



# HUMAN EMERGING RESPIRATORY PATHOGENS BULLETIN

## MONTHLY SITUATIONAL ANALYSIS OF EMERGING RESPIRATORY DISEASES AFFECTING HUMANS

Issue No 20 September 2018

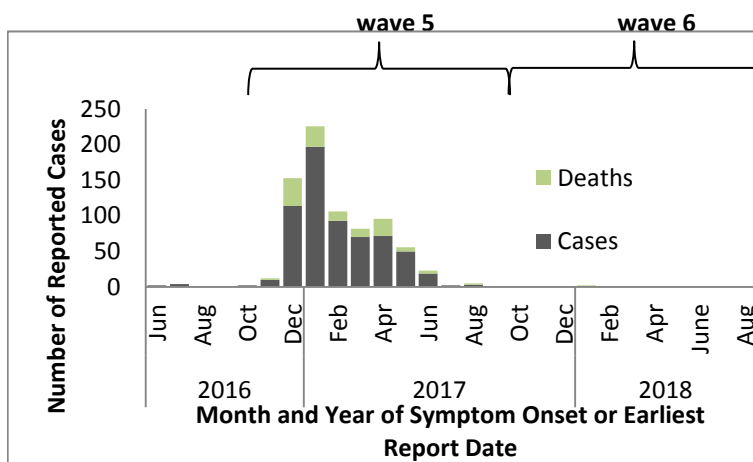
### IN THIS BULLETIN

1. Avian Influenza Updates
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### AVIAN INFLUENZA A(H7N9)

In August 2018, there have been no new cases of H7N9 reported to the World Health Organization (WHO). In total, 3 cases have been reported in wave 6 (as of October 1, 2017). The newest reported case occurred in a 59-year-old female farmer from Guangdong Province, China who had an exposure history to poultry farming. The number of cases reported monthly has continued to decline in recent months, similar to the seasonal distribution observed during previous waves [Figure 1]. Cases since the 5<sup>th</sup> wave are more spatially distributed: to date, 29 of 34 administrative regions in China have reported cases in wave 5 compared to 12 to 15 regions reporting cases in waves 1-4. The 3 cases in wave 6 have been spread across China in Guangdong Province, Xinjiang Uyghur Autonomous Region, and Yunnan Province [Figure 2]. A total of 1567 cases including at least 613 deaths have been reported globally since 2013. Two travel-related cases were reported in Canada in January 2015.

**Figure 1. Temporal Distribution of Avian Influenza A(H7N9) in China, June 25, 2016 – August 31, 2018.**



Note: Graph was prepared by the Centre for Immunization and Respiratory Infectious Diseases (CIRID) using data from the latest WHO Monthly Influenza at the Human-Animal Interface Risk Assessment. This graph reflects data available through these risk assessments as of August 31, 2018.

### UPDATE ON HUMAN EMERGING RESPIRATORY PATHOGEN PUBLIC HEALTH EVENTS (AS OF AUGUST 31<sup>ST</sup> 2018)

NOVEL INFLUENZAS <sup>1</sup>	N CUMULATIVE CASES <sup>2</sup> (DEATHS), CFR% <sup>3</sup>
A(H7N9)	[1567 (613), 39%]
A(H5N1)	[860 (454), 53%]
A(H9N2)	[45 (1), 2%]
A(H5N6)	[20 (9), 47%]
A(H7N4)	[1 (0), 0%]
A(H1N2)	[1 (0), 0%]
H3N2v	[435 (1), <1%]
H1N2v	[26 (0), 0%]
H1N1v	[22 (0), 0%]

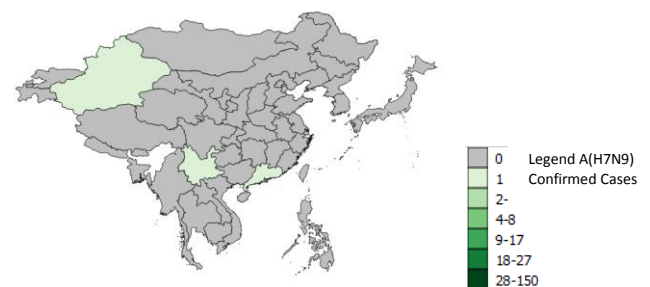
MERS-CoV <sup>1</sup>	
Global case count	[2243 (796), 35%]
Saudi Arabia	[1869 (738), 39%]

<sup>1</sup>Date of 1<sup>st</sup> Reported Case of Human Infection: MERS-CoV: February 2013 (retrospective case finding September 2012). A(H7N9): March 2013. A(H5N1): 1997. A(H9N2): 1998. A(H5N6): 2014. A(H7N4): February 2018 (retrospective case finding December 2017). H3N2v with M gene from pH1N1: 2011. H1N2v: 2005. H1N1v: 2005

<sup>2</sup>Cumulative Case Counts: updated using data reported by the World Health Organization (avian and swine influenza, MERS CoV), and the United States Centers for Disease Control and Prevention (US CDC) (swine influenza).

<sup>3</sup>Case Fatality Rate: The proportion of cases that resulted in death.

**Figure 2. Spatial Distribution of Avian Influenza A(H7N9) in China, Wave 6, October 1, 2017 to August 31, 2018.**



Note: Map was prepared by the Centre for Immunization and Respiratory Infectious Diseases (CIRID) using data from the latest WHO Monthly Influenza at the Human-Animal Interface Risk Assessment. This map reflects data available through these risk assessments as of August 31, 2018.



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### AVIAN INFLUENZA A(H7N4)

On February 14, 2018, the WHO was notified of the first known human case of Avian Influenza A(H7N4). No new cases have been reported since.

### AVIAN INFLUENZA A(H9N2)

In August 2018, no new cases of H9N2 were reported to the WHO. A total of 45 cases, including 1 death, have been reported globally since 1998. No cases have been reported from Canada.

### AVIAN INFLUENZA A(H5N1)

In August 2018, no new cases of H5N1 were reported to the WHO. A total of 860 cases including 454 deaths have been reported globally since 1997. One fatal travel-related case of A(H5N1) was reported in Canada in January 2014.

### AVIAN INFLUENZA A(H5N6)

In August 2018, one new case of H5N6 was reported to the WHO. There have been a total of 20 cases, including 9 deaths, reported globally since 2014, with all cases occurring in China.

### SWINE ORIGIN INFLUENZA A(H3N2)v

One new case of H3N2v occurred in June 2018, but no new cases have been reported since. The Indiana State Department of Health reported the first case of H3N2v this year in the United States in a county fairgoer who had been in close proximity to swine. The case is a child (<12 years old) who developed symptoms on June 18 and has since fully recovered. One locally-acquired case of H3N2v was reported in Canada in December 2016.

### SWINE ORIGIN INFLUENZA A(H1N2)v

In August 2018, there have been thirteen new cases of H1N2v, all reported from the United States [California (6), Michigan (3), Ohio (4)]. Since 2005, there have been a total of 26 confirmed cases of H1N2v in the United States, with four cases occurring in 2017. Most of the reported cases resulted in mild illness.

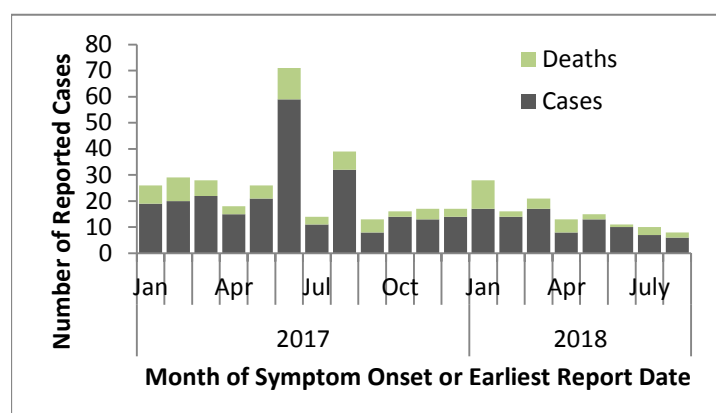
### SWINE ORIGIN INFLUENZA A(H1N1)v

In August 2018, no new cases of H1N1v were reported to the WHO. There have been a total of 22 cases reported since 2005 and only one case reported in 2018.

### MIDDLE EAST RESPIRATORY SYNDROME-CORONAVIRUS (MERS-COV)

From August 1<sup>st</sup> 2018 to August 31<sup>st</sup> 2018, 6 new cases of MERS-CoV, including 2 deaths, were reported by the Saudi Arabian Ministry of Health and the WHO [Figure 3], with all cases originating from Saudi Arabia [Figure 4]. These cases include a travel-associated case of a Saudi Arabian national who travelled to the United Kingdom and was diagnosed and is undergoing treatment there. Of the cases reported in August 2018, 4/6 (66.7%) were male and the median age was 67.5 years old (age range of 41-84 years old). A total of 2243 laboratory-confirmed cases of MERS-CoV cases, including 796 deaths, have been reported globally since 2012. No cases have been reported in Canada.

**Figure 3. Global Count of Human Cases of MERS-CoV Reported to the WHO, January 1, 2017 – August 31, 2018.**



Note: Graph was prepared by the Centre for Immunization and Respiratory Infectious Diseases (CIRID) using data from the WHO Disease Outbreak News and Saudi Arabia's Ministry of Health. This graph reflects data available as of June 30, 2018.

**Figure 4. Spatial Distribution of MERS-CoV, January 1, 2018 to August 31, 2018.**



Note: Map was prepared by the Centre for Immunization and Respiratory Infectious Diseases (CIRID) using data from the latest WHO Monthly Influenza at the Human-Animal Interface Risk Assessment. This map reflects data available through these risk assessments as of August 31, 2018.