

Current Infectious Disease Outbreaks for NYC Providers

February 15, 2019

Disease	Last Update	2018-9 Cases	Con- firmed	Deaths	Notes and References (R 1, 2, 3)
New York City					
Measles	11-Feb	73	73	0	An outbreak of measles is ongoing in the Orthodox Jewish community of Brooklyn, associated with a large outbreak of measles in Israel and Ukraine. As of February 12, 2019, there have been 73 cases of measles confirmed in Brooklyn (Williamsburg, Borough Park, Bensonhurst, and Midwood/Marine Park). Cases have occurred in 66 children (7 months –13 years) and 7 adults. Several of the cases, including the initial case, were acquired during travel to Israel, where a large outbreak of measles is occurring. A large number of exposures have occurred, especially in hospitals, outpatient medical facilities, and schools. In Rockland, Orange, and Monroe Counties, NY, a total of 135, 10, and 4 cases, respectively, have been confirmed. Measles outbreaks have been reported throughout Europe, Africa, and Asia. R 1 2
United States					
Hepatitis A	13-Feb	>13,000	>13,000	121	The sustained outbreak of hepatitis A has persisted in multiple eastern and midwestern states. Of the >13,000 nationwide cases, >7,200 have been hospitalized. Current incidence is greatest in KY (>3,900 cases), OH (>1,650), IN (989), and TN (841). WV, MA, FL, western PA 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 1 , 2
Acute flaccid myelitis (AFM)	21-Jan	217	217	0	Thirty-nine states and the District of Columbia have reported suspected AFM cases, including 3 in NYC. As of January 21, a total of 367 suspected AFM cases have been investigated; 217 have been confirmed. Incidence has decreased significantly over the past two months. Most confirmed AFM cases are in children between two and 8 years old. Fever and/or respiratory illness 3 to 10 days before symptom onset was reported in nearly all cases. Enterovirus D68 and A71 have been implicated in a number of the cases; however, CDC has been unable to consistently detect a pathogen in the clinical specimens sent for diagnostic testing. (Note: Will be deleted from coming list) R 1 , 2
*Measles	13-Feb	313	313	—	Measles outbreaks have been detected in NYC, NY (Rockland, Orange, and Monroe Counties), WA (Clark and King Counties), TX, and NJ (Ocean County), accounting for 73, 149, 54, 7, and 30 confirmed cases, respectively. CA< CO, CT, GE, and IL also have reported cases to CDC. R 1 2 3 4
*Salmonella Typhimurium	25-Jan	11	11	0	MN, MO, NE, WY, CO, TX, MS, and ME have reported a total of 11 <i>Salmonella</i> Typhimurium infections linked to contact with pet hedgehogs. The common supplier has not yet been identified. R 1
Caribbean, Central America, and South America					
Dengue	15-Feb	>99,000	>25,700	25	In 2019, a total of >99,000 dengue cases, including >25,700 laboratory-confirmed, already have been reported to the Pan American Health Organization (PAHO). Brazil (>74,000), Colombia (>8,000), Mexico (>3,200), and Nicaragua (>6,000). Dengue cases also have been confirmed in Argentina, Paraguay, Bolivia, Ecuador, Peru, Venezuela, Belize, Honduras, Guatemala, the Dominican Republic, Puerto Rico, Grenada, Guadeloupe, Jamaica, Martinique, St. Martin , and the U.S. Virgin Islands . R 1 2

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Caribbean, Central America, and South America					
Chikungunya	17-Jan	>80,000	—	—	Brazil (Sudeste, Rio de Janeiro, Centro-Oeste, Mato Grosso, and Minas Gerais Provinces) and Paraguay (Central, Amambay, Guaira, and Paraguari Departments) have reported most chikungunya cases. To a much lesser extent, chikungunya transmission also has been documented in Bolivia, Colombia, Costa Rica, El Salvador, Nicaragua, and Mexico . In the Caribbean, thousands of cases have been reported in Puerto Rico and Jamaica . Except for Brazil and Paraguay, this region reported fewer chikungunya cases in 2018. R 1 , 2 , 3
Zika	12-Feb	~2,000	—	—	Zika incidence has decreased dramatically since 2016-7; however, transmission still has been documented throughout Brazil, Bolivia, Honduras, Mexico, Puerto Rico, Dominican Republic, Cuba, and on other Caribbean islands. R 1 2
Malaria	12-Feb	—	—	—	From November 2018 to February 12, malaria activity has been reported in Brazil (including Amazonia for first time in ~20 years), Colombia, Venezuela, Trinidad and Tobago, Panama, and the Dominican Republic . R 1
Measles	25-Jan	730	59	—	In 2018, of the >16,000 reported measles cases in the Americas and Caribbean, >60% and 34% were reported in Brazil and Venezuela , respectively. So far in 2019, most of the 730 cases have been reported in Chile, Colombia, Mexico, and Cuba . Brazil has yet to reported any cases to the Pan-American Health Organization (PAHO). R 1 2
Haiti					
Cholera	29-Dec	3,794	—	43 (1.1%)	This year's incidence is the lowest since the outbreak began in 2010. In 2017, Haiti reported 13,681 cases. As of December 29, there has been a 72% reduction in cases compared to the same period in 2017. Most cases have been reported from the following Departments: Artibonite, Nord Est, Centre, and Ouest. R 1 2 3
Diphtheria	31-Dec	373	99	27 (7.2%)	In 2018, as of December 31, a total of 373 probable cases have been reported, including 99 confirmed and 27 (7.2%) deaths. The highest incidence has been in children 6-14 years old followed by 1-5 year olds. R 1 2
Panama					
Hantavirus	22-Dec	103	103	4	In 2018, a total of 103 hantavirus infections were reported in Panama, including 99 from Los Santos province, and the remaining from Herrera, Cocle, and Veraguas provinces. R 1
Argentina					
Hantavirus	28-Jan	31	31	13 (41.9%)	The number of confirmed hantavirus cases in Epuyen, an Andean village in Chubut province, continues to increase. Of 24 confirmed cases, 9 have died. Andes virus is endemic in this area. R 1 2
Brazil					
*Yellow fever	11-Feb	361	361	8 (2.2%)	This is the beginning of yellow fever season (December—May). As of February 11, a total of 361 confirmed cases have been reported in the southern states of São Paulo (9 municipalities) and Parana (2 municipalities). 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 1 2

Disease	Last Update	2018-19 Cases	Confirmed	Deaths	Notes
Venezuela					
Malaria	15-Oct	>650,000	—	—	As its health infrastructure continues to collapse, Venezuela has seen large epidemics in 2018, including of malaria. Estimates in mid-October were that at least 650,000 cases had occurred, including many in Bolivar province. Due to the ongoing humanitarian crisis in Venezuela, severe shortages of supplies and medications continue. R 1 2 3
Diphtheria	22-Jan	46	—	—	As per the Pan American Health Organization (PAHO), a diphtheria outbreak that began in 2016 has continued. As of January 22, a total of 46 cases have been reported in 2019. In 2018, a total of 1,102 cases, including 150 (13.6%) deaths. With Venezuela's collapsing healthcare system, childhood vaccination has been affected. R 1 2 3
Europe					
Measles	31-Dec	>70,000	>70,000	—	Between January 2018 and January 2019, >70,000 measles cases were confirmed throughout WHO's European Region. Particularly affected countries have been Ukraine (>35,000), Serbia (>5,000), Georgia (>1,500), Greece (>2,150), Italy (>2,750), France (>2,750), and Russia (>1,800). Incidence has been increasing in Poland, France, Italy, the UK, and Portugal. Due to suboptimal vaccination, there is a high risk for continued transmission and exportation. In 2019, a total of 15,095 cases, including 6,364 adults, were reported in Ukraine alone as of February 1. R 1 2 3
Influenza	3-Feb	—	—	—	Influenza activity is widespread and continues to increase throughout the European Region, and especially in Southern and Central states. Of symptomatic patients tested by sentinel surveillance, >50% tested positive for influenza. Influenza A(H1N1)pdm09 has been identified in most hospitalized patients. Influenza A(H3N2) viruses also are circulating, but only few influenza B isolates. Excessive mortality in elderly populations has been seen. R 1 2
Spain					
Rubella	1-Jan	18	8	—	Officials in the Aragon region of northeastern Spain have reported a rubella outbreak in Zuera. R 1
United Kingdom					
XDR- <i>Neisseria gonorrhoeae</i>	09-Jan	2	2	—	Public Health Europe is investigating 2 cases of <i>N. gonorrhoeae</i> in heterosexual females. One infection was acquired in the UK and the other elsewhere in Europe. Both isolates were resistant to ceftriaxone and azithromycin. Both cases were successfully treated with alternative antibiotics. Contact tracing is on-going to identify others who may be infected. In May 2018, two other cases of XDR- <i>N. gonorrhoeae</i> with the same resistance pattern were identified. The ECDC's XDR-gonococcal response plan can be found here . R 1 2 3

Disease	Last Update	2018-9 Cases	Confirmed	Deaths	Notes
Arabian Peninsula and Middle East					
Oman					
*MERS-CoA	14-Feb	10	?	4 (40%)	From January 27-February 14, a total of 10 MERS-CoA cases, including 4 deaths, have occurred in Oman. A first cluster involving 6 members of the same family took place in the central, North Batinah region of Oman. On February 10, 4 additional cases in different Omani provinces were described in a government tweet. Government authorities have not announced yet the number of primary and secondary cases. These are the first cases reported in Oman since March 2018. R 1
Saudi Arabia					
MERS-CoA	15-Feb	62	62	5 (8.1%)	In 2019, as of February 15, the Ministry of Health (MOH) has reported a total of 62 cases of MERS-CoA infection, including 52 since the last outbreak list, of which 39 are linked to one or more healthcare-associated outbreaks in Wadi Aldwasir. Riyadh (6), Buraidah (3), and Najran, Khamees Meshait, AlGurayat and AlKharj also reported new cases. This may be the most dramatic increase in cases since early 2018. Also, they are geographically spread from the Jordanian border to Oman north-south, and from coastal Jeddah to west of Riyadh, instead of being confined to one or two distinct areas. Of note, there may have been a group of asymptomatic cases or with mild illnesses on home isolation that then progressed to serious disease requiring hospitalization, which may not have documented previously (and important to keep in mind). (Note: Case fatalities appear not have been accurately reported by the MOH, as the case-fatality rate is too low.) R 1 2 (See epidemic curve and map on p. 10 of this report.)
Yemen					
Cholera	14-Feb	396,507	3481	531 (0.13%)	In the first three weeks of 2019, nearly 400,000 cases of cholera were reported in Yemen, including 3,481 (0.13%) deaths. In 2018, children <5 years old accounted for 29% of the >1.4 million suspected cases. The directorates with the highest attack rates were Amran, Al Mahwit, Sana'a, Dahamar, and Al Dhale'e. R 1 2 3 4
Diphtheria	30-Dec	2,810	—	161 (5.7%)	As of December 30, there have been 2,810 suspected diphtheria cases, including 161 deaths (5.7%), reported from 20 governorates since August. Children <5 years old account for ~20% of cases and ~40% of deaths. Public health authorities completed a large vaccination campaign targeting children aged 6 weeks to 15 years in 11 governorates. The ongoing humanitarian crisis has greatly interfered with the public health response. R 1 2 3
Asia					
Chikungunya	25-Nov	>55,000	—	—	In 2018 and as of November 25, a total of 47,208 cases of chikungunya, including 8,499 confirmed, have been reported in India . Most have occurred in the following states: Karnataka, Gujarat, Maharashtra, Jharkhand, and Madhya Pd. Thailand has reported 3,656 cases in 2018, which is 3,301 since the previous update. Most cases have been in the water-bound southern branch that connects with Malaysia. R 1 2 3

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Asia					
Dengue	21-Jan	>500,000	—	—	Dengue is endemic throughout Asia. This year, more cases have been reported than in 2017; Indian Ocean nations such as The Maldives and Réunion were especially hard-hit. Tens of thousands of dengue cases have been reported by Thailand, Malaysia, Vietnam, Sri Lanka and the Philippines . To a lesser extent, it has been reported in the Seychelles, Pakistan (Karachi, Rawalpindi), India (Punjab, Bhubaneswar, Pune, Bhilai, Himachal Pradesh, Madhya Pradesh, Kerala, Goa, Hyderabad, Andhra Pradesh, and Rajasthan), Bangladesh, Laos, Cambodia, Myanmar, Singapore , and Taiwan . R 1 2
India					
Kyasanur Forest disease	1-Feb	>60	—	6 (9.7%)	In mid-December, an initial two cases of Kyasanur Forest disease (KFD) were announced in the Shivamogga and Shimoga districts (Karnataka state). As of February 1, a total of 62 cases, including 6 deaths, have been reported. Multiple deaths in non-human primates preceded the human cases. Sera from dead monkeys are being tested. If positive, vaccination will be administered in the areas with human disease. R 1
Japan					
Rubella	18-Dec	2,588	2,588	—	As of December 18, a total of 2,588 cases of rubella have been reported by Japanese health authorities in 2018. The prefectures most affected have been Chiba, Tokyo, Saitama, Aichi, and Kanagawa. On October 22, CDC issued a Level 2 alert, recommending vaccination for travelers to Japan, and for unprotected pregnant women not to travel there. R 1 , 2
Pakistan					
Typhoid fever (XDR)	30-Dec	>4,600	—	—	A strain of extensively drug-resistant (XDR) typhoid fever continues to be reported in Pakistan and in persons who traveled there. The strain was initially characterized in Hyderabad in November 2016 and then spread to Karachi and other districts in Sindh province. In 2018 alone, >4,600 cases were reported there. It is resistant to ampicillin, chloramphenicol, trimethoprim-sulfamethoxazole, ciprofloxacin, and ceftriaxone and is susceptible to azithromycin and carbapenems. CDC has issued a Level 2 Alert for all travelers to Pakistan, recommending vaccination with the oral or injectable vaccine prior to travel and being careful to practice safe eating and drinking when in Pakistan. R 1 2 3
Leishmaniasis	25-Jan	>400	—	—	According to specialists in Pakistan, >400 people in the Khyber Pakhtunkhwa region along the Afghanistan border been hospitalized with cutaneous leishmaniasis, which is endemic in the northwest tribal areas. R 1
Pakistan and Afghanistan					
Polio (WPV1)	13-Feb	2	2	—	In 2018, 21 and 12 cases of infection with wild poliovirus type 1 (WPV1) were confirmed in Afghanistan and Pakistan , respectively. So far in 2019, one WPV 1 case in Afghanistan (Kandahar province) has been reported, and multiple positive environmental samples (Kandahar and Helmand provinces). In Pakistan , one WPV 1 infection has been confirmed in the Federally Administered Tribal Area and positive environmental samples were collected from Sindh, Punjab, Khyber Pakhtunkhwa, and Balochistan provinces. R 1

Disease	Last Update	2019 Cases	Confirmed	Deaths	Notes
Australia and the Pacific					
New Caledonia					
Dengue	16-Jan	2,272	—	—	As of January 16, New Caledonia health authorities have reported 2,272 dengue cases since January 1, 2018. R 1
Papua New Guinea					
Polio (cVDPV)	13-Feb	0	0	—	In 2018, a total of 26 cases of circulating vaccine-derived poliovirus (cVDPV) infection were reported in Papua New Guinea, most recently in East Sepik. In 2019, no cases have been confirmed. In the past week, one environmental sample was positive for cVDPV in the National Capital district. Acute flaccid paralysis surveillance has been strengthened and expanded vaccination activities are targeting poorly-immunized children 14 years and younger. R 1
Africa					
Polio (cVDPV)	13-Feb	0	0	—	Outbreaks of circulating vaccine-derived poliovirus (cVDPV) continue in Nigeria , where there are two separate outbreaks. One is located in Jigawa, Katsina, and Borno states), and the other in Sokoto state. the Somalia (Lower Juba), Democratic Republic of Congo (Haut Katanga, Haut Lomami, Mongala, and Maniema Provinces), Niger (Zinder province) and Mozambique (Zambézia province). So far in 2019, compared with 80 cases in 2018, there have been no cases of cVDPV infection reported. CDC issued Level 2 travel alerts for these African countries, recommending vaccination for all travelers to these countries, including a booster dose for adults previously vaccinated. R 1 2
Measles	27-Jan	>100,000	—	—	The most intense African outbreak currently is in Madagascar (p. 8), with >53,000 cases identified since early October. In the DRC , >12,000 cases have been reported in 2019 alone (p. 7) and Nigeria has identified >17,000 cases. To a lesser extent, Chad, Liberia, Sierra Leone, Mauritius, Ethiopia, South Sudan, Mali, Guinea, Uganda, and Kenya also have seen cases. R 1 2
Burundi					
Cholera	27-Jan	167	19	2 (1.2%)	On December 28, health authorities in Burundi announced a cholera outbreak that is predominantly in the southwest Rumonge health district along the eastern shore of Lake Tanganyika. As of January 27, the outbreak had spread to the capital city of Bujumbura, which accounts for 18 of the 167 total reported cases. R 1 2 3
Central African Republic					
Monkeypox	3-Feb	34	25	2 (5.9%)	Since October 2, monkeypox clusters have been identified in Mbaiki, Bangassou, and Bossembele districts in the south near to the DRC. As of December 23, a total of 45 monkeypox cases have been reported, including 25 confirmed. Outbreaks of monkeypox have occurred in the Central African Republic annually since 2013. R 1 2 3
Chad					
Measles	27-Jan	981	—	6 (0.6%)	As of January 27, a total of 981 measles cases have been reported in 2019, including 356 confirmed and 95 (1.8%) deaths. Thirty-nine districts across the country have been affected. The mean age of cases is 9 years. Only 13% of cases had been vaccinated. R 1

Disease	Last Update	2018-9 Cases	Con- firmed	Deaths	Notes
Democratic Republic of Congo					
Cholera	27-Jan	2,705	—	18 (2.6%)	To-date, a total of 2,705 cholera cases have been reported in the DRC in 2019, including 18 death. Most cases have been in six provinces: Kasai Oriental, Tanganyika, Upper Katanga, Sankuru, Lomami, and South Kivu. R 1 2 3
Monkeypox	27-Jan	356	—	5 (1.4%)	So far in 2019, a total of 356 suspected monkeypox cases have been reported in DRC, including 5 deaths. Sankuru Province has the highest number of cases; however, 14 provinces have reported cases. R 1 2 3
Measles	27-Jan	12,809	11	225 (1.8%)	Already in 2019, a total of 12,809 measles cases have been reported in DRC. Cases have been reported in more than 100 geographically dispersed health districts, including 2018 cases. There has been a decreasing trend in reported cases for the past 7 weeks. R 1 2
Ebola	12-Feb	823	762	517 (62.8%)	<p>The Ebola virus disease (EVD) outbreak in northeastern DRC has continued to expand. The main focus and epicenters for the past two months have been Katwa and Butembo. As of February 12, at total of 762 confirmed and 61 probable EVD cases have been reported, including 517 (62.8%) deaths. Fifty-eight percent of cases have been female and more than 100 pediatric deaths have occurred, including 65 children less than 5 years old. Community deaths continue to occur without links to confirmed cases, and unknown transmission chains.</p> <p>Since vaccination began on August 8 and as of February 12, more than 78,000 vaccinations have been administered. More than 7,800 contacts are being followed at any one time; however, daily contact typically is made with only 70-85% contacts each day. Community resistance, demonstrations, and resistance, and attacks by armed groups and civilians have severely hindered public health response activities.</p> <p>R 1 2 3 4 (See epidemic curve and map on p. 11 of this report.)</p>
Kenya					
*Rift Valley fever	12-Feb	2	2		In early February, Rift Valley fever (RVF) infection was confirmed in livestock in OI Kalou sub-county, north of Nairobi and east of Nakuru. On February 12, the Ministry of Health reported 2 confirmed human RVF cases in the OI Kalou area. 2018 was an active year for RVF, with multiple human and animal outbreaks and 26 human deaths. R 1
Madagascar					
Measles	5-Feb	53,459	676	312 (0.6%)	Measles incidence has soared in recent weeks. Since in began in October 2018, >50,000 cases have been identified from all regions of the island. Declines in vaccination rates and herd immunity are thought to have been important facilitators of transmission. Roughly 65% of cases have been in children 0 – 14 years old. Most of the 312 deaths have been infants less than 9 months old. R 1 2 3 4
Mayotte					
Rift Valley fever	8-Feb	31	31	—	Between December 11 and January 28, a total of 31 Rift Valley fever (RVF) cases were reported on the island of Mayotte, which is between Madagascar and Mozambique. Twelve human cases were reported in the past week. Veterinary samples from sick animals or during abortions have confirmed 23 separate animal outbreaks. It has not been determined yet whether human cases result largely from contact with animals or mosquito bites. R 1

Disease	Last Update	2018-9 Cases	Confirmed	Deaths	Notes
Namibia					
Hepatitis E	20-Jan	4,623	568	40 (0.9%)	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, spread to 8 other regions: Erongo, Omusati, Oshana, Ohangwen, Oshikoto, Kavango, and, most recently, Otjozo and Hardap. As of January 20, a total of 4,623 hepatitis E have been identified. Forty cases have died, of whom 17 (42.5%) were either pregnant or post-partum women. Most cases have been reported from densely populated informal settlements with inadequate access to clean water, sanitation, and hygiene. R 1 2 3
Nigeria					
Lassa fever	3-Feb	278	275	57 (20.7%)	As of February 3, there have been a total of 278 confirmed Lassa fever cases reported in 2019, including 9 in healthcare workers. Fifty-seven (20.7%) deaths have occurred. From January 28-February 3, a total of 68 new confirmed cases were reported. Most confirmed cases have been in Edo and Ondo States, with cases also confirmed from Bauchi, Ebonyi, Taraba, Plateau, Gombe, Kaduna, Kwara, FCT, Benue, Rivers, Kogi, and Enugu States. R 1 2
Yellow fever	30-Dec	4,004	237	33 (0.8%)	A yellow fever outbreak has persisted in Nigeria since September 2017. All states and the FCT have reported suspected cases. Fourteen states have had confirmed cases (Kogi, Kwara, Zamfara, Kebbi, Edo, Kano, Nasawara, Katsina, Niger, Rivers, Anambra, FCT, Benue, and Ekiti). Yellow fever vaccination campaigns have been completed in 6 states and a large scale campaign began Edo State on December 18. R 1 2 3
Monkeypox	13-Dec	311	132	(2.3%)	An increase in monkeypox cases has occurred recently in Nigeria. In 2018 as of December 13, a total of 311 monkeypox cases have been reported, including 132 confirmed, one probable, and 15 new cases in the past month. The states of Rivers, Bayelsa, and Cross River, in southern Nigeria, have reported the highest number of cases. R 1 2 3
Togo					
Lassa fever	7-Feb	2	1	2 (100%)	Togo health authorities reported a confirmed Lassa fever in the Doufelgou District, Kara Region, on the border with Benin. It is possible that this case is related to the ongoing Lassa fever outbreaks in Benin or Nigeria. A second suspect case was reported in the central Tchaoudjo health district. Response teams have been sent to area to assist local authorities with detection and infection prevention and control issues in area health facilities. Since the first report on January 2, there have been no further cases reported. R 1 2
Uganda					
Crimean-Congo hemorrhagic fever	14-Jan	16	12	4 (25%)	Through 2018, and as of January 14, a total of 16 cases of Crimean-Congo haemorrhagic fever, including 12 confirmed and 4 deaths, have been reported seven districts: Kakumiro, Isingiro, Kiboga, Kiryandongo, Nakaseke, Sembabule, and Rukungiri, which is near to the border with the Democratic Republic of Congo. R 1 2 3 4
Cholera	4-Feb	54	22	3 (5.6%)	A cholera outbreak has been confirmed in 4 divisions of Kampala and in the Wakiso division of Kiira Municipality. Details are still spotty. R 1

Disease	Last Update	2018-9 Cases	Confirmed	Deaths	Notes
Zimbabwe					
Typhoid fever	11-Dec	5,159	262	15 (0.3%)	On August 7, WHO was informed about a typhoid fever outbreak in the Mkoba neighborhood of Gweru City, which is in the centrally-located Midlands Province. In mid-September, Harare reported an upsurge in typhoid cases. Incidence peaked in mid-October and has gradually declined since then. As of December 11, a total of 5,159 suspected typhoid fever cases had been identified since October 2017. The outbreak has been attributed to ruptured sewer lines and subsequent contamination of borehole water supplies. The concurrent cholera outbreak has complicated

Removed from last bi-weekly list:

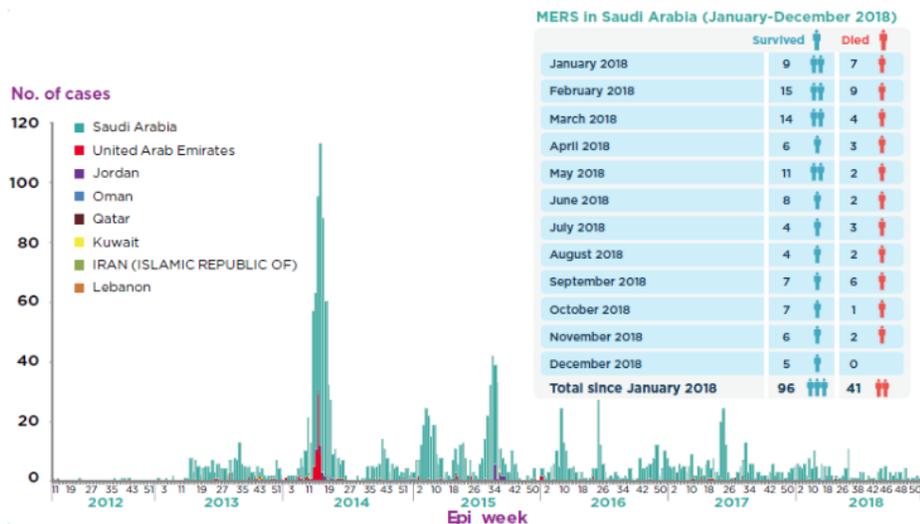
- Pertussis (United States)
- Hantavirus (Bolivia)
- Hantavirus (Chile)
- Cholera (Cameroon)
- Hepatitis E (Central African Republic)
- Yellow fever (Central African Republic)
- Cholera (Ethiopia)
- Cholera (Nigeria)
- Dengue (Senegal)

New outbreaks since last bi-weekly list:

- *Measles (US, Multistate)
- **Salmonella* Typhimurium (US, Multistate)
- *Yellow fever (Brazil)
- *MERS-CoV (Oman)
- *Rift Valley fever (Kenya)

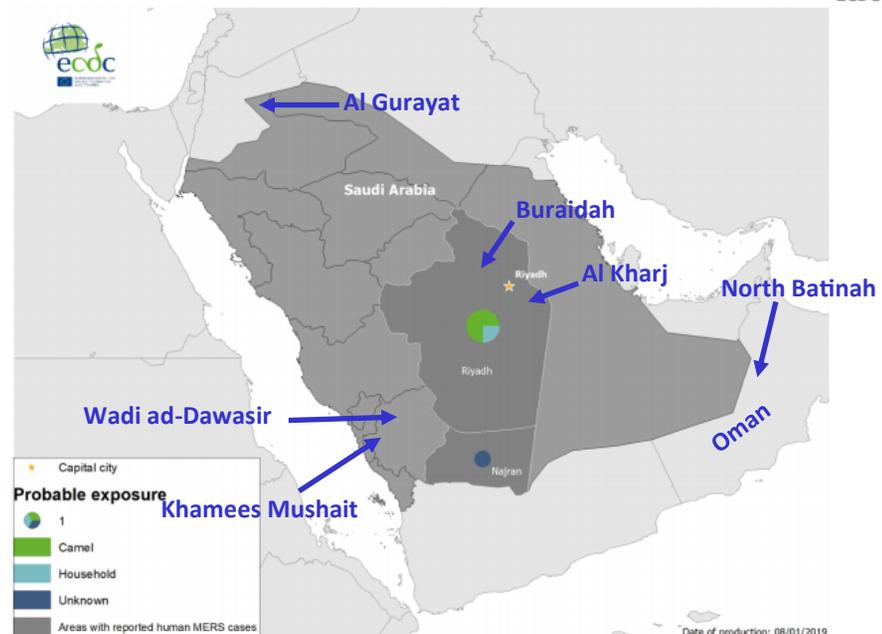


MERS situation update, January 2019.



At the end of January 2019, a total of 2298 laboratory-confirmed cases of Middle East respiratory syndrome (MERS), including 811 associated deaths (case-fatality rate: 35.2%) were reported globally; the majority of these cases were reported from Saudi Arabia (1915 cases, including 735 related deaths with a case-fatality rate of 38.3%).

Geographical distribution of confirmed MERS-CoV cases by probable region of exposure and infection, Saudi Arabia, month of December 2018



Geographical distribution of confirmed and probable Ebola virus disease cases reported from 1 May to 9 February 2019, North Kivu and Ituri provinces, Democratic Republic of the Congo.

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

As of February 9, 2019

