Glossary and abbreviations

AFCOR—Africa Task Force for Novel Coronavirus
AFR—WHO African Region
AMR—WHO Region of the Americas
AP—Associated Press
Article 6—International Health Regulations section regarding Member State notifications to the World Health Organization about a potential international health threat
Article 10—International Health Regulations section regarding Member State verification of emerging disease threat information
AU—African Union
CCDC—Chinese Center for Disease Control
COVID-19—the disease caused by SARS-CoV-2
DG—WHO Director-General
Dispersion factor k—describes how a disease clusters
EB—WHO Executive Board
ECDC—European Centre for Disease Prevention and Control
ED—Executive Director
EEA—European Economic Area
EMR—WHO Eastern Mediterranean Region
EU—European Union
EUR—WHO European Region
G7—Group of Seven
G20—Group of Twenty
GOARN—WHO Global Outbreak Alert and Response Network
HCWs—health care workers
h-to-h—human-to-human
HQ—headquarters
IASC—Inter-agency Standing Committee
IDVI—Infectious Disease Vulnerability Index
IFRC—International Federation of Red Cross and Red Crescent Societies
IHR—International Health Regulations
ILO—International Labour Organization
Mean serial interval—indicates the length of time between symptom onset of an initial case and any subsequent cases
nCoV—novel coronavirus
PCR—polymerase chain reaction
R&D—research and development
PHEIC—Public Health Emergency of International Concern
PPE—personal protective equipment
ProMED—Program for Monitoring Emerging Diseases
PUO—pneumonia of unknown origin
R0—R naught, basic reproduction number, estimates how many other cases one infected individual is likely to cause prior to institution of public health measures or development of immunity
Rt and Re—R at time t, effective reproduction number, estimates how many other cases one infected individual is likely to cause at a specific time, considering immunity and public health measures
RaTG13—a type of bat coronavirus
RCCE—Risk Communication and Community Engagement
SARS—severe acute respiratory syndrome
SARS-CoV-2—severe acute respiratory syndrome-coronavirus-2, the virus that causes COVID-19 disease
SCMP—South China Morning Post
SEAR—WHO South-East Asian Region
STAG-IH—WHO Strategic and Technical Advisory Group for Infectious Hazards
UN—United Nations
UNHCR—UN High Commissioner for Refugees
UK—United Kingdom
US—United States
US CDC—United States Centers for Disease Control and Prevention
WASH—Water, Sanitation, and Hygiene
WHO—World Health Organization
WPRO—WHO Western Pacific Regional Office
2019-nCoV—novel coronavirus 2019
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<th>CHRONOLOGY LEGEND</th>
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**Patients with PUO admitted to Wuhan hospital (later confirmed as SARS-CoV-2)**


41 patients with pneumonia of unknown origin (PUO) were admitted to a Wuhan hospital between 16 Dec.-2 Jan. Confirmed as SARS-CoV-2 in Jan. 2020.

**Three patients with PUO identified in Wuhan (later confirmed as SARS-CoV-2)**


Three patients with PUO were identified in Wuhan from 21 Dec. onwards. Lung fluid samples collected 30 Dec. during hospital admission later confirmed SARS-CoV-2. One patient was a retailer at the Huanan Seafood Market, another a frequent market visitor. One died 9 Jan. 2020, the others were discharged.

**Sewage samples in Italy possibly positive for SARS-CoV-2**


Sewage samples from 18 Dec. in Milan and Turin were found to be positive for SARS-CoV-2, but may be false positives.

**Wuhan doctors sent lung fluid sample to commercial lab for testing**

Published: 05 May 2020

Wuhan doctors noticed pneumonia patients were not responding to usual treatments and sent a test sample to Vision Medicals (commercial lab) for next generation sequencing/testing.
First reported suspected cluster

**Suspicious cases admitted to Wuhan hospital**

Dr. Zhang Jixian

One female with fever and dry cough symptoms is identified by Dr. Zhang Jixian in Hubei Hospital of Integrated Chinese and Western Medicine. Her husband is admitted to a different department of the hospital on the same day. The results of the diagnostic work-ups are different than normal pneumonia cases. The female reports close contact with the Huanan Seafood Market, while her husband reports no contact with the market.

*Interview and correspondence with Dr. Zhang Jixian, Journal of Nuclear Medicine, WHO-convened Global Study of the Origins of SARS-CoV*

**Additional suspicious cases identified at Wuhan hospital, cluster reported**

Dr. Zhang Jixian

Staff at Hubei Hospital of Integrated Chinese and Western Medicine realize that the two cases are a couple, and transfer the husband to the same department as his wife. Their son, who is asymptomatic, is also CT scanned, which reveals that he has similar lung abnormalities as his parents. Dr. Zhang Jixian reports the three cases to the Jianghan District Center for Disease Control and Prevention (CDC).

*Interview and correspondence with Dr. Zhang Jixian, Journal of Nuclear Medicine, IHR Review Committee Report*

**Wuhan CDC collects samples from PUO patients**

Wuhan CDC

Wuhan CDC visits Hubei Hospital of Integrated Chinese and Western Medicine to collect lung fluid and blood samples from three PUO patients (husband, wife, son) for more investigation. Dr. Zhang Jixian reports to Wuhan CDC that she is "concerned about human-to-human (h-to-h) transmission."

Dr. Zhang Jixian notes "Wuhan CDC didn’t dismiss my thoughts nor did they confirm them, but said they needed to confirm through lab investigations."

*Interview and correspondence with Dr. Zhang Jixian, Journal of Nuclear Medicine, IHR Review Committee Report*
**30 Dec 2019 – 15:10 CST/08:10 CET**

**ALERT**

**Wuhan issues a first “urgent notice” to health institutions**

Wuhan Municipal Health Commission

The Wuhan Municipal Health Commission issues an “urgent notice” to health institutions about cases of PUO linked to the Huanan Seafood Market. The notice is shared in online chat groups, including by ophthalmologist Dr. Li.

Wuhan Municipal Health Commission archived document, WHO internal documents, Associated Press, PBS Frontline

**30 Dec 2019 – 18:50 CST/11:50 CET**

**ALERT**

**Wuhan issues a second “urgent notice” to health institutions**

Wuhan Municipal Health Commission

The Wuhan Municipal Health Commission issues a second notice to health institutions, with instructions not to disclose information to the public without authorisation. The “urgent notice” includes the following three headings: Strengthening Responsibility and Guidance, Regularizing Medical Care, and Strict Reporting Information System.


**12:16 CST/05:16 CET**

**REQUEST**

**Taipei CDC IHR Point of Contact emails WHO via IHR**

Taipei CDC IHR Point of Contact

Taipei CDC IHR Point of Contact emails WHO via the International Health Regulations (IHR) system and requests information about cases, referring to recent news reports. WHO Headquarters (HQ) acknowledges the request.

WHO internal documents, Taiwan Centers for Disease Control

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**31 Dec 2019 – 10:16 CST/03:16 CET**

**NEWS REPORT**

**First report of cases in Chinese media**

Published: 31 Dec 2019

Finance Sina publishes the first report in Chinese media on cases of PUO in Wuhan. Other media articles are published shortly after in Beijing News, Central News Agency, Taiwan and South China Morning Post (SCMP).

Finance Sina, WHO internal documents

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**31 Dec 2019**

**55% of cases linked to Huanan Seafood Market**

Li Q, Guan X, et al.

Published: 29 Jan 2020

A study of the first laboratory confirmed patients in Wuhan with COVID-19 found a link to the Huanan Seafood market in 55% of cases with onset of disease before 1 Jan.

New England Journal of Medicine
### Alert

**12:59 CST/05:59 CET**

**WHO**

**ProMED reports cases in Wuhan**

_ProMED_ reports cases in Wuhan.

_ProMED, WHO staff interview, WHO internal documents, IHR Review Committee Report_

### Cases

**13:36 CST/06:36 CET**

**Wuhan**

**Wuhan releases public bulletin about PUO cases**

27 cases of PUO are confirmed by Wuhan Municipal Health Commission in public bulletin.

_Sate Council Information Office of the People’s Republic of China_

### Border Measures

**16:57 CST/08:57 CET**

**Hong Kong SAR (China)**

**makes public health announcement**

Hong Kong SAR (China) makes public health announcement related to cluster of PUO cases in Wuhan, and underscores thermal imaging systems are in place at borders to screen for possible cases.

_Government of the Hong Kong Special Administrative Region_

### Request

**13:55 CST/06:55 CET**

**WHO China Country Office**

**takes note of public bulletin and notifies WPRO**

WHO China Country Office sees online public bulletin from Wuhan Municipal Health Commission and immediately notifies the WHO WPRO IHR Focal Point by email, and specifies no IHR notification has been issued.

_WHO staff interview, WHO internal documents_

**REQUEST**

**WHO HQ requests information from WHO WPRO IHR Focal Point**

WHO HQ having detected ProMED signal, WHO HQ surveillance team requests more information from the WHO WPRO IHR Focal Point, who provides a machine translation of the Wuhan Municipal Health Commission public bulletin. On the same day, WHO receives requests for more information from the United Kingdom (UK) and the European Centre for Disease Control (ECDC).

_WHO internal documents_

### Action

**13:38 CST/06:38 CET**

**WHO China Country Office**

**receives query from Beijing bureau of New York Times**

WHO China Country Office sees online public bulletin from Wuhan Municipal Health Commission and immediately notifies the WHO WPRO IHR Focal Point by email, and specifies no IHR notification has been issued.

_WHO internal documents_

**REQUEST**

**WHO China Country Office**

receives query from Beijing bureau of New York Times regarding cases in Wuhan.

_WHO internal documents_
Eight doctors questioned by Wuhan police

Published: 01 Feb 2020

The doctors questioned include ophthalmologist Li Wenliang, who had sent a private chat message to colleagues about a new SARS-like virus. The incidents were reported on the Chinese newscast "Xinwen Lianbo", watched by millions. The police followed up with a warning in the Xinhua News Agency and "call on all netizens to not fabricate rumors, not spread or believe rumors."

Washington Post, The Lancet
SCIENCE

- Sampling at Huanan Seafood Market showed the virus was present in the environment, not in animals
- Joint WHO-China mission
- Published: 31 Jul 2020

COUNTRY

- Of 336 samples collected from animals at Huanan Seafood Market, none was positive by polymerase chain reaction (PCR) for SARS-CoV-2. 69 out of 842 environmental samples were positive by PCR for SARS-CoV-2. Three genetic sequences of SARS-CoV-2 from environmental samples at Huanan Seafood Market eventually were published on the Global Initiative on Sharing All Influenza Data.

REAL-TIME EVIDENCE

- WHO Representative to China writes formal letter to China
- WHO Representative to China writes a letter to the National Health Commission, offering support and urging the Commission and the China IHR National Focal Point to respond urgently to requests for information.

INTERNATIONAL

- First three-level teleconference
  - WHO Incident Manager Support Team holds its first three-level teleconference. In a context of increasing requests for information from several Member States, specifics of activating IHR to obtain further information from China are discussed.

REQUEST

- Countries ask WHO for information
  - Several Member States, including Malaysia and the Republic of Korea, request further information about the outbreak from WHO.

BORDER MEASURES

- Hong Kong SAR (China) to add “mystery Wuhan pneumonia” to notifiable infectious diseases list
  - Hong Kong SAR (China) announces that they will add “mystery Wuhan pneumonia” to a list of notifiable infectious diseases, allowing the authorities to place patients in quarantine.

MEETING

- First technical briefing between China and WHO
  - First of three technical briefings between WHO China Country Office and the Chinese National Health Commission. China gives WHO information matching the public bulletin, issued one hour later. A WHO three-level teleconference is held immediately following the meeting.
04 Jan – 11:22 CST/04:22 CET

REQUEST

WHO WPPO requests more information; advises IHR state parties will be notified

WHO WPPO

WHO WPPO IHR Focal Point acknowledges the information received from the Chinese National Focal Point. WHO WPPO advises that IHR state parties will be notified. The Focal Point replies one hour later.

WHO internal documents

CASES

17:00 CST/10:00 CET

Wuhan issues second public bulletin confirming 44 PUO cases

Wuhan Municipal Health Commission

Wuhan Municipal Health Commission issues second public bulletin, confirming 44 PUO cases, of which 11 are severely ill and 33 are in stable condition.

WHO

04 Jan – 13:27 CST/06:27 CET

ANNOUNCEMENT

WHO WPPO tweets China has reported a cluster of PUO cases

WHO WPPO

"#China has reported to WHO a cluster of pneumonia cases in Wuhan, Hubei Province. The Govt has also met with our country office, and updated @WHO on the situation. Govt actions to control the incident have been instituted and investigations into the cause are ongoing."

WHO WPPO Twitter

04 Jan – 19:13 CET/05 Jan – 02:13 CST

ANNOUNCEMENT

WHO HQ tweets China has reported a cluster of pneumonia cases

WHO HQ

"#China has reported to WHO a cluster of pneumonia cases with no deaths — in Wuhan, Hubei Province. Investigations are underway to identify the cause of this illness."

WHO HQ Twitter

01 Jan–09 Jan 2020

SCIENCE

Re estimated at 3.54 in China

Hao X, Chen S, et al.

Published: 16 Jul 2020

Re estimated at 3.54 (3.4–3.67) in China for the period 1 Jan.–9 Jan., suggesting rapid spread.

Nature
Unobserved cases due to h-to-h transmission in China estimated to be 52,381
Mizumoto K, Kagaya K, and Chowell G. Published: 2 Jun 2020
Unobserved cases due to human-to-human transmission were estimated to be 52,381 from 8 Dec. 2019 to 9 Jan. 2020. R_0_ estimated to 2.37.
International Journal of Infectious Disease
PCR diagnostic reagent was developed and tested in China, allowing for accurate identification and diagnosis of SARS-CoV-2 infection. Reagent was distributed to Wuhan the next day.

Li, Q., Guan, X., et al. (2020). Initial estimates of transmission dynamics in Wuhan indicated R0 to be 2.2 (1.4–3.9) and a doubling time of 7.4 days. New England Journal of Medicine.

WHO recommends no specific health measures for travellers

WHO HQ
Published: 10 Jan 2020

WHO publishes advice for international travel and trade, recommends caution while traveling in or from Wuhan. Advises against travel or trade restrictions on China based on currently available information.

WHO HQ

PCR diagnostic reagent developed and tested

China CDC
Published: 29 Jan 2020

PCR diagnostic reagent was developed and tested in China, allowing for accurate identification and diagnosis of SARS-CoV-2 infection. Reagent was distributed to Wuhan the next day.

New England Journal of Medicine, State Council Information Office of the People’s Republic of China
**REAL-TIME EVIDENCE**

**COUNTRY**

- **Country**

  **Wuhan reports 41 cases using updated case definition and the first death**
  
  Wuhan Municipal Health Commission

  The Wuhan Municipal Health Commission publishes its fourth bulletin coinciding with the second technical briefing between China and WHO. The total number of cases is revised down to 41, based on a new case definition. The first death is reported. The bulletin also states that no new cases have been reported since 3 Jan., and "no clear evidence of human-to-human transmission" has been found.

  **Wuhan Municipal Health Commission, WHO internal documents**

**INTERNATIONAL**

- **Meeting**

  **Second technical briefing between China and WHO**

  WHO

  Second of three technical briefings between WHO China Country Office and the Chinese National Health Commission. The list of cases shared confirm there are cases not linked to the Huanan Seafood Market.

  **WHO internal documents**

**PUBLICATION**

- **Publication**

  **WHO reports 41 cases and one death**

  WHO

  Published: 12 Jan 2020

  WHO issues a Disease Outbreak News update, based on information from China’s National Health Commission. It reads "WHO is reassured of the quality of the ongoing investigations and the response measures implemented in Wuhan."

  **WHO Disease Outbreak News**

**ACTION**

- **Action**

  **Scientists publish first protocol for RT-PCR test**

  WHO

  Published: 13 Jan 2020

  WHO publishes the first protocol for a reverse transcription polymerase chain reaction (RT-PCR) assay for detection of the novel coronavirus, developed by partner laboratories.

  **Charité Virology**

**SCIENCE**

- **Science**

  **Research consortium publishes draft genome**

  Chinese researchers

  A consortium of researchers led by Professor Yong-Zhen Zhang from the Shanghai Public Health Clinical Center publishes a draft genome of the newly discovered coronavirus suspected of causing the outbreak on GenBank. The genome was submitted to GenBank on 5 Jan. (see retrospective entry on 5 Jan.).

  **Science Magazine, Post by Edward Holmes, Caixin, Twitter**

**NEWS REPORT**

- **News report**

  **Crowds gather at Wuhan events**

  Published: 01 Feb 2020

  Holiday shopping fairs and other events continued. Without clear government warnings, people kept travelling within and beyond China.

  **Washington Post**

**CASES**

- **Cases**

  **First case outside China detected in Thailand**


  Published: 27 Feb 2020

  Air traveler who arrived from Wuhan on 8 Jan. was identified through airport thermosurveillance and was diagnosed in hospital on 12 Jan. Virus was genetically identical to 30 Dec. strains in Wuhan.

  **Euro Surveillance, IHR Review Committee Report**

- **Cases**

  **China: 1,723 estimated cases**

  Estimated cases of COVID-19 were 1,723 based on data looking at probability of exportation.

  **Imperial College**

**CASES**

- **Cases**

  **Thailand: First reported case**

  First reported case in Thailand, imported from Wuhan (see retrospective entry on 12 Jan.).

  **WHO Dashboard and Situation Reports**
WHO holds a teleconference with the diagnostics and laboratories global expert network to discuss a diagnostics strategy. The teleconference includes members from WHO Global Laboratories Alliance for the Diagnosis of High Threat Pathogens.

WHO scientist in press briefing: “From the information that we have it is possible that there is limited human-to-human transmission”. WHO tweet: “Preliminary investigations conducted by the Chinese authorities have no clear evidence of human-to-human transmission of the novel coronavirus (2019-nCoV) identified in Wuhan, China”.

Travel data is used to produce a list of top 20 passenger destination cities from Wuhan, with the majority being in Asia. Infectious Disease Vulnerability Index (IDVI) scores are calculated for each destination.

China’s top health official ordered the country to prepare for a pandemic. China CDC internally declared level one emergency. Chinese officials still said that the chance of sustained h-to-h transmission was low.
## Real-Time Evidence

### Cases

**First US COVID-19 patient seeks care**

*US CDC*

A man from Seattle seeking care for illness is later confirmed on 21 Jan. as the first US COVID-19 case.

Published: 21 Jan 2020

### Science

**Rt estimated at 2.35 in China**


Published: 11 Mar 2020

Rt estimated at 2.35 in China one week before travel restrictions were put in place on 23 Jan. It fell to 1.05 one week later.

*The Lancet Infectious Diseases*

**Re estimated at 3.32 in China**

*Hao X, Chen S, et al.*

Published: 16 Jul 2020

Re estimated at 3.32 (3.19–3.44) in China for the period 10 Jan.–22 Jan.

*Nature*
### REAL-TIME EVIDENCE

#### CASES
- **China reaches 198 reported cases**
  - Wuhan Municipal Health Commission announces 198 cases of nCoV-2019 and four deaths, as of 19 Jan. In Wuhan Jinyintan Hospital, a doctor reports 150 cases based on a clinical case definition.

#### NEWS REPORT
- **China medical expert confirms h-to-h transmission**
  - National Health Commission delegation led by Prof. Nanshan Zhong announces on state TV cases involving h-to-h transmission, that medical staff have been infected, and that there are two cases in Guangdong Province. The delegation suggests people don’t travel in and out of Wuhan.

#### NEWS BRIEFING
- **President Xi Jinping says China will curb outbreak**
  - “People’s lives and health should be given top priority and the spread of the outbreak should be resolutely curbed,” state media quote President Xi Jinping.
  - Reuters

#### ANNOUNCEMENT
- **WHO WPRO tweets: Evidence of limited h-to-h transmission**
  - WHO WPRO
    - Published: 19 Jan 2020
    - “According to the latest info received and WHO analysis, there is evidence of limited human-to-human transmission... While there is currently no clear evidence of sustained human-to-human transmission, we do not have enough evidence to evaluate the full extent of human-to-human transmission.”
  - WHO WPRO Twitter

### RETROSPECTIVE EVIDENCE

#### NEWS REPORT
- **US reports it will screen passengers on Wuhan flights**
  - The US will begin screening efforts at three US airports to detect travelers from Wuhan who might have symptoms of a new respiratory virus. Many countries follow suit in the days to come.
  - Reuters

#### CASES
- **Republic of Korea: First reported cases**
  - First reported cases in the Republic of Korea, imported from Wuhan.
  - WHO Dashboard and Situation Reports
Singapore implements comprehensive contact tracing.
Government of Singapore

Singapore is the first country other than China in the Western Pacific Region (WPR) to implement comprehensive contact tracing.

Our World in Data

China closes schools.
Ministry of Education

China begins school closures.
EdSurge

WHO expects further spread.
“More cases should be expected in other parts of China and possibly other countries in the coming days,” says WHO spokesman Tarik Jasarevic.

Reuters

WHO WPRO Tweet

Clear evidence of h-to-h transmission according to WHO WPRO tweet
WHO WPRO
Published: 21 Jan 2020

“It is now very clear from the latest information that there is at least some human-to-human transmission of #nCoV2019. Infections among health care workers strengthen the evidence for this.”

WHO WPRO Tweet

China: Cases spread to 14 provinces
309 cases are reported in China, spread across 14 provinces/municipalities.

WHO Situation Report

Multiple medical staff in Wuhan infected
Wuhan Municipal Health Commission

Wuhan Municipal Health Commission reports 15 medical staff confirmed as cases of pneumonia caused by new coronavirus infection in Wuhan.

China Daily

Risk to UK very low
“Based on the available evidence, the current risk to the UK is very low,” says Dr. Nick Phin, deputy director of the National Infection Service (NIS). “We are... keeping the situation under constant review.”

Reuters

Cases

China Daily
### 22 Jan–23 Jan 2020

#### MEETING

WHO's IHR Emergency Committee starts first meeting

WHO's IHR Emergency Committee starts its first COVID-19-related meeting. On this day, WHO reports 314 cases, with 310 cases in 14 provinces and municipalities within China, and four confirmed cases in three countries outside China, all with direct connections to Wuhan.

**IHR Committee Statement, WHO Situation Report**

#### MEETING

WHO's IHR Emergency Committee ends meeting. No PHEIC declared

WHO

The IHR Emergency Committee does not recommend the outbreak a Public Health Emergency of International Concern (PHEIC), but urges countries to be prepared for additional spread. The Committee agrees to meet again within 10 days. By this day, cases have increased to 581, with 571 cases in 24 provinces and municipalities within China, and 10 cases in four countries outside China, all connected to Wuhan.

**IHR Committee Statement, WHO Situation Report**

#### CONTACT TRACING

- **Germany** implements comprehensive contact tracing
  - *Government of Germany*
  - Germany is the first country in the WHO European Region (EUR) to implement comprehensive contact tracing.
  - **Our World in Data**

- **Costa Rica** introduces comprehensive contact tracing
  - *Government of Costa Rica*
  - Contact tracing for all COVID-19 cases is introduced in Costa Rica, the first country in the WHO Region of the Americas (AMR) to do so.
  - **Our World in Data**

#### MASK USAGE

- **France** recommends mask wearing
  - *Government of France*
  - France recommends mask wearing, the first country in EUR to do so.
  - **Our World in Data**

#### NEWS REPORT

- **China** reports 15 samples from Huanan Seafood Market contain virus
  - Published: 22 Jan 2020
  - It is unclear whether the virus is shed by humans or animals. Chinese scientists publish the genetic sequence from some samples, but the information provides no clues to the virus’ origins.
  - **China CDC, NY Times**

#### CASES

- **China**: 18,700 estimated cases, R0 at 5.7
  - Published: July 2020
  - 18,700 estimated cases in China. Transmission dynamics of early Wuhan spread were possibly as high as R0 5.7, with a doubling time of 2.3–3.3 days.
  - **Emerging Infectious Diseases**

#### LOCKDOWN/STAY-AT-HOME MEASURES

- **First lockdown in Wuhan**
  - *Chinese Centre for Disease Control and Prevention*
  - Lockdown initiated in Wuhan.
  - **China CDC**
  - Cases per million
    - China: 0.45

#### CASES

- **Singapore**: First reported case
  - *WHO Statement*
  - First reported case in Singapore.
**BORDER MEASURES**

21 countries/areas have international screening in place

<table>
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<th>National governments</th>
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<td>Officials across the globe from Africa to South America begin containment measures.</td>
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**CONTACT TRACING**

Nepal introduces comprehensive contact tracing

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<thead>
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<th>Government of Nepal</th>
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<tr>
<td>Contact tracing for all cases of COVID-19 introduced in Nepal, the first country in SEAR to do so.</td>
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**PUBLICATION**

Molecular assays to diagnose COVID-19

| WHO HQ |
| Published: 24 Jan 2020 |
| WHO publishes an overview of assays that have applied to Foundation for Innovative New Diagnostics for participation in its assay assessment work. |

**ADVICE**

WHO recommends no restrictions on international traffic

| WHO |
| Published: 24 Jan 2020 |
| WHO updates advice for international traffic, recommending against restrictions, but supporting airport exit screening and suggesting possible entry screening. |

**MEETING**

Informal consultation on therapeutics

| WHO HQ |
| Published: 24 Jan 2020 |

**CASES**

Vast majority of early infections in China undetected

| Li R, Pei S, et al. |
| Published: 16 Mar 2020 |
| Researchers estimate that 86% of all infections were undetected prior to the lockdown of Wuhan on 23 Jan., leading to rapid spread. |

Travel restrictions in China significantly reduced spread

| Published: 13 Mar 2020 |
| Researchers estimate that travel restrictions enacted in China after 23 Jan. reduced the average daily rate of case exports by 81.3%. |

**SCIENCE**

Clinical characteristics, severity, and mortality published

| Jan 24, Key scientific articles published in the Lancet |
| Common symptoms: cough, fever, short breath, and myalgias. Approximately 17–42% developed acute respiratory distress syndrome, 23–32% admitted to intensive care units, and 11–15% died. Of the 41 first laboratory-confirmed patients 27/41(66%) were found to be exposed to Huanan Seafood Market. |

Family cluster suggests h-to-h transmission and asymptomatic infection

| The Lancet |
| Study describes a family cluster where h-to-h transmission and asymptomatic infection is documented. |

**DATA**

Because of the pandemic potential of 2019-nCoV, careful surveillance is essential to monitor its future host adaptation, viral evolution, infectivity, transmissibility, and pathogenicity.
First mask mandates in Guangdong, China

The Guangdong Provincial Headquarters Office for the Prevention and Control of Pneumonia Infected by the Novel Coronavirus

Mask wearing in public places made mandatory in Guangdong province.

Xinhuanet

Cases per million

China: 1.44

WHO grades outbreak as level three emergency

The SARS-CoV-2 outbreak is elevated to the highest level of emergency. WHO HQ takes over emergency management from the regional office.

WHO internal documents

WHO Dashboard and Situation Reports, NEJM, franceinfo

First reported cases in Viet Nam and France. The two Vietnamese cases involve a father who travelled to China, who met his son in Viet Nam.

WHO Dashboard and Situation Reports, NEJM, franceinfo

An 80 year old man disembarks the Diamond Princess in Hong Kong with a cough. On 1 Feb. he tests positive for COVID-19.

Government of Hong Kong, Journal of Travel Medicine

2,014 cases globally, of which 1,985 are from China. There are 29 cases in 10 other countries.

WHO Situation Report
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<th>Date</th>
<th>Action</th>
<th>Country</th>
<th>Evidence</th>
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<tbody>
<tr>
<td>27 Jan</td>
<td><strong>R&amp;D Blueprint: Open call to researchers</strong></td>
<td></td>
<td>Viet Nam implements border controls</td>
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<td></td>
<td>Evaluating cross-reactivity of nCoV with SARS to identify possible designs for experimental vaccines and therapeutics.</td>
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<td>Singapore expands border controls</td>
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<td><strong>Publication of trial designs for experimental therapeutics</strong></td>
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<td>WHO</td>
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<tr>
<td>28 Jan</td>
<td><strong>WHO DG meets President Xi</strong></td>
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<tr>
<td></td>
<td>WHO Director-General (DG): “We appreciate the seriousness with which China is taking this outbreak, especially the commitment from top leadership, and the transparency they have demonstrated, including sharing data and genetic sequence of the virus.”</td>
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<td></td>
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<td>Prime Minister</td>
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<td></td>
<td>Government announces plans to ban travel from China.</td>
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<tr>
<td></td>
<td>Government News Report, Think Global Health</td>
<td></td>
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<td></td>
<td>Travel ban from Hubei implemented, later expanded to include China.</td>
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<td></td>
<td>Straits Times</td>
<td></td>
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<tr>
<td></td>
<td>Cases per million Singapore: 1.20</td>
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</table>

**30 Jan-01 Feb 2020**

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<tr>
<th>Country</th>
<th>Evidence</th>
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<tbody>
<tr>
<td></td>
<td><strong>Dramatic reduction to 1.18 in China</strong></td>
</tr>
<tr>
<td></td>
<td>Hao X, Chen S, et al.</td>
</tr>
<tr>
<td></td>
<td>Published: 16 Jul 2020</td>
</tr>
<tr>
<td></td>
<td>Re estimated at 1.18 (1.11-1.25) in China for the period 23 Jan.-1 Feb.</td>
</tr>
<tr>
<td></td>
<td>Nature</td>
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</tbody>
</table>

**27 Jan–28 Jan 2020**

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</table>
### BORDER CONTROL MEASURES

**Georgia implements border controls**

- Government of Georgia
- Georgia implements travel ban from high-risk regions, the first in EUR to do so.

### CASES

**China reaches 6,000 cases, spread to 15 countries**

- 6,065 cases globally, of which 5,997 are from China. 68 cases reported outside China, in 15 countries.

**United Arab Emirates: First reported cases**

- Four cases reported in the United Arab Emirates in air travelers arriving from Wuhan.

### INTERIM GUIDANCE

**Interim guidance on the use of masks**

- Wearing a medical mask is one of the prevention measures to limit spread of certain respiratory diseases, including 2019-nCoV, during home care and in health care settings.

### SCIENCE

**Diagnostic reagent provided across China**

- Chinese CDC
- Published: 26 Mar 2020
- Diagnostic tests made widely available in all China’s provinces.

**Bat coronavirus likely ancestor of SARS-CoV-2**

- Paraskevdis D, Kostaki EG, et al.
- Published: 29 Jan 2020
- A bat coronavirus is found to share 96.3% of its genome with SARS-CoV-2.

### MEETING

**Third meeting of the STAG-IH**

- WHO STAG-IH
- STAG-IH discusses briefings on Strategic Response Plan, and R&D Update–Global Research and Innovation meeting.

**WHO DG updates on his visit to China**

- WHO DG
- “China’s efforts to contain the outbreak at the epicentre have been essential for preventing the further spread of the virus.”

**First meeting of PSCN**

- Pandemic Supply Chain Network
- The Pandemic Supply Chain Network (PSCN), created by WHO in collaboration with the World Economic Forum, holds its first meeting to develop a market capacity and risk assessment for personal protective equipment (PPE).

**Study of first 425 Wuhan cases published in NEJM**

- Li Q, Guan X, et al.
- Published: 29 Jan 2020
- Study of first 425 lab-confirmed cases in Wuhan demonstrates epidemiological characteristics of the disease. Confirms h-to-h transmission since mid-Dec.
- Supports 14 day quarantine period for those exposed.
**ALERT**

**WHO DG declares PHEIC**

On the advice of the second meeting of the IHR Emergency Committee, the WHO DG declares a Public Health Emergency of International Concern. By this day, cases have increased to 7,834, with 7,736 in China and 98 in 18 countries outside China.

**DG Statement**

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**INTERNATIONAL**

**SCIENCE**

*SARS-CoV-2 established as new to humans*

Lu R, Zhao X, et al.

Published: 30 Jan 2020

Genomic sequences of early patients with COVID-19 are found to be almost (99.98%), suggesting the virus is new to humans.

*The Lancet*

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**CASES**

**Italy: First reported cases**

First two cases reported in Italy, both with travel history to Wuhan.

*WHO Dashboard and Situation Reports*

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**REAL-TIME EVIDENCE**

**SCIENCE**

*Rt <1 in 30 provinces outside Hubei*


Published: 02 Apr 2020

Rt estimated to be below the epidemic threshold (<1) in 30 provinces outside Hubei after 30 Jan, suggesting containment measures rapidly lowered transmission.

*The Lancet*

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**NEWS REPORT**

Nature news summarises latest science on epidemic

Published: 30 Jan 2020

Article summarises key knowledge at the time: Documents possible asymptomatic transmission; R0 of 1.4–2.5; not as deadly as SARS; bat source likely; virus likely emerged Nov. 2019.

*Nature*

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**CASES**

**India: First reported case**

First case reported in India.

*WHO Situation Report*

---

**BORDER CONTROL MEASURES**

**Pakistan implements border controls**

Government of Pakistan

Pakistan introduces temporary ban on travel from high-risk regions, the first in the Eastern Mediterranean Region (EMR) to do so.

*Our World in Data*

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**30 Jan**

**31 Jan**
China surpasses 10,000 cases, spread to 23 countries

11,821 cases in China, 132 cases outside China, in 23 countries.

WHO Situation Report

Viet Nam declares national epidemic

Government of Viet Nam

Prime Minister

Viet Nam declares a national epidemic.

Hanoi Times

Cases per million

Viet Nam: 0.06

Saudi Arabia implements comprehensive contact tracing

Government of Saudi Arabia

Contact tracing for all cases of COVID-19 introduced in Saudi Arabia, the first in EMR to do so.

Our World in Data

WHO ships first PCR-based diagnostic tests

WHO

The first consignment of validated PCR-based diagnostic tests is shipped by WHO from Germany to countries and WHO Regional Offices.

WHO internal documents

Fiji implements border controls

Government of Fiji

Travel from China banned for all foreigners.

Fiji Sun

Cases per million

Fiji: 0.00

Scientists forecast global pandemic

Wu JT, Leung K, Leung G

Published: 31 Jan 2020

Researchers estimate 75,815 cases in Wuhan, forecast exponential growth in major Chinese cities and global spread, calling for preparedness plans.

The Lancet

NY Times publishes account of events before Wuhan lockdown

Published: 01 Feb 2020

The NY Times publishes an account of events leading up to the lockdown in Wuhan. This includes early suspicions of the possibility of h-to-h transmission. The article also outlines ways in which people felt Wuhan authorities underplayed the severity of the outbreak, and would have liked to see more transparency.

NY Times

First reported death outside China

The first death outside China is reported in the Philippines.

WHO Situation Report

WHO Representative to China holds video briefing

Published: 02 Apr 20

On the video briefing, WHO’s representative to China “praised the Chinese...response. Then he went a step further, calling on other countries not to step out of line with the WHO recommendations...”

Globe and Mail
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>02 Feb</td>
<td>The US implements border controls</td>
<td>US President</td>
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<tr>
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<td>Presidential proclamation issued suspending entry into the US of “aliens” who had been in China in the preceding 14 days.</td>
<td>Presidential Proclamation</td>
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<td>Cases per million: United States: 0.03</td>
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<tr>
<td>03 Feb</td>
<td>New Zealand bans Chinese travellers and boosts border screening</td>
<td>Government of New Zealand</td>
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<td></td>
<td>Restrictions put in place preventing “foreign nationals from or transiting through mainland China from entering New Zealand.”</td>
<td></td>
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<tr>
<td></td>
<td>The Guardian</td>
<td></td>
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<tr>
<td></td>
<td>WHO DG gives speech at WHO EB meeting</td>
<td>WHO DG</td>
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<td></td>
<td>WHO DG begins reporting on the COVID-19 PHEIC from paragraph 53 of his remarks. The DG also quotes President Xi Jinping, who during the DG’s visit to Beijing said: “We will take serious measures at the epicentre, at the source, in order to protect our people, and also to prevent the spread of the virus to other countries.”</td>
<td>WHO</td>
</tr>
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<td>Africa CDC establishes continent-wide task force</td>
<td>Africa CDC</td>
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<td></td>
<td>Africa CDC inaugurates Africa Task Force for Novel Coronavirus (AFCOR); as of yet no cases confirmed in Africa.</td>
<td>Africa CDC</td>
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<td>Diamond Princess anchors at Yokohama</td>
<td>Diamond Princess</td>
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<td></td>
<td>The Diamond Princess cruise ship, with 2,666 passengers and 1,045 crew members, quarantines off Yokohama port after a 14 day journey to Hong Kong, Viet Nam, and Taiwan.</td>
<td>Disaster Medicine and Public Health Preparedness</td>
</tr>
<tr>
<td></td>
<td>At the whole genome level, the RaTG13 bat coronavirus from Yunnan province is 96% concordant with the SARS-CoV-2 genome.</td>
<td>Nature</td>
</tr>
</tbody>
</table>

**Science**

Bat coronavirus is possible early progenitor

Zhou P, Yang X-L, et al. Published: 03 Feb 2020

At the whole genome level, the RaTG13 bat coronavirus from Yunnan province is 96% concordant with the SARS-CoV-2 genome.
### WHO holds technical briefing on COVID-19 at WHO EB meeting

**WHO DG**

The WHO DG underlines that "99% of the cases are in China and 97% of the deaths are in Hubei Province." Nonetheless, he says, "Now is the moment for all countries to be preparing themselves" and notes that WHO has begun distributing supplies to 24 countries. He also urges countries to share data, saying WHO has received complete case report forms for only 38% of 176 cases outside China, including from high-income countries. He asks countries not to impose restrictions that are "inconsistent with the International Health Regulations," noting that 22 countries already have done so.

**WHO**

### Strategic preparedness and response plan

**WHO HQ**

Published: 04 Feb 2020

WHO publishes COVID-19 strategic preparedness and response plan outlining public health measures for the international community. The 2019_nCoV Simulation Exercise to enhance national preparedness efforts is also made available online.

**WHO HQ**

### Fourth meeting of the STAG-IH

**WHO STAG-IH**

Published: 04 Feb 2020

STAG-IH experts review WHO response strategy and discuss 'strategy switch.'

**WHO STAG-IH**

### WHO DG begins daily media briefings

**WHO**

Published: 05 Feb 2020

WHO DG begins daily media briefings to provide updates on the COVID-19 pandemic, clarify public health measures, and encourage action.

**WHO**

### The Republic of Korea issues border measures

**Ministry of Health and Welfare**

Special entry procedures applied for all travelers from China.

**Ministry of Health News Release**

Cases per million
Republic of Korea: 0.31

### Sri Lanka implements comprehensive contact tracing

**Government of Sri Lanka**

Sri Lanka implements comprehensive contact tracing.

**Our World in Data**

Cases per million
Sri Lanka: 0.05

### Chinese ambassador: UK overreacted to coronavirus

**Reuters**

Britain's advice to its nationals to leave China because of outbreak in Hubei was an overreaction, the Chinese ambassador to London says. "We asked them to take the advice of the WHO to make a reasonable response. Do not overreact."

**Reuters**

### Border control measures

**BORDER CONTROL MEASURES**

**WHO**

Published: 06 Feb 2020

WHO calls for improved data sharing

**WHO**

Published: 04 Feb 2020

WHO DG urges all health ministers to improve data sharing on coronavirus immediately and says he will send a team of international experts to work with Chinese counterparts.

**Reuters**

### Fourth meeting of the STAG-IH

**WHO STAG-IH**

Published: 04 Feb 2020

STAG-IH experts review WHO response strategy and discuss 'strategy switch.'

**WHO STAG-IH**

### CONTACT TRACING

Sri Lanka implements comprehensive contact tracing.

**Government of Sri Lanka**

Sri Lanka implements comprehensive contact tracing.

**Our World in Data**

Cases per million
Sri Lanka: 0.05

### NEWS REPORT

**Chinese ambassador: UK overreacted to coronavirus**

**Reuters**

Britain’s advice to its nationals to leave China because of outbreak in Hubei was an overreaction, the Chinese ambassador to London says. “We asked them to take the advice of the WHO to make a reasonable response. Do not overreact.”

**Reuters**

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Sixth meeting of the STAG-IH
WHO STAG-IH
STAG-IH expert meeting discusses clinical aspects of nCoV.
WHO STAG-IH

First meeting of the UN Crisis Management Team
UN Crisis Management Team
WHO activates the United Nation (UN) Crisis Management Team, chaired by the Executive Director (ED) of the WHO Health Emergencies Program, to coordinate UN efforts to respond collectively to the 2019-nCoV outbreak.
WHO

WHO names disease as COVID-19
WHO
The name of the disease, short for Coronavirus Disease, was chosen to avoid inaccuracy and stigma and therefore does not refer to a geographical location, an animal, an individual, or group of people.
WHO

WHO convenes global research and innovation forum
WHO
300 experts meet in person in Geneva, with a further 150 joining online, to prioritise research needs and discuss funding.
WHO

COVID-19: What is next for public health?
WHO STAG-IH
A STAG-IH review shows strategy of containment for elimination is crucial and should continue until the end of February.
The Lancet
**RISK ASSESSMENT**

**Increased transmission beyond China**

ECDC
Published: 14 Feb 2020

The European Centre for Disease Prevention and Control assesses the risk associated with SARS-CoV-2 infection for the EU/EEA and UK population as currently low.

**CONTACT TRACING**

**Egypt implements comprehensive contact tracing**

Government of Egypt

Egypt implements comprehensive contact tracing.

Our World in Data

Cases per million
Egypt: 0.01

**CASES**

**Egypt: First case in Africa**

First case reported on the African continent, second reported case in the Eastern Mediterranean Region.

WHO Dashboard and Situation Reports

**ACTION**

**WHO provides general guidance on mass gatherings**

WHO
Published: 14 Feb 2020

WHO provides general guidance to organizers, encouraging risk assessments to be conducted throughout planning, operational, and post-event phases. No specific limits to the number of people are quoted.

WHO

**SPEECH**

**WHO DG speaks at Munich Security Conference**

WHO
Published: 15 Feb 2020

In his speech, the WHO DG notes “we’re encouraged that outside China, we have not yet seen widespread community transmission,” but says “we’re concerned about the potential havoc this virus could wreak in countries with weaker health systems.”

WHO

**ACTION**

**Second WHO-China mission starts**

WHO
Published: 28 Feb 2020

The goal of the mission is to rapidly inform planning and next steps in China and internationally, and improve preparedness in geographic areas not yet affected.

WHO

**CASES**

**China reaches 50,000 cases, spread to 25 countries**

50,054 cases in China, 526 cases outside China, in 25 countries.

WHO Situation Report

**NEWS REPORT**

**Leaked report: Fewer than half of new deaths in China reported**

Published: 01 Dec 2020

196 deaths recorded in Hubei, but publicly only 93 reported.

CNN
**MEETING**

**Seventh meeting of the STAG-IH**

**WHO STAG-IH**

STAG-IH experts discuss epidemiological situation and possible relapse in COVID-19 survivors.

**WHO STAG-IH**

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**DECLARATION OF EMERGENCY**

**The Republic of Korea: Health emergency declared**

**Prime Minister**

After declaring a health emergency in Daegu, the Prime Minister announces “we have entered an emergency phase.”

**Cases per million**

Republic of Korea: 2.03

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**REAL-TIME EVIDENCE**

**NEWS REPORT**

**WHO DG: The world must act fast to contain coronavirus**

WHO warns that the window of opportunity to contain wider international spread of the new coronavirus disease is closing, after cases are reported in Iran and Lebanon.

**Reuters**

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**CASES**

**First suspected case of asymptomatic transmission reported**

Bal Y, Yao L, et al.

Published: 21 Feb 2020

Researchers report a familial cluster of five cases, apparently transmitted from an asymptomatic family member with recent Wuhan travel. First report of suspected asymptomatic transmission.

**JAMA**

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**RISK ASSESSMENT**

**Modelling predicts at-risk African countries**


Published: 20 Feb 2020

Modelling evaluates vulnerability and preparedness of each African country to COVID-19; predicts Egypt, Algeria, and South Africa are at highest risk of spread.

**The Lancet**

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**COUNTRY**

**CASES**

**First case of local transmission in Italy**

Altieri C, Cento V, et al.

Published: 19 Jan 2021

First case of evident SARS-CoV-2 transmission in Italy emerged in Lombardy.

**Nature**

---

**RETROSPECTIVE EVIDENCE**

**FIRST CASES**

**China: Control measures avert hundreds of thousands of cases**


Published: 31 Mar 2020

Analysis of control measures during the first 50 days in China shows likely averted hundreds of thousands of cases by 19 Feb. (day 50).

**Science**

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**SCIENCE**

**SARS-CoV-2 detected on university doorhandle**

Lednicky J, Salemi M, et al.

Published: 13 Jan 2021

SARS-CoV-2 was detected in sample from Florida university door handle on 21 Feb, weeks before the first confirmed case in the state.

**PLOS ONE**
**Case 1: Areas of Italy introduce lockdown/stay-at-home measures**

Several municipalities in northern Italy orders lockdown, the first in WHO EUR to do so.

**Governments**
- Italy: 2.564 cases per million
- Oman: 0.392 cases per million

**Sources**
- The Guardian
- Our World in Data

---

**Case 2: Japan: Diamond Princess reaches 691 cases**

691 cases confirmed on board compared to 10 cases 10 Feb. The effectiveness and validity of infection control, justification for the timing of inspections, and nature of COVID-19 are all in question.

**Sources**
- Disaster Medicine and Public Health Preparedness

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**Case 3: China reaches 76,000 cases, spread to 28 countries**

76,392 cases in China, 1,402 cases outside China, in 28 countries.

**Sources**
- WHO Situation Report

---

**Case 4: Brazil: First case in Latin America**

First case reported in Latin America, in Brazil.

**Sources**
- WHO Situation Report
GUIDANCE
WHO provides guidance to countries on rational usage of PPE
WHO
Published: 27 Feb 2020
WHO notes "the current global stockpile of PPE is insufficient, particularly for medical masks and respirators...especially if the widespread, inappropriate use of PPE continues." WHO recommends using PPE appropriately, minimising PPE, and coordinating the PPE supply chain. No masks or PPE advised for asymptomatic individuals.

BORDER CONTROL MEASURES
Singapore implements border control
Government of Singapore
Singapore bars travel from Daegu and Cheongdo effective 26 Feb., with border closures later expanded.

ADVISE
Africa CDC calls for continent to act collectively
Nkengasong JN, Mankoula W
Published: 27 Feb 2020
Members of Africa CDC publish on the "looming threat" of SARS-CoV-2 in Africa and call for a unified, continent-wide preparedness plan.
The Lancet

CASES
Nigeria: First case in sub-Saharan Africa
First case reported in sub-Saharan Africa, in Nigeria.
WHO Dashboard and Situation Reports
### SCHOOL CLOSURES

**Japan closes schools**
- **Prime Minister**
- Closure of elementary, junior high, and senior high schools as well as "schools for special needs education."

### CONTACT TRACING

**Nigeria implements comprehensive contact tracing**
- **Government of Nigeria**
- Nigeria is the first country in the AFR to implement comprehensive contact tracing.

### CASES

**Spread in China slows down, global surge begins**
- **WHO Situation Report**
- 79,968 cases in China, 7,169 cases in 58 countries outside China.

### MASK USAGE

**Japan recommends mask wearing**
- **Government of Japan**
- Face coverings recommended by the government.
- **Cases per million**
  - Japan: 2.05

### SCIENCE

**Asymptomatic people can be potential sources**
- **Huang R, Xia J, et al.**
- Published: 28 Feb 2020
- Analysis of a family cluster of patients provides evidence that asymptomatic people can be potential sources of SARS-CoV-2 infection.

### GUIDANCE

**WHO publishes quarantine guidance**
- **WHO**
- Published: 29 Feb 2020
- WHO recommends “the global containment strategy includes the rapid identification of laboratory-confirmed cases, and their isolation and management in either a medical facility or at home.” For such contacts, WHO recommends that such persons be quarantined for 14 days.

### RETROSPECTIVE EVIDENCE

**Report from the second WHO-China mission released**
- **Aylward B, Liang W, et al.**
- Published: 28 Feb 2020
- The report from the 16–24 Feb. mission, co-written by China, outlines disease severity and transmission dynamics, as well as the control measures proving to be effective.

### COUNTRY

**Japan closes schools**
- **Prime Minister**
- Closure of elementary, junior high, and senior high schools as well as "schools for special needs education."

### INTERNATIONAL

**WHO publishes quarantine guidance**
- **WHO**
- Published: 29 Feb 2020
- WHO recommends “the global containment strategy includes the rapid identification of laboratory-confirmed cases, and their isolation and management in either a medical facility or at home.” For such contacts, WHO recommends that such persons be quarantined for 14 days.

**WHO recommends mask wearing**
- **Government of Japan**
- Face coverings recommended by the government.
- **Cases per million**
  - Japan: 2.05
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<tr>
<td>02 Mar, cont.</td>
<td>04 Mar</td>
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**REAL-TIME EVIDENCE**

- **COUNTRY**
  - **MASK USAGE**
    - Brazil recommends mask-wearing
      - Government of Brazil
    - Brazil recommends mask-wearing, the first in the Americas to do so.
      - Our World in Data
      - Cases per million
        - Brazil: 0.009
  - **CONTACT TRACING**
    - Argentina implements comprehensive contact tracing
      - Government of Argentina
    - Argentina is the first country in AMR to implement comprehensive contact tracing.
      - Our World in Data
      - Cases per million
        - Argentina: 0.02
  - **CASES**
    - South Africa: First reported case
      - First case reported in South Africa.
      - WHO Situation Report
  - **GUIDANCE**
    - Guidance for assessment, monitoring and movement restrictions in Africa
      - Africa CDC/African Union
  - **PUBLICATION**
    - Africa Joint Continental Strategy for COVID-19 Outbreak
      - Africa CDC/African Union
  - **INTERIM GUIDANCE**
    - Responding to community spread of COVID-19
      - WHO HQ
        - Guidance issued in ten areas, including: National coordination, risk communication, public health measures, case management, infection prevention, control, surveillance, laboratory systems, and R&D.
      - WHO HQ
  - **LOCKDOWN/STAY-AT-HOME MEASURES**
    - Singapore: First social distancing measures applied
      - Ministry of Health
      - "Circuit-breaker" partial-lockdown introduced with closures of schools, workplaces, non-essential services, venues, and attractions.
      - Ministry of Health News Highlight
    - Cases per million
      - Singapore: 23.59
      - Brazil: 0.009
      - Argentina: 0.02
Severity increases with age
Published: 10 Apr 2020
Data from 32,583 Wuhan cases identified between 8 Dec 2019 and 8 March 2020 showed that severity increased with age and that public health measures were effective in dropping the reproduction rate.

India issues mask guidance
Ministry of Health and Family Welfare
India issues guidance outlining where masks should be worn.

Italy imposes first national lockdown
Italy
Published: 10 Mar 2020
Expanding on previous local restrictions, Italy announces first nationwide lockdown in an effort to contain spread of COVID-19.

Who has been assessing this outbreak around the clock and we are deeply concerned both by the alarming levels of spread and severity, and by the alarming levels of inaction. We have therefore made the assessment that COVID-19 can be characterized as a pandemic.

WHO DG announces pandemic
WHO DG
WHO DG announces pandemic: “WHO has been assessing this outbreak around the clock and we are deeply concerned both by the alarming levels of spread and severity, and by the alarming levels of inaction. We have therefore made the assessment that COVID-19 can be characterized as a pandemic.”

ITAP calls for $8 billion and for G7 and G20 leadership
ITAP
The Global Preparedness and Monitoring Board (ITAP) calls for an immediate injection of USD 8 billion for the COVID-19 response, and for G7 and G20 leaders to meet.

GPMB
Published: 09 Mar 2020

The Global Preparedness and Monitoring Board (GPMB) calls for an immediate injection of USD 8 billion for the COVID-19 response, and for G7 and G20 leaders to meet.

GPMB

Four countries implement school closures
Pakistan, Peru, Sri Lanka, United States
Cases per million
Pakistan: 0.14
Peru: 0.33
Sri Lanka: 0.28
United States: 4.79

NY Times: “A Fumbled Global Response to the Virus in a Leadership Void”

“While world leaders are at last speaking out about the gravity of the pandemic, their voices are less a choir than a cacophony.”

GPMB calls for $8 billion and for G7 and G20 leadership
GPMB
Published: 09 Mar 2020

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Peru: 0.33
Sri Lanka: 0.28
United States: 4.79

Estimates of severity of COVID-19
Published 30 Mar 2020

Lancet Infectious Diseases
Three countries declare states of emergency

India, the United States, and Uruguay declare states of emergency or implement emergency legislation.

Cases per million
- India: 0.06
- United States: 6.70
- Uruguay: 1.15

Argentina expands emergency measures

Ministry of Health
Argentina passes the Decree of Necessity and Urgency, which allows adoption of new health emergency measures.

Government announcement
Cases per million
- Argentina: 0.42

Argentina suspends flights from high-risk areas

President
There is a 30-day suspension of flights from high-risk countries, including all of Europe, Iran, the US, the Republic of Korea, Japan, and China.

La Nacion
Cases per million
- Argentina: 0.42

Bhutan recommends mask wearing

Government of Bhutan
Bhutan recommends mask-wearing, the first country in SEAR to do so.

Our World in Data
Cases per million
- Bhutan: 1.296

UNICEF presents briefing on Monitoring and mitigating the secondary impacts of the COVID-19 epidemic on WASH services availability and access.

UNICEF

GUIDANCE

Human rights in the COVID-19 response

OHCHR
UN Human Rights Office of the High Commissioner publishes guidance on the importance of human rights in the response.

OHCHR

BORDER CONTROL MEASURES

Argentina suspends flights from high-risk areas

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UNICEF

108,689 estimated US infections

Perkins TA, Cavany SM, et al.
Published: 21 Aug 2020
Modelling study finds that fewer than 10% of cases were detected due to lack of testing; likely 108,689 infections in the US by 12 March.

PNAS

RETROSPECTIVE EVIDENCE

11 Mar, cont.

MEETING

Ninth meeting of the STAG-IH

WHO STAG-IH
Experts discuss pandemic announcement, epidemiology and laboratory diagnosis updates, R&D Blueprint global meeting update, and solidarity trial.

WHO STAG-IH

NEWS REPORT

Urgent need for health security funds

“COVID-19 response must be never again” – urgent need for funds for a co-ordinated effort to identify, trial, and make available potential treatments.

Financial Times

COUNTRY

INTERNATIONAL

REAL-TIME EVIDENCE

NEWS REPORT

Nature interviews experts: containment still possible

Wellcome Trust, US CDC, and WHO experts say COVID-19 containment still possible.

Nature News Explainer

PUBLICATION

Monitoring and mitigating the secondary impacts of COVID-19

UNICEF
UNICEF presents briefing on Monitoring and mitigating the secondary impacts of the COVID-19 epidemic on WASH services availability and access.

UNICEF

CASES

Iran: Second highest (8,042 cases) outside China

Iran has the second highest number of cases outside China with 8,041, surpassing the Republic of Korea.

WHO Situation Report

12 Mar

12 Mar

13 Mar
Uruguay requests people to stay at home
President asks people to stay in their homes to protect the population.

Spain begins lockdown
Prime Minister
Two-week lockdown announced ordering people to stay at home with some exceptions for essential services.

Two countries introduce lockdown/stay at home measures
Governments of Jamaica and Venezuela
Jamaica introduces 2 week quarantine in select communities. Venezuela introduces mandatory stay-at-home measures except for essential reasons, the first countries in AMR to do so.

Spain: State of alarm declared
Ministry of the Presidency
State of alarm declared for 15 days.

WHO, UN Foundation, and partners launch COVID-19 Solidarity Response Fund
WHO
Published: 13 Mar 2020
The Solidarity Response Fund is a new mechanism for WHO to receive resources from a broader funding base, including private individuals, and corporations.
**REAL-TIME EVIDENCE**

**Country**

- **Border Control Measures**
  - Three countries implement border restrictions
  - Various countries
  - India, Singapore, and Sri Lanka implement various levels of border closures and travel restrictions during this week.
  - India: 0.06
  - Singapore: 38.63
  - Sri Lanka: 2.38

- **Lockdown/Stay-at-Home Measures**
  - Five countries introduce lockdown/stay-at-home measures
  - Various countries
  - Liberia, Niger, Peru, the Republic of Korea, and the US impose various levels of lockdown or stay-at-home measures during this week.
  - Liberia: 0.59
  - Niger: 0.59
  - Peru: 2.61
  - Republic of Korea: 171.62
  - US: 9.70

**International**

- **Interim Guidance**
  - Mental Health Considerations
    - WHO HQ
    - WHO publishes a series of messages to be used in communications to support mental and psychosocial well-being in different target groups.

- **Action**
  - Launch of SOLIDARITY trial for treatments of COVID-19
    - WHO
    - Published: 18 Mar 2020
    - One of the largest international randomized trials for COVID-19 treatments starts, enrolling almost 12,000 patients in 500 hospital sites in over 30 countries.

**Science**

- **Lopinavir-Ritonavir does not help severe COVID-19**
  - Cao B, Wang Y et al.
  - Published: 07 May 2020
  - A randomized control trial of Lopinavir-Ritonavir in adults hospitalized with severe COVID-19 shows no benefit observed with this treatment beyond standard care.

- **Wuhan: Estimating the clinical severity of COVID-19**
  - Wu J, Leung K et al.
  - Published: 19 Mar 2020
  - Estimating clinical severity of COVID-19 from transmission dynamics in Wuhan to end Feb 2020 – with symptomatic case fatality rate 1.4%.

**Publication**

- **Readiness and response operations in refugee camps**
  - IFRC, IOM, UNHCR, WHO
  - Group publishes interim guidance on scaling-up COVID-19 outbreak in readiness and response operations in humanitarian situations, including camps and camp-like settings.

- **Mental health considerations**
  - WHO HQ
  - WHO publishes a series of messages to be used in communications to support mental and psychosocial well-being in different target groups.

- **Launch of SOLIDARITY trial for treatments of COVID-19**
  - WHO
  - Published: 18 Mar 2020
  - One of the largest international randomized trials for COVID-19 treatments starts, enrolling almost 12,000 patients in 500 hospital sites in over 30 countries.

**News Report**

- **Worldwide shortage of COVID-19 test agents**
  - Worldwide shortage of COVID-19 test agents plagues health systems – even as infections surpass 200,000.
  - New England Journal of Medicine

- **Worldwide shortage of COVID-19 test agents**
  - Worldwide shortage of COVID-19 test agents plagues health systems – even as infections surpass 200,000.
  - Health Policy Watch

- **Worldwide shortage of COVID-19 test agents**
  - Worldwide shortage of COVID-19 test agents plagues health systems – even as infections surpass 200,000.
  - Nature Medicine (Letter)
SCHOOL CLOSURES
Six countries implement school closures
Various countries
Egypt, Liberia, Nigeria, Sweden, Thailand, and Uruguay implement various levels and types of school closures during this week.

<table>
<thead>
<tr>
<th>Country</th>
<th>Cases per million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt</td>
<td>1.08</td>
</tr>
<tr>
<td>Liberia</td>
<td>0.59</td>
</tr>
<tr>
<td>Nigeria</td>
<td>0.04</td>
</tr>
<tr>
<td>Sweden</td>
<td>125.26</td>
</tr>
<tr>
<td>Thailand</td>
<td>3.04</td>
</tr>
<tr>
<td>Uruguay</td>
<td>2.30</td>
</tr>
</tbody>
</table>

LOCKDOWN/STAY-AT-HOME MEASURES
Lesotho introduces lockdown/stay-at-home measures
Government of Lesotho
Lesotho introduces measures mandating people to stay at home except for "extreme circumstances," the first in AFR to do so.

BORDER CONTROL MEASURES
Six countries implement border restrictions
Various countries
Egypt, Germany, New Zealand, Niger, the Republic of Korea, and Sweden implement various levels of border closures and travel restrictions.

<table>
<thead>
<tr>
<th>Country</th>
<th>Cases per million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt</td>
<td>2.15</td>
</tr>
<tr>
<td>Germany</td>
<td>182.85</td>
</tr>
<tr>
<td>New Zealand</td>
<td>5.81</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>167.06</td>
</tr>
<tr>
<td>Sweden</td>
<td>153.77</td>
</tr>
</tbody>
</table>

LOCKDOWN/STAY-AT-HOME MEASURES
Two countries introduce lockdown/stay-at-home measures
Various countries
Argentina and Fiji introduce various levels of lockdown or stay-at-home measures.

<table>
<thead>
<tr>
<th>Country</th>
<th>Cases per million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>2.15</td>
</tr>
<tr>
<td>Fiji</td>
<td>1.12</td>
</tr>
</tbody>
</table>

LOCKDOWN/STAY-AT-HOME MEASURES
Sri Lanka introduces lockdown/stay-at-home measures
Government of Sri Lanka
Lockdown-style curfew imposed for whole country, with recommendations that people stay in their homes. First country in the region to do so.

<table>
<thead>
<tr>
<th>Country</th>
<th>Cases per million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td>2.8</td>
</tr>
</tbody>
</table>

19 Mar
**Publications**

**A gender lens on COVID-19**

UNFPA


**School closures**

Four countries implement school closures

Various countries

Fiji, Niger, Uganda, and the UK implement various levels and types of school closures.

**Cases**

Europe becomes epicenter

Europe (104,591 cases) surpasses Western Pacific (93,349 cases) as epicenter.

**Cases**

Spain: Second highest outside China (19,980 cases)

Spain surpasses Iran to become the country with the second highest cases outside China, after Italy.

**Interim guidance**

Laboratory testing strategy recommendations

WHO

WHO publishes recommendations for laboratory testing strategy. It describes the strategic use of diagnostic tests in different scenarios and includes how to rationalize testing when testing capacity/reagents are lacking.

**Interim guidance**

Infection prevention in long-term care

WHO

WHO publishes interim guidance on infection prevention and control in long-term care facilities to prevent spread within and outside the facility.

**Border control measures**

Four countries implement border restrictions

Various countries

India, Spain, Uruguay, and Viet Nam implement various levels of border closures and travel restrictions.

**Border control measures**

Three countries implement border restrictions

Various countries

Mexico, Pakistan, and Uganda implement various levels of border closures and travel restrictions.

**Cases**

Iran: 916,000 cumulative cases estimated

Ghaffarzadeh N, Rahmandad H

Published: 06 Jul 2020

Simulation modelling estimates 916,000 cumulative cases in Iran by 20 March. 19,644 cases were reported by this date.

**Cases**

300,000 cases globally

292,142 cases globally, driven by Europe (151,293 cases) and Western Pacific (94,787 cases).

**Cases**

WHO and social media companies launch Health Alert messaging service

WHO

Published: 20 Mar 2020

WHO launches dedicated COVID-19 public health messaging services in Arabic, English, French, Hindi, Italian, Spanish, and Portuguese with WhatsApp and Facebook.

**Cases**

Spain becomes second highest outside China (19,980 cases)

Spain surpasses Iran to become the country with the second highest cases outside China, after Italy.
**UN begins fundraising drive**

UN launches a USD 2 billion coordinated global humanitarian response plan to fight COVID-19 in vulnerable countries.

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**Border control measures**

Four countries implement border restrictions

Various countries
Brazil, China, Nigeria, and Russia implement various levels of border closures and travel restrictions during this week.

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**School closures**

Five countries implement school closures

Various countries
Mexico, Mozambique, New Zealand, Russia, and the Republic of Korea implement various levels and types of school closures.

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**Lockdown/stay-at-home measures**

Two countries introduce lockdown/stay-at-home measures

Various countries
Pakistan and the UK introduce various levels of lockdown or stay-at-home measures.

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**Mask usage**

Namibia recommends mask wearing

Government of Namibia
Namibia recommends mask wearing, the first in AFR to do so.

**Modelling shows measures can control spread of COVID-19**

Using computational models of spread in Wuhan, control measures are found to halt the pandemic, but premature lifting will lead to an earlier second peak.

---

**Seroprevalence in Wuhan and outside approximately 3%**

Xu X, Sun J, et al. Published: 05 Jun 2020

Seroprevalence in Wuhan ranged from 3.2% and 3.8% during 9 March-10 April, and anywhere from 1.3% and 3.6% in two cities outside Wuhan but within Hubei.
**DECLARATION OF EMERGENCY**
Five countries declare states of emergency
- New Zealand, Niger, Pakistan, Thailand, United Kingdom

**LOCKDOWN/STAY-AT-HOME MEASURES**
Six countries introduce lockdown/stay-at-home measures
- Brazil, Germany, Niger, Russia, Thailand, Uganda introduce various levels of lockdown or stay-at-home measures during this week.

**SCHOOL CLOSURES**
US close all public schools
Subnational actors in the United States
All public school buildings in the US are closed by this date.

**BORDER CONTROL MEASURES**
Three countries implement border restrictions
- Fiji, Thailand, Uruguay

**PUBLICATION**
Origins of SARS-CoV-2
WHO HQ
All available evidence suggests SARS-CoV-2 has a natural animal origin and is not a manipulated or constructed virus. Most probable ecological reservoir is bats.

**INTERIM GUIDANCE**
Surveillance guidance using GISRS
WHO HQ
WHO publishes interim guidance on operational considerations for leveraging influenza surveillance systems such as the Global Influenza Surveillance and Response System to incorporate COVID-19 testing.

**REAL-TIME EVIDENCE**
- New Zealand: 106.59
- Niger: 3.73
- Pakistan: 8.49
- Thailand: 14.97
- United Kingdom: 262.84

**COUNTRY**
- Brazil: 10.57
- Germany: 296.87
- Niger: 0.41
- Russia: 8.66
- Thailand: 14.97
- Uganda: 0.20

**26 Mar**

**Cases per million**
- Fiji: 5.56
- Thailand: 14.97
- Uruguay: 68.51

**25 Mar, cont.**

**25 Mar, cont.**

**26 Mar**

**26 Mar**
**MEETING**
G20 leaders meet and issue statement
G20
Published: 26 Mar 2020
“We ask the WHO, in cooperation with relevant organizations, to assess gaps in pandemic preparedness and report to a joint meeting of Finance and Health Ministers in the coming months, with a view to establish a global initiative on pandemic preparedness and response.”

**INTERIM GUIDANCE**
Guiding principles for immunization activities
WHO HQ
WHO publishes guiding principles for immunization activities during the COVID-19 pandemic.

**INTERIM GUIDANCE**
Joint family-friendly workplace guidance
UNICEF, ILO, UN Women
UNICEF, the International Labour Organization (ILO), and UN Women publish recommendations for family-friendly policies and other good workplace practices in the context of COVID-19.

**SCIENCE**
Loss of smell and taste common with COVID-19
Published: 26 Mar 2020
A cross-sectional study of self-reported olfactory and taste disorders (OTDs) in patients with SARS-CoV-2, finds that loss of smell and taste is fairly frequent and may precede the onset of full-blown clinical disease.

**CASES**
Italy, US: Highest number of cases, surpassing China
Italy reaches 86,498 cases, and US reaches 85,228 cases, surpassing China (82,213 cases) for the first time.

**26 Mar, cont.**

**27 Mar**

**28 Mar**
**REAL-TIME EVIDENCE**

**CASES**

- **US has world’s highest number of cases**
  The US becomes the world’s epicenter, surpassing Italy, with 103,321 cases.
  *WHO Situation Report*

- **Americas become number two epicenter, 635,000 cases globally**
  634,813 cases globally driven by Europe (361,031 cases) and Region of Americas (120,792 cases). The Americas surpass Western Pacific.
  *WHO Situation Report*

**CASES**

- **UN warns of impact on students**
  As one of several announcements about the socio-economic impact of COVID-19, the UN warns that “now nearly 1.5 billion children - or 87% of Earth’s student population - whose schools have closed because of the novel coronavirus pandemic.”
  *Washington Post*

- **Estimates of COVID-19 fatality ratio published**
  Estimated overall infection fatality ratio for China is 0.66%, with an increasing profile with age.
  *The Lancet Infectious Diseases*

**SCIENCES**

- **European analysis of public health interventions**
  Non-pharmaceutical interventions are found to be effective to reduce transmission, but take two to three weeks to demonstrate impact.
  *Imperial College*

- **11-fold under-detection in New York State**
  Detected cases compared to seroprevalence were 8.9%, suggesting an 11-fold under-detection of cases in New York State. The number of infection-experienced adults were estimated to be 2,139,300.
  *Annals of Epidemiology*

**NEWS REPORT**

- **Americas become number two epicenter, 635,000 cases globally**

- **UN warns of impact on students**

- **Estimates of COVID-19 fatality ratio published**

- **European analysis of public health interventions**

29 Mar

30 Mar
CASES

**COVID-19 sweeps the globe**

WHO reports 750,890 COVID-19 cases globally, including 57,610 in the previous 24 hours, along with 36,405 deaths. The US reports the highest number of cases with 140,640. Italy reports the highest number of deaths with 11,591.

*WHO Situation Report*

31 Mar

RETROSPECTIVE EVIDENCE

**Lockdown led to rapid reduction of transmission in New Zealand**

Geoghegan JL, Ren X, et al.
Published: 11 Dec 2020

Genomic epidemiology reveals rapid reduction of transmission within one week of lockdown in New Zealand. Re decreased from 7 to 0.2.

*Nature Communications*