

## Current Infectious Disease Outbreaks for On-Call MDs

September 6, 2019

Disease	Last Update	2019 Cases	Con- firmed	Deaths	Notes and References (R 1, 2, 3)  *[Disease] = new since previous outbreak list
<b>New York City</b>					
<b>Measles</b>	3-Sep	654	654	0	On September 3, the NYC Department of Health and Mental Hygiene announced an end to the nearly year-long outbreak. A total of 654 confirmed measles cases were identified in the country's largest measles outbreak since 1992, centered within Brooklyn's Orthodox Jewish communities. Rash onsets occurred between September 30, 2018 and July 15, 2019. Serious complications included hospitalization (52), intensive unit care (19) and pneumonia (34). In response to this outbreak, New York State ended all religious exemptions for immunizations, joining other states that had taken this step previously: CA, AZ, WV, MS, and ME. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>United States</b>					
<b>Hepatitis A</b>	30-Aug	>23,900 (2018-19)	>23,900 (2018-19)	220 (1%)	The sustained 2018-19 outbreak of hepatitis A (HAV) has persisted in multiple eastern, southern, and midwestern states. Of the >23,900 nationwide cases reported as of August 30, >15,000 (63%) have been hospitalized. Twenty-seven states continue to report cases (AZ, CO, LA, AL, NM, AR, MO, MI, IL, OH, WV, KY, IN, TN, VA, NC, SC, FL, GA, NV, NH, MA, ID, NJ, PA, WA, MS, and MN). Risk factors continue to be homelessness and IV drug use. On October 24, 2018, the Advisory Committee on Immunization Practices (ACIP) recommended HAV vaccination for homeless persons >1 year old. R <a href="#">1</a> <a href="#">2</a>
<b>Measles</b>	29-Aug	1,234	1,234	—	As of August 29, a total of 1,234 measles cases, including 125 hospitalizations have been reported from 31 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, ID, AK, HI and OH. This is the greatest case load in the US since 1992. The majority of cases have been in NYC and nearby NYS counties. The outbreak has ended in some locations. R <a href="#">1</a>
<b>*Listeria</b>	23-Aug	24	24	2 (8.3%)	PulseNet has detected a multistate outbreak of listeriosis. As of August 23, a total of 24 cases have been reported by 13 states (NY, OH, MI, IN, KY, IL, IA, MO, KS, TX, FL, OR, CA). Onsets have ranged from July 20, 2017 to August 1, 2019. Twenty-two cases have been hospitalized and two (8.3%) have died. No links to foods, restaurants, or grocery stores have been identified. A concurrent listeriosis outbreak in Canada involving a closely related <i>Listeria monocytogenes</i> strain has been linked to Rosemount brand cooked diced chicken. R <a href="#">1</a> <a href="#">2</a>
<b>*Coccidioides</b>	27-Aug	6,414	6,414	??	As of August 27, a total of 6,414 cases of coccidioidomycosis had been report to public health authorities in Arizona, which is nearly 1,200 more than at the same time in 2018. Increased incidence of <i>Coccidioides</i> infection can be attributed to increased reporting practices, climate change (drought and increasing temperatures), dust storms, soil disturbance caused by increased construction activity, and host factors. No longer a fungal disease limited to the southwest, <i>Coccidioides</i> spp. have been detected in recent years as far north as eastern Washington State. R <a href="#">1</a>
<b>*EEE</b>	28-Aug	9	6	1(16.6%)	An elderly male from Somerset County, NJ was diagnosed with eastern equine encephalitis (EEE). Five In southwest MI (Kalamazoo and Barry counties), one confirmed and 3 suspect human cases of EEE also have been reported. Four human EEE cases, including one death, also were reported in MA (Bristol and Franklin Counties). R <a href="#">1</a> <a href="#">2</a>

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<b>United States</b>					
<b>Legionnaires' disease</b>	15-Aug	79	13	1 (1.3%)	A Legionnaires' disease (LD) outbreak in Atlanta has been linked to the Sheraton Atlanta. As of August 15, a total of 79 suspected cases, including 13 confirmed by the Georgia Department of Public Health (GDPH), have been reported; one (1.3%) has died. LD cases have been confirmed in persons who stayed at the hotel from June 12 - July 15. The source of the outbreak is thought to be the hotel's cooling tower or a decorative fountain in the atrium. R <a href="#">1</a> <a href="#">2</a>
<b>Rat lungworm</b>	10-Jul	6	6	0	The Hawaii Department of Health reported a sixth case of infection with the rat lungworm, <i>Angiostrongylus cantonensis</i> on the island of Hawaii's western half. Half of the infections have been in visitors to the island from the mainland who were unaware of the risk when consuming fresh produce. R <a href="#">1</a>
<b>Salmonellosis</b>	30-Aug	1,003	1,003	2 (0.02%)	As of August 30, a total of 1,003 salmonellosis cases have been reported from 48 states, following contact with chicks and ducklings in backyard flocks from multiple hatcheries. One hundred seventy-five cases were hospitalized; 2 have died. Onset dates range from January 1 to August 9. Infections have been with many <i>Salmonella</i> serotypes: Braenderup, Montevideo, Agona, Anatum, Infantis, Newport, Alachua, Enteritidis, Manhattan, Muenchen, and Oranienburg. R <a href="#">1</a>
<b>Salmonellosis</b>	27-Aug	143	143	0	PulseNet identified an outbreak of multi-drug resistant salmonellosis due to serotypes 14,[5],12:i:-, Infantis, Newport, and London. As of August 27, total of 143 cases from 35 states have been reported, including 33 hospitalizations and no deaths. Onsets range from June 10 to July 30. Exposure to pig ear dog treats is the likely cause of the outbreak. Pet Supplies Plus recalled pig ear dog treats stocked in open bins. R <a href="#">1</a>
<b>Cyclosporiasis</b>	29-Aug	1,696	1,696	0	As of August 29, a total of 1,696 <i>Cyclospora cayetanensis</i> infections without international travel had been reported, including 92 hospitalizations. On May 30, only two states (SC, CT) had reported cases. As of August 29, A total of 33 states had reported cases (VT, NH, CT, MA, NY, NJ, PA, MD, DC, VA, NC, SC, GA, FL, LS, MO, IA, MN, WI, IL, MI, IN OH, NE, KS, AR, TN, CO, NM, TX, AZ, UT, CA). Clusters involving multiple restaurants or events are being investigated. One outbreak (205 cases) has been linked to basil imported from Siga Logistics de RL de CV of Morelos, Mexico. R <a href="#">1</a>
<b>*SLE</b>	21-Aug	2	2	0	Two middle-aged persons were diagnosed with St. Louis encephalitis (SLE) in El Centro (Imperial County) which is in southern CA. Both had been hospitalized in July. R <a href="#">1</a>
<b>*LACV</b>	16-Aug	1	1	0	A 7-year-old child from Mt. Vernon, OH (Knox County) was infected with La Crosse virus encephalitis. Risk factors have not yet been identified. R <a href="#">1</a>
<b>*STEC</b>	20-Aug	69	69	0	The MN Department of Health announced an outbreak of Shiga-toxin producing <i>E. coli</i> (STEC) infection that has been linked to swimming in Lake Nokomis, which is in south Minneapolis. Both of the lake's beaches have been closed. Since this first started in early August, a total of 69 STEC infections have been reported. R <a href="#">1</a>
<b>*STEC</b>	5-Sep	14	14	0	On September 5, the Philadelphia (PA) Department of Public Health announced an outbreak of Shiga-toxin producing <i>E. coli</i> (STEC). Two patients also have been diagnosed with hemolytic uremic syndrome (HUS). The patients ate at some common restaurants, though names of establishments have not been released yet. R <a href="#">1</a>

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<b>Canada</b>					
* <i>Listeria</i>	23-Aug	7	7	0	A listeriosis outbreak has been detected in three Canadian provinces: Ontario, Manitoba, and British Columbia. As of August 23, a total of 7 cases have been confirmed, including 5 with onsets in April - June 2019. Rosemount cooked diced chicken was supplied to institutions where cases resided or visited (cafeterias, hospitals, nursing homes). This product and cooked diced chicken produced by Reuven International and Sysco's cooked shredded chicken also have been recalled by Canadian authorities. The <i>Listeria monocytogenes</i> outbreak strain is closely related to the strain identified in a concurrent US outbreak. R <a href="#">1</a> <a href="#">2</a>
<b>Caribbean, Central America, and South America</b>					
Dengue	3-Aug	>2,000,000	>870,000	740	In 2019 as of August 3, a total of >2,000,000 dengue cases, including >870,000 laboratory-confirmed, and 740 deaths, have been reported to the Pan American Health Organization (PAHO). Cases have been confirmed in all Central and South American countries except Uruguay. <b>Brazil</b> (>1,740,000), <b>Colombia</b> (>74,000), <b>Nicaragua</b> (>61,000), <b>Mexico</b> (>44,000), and <b>Honduras</b> (>49,000) have reported the most cases. Most dengue cases in the Caribbean (>12,400) have been reported by the <b>Dominican Republic, Jamaica, and Cuba. Guadeloupe, Martinique, Antigua/ Barbuda, Aruba, Trinidad/Tobago, and 11 other islands</b> also have reported cases. R <a href="#">1</a>
Chikungunya	4-Aug	>98,700	—	40	In 2018, >80,000 chikungunya cases were reported in the Americas and the Caribbean. In 2019 as of August 4, <b>Brazil</b> alone has reported 97,900 cases (Rio de Janeiro, Minas Gerais, Bahia, Rio Grande do Norte, Pernambuco, and Pará regions). To date in 2019, chikungunya cases also have reported in <b>Peru, Colombia, Paraguay, El Salvador, Mexico, Bolivia, and Nicaragua</b> . R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
Zika	10-Aug	>12,000	3,482	—	As of August 10, a total of >12,000 Zika cases have been reported to PAHO in 2019. In addition to <b>Brazil's</b> >9,000 and <b>Peru's</b> 1,370 reported cases, countries throughout <b>Central America, Mexico, Bolivia, Colombia, Paraguay, Argentina, and Venezuela</b> , have reported Zika cases. In 2019, <b>Puerto Rico</b> (28) is the only Caribbean island to have reported to PAHO. R <a href="#">1</a>
Measles	12-Aug	>15,000	1,030	—	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 >15,000 suspected cases have been reported by <b>Brazil, Mexico, Cuba, Paraguay, and Columbia</b> . Confirmed cases also have been reported in <b>Argentina, Venezuela, Chile, Peru, Costa Rica, and the Bahamas</b> . R <a href="#">1</a> <a href="#">2</a>
<b>Haiti</b>					
Cholera	3-Aug	511	—	3 (0.6%)	As of August 3, a total of 511 cholera cases, including 3 (0.6%) deaths, have been reported in 2019. In comparison, 3,786 cholera cases were reported in 2018 and 13,681 cases in 2017. 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> <a href="#">4</a>
Diphtheria	27-Jul	88	11	2 (18.2%)*	As of July 27, a total of 88 diphtheria cases have been reported in Haiti in 2019, including 11 confirmed and two deaths (18.2%). This represents a significant decrease from 2018, when 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. R <a href="#">1</a> * Case-fatality rate is of confirmed cases only

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<b>Argentina</b>					
Hantavirus	24-Jul	18	18	1	Once again, hantavirus cases have been occurring in Jujuy province, as 3 additional cases were reported by health authorities. Most cases have originated from Palma Sola and San Pedro. R <a href="#">1</a>
<b>Brazil</b>					
Yellow fever	9-Jun	82	82	14(17%)	This is the beginning of yellow fever season. As of June 9, a total of 82 confirmed cases (all presumed to be sylvatic) have been reported in the southern states of São Paulo (68), Parana (13), 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>Mexico</b>					
Cyclosporiasis	2-Aug	14	14	0	Fourteen British tourists to Riveria Maya and Cancun have been diagnosed with cyclosporiasis. There are reports of other resorts being linked to infection. More than 1,700 cases of cyclosporiasis have been confirmed in the US, with one of many outbreaks found to be due to contaminated basil from Siga Logistics de RL de CV of Morelos. R <a href="#">1</a>
<b>Venezuela</b>					
Diphtheria	3-Aug	384	—	16 (4.6%)	A diphtheria outbreak that began in 2016 has continued in Venezuela. As of August 3, a total of 384 suspected cases and 16 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 suffered. R <a href="#">1</a>
Malaria	20-Jul	10	—	—	At least 10 cases of malaria were reported in Venezuela's Anzoategui State (Barcelona). Malaria has re-emerged in Venezuela over the past few years as mosquito control programs have stopped functioning there. R <a href="#">1</a>
<b>Europe</b>					
West Nile virus	6-Sep	241	241	20 (8.3%)	The 2019 West Nile virus season has accelerated in Europe. As of September 6, a total of 241 cases have been confirmed. Greece (156), Romania (25), Cyprus (14), Italy (14), Hungary (11), Bulgaria (4), Austria (1), and France (1) have reported cases, including 20 (9.2%) deaths in Greece (14), Romania (3), Cyprus (1), Italy (1), and Serbia (1). Seventeen equine outbreaks have been reported in Greece (12), Italy (3), Germany (1), and Hungary (1). R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
Measles	29-Aug	>90,000	>36,000	37	Between January 2018 and January 2019, an estimate of >73,700 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 >54,246 cases, including 18 deaths, were reported in <b>Ukraine</b> alone as of August 12. Outbreaks have been reported in most European countries, including <b>Serbia, North Macedonia, Romania, France, Poland, Bulgaria, Italy, Lithuania, Czech Republic, Germany, the United Kingdom, Switzerland, Slovakia, Spain, and Austria.</b> R <a href="#">1</a> <a href="#">2</a>
*Hantavirus	22-Aug	578	420		In 2019 as of August 22, a total of 578 cases of hemorrhagic fever with renal syndrome were reported in <b>Austria</b> (200), <b>Croatia</b> (149), <b>Hungary</b> (9), and <b>Slovenia</b> (220). Confirmed Puumala infection was confirmed in the Austrian and Slovenian cases. Dobrava virus may have been the infectious agent in Croatia. R <a href="#">1</a>

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<b>Denmark</b>					
<b>Campylobacteriosis</b>	26-Jul	50	50	0	At least 50 people have been diagnosed with campylobacteriosis, though health authorities suspect that many more people have been sickened after eating chicken meat. R <a href="#">↓</a>
<b>France</b>					
<b>Salmonellosis</b>	20-Jul	>80	>80	0	More than 80 persons in France have been infected with <i>Salmonella enterica</i> serovar Typhimurium; 13 were hospitalized. Illness has been linked to consumption of Italian capocollo, a pork cold cut, produced by Di Vittorio with ingredients from France and Germany. The product has been recalled. R <a href="#">↓</a>
<b>Salmonellosis</b>	3-Aug	49	49	0	In northern France, 49 people were diagnosed with <i>S. enterica</i> serovar Typhimurium following consumption of cheese made from unpasteurized, raw sheep milk by the French firm, GAEC Froidevaux Cornuet. R <a href="#">↓</a>
<b>Latvia</b>					
<b>Tick-borne encephalitis</b>	30-Jun	>90	>90	—	Latvian health authorities have reported a 33% increase in tick-borne encephalitis (TBE) in the first half of 2019, compared to the same period in 2018. The Baltic countries have the highest rates of TBE in Europe. R <a href="#">↓</a>
<b>Spain</b>					
<b>*Listeriosis</b>	16-Aug	204	204	3 (1.2%)	As of August 16, a total of 204 listeriosis cases have been confirmed in of Spain, 197 (96.5%) of which in the Andalusia (southern) region. Cases also have occurred in Aragon (3), Extremadura (2), Castile and León (1), and Madrid (1). Illness has been linked to a roasted pork product produced under the “La Mecha brand (Seville, Spain). Cases can be anticipated in travelers to this popular tourist destination. R <a href="#">↓</a>
<b>Sweden</b>					
<b>Tularemia</b>	2-Sep	690	690	—	A large tularemia outbreak continues to expand in multiple counties in northern, central, and eastern Sweden. As of September 2, a total of 680 cases — most in Dalarna and Gävleborg counties (>400) — have occurred. Increasing numbers of cases also have been reported in Norrbotten, Örebro, and Västerbotten. <i>F. tularensis</i> subspecies <i>holarctica</i> is found throughout northern Europe and can be transmitted by tick and mosquito bites and via direct contact with infected animal tissue. R <a href="#">↓</a> <a href="#">2</a> <a href="#">3</a>
<b>Arabian Peninsula and Middle East</b>					
<b>Yemen</b>					
<b>Cholera</b>	11-Aug	>936,000 (2018-19)	4,279	1,313 (0.1%)	Yemen continues to suffer through the worst cholera outbreak of modern times. More than 936,000 suspected cases have been identified from January 1, 2018 to August 11, 2019, of which >4,200 have been culture-confirmed. 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. R <a href="#">↓</a>

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<b>Saudi Arabia</b>					
<b>MERS-CoA</b>	2-Sep	169	169	44 (26.0%)	<p>Many pilgrims from the US traveled to Saudi Arabia for the Hajj from August 9 - 14. In 2019, as of September 2, the Ministry of Health (MOH) has reported a total of 169 cases of MERS-CoA infection., including 44 (26.0%) deaths. For the last few months, 0-3 cases have been reported weekly. The past 8 weeks, cases have been reported from the central Al-Qassim Region (Ar Rass, Buraidah), AlQurayat Region (AlQurayat city), Taif Region (Alkhurma city), Riyadh City, and in the south (Najran).</p> <p>Recently, 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. <b>(See epidemic curve, map, and nosocomial transmission diagram on p. 14 of this report.)</b> R <a href="#">1</a> <a href="#">2</a></p>
<b>Asia</b>					
<b>Dengue</b>	11-Aug	~539,000	—	—	<p>Dengue is endemic throughout Asia. Already in 2019, the <b>Philippines, Vietnam, Malaysia, Thailand, and Sri Lanka</b> have reported &gt;146,000, &gt;115,180, &gt;82,800, &gt;28,000, and &gt;43,200, and &gt;36,800 dengue cases, respectively. <b>Cambodia</b> (~39,000), <b>Singapore</b> (&gt;9,600) the <b>Maldives</b> (&gt;3,300), <b>Laos</b> (&gt;15,650), <b>India</b> (&gt;5,500), <b>Bangladesh</b> (&gt;8,500), <b>Indonesia</b> (&gt;1,000), <b>Nepal</b> (1,500), and <b>Pakistan</b> (&gt;2,800). <b>Timor-Leste</b> and <b>Taiwan</b> also have reported cases. Except for Bangladesh, Pakistan, and Sri Lanka, 2019 incidence is dramatically increased over 2018. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a></p>
<b>MDR falciparum malaria</b>	22-Jul	—	—	—	<p>Dihydroartemisinin-piperaquine (DHA-PQP), frontline treatment for falciparum malaria, administered throughout SE Asia and in many regions of Africa the last decade, is no longer efficacious in large swaths of these areas. Studies published in Lancet Infectious Disease indicate that DHA-PQP resistance is now prevalent in eastern parts of SE Asia. Continued spread of this P. falciparum lineage has the potential for becoming a global public health emergency. R <a href="#">1</a></p>
<b>Chikungunya</b>	Aug-4	>7,600	—	—	<p>So far in 2019, <b>Thailand</b> has reported ~6,000 chikungunya cases, most of which are in its southern districts near Malaysia. <b>The Maldives</b> and <b>Malaysia</b> (largely in Kuala Langat District) have reported &gt;1,320 and &gt;200 cases, respectively. <b>India</b> (Tamil Nadu) and <b>Indonesia</b> (Depok, West Java) also have reported cases. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a></p>
<b>China</b>					
<b>*Avian influenza A (H5N6)</b>	19-Aug	1	1	0	<p>On August 8, China confirmed that a 59-year-old woman from Beijing had been diagnosed with avian influenza (H5N6) infection. This was the first human infection with avian influenza A(H5N6) on mainland China in 2019. This year, one case of human infection with avian influenza A( H7N9) from Gansu province (northcentral China) was reported and another with avian influenza A(H9N2) infection was confirmed in Jiangu province (eastern China). R <a href="#">1</a> <a href="#">2</a></p>
<b>India</b>					
<b>Acute encephalitis syndrome</b>	27-Jul	~1,600	??	??	<p>Since April, &gt;1,560 cases of acute encephalitis syndrome (AES) have been reported in the northern Indian state of Assam, south of Tibet. Of them, ~440 have been confirmed as Japanese encephalitis, a vaccine-preventable disease. Cases also have been reported in Nagaland, Meghalaya, and in Manipur states, southeast of Bangladesh. R <a href="#">1</a></p>

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<b>Iran</b>					
<b>Brucellosis</b>	31-Mar	>16,000	>16,000	??	More than 16,000 brucellosis cases were diagnosed from March 2018 to March 2019, and especially in western, north-western, and northeastern provinces. R <a href="#">↓</a>
<b>Myanmar</b>					
<b>*Polio (cVDPV)</b>	5-Sep	4	4	0	In 2019 as of September 5, a total of 4 circulating vaccine-derived poliovirus infections (cVDPV) have been identified in Myanmar (Kayin province). R <a href="#">↓</a>
<b>Pakistan</b>					
<b>Crimean-Congo HF</b>	22-Aug	>50	>50	20 (40%)	In August, 27 and 25 Crimean-Congo hemorrhagic fever (CCHF) cases were reported in Karachi (Sindh province) and Balochistan province, respectively, including 20 deaths. Another patient died from CCHF in Lahore (Punjab province). It is likely that many cases of CCHF in Sindh, Punjab, and Balochistan provinces are going unreported. R <a href="#">↓</a>
<b>Pakistan and Afghanistan</b>					
<b>Polio (WPV1)</b>	5-Sep	73	73	—	Already in 2019, a total of 58 infections with wild poliovirus type 1 (WPV1) have been reported in <b>Pakistan</b> (12 cases in 2018) in Punjab, Sindh, Balochistan, and especially southern Khyber Pakhtunkwa provinces. More than 5 million children were vaccinated in July campaigns. In <b>Afghanistan</b> , a total of 15 WPV1 infections have been reported in 2019, compared with 21 in 2018. Cases have occurred in Kandahar, Himand, Uruzgan, and Kunar provinces. More than 2 million children were vaccinated in July. R <a href="#">↓</a>
<b>Philippines</b>					
<b>Falsified rabies PEP</b>	26-Jul	—	—	—	WHO and the FDA of the Philippines announced that counterfeit and falsified rabies vaccine (Verorab, Speeda, and Rabipur) and anti-rabies serum (EquiRab) are in commercial circulation. If a patient presents with a history of animal bite and post-exposure prophylaxis (PEP) in the Philippines, providers can consider this information. R <a href="#">↓</a>
<b>*Leptospirosis</b>	17-Aug	75	75	12 (16%)	In 2019 as of August 17, a total of 75 leptospirosis cases have been reported in the Calabarzon region (Cavite, Laguna, Batangas, Rizal and Quezon provinces). R <a href="#">↓</a>
<b>Taiwan</b>					
<b>Japanese encephalitis</b>	10-Jul	12	12	1 (8.3%)	Twelve cases of Japanese encephalitis (JE), a vaccine-preventable disease, have been confirmed in Kaohsiung City and Chiayi City, indicating that the JE transmission season has started in Taiwan. One has died. The <i>Culex</i> mosquito vector is abundant in Taiwan. R <a href="#">↓</a>
<b>Australia and the Pacific</b>					
<b>Dengue</b>	30-Jul	>5,200	—	—	Already, 2019 promises to record significant dengue incidence. As of July 26, <b>New Caledonia</b> has reported 3,852 cases (DENV-2). <b>Australia</b> has reported nearly twice as many cases by July 30 (810) than at the same time last year. In <b>French Polynesia</b> , 630 cases have been reported as of July 28 in <b>Moorea, Raiatea, Bora Bora, Palau, Rangiroa, Vanatu, the Cook Islands, Wallis and Fortuna</b> , and <b>Tahiti</b> , including 106 cases due to DENV-2 on <b>Tahiti</b> (for the first time since 2000), <b>Moorea, Bora Bora</b> and <b>Nuku Hiva</b> . R <a href="#">↓</a> <a href="#">2</a> <a href="#">3</a>

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<b>Africa</b>					
<b>Polio (cVDPV)</b>	5-Sep	72	72	—	So far in 2019, compared with 80 cases in 2018, a total of 53 cases of circulating vaccine-derived poliovirus (cVDPV) infection have been reported in <b>DRC</b> (29), <b>Nigeria</b> (15), <b>Angola</b> (8), <b>Central African Republic</b> (4), <b>Somalia</b> (3), <b>Ethiopia</b> (2), and <b>Niger</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>	18-Aug	>350,000	>5,000	—	The most severe outbreak had been in <b>Madagascar</b> , with >145,000 cases in 2019. That outbreak, however, has ended. <b>DRC</b> , <b>Nigeria</b> , and <b>Chad</b> have reported >155,400; >30,000; and >23,700 cases, respectively, in 2019. To a lesser extent, <b>Angola</b> , <b>Cameroon</b> , <b>Central African Republic</b> , <b>Niger</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-Aug	>58,000	>25,000	—	In 2019 and as of August 4, a total of >58,000 cases of dengue, including >25,000 confirmed, have been reported on the island of <b>Réunion</b> (48,800), in <b>Côte d'Ivoire</b> (2,514), <b>Tanzania</b> (6,829), <b>Kenya</b> , <b>Mauritius</b> (123), <b>Mayotte</b> (80), and <b>Benin</b> (19). Incidence on <b>Réunion</b> has decreased dramatically. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Leishmaniasis</b>	25-Aug	>7,000	—	—	A major kala-azar outbreak with >2,300 cases has been ongoing in <b>Kenya</b> since April. Leishmaniasis also can be found in <b>South Sudan</b> and <b>Somalia</b> . Earlier this year, >6,000 cutaneous leishmaniasis cases were reported in <b>North Africa</b> over a 6-month period. Most were diagnosed along the Mediterranean coast (west of Tripoli) of <b>Libya</b> , followed by central and southwestern <b>Tunisia</b> and in the Ghardaia Province of <b>Algeria</b> . R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Angola</b>					
<b>Measles</b>	30-Jun	3,127	85	64 (2.0%)	On May 4, Angola health authorities reported a new measles outbreak. As of June 30, a total of 3,127 cases have been identified, including 85 confirmed and 64 (2%) deaths. Most cases have been in Lunda Sul and Moxico provinces, though 16 more have reported cases. R <a href="#">1</a>
<b>Burundi</b>					
<b>Malaria</b>	11-Aug	5,992,214	—	2,192 (0.5%)	Burundi currently has epidemic levels of malaria throughout the country. In 2019 as of August 11, more than 5.9 million suspected cases of malaria have been reported. In the week ending August 11, >112,000 cases and 66 deaths were reported which is >100% more than at the same time in 2018. Health authorities are hampered by a lack of resources to mount a comprehensive, nationwide malaria prevention campaign. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>*Cholera</b>	28-Jul	199	32	1 (0.5%)	From June 1 to July 28, a total of 199 cholera cases, including 32 confirmed, were reported in the Bujumbura Mairie and Cibitoke health districts. One person has died. R <a href="#">1</a>
<b>Cameroon</b>					
<b>Cholera</b>	20-Aug	467	87	23 (5%)	A new wave of cholera was reported from the North and Far North Regions following the onset of the rainy season in May. A total of 467 suspected cholera cases have been reported since March 1 and as of August 20, including 87 confirmed and 23 (5%) deaths. Over 70% of reported cases have been from the North Region, where 57% of cases are female. The incidence trend appears to be decreasing. R <a href="#">1</a> <a href="#">2</a>

Disease	Last Update	2019 Cases	Confirmed	Deaths	Notes
<b>Central African Republic</b>					
Measles	25-Aug	281	15	2 (0.7%)	On July 9, the Ministry of Health announced a measles outbreak in the Nana-Gribizi health district. As of August 25, a total of 281 cases were reported, including 15 confirmed and 2 (0.7%) deaths, both in children <5 years old. Vaccine coverage for the first vaccine dose is only 49%. R <a href="#">1</a>
*Rift Valley fever	24-Aug	8	1	0	On August 19, RT-PCR detected Rift Valley fever (RVF) virus in a blood specimen from a Central African Republic farmer (Boali sub-prefecture). Active surveillance identified 7 additional suspected cases, 5 of whom having pending blood test results. Clinical specimens also were collected from 21 sick animals (mainly cows and sheep) found with coryza, cough, or diarrhea. This is the first RVF outbreak ever reported in the Central African Republic. R <a href="#">1</a>
<b>Chad</b>					
Measles	18-Aug	23,731	133	225 (0.9%)	As of August 18, a total of 23,731 measles cases have been reported in 2019, including 225 (0.9%) deaths. The tempo of the outbreak may be lessening. Of the country's 126 districts, 118 (94%) have now been affected. Sixty percent of cases are <5 years old., of whom 77% were not vaccinated. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a> <a href="#">4</a>
<b>Côte d'Ivoire</b>					
Dengue	30-Jul	2,919	302	2 (0.1%)	A dengue outbreak in Côte d'Ivoire was first reported on February 15. As of July 30, a total of 2,919 cases have been reported, including 302 laboratory-confirmed and 2 (0.1%) deaths. The trend in reported cases has been decreasing since mid-June. The outbreak has been located in the upscale suburbs of the capital city, Abidjan. DEN-1 is the pre-dominant serotype, though DEN-3 also has been identified. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Congo</b>					
Chikungunya	4-Aug	11,282	148	0	As of August 4, a total of 11,230 cases, including 148 confirmed, have been reported since the outbreak began in February. The downward trend in incidence has continued. Cases have been reported in 9 of 12 departments: Kouilou (most affected), Pool., Bouenza, Pointe-Noire, Plateaux, Niari, Lékoumou, Brazzaville, and Cuvette. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Democratic Republic of Congo</b>					
Cholera	11-Aug	15,989	—	297 (1.9%)	As of August 11, a total of 15,989 cholera cases have been reported in the DRC in 2019, including 297 (1.9%) deaths. Outbreaks have been reported in 20 (77%) 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>
Measles	11-Aug	155,460	5,696	3,006 (1.9%)	As of August 11, a total of 155,460 measles cases have been reported in DRC in 2019, including 3,006 deaths (1.9%). In the week ending August 11, >5,600 cases and 141 deaths were reported from 23 provinces across the country. Seventy-seven percent of all reported cases and 90% of measles-associated deaths have been children <5 years old. More than 80% of cases in 2019 have been from Tshopo, Lualaba, Kasai, South Kivu, Upper Lomami, Tanganyika, Kasai-Central, Ituri, and Kasai-Oriental provinces. Measles vaccination coverage remains low in the DRC. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>

Disease	Last Update	2019 Cases	Confirmed	Deaths	Notes
<b>Democratic Republic of Congo</b>					
<b>Monkeypox</b>	11-Aug	3,289	—	64 (1.9%)	In 2019 and as of August 11, a total of 3,289 cases of monkeypox have been reported, including 64 (1.9%) deaths. In the week ending in August 11, most cases occurred in Sankuru province. Mai-Ndombe, North Ubangi, and South Ubangi provinces also have reported cases in recent months. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a> <a href="#">4</a>
<b>Ebola</b>	1-Sep	3,036	2,931	2,035 (67.0%)	<p>The last two months has seen a worsening of the Ebola virus disease (EVD) outbreak in northeastern DRC's North Kivu and Ituri provinces, including a dramatic increase in transmission within Beni and from there into surrounding health areas. Since August 15, a total of 6 EVD cases (all under surveillance) have been detected in South Kivu province's Mawenga health district, and another EVD case crossed the border and was detected in Uganda on August 29. Violence and community unrest continued to interfere with response activities.</p> <p>As of September 1, a total of 3,036 EVD cases, of whom 156 (5%) were health workers, have been reported, including 2,931 confirmed and 105 probable; 2,035 (67.0%) have died. Fifty-eight percent of cases have been female and 28% (857) have been children &lt;18 years old. In the 21 days from August 12 to September 1, a total of 58 health areas within 17 health zones reported new cases, or 8.7% of the 664 health areas with North Kivu and Ituri provinces. During this period, a total of 193 confirmed cases were reported, the majority of whom were from the health zones of Beni (28%; n=39), Kalunguta (15%; n=28), and Mandima (12%; n=23). The incidence in Beni health zone has improved, but Mambasa health zone (Ituri province) may be emerging as a new hot spot, with 19 cases in the last 21 days. Of concern, many EVD cases continue to be persons without known contact with EVD cases. More than 211,000 Ebola vaccinations were administered as of September 2.</p> <p>There have been no further introductions or transmissions of EVD into Goma, and 21 days have past since the last case was detected there. <b>See epidemic curve and maps on p. 15 of this report.</b>) R <a href="#">1</a> <a href="#">2</a></p>
<b>cVDPV</b>	5-Sep	29	29	0	In 2019 as of August 28, a total of 23 cases of acute flaccid paralysis following infection with circulating vaccine-derived poliovirus 2 (cVDPV2) were reported in the DRC. So far in 2019, 29 cVDPV2 cases have been reported (20 in 2018). There are nine separate cVDPV2 outbreaks ongoing in Haut Katanga, Mongala, Sankuru, Tanganika, Tshuapa, Kasai, Kasai Central, and Haut Lomami (2) provinces. R <a href="#">1</a>
<b>Egypt</b>					
<b>Shiga toxin-producing <i>E. coli</i> (STEC)</b>	30-Jul	51	20	0	Public Health England and Germany health authorities have determined that 20 and 31 persons, respectively, were infected with a Shiga toxin-producing <i>E. coli</i> (STEC) during travel to Egypt. A source(s) has not been determined yet. To date, 4 persons in England have been hospitalized. In England and Germany, hemolytic uremic syndrome (HUS) was confirmed in one and 5 persons, respectively. R <a href="#">1</a>

Disease	Last Update	2019 Cases	Con- firmed	Deaths	Notes
<b>Ethiopia</b>					
Measles	18-Aug	7,951	59	—	In Ethiopia as of August 18, a total of 7,951 measles cases have been reported in 2019, including 59 laboratory-confirmed. The impacted areas have been Oromia, Amhara, and Solami regions. Half of cases are children <5 years old. A vaccination campaign is planned to target 6.7 million displaced children aged 6 months to 14 years. R <a href="#">1</a> <a href="#">2</a>
Cholera	18-Aug	1,097	42	11 (1%)	Since May 12 and as of August 18, a total of 1,097 cholera cases were reported by Ethiopian health authorities in the following 8 regions: Afar, Amhara, Oromia, Somali, Hirari, Tiray, Addis Ababa, and Dire Dawa. R <a href="#">1</a> <a href="#">2</a>
*Chikungunya	15-Aug	3,756	—	0	An outbreak of chikungunya has been reported from the Ethiopian city of Dire Dawa. A total of 3,756 suspected cases were reported, though some infections may be due to dengue or malaria. R <a href="#">1</a>
<b>Guinea</b>					
Measles	11-Aug	4,573	969	13 (0.3%)	As of August 11, a total of 4,573 measles cases, including 13 (0.3%) deaths have been reported, compared with 1,863 total cases in 2018. Of 1,595 specimens tested, 969 (57.2%) have been positive. Disease transmission currently is most acute in Matoto, Ratoma, Dixinn, Labé, Matam, Dubreka, Coyah, Maferinyah, Kegneko, and Manéah. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a> <a href="#">4</a>
<b>Kenya</b>					
Leishmani- asis	25-Aug	2,314	630	28 (1.2%)	As of August 25, a kala-azar outbreak in Mandara, Marsabit, Wajir, and Garissa counties has led to 2,314 suspect cases, including 630 confirmed; 28 (1.2%) have died. In the week ending August 25, a total of 65 cases were reported. with rapid diagnostic testing and 28 deaths (1.2%). R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a> <a href="#">4</a>
Cholera	25-Aug	3,777	160	26 (0.7%)	A cholera outbreak that began in early January has been contained in Nairobi and Narok. As of August 25, a total of 3,777 cases have been reported, including 160 confirmed and 26 (0.7%) deaths. Cases continue to be reported from Kajiado, Garissa, Wajir, Mombassa, Machakos, and Nairobi Counties. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Liberia</b>					
Measles	11-Aug	1,263	148	5 (0.4%)	As of August 11, a total of 1,263 measles cases from across the country, including 148 confirmed and 5 (0.4%) deaths. Bong, Margibi, and Lofa Counties have been hard-hit. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
*Lassa fever	25-Aug	34	25	9 (26.5%)	Three cases of Lassa fever were lab-confirmed during the last week in Bong County in Central Liberia. As of August 25, a total of 34 suspect cases have been reported in 2019, including 25 confirmed and 9 (26.5%) deaths. R <a href="#">1</a> <a href="#">2</a>
<b>Mali</b>					
Measles	25-Aug	1,100	313	0	As of August 25, a total of 1,100 measles case were reported in Mali, including 313 confirmed. Cases have been reported recently in Koulikoro, Segou, Kayes, Mopti, Bamako, Kidal, and Babamba health districts. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>

Disease	Last Update	2019 Cases	Confirmed	Deaths	Notes
<b>Namibia</b>					
Hepatitis E	11-Aug	6,151	1,390	56 (0.8%)	The hepatitis E outbreak that started nearly one year ago has persisted, become protracted, and has continued to intensify. The outbreak, which at first was restricted to the Windhoek district in the Khomas Region (still the most affected region), spread to 11 other regions: Erongo, Omusati, Oshana, Omaheke, Ohangwena, Otjozondjupa, Oshikoto, Kavango, Karas, Kunene, and Hardap. As of August 11, a total of 6,151 hepatitis E cases had been identified. Fifty-six (0.8%) cases have died, of whom 36 (64%) were either pregnant or post-partum women. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a> <a href="#">4</a>
<b>Niger</b>					
Measles	27-Jul	9,706	0	51 (0.5%)	As of July 27, a total of 9,706 measles cases, including 51 (0.5%) deaths have been reported by Niger in 2019. Most have occurred in Maradi and Tahoua regions, followed by Zinder, Niamey, Tillaberi, Agadez, Diffa, and Dofo. A downward trend in the case count has been seen in recent weeks. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Nigeria</b>					
Lassa fever	11-Aug	674	656	160 (23.7%)	As of August 11, there have been a total of 656 laboratory-confirmed and 18 probable Lassa fever cases reported in 2019, including 18 healthcare workers, two of whom died. One hundred and sixty (23.7%) deaths have occurred in confirmed and probable cases. The steady decline seen in the past months has continued. Ninety-three percent of confirmed cases have been from Edo, Ondo, Ebonyi, Bauchi, Taraba, and Plateau States. The <i>emergency phase of the outbreak has been declared over</i> . R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
Measles	25-May	30,669	1,476	91 (0.3%)	As of May 25 (no recent updates), a total of 30,669 suspected measles cases have already been reported in Nigeria, including 1,862 in the week ending May 19. Borno State in northeast Nigeria, Yobe, and Katsina State in the north have accounted for 75% of cases. More than 17,000 suspected measles cases were reported in 2018. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
Cholera	23-Aug	674	149	4 (0.6%)	On June 18, health authorities in Adamawa State declared a cholera outbreak in the northeast state. As of August 23, a total of 674 suspected cases have been reported, including 4 (0.8%) deaths. <i>Vibrio cholera</i> classical O1 strain has been confirmed. Most cases continue to be reported in Yola North, Girei, Yola South, and Song. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>South Sudan</b>					
Measles	28-Jul	2,472	72	91 (3.7%)	As of July 28, total of 2,472 suspected measles cases, including 72 confirmed and 91 (3.7%) deaths, have been reported in 13 South Sudan counties: Juba, Pibor, Gogri West, Gogri East, Melut, Mayom, Tonj North, Awiel South, Awiel West, Awiel East, Renk, Longochuk, and Jur River. R <a href="#">1</a> <a href="#">2</a> <a href="#">3</a>
<b>Tanzania</b>					
*Aflatoxicosis	25-Aug	72	—	9 (12.5%)	Since June 1, a total of 72 cases of suspected aflatoxicosis have been reported in the Dodoma and Manyara regions. Presentations have included abdominal distention, jaundice, vomiting, lower extremity swelling, and some fever and headache. It is not known whether one or more foodstuffs were contaminated with this potent toxin. R <a href="#">1</a>

Disease	Last Update	2019 Cases	Confirmed	Deaths	Notes
<b>Uganda</b>					
<b>Measles</b>	2-July	1,275	604	6 (0.5%)	As of July 2 (no recent update), a total of 1,275 suspected measles cases have been reported in 2019, of whom 604 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>

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

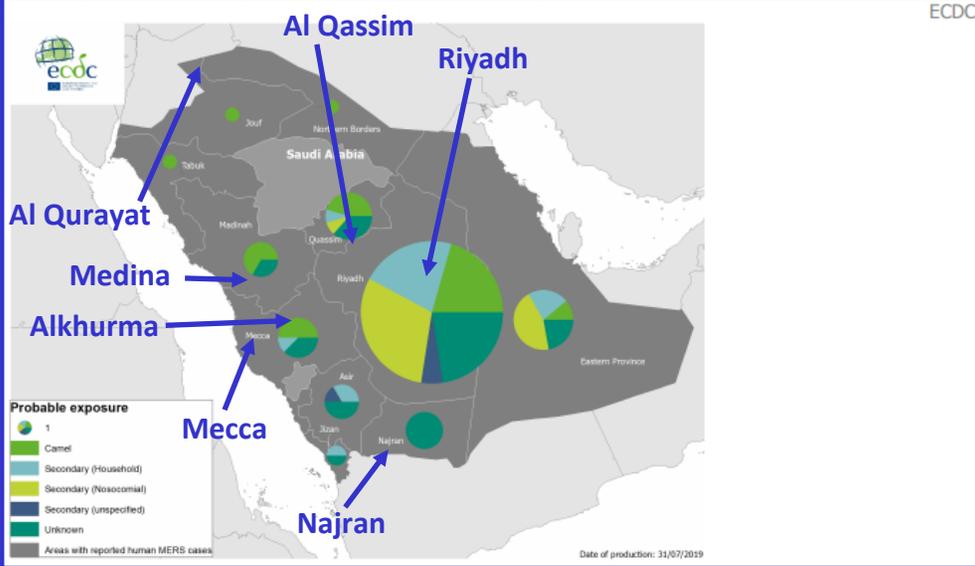
- Shigellosis (New York City)**
- E. coli 0103 and 0121 (US, Multistate)**
- Hantavirus (US, New Mexico)**
- Cholera (Mozambique)**
- Lassa fever (Sierra Leone)**
- Cholera (Tanzania)**
- Typhoid fever (Zimbabwe)**

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

- \* **Listeria (US, Multistate)**
- \* **Coccidioides (Arizona)**
- \* **Eastern equine encephalitis (US, Multistate)**
- \* **St. Louis encephalitis (US, CA)**
- \* **La Crosse virus encephalitis (US, OH)**
- \* **Shigatoxin-producing E. coli (US, MN)**
- \* **Shigatoxin-producing E. coli (US, PA)**
- \* **Listeria (Canada, Multi-province)**
- \* **Hantavirus (Europe, Multistate)**
- \* **Listeriosis (Spain)**
- \* **Avian influenza (H5N6) (China)**
- \* **Polio (cVDPV) (Myanmar)**
- \* **Leptospirosis (Philippines)**

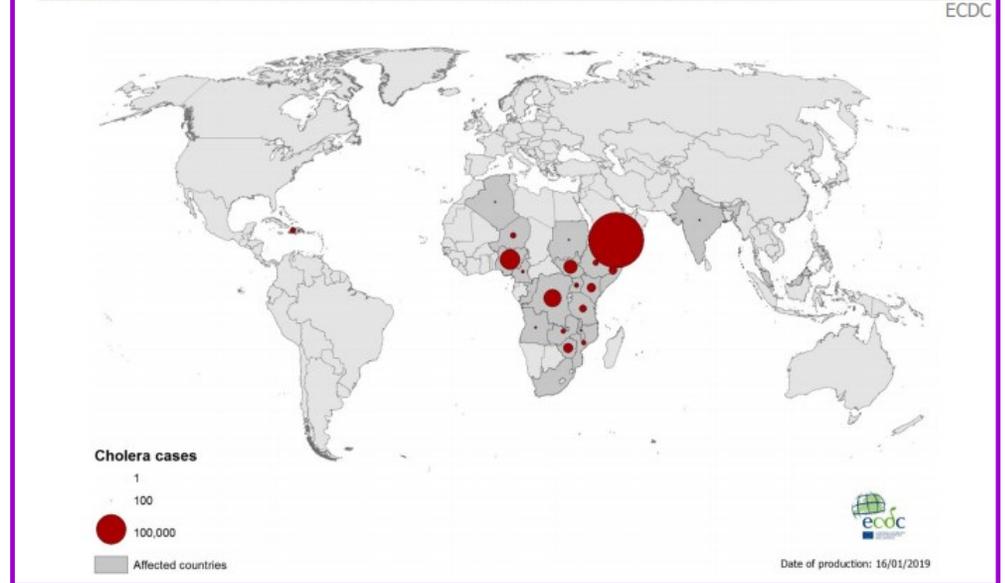
# MERS-CoV

Geographical distribution of confirmed MERS-CoV cases by probable region of infection and exposure in 2019, Saudi Arabia, as of 30 July 2019

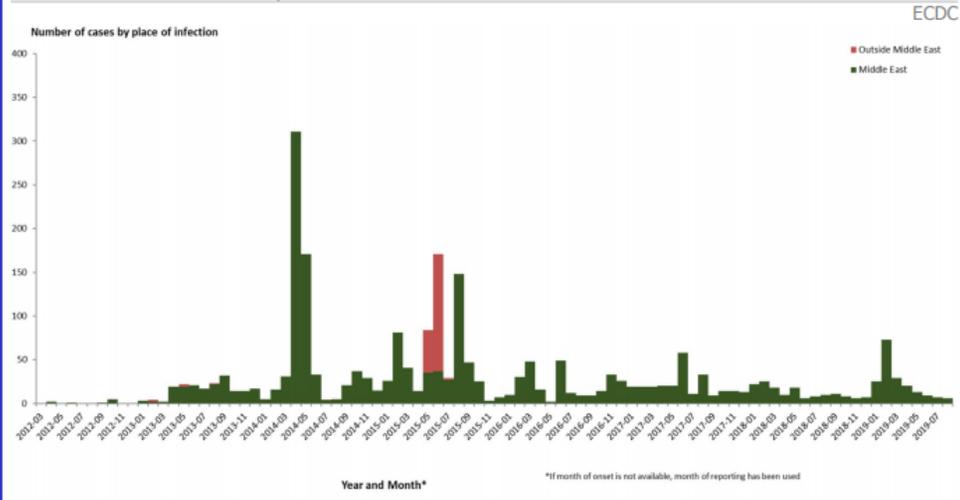


# Cholera

Geographical distribution of cholera cases reported worldwide in 2018



Distribution of confirmed cases of MERS-CoV by place of infection and month of onset, from March 2012 to 2 September 2019



Geographical distribution of new cholera cases reported worldwide between June to August 2019



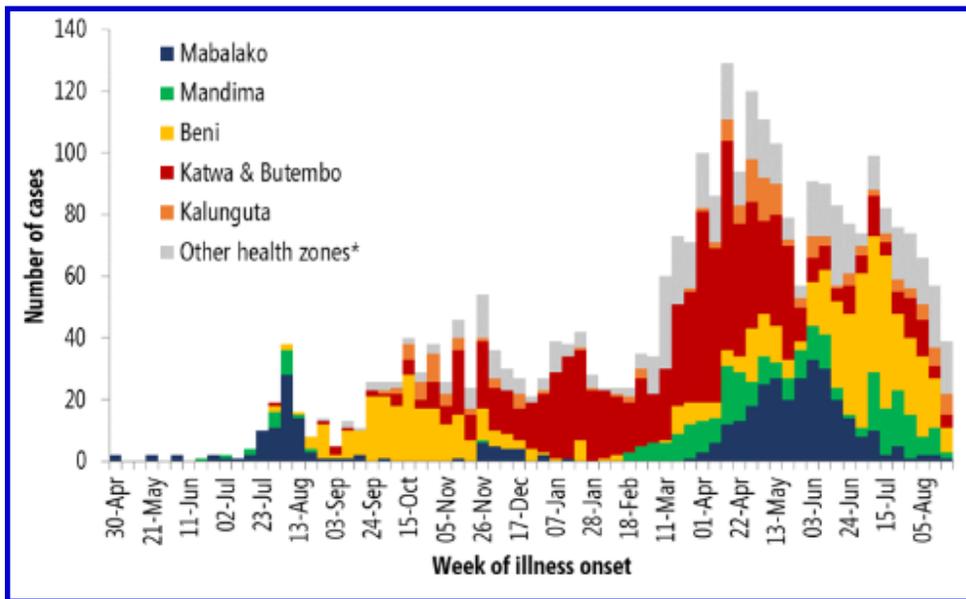


Figure 2: Confirmed and probable Ebola virus disease cases by week of illness onset by health zone. Data as of 27 August 2019\*

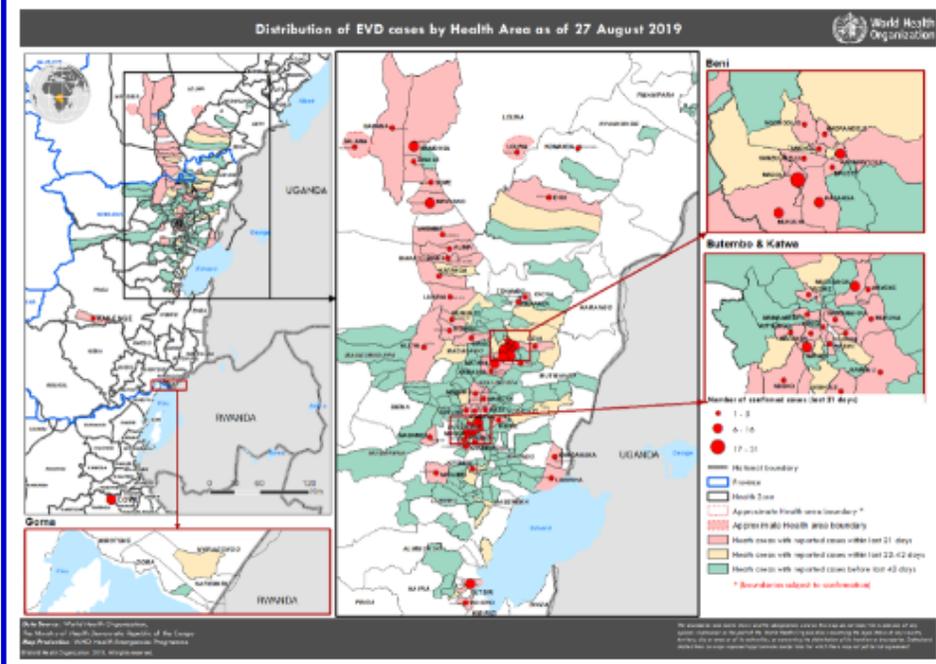


Table 1: Confirmed and probable Ebola virus disease cases, and number of health areas affected, by health zone, North Kivu and Ituri provinces, Democratic Republic of the Congo, data as of 27 August 2019\*\*

Province	Health Zone	During the last 21 days (7 August – 27 August)		Cumulative to date				
		Confirmed Cases reported	Health areas: reporting at least 1 case / Total areas in zone	Confirmed cases	Probable cases	Total cases	Deaths among confirmed cases	Total deaths
South Kivu	Mwenga	6	1/18	6	0	6	2	2
	Alimbongo	1	1/20	5	0	5	2	2
	Beni	57	11/18	659	9	668	415	424
	Biena	0	0/16	16	1	17	12	13
	Butembo	12	4/15	277	0	277	331	331
	Goma	0	0/10	1	0	1	1	1
	Kalunguta	22	6/18	157	15	172	64	79
	Katwa	18	9/18	645	23	668	450	473
	Kayna	12	2/21	22	0	22	8	8
	Kyondo	0	0/22	20	4	24	13	17
North Kivu	Lubero	0	0/19	31	2	33	4	6
	Mabalako	5	4/12	370	17	387	275	292
	Manguredjipa	0	0/10	18	0	18	12	12
	Masereka	1	1/16	50	6	56	17	23
	Musienene	6	5/20	81	1	82	33	34
	Mutwanga	10	2/19	26	0	26	10	10
	Nyiragongo	0	0/10	3	0	3	1	1
	Oicha	2	2/26	55	0	55	24	24
	Pinga	1	1/18	1	0	1	0	0
	Vuhovi	2	2/12	103	14	117	37	51
Ituri	Ariwara	0	0/21	1	0	1	1	1
	Bunia	0	0/20	4	0	4	4	4
	Komanda	7	2/15	42	9	51	25	34
	Lolwa	3	1/8	3	0	3	1	1
	Mambasa	16	5/17	25	0	25	8	8
	Mandima	22	7/15	260	4	264	137	141
	Nyakunde	0	0/12	1	0	1	1	1
	Rwampara	0	0/13	8	0	8	3	3
	Tchomia	0	0/12	2	0	2	2	2
	<b>Total</b>		<b>203</b>	<b>66/471 (14%)</b>	<b>2892</b>	<b>105</b>	<b>2997</b>	<b>1893</b>

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

As of August 27, 2019

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

Source: ECDC



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

Source: ECDC

