six of the 29 cases were in children (median age 3.8 years). EV-D68 was detected in 27 of 29 respiratory specimens, 8 stool samples, and 2 cerebrospinal fluid samples.

Two patients died, and only three made a full recovery from the polio-like symmetric flaccid limb weakness, cranial nerve deficits, and bulbar symptoms (related to the medulla oblongata) that are the hallmark of AFM diagnosis, the authors said.

"By activating the 2016 EV-D68 AFM Working Group network, we were able to identify 29 EV-D68–related AFM cases in Europe in 2016, but these probably represent only the tip of the iceberg," the authors said.

Though the association between EV-D68 and AFM has been investigated since 2014, causality has not yet been proven. While enteroviruses are common among children, AFM is a rare, mysterious illness. The authors suggest establishing a European email alert system to help clinicians track any future connections between AFM and EV-D68.

*Jan 4 Pediatr Infect Dis J study*
**UK task force describes 40 recent acute flaccid paralysis cases**
The United Kingdom Acute Flaccid Paralysis Task Force today reported 40 cases between Jan 1, 2018, and Jan 21, 2019, up from 28 reported in December by Public Health England.

Writing in *Eurosurveillance*, the group said the task force was formed in November after PHE began to receive AFP reports and that today’s report spells out their early findings.

Of the 40 cases, 9 involve acute flaccid myelitis (AFM) and 9 patients were positive for enterovirus D68 (EV-D68). Tests excluded poliovirus in all but two cases, and investigations are still underway. Aside from the 9 confirmed AFM cases, 7 more are classified as probable and further testing is pending to classify 19 of the other cases. Half of the patients and most of those with EV-D68 infections are children ages 5 and younger.

Clinically, 22 of the patients had experienced a recent acute respiratory illness. Half had paralysis symptoms in all four limbs. Fifteen patients were admitted to intensive care units, including 12 who needed assisted ventilation. Three of the children still have considerable neurologic problems.

The authors said the UK situation is very similar to the pattern seen in the United States, with the increase in polio-like syndrome cases tracking with EV-D68 circulation.
HOT TOPICS
1. Ebola
2. Influenza
3. Measles
4. MERS
5. Lassa fever
6. WHO top 10 global public health threats

UPDATES
7. Antimicrobial resistance
8. Polio
9. Zika & Yellow Fever
10. Acute Flaccid Myelitis (AFM)
11. Government shutdown & public health
12. Other
Trump criticizes bipartisan border deal but predicts there won’t be another shutdown

By Erica Werner, Sean Sullivan, Damian Paletta and John Wagner
February 12 at 2:37 PM

President Trump said Tuesday he’s not happy with a bipartisan border deal in Congress aimed at averting another government shutdown, but he suggested he could add to it to build his U.S.-Mexico border wall and predicted there will not be another lapse in government funding.

“Am I happy at first glance? The answer is no, I’m not, I’m not happy,” Trump told reporters at the White House as he met with Cabinet members.

“It’s not going to do the trick, but I’m adding things to it and when you add whatever I have to add, it’s all going to happen where we’re going to build a beautiful big strong wall,” Trump said.

A number of Senate Republicans were cognizant of Trump's uneasiness with the deal, but they also noted that he had stopped short of saying it was unacceptable. Trump spoke with Senate Majority Leader Mitch McConnell (R-Ky.) about the deal midday Tuesday, a person briefed on the call said, though the precise contents of the conversation could not be learned.
HOT TOPICS
1. Ebola
2. Influenza
3. Measles
4. MERS
5. Lassa fever
6. WHO top 10 global public health threats

UPDATES
7. Antimicrobial resistance
8. Polio
9. Zika & Yellow Fever
10. Acute Flaccid Myelitis (AFM)
11. Government shutdown & public health
12. Other
Upcoming: Tabletop scenario for CLF members

• We are planning a simulation of a pandemic situation that will occur over a span of two weeks, and will include up to four situation update calls (tentatively scheduled for Sep 2019).
• This unique opportunity will help test your organization’s emergency preparedness and response, and allow members to learn from each other
• Stay tuned for more information!