

COVID-19 OUTBREAK IN SINGAPORE

In view of the recent outbreak of the 2019 novel coronavirus (COVID-19, formerly known as 2019-nCoV), *SMA News* had put together a special news bulletin (*SMA e-News*) to provide our Members and fellow doctors with a succinct overview of key events, websites and ground tips. Reproduced below are the key contents of the bulletin.

EPIDEMICS IN PERSPECTIVE

Text by Dr Paul Yang Ing Woei and Dr Tan Yia Swam • Reviewed by Dr Leong Hoe Nam

Background

Epidemics are not new to human history and modern epidemics are well documented on websites of healthcare organisations, such as the Centers for Disease Control and Prevention, and the World Health Organization.

Key comparisons

⚠ Spanish flu (1918)

- Infected 500 million people, almost one third of the world's population then. Lasted two years and caused 50 million deaths.
- Worldwide spread, but called the "Spanish flu" as Spain had no censorship then and published the first public reports of the epidemic.

⚠ SARS (2003)

- Infected 8,069 people. Lasted nine months and caused 774 deaths.

⚠ Seasonal influenza

- Causes three to five million cases of severe illness per year and about 290,000 to 650,000 respiratory deaths. Milder illness may not be tested and documented.

⚠ Current COVID-19

- Coronavirus has been with humankind since humans domesticated animals many eons ago.
- With modern modes of transportation, it has gone intercontinental.

In the bigger scheme of things, influenza is still the king. It does not light up the public imagination because it keeps visiting repeatedly like clockwork. It has become routine, like the seasons. In temperate countries, it occurs once a year during the colder months. In countries near the equator, like Singapore, Indonesia and Malaysia, it occurs throughout the year.

As doctors, we have the sacred duty to protect the public not only from viruses but also to hand-hold them through these challenging times. In such times, the public looks to us for **solutions** and **reassurance**.

There is no doubt that as professionals we will all rise to this occasion as we did during every epidemic in this century.

Further readings

1. World Health Organization. Emergency preparedness, responses. *Disease Outbreak News*. Available at: <https://www.who.int/csr/don/en/>.
2. Centers for Disease Control and Prevention. *CDC Current Outbreak List*. Available at: <https://www.cdc.gov/outbreaks/index.html>.

TIMELINE OF EVENTS

Compilation by Dr Tina Tan and Dr Tan Yia Swam

Government Releases in Singapore

- Situation update on COVID-19 in China by Ministry of Health (MOH), including notification and identification of suspect cases of COVID-19 (MOH Circular 12/2020)

- MOH set up a multi-ministry taskforce

- First confirmed case in Singapore
- Revised suspect case definition (MOH Circulars 19/2020 and 19A/2020)

- Second and third cases confirmed
- Temperature screening for land and sea checkpoints

- Fourth case confirmed

- Fifth case confirmed
- Compulsory leave of absence announced

- Sixth and seventh cases confirmed

- Eighth, ninth and tenth cases confirmed

- Three new cases confirmed; total tally 13
- Surgical mask distribution to Singaporean households announced

- World Health Organization declares outbreak an international emergency
- 16 confirmed cases

SMA and CFPS's Response and Actions

- Email reminder to Members on MOH licensing terms and conditions on maintaining a supply of personal protective equipment (PPE)

- MOH, College of Family Physicians Singapore (CFPS) and SMA met to discuss support for the private primary care sector; MOH agreed to release stockpile of N95 masks for sale
- MOH's N95 mask stock arranged for delivery to SMA office
- CFPS agreed to man hotline for doctors who are unsure of procedures

- Supply of N95 masks delivered at 9 am
- SMA Secretariat mobilised to sell N95 masks from 10 am to 2 pm with support from CFPS

- MOH, CFPS and SMA met again to discuss current situation and further support for doctors in the private sector

- Decision made to continue N95 mask sale on 28 January
- SMA Secretariat prepared for the sale of N95 masks

- SMA requested for additional stock of N95 and surgical masks from MOH
- Two batches of N95 masks approved and collected for sale
- Sale of N95 masks from 9 am to 4 pm

- Sale of N95 and surgical masks from 9 am to 4 pm
- The *Straits Times Forum* published a letter penned by SMA 1st Vice President Dr Tan Yia Swam (<http://bit.ly/2UdPhpo>)

- Provided input and comments for interview with *TODAY* (<http://bit.ly/391b2wP>)

TIPS FOR DOCTORS

Compilation by Dr Alex Wong • Material adapted from doctors' chat group



Editor's note: The following are only suggestions for fellow medical practitioners and are not meant to constitute a guideline for management. I am heartened that experienced doctors have generously shared their personal experiences and tips on overcoming day-to-day challenges on the ground. Do keep track of official news releases and updates. Stay safe and keep up the good work!

General instructions

1. Consider converting the waiting area to an open-aired space and turning off the air conditioner.
2. Ensure that all staff have been fit-tested for N95 masks.
3. Brief staff on personal hygiene:
 - a. All staff are to do daily temperature checks.
 - b. Ensure that staff are versed on the proper way to wear masks.
 - c. Discard masks after use.
 - d. Remind staff not to touch their faces and to wash their hands before touching their faces. ("Your face is sacred; don't touch it" – Dr Leong HN)
 - e. No handphone use during clinic hours except during emergencies. Keep it in a ziplock bag.
4. Put up notices outside the clinic informing patients to notify clinic staff regarding travel history (see Annexe A for travel advisory in Mandarin).
5. Remove all but two to three pens for patients to use at registration.
6. Disinfect non-metallic surfaces with diluted bleach (see Annexe B for guidance on bleach dilution).
7. Metallic surfaces have to be wiped down with alcohol wipes.
8. At the end of each session, before unmasking and ungloving, wipe down the computers and/or pens. Also wipe down all the doorknobs, tabletops, counters, telephones and stationeries (staplers, pens, etc) in the dispensing area, as well as outside and inside consultation rooms.
9. Doctors to wipe stethoscope and blood pressure cuff after each patient consultation.
10. Screen patients at clinic entrance.
 - a. When two staff are on duty, one will be the triage nurse. The triage nurse should be wearing a surgical mask. Suspected cases should be managed in an N95 mask or full PPE.
 - b. Doctor should be wearing a surgical mask. Consider an N95 mask or full PPE for procedures that may aerosolise viral particles (eg, nebulisation and nasogastric tube insertion).
 - c. Re-using of N95 masks is not recommended. Visit: <http://bit.ly/3b8BWVD>.
 - d. You must not remove your mask during the entire work session. Wash your hands before touching your face.
 - e. Discourage patients from waiting in the clinic.
- i. If time permits, allow patients to book via phone and call them when it is their turn. For busy clinics where calling is not feasible, send patients home and give them an appointment time to revisit the clinic.
- ii. For those who insist on waiting, separate them by asking patients with upper respiratory tract infections to wait outside and non-infectious patients to wait inside.
- iii. Chronic patients who are well can repeat their medicine for one to two months. These patients can enter the clinic and should be attended to by the non-triage nurse.
- iv. If the triage nurse picks up a patient who fulfils criteria for the COVID-19, isolate the patient and keep in view the transfer to Tan Tock Seng Hospital (see Annexe C for management of suspected cases).
11. 14-day leave of absence
 - a. From 31 January, all returning from mainland China regardless of which sector they work in must take 14 days of leave of absence starting from their date of return from China. This is a form of quarantine. There is no need to see a doctor for a medical certificate. This will minimise exposure to persons returning from China. They should monitor their health closely for two weeks upon their return to Singapore. If unwell with fever or respiratory symptoms, they should wear a mask and seek treatment. ◆

ANNEXE A. TRAVEL ADVISORY IN MANDARIN

1. 如果您患有肺炎的病徵及病狀，或有严重的呼吸系统感染而导致呼吸困难，而在病发前14天内曾经前往或居住在中国大陆。或是
2. 患有任何呼吸系统疾病，无论情况轻重，的患者，而在病发前14天内：曾经前往或居住在湖北省（包括武汉市）或浙江省（包括杭州市），或是曾经去过中国大陆的任何一家医院或医疗设施，或与2019冠状病毒疾病感染患者有过接触，或在工作上与近期（14天内）曾经前往中国大陆的旅客有经常或密切接触，都请马上向服务人员索取口罩，并立刻戴上它才登记求诊。

凡被怀疑有2019冠状病毒疾病感染患者，本诊所会安排救护车，转送到陈篤生医院急诊（成人）或竹脚医院儿科急诊（儿童）接受详细检验。请在诊所外等候。感谢您的合作和无私之举。

The advisory in brief

It advises that any patient who had been to mainland China, especially Hubei and Zhejiang; or visited any hospitals or medical facilities in mainland China; or been in contact with any COVID-19 patient; or contact with travellers from mainland China is to immediately retrieve and put on a surgical mask before registration. It also states that the clinic will arrange for ambulance transport for suspect cases to the A&E of Tan Tock Seng Hospital (adults) or KK Women's and Children's Hospital (children) for further tests, and asks that patients wait outside the clinic.

ANNEXE B. GUIDANCE ON BLEACH DILUTION

Bleach as a disinfectant (usually 5.25% or 6% to 6.15% sodium hypochlorite depending on manufacturer) is usually diluted in water at 1:100.

Approximate dilutions are 1/4 cup of bleach in a gallon of water for a 1:100 dilution (~600 ppm).

1 cup = 240 millilitres

1 gallon = 3.785 litres

Things to note

- Do not mix bleach with other cleaning agents.
- Do not mix bleach with hot water.
- Bleach degrades over time if left at room temperature.
- Store bleach in a cool dark place and use freshly produced/purchased bleach.
- Bleach can corrode metals and damage painted surfaces.
- Avoid touching the eyes. If bleach gets into the eyes, immediately rinse with water for at least 15 minutes and consult a physician.
- If using diluted bleach, prepare fresh diluted solution daily. Label and date it, and discard unused mixtures 24 hours after preparation.
- Organic materials inactivate bleach; clean surfaces so that they are clear of organic material.

ANNEXE C. MANAGEMENT OF SUSPECT CASES OF COVID-19

Case definition (correct as of 5 February 2020)

1. A person with clinical signs and symptoms suggestive of pneumonia or severe respiratory infection with breathlessness **AND** travel to mainland China within 14 days before onset of illness; or
2. A person with an acute respiratory illness of any degree of severity who, within 14 days before onset of illness had:
 - Been to Hubei Province (including Wuhan city) or Zhejiang Province (including Hangzhou city), China; **OR**
 - Been to a hospital in mainland China; **OR**
 - Had close contact with a case of COVID-19 infection; **OR**
 - Had frequent or close contact during work with recent travellers from mainland China (travel history in the last 14 days).

Proposed workflow for a suspect case

1. Managing staff/doctor to wear N95 mask, gown and gloves.
2. Do not allow the patient to enter clinic.
 - a. Seat patient outside clinic and away from others.
 - b. Put a face mask on patient and a squirt of hand sanitiser.
3. **Record the time of registration, name and contact details of patient AND any accompanying person.**
4. **Inform doctor immediately. Doctor to see the patient at a designated area outside the clinic.**
5. Once doctor confirms that the patient is a suspect case,
 - a. If unstable, call **995** and notify operator of suspect case of COVID-19;
 - b. If stable, call 6220 5298 for dedicated ambulance transport.
6. Doctor to submit MD131 via the Communicable Diseases Live & Enhanced Surveillance (CDLENS) system.
7. If patient absconds, inform Surveillance Duty Officer of Communicable Diseases Division at 9817 1463.
8. After patient leaves,
 - Wipe down tablet/pen and all surfaces, knobs and equipment the patient may have contaminated.
 - Unmask, unglove and wash your hands.
 - Double bag all cleaning materials into black garbage bags.
 - Spray diluted bleach into garbage bags and tie up garbage bag.
 - Wash hands with soap and water.
 - Remask and wear gloves.
 - Call back other patients.

HELPFUL RESOURCES

Compilation by Dr Ganesh Kudva

Website	URL
Singapore Government's Factually website	https://www.gov.sg/factually?topic=Health
Ministry of Health Singapore's website	https://www.moh.gov.sg/covid-19
Gov.sg WhatsApp channel	http://bit.ly/36FW9i1
Lancet	https://www.thelancet.com/coronavirus
New England Journal of Medicine	https://www.nejm.org/coronavirus
MOH Alerts (accessible only via Internet Explorer)	https://mohalert.moh.gov.sg/welcome.do
Primary Care Pages	https://www.primarycarepages.sg
Channel NewsAsia	http://www.cna.asia/wuhan-virus
8world News (8 视界新闻)	http://bit.ly/37JuE8z
The Straits Times	https://www.straitstimes.com/coronavirus
Lianhe Zaobao (联合早报)	http://bit.ly/2Ubm9W

Information provided are accurate as at time of print.