Epidemiology & clinical management of COVID-19

CORONAVIRUS (COVID-19) UPDATE NO. 31
19 June 2020
Current global situation

- Nearly 8.25 million COVID-19 cases globally
- Nearly 450,000 deaths

Top ten countries with the highest number of new cases over the past 24 hours:
- Chile - 36,179
- Brazil – 34,918
- USA – 27,921
- India - 12,881
- Russian Federation – 7,790
- Pakistan - 5,358
- Saudi Arabia - 4,919
- Mexico - 4,599
- Peru - 4,164
- South Africa - 4,078

Data as of 06h00 18.06.20
Current global situation

Number of new deaths of COVID-19 per day, by WHO Region

![Graph showing new daily deaths of COVID-19 per day, by WHO Region. The graph includes data from various WHO regions, with AFRO, AMRO, EMRO, EURO, SEARO, and WPRO regions represented. The x-axis represents dates from 18 May to 18 June, and the y-axis represents the number of new daily deaths, ranging from 0 to 6000.]
Epidemiological characteristics COVID-19

This update covers two recently published reports on the epidemiological characteristics of COVID-19:
One from China¹ and one from The United States of America²

Time period analysed:
• **China**: From December 2019 to 20 February 2020
  • **USA**: From 22 January to 30 May 2020

Cases and deaths
• **China**:
  • 75 565 total, 55 924 lab confirmed, 2114 deaths
  • Median age: 48 years (IQR: 39-63); 51.1% male

• **USA**:
  • 1 761 503 total, 1 320,488 lab confirmed, 103 700 deaths
  • Median age: 48 years (IQR: 33-65); 48.9% female

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¹ [http://weekly.chinacdc.cn/en/article/id/e53946e2-c6c4-41e9-9a9b-fea8db1a8f51](http://weekly.chinacdc.cn/en/article/id/e53946e2-c6c4-41e9-9a9b-fea8db1a8f51)
² [https://www.cdc.gov/mmwr/volumes/69/wr/mm6924e2.htm?s_cid=mm6924e2_w](https://www.cdc.gov/mmwr/volumes/69/wr/mm6924e2.htm?s_cid=mm6924e2_w)
Age distribution of laboratory confirmed COVID-19 cases in China (01.12.19 – 20.02.20) and USA (22.01.20 – 30.05.20)

1. http://weekly.chinacdc.cn/en/article/id/e53946e2-c6c4-41e9-9a9b-fea8db1a8f51
2. https://www.cdc.gov/mmwr/volumes/69/wr/mm6924e2.htm?s_cid=mm6924e2_w
Case fatality ratio by age group for laboratory confirmed COVID-19 cases in China (01.12.19 – 20.02.20) and USA (22.01.20 – 30.05.20)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>USA</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤80</td>
<td>28.7%</td>
<td>14.8%</td>
</tr>
<tr>
<td>70-79</td>
<td>16.6%</td>
<td>8.0%</td>
</tr>
<tr>
<td>60-69</td>
<td>6.7%</td>
<td>3.6%</td>
</tr>
<tr>
<td>50-59</td>
<td>2.4%</td>
<td>1.3%</td>
</tr>
<tr>
<td>40-49</td>
<td>1.0%</td>
<td>0.4%</td>
</tr>
<tr>
<td>30-39</td>
<td>0.2%</td>
<td>0.4%</td>
</tr>
<tr>
<td>20-29</td>
<td>0.2%</td>
<td>0.1%</td>
</tr>
<tr>
<td>10-19</td>
<td>0.2%</td>
<td>0.1%</td>
</tr>
<tr>
<td>0-9</td>
<td>0.1%</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

1. http://weekly.chinacdc.cn/en/article/id/e53946e2-c6c4-41e9-9a9b-fc8a8db1a8f51
2. https://www.cdc.gov/mmwr/volumes/69/wr/mm6924e2.htm?s_cid=mm6924e2_w
Proportion of cases of COVID-19 reporting selected symptoms – data from China (01.12.19 – 20.02.20) and USA (22.01.20 – 30.05.20)

1. http://weekly.chinacdc.cn/en/article/id/e53946e2-c6c4-41e9-9a9b-fea8db1a8f51
2. https://www.cdc.gov/mmwr/volumes/69/wr/mm6924e2.htm?s_cid=mm6924e2_w
Reported underlying medical conditions for laboratory confirmed COVID-19 cases in China (01.12.19 – 20.02.20) and USA (22.01.20 – 30.05.20)

- Inmunocompromised: 5.3% (USA), 5.3% (China)
- Renal disease: 7.6% (USA), 1.4% (China)
- Liver disease: 1.4% (USA), 1.4% (China)
- Neurological disability: 4.8% (USA), 4.8% (China)
- Cancer: 0.0% (USA), 0.0% (China)
- Chronic respiratory disease: 17.5% (USA), 30.2% (China)
- Diabetes: 30.2% (USA), 32.2% (China)
- Any cardiovascular disease: 32.2% (USA), 60.0% (China)

1. [Weekly China CDC](http://weekly.chinacdc.cn/en/article/id/e53946e2-c6c4-41e9-9a9b-f8a8db1a8f51)
2. [CDC MMWR](https://www.cdc.gov/mmwr/volumes/69/wr/mm6924e2.htm?s_cid=mm6924e2_w)
Disease severity in laboratory confirmed COVID-19 cases in China (01.12.19 – 20.02.20) and USA (22.01.20 – 30.05.20)

<table>
<thead>
<tr>
<th>Disease severity</th>
<th>China</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild to moderate</td>
<td>80%</td>
<td>84%</td>
</tr>
<tr>
<td>Severe</td>
<td>15%</td>
<td>14%</td>
</tr>
<tr>
<td>Critical</td>
<td>5%</td>
<td>2%</td>
</tr>
</tbody>
</table>

USA data:
• Hospitalization was six times more frequent among patients with a reported underlying condition (45.4%) compared to those without such conditions (7.6%)
• Death occurred 12 times more often among patients with reported underlying conditions (19.5%) compared with those without such conditions (1.6%)

1. http://weekly.chinacdc.cn/en/article/id/e53946e2-c6c4-41e9-9a9b-fea8db1a8f51
2. https://www.cdc.gov/mmwr/volumes/69/wr/mm6924e2.htm?s_cid=mm6924e2_w
Clinical disease progression for COVID-19

Onset symptoms (cough, fever) → Infectious → Incubation period: Median 4-5 days (1-14 days) → Mild moderate disease 80% → Shortness of breath, hypoxia: Severe disease 15% → Respiratory failure, multiorgan system dysfunction: Critical 5% → Death: Median 10-12 days after onset symptoms

Recovery average 14 days

Median 7-10 days after onset symptoms
Care of suspected or confirmed **mild** COVID-19: symptomatic treatment

- Isolate to stop virus transmission, at a designated COVID-19 health facility, community facility or at home.
- Give symptomatic treatment such as antipyretics for fever and pain, adequate nutrition and appropriate rehydration.
- Counsel patients about signs and symptoms that should prompt urgent care.

➢ Antibiotic therapy or prophylaxis are **not indicated**
Care of **moderate** COVID-19 with pneumonia

- Isolate to stop virus transmission, at a designated COVID-19 health facility, community facility or at home. Patients with moderate illness may not require hospitalization.
- For patients at higher risk of severe disease, isolation in hospital is preferred.
- Antibiotics are not indicated unless there is clinical suspicion of a bacterial infection
- Monitor closely for signs or symptoms of disease progression.
Care of severe COVID-19 with pneumonia

- Equip all areas for severely ill patients with functioning oxygen system.
- Closely monitor patients for signs of clinical deterioration, such as rapidly progressive respiratory failure and shock; respond immediately with supportive care interventions.
- Monitor patients for signs of thromboembolism or related conditions, such as stroke, deep venous thrombosis, pulmonary embolism or acute coronary syndrome.
Recovery trial: Dexamethasone in ventilated COVID-19 patients

- Statement by trial investigators (University of Oxford)
  - The results have not been published in a journal yet
- Over 6000 hospitalized patients were randomized to receive either dexamethasone (6 mg daily) or usual care for 10 days
- Dexamethasone was associated with significantly fewer deaths among patients compared with those given usual care
  - Patients on oxygen: dexa group had one-fifth fewer deaths compared to usual care
  - Patients on ventilator: dexa group had one-third fewer deaths compared to usual care
- For patients who didn't require oxygen or respiratory support, there was no observed additional benefit with dexamethasone

Upcoming events

Webinar: Public Health Emergency Operations Centres (PHEOCs) for COVID 19 Response.
Tuesday 23 June 14h00 Geneva time.
Register

Pre-conference of the 1st WHO infodemiology conference.