

Situation Report

Majority of Public Health Risk Still Limited to Wuhan as Human-to-Human Transmission of New Coronavirus Confirmed (Updated 1/23)

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Overview

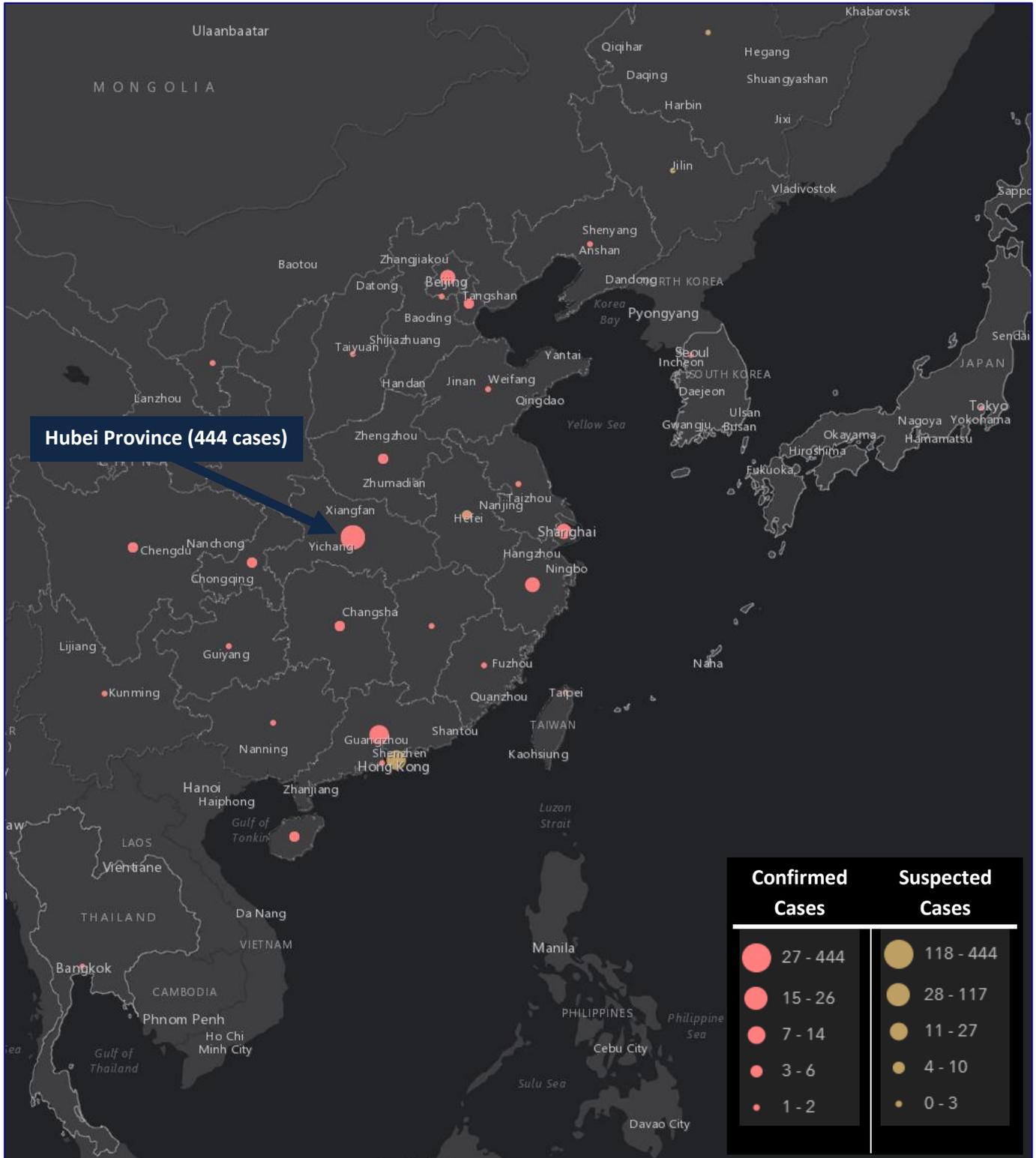
In late December 2019, health workers in the city of Wuhan, located in China's Hubei Province, notified authorities about a cluster of pneumonia cases with unknown causes. The cases were initially linked to a single fresh seafood market in the city and were quickly determined to have been caused by a new strain of coronavirus, a group of viruses that includes severe acute respiratory syndrome (SARS), Middle East Respiratory Syndrome (MERS), and other strains that only cause minor symptoms. The Wuhan virus, with a case fatality rate of around 2.5 percent, appears to be less deadly than SARS or MERS, which have case fatality rates of ten percent and 35 percent, respectively.

Additional cases have since been reported in multiple locations across mainland China, as well as Thailand, Hong Kong, Macau, Japan, South Korea, Taiwan, and the U.S., with over 560 confirmed cases and 17 deaths recorded as of Wednesday evening, January 22. Some health experts have also warned that the actual number of cases could be significantly higher, with around 4,000 being estimated given the number of cases reported outside of China. In response to the outbreak, authorities in a number of countries have stepped up screening procedures at exit and entry points. Authorities initially deemed the risk of transmission to be low, but the high number of cases suggest that the risk of human-to-human transmission is higher than what was originally thought. While the World Health Organization (WHO) decided against issuing a Public Health Emergency of International Concern (PHEIC) on Wednesday, they said that they would convene again in the coming days and such a declaration could be issued in the near future.



**Wuhan,
Hubei Province**
January 23, 2020

Distribution of Reported Cases as of Wednesday, January 22



Source: [John Hopkins Center for Systems Science and Engineering \(CSSE\)](#)

List of Reported Cases as of Wednesday, January 22

Country	Province/State/City	Confirmed
China	Hubei	444
China	Guangdong	26
China	Beijing	14
China	Zhejiang	10
China	Shanghai	9
China	Chongqing	6
China	Guangxi	5
China	Henan	5
China	Sichuan	5
China	Hainan	4
China	Hunan	4
China	Tianjin	4
China	Hong Kong	2
China	Jiangxi	2
China	Liaoning	2

Country	Province/State/City	Confirmed
China	Shandong	2
China	Anhui	1
China	Fujian	1
China	Guizhou	1
China	Hebei	1
China	Heilongjiang	1
China	Jiangsu	1
China	Macau	1
China	Ningxia	1
China	Shanxi	1
China	Yunnan	1
Thailand		4
USA		1
Japan		1
Taiwan		1
South Korea		1

There are also concerns regarding the potential for greater transmission during the upcoming Chinese Lunar New Year holiday, when many residents travel home to visit family members. Lunar New Year celebrations have been canceled in Wuhan and many other major cities. Due to the outbreak, the Chinese government has taken the severe step of temporarily shutting down departures from Wuhan’s main international airport and suspending all public transportation services across the city. The UK Foreign and Commonwealth Office (FCO) and the U.S. Centers for Disease Control and Prevention (CDC) have advised against all unnecessary travel to Wuhan due to the outbreak. Given the current restrictions on public transportation, flight operations, and regular travel into and out of the city, along with the ongoing outbreak, travelers should avoid Wuhan until the situation has stabilized. There is a relatively higher risk of the virus spreading to other cities in China compared to other countries, and all travelers to China should take precautions.

Presently, the risk of transmission outside of China remains low, given that all infected individuals in other countries are believed to have contracted the virus in Wuhan. However, customers with interests in any of the affected countries are advised to closely monitor developments and take steps to minimize potential exposure. This includes washing hands frequently, refraining from touching your eyes, nose, and mouth, and avoiding contact with people exhibiting symptoms of the disease, as well as dead and live animals and animal markets. Common symptoms of the new coronavirus include fever, difficulty breathing, cough, shortness of breath, pneumonia, or other respiratory ailments. Customers traveling to or returning from China should be prepared for enhanced health screening measures at airports, ports, and other points of entry and resultant delays.

Coronavirus Outbreak in China

On December 31, 2019, health workers in Wuhan, located in Hubei Province, notified the WHO China Country Office of 27 cases of pneumonia with unknown causes. Most of those infected are believed to have visited or worked at the Huanan Seafood Wholesale Market, which sold seafood and other live animals, including birds, pheasants, and snakes. The market has since been closed as a precaution. On January 7, 2020, Chinese authorities identified the cause of the virus as a new strain of coronavirus labelled 2019-nCoV. Since the outbreak began, over 550 confirmed cases of the new coronavirus have been recorded across China as of Wednesday, January 22. A majority of confirmed cases have occurred in Hubei Province (444), followed by Guangdong (26), Beijing (14), Shanghai (9), Chongqing (6), and a number of other cities and provinces. All 17 deaths associated with the new coronavirus have taken place in Hubei Province. The majority of deaths have been among elderly individuals, many of whom had pre-existing health conditions, including chronic diseases. Most of those infected have been male and over the age of 40. Moreover, around 15 healthcare workers have been infected with the virus in Wuhan. It remains unclear if all of those infected outside of Wuhan had recently traveled to the city.

Direct Impacts to Wuhan and Other Areas in Hubei Province

In response to the outbreak, government officials have announced major travel restrictions for the city. The restrictions went into effect from 10:00 AM local time on Thursday, January 23. These include the suspension of all departing flights from Wuhan Tianhe International Airport (WUH), along with public transportation services like trains, buses, subways, and ferries. Some other provinces, such as Jiangsu, have stopped all bus travel to Wuhan and are inspecting passengers from Wuhan at airports and train stations. Though travel in private vehicles has yet to be specifically banned, residents have been advised that they may only leave the city under “special conditions.” There have not been any specific details regarding what measures authorities would take to prevent people from leaving the city, or what conditions would be considered appropriate. There were no initial reports regarding when the restrictions would be lifted. Travelers remaining in Wuhan are advised to contact their country’s embassy for further direction and follow all instructions from local authorities. The local government has also mandated that everyone in the city wear masks in public places, along with all workers at public institutions. Wuhan has also canceled major Lunar New Year celebrations and artistic and theater productions, while also moving other scheduled events outside of the city, such as the Women's Olympics football qualifiers. There have also been reports that hospitals in the city are becoming crowded and there has been a general decrease in the availability of healthcare services due to the high number of people being tested or treated for the virus. Areas surrounding Wuhan, such as Huanggang, Xianning, and Ezhou have also implemented lockdowns and restrictions on public transportation. It is possible that other cities in China could enact similar lockdowns in the future.

Confirmed Cases Outside of Mainland China (as of 1/22)

Thailand

Four confirmed cases of 2019-nCoV have been recorded in Thailand since early January. Three of the cases were Chinese nationals, one was a Thai citizen, and all had recently traveled to Wuhan. The first and second infected individuals arrived in the country on January 8 and January 13 and have since recovered and returned home. The third and fourth individuals are being treated at medical facilities outside Bangkok. Thai officials have said that there have not been any reports of human-to-human transmission within Thailand. Passengers from Wuhan are being screened at multiple airports and officials have said that over 19,000 passengers have been cleared.

Japan

Japan's Ministry of Health, Labour, and Welfare reported one confirmed case of 2019-nCoV on January 15, 2020. The case involved a male who had traveled to Wuhan in late December and developed a fever. He returned to Japan on January 6 and visited a local hospital on January 10, when he was admitted and later tested positive for the virus. He was discharged from the hospital on January 15 and is in stable condition. The patient did not report visiting any live animal markets in Wuhan but stated that he had close contact with a person with pneumonia.

South Korea

One confirmed case of 2019-nCoV has been recorded in South Korea. The patient is a 35-year-old Chinese national who traveled from Wuhan to Incheon International Airport (ICN) in Seoul on January 20. Upon arrival, the woman was found to have a fever and was transferred to the hospital, where she later tested positive for 2019-nCoV. It remains unclear how she contracted the virus, as she did not report visiting any markets or having contact with confirmed cases or wild animals.

Taiwan

Taiwan recorded its first confirmed case on Tuesday, January 21, after a woman traveling from Wuhan reported symptoms of the virus at Taoyuan International Airport (TPE). The woman has since been placed in isolation.

Hong Kong

Hong Kong confirmed its first two cases of the 2019-nCoV on Wednesday, January 22. The first infected individual was a tourist from Wuhan who arrived in Hong Kong through the high-speed railway in West Kowloon on Tuesday. The other case involves a man who had visited Wuhan recently. Both are being treated at the Princess Margaret Hospital in Kwai Chung.

Macau

Macau confirmed its first case of the 2019-nCoV on Wednesday, January 22. The infected individual is from Wuhan and was hospitalized on Tuesday. She is being kept in isolation along with two of her friends. She traveled to Macau by way of a high-speed train to Zhuhai on January 19 and then took a shuttle bus. She had reportedly visited casinos in Macau before being hospitalized. At the time of her entry into Macau, she was not showing symptoms of the virus.

United States

The U.S. announced its first confirmed 2019-nCoV case on January 21. The individual had been traveling in Wuhan since November and returned to the U.S. through Seattle-Tacoma International Airport (SEA) on January 15. He was hospitalized from January 19 with pneumonia symptoms and tested positive for the coronavirus a day later.

Other

Singapore recorded three suspected cases on Wednesday, all of whom have been quarantined. A number of other previously suspected cases tested negative for the virus. Vietnam has also quarantined two Chinese tourists from Wuhan; however, no confirmed cases have been recorded so far. In the Philippines, a five-year-old child from Wuhan was hospitalized after experiencing symptoms of the flu, although he has recovered and it remains unclear if he had the new coronavirus. The family of an infected man flew to Manila, but none of them have reported any symptoms, although Cebu Pacific has advised all passengers on the January 22 Flight 5J 111 plane to be on the lookout for any flu-like symptoms. All passengers were screened upon arrival and none were held for additional observation.

Reasons for Sudden Increase in Cases

For the first few weeks when the outbreak was reported, up to around January 17, around 45 cases of the new coronavirus were confirmed. This number spiked over the weekend and has significantly increased since then. This may be due to a number of factors, including procedures implemented in China after the 2002-2003 SARS outbreak and delay of diagnostic kits. In order to avoid false positives, the post-SARS procedures require samples to be confirmed multiple times in separate laboratories and then be reviewed by a panel of clinical experts. In addition, diagnostic kits developed from the gene sequence of the virus were not distributed to local hospitals in significant numbers until this past weekend. Given these reasons, the 12-fold increase in cases from Friday to Wednesday should not be used to suggest exponential growth of infections over the past few days, but rather better identification and awareness of the illness. There have been concerns that the official number of cases are possibly being downplayed by the Chinese government, although President Xi Jinping has called for all-out efforts

to curb the spread of the virus and the Central Political and Legal Affairs Commission has warned that there would be severe repercussions for anyone withholding reports. During a press conference on Wednesday, the WHO praised the level of information being shared by Chinese health authorities. However, the overall lack of transparency in China's medical, political, and media sectors are persistent issues that could be impacting the credibility of the currently-released numbers.

Screening Measures and Other Responses

Authorities in Wuhan have implemented a number of measures in response to the outbreak. This includes installing thermal screening checkpoints in public areas and at exit points around the city, including Wuhan Tianhe International Airport (WHU), train, and bus stations. Anyone displaying symptoms of fever will reportedly be quarantined. Traffic police in the city have also been instructed to inspect private vehicles for live poultry and other wild animals, and the entry of tour groups into the city has been restricted. Several Chinese travel firms, including Trip.com, Fliggy, Meituan Dianping, and Qunar.com, have offered free cancellations for trips to Wuhan.

Outside of China, a number of countries have introduced screening measures at airports and other points of entry, particularly for travelers from Wuhan, but other cities as well. These measures include questionnaires and mandatory thermal scans. The U.S. Centers for Disease Control and Prevention (CDC) has also introduced these measures at San Francisco International Airport (SFO) and Los Angeles International Airport (LAX) in California, John F. Kennedy International Airport (JFK) in New York, Hartsfield-Jackson International Airport (ATL) in Georgia, and O'Hare International Airport (ORD) in Illinois. These locations were chosen due to the high volume of travelers from Wuhan. Additionally, the CDC has issued a Warning – Level 3 Travel Notice for Wuhan, advising travelers to avoid nonessential travel: <https://wwwnc.cdc.gov/travel/notices/warning/novel-coronavirus-wuhan-china>.

Advice from the CDC and WHO

The advice from the [CDC](#) and [WHO](#) are nearly identical in regard to how to best avoid contracting the virus. There are no vaccines currently available to treat the new coronavirus. These recommendations include:

- Avoid contact with sick people who are exhibiting symptoms of the disease, such as fever, difficulty breathing, cough, or shortness of breath.
- Frequently wash hands with soap and water for at least 20 seconds or use alcohol-based hand sanitizer if soap and water are unavailable.
- Avoid contact with live or dead animals, along with products like uncooked animal meat.
- Avoid all travel to markets where live animals are being sold.

Background

Coronaviruses refer to a large family of viruses that commonly affect animals. Some of these viruses can also be transmitted from animals to humans and can cause symptoms similar to the common cold and other respiratory illnesses, such as runny nose, cough, sore throat, fever, and headache. Prior to this new strain, there were six strains of coronavirus that were known to infect humans, including Middle East Respiratory Syndrome (MERS) and severe acute respiratory syndrome (SARS). In addition to being transmitted from animals, many of the human coronavirus strains can also be transmitted from human to human through coughing, sneezing, close personal contact, including shaking hands, contact with an infected surface, and fecal contamination. China has experienced several previous outbreaks of SARS, including a 2002-2003 outbreak that killed nearly 650 people in mainland China and Hong Kong. Approximately 8,100 people were infected by the outbreak worldwide and 774 people died.

Assessment

With the confirmation that the Wuhan coronavirus is spreading from person to person, the public health risk is significantly higher than it was last week. At the moment, this risk is largely limited to Wuhan itself and Hubei Province more generally. However, over a dozen cases have been reported in other large cities and provinces like Beijing and Guangdong, and the number is likely to rise across the country in the coming weeks. Adding to the risk of the virus spreading is the upcoming Lunar New Year holiday, which is set to begin on Friday, January 24, and involves millions of people traveling across the country and spending extended time with family and friends in relatively close quarters, which are ideal conditions for the virus to spread. This could expose new areas to the virus, including less urbanized regions where healthcare facilities are not as advanced, which could hamper the detection of the virus. If sustained local transmission is reported in Chinese cities outside of Wuhan, travelers should take enhanced precautions if traveling to any of those cities.

It remains unclear how easily the virus is spread from person to person, which is one of the factors that has stopped the WHO from issuing a Public Health Emergency of International Concern (PHEIC) as of January 23. If the number of cases continues to grow, if there is sustained local transmission of the virus outside of Wuhan, or if the virus is determined to spread more easily between humans than what is currently believed, it is likely that an emergency will be declared, which could lead to advice about limiting travel and trade to some areas.

The number of cases in multiple countries outside of China suggests that infections within China are higher than what has been currently confirmed. While many countries and cities across the globe have implemented enhanced screening measures to guard against the outbreak, this is not a guaranteed method of stopping the disease, highlighted by the fact that the infected woman in Macau was not

showing any symptoms of the virus at the time of entry. This is likely due to the estimated incubation time of the virus being between ten and 14 days. However, imported cases, where the infected individual had traveled through Wuhan, do not represent a significant public health risk in the country or city where it is later confirmed. A spike of locally-acquired cases, where the infected individual had no recent travel to Wuhan, would be considered more serious, as it would indicate that the virus is spreading within the local population. One mitigating factor would be if the locally-infected person was known to be in close contact with someone from Wuhan and all individuals are able to be quarantined.

Travelers are advised to avoid unnecessary travel to Wuhan at this time, as there are likely a number of infected individuals who have not been identified or quarantined. In addition, the restrictions imposed on ground, air, and sea transportation will make it more difficult to travel to, within, and from the city. Those with supply chains or other business operations in Wuhan or other cities that have reported lockdowns should expect significant disruptions until the restrictions are lifted and the outbreak has eased.

Although the risk of sustained transmission outside of China remains low at this time, customers with interests in China or any of the affected countries are advised to take steps to minimize potential exposure. This includes washing hands frequently, refraining from touching your eyes, nose, and mouth, as well as avoiding contact with people exhibiting symptoms of the disease, dead and live animals, and markets where live animals are being sold. Travelers should also be prepared for enhanced health screening measures at airports, ports, and other points of entry and resultant delays. While there have been no initial reports of travel restrictions, customers are urged to monitor developments, as the risk is likely to rise as the number of cases increases.

About the Author

Mathew Mikuni is the Regional Analyst for Asia/Pacific. Mathew earned his BA with a double major in Diplomacy and World Affairs and Asian Studies from Occidental College. He spent three years living in Japan and assisted NC4 with on-the-ground reporting as a foreign correspondent. Mathew also has comprehensive experience as a real-time international, domestic, and support analyst.