Summary

1. Since the previous issue of Avian Influenza Report (AIR), there were no new human cases of avian influenza A(H7N9). Since March 2013 (as of January 12, 2019), there were a total of 1567 human cases of avian influenza A(H7N9) reported globally (in the past six waves). The latest case was reported on February 12, 2018.

2. Since the previous issue of AIR, there were no new human cases of avian influenza A(H5N6). Since 2014 (as of January 12, 2019), there were 23 human cases of avian influenza A(H5N6) reported globally and all occurred in Mainland China. The latest case was reported on November 23, 2018.

3. Since the previous issue of AIR, there were no new human cases of avian influenza A(H5N1). From 2011 to 2016, 10 to 145 confirmed human cases of avian influenza A(H5N1) were reported to World Health Organization (WHO) annually (according to onset date). In 2017, there were three cases in Egypt and one case in Indonesia. The latest case was reported on September 27, 2017.

* Since November 21, 2012, WHO only publishes information on human cases with avian influenza A(H5N1) infection in “Influenza at human - animal interface: Monthly Risk Assessment Summary”. Only cases of human infection with H5N1 involved in events that are unusual or associated with potential increased risks will be reported in Disease Outbreak News. The latest report was published in December, 2018.
This week's highlights
(Sources: WHO, National Health Commission (NHC), Mainland health authorities, Ministry of Agriculture of the People's Republic of China, Centre for Health Protection (CHP) and World Organisation for Animal Health (OIE))

Table 1. Hong Kong: Confirmed human cases of avian influenza A(H5N1 / H5N6 / H7N9) since previous issue of AIR

<table>
<thead>
<tr>
<th>Details</th>
<th>No. of H5 cases (No. of deaths)</th>
<th>No. of H7N9 cases (No. of deaths)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In this reporting period</td>
<td>0(0)</td>
<td>0(0)</td>
</tr>
</tbody>
</table>

Table 2. Outside Hong Kong: Confirmed human cases of avian influenza A(H5N1 / H5N6 / H7N9) since previous issue of AIR

<table>
<thead>
<tr>
<th>Date of report</th>
<th>Country</th>
<th>Province / Region</th>
<th>District / City</th>
<th>Sex</th>
<th>Age</th>
<th>Condition at time of reporting</th>
<th>Subtype of virus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Table 3. Confirmed human cases of avian influenza A(H5N1) reported to WHO / NHC since 2003 (by onset date) §

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases</td>
<td>4</td>
<td>46</td>
<td>98</td>
<td>115</td>
<td>88</td>
<td>44</td>
<td>73</td>
<td>48</td>
<td>32</td>
<td>39</td>
<td>52</td>
<td>145</td>
<td>10</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>860</td>
<td></td>
</tr>
<tr>
<td>Deaths</td>
<td>4</td>
<td>32</td>
<td>43</td>
<td>79</td>
<td>59</td>
<td>33</td>
<td>32</td>
<td>24</td>
<td>34</td>
<td>20</td>
<td>25</td>
<td>42</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>454</td>
<td></td>
</tr>
<tr>
<td>Case fatality rate</td>
<td>100%</td>
<td>69.6%</td>
<td>43.9%</td>
<td>68.7%</td>
<td>67%</td>
<td>75%</td>
<td>43.8%</td>
<td>50%</td>
<td>54.8%</td>
<td>62.5%</td>
<td>64.1%</td>
<td>42.3%</td>
<td>29%</td>
<td>30%</td>
<td>50%</td>
<td>0%</td>
<td>0%</td>
<td>52.8%</td>
</tr>
</tbody>
</table>

§ Further breakdown by countries is available at WHO website
Table 4. Confirmed human cases of avian influenza A(H5N1) reported to WHO / NHC since 2003 (by date of reporting)

<table>
<thead>
<tr>
<th>Country</th>
<th>Cumulative no. of cases (December 2003 to January 2019)</th>
<th>No. of recent cases (October 2018 to January 2019)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azerbaijan</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Cambodia</td>
<td>56</td>
<td>0</td>
</tr>
<tr>
<td>Canada</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Mainland China</td>
<td>53*</td>
<td>0</td>
</tr>
<tr>
<td>Djibouti</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Egypt</td>
<td>359</td>
<td>0</td>
</tr>
<tr>
<td>Indonesia</td>
<td>200</td>
<td>0</td>
</tr>
<tr>
<td>Iraq</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Laos</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Myanmar</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Nigeria</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Pakistan</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Thailand</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>Turkey</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>Vietnam</td>
<td>127</td>
<td>0</td>
</tr>
<tr>
<td>Overall</td>
<td>860</td>
<td>0</td>
</tr>
</tbody>
</table>

* Including two cases from Mainland China detected in Hong Kong

Table 5. Cumulative number of confirmed cases of human infection with avian influenza A(H5N6) since 2014 and since January 2018 respectively

<table>
<thead>
<tr>
<th>Confirmed H5N6 human cases have been reported in the following countries / areas</th>
<th>Cumulative no. of cases since 2014 (23 cases in total) (as of January 12, 2019)</th>
<th>Cumulative no. of cases since January 2018 (5 cases in total) (as of January 12, 2019)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mainland China</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guangdong Province</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Guangxi Zhuang Autonomous Region</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Hunan Province</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Yunnan Province</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Anhui Province</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Fujian Province</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Hubei Province</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Jiangsu Province</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sichuan Province</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Jiangxi Province</td>
<td>1*</td>
<td>-</td>
</tr>
</tbody>
</table>

* imported case from Guangdong
<table>
<thead>
<tr>
<th>Confirmed H7N9 human cases have been reported in the following countries / areas</th>
<th>Cumulative no. of cases since 2013 (1567 cases in total)</th>
<th>Cumulative no. of cases since October 2018 (0 cases in total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zhejiang Province</td>
<td>310</td>
<td>0</td>
</tr>
<tr>
<td>Guangdong Province</td>
<td>259</td>
<td>0</td>
</tr>
<tr>
<td>Jiangsu Province</td>
<td>252</td>
<td>0</td>
</tr>
<tr>
<td>Fujian Province</td>
<td>108</td>
<td>0</td>
</tr>
<tr>
<td>Anhui Province</td>
<td>99</td>
<td>0</td>
</tr>
<tr>
<td>Hunan Province</td>
<td>95</td>
<td>0</td>
</tr>
<tr>
<td>Shanghai Municipality</td>
<td>57</td>
<td>0</td>
</tr>
<tr>
<td>Jiangxi Province</td>
<td>52</td>
<td>0</td>
</tr>
<tr>
<td>Sichuan Province</td>
<td>38</td>
<td>0</td>
</tr>
<tr>
<td>Beijing Municipality</td>
<td>35</td>
<td>0</td>
</tr>
<tr>
<td>Guangxi Zhuang Autonomous Region</td>
<td>31</td>
<td>0</td>
</tr>
<tr>
<td>Hubei Province</td>
<td>31</td>
<td>0</td>
</tr>
<tr>
<td>Hebei Province</td>
<td>29</td>
<td>0</td>
</tr>
<tr>
<td>Henan Province</td>
<td>28</td>
<td>0</td>
</tr>
<tr>
<td>Shandong Province</td>
<td>28</td>
<td>0</td>
</tr>
<tr>
<td>Guizhou Province</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Xinjiang Uygur Autonomous Region</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>Chongqing Municipality</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>Yunnan Province</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Shaanxi Province</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Gansu Province</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Liaoning Province</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Tianjin Municipality</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Jilin Province</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Shanxi Province</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Tibet Autonomous Region</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Inner Mongolia Autonomous Region</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>21*</td>
<td>0</td>
</tr>
<tr>
<td>Taiwan</td>
<td>5*</td>
<td>0</td>
</tr>
<tr>
<td>Canada</td>
<td>2*</td>
<td>0</td>
</tr>
<tr>
<td>Macao</td>
<td>2*</td>
<td>0</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1*</td>
<td>0</td>
</tr>
</tbody>
</table>

* All cases imported from Mainland China
* The latest case imported from Mainland China
**Table 7.** Outside Hong Kong: Confirmed human cases of avian influenza A infections other than avian influenza A(H5N1 / H5N6 / H7N9) reported in the past 6 months

<table>
<thead>
<tr>
<th>Place of occurrence</th>
<th>No. of cases (No. of deaths)</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In this reporting period</strong></td>
<td>-</td>
<td>0(0)</td>
</tr>
</tbody>
</table>
| **Previously reported cases (onset in the past 6 months)** | Mainland China | 4(0) | Avian influenza A(H9N2):  
- **Guangxi Zhuang Autonomous Region:** A 3-year-old boy with onset on October 10, 2018. |

**Table 8.** Hong Kong: Confirmed reports of avian influenza A(H5) or avian influenza A(H7N9) in poultry / wild birds / environmental samples since 2015

<table>
<thead>
<tr>
<th>No. of reports of H5 in poultry / wild birds / environmental samples</th>
<th>No. of reports of H7N9 in poultry / wild birds / environmental samples</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In this reporting period</strong></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Previously reported cases since 2015 (before this reporting period)</strong></td>
<td>16*</td>
<td>1#</td>
</tr>
</tbody>
</table>

* Carcass of a peregrine falcon found in Yuen Long on April 9, 2015 (H5N6)  
  Carcass of an oriental magpie robin found in Sai Kung on April 29, 2015 (H5N6)  
  Carcass of an oriental magpie robin found in Kwai Chung on November 17, 2015 (H5N6)  
  Carcass of a great egret found in Wong Tai Sin on December 31, 2015 (H5N6).  
  Chicken carcass found in Tuen Mun on February 14, 2016 (H5N6)  
  Chicken carcass found in Tai O on February 18, 2016 (H5N6)  
  Samples of faecal droppings collected at Mai Po Nature Reserve on November 25, 2016 (H5N6)  
  A sample of faecal droppings collected at Mai Po Nature Reserve on November 30, 2016 (H5N6)  
  A dead red-whiskered bulbul collected at Kowloon City on April 7, 2017 (H5N6)  
  A dead oriental magpie robin found in Tsing Kwan O on December 21, 2017 (H5N6)  
  An environmental swab of a chopping board and skin swabs of a chilled duck sample taken from a fresh provision shop in Wan Chai on 2 January & 9 January, 2018 (H5N6)  
  An oropharyngeal swab from a batch of chilled chicken taken at a fresh provision shop in Mong Kok, reported on 23 January, 2018 (H5N6)  
  A black-headed gull carcass found in Ngau Hom Tsuen, Lau Fau Shan on February 8, 2018 (H5N6)  
  A dead crested myna was found at Kun Lung Wai, Fanling tested positive for H5N6 virus on April 9, 2018  
  A swab sample taken from a bird cage housing a hill myna at a pet bird shop in Yuen Po Street Bird Garden in Mong Kok on 7 April, 2018 (H5N6)  
  A sample of faecal droppings of live poultry taken from a poultry stall in Yan Oi Market in Tuen Mun was tested positive for H7N9 virus on June 5, 2016.

# A sample of faecal droppings of live poultry taken from a poultry stall in Yan Oi Market in Tuen Mun was tested positive for H7N9 virus on June 5, 2016.
Table 9. Outside Hong Kong: Confirmed avian influenza A(H5) or other highly pathogenic avian influenza in poultry / wild birds / environmental samples reported in this week – number of reports for various subtypes of virus

<table>
<thead>
<tr>
<th>Subtype of virus</th>
<th>No. of reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>H5</td>
<td>1</td>
</tr>
<tr>
<td>H5N1</td>
<td>1</td>
</tr>
<tr>
<td>H5N2</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 10. Outside Hong Kong: Confirmed avian influenza A(H5) or other highly pathogenic avian influenza in poultry / wild birds / environmental samples reported in this week – details of reports

<table>
<thead>
<tr>
<th>Places of occurrence</th>
<th>Details</th>
<th>OIE Report Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taiwan</td>
<td>Samples from poultry in Yunlin County were tested positive for highly pathogenic avian influenza A (H5N2).</td>
<td>January 04 and January 11, 2019</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Samples from poultry in Long An were tested positive for highly pathogenic avian influenza A (H5N1).</td>
<td>January 10, 2019</td>
</tr>
<tr>
<td>Russia</td>
<td>Samples from poultry in Rostovskaya Oblast were tested positive for highly pathogenic avian influenza A (H5).</td>
<td>January 11, 2019</td>
</tr>
</tbody>
</table>

For cumulative reports of avian influenza A(H5) or other highly pathogenic avian influenza in poultry / wild birds, please refer to the OIE website.
<table>
<thead>
<tr>
<th>Country/Area</th>
<th>Human cases</th>
<th>Date of last report / onset of last reported case</th>
<th>Poultry cases / other related samples</th>
<th>Date of last report (Subtype in this report)</th>
<th>Wild bird cases / other related samples</th>
<th>Date of last report (Subtype in this report)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Subtype of virus</td>
<td></td>
<td>Subtype of virus</td>
<td></td>
<td>Subtype of virus</td>
<td></td>
</tr>
<tr>
<td>Bulgaria</td>
<td>H5</td>
<td>23/12/2018 (H5N8)</td>
<td>-</td>
<td>-</td>
<td>H5</td>
<td>19/12/2018 (H5N6)</td>
</tr>
<tr>
<td>Cambodia</td>
<td>H5</td>
<td>31/08/2018 (H5N1)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Denmark</td>
<td>H5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>H5</td>
<td>03/09/2018 (H5N6)</td>
</tr>
<tr>
<td>Egypt</td>
<td>H5</td>
<td>17/07/2018*</td>
<td>Endemic (H5)</td>
<td>Endemic (H5N1)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Germany</td>
<td>H5</td>
<td>04/09/2018 (H5N6)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ghana</td>
<td>H5</td>
<td>11/08/2018</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>India</td>
<td>H5</td>
<td>04/01/2019 (H5N1)</td>
<td>-</td>
<td>-</td>
<td>H5</td>
<td>07/01/2019 (H5N1)</td>
</tr>
<tr>
<td>Indonesia</td>
<td>H5</td>
<td>05/01/2019 (H5N8)</td>
<td>Endemic (H5)</td>
<td>Endemic (H5N1)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Iran</td>
<td>H5</td>
<td>22/10/2018 (H5N1)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Laos</td>
<td>H5</td>
<td>25/09/2018 (H5N6)</td>
<td>-</td>
<td>-</td>
<td>H5</td>
<td>27/12/2018 (H5N6)</td>
</tr>
<tr>
<td>Mainland China</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guangdong</td>
<td>H5</td>
<td>25/09/2018 (H5N6)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Guangxi</td>
<td>H5</td>
<td>18/10/2018 (H5N6)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Guizhou</td>
<td>H5</td>
<td>29/09/2018 (H5N6)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hunan</td>
<td>H5</td>
<td>10/10/2018 (H5N6)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hubei</td>
<td>H5</td>
<td>24/10/2018 (H5N6)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Jiangsu</td>
<td>H5</td>
<td>22/11/2018 (H5N6)</td>
<td>-</td>
<td>-</td>
<td>H5</td>
<td>03/09/2018 (H5N6)</td>
</tr>
<tr>
<td>Yunnan</td>
<td>H5</td>
<td>21/11/2018 (H5N6)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Malaysia</td>
<td>H5</td>
<td>02/09/2018 (H5N1)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Netherlands</td>
<td>H5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>H5</td>
<td>16/08/2018 (H5N2)</td>
</tr>
<tr>
<td>Russia</td>
<td>H5</td>
<td>11/01/2019*</td>
<td>-</td>
<td>-</td>
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<td>-</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>H5</td>
<td>22/07/2018 (H5N8)</td>
<td>-</td>
<td>-</td>
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<td>-</td>
</tr>
<tr>
<td>South Africa</td>
<td>H5</td>
<td>14/12/2018 (H5N8)</td>
<td>-</td>
<td>-</td>
<td>H5</td>
<td>18/07/2018 (H5N8)</td>
</tr>
<tr>
<td>Taiwan</td>
<td>H5</td>
<td>13/08/2018*</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Vietnam</td>
<td>H5</td>
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Sources: WHO, OIE, NHC and other official websites

* without further subtype information