

Center for Infectious Disease Research and Policy University of Minnesota

## CIDRAP Leadership Forum Infectious Disease BRIEFING June 12<sup>th</sup>, 2019

#### CLF BRIEFING

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- **10.** Foodborne disease
- **11.** Generic drug availability study
- 12. Other



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## Figure 1: Confirmed and probable Ebola virus disease cases by week of illness onset, as of 02 June 2019



Figure 2: Geographical distribution of confirmed and probable Ebola virus disease cases by health area, North Kivu and Ituri provinces, Democratic Republic of the Congo, 02 June 2019





### DRC notes 23 new Ebola cases as another hospital attacked

Filed Under: Ebola; VHF

Stephanie Soucheray | News Reporter | CIDRAP News | Apr 22, 2019

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Over the weekend and through today, the ministry of health in the Democratic Republic of the Congo (DRC) recorded 23 new Ebola cases and 19 deaths, while a Katwa hospital saw a violent attack that left one of the assailants dead.

The totals swell outbreak numbers to 1,340 cases, of which 1,274 are confirmed. The number of deaths rose to 874.

#### Katwa hospital attack

The Katwa attack came 1 day after a hospital attack in Butembo took the life of a World Health Organization (WHO) epidemiologist deployed to the outbreak region. Both Katwa and Butembo have been hot spots of virus activity in the last several months—more than half of all cases reported in recent weeks originated in Katwa.



UN, Martine Perret / Flickr cc



### WHO: 'Notable escalation' of violence in DRC Ebola outbreak

Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | Apr 25, 2019

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April has brought worsening conditions to the ongoing Ebola outbreak in North Kivu province, Democratic Republic of the Congo (DRC), according to the latest disease outbreak news update from the World Health Organization (WHO), as cases continue to mount.

Both community resistance and violent attacks are on the rise in hot spots such as Katwa and Butembo, the WHO said, and a perceived lull in cases only reflects that surveillance activity has been interrupted due to ongoing security threats.



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UN, Beatrice Mategwa / iStock

#### Efforts halted in some areas

"This past week witnessed a notable escalation of security incidents surrounding the Ebola virus disease (EVD) response efforts," the agency said.



### DRC's 23 Ebola cases today top daily record

Filed Under: Ebola; VHF Lisa Schnirring | News Editor | CIDRAP News | Apr 26, 2019 **f** Share 🈏 Tweet **in** LinkedIn 🌄 Email 📑 Print & PDF

The Democratic Republic of Congo (DRC) today said Ebola infections have been confirmed in 23 more people, a record number for one day, coming on the heels of worsening conditions in hard hit areas of North Kivu and Ituri provinces.

The surge of cases, which often happens after attacks on the Ebola response, puts the new outbreak total within striking distance of 1,400 cases, and today the fatality count reached 900. 

 Image: set in set in

World Bank/Vincent Tremeau/Flickr cc

The 23 new cases are from eight different locations, 9 of them in Katwa, one of the main epicenters and the

scene of one of the recent violent episodes that stalled important response activities—including case finding and contact tracing—that are key steps in battling the outbreak. The other new cases are from Mandima (3), Musienene (2), Butembo (2), and one each in Kalunguta, Vuhovi, Komanda, and Mabalako.



### Ebola spreading at record pace in DRC, now 1,466 cases

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Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | Apr 29, 2019

Today the ministry of health in the Democratic Republic of the Congo (DRC) recorded 27 new cases of Ebola, setting a new single-day record for this 9month outbreak on the far eastern edge of the country. Late last week, officials recorded 23 cases in one day, the previous high.

#### Deadliest day

In addition to the 27 cases recorded today, the ministry also recorded 26 deaths—also the highest daily total to date—15 of which took place in the community. Community deaths are linked to further virus transmission, as they can signal unsafe burial practices and contact with a patient's bodily fluids.



World Bank, Vincent Tremeau / Flickr cc

The cases and fatalities raise outbreak totals to 1,466 cases (1,400 confirmed and 66 probable) and 957 deaths. A total of 239 suspected cases are still under investigation.

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# Ebola deaths top 1,000 in increasingly dangerous outbreak

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

Today Mike Ryan, MD, with the World Health Organization (WHO) outlined major response setbacks in trying to contain the ongoing Ebola outbreak in the Democratic Republic of the Congo (DRC)—including more than 100 violent attacks since January—as cases continue to mount and deaths top 1,000.

#### 'Continued intense transmission'

"Every time we have managed to gain control over the virus, we have suffered major security events," Ryan said, as he explained that the situation on the ground in North Kivu and Ituri provinces is the worst it's been in months, marred by community distrust and a growing threat from rebel groups who are using the outbreak to harness political unrest in the region.



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World Bank, Vincent Tremeau / Flickr cc



### DRC warns of new Ebola wave after latest violence

Filed Under: Ebola; VHF Lisa Schnirring | News Editor | CIDRAP News | May 06, 2019 **f** Share **y** Tweet **in** LinkedIn **v** Email **e** Print & PDF

Spasms of insecurity and violence continued to rock Ebola hot spots in the Democratic Republic of the Congo (DRC) outbreak region over the weekend, temporarily halting response activities in Butembo, as the number of new cases reported in recent days grew by 43.

In research developments, a new study on the impact of intravenous (IV) fluid therapy during West Africa's outbreak found no difference in survival at the 28-day mark compared with people who didn't receive it, though the investigators said randomized controlled trials are needed to clarify its impact and role in resource-limited field settings.



UN, Beatrice Mategwa / Flickr cc

#### Unrest and attacks

In Butembo and nearby health areas, a May 4

demonstration by taxi drivers temporarily stopped response activities after the group placed wooden barricades on the main road arteries, the health ministry said yesterday. The protesters also attacked handwashing devices throughout the city.



# With rising cases and dwindling stockpiles, WHO suggests alternative Ebola vaccination strategies

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Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | May 07, 2019

Today SAGE, the World Health Organization's Strategic Advisory Group of Experts, released new guidelines to address several growing concerns about vaccination strategies currently being used in Democratic Republic of the Congo (DRC) Ebola outbreak.

Despite vaccinating more than 111,000 people with Merck's rVSV-ZEBOV, a highly protective unlicensed Ebola vaccine, the outbreak has worsened dramatically in the last month due to violent attacks and a communication breakdown between community members and response workers.



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And cases with no connection to an ongoing transmission chain are increasingly being diagnosed.



### Worries rise over risk of Ebola spread beyond DRC hot zones

Filed Under: Ebola; VHF

Lisa Schnirring | News Editor | CIDRAP News | May 10, 2019 🕴 🕈 Share 🈏 Tweet in LinkedIn 🔀 Email 👨 Print & PDF

The World Health Organization's (WHO's) top official today said he was "profoundly worried" about the rising threat of Ebola spreading to other parts of the Democratic Republic of Congo (DRC) and to neighboring countries, as the country's health ministry today reported 23 new cases.

On Twitter, WHO Director-General Tedros Adhanom Ghebreyesus, PhD, said most operations have resumed in the wake of the most recent attacks, but the disruptions and a testing backlog will lead to a rise in the number of cases reported over the coming days.



World Bank / Vincent Tremeau/ Flickr cc

Since the current outbreak in North Kivu and Ituri provinces began in August, several violent incidents, some with resulting community protest, have disrupted the outbreak response and triggered spikes in new cases.



### DRC Ebola cases top 1,800 amid burial team attacks

Filed Under: Ebola; VHF

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

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Blowing past the 1,800 case mark, the Democratic Republic of the Congo (DRC) reported 39 cases over the weekend as well as a pair of assaults on burial teams, along with 10 new infections today, according to the latest official reports, raising the outbreak's total to 1,826.

In his keynote speech to mark the opening of the World Health Assembly (WHA) in Geneva today, World Health Organization (WHO) Director-General Tedros Adhanom Ghebreyesus, PhD, praised the DRC health minister and its government for their leadership and commitment to ending the outbreak, but added that the risk of spread beyond the two affected provinces remains very high.



UNMEER, Martine Perret / Flickr cc

"We are fighting one of the world's most dangerous viruses in one of the world's most dangerous areas," Tedros said, emphasizing that outbreak responders are also battling insecurity, violence, misinformation, mistrust, and politicization of the event.



# UN names new 'Ebola czar' for growing DRC outbreak

Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | May 23, 2019

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The United Nations (UN) today announced the creation of an emergency Ebola response coordinator, a role that officials hope will tackle the security and political challenges facing the response efforts in the Democratic Republic of the Congo's (DRC's) 10month-long Ebola outbreak.

The UN appointed David Gressly, MBA, currently the UN's deputy special representative for peacekeeping missions in the DRC, to the post. Gressly is expected to work closely with the World Health Organization (WHO).



USO / iStock

"The Ebola response is working in an operating environment of unprecedented complexity for a public health emergency—insecurity and political protests have led to periodic disruptions in our efforts to fight the disease," said Gressly in a WHO statement. "Therefore, an enhanced UN-wide response is required to overcome these operating constraints, and this includes moving senior leadership and operational decision making to the epicenter of the epidemic in Butembo. We have no time to lose."

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## WHO experts say violence preventing end of Ebola outbreak

Filed Under: Ebola: VHF Stephanie Soucheray | News Reporter | CIDRAP News | May 28, 2019

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Today experts from the World Health Organization (WHO) said the ongoing Ebola outbreak in the Democratic Republic of the Congo (DRC) is being fueled by violent security incidents.

"The outbreak could be stopped ... but without a secure environment it's not possible," said Matshidiso Moeti, MBBS, MSc, WHO regional director for Africa, in a teleconference today.

#### Violent incidents have tripled

The past 5 months have seen 174 attacks on health clinics and health workers, alike, Moeti said. The attacks have caused 5 deaths and 51 documented injuries. When compared with the first 5 months of

UN Photo, Martine Perret / Flickr cc

the outbreak, which began last August, that's a tripling of violence, she said.

Over the weekend, a community health worker near Mbalako was killed. The worker was trained to carry out response efforts in Vusahiro village. On the evening of the attack, three houses in the village were also burned.



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### Decline in Ebola cases comes amid fragile security situation

Filed Under: Ebola; VHF Lisa Schnirring | News Editor | CIDRAP News | May 29, 2019

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It its latest weekly Ebola assessment, the World Health Organization (WHO) said Ebola cases have dipped slightly in the past weeks, but it warned that the decline should be interpreted with extreme caution, due to the complex environment and fragile security situation.

Meanwhile, the Democratic Republic of the Congo (DRC) health ministry yesterday reported 6 more cases, pushing the outbreak total to 1,926 cases.

## Encouraging glimmers or ongoing fluctuations?

Part of the decline reflects fewer cases in Katwa, which has been the main Ebola epicenter over the past several weeks. At the same time, smaller hot spots

such as Mabalako, Kalunguta, and Mandima are experiencing rising cases. For example, the WHO notes that Mabalako has reported 23% of newly confirmed cases over the past 3 weeks.



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#### Experts: DRC Ebola outbreak fueled by attacks

Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | May 30, 2019

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By early February 2019, transmission of Ebola in the Democratic Republic of the Congo's (DRC's) Ituri province was largely under control, and declines were observed in Katwa and Butembo, several leading experts on the outbreak wrote yesterday in the *New England Journal of Medicine (NEJM)*.

But a sudden increase in violent attacks on healthcare workers and facilities throughout North Kivu province have caused the outbreak to spike in the last 2 months and become intractable.



MONUSCO/Force/Flickr cc

The experts, including DRC Minister of Health Oly

Ilunga Kalenga, MD, and the World Health

Organization (WHO) African regional director, Matshidiso Moeti, MD, published a special report on the 10-month-long outbreak, the world's second largest.



# Ebola hits 2,000 cases as vaccine OK'd in some pregnant, lactating women

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

Today the Ebola case count in the Democratic Republic of the Congo (DRC) will likely surpass 2,000 cases, a new milestone ushered in by heavy transmission in May, by a good measure the most active month in this outbreak.

Over the weekend, the ministry of health in the DRC recorded 20 new cases of the virus, and reports on Twitter suggest the ministry will announce 14 more cases today. If confirmed, the cases will raise the outbreak total to 2,008 cases.



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World Bank, Vincent Tremeau / Flickr cc

The cases over the weekend originated in Mabalako,

Katwa, Beni, Butembo, and Mangurujipa, all villages and cities in North Kivu province. Sixteen deaths were also recorded over the weekend, bringing the fatality total to 1,339 as of yesterday.



# Aid groups weigh in on DRC topping 2,000 Ebola cases

Filed Under: Ebola; VHF Lisa Schnirring | News Editor | CIDRAP News | Jun 04, 2019

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As expected, the Democratic Republic of the Congo (DRC) health ministry marked an Ebola outbreak milestone of passing 2,000 cases late yesterday, and groups working in the region called for pushing the reset button on the response.

In its daily update yesterday, the DRC said the outbreak passed the 2,000-case bar on Jun 2. Officials said that, although the landmark is concerning, the health ministry sees some positive signs, including a slight improvement in the security situation, though the situation remains volatile and unpredictable.



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The ministry added that most incidents related to community resistance have been resolved by community leaders, sensitizers, and psychosocial experts.

Another positive sign is that the outbreak is still geographically contained, though the risk remains high because of significant population movements. Also, nine earlier-affected health zones have gone 21 days without reporting any new cases.

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### New violence in Beni, DRC, as Ebola lab targeted

Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | Jun 05, 2019

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Thieves robbed an Ebola lab in Komanda yesterday, taking laptops and a GeneXpert device used to test virus samples, the Democratic Republic of Congo's (DRC's) ministry of health said in yesterday's daily report.

No one was injured in the robbery, but in Beni, 12 people were killed on the evening of Jun 3, the DRC said. ISIL, the Islamic State, is claiming responsibility for the attack, and an *Al Jazeera* report suggests this is the group's response to an altercation last week between the Congolese military and the terrorist organization Allied Democracy Forces (ADF) that left 26 ADF members dead.

ISIL also took credit for supporting those ADF fighters.

#### **Response efforts continue**

The DRC said response efforts are still under way in Beni, despite the chaos.



World Bank, Vincent Tremeau / Flickr cc

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#### WHO details some strides in Ebola response

Filed Under: Ebola; VHF Stephanie Soucheray | News Reporter | CIDRAP News | Jun 07, 2019

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Earlier case-contact registration and a drastically reduced rate of nosocomial transmission—those are two of the main improvements the World Health Organization (WHO) has identified in a new assessment of the ongoing Ebola outbreak in the Democratic Republic of the Congo (DRC).

As the outbreak crossed the 2,000-case milestone earlier this week, the WHO has taken stock of the outbreak response and seen some signs of progress toward ending it.

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"A total of 88 confirmed cases were reported each week for the past two epidemiological weeks, down from a peak of 126 cases per week observed in April.

Declines in the incidence of new cases have been most apparent in hotspots such as Katwa, Mandima and Beni health zones," the WHO said.

In April, 31% of cases were transmitted nosocomially—in healthcare settings—by the last week of May, that percentage fell to 9%.



## Large Ebola outbreaks new normal, says WHO

By James Gallagher Health and science correspondent, BBC News

() 7 June 2019

## The world is entering "a new phase" where big outbreaks of deadly diseases like Ebola are a "new normal", the World Health Organization has warned.

Previous Ebola outbreaks affected relatively small numbers of people.

But the Democratic Republic of Congo is dealing with the second largest outbreak ever, just three years after the world's largest one ended.

The WHO said countries and other bodies needed to focus on preparing for new deadly epidemics.



## It might take 2 more years to contain Congo Ebola outbreak, WHO official says



By Susan Scutti, CNN () Updated 1:49 PM ET, Thu June 6, 2019

**(CNN)** — In a "worst-case scenario," the current Ebola outbreak in the Democratic Republic of Congo may take up to two years to end, a World Health Organization official said Thursday.

The outbreak, which began on August 1, is "not under control," Dr. Mike Ryan, executive director of WHO Health Emergencies Programme, said during a press briefing. "We may end up dealing with this outbreak for a long time."



Related Article: Ebola Fast Facts

As of Wednesday, the cumulative number of probable cases of the viral disease -- which causes fever, severe headache and in some cases hemorrhaging -- is 2,025, according to Congo's Ministry of Health. Of the 1,931 confirmed Ebola patients, 1,357 have died while 552 have made a full recovery. On average, Ebola kills about half of those infected, yet the current outbreak has caused fatalities in 70% of those infected.



## WHO: One in four DR Congo Ebola cases could be going undetected

Second-worst Ebola epidemic on record 'certainly not under control', World Health Organization warns.



One-quarter of <u>Ebola</u> infections in the eastern Democratic Republic of the Congo's latest outbreak of the disease may be going undetected, the World Health Organization (WHO) has warned.

Michael Ryan, executive director of WHO's Health Emergencies Programme, said on Thursday the epidemic was "not out of control, but it is certainly not under control", with insecurity and community mistrust hampering emergency responders' efforts.

"We believe we are probably detecting in excess of 75 percent of cases. We may be missing up to a quarter of cases," Ryan said at a press conference in the Swiss city of Geneva.



## DRC daily Ebola totals show possible signs of slowing

Filed Under: Ebola; VHF

Lisa Schnirring | News Editor | CIDRAP News | Jun 10, 2019

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Over the weekend and through today the Democratic Republic of the Congo (DRC) reported 23 new Ebola cases, 2 of them in healthcare workers and one involving a reintroduction of the virus into an earlier affected area.

In a related development, a snapshot from the World Health Organization (WHO) African regional office notes a continued decline in weekly cases, which it says is encouraging.

#### New cases in 8 locations

The 23 new cases are in Mabalako (8), Mandima (4), Butembo (3), Beni (2), Katwa (2), Musienene (2), Mangurujipa (1), and Rwampara (1).



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World Bank, Vincent Tremeau / Flickr cc

The infections lift the overall outbreak total to 2,062 cases, which includes 1,968 confirmed and 94 probable cases.



## Confirmation of case of ebola virus disease in Uganda



**Kampala, 11 June 2019 -** The Ministry of Health and the World Health Organization (WHO) have confirmed a case of Ebola Virus Disease in Uganda. Although there have been numerous previous alerts, this is the first confirmed case in Uganda during the Ebola outbreak on-going in neighbouring Democratic Republic of the Congo.

The confirmed case is a 5-year-old child from the Democratic Republic of the Congo who travelled with his family on 9th June 2019. The child and his family entered the country through Bwera Border post and sought medical care at Kagando hospital where health workers identified Ebola as a possible cause of illness. The child was transferred to Bwera Ebola Treatment Unit for management. The confirmation was made today by the Uganda Virus Institute (UVRI). The child is under care and receiving supportive treatment at Bwera ETU, and contacts are being monitored.

The Ministry of Health and WHO have dispatched a Rapid Response Team to Kasese to identify other people who may be at risk, and ensure they are monitored and provided with care if they also become ill. Uganda has previous experience managing Ebola outbreaks. In preparation for a possible imported case during the current outbreak in DRC, Uganda has vaccinated nearly 4700 health workers in 165 health facilities (including in the facility where the child is being cared for); disease monitoring has been intensified; and health workers trained on recognizing symptoms of the disease. Ebola Treatment Units are in place.

In response to this case, the Ministry is intensifying community education, psychosocial support and will undertake vaccination for those who have come into contact with the patient and at-risk health workers who were not previously vaccinated.





"The young patient - 5- year-old index case of #Ebola died last night. Two more samples were sent to UVRI and have tested positive. We, therefore, have three confirmed cases of #Ebola in #Uganda"-@JaneRuth\_Aceng



WHO Uganda 🤡 @WHOUganda

@MinofHealthUG and the @WHO have confirmed a case of #Ebola Virus Disease outbreak in #Uganda. Although there have been numerous previous alerts, this is the first confirmed case in Uganda during the Ebola outbreak...

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#### With 90 more measles cases, US nears record year

Filed Under: Measles Stephanie Soucheray | News Reporter | CIDRAP News | Apr 15, 2019

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**Note:** This story was updated on Apr 16 to clarify that the 4 cases in Santa Clara, California, are not connected epidemiologically.

The number of measles cases confirmed in the United States since the first of the year grew by 90 in the last week, raising the total to 555 cases, meaning it's likely 2019 will see the most measles cases in the United States since the disease was eliminated in 2000.

As it stands, the 555 cases still falls short of 2014's total of 667 measles cases, which included 383 cases in an Amish community in Ohio.

So far this year 20 states have confirmed measles, including Maryland, which recorded its first case of the year.



CDC / Cynthia S. Goldsmith & William Bellini, PhD



#### Soaring US measles cases near 700, set record

Filed Under: Measles
Jim Wappes | Editorial Director | CIDRAP News | Apr 25, 2019 f Share y Tweet in LinkedIn Sector | CIDRAP News | Apr 25, 2019

A nation priding itself on medical advances has taken a major step backward. US measles cases, which have accelerated in recent weeks, have now reached a new post-elimination high, at 695 infections, the Centers for Disease Control and Prevention (CDC) said yesterday.

It's the nation's highest total in 25 years. And it's not even May.

Measles was declared officially eliminated in 2000 in the United States after total cases didn't even reach 140 for 3 straight years. The previous post-elimination annual high mark was recorded in 2014—for *all* of 2014—with 667 cases.



CDC / Molly Kurnit, MPH

But you would have to go back to 1994, which saw 958 cases, for a more dismal record than this year's. The country, however, is on track to pass that total in the coming weeks.

## CIDRAP Center for Infectious Disease Research and Policy

# US measles cases top 700; states grapple with 9 outbreaks

Filed Under: Measles

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

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After the United States set a post-elimination-era record in measles cases last week, infections continue to pile up, and with 78 cases for the past week, the country has now reached 704 total, the US Centers for Disease Control and Prevention (CDC) said today.

Thirteen outbreaks—defined as three more related cases—have now been reported in 2019 so far, and account for 94% of all cases. Nine outbreaks are currently active, up from six reported the previous week. The CDC today spelled out all the details and implications of this year's surge in cases in an early report in *Morbidity and Mortality Weekly Report (MMWR)* and in its weekly case update.

#### Cases could top 1994 total

In the two reports the CDC said the 78 new cases lift the nation's total so far this year—which isn't even half over—to 704 cases in 22 states as of Apr 26.



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UNICEF / Flickr cc

## STAT

# As measles cases spread, the tinder for more outbreaks is growing

By HELEN BRANSWELL @HelenBranswell / MAY 3, 2019

S. health officials are putting all they have into extinguishing measles outbreaks, many of them raging in cities throughout the country. The reality, though, is that there is a growing amount of tinder afoot, a fact that will make it increasing difficult to battle these blazes, experts fear.

In recent years, the percentage of children who have received one or more doses of measles-containing vaccine has remained relatively stable, according to the Centers for Disease Control and Prevention. But that stability masks the fact that, over the past few decades the overall size of the population that is either unvaccinated or undervaccinated has been growing.

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#### Measles outbreaks continue to grow in US, Europe

Filed Under: Measles
Stephanie Soucheray | News Reporter | CIDRAP News | May 06, 2019
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A large measles outbreak in Ukraine has infected more than 25,000 people and is connected to growing outbreaks in Europe and the record-setting one in the United States.

Both the US Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) released new measles updates today. The CDC recorded 60 new cases of measles last week, raising 2019's total to 764, the highest number seen since 1994.

Meanwhile, the first 2 months of 2019 saw 34,300 measles cases reported in 42 countries of the WHO European Region, including 13 measles-related deaths in Albania, Romania, and Ukraine. Ukraine's more than 25,000 cases account for more than 75% of the European total.

"Although the European Region achieved its highest ever estimated coverage for the second dose of measles vaccination in 2017 (90%)," the WHO said, "countries with measles outbreaks have experienced a



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range of challenges in recent years including a decline or stagnation in overall routine immunization coverage in some cases, low coverage at subnational level or among some marginalized groups and immunity gaps in older populations."



#### Measles surges in Europe and Tunisia; study identifies at-risk US locations

Filed Under: Measles

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

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Countries around the world are seeing a resurgence of measles cases this spring, and international travel guarantees outbreaks don't stay isolated to one community for very long. That's the key takeaway from studies and reports published today that look at ongoing outbreaks in Europe, Africa, and the United States.

#### WHO boosts measles response in Europe

Yesterday, the World Health Organization's (WHO) European regional office announced it was stepping up outbreak response across the continent, where more than 100,000 measles cases and 90 measlesrelated deaths have been recorded since January 2018.



James Willamor/ Flickr cc

"We have observed an unprecedented upsurge in people sick with this preventable disease, and too many have lost their lives to it," said Dorit Nitzan, MD, acting regional emergency director at the WHO Regional Office for Europe. "This is unacceptable and we need to be bolder and scale up our response to the next level. I am proud to see that different parts and levels of WHO are intensifying their combined efforts to stop these outbreaks."



### US measles cases pass 800, on track for record year

Filed Under: Measles

Lisa Schnirring | News Editor | CIDRAP News | May 13, 2019

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With 75 more measles cases reported in United States over the past week, the number of infections topped 800, putting this year on pace to pass the total for 1994, the US Centers for Disease Control and Prevention (CDC) said today in its weekly update.

In other measles developments, Toronto health officials announced two travel-related measles cases and said investigations are underway into both.

#### Maryland added to outbreak list, earlier outbreaks add more cases



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Manjurul/ iStock

The new cases boost the current US total to 839 from 23 states, with many of the cases linked to 10 outbreaks in seven different states: New York, Michigan, New Jersey, California, Georgia, Maryland, and Pennsylvania.

The modern record of 963 cases occurred in 1994, the year the federally funded Vaccines for Children program began, an event that stabilized the number people vaccinated against the disease and set the stage for measles elimination in 2000.


## More US measles cases, links to international travel noted

Filed Under: Measles Stephanie Soucheray | News Reporter | CIDRAP News | May 16, 2019

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International travel brought the measles virus to Orthodox Jewish communities in New York and New Jersey and to Washington state, according to two new reports from officials with the Centers for Disease Control and Prevention (CDC) and state health departments published in today's *Morbidity and Mortality Weekly Reports (MMWR)*.

In addition, officials Oklahoma have reported the state's first case of the year, while Washington and Pennsylvania added to their case totals.



Mike Blyth / Wikimedia Commons

#### Low vaccination rates in NY, NJ

The first *MMWR* report details outbreaks in religious communities in Rockland County, New York, and Ocean County, New Jersey. In both outbreaks, unvaccinated travelers reported recent travel in Israel, where an outbreak of about 3,150 measles cases is ongoing, the authors said.



## US measles cases top record, putting elimination status at risk

Filed Under: Measles

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

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The US Centers for Disease Control and Prevention (CDC) said today that 971 cases of measles have been reported this year, topping the 1994 modern-record level, and it warned that if a pair of large outbreaks in and around New York City continue over the summer and fall, the United States could lose its measles elimination status.

In an email statement, the CDC said the US measles elimination goal—to stop continuous local transmission—was first announced in 1963, and it took until 2000 for the nation to achieve it, which was a monumental task. Loss of measles elimination status



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would be a blow to the nation and erase the hard work of all public health levels, it added.

#### Two large outbreaks weigh heavily

Outbreaks in New York City and nearby Rockland County, both centered in Orthodox Jewish communities, have continued for nearly 7 months and between them have totaled 804 cases so far, according to the latest city and county updates.

# STAT

# Measles outbreaks put U.S. at risk of losing prized 'elimination' status

By HELEN BRANSWELL @HelenBranswell / JUNE 4, 2019

ith two large and still growing outbreaks in New York pushing the country's measles count to a quarter-century high, public health officials are starting to grapple with an unpleasant prospect.

The Rockland County and Brooklyn outbreaks have dragged on for eight months. If transmission from either of those outbreaks continues until late September, the United States will likely lose a hard-fought and prized status — that of a country deemed to have "eliminated" measles.

And if that happens — Venezuela and Brazil are the only other countries in the Americas where measles is considered endemic, or constantly circulating — the implications could be profound, experts say.



# Experts urge vaccination as US measles cases top 1,000

Filed Under: Measles; Childhood Vaccines Jim Wappes | Editorial Director | CIDRAP News | Jun 06, 2019

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Federal officials yesterday said US measles cases have reached 1,001, the first time since 1992 that cases have been in quadruple figures, while experts continued to urge vaccination and underscored the safety of the vaccine.

Health and Human Services (HHS) Secretary Alex Azar said in an HHS news release, "We cannot say this enough: Vaccines are a safe and highly effective public health tool that can prevent this disease and end the current outbreak."



LightFieldStudios / iStock

#### He added, "The Department of Health and Human

Services has been deeply engaged in promoting the safety and effectiveness of vaccines, amid concerning signs that there are pockets of undervaccination around the country. The 1,000th case of a preventable disease like measles is a troubling reminder of how important that work is to the public health of the nation."

## The New York Times

# Measles Outbreak Now at 880 Cases, With Fastest Growth Still in New York

Warming weather usually slows transmission of the virus, but it is not clear that this outbreak is fading, experts said.

May 20, 2019

There have now been 880 measles cases reported in this year's outbreak, already the largest since 1994, federal health officials said on Monday.

An additional <u>41 cases were reported last week</u>, according to the Centers for Disease Control and Prevention. Of those, 30 were in New York State, which is having the country's most intense outbreak, largely in Orthodox Jewish communities.

Most of those new cases were in New York City, and nine were in suburban Rockland County.



# Number of Measles Cases Reported by Year

2010-2019\*\*(as of June 6, 2019)





## Measles Cases in 2019

From January 1 to June 6, 2019, 1,022\*\* individual cases of measles have been confirmed in 28 states. This is an increase of 41 cases from the previous week. This is the greatest number of cases reported in the U.S. since 1992 and since measles was declared eliminated in 2000.



# STAT

## As Americans shun the measles vaccine, the residents of Idjwi are dying to get it

By JACQUES SEBISAHO / JUNE 6, 2019

JWI ISLAND — From my home in Idjwi, an island in Lake Kivu between the Democratic Republic of Congo and Rwanda with a population of 300,000, I've been watching the U.S. measles outbreak with a mixture of astonishment and incredulity.

The U.S. outbreak, with nearly <u>1,000 reported cases</u> so far, is due in large part due to parents who have not vaccinated their children against this highly contagious disease. In Idjwi, many parents would give anything for their children to receive a measles vaccination, because they know all too well what can happen to unvaccinated children.

My wife and I run Amani Global Works, a nonprofit organization designed to serve as a bridge from the fractured medical care available in Idjwi to a modern health care system, and also to build defenses against epidemics through integrated primary care. Despite the island's relatively small population, we have seen more than 1,500 cases of measles at our hospital. The real figure is surely much higher, since most people can't access the hospital. The known death toll is 100, and rising.

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





Notes: Based on data received 2019-05 - Data Source: IVB Database - This is surveillance data, hence for the last month(s), the data may be incomplete.

## Number of Reported Measles Cases (6M period)



Top 10*					
Country	Cases				
Madagascar	84765				
Ukraine	56094				
India**	19544				
Nigeria	10610				
Brazil	8663				
Philippines	7518				
Yemen	6779				
Kazakhstan	5902				
Thailand	5784				
Venezuela (Bolivarian Republic of)	5668				



Notes: Based on data received 2019-05 - Surveillance data from 2018-10 to 2019-03 - \* Countries with highest number of cases for the period \*\*WHO classifies all suspected measles cases reported from India as measles clinically compatible if a specimen was not collected as per the algorithm for classification of suspected measles in the WHO VPD Surveillance Standards. Thus numbers might be different between what WHO reports and what India reports.





#### Figure 1. Number of measles cases by country, EU/EEA, March 2019 (n=1 548)

Produced 26 Apr 2019 using ECDC map maker: https://emma.ecdc.europa.eu



## 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



#### **Measles immunisation rates have fallen in 12 EU countries** *Percent of children covered with two shots of the measles vaccine (%)*



\*Or closest year for which data is available \*\*Ireland data is for first shot of measles vaccine



# How the battle against measles varies around the world

Conflict, inequality and skepticism limit global vaccine coverage BY SUJATA GUPTA 6:00AM, MAY 21, 2019

The World Health Organization's goal was lofty but achievable: eliminate measles from five of the world's six regions by 2020. But recent outbreaks — even in places where elimination had been achieved — are making that goal a distant dream.

In the first four months of 2019, 179 countries reported 168,193 cases of measles. That's almost 117,000 more cases reported during the same period last year. Actual numbers are probably much higher; the WHO estimates that only 1 in 10 cases are reported. With this uptick, none of the regions will meet the 2020 goal, says pediatrician Ann Lindstrand, vaccine lead for immunization systems at the WHO in Geneva. COMMUNIQUE DE PRESSE

Ministère de la Santé



MIN SANTE - PRESS RELEASE - JUNE 10, 2019

### Special statement by His Excellency the Minister of Health concerning the measles epidemic in the Democratic Republic of Congo

#### Dear compatriots,

Since the beginning of 2019, we have seen an increase in the number of suspected cases of measles with a total of 87,000 suspected cases until week 20 with a lethality estimated at 1.8%. The INRB laboratory confirmed 677 measles cases in 516 health areas, located in 83 health zones in 23 provinces of the country.

This situation is all the more worrying because it represents an increase of more than 700%, compared to the epidemiological situation for the same period in 2018. For the whole of 2018, the country had notified 65,098 suspected cases of measles, of which 2,908 cases were investigated, of which 961 were confirmed with a lethality of 1.3%. There were 18 provinces out of 26 (69%) that had each registered at least one health zone in a measles epidemic.

# Times LIVE

# DRC health minister declares measles epidemic, urges mass vaccinations

11 June 2019 - 14:50 BY AFP

Democratic Republic of Congo's (DRC's) health minister has declared an epidemic of measles, with the country already struggling to contain the outbreak of deadly Ebola disease since last August.

Medical teams have confirmed 677 cases of measles among 87,000 suspected cases in 23 provinces, Oly Ilunga Kalenga said in a statement on Monday.

The tally represents a seven-fold increase on the same period in 2018, he added. He urged parents to vaccinate their children.

In April, 2.24 million children aged between six and 59 months were vaccinated over four days, and another immunisation campaign covering 1.4 million children will be launched "in the coming days," he said.

### An Outbreak of Measles at an International Sporting Event with Airborne Transmission in a Domed Stadium

Kristen R. Ehresmann, Craig W. Hedberg, Mary Beth Grimm, Cheryl A. Norton, Kristine L. MacDonald, and Michael T. Osterholm

Acute Disease Epidemiology Section and Acute Disease Prevention Services Section, Minnesota Department of Health, Minneapolis

An outbreak of measles occurred in conjunction with the International Special Olympics Games in the Minneapolis-St. Paul metropolitan area during July 1991. Sixteen outbreak-associated cases of measles were reported among US residents from seven states, with 9 additional cases resulting from subsequent transmission. The primary case was a track and field athlete from Argentina. Transmission occurred in three settings: the opening ceremonies in a domed stadium, track and field events, and first aid stations. Eight secondary cases had their only potential exposure at the opening ceremonies; 2 of these cases were unrelated spectators sitting in the same section of the upper deck >30.5 m above the athlete's entrance. These findings demonstrate that the risk of indigenous measles transmission associated with international events in the United States must be considered, even in areas without recent measles activity. Moreover, the dynamic airborne transmission of measles illustrates the potential for transmission in the absence of a recognized exposure.

International sporting events provide the potential for efficient and widespread transmission of measles. Athletes and

Received 3 June 1994; revised 21 September 1994.

Presented in part: 32nd Interscience Conference on Antimicrobial Agents and Chemotherapy, Anaheim, California, October 1992 (abstract 115306).

Reprints or correspondence: Kristen Ehresmann, Acute Disease Epidemiology, Minnesota Department of Health, 717 Delaware St. S.E., P.O. Box 9441, Minneapolis, MN 55440-9441.

The Journal of Infectious Diseases 1995;171:679-83 © 1995 by The University of Chicago. All rights reserved. 0022-1899/95/7103-0023\$01.00 spectators from countries where outbreaks are occurring or where measles is endemic may travel during their incubation period when they are infectious, resulting in exposure to people from areas where the disease is uncommon. Mass gatherings of spectators, trainers, and medical support personnel further increase the risk of transmission to susceptible persons in a confined environment [1–4]. The International Special Olympics (ISO) Games were held in the Minneapolis–St. Paul (Twin Cities) metropolitan area 19–26 July 1991; 6058 athletes from all 50 states and 93 nations participated. The games also were attended by 40,000 support staff and







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

Total cases	Year-to-date 2019		Year-to-dat	Year-to-date 2018		Total in 2018	
	WPV	cVDPV	WPV	cVDPV	WPV	cVDPV	
Globally	29	12	12	16	33	104	
—In Endemic Countries	29	8	12	2	33	34	
—In Non-Endemic Countries	0	4	0	14	0	70	



### Case breakdown by country

Countries	Year-to-date 2019		Year-to-d	Year-to-date 2018		)18	Onset of paralysis of most recent case	
	WPV	cVDPV	WPV	cVDPV	WPV	cVDPV	WPV	cVDPV
Afghanistan	8	0	9	0	21	0	8-May-2019	NA
Democratic Republic Of The Congo	0	1	0	8	0	20	NA	8-Feb-2019
Indonesia	0	0	0	0	0	1	NA	27-Nov-2018
Mozambique	0	0	0	0	0	1	NA	21-Oct-2018
Niger	0	1	0	0	0	10	NA	3-Apr-2019
Nigeria	0	8	0	2	0	34	NA	29-Mar-2019
Pakistan	21	0	3	0	12	0	19-May-2019	NA
Papua New Guinea	0	0	0	2	0	26	NA	18-Oct-2018
Somalia	0	2	0	4	0	12	NA	21-Apr-2019



# Polio: Statement of the Twenty-first IHR Emergency Committee

#### **Regarding the International Spread of Poliovirus**

29 May 2019 | Statement | Geneva

The twenty-first meeting of the Emergency Committee under the International Health Regulations (2005) (IHR) regarding the international spread of poliovirus was convened by the Director-General on 14 May 2019 at WHO headquarters with members, advisers and invited Member States attending via teleconference, supported by the WHO secretariat.

The Emergency Committee reviewed the data on wild poliovirus (WPV1) and circulating vaccine derived polioviruses (cVDPV). The Secretariat presented a report of progress for affected IHR States Parties subject to Temporary Recommendations. The following IHR States Parties provided an update on the current situation and the implementation of the WHO Temporary Recommendations since the Committee last met on 19 February 2019: Afghanistan, DR Congo, Indonesia, Nigeria, Pakistan and Somalia.



## Wild poliovirus

The Committee is gravely concerned by the significant further increase in WPV1 cases globally in 2019, particularly in Pakistan where 15 cases have already been reported. In Pakistan transmission continues to be widespread, as indicated by the number of positive environmental isolates in many areas of the country, and the proportion of samples that detect WPV1 is rising. The recent cluster of cases in Lahore also indicates that vulnerabilities still exist outside the high-risk corridors. Notably, the increased rate of infection during what is usually the low season may herald even higher rates of infection in the coming high season unless urgent remedial steps are taken. The committee was very concerned about attacks on vaccinators and on the police protecting them. The increasing refusal by individuals and communities to accept vaccination also needs to be actively addressed. While the committee understood that the recent elections and political transition may have adversely affected delivery of the polio program, it is now essential that the new government renews its efforts, noting that the eradication program in the country is no longer on-track.



### Vaccine derived poliovirus

The multiple cVDPV2 outbreaks on the continent of Africa are as concerning as the WPV1 situation in Asia. The emergence of new strains of cVDPV2 in areas where mOPV2 has been used, the recent spread of cVDPV2 into southern Nigeria, including the densely populated Lagos region, and evidence of missed transmission in Nigeria and Somalia suggests that the situation continues to deteriorate. Insufficient coverage with IPV exacerbates the growing vulnerability on the continent to cVDPV2 transmission. Early detection of any international spread from the five currently infected countries and prioritized use of mOPV2 is essential to mitigate further depletion of the limited mOPV2 supply. Repeatedly, cases have occurred in border districts (in Nigeria, close to Benin, in DR Congo close to Angola, in Somalia, close to Ethiopia, and in Mozambique, close to Malawi).

The cVDPV1 outbreaks in PNG and Indonesia and cVDPV3 in Somalia highlight the gaps in population immunity due to pockets of persistently low routine immunization coverage in many parts of the world. However, these outbreaks seem to pose a lesser risk of international spread, as bOPV vaccine is already available in the country, and available for traveler vaccination, and global population immunity is far higher than for type 2. It appears likely there has been missed transmission of cVDPV1 in Indonesia although no evidence so far that the virus has spread beyond Papua. Large inaccessible areas of Somalia are a significant constraint on achieving interruption of transmission, exacerbated by large nomadic population movements.

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#### Number of specimens positive for influenza by subtype in the northern hemisphere



## News Scan for May 28, 2019

#### WHO: Flu on the rise in Southern Hemisphere

Across most of the temperate zone of the Southern Hemisphere influenza detections are rising, according to the latest global flu update from the World Health Organization (WHO).

Australia, New Zealand, and South Africa saw an increase in influenza A (H3N2) activity, while South America has seen mostly H1N1. Overall, Oceania and Australia reported more influenza-like illness (ILI) detections than this time last year, a trend also seen in some countries in South America.

Flu activity continues to decrease throughout much of the Northern Hemisphere, including North America and most of Asia.

Globally, 57% of all lab-confirmed flu specimens tested in recent weeks were typed as influenza A, and 43% as influenza B. Of the subtyped influenza A viruses, the WHO said, 30.9% were H1N1 and 69.1% H3N2.

May 27 WHO update

#### Percentage of respiratory specimens that tested positive for influenza By influenza transmission zone

Status as of 07 June 2019



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

Data Source: Global Influenza Surveillance and Response System (GISRS), FluNet (www.who.int/flunet) World Health Organization



#### Countries, areas or territories in the temperate zone of the southern hemisphere

- Increased influenza detections were reported from countries in the temperate zone of the southern hemisphere.
- In Oceania, influenza activity increased across the continent, with influenza A(H3N2) being the dominant subtype. In Australia, influenza like illness (ILI) and influenza percent positive increased and were higher compared to the same period in previous years. Influenza A(H3N2) was the most frequently detected virus, followed by influenza B. Influenza season started earlier also in New Zealand, with influenza A(H3N2) and B (Victoria-lineage) viruses detected in similar proportions. Decreased influenza detections of predominantly influenza A(H1N1)pdm09 viruses were reported in New Caledonia.
- In South Africa, the 2019 influenza season also appeared to have started earlier than previous years. ILI and influenza detections continued to increase with influenza A(H3N2) viruses predominating.
- In South America, a sharp increase of influenza positivity and ILI was reported in Chile, with influenza A(H1N1)pdm09 viruses most frequently detected. Influenza detections reports remained low in Argentina, Brazil, Paraguay and Uruguay.

# Flu vaccine shortage amid run on private market pharmacy supplies

By **Kate Aubusson** and **Liam Mannix** May 29, 2019 – 11.34am

Australian pharmacies are running out of the flu vaccine amid unprecedented numbers of people getting immunised against the infection.

The federal and state-funded free flu vaccines are still available from GPs for the most at-risk groups (including young children, pregnant women and the elderly) and their supply is secure, health authorities confirmed on Wednesday.

But pharmacies across Australia have run out - or are running very low - on flu vaccines for the rest of the population.

Customers at several pharmacies have been told that there are no more flu vaccines left in Australia, or to hurry in and pick up one of their few remaining doses.

# Effectiveness of the Neuraminidase Inhibitors: The Supporting Evidence Increases

#### Arnold S. Monto Published: 20 May 2019

The neuraminidase inhibitors (NAIs) zanamivir and oseltamivir were the first in that class of influenza antivirals to receive approval by the Food and Drug Administration, with both approved at the turn of the last century [1, 2] The regulatory approvals, for both prophylaxis and treatment of uncomplicated influenza, occurred after standard review of studies. The 2 drugs target nearby sites in the enzymatically active pocket of the virus but are very different in their route of administration and pharmacokinetics [1, 2]. Despite these differences, the results of the clinical trials of both were remarkably similar in terms of the characteristics of prophylactic efficacy and of treatment effects. Recruitment of cases to the treatment studies was based on clinical criteria but was limited to the influenza season; these cases were the intent-to-treat population [3-5]. The studies were done before use of polymerase chain reaction analysis had become accepted for influenza diagnosis, so the standard method of detecting the infecting virus was by cell culture. To avoid misclassification, the definition of infection in most studies also included a rise in the hemagglutination-inhibiting antibody titer. Analysis was performed for the intent-to-treat population, as well as only for those who were infected, with the latter performed to estimate the actual effect of treatment. The clinical end point was referred to as "alleviation" of major symptoms of influenza-that is, a shortened duration of illnesses in individuals with uncomplicated disease at onset. Although not part of the primary outcome of the studies, attempts were made in secondary analyses to determine whether there was any reduction in the frequency of complications, such as respiratory infections requiring antibiotics; the antibiotic requirement was included to increase the validity of what was, in most cases, a clinical diagnosis. These diagnoses, as well as hospitalization, were relatively infrequent, as would be expected in studies of uncomplicated influenza, but there was significant reduction in the frequency of these complications both for zanamivir recipients and oseltamivir recipients [6-8].

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## UN report calls for urgent action against antimicrobial resistance

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

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There is no time to wait.

That's the conclusion of a report out today from the United Nations (UN) Interagency Coordination Group (IACG), a panel of global experts formed to provide guidance and ensure sustained global action on antimicrobial resistance (AMR).

The report warns that, unless urgent action is taken to address AMR, global deaths from drug-resistant infections could rise from the current estimate of 700,000 a year to 10 million a year by 2050, and the economic impact could be similar to the 2008 global financial crisis, with 24 million people being forced into extreme poverty by 2030.



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Emphasizing a One Health approach, the report calls on UN member states to accelerate national response plans to the AMR crisis, increase and encourage investment in development of new antibiotics and programs to combat drug resistance, collaborate with civil society groups and other stakeholders, and strengthen accountability and global governance.



## USDA spotlights high antibiotic use in pigs, cattle

Filed Under: Antimicrobial Stewardship Chris Dall | News Reporter | CIDRAP News | May 28, 2019

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Two new reports from the US Department of Agriculture (USDA) provide a sense of the extent of antibiotic use and stewardship among US livestock producers.

The two reports from the USDA's National Animal Health Monitoring System examine how antibiotics were used on beef feedlots and large swine operations in 2016. That was the last year before the Food and Drug Administration (FDA) implemented a new policy preventing use of medically important antibiotics for growth promotion in food-producing animals and requiring veterinary oversight for the use of medically important antibiotics.



dusanpetkovic/iStock

The data from the two reports show that 87.5% of feedlots and 95.5% of swine operations gave cattle and pigs any antibiotics in feed, water, or by injection in 2016. Just over 90% of swine operations gave pigs medically important antibiotics, while 56% of feedlots used medically important antibiotics.


### Investors push restaurant chains to cut antibiotics in meat supply

Filed Under: Antimicrobial Stewardship Chris Dall | News Reporter | CIDRAP News | May 21, 2019

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A new report from a global coalition of investors suggests the world's largest fast food and casual dining companies are getting the message about their role in addressing antibiotic resistance.

Three years after it began asking companies to establish a comprehensive antibiotics policy to phase out routine use of antibiotics in livestock, poultry, and seafood supply chains and provide clear targets and timelines, the Farm Animal Investment Risk & Return (FAIRR) coalition says 17 out of 20 companies now have publicly available policies, while 2 have internal policies and 1 is developing a policy. In addition, 13 of the 20 companies are now focused on reducing or prohibiting routine use of either all antibiotics or medically important antibiotics in their supply chains.

The FAIRR coalition, which includes 74 institutional investors that manage nearly \$5 trillion in combined assets, first began engaging with companies in 2016, when it sent letters to 10 of the largest publicly listed companies in the fast food and casual dining sectors following a review that found the companies were not



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Compassion in World Farming / Flickr cc

acknowledging their role in addressing antibiotic resistance. Ten more publicly listed companies were targeted in 2017. By 2018, all targeted companies had recognized the need to limit antibiotic use in their supply chains.

### The New York Times

### Citrus Farmers Facing Deadly Bacteria Turn to Antibiotics, Alarming Health Officials

In its decision to approve two drugs for orange and grapefruit trees, the E.P.A. largely ignored objections from the C.D.C. and the F.D.A., which fear that expanding their use in cash crops could fuel antibiotic resistance in humans.

#### By Andrew Jacobs

May 17, 2019

ZOLFO SPRINGS, Fla. — A pernicious disease is eating away at Roy Petteway's orange trees. The bacterial infection, transmitted by a tiny winged insect from China, has evaded all efforts to contain it, decimating Florida's citrus industry and forcing scores of growers out of business.

In a last-ditch attempt to slow the infection, Mr. Petteway revved up his industrial sprayer one recent afternoon and doused the trees with a novel pesticide: antibiotics used to treat syphilis, tuberculosis, urinary tract infections and a number of other illnesses in humans.

### The New York Times

## Warning of 'Pig Zero': One Drugmaker's Push to Sell More Antibiotics

Overuse of antibiotics in livestock has given rise to drugresistant germs. Drugmakers say they want to be part of the solution. But a recent campaign urged farmers to administer the drugs to healthy animals daily.

By Danny Hakim and Matt Richtel

June 7, 2019

Facing a surge in drug-resistant infections, the World Health Organization issued <u>a plea to farmers</u> two years ago: "Stop using antibiotics in healthy animals."

But at last year's big swine industry trade show, the World Pork Expo in Des Moines, one of the largest manufacturers of drugs for livestock was pushing the opposite message.

"Don't wait for Pig Zero," warned a poster featuring a giant picture of a pig peeking through an enormous blue zero, at a booth run by the drugmaker Elanco.

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# CIDRAP Center for Infectious Disease Research and Policy

### Indian government confirms Nipah virus in Kerala man

Filed Under: Nipah Stephanie Soucheray | News Reporter | CIDRAP News | Jun 04, 2019

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The Indian government today confirmed that a 23year-old man from Kerala has a Nipah virus infection, and another 86 case contacts are being monitored for the deadly disease, according to the *Deccan Chronicle*.

Officials said the patient, a college student, is hospitalized and in stable condition. They also said two of the case contacts have fevers, and two nurses who took care of the 23-year-old were also experiencing fevers and sore throats.

Early symptoms of Nipah are similar to the flu, with some cases quickly progressing to seizures and deadly encephalitis. According to the World Health Organization (WHO), Nipah's case-fatality rate is between 45% and 75%.



Cloudtail the Snow Leopard / Flickr cc

#### No known exposure

In May 2018, 17 people in Kerala died from Nipah in an outbreak connected to infected fruit bats found in a family farm's well.

#### A Research and Development (R&D) Roadmap for Nipah Virus

Kristine A. Moore, MD, MPH<sup>1,2</sup> Angela J. Mehr, MPH<sup>1</sup> Julia T. Ostrowsky, MSc<sup>4</sup> Rebecca A. Johnson, PhD, MPH<sup>4</sup> Michael T. Osterholm, PhD, MPH<sup>4</sup> Virginia Benassi, LLM, MA<sup>3</sup> Josephine P. Golding, PhD<sup>4</sup> Kori Cook, MPH<sup>4</sup> Marie-Pierre Preziosi, MD, PhD<sup>3</sup> The Nipah Virus R&D Roadmap Taskforce<sup>5</sup>

'Center for Infectious Disease Research and Policy, University of Minnesota; Minneapolis, Minnesota, USA

<sup>2</sup>Contact information for Dr. Moore: Center for Infectious Disease Research and Policy, C315 Mayo Memorial Building, MMC 263; 420 Delaware Street, SE, Minneapolis, MN 55455, 612-626-6770; kanoore@umr.edu

3World Health Organization; Geneva, Switzerland

\*Wellcome Trust; London, United Kingdom

Nipah Virus WHO R&D Taskforce members:

#### A Research and Development (R&D) Roadmap for Ebola and Marburg Viruses

Kristine A. Moore, MD, MPH<sup>12</sup> Julia T. Ostrowsky, MSc<sup>4</sup> Angela J. Mehr, MPH<sup>4</sup> Rebecca A. Johnson, PhD, MPH<sup>4</sup> Michael T. Osterholm, PhD, MPH<sup>4</sup> Virginia Benassi, LLM, MA<sup>3</sup> Josephine P. Golding, PhD, MSc<sup>4</sup> Kori Cook, MPH<sup>4</sup> Marie-Pierre Preziosi, MD, PhD<sup>3</sup> The Ebola/Marburg R&D Roadmap Taskforce<sup>3</sup>

'Center for Infectious Disease Research and Policy, University of Minnesota; Minneapolis, Minnesota, USA

<sup>2</sup>Contact information for Dr. Moore: Center for Infectious Disease Research and Policy, C315 Mayo Memorial Building, MMC 263; 420 Delaware Street, SE, Minneapolis, MN 55455. 612-626-6770; <u>kanoore@umr.edu</u>

3World Health Organization; Geneva, Switzerland

\*Wellcome Trust; London, United Kingdom

'Ebola/Marburg WHO R&D Taskforce members:

#### A Research and Development (R&D) Roadmap for Lassa Fever

Kristine A. Moore, MD, MPH<sup>1,2</sup> Rebecca A. Johnson, PhD, MPH<sup>1</sup> Julia T. Ostrowsky, MSc<sup>1</sup> Ar gela J. Mehr, MPH<sup>1</sup> Michael T. Osterholm, PhD, MPH<sup>1</sup> Virginia Benassi, LLM, MA<sup>3</sup> Josephine P. Golding, PhD<sup>4</sup> Kori Cook, MPH<sup>4</sup> Marie-Pierre Preziosi, MD, PhD<sup>3</sup> The Lassa Fever R&D Roadmap Taskforce<sup>5</sup>

'Center for Infectious Disease Research and Policy, University of Minnesota; Minneapolis, Minnesota, USA

<sup>2</sup>Contact information for Dr. Moore: Center for Infectious Disease Research and Policy, C315 Mayo Memorial Building, MMC 263; 420 Delaware Street, SE, Minneapolis, MN 55455. 612-626-6770; <u>kanoore@umr.edu</u>

3World Health Organization; Geneva, Switzerland

'Wellcome Trust; London, United Kingdom

Lassa Fever WHO R&D Taskforce members:

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- 3. Polio
- 4. Influenza update
- 5. Antibiotics in agriculture UPDATES
- 6. Nipah
- 7. Cholera
- 8. MERS
- 9. Vector-borne disease
- **10.** Foodborne disease
- **11.** Generic drug availability study
- 12. Other





### News Scan for Apr 19, 2019

#### Oxfam warns of Yemen cholera disaster replay as suspected cases climb

Aid groups in conflict-torn Yemen are having problems reaching 40,000 people suspected as having cholera, setting the scene for a possible repeat of the world worst outbreak, Oxfam International, one of the groups working in the area, warned yesterday in a statement.

Fighting and restraints on access, such as checkpoints and permits required by warring groups, are making it extremely difficult to reach some affected areas, Oxfam said.

Suspected cholera cases are already rising ahead of the rainy season, and in the latter half of March, about 2,500 suspected cases were reported each day, up from 1,000 a day in February. The group said illness levels are 10 times higher than they were in 2018.

In 2017, Yemen experienced the world's largest cholera outbreak, and at its worst point, 7,000 cases were reported each day. More than 3,000 people have died from cholera in Yemen since 2016.

If suspected cases continue at current levels for the rest of the year, the rise in disease activity this year could eclipse that of 2018. So far this year, 195,000 suspected illnesses have been reported, including 38,000 in districts that are hard for aid groups to reach.

Oxfam and its local partners are working in Amran, Taizz and Al Dale'e governorates to bring in fresh water, fix sanitation systems, and distribute soap, washing powder, basins, and jerry cans. The group is also helping local responders spread information about how cholera is transmitted and steps community members can take to prevent its spread.

#### Apr 19 Oxfam press release



#### WHO EMRO | Outbreak update - Cholera in Yemen, 26 May 2019

08 June 2019 - The Ministry of Public Health and Population of Yemen reported 16,868 suspected cases of cholera with 12 associated deaths during epidemiological week 21 (20 to 26 May) of 2019. Seventeen percent of cases were severe. The cumulative total number of suspected cholera cases from 1 January 2018 to 26 May 2019 is 724,405, with 1135 associated deaths (CFR 0.15%). Children under five represent 22.5% of total suspected cases during 2019. The outbreak has affected 22 of 23 governorates and 296 of 333 districts in Yemen.

From week 8 in 2019, the trend of weekly reported suspected cholera cases started increasing and peaked at more than 29500 cases in week 14. During weeks 15 to 21 case numbers went down and over the past 3 weeks a stable trend was observed. The decline may be attributed to enhanced control efforts such as community engagement and WaSH activities, and scaling up of response by WHO and partners, including establishing of additional DTCs and ORCs.



## Cholera surge stalks Yemen's hungry and displaced

Eissa al-Rajehy

HAJJAH, Yemen (Reuters) - In the last two weeks Dr Asmahan Ahmed has seen a surge in suspected cholera cases arriving at her health center in Abs, a small, Houthi-held town in northwest Yemen.

"Every day there are 30-50 cases, no fewer. Suddenly it became like this," she said in the 15-bed diarrhea treatment center.

Yemen is suffering its third major cholera outbreak since 2015 when a Saudi-led military coalition intervened to try to restore Yemen's internationally recognized government after it was ousted from power in the capital Sanaa by the Iran-aligned Houthi movement.

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### UAE study finds high MERS seroprevalence in some camel workers

Filed Under: MERS-CoV Lisa Schnirring | News Editor | CIDRAP News | Apr 11, 2019 **f** Share **y** Tweet **in** LinkedIn **Second Print** & PDF

A new MERS-CoV seroprevalence study of camel workers in Abu Dhabi found high levels for people in certain jobs, as Saudi Arabia—the country hit hardest by the virus—reported three more cases, all in people who contracted the virus from other patients.

#### Exposures in markets, slaughterhouses

For the seroprevalence study, a research team from the United Arab Emirates (UAE) and the US Centers for Disease Control and Prevention (CDC) examined blood samples of camel workers from 2014 to 2017. Some workers were from an open-air camel market in



Jack Dyson / Flickr cc

Abu Dhabi linked to a 2015 human case, and others worked at two of the city's camel slaughterhouses.

Their goals were to sift out specific risk factors that seem more likely to lead to MERS-CoV (Middle East respiratory syndrome coronavirus) transmission to help guide steps to prevent infections in people and to pinpoint risk groups that would benefit from a future vaccine. The team published its findings yesterday in an early online edition of *Emerging Infectious Diseases*.



### News Scan for Apr 24, 2019

#### WHO offers new details on hospital-related Saudi MERS outbreak

The World Health Organization (WHO) released new details today about a MERS-CoV outbreak in Wadi ad-Dawasir, Saudi Arabia. Since January, officials have identified 61 cases in the city, of which 14 were in health workers, and 37 were thought to involve healthcare exposure.

Eight patients died from their MERS-CoV (Middle East respiratory syndrome coronavirus) infections, resulting in a case-fatality rate of 13.1% for this outbreak. The median age of patients was 46, and 65% of them were men.

"Investigations into the source of infection of the 61 cases found that 37 were health-care acquired infections, 14 were primary cases presumed to be infected from contact with dromedary camels and the remaining (10) infections occurred among close contacts outside of health care settings," the WHO said. "As previously reported, two human to human transmission amplification events took place at a hospital during this outbreak."

The amplification events took place in an emergency department and a cardiac unit, the WHO said.

The last identified case from Wadi ad-Dawasir was reported on Mar 12, and as of Mar 31, officials have followed up with 380 case contacts for 14 days.

#### Apr 24 WHO statement



### Six new Saudi MERS cases as study shows virus infecting Bactrian camels

Filed Under: MERS-CoV

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

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Saudi Arabia's Ministry of Health (MOH) announced 6 new MERS-CoV cases over the past 3 days, including 3 in Riyadh and 3 fatalities, and in a new research development, experimental infection tests on Bactrian camels found that they are susceptible to the virus.

#### Cases include secondary infection in Riyadh

In epidemiologic week 22 updates, Saudi Arabia's health ministry reported six new MERS-CoV (Middle East respiratory syndrome coronavirus) cases from May 26 to May 28. Of the three Riyadh cases, one involves a 23-year-old woman whose exposure to the virus is listed a secondary, hinting at a potential household or hospital cluster.



Saurabh Chatterjee / Flickr cc

The other two patients from Riyadh are a 65-year-old man who died from his infection and whose exposure

is listed as primary, meaning he isn't thought to have contracted the virus from another known patient. The other is a 64-year-old man who had contact with camels before he got sick.



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

#### MERS in Saudi Arabia (January-April 2019)



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### News Scan for Apr 15, 2019

#### Experts warn of climate-related vectorborne disease spread in Europe

Speakers at a symposium on climate change at the European Congress of Clinical Microbiology and Infectious Diseases (ECCMID) in Amsterdam yesterday warned that the geographic range of mosquito and tickborne diseases is expanding quickly, fueled by multiple factors, including climate change.

The experts predicted that vectorborne disease outbreaks will increase across many parts of Europe over the next few decades, even at previously unaffected higher latitudes and altitudes in Northern Europe, according to an ECCMID news release. They warned that actions are needed to improve surveillance and data sharing and to monitor environmental and climate precursors to outbreaks.

Climate change is only one of many factors, which include globalization, socioeconomic development, urbanization, and changes in land use, said Jan Semenza, PhD, MPH, with the European Centre for Disease Prevention and Control.

Giovanni Rezza, MD, PhD, who directs the department of infectious diseases at the Instituto Superiore di Sanita in Rome, said the stark reality is that longer hot seasons will enlarge the seasonal window for the potential spread of vector-borne outbreak, favoring larger events. "We must be prepared to deal with these tropical infections. Lessons from recent outbreaks of West Nile virus in North America and chikungunya in the Caribbean and Italy highlight the importance of assessing future vector-borne disease risks and preparing contingencies for future outbreaks."

The experts noted that the interplay between multiple drivers makes projecting disease burden challenging, but they said climate change has allowed mosquitoes and ticks to adapt, proliferate, and broach new areas, with examples including dengue outbreaks in France and Croatia, malaria in Greece, West Nile fever in southeast Europe, and chikungunya in Italy and France. **Apr 13 ECCMID press release** 

### The New York Times

### How Dengue, a Deadly Mosquito-Borne Disease, Could Spread in a Warming World

By KENDRA PIERRE-LOUIS and NADJA POPOVICH JUNE 10, 2019

Climate change is poised to increase the spread of dengue fever, which is common in parts of the world with warmer climates like Brazil and India, a new study warns.

Worldwide each year, there are 100 million cases of dengue infections severe enough to cause symptoms, which may include fever, debilitating joint pain and internal bleeding. There are an estimated 10,000 deaths from dengue — also nicknamed breakbone fever — which is transmitted by Aedes mosquitoes that also spread <u>Zika</u> and chikungunya.

The study, published Monday in the journal <u>Nature</u> <u>Microbiology</u>, found a likelihood for significant expansion of dengue in the southeastern United States, coastal areas of China and Japan, as well as to inland regions of Australia.





### News Scan for May 31, 2019

#### At least 7,000 sickened with dengue in Honduran outbreak

Doctors without Borders (MSF) is ramping up its efforts in Honduras, as the country has tallied 6,883 cases of dengue fever since the first of the year.

Sixty-one percent of cases have been recorded in Honduras's Cortes department, and the nearly 7,000 cases include 2,111 cases of severe dengue, MSF said in a press release.

"The behaviour of this epidemic is unusual compared to previous dengue outbreaks," says Deysi Fernandez, MD, MSF's medical activity manager for the dengue response in Honduras. "This epidemic fluctuates, with a high number of cases some weeks and a decrease in other weeks."

MSF said it is engaging in community education and extensive mosquito control. May 29 MSF press release



### News Scan for May 28, 2019

#### Uganda confirms yellow fever outbreak in 2 locations

Uganda has confirmed a yellow fever outbreak in two districts—Koboko and Masaka—located in the northern and central regions of the country, according to a bulletin from the WHO's African regional office.

Officials identified two cases of yellow fever in March, when routine surveillance showed the virus in an 80-year-old woman and a 10-year-old girl, neither of whom had been vaccinated against yellow fever.

Rapid response teams were sent to the villages of both patients and found an additional seven cases of yellow fever, and a "substantial population of unvaccinated individuals due to immigration and missing the yellow fever reactive vaccination campaign, which was conducted in 2016."

Uganda has not yet introduced the yellow fever vaccine into routine immunizations, and one of the cases in Koboko district is near the Ugandan–Democratic Republic of Congo (DRC) border, where an Ebola outbreak is ongoing. Cross-border surveillance has been heightened, the WHO said. **May 26 WHO African regional office bulletin** 

#### PLOS | NEGLECTED TROPICAL DISEASES

### Increased growth ability and pathogenicity of Americanand Pacific-subtype Zika virus (ZIKV) strains compared with a Southeast Asian-subtype ZIKV strain

Yasuhiro Kawai, Eri Nakayama, Kenta Takahashi, Satoshi Taniguchi, Ken-ichi Shibasaki, Fumihiro Kato, Takahiro Maeki, Tadaki Suzuki, Shigeru Tajima 🖾, Masayuki Saijo, Chang-Kweng Lim

#### Published: June 6, 2019

#### Abstract

We investigated the growth properties and virulence in mice of three Zika virus (ZIKV) strains of Asian/American lineage, PRVABC59, ZIKV/Hu/Chiba/S36/2016 (ChibaS36), and ZIKV/Hu/NIID123/2016 (NIID123), belonging to the three distinct subtypes of this lineage. The American-subtype strain, PRVABC59, showed the highest growth potential in vitro, whereas the Southeast Asian-subtype strain, NIID123, showed the lowest proliferative capacity. Moreover, PRVABC59- and NIID123-infected mice showed the highest and lowest viremia levels and infectious virus levels in the testis, respectively, and the rate of damaged testis in PRVABC59- infected mice was higher than in mice infected with the other two strains. Lastly, ZIKV NS1 antigen was detected in the damaged testes of mice infected with PRVABC59 and the Pacific-subtype strain, ChibaS36, at 2 weeks post-inoculation and in the epididymides of PRVABC59- infected mice at 6 weeks post-inoculation. Our results indicate that PRVABC59 and ChibaS36 exhibit increased abilities to grow in vitro and in vivo and to induce testis damage in mice.



### First US human bite from worrying longhorned tick noted

Filed Under: Tick-borne Disease

Lisa Schnirring | News Editor | CIDRAP News | Jun 03, 2019 🕴 🕈 Share 🈏 Tweet in LinkedIn 🌄 Email 👩 Print & PDF

In a report last week, researchers described the first human in the United States known to be bitten by an Asian longhorned tick, a rapidly spreading invasive species that the US Centers for Disease Control and Prevention (CDC) warned about last year.

Though the 66-year-old man did not get sick, scientists know that *Haemaphysalis longicornis* can harbor bacteria that can cause human and animal diseases—possibly including Lyme disease—and an investigation into areas where the man lived found the tick in locations other ticks aren't typically found, which could lead to changes in public health risk messaging.



James Gathany/CDC DVBD

A team from the CDC, New York, and New Jersey reported the findings on May 31 in *Clinical Infectious Diseases*.



### Year after being first found in Virginia, longhorned tick confirmed in 24 counties

Tick mainly found in parts of Western Virginia

By Maddi Dempsey - Intern

Posted: 12:24 PM, June 10, 2019

**RICHMOND, Va.** - After being previously unknown in Virginia, scientists determined the longhorned tick is indeed in the state.

First detected in Albemarle County in May 2018 by researchers at the National Veterinary Services Laboratory in Ames, Iowa, they've since detected the tick in 24 counties, mostly in the western part of the state.

The Virginia State Veterinarian believes that new sites will be confirmed in the coming months.

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# Interim Report: Blue-Ribbon Panel on the Prevention of Foodborne *Cyclospora* Outbreaks

### June 5, 2019

#### Abstract

In the spring and summer of 2018, Fresh Express and other fresh produce suppliers were linked to a *Cyclospora cayetanensis* outbreak — with U.S.-grown fresh produce samples testing positive for the parasite. To address this issue, Fresh Express formed the Blue-Ribbon Panel on the Prevention of Foodborne *Cyclospora* Outbreaks, comprising scientists with deep expertise in the biology of the organism, food safety, outbreak response, and public health. The panel was charged with studying the parasite and identifying controls to limit further *C. cayetanensis*— associated outbreaks. After a November 2018 in-person meeting, the Blue-Ribbon Panel formed four working groups that continued to work on *C. cayetanensis* specific issues related to root-cause assessment, preventive measures/controls, collaborative approach, and testing validation over the next several months. This report contains the working groups' preliminary findings, recommendations, and continuing priorities to more effectively prevent and control *C. cayetanensis* outbreaks going forward.

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### Sound Tree

BT item #	Description	Mfctr ETA for next release	Date Mfctr expects back orders to clear	Possible sub **	Description
0301-67	Adenosine 6mg, 2ml LL Syringe	unknown	unknown	0542-02	Adenosine 6mg, 2ml Vial
0301-68	Adenosine 12mg, 4ml LLSyringe	unknown	unknown	0651-04	ADENOSINE 12MG 4ML SDV
0302-66	Amiodarone 150mg, 3ml syringe	Discontinued by th	ne manufacturer	9875-25 or 0180-03 (both	Amiodarone 150mg, 3ml vial
0616-03	Amiodarone 150mg, 3ml vial	mid June	mid June	limited by mfctr)	
374910	ATROPINE 0.5MG 5ML LIFESHIELD SYRINGE 1040A 10EA/BX	June 2019	June 2019		
374911	Atropine 1mg, 10ml Lifeshield syringe	8/2019	08/2019	1010-25	Atropine 1mg, 1ml vial (short date avail only)
AB1630-10	Atropine 1mg, 10ml ANSYR syringe	8/2019	9/2019	1010-25	
371006	Atropine 1mg, 1ml Luer Jet	mfctr allocation (Limited quantities			
101-10ea	Cefazolin 1gm vial	unknown	unknown	237-10	Cefazolin 1gm vial
371117	C2 DEMEROL 100MG/ML 1ML CPJ LL 10/BOX	Q3- BTM not accepting backorde			
371176	C2 DEMEROL 25MG/ML 1ML CPJ LL SLM 10/BX	2020- BTM not accepting backord		No Available Sub	
371116	C2 DEMEROL 50MG/ML, 1ML, CPJ LL SLM 10/BX	2020- BTM not accepting backord	ers due to extended BO period		
0074490201	Dextrose 50% 50ml Lifeshield	08/2019	8/2019	373301	DEXTROSE 50% 25GM, 50ML Luer Jet
377515	DEXTROSE 50% 25GM, 50ML ANSYR SYRINGE	08/2019	09/2019		
373301	DEXTROSE 50% 25GM, 50ML Luer Jet	mfctr allocation (Limited quantities releasing; timeframe unknown)			
D6648-02	DEXTROSE 50% 25GM, 50ML vial	08/2019	08/2019		Dexamethasone 4mg, 1ml vial (LIMITED QTY
0367-25	Dexamethasone 10mg/ml, 1ml vial	Jun-19	unknown	373165	ON HAND)
373165	Dexamethasone 4mg, 1ml vial	Jun-19	June 2019		
370951EA	C4 DIAZEPAM 10MG AUTO- INJECTOR	Unknown	Unknown	3213-12	DIAZEDAM ENCINE 10ML VIAL
371104	DIAZEPAM 10MG, 2ML CARPUJECT	limited on hand	09/2019	3213-12	DIAZEPAM 5MG/ML 10ML VIAL
0409-4350-03	DILTIAZEM 100MG ADD-VANTAGE VIAL	3/2020	03/2020	6013-10	Diltiazem, 25 mg, 5 ml Vial *Refrigerate*
1171-01ea	DILTIAZEM 25MG, 5ML VIAL	2020 2020			10ea/Box DIPHENHYDRAMINE 50MG/ML 1ML SDV
374402	DIPHENHYDRAMINE 50MG LUER LOCKING CARPUJECT	9/2019- 3/2020 - BTM not accepting backorders due to extended BO period		0376-25	2035 - BENADRYL 25 VIALS/PK
2346-32	Dobutamine 250mg/ 250ml bag	available		234401	DOBUTAMINE 250MG 20ML/VIAL
2347-32	DOBUTAMINE/D5W 500MG/ 250ML 12EA/CS	AVAILABLE			
0074581901	DOPAMINE 200MG 5ML VIAL 2040 25EA/BX	8/2019	9/2019	No Available Sub 7808-22	
379104	DOPAMINE 400MG, 10ML VIAL		12/2019 06/2020		Dopamine 400mg/D5W 250ml Bag 12EA/CS DOPAMINE 800MG/D5W 500ML BAG 3025
14538	Dopamine 800MG/D5W 250MI Bag 18EA/CS	Manufacturer backorder- limited releases		377809	12EA/CS
AB2122-01	Enalaprilat 1.25mg, 1ml vial	Q1 2020	Q2 2020	9787-10	Enalaprilat 1.25mg, 1ml Vial
374921 373316	Epinephrine 1:10:000 10ml Lifeshield Epinephrine 1:10:000 10ml Luer Jet	08/2019 06/2020		0159-25EA	Adrenalin (Epinephrine) 1mg, 1ml (1:1000) Vial
1649-49	Epinephrine 0.3mg Autoinjector 2 pack	mfctr allocation mfctr allocation		680154-KIT	Curaplex Epi Kit incl 1 cc Syringe w/25 ga x 1 in
1695-49	Epinephine O'Sing Autoinjector 2 pack	metranocation		680154-KIT	Needle Curaplex Epi Kit incl 1 cc Syringe w/25 ga x 1 in
2102-02	Epinephrine Adult 2-Pack Auto-Injector 0.3mg, 0.3ml *SAFETY*	mfctr allocation		680154-KIT	Needle Curaplex Epi Kit incl 1 cc Syringe w/25 ga x 1 in
2101-02	Epinephrine Junior 2-Pack Auto-Injector 0.15mg, 0.3ml	mfctr allocation		680154-KIT	Needle Curaplex Epi Kit incl 1 cc Syringe w/25 ga x 1 in
376029	*SAFETY* AMIDATE 40MG, 20ML LIFESHIELD	2020			Needle
6695-01	Etomidate, 20mg, 10ml Vial 10ea/bx	5/2019		6695-02	ETOMIDATE 40MG, 20ML VIAL
379094	C2 FENTANYL 0.05MG/ML 2ML SDV 25/BX	08/2019	08/2019		
371276	C2 FENTANYL 2ML CPJT	10/2019	04/2020	6027-25 (mfctr allocation)	C2 Fentanyl, 0.05mg/ml, 2ml Vial, 25/Bx with Safety Seal
371124	C2 FENTANYL 0.05MG/ML 2ML AMPULE 10/BOX CS24	available			Sarety Sear
0404-01	(limited qty on hand)			0507-21	Elucaina Emil drapper bette
0404-01	Fluorescein Sodium 1mg Strips 100/bx	unknown		0507-21	Flucaine 5ml dropper bottle

### Sound Tree

BT item #	Description	Mfctr ETA for next release	Date Mfctr expects back orders to clear	Possible sub **	Description
6102-10	FUROSEMIDE 100MG, 10ML VIAL	09/20	19	379631	Furosemide 100mg, 10ml ANSYR syringe
0403-03	OPTHALMIC STRIPS, FUL-GLO FLUORESCEIN SODIUM STRIPS, 0.6MG, STERILE, INDV WRAPPED 300/BX Gentak, Gentamicin Sulfate Ophthalmic Ointment USP 0.3%,	unkno	wn		
0284-35	Gentak, Gentamicin Sulfate Ophthalmic Ointment USP 0.3%, 3.5 gm	Mfctr has no ETA, BTM	not accepting orders		
371207	GENTAMICIN SULFATE 40MG/ML 2ML SDV 25/BX	September		0010-20 (in new item set up)	GENTAMICIN SULFATE 40MG/ML 2ML SDV 25/BX
373474	HALOPERIDOL 5MG 1ML VIAL	late May		0426-12	Haloperidol 1/EA 10EA/BX
1312-30	C2 Hydromorphone 2mg, 1ml cpjt	06/2019 09/2019		6121-25	C2 HYDROMORPHONE 2MG/ML 1ML VIAL 10/BX
2051-05	C3 KETAMINE 100MG/ML, 5ML VIAL, 10/BX	06/2020	06/2020		
9509-10	C3 KETAMINE 100MG/ML, 5ML VIAL, 10/BX	mfctr allocation	unknown	0181-20	C3 Ketamine 10mg/ml 20ml Vial 10/bx
0205310	C3 KETAMINE 50MG/ML, 10ML VIAL, 10/BX	Q1 2020	Q2 2020		
9508-10	C3 KETAMINE 50MG/ML 10ML VIAL	30-60 d	ays		
378701	Ketorolac 30mg cpj	09/2019	01/2020	3795-01	Ketorolac 30mg, 1ml vial
378702	Ketorolac 60mg, 2ml cpj	09/2019	01/2020	3796-01	Ketorolac 60mg, 2ml vial
372339	LABETALOL 20MG 4ML LUER LOCK CARPUJECT 1030 10EA/BX	Jun-19 November 2019			
2267-20	Labetalol 100 mg, 20 ml Vial	12/2019			
0934-98	Labetalol 100mg, 20ml vial	Mfctr allocation	Unknown		
9622-01	Labetalol 100mg, 20ml vial	30-60 days	mfctr allocation		
2267-54	Labetalol 200mg, 40ml vial	June 2019	Q4 2019		
370711	LIDOCAINE 2% JELLY 5ML TUBE 2070	Temporarily off the market by Mfctr		301200	LIDOCAINE JELLY 2% 5ML URO-JET SYRINGE
379200	LIDOCAINE JELLY 2% 30ML 12/PK 2072	Temporarily off the market by Mfctr		373013	LIDOCAINE JELLY 2% 10ML URO-JET SYRINGE 2073
4276-02	LIDOCAINE 1% 500MG, 50ML MDV 25/BX	06/2019	6/2019	No Available Sub	
4276-01S	Lidocaine 1% 20ml vial	Limited stock on hand	June 2019	No Available Sub	
3178-03EA	Lidocaine 1% w/Epinephrine 1:100,000 50ml Vial 25ea/bx 4bx/cs	05/2019	8/2019		
374277	Lidocaine 2% 20ml vial	June 2019	September 2019	No Available Sub	
374904	LIDOCAINE 2% 100MG 5ML Lifeshield	08/2019	08/2019		LIDOCAINE 2% 100MG 5ML LUER JET 1026B 10EA/PK
0074490301	LIDOCAINE 2% 100MG 5ML ANSYR	stock on hand	March 2021	373390	
2066-05	Lidocaine 2% 100mg, 5ml vial Preserv Free	Q4 2019	Q4 2019		
118-2B096	Lidocaine 2gm/ D5 250ml bag	Mfctr allocation		9594-20	Lidocaine 1gm, 250ml bag
1539-31	C4 LORAZEPAM 4MG/ML 1MLCPJ	Q3 2020			
376779	C4 Lorazepam, 4mg, 1ml Vial	June 2019	Jun-19	371100	Lorazepam 2mg, 1ml vial
371102	C4 LORAZEPAM 2MG 1ML LUER LOCKING CARPUJECT *REFRIG* CS02 10/BX	June 2019	Jun-19		
1587-50	Marcaine 0.25% 50ml vial	March 2020 June 2020			
372285	Metoprolol 5mg, 5ml ampule	Dec-19		660-05	Metoprolol 5mg, 5ml vial (qty on hand)
2587-05	C4 Midazolam 10mg, 10ml vial 10 / box	Available			
371108	C4 MIDAZOLAM **VERSED** 1MG/ML 2ML SLIMPACK CPJ 10/BOX CS08	Q1 2020		2305-17	C4 MIDAZOLAM 2MG, 2ML VIAL 25/BOX
1893-01	Morphine 10mg, 1ml CPJT	02/2020- BTM not accepting backorders due to extended BO period			
1891-01	Morphine 4mg, 1ml CPJT	June 2019 Sep-19		6127-25	C2 Morphine 10mg 1ml Vial 25/bx



BT item #	Description	Mfctr ETA for next release	Date Mfctr expects back orders to clear	Possible sub **	Description
1890-01	Morphine 2mg, 1ml CPJT	Jun-19 09/2019			
0162-10	Norepinephrine 4mg, 4ml ampule	Available			Levophed 4mg, 4ml vial
1120-12	Ondansetron Injection, 4mg, 2ml iSecure	Q4 2019- BTM not accepting backorders due to extended BO period		4755-02	Ondansetron Injection, 4mg, 2ml vial
3157-83	PROMETHAZINE 25MG/ML 1ML AMP 2098 25EA/BX	available			
375204	Quelicin 200mg, 10ml vial	Best Expiration Date available is 12/2019			
0074553401	SODIUM BICARBONATE 4.2% 10ML INFANT LIFESHIELD 1043A 10EA/BX	08/2019			
0074490000	SODIUM BICARBONATE 8.4% 10ML PEDI LIFESHIELD 1044 10EA/BX	08/2019	01/2020		
376637	Sodium Bicarb 8.4% 50ml Lifeshield	08/2019	10/2019	No Available Sub	
371035	Sodium Bicarb 8.4% 50ml Luer Jet	Mfctr allocation	unknown		
376625	SODIUM BICARBONATE 8.4% SDV 50ML 25EA/BX	06/2019			
371634	SODIUM BICARBONATE 7.5% 50ML LIFESHIELD SYRINGE	08/2019			
4888-50	Sodium Chloride 0.9% 50ml vial	06/2019	08/2019	0074488810	Sodium Chloride 0.9% 10ml Plastic Flip-Top Single Dose Vial (qty on hand)
1918-32	Sodium Chloride 0.9% 2ml carpuject	Q3 2019	Q4 2019	0074488810	
3977-03	Sterile Water, Bact. 30ml	06/2019		No Available Sub	
371651	Thiamine 100mg/ml, 2ml vial	05/2019			
6535-01	Vancomycin 1gm addvantage vial	06/2019	Jan 2020		
1632-01	VECURONIUM 10MG 10ML VIAL 10EA/BX	Q3/ Q4 2019 - BTM not accepting backorders due to extended BO period		0931-44 (mfctr allocation)	VECURONIUM 10MG 10ML VIAL 10EA/BX

- 1. Ebola
- 2. Measles
- 3. Polio
- 4. Influenza update
- 5. Antibiotics in agriculture UPDATES
- 6. Nipah
- 7. Cholera
- 8. MERS
- 9. Vector-borne disease
- **10.** Foodborne disease
- **11.** Generic drug availability study
- 12. Other





# Upcoming: Pandemic influenza simulation exercise for CLF members

- Scenario: H7N9 strain of avian influenza that originated in China and is spreading from person to person for the first time
- We will convene three situation update calls that will occur over a span of two weeks:
  - September 10, 12, & 17 (tentatively)
- How will your organization respond? Considerations:
  - Continuity of operations
  - Employee protection
  - Prevention through vaccine/post-exposure prophylaxis
  - Supply chain challenges

# **Questions, Comments and Discussion**





Center for Infectious Disease Research and Policy University of Minnesota

# CIDRAP Leadership Forum Infectious Disease BRIEFING

June 12<sup>th</sup>, 2019

Thank you for attending!