

INTERNATIONAL SOS CORONAVIRUS EXECUTIVE SUMMARY 18 MARCH 2020; 12.00 HRS GMT

Authors

- Dr Doug Quarry
- Professor John Oxford

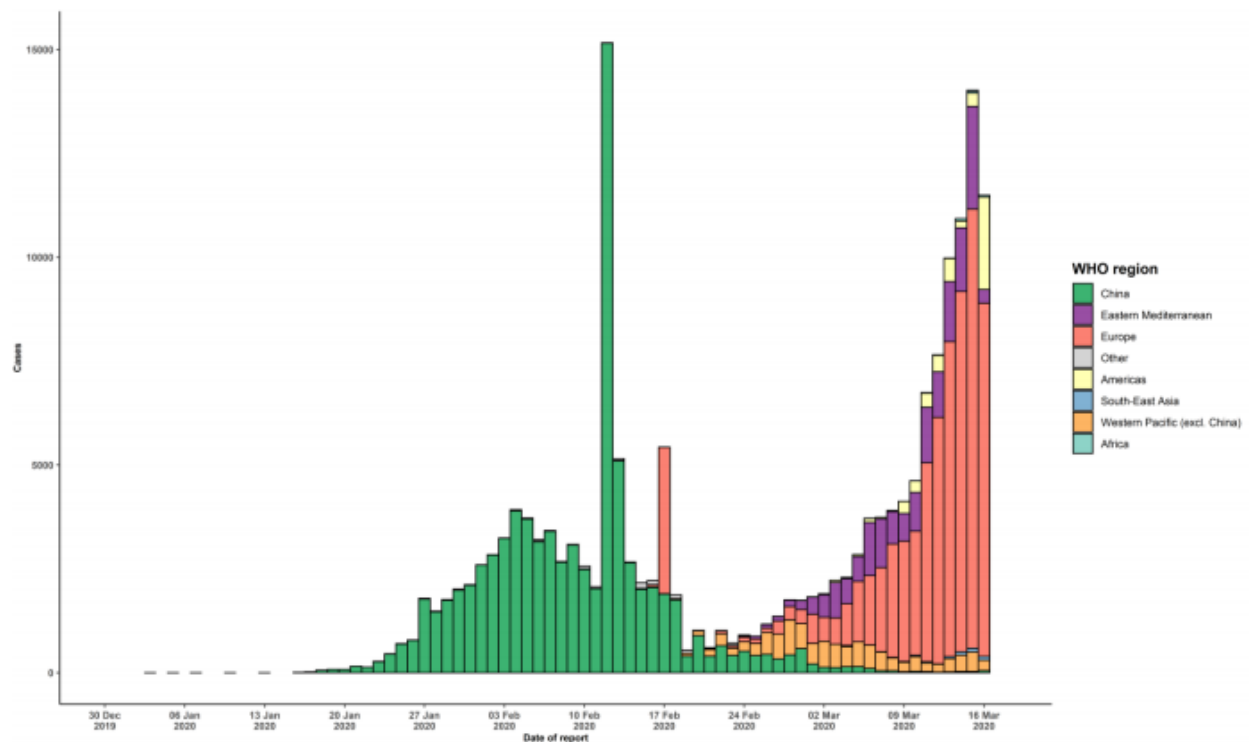
International SOS now publishes a COVID-2019 Daily Case Summary.

The Executive Summary will be produced weekly and will contain in-depth analysis.

INTRODUCTION

This week has seen an explosion of cases, particularly in Europe.

Chart: Epidemic curve of confirmed COVID-19, by date of report and WHO region to 17 March, 2020



Rather than discuss the vexed topic of herd immunity, we have decided to explore the range of possible Public Health interventions available to slow / stop an epidemic of a respiratory virus. We detail which were used in three Asian countries that seem to have “controlled” their COVID-19 epidemics.

COUNTRY COVID-19 STATUS WITH INTERNATIONAL SOS MEDICAL RISK RATINGS

International SOS maintains Medical Risk Ratings for all countries. Factors considered include: standard of medical care, strength of public health system, level of health threats, water potability, and difficulty of international evacuation.

In general, we would expect countries with HIGHER Medical Risk Ratings to be more vulnerable to epidemics.

Note: 12 of 14 countries in "Outbreak" status have a LOW Medical Risk Rating.

Table updated: 18 March 2020

OUTBREAK				
Mainland China	Iran	Belgium	France	Germany
Italy	Japan	Netherlands	Norway	South Korea
Spain	Switzerland	United Kingdom	United States	

LOCAL TRANSMISSION				
Afghanistan	Venezuela	Algeria	Argentina	Bangladesh
Cambodia	Cameroon	India	Indonesia	Kazakhstan
Nigeria	Palestine	Rwanda	Sri Lanka	Vietnam
Argentina	Bosnia and Herzegovina	Brazil	Bulgaria	Costa Rica
Ecuador	Egypt	Guam	Kuwait	Lebanon
Malaysia	Maldives	Mexico	Moldova	Morocco
Philippines	Puerto Rico	Romania	Saudi Arabia	Slovakia
Thailand	Tunisia	Ukraine	Australia	Austria
Canada	Chile	Czech Republic	Denmark	Finland
Greece	Hong Kong	Iceland	Ireland	Israel
Macao	Malta	New Zealand	Poland	Portugal
Singapore	Slovenia	South Africa	Sweden	Taiwan
Turkey	UAE			

IMPORTED ONLY				
Burkina Faso	Guinea	Iraq	Liberia	Somalia
Armenia	Azerbaijan	Benin	Bhutan	Bolivia
Congo	DRC	Ivory Coast	Equatorial Guinea	Eswatini
Ethiopia	Gabon	Georgia	Ghana	Guyana
Kenya	Mauritania	Mongolia	Nepal	Pakistan
St. Lucia	St Martin	St. Vincent & the Grenadines	Sudan	Suriname
Tanzania	Togo	US Virgin Islands	Uzbekistan	Andorra
Bahrain	Belarus	Estonia	Gibraltar	Guadeloupe

Hungary	Lichenstein	Luxembourg	Mayotte	Namibia
Macedona	Oman	Panama	Paraguay	Peru
Russa	Senegal	Serbia	Seychelles	Somalia
Trinidad & Tobago	Andora	Estonia	Gibraltar	Guadeloupe
Hungary	Lichenstein	Luxembourg	Martinique	Monaco
Qatar	San Marino	Uruguay	Vatican	

LEGEND AND DEFINITIONS OF MEDICAL RISK RATINGS

EXTREME MEDICAL RISK	HIGH MEDICAL RISK	MEDIUM MEDICAL RISK	LOW MEDICAL RISK
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LEGEND FOR TRANSMISSION STATUS

- **Imported cases only:** all cases have been imported from other countries / territories.
- **Locally-acquired cases:** cases have been acquired in the country. Some cases may have no known links to confirmed cases.
- **Outbreak:** Countries in this category may have any or all of the following characteristics.
 - › > 1000 cases
 - › Locally-acquired cases in many areas
 - › Many exported cases

The following countries and territories have cases of COVID-19.

Members should consult the alerts on the [Members Website](#), Premium Services Members can also access the location pages through the links below.

STATEMENT FROM DR. TEDROS ADHANOU GHEBREYESUS WHEN DECLARING COVID-19 A PANDEMIC ON 11 MARCH, 2020

*"We are deeply concerned by alarming levels of severity and **by the alarming levels of inaction...***

"We have rung the alarm bell loud and clear..."

"Find, isolate, test and treat every case, and trace every contact..."

"Ready your hospitals. Protect and train your health care workers..."

"We also believe that this is the first pandemic that is able to be controlled..."

Dr. Tedros pointed out the success in China, South Korea and Singapore in controlling their outbreaks. He said the rest of the world was seeing alarmingly rapid rises.

WHAT ARE "CONTAIN" V'S "MITIGATE" STRATEGIES?

The terms "Containment strategy" and "Mitigation strategy" are used and confused frequently.

These definitions are derived from various sources:

Containment: used at the start of an outbreak to track the dissemination of a disease within a community and then use isolation and individual quarantines to keep people who have been exposed to, or infected by, the disease from spreading it

Mitigation: an acknowledgement that a disease is spreading in the community. There are cases that cannot be linked to known cases. Trying to contain the spread through quarantines and contact tracing is no longer feasible. In mitigation, we try to reduce the risk to those who are at most risk (for COVID-19: the elderly and those with chronic underlying conditions). In practical terms this means re-deploying public health workers away from contact tracing and disease surveillance towards efforts with a broader reach, including working with schools to determine when to close and when to reopen, with business to protect their employees and their customers, and with hospitals to prepare for a surge of new patients.

The interventions listed below can be part of a "Containment" or part of a "Mitigation" strategy.

Quoting Dr. Tedros again:

"It's not about containment or mitigation – which is a false dichotomy. It's about both...."

All countries must take a comprehensive blended strategy for controlling their epidemics and pushing this deadly virus back....

Countries that continue finding and testing cases and tracing their contacts not only protect their own people, they can also affect what happens in other countries and globally...."

A RANGE OF PUBLIC HEALTH INTERVENTIONS ARE AVAILABLE

A) PUBLIC EDUCATION

B) STOP / REDUCE VIRUS BEING IMPORTED INTO A COUNTRY

1. Flight / travel bans
2. Screening of incoming passengers
 - Questionnaires
 - Temperature checks
 - Testing
3. Quarantine of incoming passengers
4. Isolation of cases
5. Contact tracing

C) STOP / REDUCE SPREAD OF VIRUS IN A COUNTRY

1. Social Distancing (personal)
 - Avoid sick people
 - Keep 1.5 metres from all people
 - Do not kiss
 - Do not embrace
 - Keep away from crowds, restaurants, movies
 - Work from home
 - Avoid peak-hour travel
2. Social distancing (government mandate)
 - Work from home
 - Ban social gatherings (5000 / 500 / 50 / 10 people / all)
 - Reduce / stop public transport
 - Close universities
 - Close schools
 - Close daycare
 - Stop driving
 - "Lock down"
3. Personal and home hygiene
 - Wash hands frequently
 - Do not touch face / nose / eyes
 - Cough etiquette
 - Disinfect surfaces

4. Testing of suspected cases
 - Isolation of cases
 - Contact tracing
 - Quarantine of contacts
5. Surveillance / community testing
6. For the sick (if medical facilities overwhelmed)
 - Self-isolate
 - Go to hospital if required
7. Decontamination of public areas

WHAT IS THE CORRECT LEVEL OF INTERVENTION?

There are two overarching goals of a public health intervention:

Scenario 1: To stop an outbreak / epidemic:

- Management of ebola
- Management of polio

Scenario 2: To minimize the “impact” of an outbreak / epidemic when stopping the outbreak is not possible:

- Management of measles
- Management of HIV

Scenario 2 is relevant for COVID-19 in most countries. Given that a vaccine will not be available for 12-18 months, in most countries a balance must be struck between allowing enough of the population to be infected to enable herd immunity to develop, while attempting to sufficiently limit spread to allow health systems not to be overwhelmed, which would cause unnecessary morbidity and mortality.

The Washington Post, while studying the effects of various degrees of social distancing, [produced a very interesting simulator](#) whose conclusion was:

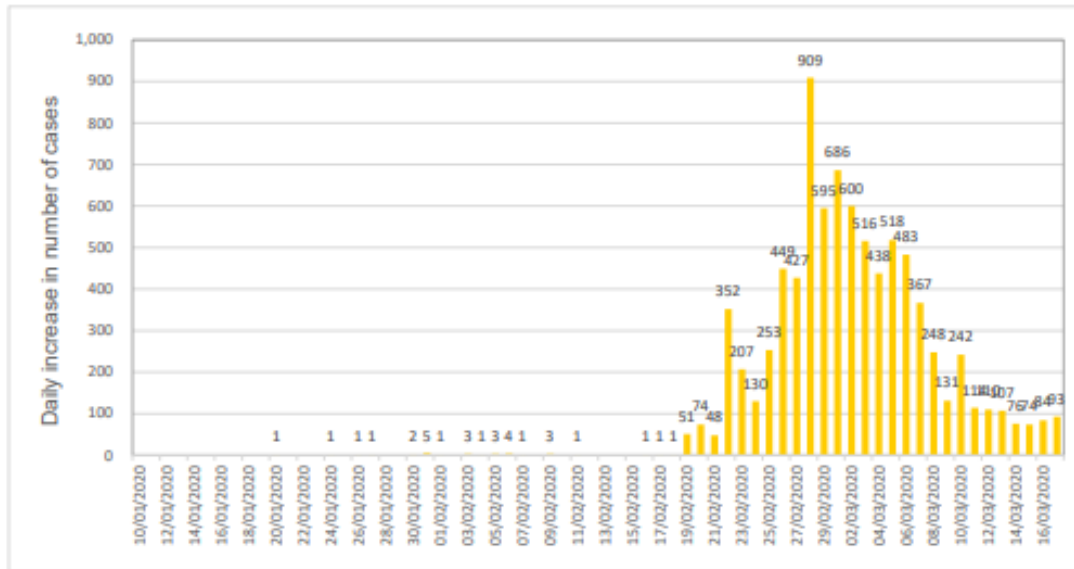
"Even with different results, moderate social distancing will usually outperform the attempted quarantine, and extensive social distancing usually works best of all."

Whilst not being at all academic in nature, this simulator allows one to conceptualize the discussion regarding herd immunity and the Chinese experience.

COMPARISON OF THREE SUCCESSFUL COVID-19 INTERVENTIONS

SOUTH KOREA

Currently confirming approximately 100 cases / day



Daily number of new cases reported in Korea since January 10, 2020

Chart from: [Centre for Health Protection](#), The Government of Hong Kong (SAR)

Interventions applied in Korea

“Special Care Zones” were declared around Gyeongsan and Daegu cities. Interventions included:

- Residents asked to stay at home (no lockdown)
- Public transport reduced
- Cases isolated in hospital with overflow of less serious cases to converted hotels
- Strong close contact tracing with quarantine
- Focus on testing, including “drive thru” (total of 270,000 tests performed so far)

Remainder of Korea:

- Cases isolated in hospital
- Strong close contact tracing with quarantine
- Some “drive-thru” testing

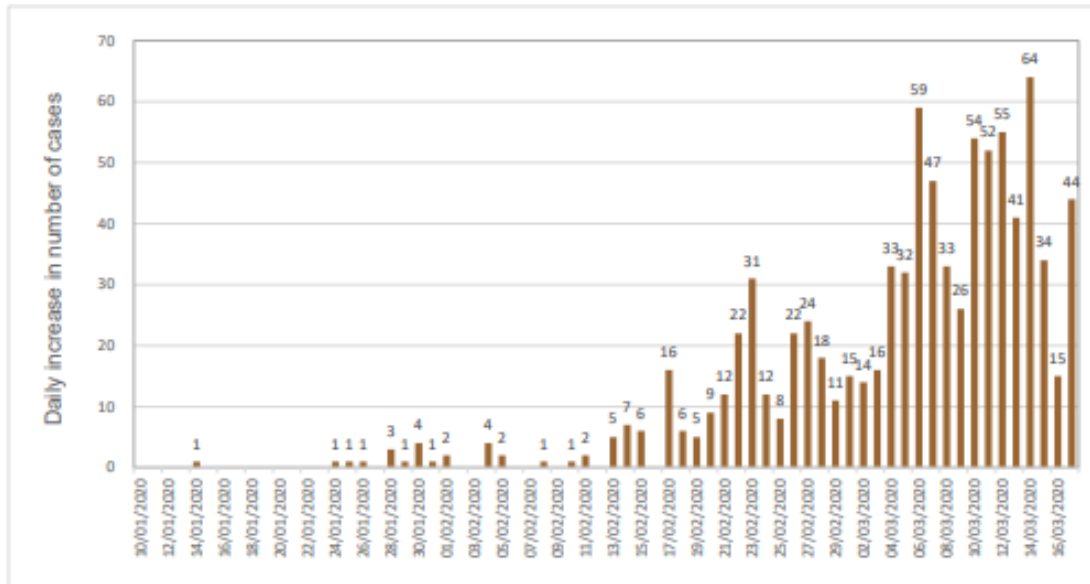
In addition:

- Many apps were developed allowing Koreans to locate hotspots and cases.

Read: [Coronavirus cases have dropped sharply in South Korea. What's the secret to its success?](#) Science Magazine: March 17, 2020

JAPAN

Currently confirming about 30-50 cases / day



Daily number of new cases reported in Japan since January 10, 2020

Chart from: [Centre for Health Protection](#), The Government of Hong Kong (SAR)

Life in most of Japan (including greater Tokyo) continues fairly normally.

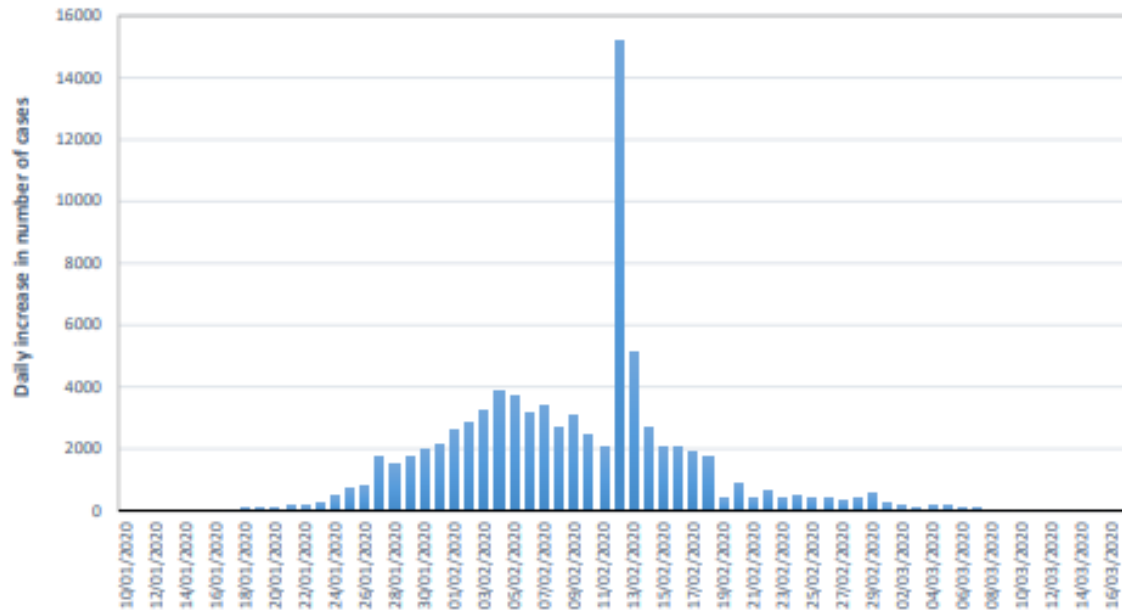
Interventions applied in Japan:

- Significant government-led education campaign
 - Steps to take
 - Masks
 - Hand washing
 - Social distancing
 - Avoid gatherings
- All Japanese wearing masks
- High levels of handwashing and sanitizer
- Large events cancelled
- School effectively closed for March, 2020
- Off-peak commuting encouraged (avoid busy trains)
- Teleworking (telecommuting) encouraged
- Limited testing:
 - 16 March: 824 tests / 15+ve
 - 17 March: 809 tests / 33 +ve
 - Total tests so far: 32,000
- Focus on clusters
 - Currently 15 clusters
 - Two have > 50 people
 - Most can be contact traced
 - Isolation and quarantine

Read: [Japan testing for coronavirus at fraction of capacity Reuters](#), March 18, 2020

MAINLAND CHINA

Currently confirming approximately 40 cases / day.



Daily number of new cases reported in China since January 10, 2020

Chart from: [Centre for Health Protection](#), The Government of Hong Kong (SAR)

Almost all interventions listed above were used to control the severe epidemic of COVID-19 in Mainland China.

Lockdown continues in Hubei (only) however we understand that this may be lifted on 29 March 2020.

Photo of Chinese medical staff celebrating leaving Wuhan to return home.



Photo: Confidential source, Wuhan China.

AUTHORS

Dr Quarry MBBS, MSc (Community Health):

- Group Medical Director, Medical Intelligence, International SOS

Professor John Oxford PhD, DSc, FRCPE

- International Virologist & Author
- Blizzard Institute, Queen Mary College, London.
- Scientific Director, Oxford Media Medicine