

# Covid-19 Testing Practice in Taiwan

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CASBS tech group, 2020/04/07

Taiwan is only 81 miles away from China

- Taiwan has >23 million people in an island of 32,260 km<sup>2</sup>  
Compared to California: 39.5 million, 423,970 km<sup>2</sup>
- Taiwan was considered one of the most at-risk countries outside of China (Gardner et al., 2020) due to its close distance and stronger economic/transport links with China.



## COVID-19 in Taiwan

- 376 confirmed cases and 5 deaths as of 2020/04/07 (since the first case reported on 2020/01/21)
- Incidence rate < 1 per 100,000
- Only a few cases have unknown sources
- Schools and businesses remain open



Photo: 王飛華, 2020/04/06

# COVID-19 testing



- Bill Gates: “There are countries like Taiwan, who are exemplary, solved the problem and **really got the community wide testing done very well**. They prioritized who got tested, so they won’t even have the disease or the economic effect that other countries would have.”

## Limited COVID-19 testing in Taiwan



- Vice president Chen Chien-Jen (an epidemiologist):  
“Large volumes of tests are only needed when sources of infection cannot be traced.”



Swab test is performed at Taiwan Taoyuan International Airport



- The commander of Taiwan's CDC, Chen Shih-Chung (a dentist) turned down the request of more testing because “it could increase the number of false negative cases.” And this might create a quarantine loophole (e.g., those with false negative tests could move around without taking precautions and infect others)

The lower the positive test rate, the broader the coverage of tests of potentially infected people

Data for 13 countries that have conducted more than 15,000 tests

**Comparison of COVID-19 positive test rate, incidence rate, and fatality rate by country**

Country	Positive test rate (per 1,000 people tested)	Incidence rate (per 100,000 people)	Fatality rate (per every 100 people infected)	Total number of people tested	Data as of
United Arab Emirates	0.8	1.20	0.00	125,000	3/16
Russia	1.2	0.14	0.50	122,854	3/18
Taiwan	5.0	0.45	0.93	20,014	3/18
Australia	6.9	2.88	0.85	83,138	3/18
Canada	12.2	2.32	1.38	34,750	3/16
South Korea	27.9	16.64	1.10	307,024	3/18
U.K.	38.7	3.95	5.48	50,442	3/17
Norway	49.9	33.17	0.39	28,522	3/18
Japan	56.5	0.76	3.43	15,354	3/18
Belgium	80.9	15.53	1.17	18,360	3/18
U.S.	101.1	4.16	1.47	76,495	3/18
France	167.4	16.54	3.41	36,747	3/15
Italy	202.8	68.41	8.30	137,962	3/16

Wikipedia, COVID-19 testing@2020-3-19

## Who gets tested in Taiwan?

- Two high-risk groups:
  - 1) people with pneumonia or who have a fever and respiratory symptoms after returning from countries on the highest risk travel warning list.
  - 2) People have contact with those from foreign countries who had respiratory symptoms and a fever.

## Suggestions for other countries

- In countries where the incidence is high and the vast majority of cases cannot be traced back to the source of infection, it is necessary to take COVID-19 testing more comprehensively.
- However, people with negative test results must be informed about the possibility of false negative.
- Social distancing and other precautions (e.g., face mask) are necessary.



■ 1910 pandemic: Seattle Policemen



Zass17 California



## Taiwan's president: Tsai Ing-Wen

Today I announced three major areas where [#Taiwan](#) will contribute to the global fight against [#COVID19](#):

- 1: Donating 10 million face masks to countries in need.
- 2: Increasing production of quinine.
- 3: Sharing our use of technology to trace & investigate outbreaks.

