

## Current Infectious Disease Outbreaks for NYC Providers

June 7, 2019

Disease	Last Update	2019 Cases	Con- firmed	Deaths	Notes and References (R 1, 2, 3)
<b>New York City</b>					
<b>Measles</b>	3-Jun	566	566	0	<p>As of June 3, 2019, there have been 566 confirmed measles cases identified in New York City (NYC) since October. Most have involved members of the Orthodox Jewish community. Most cases are less than five years old, and &gt;73% were unvaccinated. To-date, there have been numerous hospitalizations and ICU admissions, but no deaths. The outbreak tempo has quickened in recent weeks. On April 9, the NYC Health Commissioner declared a public health emergency, ordering all unvaccinated adults and children in certain Brooklyn ZIP codes to be vaccinated. Persons found unvaccinated or non-immune in these ZIP codes are subject to fines.</p> <p>The initial case was unvaccinated and acquired measles in October 2018 on a visit to Israel; multiple importations have occurred since from Israel and other countries. A large number of exposures have occurred, especially in hospitals, outpatient medical facilities, and schools. Measles outbreaks also have occurred in New York's Rockland, Orange, and Monroe Counties. R <a href="#">1</a> <a href="#">2</a></p>
<b>United States</b>					
<b>Hepatitis A</b>	01-Jun	>18,700 (2018-19)	>18,700 (2018-19)	181	<p>The sustained 2018-19 outbreak of hepatitis A has persisted in multiple eastern and midwestern states. Of the &gt;18,700 nationwide cases, &gt;10,600 have been hospitalized. Current incidence is greatest in OH (&gt;2,100), IN (1,325), and TN (&gt;1,500). CO, FL, GA, VA, MA, and NH also are reporting increases in cases. Main risk factors continue to be homelessness and IV drug use. On October 24, the Advisory Committee on Immunization Practices (ACIP) recommended hepatitis A vaccination for all homeless persons over one year old. R <a href="#">1</a>, <a href="#">2</a></p>
<b>Measles</b>	6-Jun	1,022	1,022	—	<p>Measles outbreaks have been detected in 28 states — WA, TX, OK, NJ, NY, PA, CA, CO, CT, IL, KY, TN, NH, OR, GA, FL, IN, MD, MA, MI, MO, IA, NV, AZ, VT, RI, VA, and ID. This is the greatest number of cases reported in the US since 1992. The majority of cases have been in NYC and nearby NYS counties. R <a href="#">1</a></p>
<b>E. coli O103</b>	May 13	196	196	0	<p>As of May 13, a total of 196 <i>E. coli</i> O103 cases, including 28 hospitalizations, have been reported by 10 midwestern and southern states (MN, IL, IN, OH, KY, VA, TN, MS, GA, and FL). Two cases of hemolytic uremic syndrome and no deaths have been reported. Onset dates have ranged from March 1 to April 19. Ground beef produced by K2 Foods (also known as Colorado Premium Foods in Carrolton, GA) and Grant Park Packing in Franklin Park, IL have been linked to the outbreak. R <a href="#">1</a></p>
<b>*E. coli O26</b>	24-May	17	17	0	<p>As of May 24, a total of 17 cases of <i>E. coli</i> O26 (STEC) infections have been reported in 8 states (CA, MO, OH, PA, NY, NJ, CT, and RI), including 3 hospitalizations. Onsets have ranged from December 11, 2018 to April 18, 2019. Illness has been linked to eating raw dough made from flour manufactured by ADM Milling Co., and specifically, of Baker's Choice All-Purpose Flour. R <a href="#">1</a></p>

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<b>United States</b>					
<b>Gastro- enteritis (Multiple Pathogens)</b>	22-May	16	16	0	On May 10, CDC posted a Food Safety Alert warning consumers to avoid eating raw oysters from Estero El Cardon estuary in Baja California, Mexico. As of May 22, a total of 16 cases of gastroenteritis from 5 states (CA, NV, IL, NH, and AK) have been linked to this exposure; 2 were hospitalized. Onset dates range from December 16, 2018 to April 4, 2019. Pathogens involved: <i>Shigella flexneri</i> , <i>Campylobacter lari</i> , STEC (non-O157), <i>Vibrio parahaemolyticus</i> , <i>Vibrio albensis</i> , and <i>Vibrio</i> of unknown species. R <a href="#">1</a>
<b>Salmonella Concord</b>	23-May	4	3	0	On May 17, CDC posted a Food Safety alert, warning consumers not to eat food made from Karawan brand tahini. As of May 14, a total of 4 cases of Salmonella Concord gastroenteritis, including one hospitalization, have been linked to this product. Illness onset has ranged from March 9 to March 23. This outbreak is distinct from a previous cluster of S.salmonella Concord cases that also were linked to tahini. R <a href="#">1</a>
<b>Salmonellosis</b>	16-May	52	52	0	On May 16, CDC announced that 52 persons in 21 states, including 5 hospitalized, have been infected with <i>Salmonella</i> Braenderup and S. Montevideo, following contact with chicks and ducklings in backyard flocks. Onset dates range from January 12 to April 29. R <a href="#">1</a>
* <b>Legionnaires' disease</b>	4-Jun	10	10	1	As of June 4, a total of 10 patients have been diagnosed with Legionnaires' disease at the Mount Carmel Grove City Hospital in Grove City, OH. Current efforts are focused on testing the hospital's water systems for evidence of Legionella colonization. R <a href="#">1</a>
<b>Caribbean, Central America, and South America</b>					
<b>Dengue</b>	04-May	>695,000	>290,500	255	In 2019 as of May 4, a total of >695,000 dengue cases, including >290,500 laboratory-confirmed, already have been reported to the Pan American Health Organization (PAHO). <b>Brazil</b> (>586,500), <b>Colombia</b> (>32,000), <b>Nicaragua</b> (>21,000), <b>Mexico</b> (13,000) have reported the most cases. Dengue cases also have been confirmed in all Central and South American countries except Uruguay. Most dengue cases in the Caribbean have been reported by the <b>Dominican Republic, Jamaica, and Guadeloupe, , Martinique, and Trinidad/Tobago.</b> R
<b>Chikungunya</b>	5-May	>15,900	—	2	In 2018, >80,000 chikungunya cases were reported in the Americas and the Caribbean. In 2019 as of May 5, <b>Brazil</b> has reported >15,300 cases (Rio de Janeiro, Tocantins, Pará and Acre regions); <b>Colombia</b> reported >230 cases; and <b>Peru</b> reported >90 cases. To date in 2019, chikungunya cases also have reported in <b>Paraguay, El Salvador, Mexico, and Nicaragua.</b> R <a href="#">1</a> <a href="#">2</a>
<b>Zika</b>	18-Apr	~4,000	—	—	So far in 2019, there has been limited Zika cases reported. In addition to <b>Brazil's</b> 3,085 reported cases, <b>Peru, Bolivia, Colombia, El Salvador, and Honduras</b> have reported Zika cases. R <a href="#">1</a>

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<b>Caribbean, Central America, and South America</b>					
<b>Measles</b>	7-Mar	>14,000	315	—	In 2018, of the >16,000 reported measles cases in the Americas and Caribbean, >60% and 34% were reported in <b>Brazil</b> and <b>Venezuela</b> , respectively. So far in 2019, most of the suspected cases have been reported by <b>Brazil</b> (9,168), <b>Venezuela</b> (5,668), Confirmed cases also have been reported in <b>Argentina, Chile, Colombia, Costa Rica, Mexico</b> , and the <b>Bahamas</b> . R <a href="#">1</a> <a href="#">2</a>
<b>Haiti</b>					
<b>Cholera</b>	2-Mar	194	—	3 (1.6%)	In 2018, a total of 3,786 cholera cases were reported in Haiti, compared with 13,681 cases in 2017. As of March 2, a total of 194 cholera cases, including 3 deaths, have been reported. Since the outbreak began in 2010, Haiti has reported 819,963 suspected cases and 9,792 deaths (1.2%). R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Diphtheria</b>	20-Apr	62	6	1 (16.6%)	In 2018, a total of 375 probable cases were reported, including 105 confirmed and 14 (13.3%) deaths. The highest incidence has been in children 6-14 years old followed by 1-5 year olds. As of April 20, a total of 25 diphtheria cases have been reported in Haiti in 2019, including 6 confirmed and one death (16.6%. R <a href="#">1</a>
<b>Argentina</b>					
<b>Hantavirus</b>	10-May	50	50	13 (26%)	The number of confirmed hantavirus cases in Argentina is now 50, including 13 (26%) deaths. The epicenter of the outbreak has been Epuyen, an Andean village in Chubut province. Over the past two months, cases also have been detected in Rio Negro and Jujuy provinces. Infection with the endemic Andes virus has been confirmed. R <a href="#">1</a> <a href="#">2</a>
<b>Bolivia</b>					
<b>Hantavirus</b>	20-May	15	15	5 (33.3%)	In recent weeks, multiple foci of hantavirus infections have been reported in Bolivia. In Cochabamba department, 8 cases of suspected hantavirus pulmonary syndrome (HPS) were reported. In Santa Cruz department, 2 soldiers died and 8 more were hospitalized with suspected HPS. Another case was reported on May 20 in Tarija Department. R <a href="#">1</a>
<b>Brazil</b>					
<b>Yellow fever</b>	14-May	81	81	14 (22.7%)	This is the beginning of yellow fever season. As of May 14, a total of 81 confirmed cases (all presumed to be sylvatic) have been reported in the southern states of São Paulo (68), Parana (12), and Santa Catarina (1) This may indicate the emergence of a 3rd wave of yellow fever expansion into south and southeastern Brazil. Epizootics among non-human primates have been confirmed in both of the two southern states. Travelers to Brazil are advised to get vaccinated more than 10 days before travel. R <a href="#">1</a>
<b>Venezuela</b>					
<b>Diphtheria</b>	30-Mar	190	—	13 (6.8%)	A diphtheria outbreak that began in 2016 has continued in Venezuela. As of March 30, a total of 190 cases and 13 deaths have been reported in 2019. This compares with 1,102 cases and 50 (13.6%) deaths in 2018. With Venezuela's collapsing healthcare system, childhood vaccination has been affected. R <a href="#">1</a> <a href="#">2</a>

Disease	Last Update	2019 Cases	Confirmed	Deaths	Notes
<b>Europe</b>					
<b>Measles</b>	4-Jun	>55,700	>55,700	18	Between January 2018 and January 2019, >70,000 measles cases were confirmed throughout WHO's European Region. So far in 2019, measles outbreaks have occurred in all regions of Europe. A total of >50,700 cases, including 16 deaths, were reported in <b>Ukraine</b> alone as of Jun 4. Outbreaks have been reported in most European countries, including <b>Romania</b> (736), <b>France</b> (561), <b>Poland</b> (554), <b>Lithuania</b> (397), <b>Italy</b> (331), the <b>United Kingdom</b> (322), the <b>Czech Republic</b> (298), <b>Germany</b> (203), <b>Slovakia</b> (133) and <b>Switzerland</b> (104). R <a href="#">1</a> <a href="#">2</a>
<b>Belgium</b>					
<b>Legionnaires' disease</b>	4-Jun	32	32	2 (6.25%)	A Legionnaires' disease outbreak is ongoing in the Evergem area in Flanders, Belgium. As of June 4, a total of 32 Legionnaires' disease cases, including two (6.25%) deaths have been confirmed. A paper factory cooling tower in the Ghent canal zone is the suspected source and has been closed and cleaned. R <a href="#">1</a> <a href="#">2</a>
<b>France</b>					
<b>E. coli O26</b>	27-May	16	16	—	As of May 27, a total of 16 cases of <i>E. coli</i> O26 infection, including 14 with hemolytic uremic syndrome (all <5 years old), have been reported in children by French public health authorities. Consumption of or cross-contamination with Saint-Félicien or Saint-Marcellin cheeses are the suspected sources. R <a href="#">1</a> <a href="#">2</a>
<b>Germany</b>					
<b>Hantavirus</b>	15-May	211	211	-	Stuttgart, in the southwestern state of Baden-Wuerttemberg, has reported 211 cases of hantavirus in 2019 according to a press report. At this time, health authorities have not disclosed the total number of hospitalizations and deaths caused by this outbreak. Puumala virus (PUUV), endemic to southwestern and central Germany, causes hemorrhagic fever with renal syndrome (HFRS). R <a href="#">1</a>
<b>Greece</b>					
<b>Plasmodium vivax</b>	15-May	1	1	—	On May 15, the Greek National Public Health Organization reported a case of autochthonous <i>Plasmodium vivax</i> infection in the Thessaly Region; onset was April 26. An investigation did not confirm the presence of <i>Anopheles</i> mosquitoes. The current hypothesis is that infection occurred in the 2018 season with a long incubation period. Autochthonous cases of <i>P. vivax</i> malaria have been reported in Greece every year since 2009. R <a href="#">1</a>
<b>Switzerland</b>					
<b>*Q fever</b>	3-Jun	~50	~50	0	So far in 2019, approximately 50 cases of Q fever have been confirmed in Switzerland; 20 reside in the southern, Italian-speaking canton of Ticino. "Several" cases of Q fever have been reported by public health authorities in recent weeks in Ticino's Maggia Valley, where farmers have been ordered to vaccinate their goats. R <a href="#">1</a>

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<b>Arabian Peninsula and Middle East</b>					
<b>Saudi Arabia</b>					
<b>MERS-CoA</b>	28-May	150	150	35 (23.3%)	<p>In 2019, as of May 28, the Ministry of Health (MOH) has reported a total of 150 cases of MERS-CoA infection. Since Overall, the incidence tempo has slowly considerably since a large nosocomial outbreak in March, though cases continue to be reported in geographically dispersed locations. The past two weeks, cases have been reported from the central Al-Qassim Region (Buraidah), the Riyadh area (Riyadh City, Al Kharj), along the western coast (Jeddah, Medina, Mecca), and in the south (Najran).</p> <p>During the recent nosocomial MERS outbreak, some cases isolated at home with mild or no illness may have progressed to serious disease requiring hospitalization. This might be worth keeping in mind when evaluating patients with possible MERS. <a href="#">R 1</a> <a href="#">2</a> (<b>See epidemic curve, map, and nosocomial transmission diagram on p. 12 of this report.</b>)</p>
<b>Yemen</b>					
<b>Cholera</b>	1-Jun	>364,000	—	610 (0.002%)	<p>As of June 1, at least 364,000 suspected cases of cholera have been reported in Yemen in 2019, compared with 80,500 suspected cases during the same period in 2018. Most cases have been reported from Governates in the western areas. Yemen's water, sanitation, electricity, and health care infrastructures have been decimated by the civil war raging there since 2014. <a href="#">R 1</a> <a href="#">2</a> <a href="#">3</a></p>
<b>Asia</b>					
<b>Dengue</b>	6-Jun	>238,000	—	—	<p>Dengue is endemic throughout Asia. Already in 2019, the <b>Philippines, Vietnam, Malaysia, Sri Lanka, and Thailand</b> have reported &gt;77,000, &gt;57,800, &gt;47,100, &gt;20,000, and &gt;22,000 dengue cases, respectively. <b>Cambodia</b> (&gt;5,000), <b>Singapore</b> (&gt;3,900) the <b>Maldives</b> (&gt;2,100), <b>Laos</b> (&gt;2,400), <b>Indonesia</b> (&gt;1,000), <b>Timor-Leste, Nepal,</b> and <b>Pakistan</b> also have reported cases. <a href="#">R 1</a> <a href="#">2</a></p>
<b>Chikungunya</b>	13-May	>4,400	—	—	<p>So far in 2019, <b>Thailand</b> has reported &gt;3,370 chikungunya cases, most of which are in its southern districts near Malaysia. More than 200 cases also have been reported in <b>Malaysia</b> (largely in Kuala Langat District). <b>India</b> (Tamil Nadu), <b>Indonesia</b> (Depok, West Java), and the <b>Maldives</b> also have reported cases. <a href="#">R 1</a> <a href="#">2</a></p>
<b>Hong Kong</b>					
<b>Rat Hepatitis E</b>	14-May	3	3	0	<p>Hong Kong authorities reported 3 laboratory-confirmed cases of rat hepatitis E virus (HEV) infections in recent weeks. All cases were male, more than 65 years old, and had underlying health conditions; none have died. The cases did not report contact with rodents. The mode of transmission of rat HEV from rodents to humans is unknown. Hong Kong authorities have recommended for the public to maintain good personal and food hygiene. <a href="#">R 1</a> <a href="#">2</a> <a href="#">3</a></p>

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<b>Asia</b>					
<b>India</b>					
<b>Kyasanur Forest disease</b>	1-May	307	307	15 (4.9%)	In mid-December, an initial two cases of Kyasanur Forest disease (KFD) were announced in Karnataka state. Since then, incidence has continued steadily despite vaccination efforts. As of May 1, a total of 307 cases of KFD have been reported in the Shivamogga, Shimoga, Uttara Kannada, Sagar taluk, Udupi, Aralagodu and Chikkamagaluru districts of Karnataka state, including 15 deaths. Multiple deaths in non-human primates preceded human cases. A third round of KFD vaccination (87% effective after third vaccine) is being planned. In March and April, Kerala state also reported 6 cases in Wayanad district, including 2 deaths. R <a href="#">↓</a>
<b>*Nipah virus</b>	5-Jun	1	1	0	Public health authorities in Kerala, India, announced a confirmed case of Nipah virus infection in a 21-year old resident of Emakulam district, who presented with high fever and CNS dysfunction. Five symptomatic contacts have been isolated in a university hospital. R <a href="#">↓</a>
<b>Pakistan</b>					
<b>Leishmaniasis</b>	8-Apr	>21,000	—	—	According to the Ministry of Health, >21,000 cases of cutaneous leishmaniasis have occurred in Pakistan's Federally Administered Tribal Areas; however, the time period was not specified. Since then, large outbreaks also have been reported in Khyber Pakhtunkhwa (Peshawar). Moreover, counterfeit Gulucetime (meglumine antimoniate), standard leishmaniasis treatment and manufactured by Tillotts Pharma AG, has been discovered in Pakistan and Iran. R <a href="#">↓</a>
<b>Pakistan and Afghanistan</b>					
<b>Polio (WPV1)</b>	5-Jun	29	29	—	Already in 2019, a total of 21 infections with wild poliovirus type 1 (WPV1) have been reported in <b>Pakistan</b> (12 cases in 2018), including 2 in the past week (Khyber Pakhtunkhwa/Bannu). Sixteen environmental samples yielded WPV1 from four provinces (Sindh, Balochistan, Khyber Pakhtunkhwa, and Punjab). In <b>Afghanistan</b> , a total of 8 WPV1 infections have been reported in 2019, compared with 21 in 2018. In the past week, one confirmed case was reported from Kunar province. R <a href="#">↓</a>
<b>Taiwan</b>					
<b>*Japanese Encephalitis</b>	4-Jun	4	4	0	Four cases of Japanese encephalitis (JE), a vaccine-preventable disease, have been confirmed in Kaohsiung City (3) and Chiayi City (1), indicating that the JE transmission season has started in Taiwan. Two of the patients have required intensive care management. The <i>Culex</i> mosquito vector is abundant in Taiwan. R <a href="#">↓</a>
<b>Australia and the Pacific</b>					
<b>Dengue</b>	6-May	>2,500	—	—	Already, 2019 promises to record significant dengue incidence. As of May 6, <b>New Caledonia</b> has reported 3,081 cases (DENV-2), nearly the total for 2018. Similarly, <b>Australia</b> has reported more than twice as many by May 5 (429) as the same time last year. In <b>French Polynesia</b> , cases due to DENV-1 have been reported in <b>Moorea, Raiatea, Bora Bora, Rangiroa, Vanatu, the Cook Islands</b> and <b>Tahiti</b> , where DENV-2 also has been detected for the first time since 2000. R <a href="#">↓</a> <a href="#">↗</a>

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<b>Papua New Guinea</b>					
<b>Polio (cVDPV)</b>	5-Jun	0	0	—	In 2019, as of June 5, there have been no reported cases of circulating vaccine-derived poliovirus (cVDPV) infection in Papua New Guinea, compared with 26 cases in 2018. cVDPV has not be detected in an environmental sample since November 2018. R <a href="#">1</a>
<b>Africa</b>					
<b>Polio (cVDPV)</b>	5-Jun	12	12	—	So far in 2019, compared with 80 cases in 2018, twelve cases of circulating vaccine-derived poliovirus (cVDPV) infection have been reported in <b>Nigeria</b> (8), <b>Somalia</b> (2), <b>Niger</b> (1) and <b>DRC</b> (1). In 2018, outbreaks of cVDPV persisted in <b>Nigeria</b> , (Jigawa, Katsina, Borno, and Sokoto states), <b>Somalia</b> (Lower Juba), <b>DRC</b> (Haut Katanga, Haut Lomami, Mongala, and Maniema Provinces), <b>Niger</b> (Zinder province) and <b>Mozambique</b> (Zambézia province). R <a href="#">1</a>
<b>Measles</b>	12-May	>270,000	>3,950	—	The most severe outbreak has been in <b>Madagascar</b> (p. 8), with >145,00 cases in 2019. <b>DRC</b> and <b>Nigeria</b> have reported >84,000 and >28,000 cases, respectively, in 2019. To a lesser extent, <b>Angola</b> , <b>Cameroon</b> , <b>Central African Republic</b> , <b>Chad</b> , <b>Liberia</b> , <b>Sierra Leone</b> , <b>Mauritius</b> , <b>Ethiopia</b> , <b>South Sudan</b> , <b>Mali</b> , <b>Guinea</b> , <b>Uganda</b> , <b>Kenya</b> , and <b>Tunisia</b> also have reported cases. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Dengue</b>	4-Jun	>16,000	—	—	As of April 24, a total of >11,900 cases of dengue have been reported in <b>Côte d'Ivoire</b> , <b>Kenya</b> , <b>Tanzania</b> , and on <b>Mauritius</b> and the island of <b>Réunion</b> , where incidence may have started to decrease, yet 14,000 confirmed cases of both DENV-1 and DENV-2 have been reported as of Jun 4. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Leishmaniasis</b>	10-Apr	>6,000	—	—	In February, >6,000 cutaneous leishmaniasis cases were reported in <b>North Africa</b> over the past 6 months. Most have been diagnosed along the Mediterranean coast (west of Tripoli) of <b>Libya</b> (>5,000), followed by central and southwestern <b>Tunisia</b> (~1,300) and in the Ghardaia Province of <b>Algeria</b> (~400). In April, a kala-azar outbreak including nearly 30 cases was reported in in Marsabit, <b>Kenya</b> . Leishmaniasis also can be found in <b>South Sudan</b> and <b>Somalia</b> . R <a href="#">1</a>
<b>Crimean-Congo hemorrhagic fever</b>	16-May	11	4	—	In less than a month, 11 cases of Crimean-Congo hemorrhagic fever (CCHF) have been reported in southwestern African countries. <b>South Africa</b> accounts for three of the CCHF cases (2 confirmed) in Northern Cape, Free State, and North West Provinces. Seven cases (one confirmed) were reported in <b>Namibia</b> , and another case was reported in Huila, <b>Angola</b> , which, if confirmed, would be the first CCHF case ever reported in Angola. CCHF is spread by hard-bodied <i>Hyalomma</i> ticks that parasitize livestock. R <a href="#">1</a>
<b>Chad</b>					
<b>Measles</b>	26-May	18,682	80	191 (1.0)%	As of May 26, a total of 18,682 measles cases have been reported in 2019, including 191 (1.0%) deaths, as the epidemic continues to spread geographically. Laboratory supplies arrived in late April. Since then, 80 cases were confirmed serologically. Of the country's 126 districts, 117 (93%) have now been affected. The mean age of cases is ~2 years, with ~50% of cases being <1 year old. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Meningitis</b>	14-Apr	619	—	47 (7.6%)	As of April 14, a total of 619 meningitis cases have been reported this year in two districts in Mandoul region—Goundi and Bedjondo. Of specimens analyzed, most were identified as <i>N. meningitidis</i> serotype w135, followed by pneumococcus. The epidemiology of sub-Saharan invasive meningococcal disease has changed in recent years, with serotypes W, X, and C now replacing A as the predominant serotype after mass vaccination against MenA. R <a href="#">1</a> <a href="#">2</a>

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<b>Congo</b>					
<b>Chikungunya</b>	5-May	7,811	61	0	A chikungunya outbreak was declared on February 2. As of April 2, a total of 7,127 cases, including 61 confirmed, have been reported by health authorities. Cases have been reported in 8 of 12 departments: Kouilou, Pool., Bouenza, Pointe-Noire, Plateaux, Niari, Lékoumou and Brazzaville. Kouilou has been the most affected department (34%) of cases, followed by Niari. <i>Aedes albopictus</i> , a competent mosquito vector, was found during investigations. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Democratic Republic of Congo</b>					
<b>Cholera</b>	12-May	10,269	—	241 (2.3%)	As of May 12, a total of 10,269 cholera cases have been reported in the DRC in 2019, including 241 (2.3%) deaths. Outbreaks have been reported in 19 (73%) of the 26 DRC provinces. Approximately 90% of the cases have been reported from eastern provinces where cholera is now considered endemic: Tanganyika, Upper Katanga, Upper Lomami, North Kivu and South Kivu. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a> <a href="#">4</a>
<b>Monkeypox</b>	5-May	1,739	Unclear	37 (2.1%)	So far in 2019 and as of April 14, a total of 1,739 suspected monkeypox cases have been reported in DRC, including 175 in the past two reporting weeks; 26 (1.9%) have died. An unknown number of cases have been confirmed from the Ecuador, North Ubangi, and South Ubangi Provincial Health Divisions. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a> <a href="#">4</a>
<b>Measles</b>	12-May	84,400	—	1,460 (1.8%)	Already in 2019, a total of 84,400 measles cases have been reported in DRC, including 1,460 deaths (1.8%). In the past week, >2,300 cases and 73 deaths were reported. More than 64% of cases in 2019 have been from Tshopo, Lualaba, Kasai, and Upper Lomami provinces. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Ebola</b>	5-Jun	2,031	1,937	1,367 (67.3%)	<p>Over the last two months, the Ebola virus disease (EVD) outbreak in northeastern DRC expanded dramatically, fueled by a breakdown in control efforts that were interrupted by security breakdowns and resistance of local communities. Over the past two weeks, there have been some encouraging signs that transmission has been slowing down, as response teams have been able to function more freely. Over the past two weeks, 30% fewer deaths were reported per week than during April, and especially in the transmission hotspots of Katwa, Mandima, and Beni. However, incidence during the same period increased in Mabalako and Butembo.</p> <p>In the 21 days from May 13 to June 2, a total of 82 health areas within 13 health zones reported new cases, representing 46% of the 179 health areas affected to date. During this period, a total of 297 confirmed cases were reported (a 12% reduction in cases from the previous three weeks), the majority of which were from the health zones of Mabalako (27%, n=79), Butembo (22%, n=64), Katwa (15%, n=46) and Beni (12%, n=35).</p> <p>As of June 5, a total of 2,037 EVD cases have been reported, including 1,937 confirmed and 94 probable; 1,367 (67.3%) have died. Fifty-eight percent of cases have been female and 29% (585) have been children &lt;18 years old.</p> <p>As of June 1, a total of 129,000 Ebola vaccinations had been administered. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a> (See epidemic curve and maps on p. 13 of this report.)</p>

Disease	Last Update	2019 Cases	Confirmed	Deaths	Notes
<b>Guinea</b>					
<b>Measles</b>	12-May	1,359	593	14 (1.0%)	As of May 12, a total of 1,359 measles cases, including 14 (1.0%) deaths have been reported, compared with 1,863 total cases in 2018. Of 874 specimens tested, 519 (59.4%) have been positive. Disease transmission currently is most acute in Matoto, Ratoma, Dixinn, Matam, ,Dubreka, Coyah, Maferinyah, Kegneko, and Manéah. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Kenya</b>					
<b>Leishmaniasis</b>	19-May	1,102	235	13 (1.2%)	As of May 12, a kala-azar outbreak in Marsabit and Wajir counties has led to 1,102 suspected cases, including 235 confirmed with rapid diagnostic testing and 13 deaths (1.2%). R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Cholera</b>	19-May	2,137	116	14 (0.7%)	A cholera outbreak that began in early January has been contained in Nairobi and Narok. As of May 19, a total of 2,137 cases have been reported, including 116 confirmed and 14 (0.7%) deaths. Cases continue to be reported from Kajiado, Garissa, Machakos, Mandera, Embu, and Nairobi Counties. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a> <a href="#">4</a>
<b>Liberia</b>					
<b>Lassa fever</b>	12-May	23	22	6 (34.8%)	As of May 5, Liberia has reported a total of 61 cases of Lassa fever, including 21 confirmed with RT-PCR and 12 (19.7%) deaths, in 2019. Cases have been reported in Nimba, Bong, Grand Kru, Grand Bassa, and Montserrado Counties. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Measles</b>	12-May	876	65	5 (0.6%)	As of May 12, a total of 876 measles cases have been reported from 13 counties, including 65 confirmed. Eleven of 15 counties have reported cases. Bong, Margibi, and Lofa Counties have been especially hard-hit recently. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Madagascar</b>					
<b>Measles</b>	11-May (2018-19)	146,277	1,394	910 (0.6%) (2018-19)	Since the measles outbreak began in September 2018 and as of May 11, there have been 146,277 measles cases reported in Madagascar. Following a reactive vaccination campaign, the tempo of this massive outbreak continues to slow down. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a> <a href="#">4</a>
<b>Mali</b>					
<b>Measles</b>	26-May	909	261	0	As of May 26, a total of 909 measles cases were reported in Mali, including 261 confirmed. Cases have been reported recently in the following health districts: Koulikoro, Segou, Kayes, Mopti, Bamako, Kidal, and Babamba. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Mayotte</b>					
<b>Rift Valley fever</b>	3-Jun	137	137	0	Between December 11 and June 3, a total of 137 Rift Valley fever (RVF) cases were reported on the island of Mayotte, which is between Madagascar and Mozambique. There has been a significant decrease in RVF incidence over the past three months. Seventy-five percent of the cases have been male. Most cases have been concentrated Centre-West and North area of the island. One hundred twenty-three separate animal RVF outbreaks also have been documented in the Mayotte's central and western regions. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>

Disease	Last Update	2019 Cases	Confirmed	Deaths	Notes
<b>Mozambique</b>					
<b>Cholera</b>	5-May	6,739	—	8 (0.1%)	Tropical Cyclones Idai and Kenneth, hitting Mozambique in March and April, caused widespread flooding, crop loss, and devastation to infrastructure. More than 6,730 cholera cases have been reported in central Sofala (especially Beira district) and northern Cabo Delgado provinces, including recently in the port town and provincial capital of Pemba, which is one of the most cholera-endemic areas in Mozambique. Due to severe damage to healthcare, sanitation, and water facilities and infrastructure, affected areas will remain especially vulnerable to waterborne and vectorborne disease. Wide areas of the coastal regions remain without electricity and communications. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Namibia</b>					
<b>Hepatitis E</b>	19-May	5,211	953	43 (0.8%)	The hepatitis E outbreak that started nearly one year ago has persisted and become protracted. The outbreak, which at first was restricted to the Windhoek district in the Khomas Region (still the most affected region), spread to 8 other regions: Erongo, Omusati, Oshana, Ohangwen, Oshikoto, Kavango, and, most recently, Otjozo and Hardap. As of May 19, a total of 5,211 hepatitis E cases had been identified. Forty-three cases have died, of whom 19 (45.0%) were either pregnant or post-partum women. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Niger</b>					
<b>*Measles</b>	5-May	6,814	0	32 (0.5%)	In 2019 and as of May 5, a total of 6,814 measles cases, including 21 (0.5%) deaths have been reported by Niger, with cases reported from Maradi and Tahoua regions., followed by Zinder, Niamey, Tillaberi, Agadez, Diffa, and Dofo. R <a href="#">1</a>
<b>Nigeria</b>					
<b>Measles</b>	18-May	28,796	1,423	89 (0.3%)	As of May 18, a total of 28,796 suspected measles cases have already been reported in Nigeria, including 2,029 in the past week. The states of Borno in northeast Nigeria, Yobe, and Katsina in the north have accounted for nearly 80% of cases; another 33 states have reported cases. Nigerian health authorities reported >17,000 suspected measles cases in 2018. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Lassa fever</b>	26-May	593	578	129 (22.3%)	As of May 26, there have been a total of 578 laboratory-confirmed and 15 probable Lassa fever cases reported in 2019, including 18 healthcare workers, two of whom died. One hundred twenty-nine (22.3%) deaths have occurred. Since a peak at the end of January, there has been a steady decline in cases, with fewer cases in the last 5 weeks than at any other time in 2019. Ninety-three percent of cases have been in Edo (36%), Ondo (29%), Ebonyi (8%), Bauchi (7%), Taraba (7%), and Plateau (6%) States, and the remainder have been spread across 15 other States. R <a href="#">1</a>
<b>Meningitis</b>	19-May	905 (2018-19)	110	65 (7.2%)	From October 1, 2018 to May 19, Nigeria has reported 905 suspected meningitis cases, including 65 (7.2%) deaths. Of the 110 specimens that yielded an organism, 35 (31.8%) were <i>Neisseria meningitidis</i> serogroup C. Most cases have occurred in the northern states of Samfara, Katsina, and Sokoto, and to a lesser extent in Jigawa, Yobe, Bauchi, Plateau, Niger, Kano, and Kebbi. R <a href="#">1</a>
<b>Somalia</b>					
<b>*Cholera</b>	30-May	55	—	—	In the week ending May 19, a total of 55 suspected cholera patients, 24 (68%) of whom are children under 5 years old, have been reported by Somali authorities. Sixteen districts in Banadir region are affected. R <a href="#">1</a>

Disease	Last Update	2019 Cases	Confirmed	Deaths	Notes
<b>South Sudan</b>					
<b>Measles</b>	14-May	1,182	69	7 (0.6%)	As of May 14, total of 1,182 suspected measles cases, including 69 confirmed, have been reported in 12 South Sudan counties: Abyei, Juba, Pibor, Gogri West, Gogri East, Bor South, Melut, Mayom, Tonj North, Awiel South, Awiel West, and Awiel Central. Three Protection of Civilian sites have been affected. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Tanzania</b>					
<b>Cholera</b>	26-May	277	10	5 (1.8%)	In 2019, a new wave of cholera was reported in 9 Tanzanian Districts, including Longido, Handeni, and Pangani. In the past reporting week, Dar es Salaam and Tanga regions reported cases. As of May 26, a total of 277 suspected cases, including 5 deaths, have been reported by health authorities. R <a href="#">1</a> <a href="#">2</a>
<b>Uganda</b>					
<b>Measles</b>	7-May	1,041	525	6 (0.6%)	As of May 7, a total of 1,041 suspected measles have been reported in 2019, of which 525 have been confirmed. Children under 5 years old accounted for more 64% of confirmed cases; all but one live in rural areas. R <a href="#">1</a> <a href="#">2</a>
<b>*Yellow fever</b>	14-May	2	2	0	On May 14, the Ugandan Ministry of Health reported that routine sampling for a sentinel surveillance program identified two cases of yellow fever in widely separated districts. One case originated in Koboko, in the northwest close to the borders of South Sudan and the DRC. The second came from a patient in south-central Masaka, which is on close to Lake Victoria. Neither had been vaccinated. A survey by a public health response team determined that there were many unvaccinated persons in both areas. R <a href="#">1</a>
<b>Zambia</b>					
<b>*Cholera</b>	31-May	312	1	7 (2.2%)	Since April 3 and as of May 31, a total of 312 suspected cholera cases, including 1 confirmed, have reported by Zambian health authorities; 7 (2.2%) have died. Most cases (96%) have occurred in Mpulungu District, Northern Province, near to Lake Tanganyika. The disease has spread to neighboring Mbala District. R <a href="#">1</a>

**Removed from last bi-weekly list:**

***Salmonella* Newport (US, Multistate)**  
**Botulism (Argentina)**  
**Typhoid fever (El Salvador)**  
**Anthrax (Hungary)**  
**Avian influenza (China)**  
**Monkeypox (Central African Republic)**  
**Monkeypox (Congo)**  
**Meningitis (Togo)**

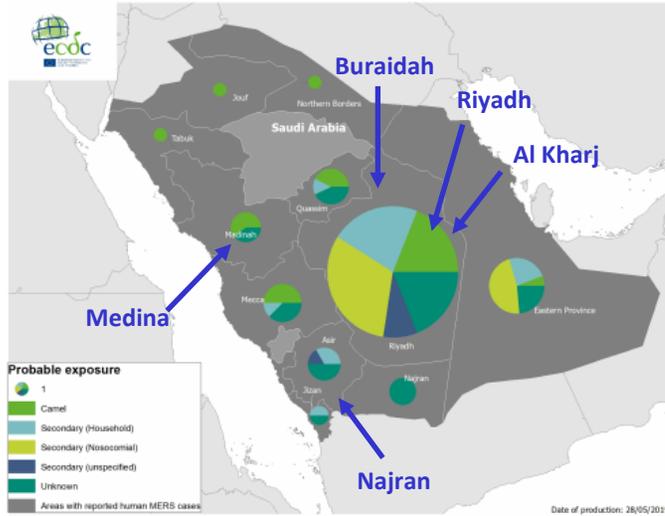
**New outbreaks since last bi-weekly list**

\* ***E. coli* O26 (US, Multistate)**  
\* **Legionnaires' disease (Ohio)**  
\* **Q fever (Switzerland)**  
\* **Nipah virus (India)**  
\* **Japanese encephalitis (Taiwan)**  
\* **Measles (Niger)**  
\* **Cholera (Somalia)**  
\* **Yellow fever (Uganda)**  
\* **Cholera (Zambia)**

# MERS-CoV

Geographical distribution of confirmed MERS-CoV cases by probable region of infection and exposure in 2019, Saudi Arabia, as of 28 May 2019

ECDC



# Cholera

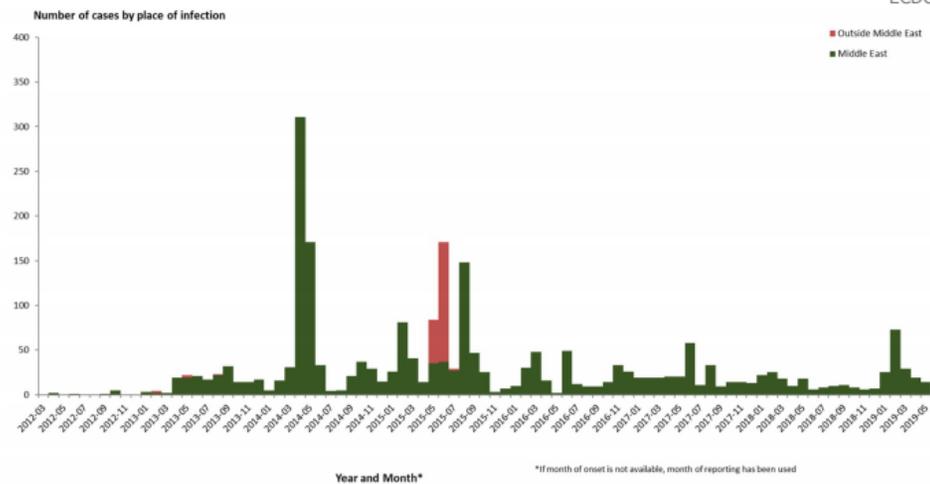
Geographical distribution of cholera cases reported worldwide in 2018

ECDC



Distribution of confirmed cases of MERS-CoV by place of infection and month of onset, from March 2012 to 28 May 2019

ECDC



Geographical distribution of new cholera cases reported worldwide between February to April 2019

ECDC



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

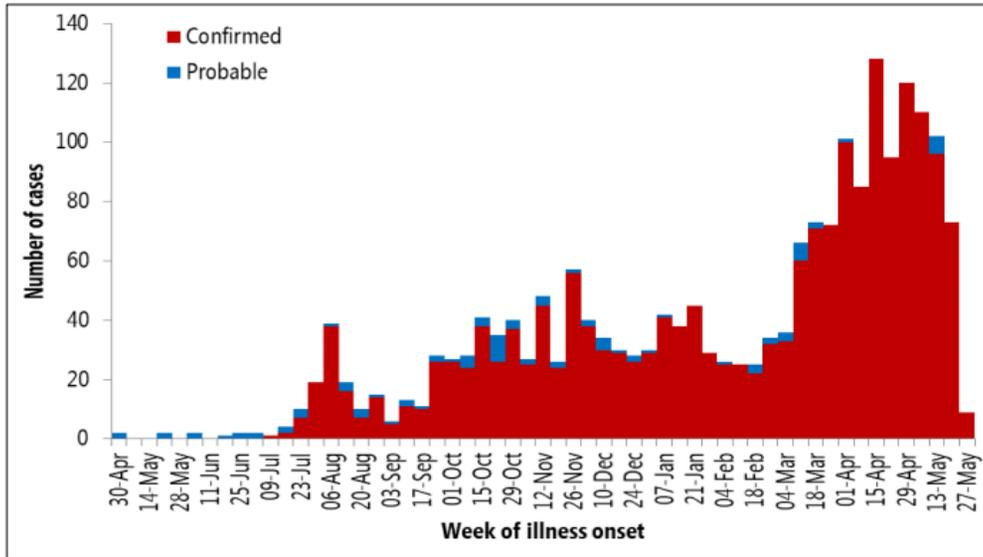
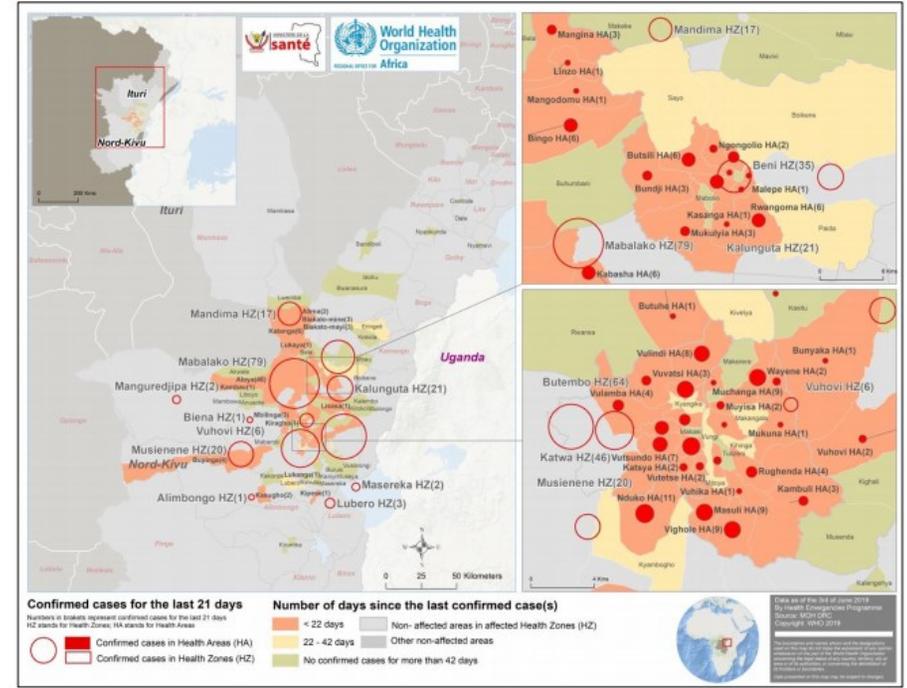


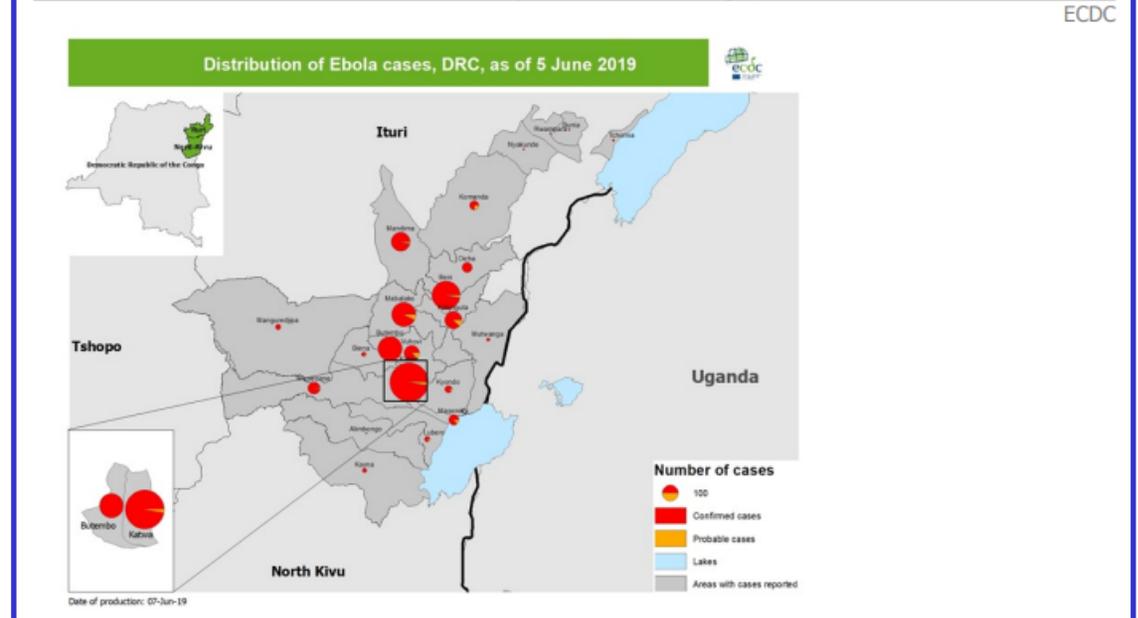
Figure 2: Geographical distribution of confirmed and probable Ebola virus disease cases by health area, North Kivu and Ituri provinces, Democratic Republic of the Congo, 02 June 2019



# Ebola virus disease outbreak, North Kivu and Ituri Provinces, Democratic Republic of Congo

As of June 2, 2019

Geographical distribution of confirmed and probable cases of Ebola virus disease, North Kivu and Ituri Provinces, Democratic Republic of the Congo, as of 5 June 2019



### Geographical distribution of chikungunya cases reported worldwide, March to May 2019

Source: ECDC



### Geographical distribution of dengue cases reported worldwide, March to May 2019

Source: ECDC

