



Terracotta Warrior, funerary art for the Emperor Qin Shi Huang, 210–209 BCE.

In considering the complete art of war, it is greatly preferable to capture a state whole, rather than to break it up; it is better to capture an army whole rather than break it up; it is better to capture a regiment whole rather than break it up; it is better to capture a

battalion whole rather than break it up; it is better to capture a company whole rather than break it up.

Using this principle, you can understand that winning a hundred victories out of a hundred battles is not the ultimate achievement, the ultimate achievement is to defeat the enemy without ever coming to battle.

Thus it follows that the highest form of warfare is to out-think the enemy; next is to break his alliances; then to defeat his armies in battle; the lowest form is to besiege his cities. Siege warfare should only be undertaken if it is unavoidable. The time involved is too costly' it takes up to three months to construct the various moveable shelters, transports and other siege engines; it takes another three months to raise earthworks against the walls. If the general loses patience and sends his men swarming like ants around the city, it will cost him a third of his army with no result. These are the disastrous pitfalls of a siege.

Thus a skillful general must defeat the enemy without coming to battle, take his cities without a siege and overthrow his state without a long campaign. He must make every effort under Heaven to achieve total victory with his forces undiminished; this is the art of strategic offense.

Thus, when deploying your troops, if you outnumber the enemy ten to one, surround him; five to one, attack him, two to one, split him. If forces are equal, engage him in open battle, if you in turn are slightly outnumbered, evade his advances; if you are heavily outnumbered, withdraw completely. A smaller force, no matter how determined, will always succumb to a larger one.

The army's commander is the mainstay of the State; if his support is solid, the State will be strong; if his support is flawed, the State will be weak. Indeed, there are three ways a ruler can bring disaster on his army. He may hobble the army by ordering advance or retreat at the wrong time; he may confuse his troops by interfering in military organization without understanding it; he may dishearten his troops by meddling with rank and responsibility without regard to the consequences. If they see the army confused and discomfited, the lesser lords and princes will take advantage and begin to cause trouble. This is called spurning victory by disrupting the army.

There are five keys to victory; knowing when to fight and when not to, brings victory' knowing what to do when superior in numbers and when outnumbered, bring victory; holding officers and men united in purpose, brings victory; careful preparation to catch the enemy unprepared, brings victory. These five together are the true path to success.

Thus we may say that if you know yourself and know your enemy, you will gain victory a hundred times out of a hundred. If you know yourself but do not know your enemy you will meet one defeat for every victory. If you know neither yourself nor your enemy, you will never be victorious.

*Sun Tzu, On Strategic Offence - The Art of War, 6th Century B.C,
(trans. James Trapp)*

There are very few writings that stand the test of over two millennia and are still widely read and even revered in the 21st century. Among these is the legendary Chinese General, Sun Tzu's, "The Art of War", a collection of thirteen "chapters" that record universal wisdoms in the field of armed conflict. The text is so ancient its exact origins have been lost. It is uncertain, as for many figures of far distant antiquity, if Sun Tzu was a true historical figure or if his writings were in fact a composite of more than one person from more than one age. These writings have nonetheless inspired and guided not only countless great military leaders over untold centuries, including Mao Tse Tung, Ho Chi Minh, and General Douglas MacArthur of more recent memory but increasingly in the modern world they have guided the business strategies of the 21st century Captains of Industry. In popular culture, Sun Tzu figures prominently even in the 24th century. In the episode, "The Last Outpost" Captain Jean-Luc Picard, exclaims to Commander William Riker, "I'm glad the Academy still teaches the strategies of Sun Tzu!"

According to very ancient tradition Sun Tzu was a brilliant general in the service of King He Lu of Wu during the archaic Spring and Autumn Annals period of 770 BCE to 476 BCE, before China was unified under a single emperor. This however is a matter of heated debate among Chinese scholars with some experts believing that certain inconsistencies and inaccuracies in the text suggest a later date for the text of the Art of War. Indeed there is not even a "standard" or "definitive" text of the work; as for so many ancient manuscripts initially transmitted by oral tradition and then copied imperfectly by the written word of scribes over countless centuries, anachronisms, contradictions and clear corruptions have accrued. The way classical age Chinese was written, without punctuations and with ambiguities furthermore creates uncertainties - no two expert interpretations of the Art of War are the same. The most widely accepted version of the text today has its origins in the Song Dynasty, (960 - 1279 CE), well after the uncertain time the text was actually written.

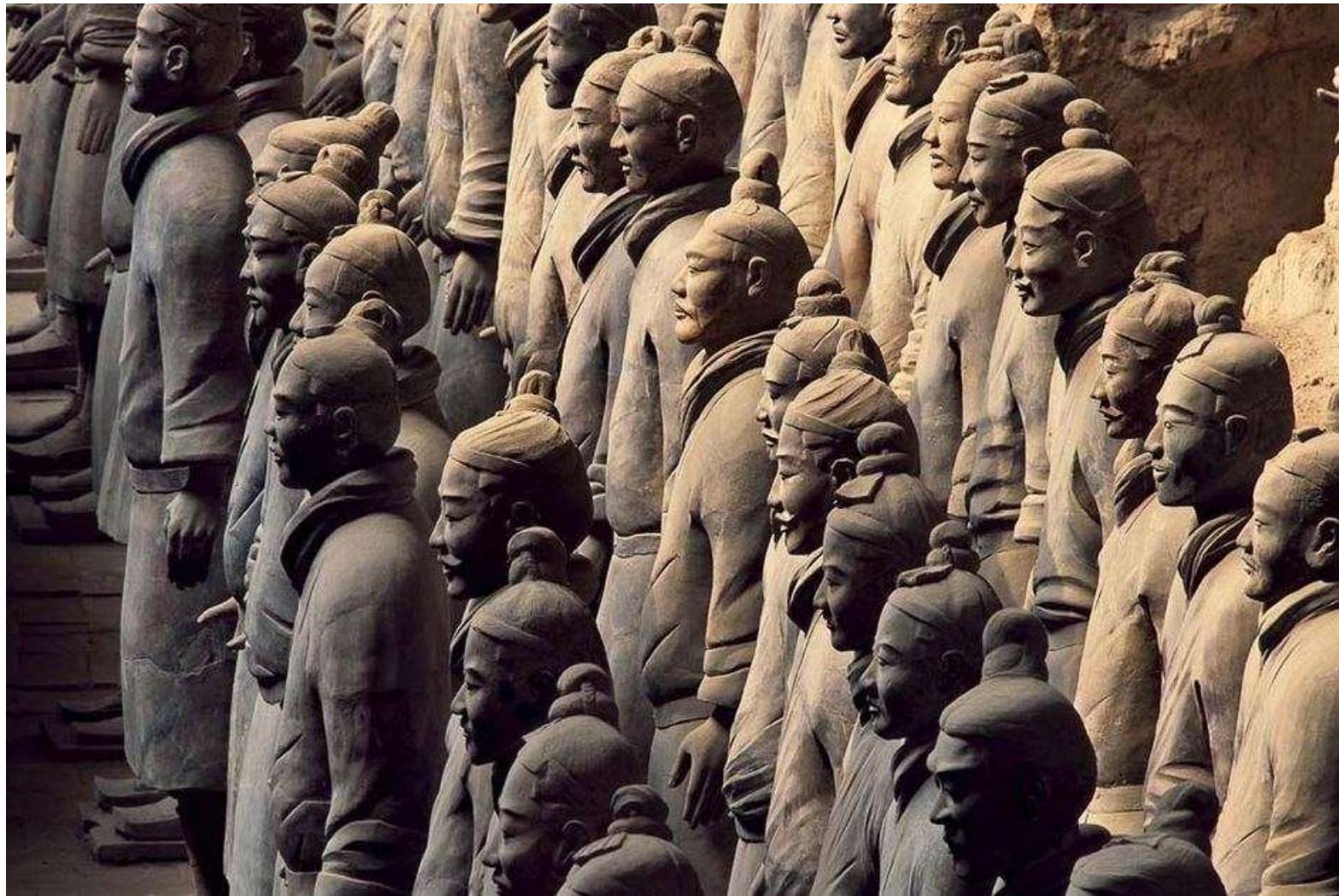
The actual structure of the text is generally not disputed. It is divided into thirteen "chapters", each describing aspects of the strategy and tactics of warfare. Some are more clearly complete than others indicating the likelihood of introduced corruptions in transcription over the centuries. What is certain however is the wisdom that comes through, it is intensely personal and lays heavy emphasis on the mood of soldiers - both one's own and of the enemy's. They are universal observations of human nature that transcend time, space and culture, and this helps explain the work's extraordinary appeal and endurance. What is apparent throughout the work is that it is no mere military technical manual. It is far more than that. Rather it expounds a whole philosophy of life, that heralds later Taoist principles. In the view of Sun Tzu, a general is no mere "commander", he is also a scholar, a philosopher, a gentleman who knows his soldiers and knows the human condition. There is a poignant depth of understanding and empathy which undoubtedly has helped to ensure its universal appeal and its immortality.

Over millennia the wisdom of Sun Tzu has guided the best military strategists of their times, and in our own age, Captains of Industry increasingly look to his writings to gain the advantage over their competition. In the late second decade of the 21st century, there emerged a fearsome new enemy that threatens to overwhelm the globe in the form of a novel coronavirus, now termed COVID-19. In our strategic offense against this new

enemy it is imperative that we make wise choices if we are to have any hope of final victory.

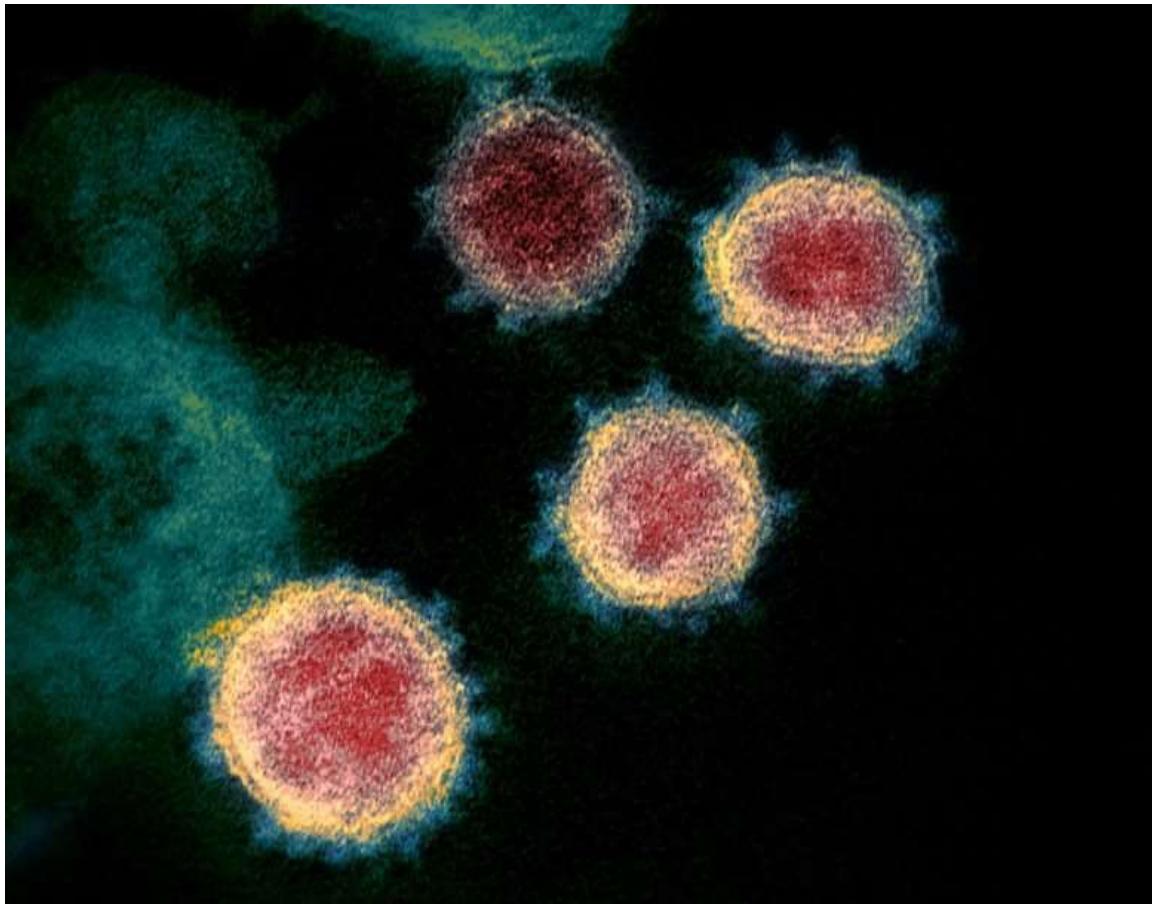
Sun Tzu tells us that it is preferable to capture a state whole rather than simply “break it up” and so our plan must be coordinated on a global scale. It’s not simply good enough to control the virus in one place - it must be defeated whole - everywhere at the same time. We look to our generals, the CDC and the WHO. While our medical scientists battle to find the right weapons in the form of vaccines and anti-viral agents, the ultimate achievement will be to defeat the enemy without having to rely on these as yet uncertain tactics.

We must out-think the enemy, we must break its alliances, with hysteria and ignorance. Although siege warfare takes a heavy toll on states it must be undertaken when unavoidable, and so we seek to isolate and contain regions where the enemy is most prevalent. We must strive to know ourselves through our international collaborations, and we must strive to know the enemy in much greater detail than at present. For it is only by knowing ourselves and knowing our enemy, that we will achieve final victory.



Terracotta Warriors, funerary art for the Emperor Qin Shi Huang, 210–209 BCE.

CORONAVIRUS - COVID - 19



Transmission electron microscope image of the COVID-19 virus. “Corona” comes from the Latin for “crown” which refers to the characteristic spiked (S proteins) that project from the surface of the virus, giving it a crown-like (or solar corona-like) appearance. (NIAID-RML).

Introduction

A novel **coronavirus** disease - **Coronavirus Disease 2019** - (or **COVID-19**) (caused by the virus *currently* known as **SARS-CoV-2**) was first diagnosed in **Wuhan City, Hubei Province, China** in November 2019.

Clinical disease appears to be predominantly **respiratory**, varying from mildly symptomatic to fatal.

The outbreak was declared a global emergency by the World Health Organization (WHO) on January 30, 2020.

On 11 March WHO declared a global pandemic.

The causative virus can result in clinical disease ranging from **mild** to **fatal**.

No vaccine is currently available

No specific anti-viral agent is currently available.

Although likely a zoonotic disease, human to human transmission also occurs **predominantly via respiratory droplet spread.**

Airborne spread is probably less likely, unless for aerosolized medical procedures when it becomes much more likely.

Case definitions:

Case definitions - for the purposes of testing - vary according to the **severity of the local situation** and the **resources** that are available.

Further there is rapid and ongoing evolution of these criteria, which as of March 2020 require daily to hourly updates that give information relevant to local conditions.

Current “contact” risk stratification is as follows:

1. **Close contact:**

For the purposes of the suspected case definition, there is no currently agreed definition of close contact as there is a lack of definitive evidence.

As interim advice, the Department of Health advises a *precautionary* understanding of close contact given a lack of definitive evidence of the mode of transmission.

In keeping with definitions of close contact developed in other jurisdictions, close contact means:

- **Greater than 15 minutes** face-to-face contact with a symptomatic suspected or confirmed case in any setting

Or

- The sharing of a **closed space** with a symptomatic suspected or confirmed case for a prolonged period (e.g. **more than 2 hours**), without recommended PPE (Droplet and Contact Precautions).

Contact needs to have occurred within the **potential infectious period** of the case.

Healthcare workers and other contacts who have taken recommended infection control precautions, including the use of recommended PPE (Droplet and Contact Precautions), while caring for a suspected or confirmed case of 2019-nCoV are **not** considered to be close contacts.

2. Casual contact:

Casual contact is defined as any person having:

- **Less than 15 minutes** face-to-face contact with a symptomatic probable or confirmed case in any setting

Or

- Sharing a closed space with a symptomatic probable or confirmed case for **less than two hours**.

History

Human coronaviruses were first identified in the mid-1960s.

The novel pathogenic coronavirus that causes **COVID-19** was first diagnosed in **Wuhan City, Hubei Province, China** in November 2019.

In past ages diseases were named after the location of (supposed) first appearance - or worse they were named for specific races or nationalities.

The classic example that history provides was the emergence of **syphilis** in the “old word”, in the Fifteenth century - the Italians called it the “French Disease” - assuming that it had emerged within the Italian City states as a result of Charles VIII’s invasion. The French, outraged, retaliated by calling it the “Italian Disease” assuming that their troops had picked up the disease from local Italians.

The greatest injustice in all of history was done to the Spanish, when the devastating Influenza pandemic of 1918-19, was given the name of “**Spanish flu**”. It was nothing of the sort. It probably emerged from the battlefields of Flanders at the end of the Great War. By rights it should have been the “Flemish flu” (...or phlegmish flu perhaps). It was only due to the fact that the Spanish were actually the only nation diligently reporting the disease that they were “rewarded” with having the deadliest infectious disease in history named after them!

The most recent example is MERS or “**Middle Eastern Respiratory Syndrome**”.

This tradition of naming new infectious diseases has had untold negative economic and social consequences by stigmatizing entire communities.

Disease names, once given, are difficult to change later even if an inappropriate name is being used. Therefore, it is important that an appropriate name is assigned to a newly identified human disease by whoever first reports it.

In response to such concerns, the World Health Organization (WHO) has developed a set of standard best practices for naming new human infectious diseases, with the aim of

minimizing unnecessary negative and discriminatory effects on nations, economies, people, and animals, and ensuring that inappropriate disease names do not become entrenched in the popular collective consciousness.

To this end, the novel coronavirus that emerged in Wuhan, China in 2019 has been given the first official name based upon these internationally agreed criteria - **COVID -19**; a far preferable name than “Wuhan Disease”.

Epidemiology

The initial outbreak of **COVID-19** occurred in **Wuhan City, Hubei Province, China** in November of 2019.

The Centers for Disease Control and Prevention (**CDC**) and the World Health Organization (**WHO**) are closely monitoring the global situation.

As of 2 April 2020, **> 860,000** (*Johns Hopkins*) cases have been diagnosed globally, with numbers still rising alarmingly.

Over **42,000** cases have been fatal worldwide.

Pathology

Organism:

The *disease*, **COVID-19** is caused by the *coronavirus, severe acute respiratory syndrome coronavirus 2* (or **SARS-CoV-2**)

Coronaviruses are lipid-enveloped, single-stranded, positive sense RNA viruses.

They are named for the crown-like spikes on their surface.

There are four main sub-groupings of coronaviruses:

1. Alpha
2. Beta
3. Gamma
4. Delta

Taxonomic Viral Classification is as follows:

Group: Group IV: (+) ssRNA

Order: Nidovirales

Family: Coronaviridae

Subfamily: Coronavirinae

Genus: Alphacoronavirus

Betacoronavirus

Gammacoronavirus

Deltacoronavirus

Species:

Currently seven coronaviruses are known that infect humans:

Common human coronaviruses:

1. 229E (an alpha coronavirus)
2. NL63 (an alpha coronavirus)
3. OC43 (a beta coronavirus)
4. HKU1 (a beta coronavirus)

Three highly pathogenic species are known:

5. **MERS-CoV:** (the cause of **MERS**)
 - This is a beta-coronavirus that causes **Middle East Respiratory Syndrome, (or MERS)**.
6. **SARS-CoV (or SARS-CoV-1)** (the cause of **SARS**)
 - This is a beta-coronavirus that causes **Severe Acute Respiratory Syndrome, (or SARS)**.
7. **SARS-CoV-2** (the cause of **COVID-19**)
 - This organism is a beta-coronavirus, that causes **Coronavirus Disease 2019**.

Coronaviruses that infect animals can mutate and evolve, and can attain the ability to infect humans. Three examples of this are SARS-CoV, MERS-CoV and. **SARS-CoV-2.**

Reservoir

The reservoir is essentially unknown, but is probably zoonotic, i.e likely transmitted between animals and people.

Other coronaviruses have been found in animals **camels** and **bats**.

A clear animal source for **COVID-19** however has not yet been identified.

Initial cases were business operators at the Hua Nan Seafood Wholesale Market, which sold live animals such as poultry, bats, marmots, and wildlife parts.

The exact source of the outbreak is still under investigation in Wuhan.

Transmission

Although likely a zoonotic disease, human to human transmission also occurs.

Transmission is thought to be predominantly by **respiratory droplets** and recently soiled **fomites**

Airborne spread is less likely, however, it is possible in certain circumstances, especially in relation to medical **aerosolization** creating procedures.

Fomite spread appears to be likely because the virus can live on surfaces and can be transmitted to patients by touch and transfer to mucus membranes.

The exact time survival of the COVID-19 virus in the environmental is currently **unknown** - but may possibly be up to 3 days depending on the inoculum shed and the nature of the surface - although the amount of viable virus steadily declines within these times frames as well, (*Neeltje van Doremalen et al NEJM, letter March 17, 2020*)

It is unknown whether the virus can be transmitted from the pregnant mother to the baby, however this appears to be **uncommon**.

It is unknown whether the virus can be transmitted through breast milk

Incubation Period

The incubation period is currently believed around **4 - 14 days**.

Period of communicability

The infectious period is currently unknown.

It is likely that a patient is infectious **once symptomatic**, until **up to 24 hours after symptoms resolve**. However, this is not confirmed.

Based on recent information, a patient may be infectious from as early as **48 hours prior to onset of symptoms**, until at least 24 hours symptom-free.

Susceptibility & resistance

All people are presumed susceptible to infection, although children seem less susceptible and the elderly more susceptible.

Antibodies derived from infection *may* provide subsequent immunity, however this is currently **unknown**.

Immunity post infection is however thought “likely” to occur, at least in the **short term**.

It is unknown how long this immunity - if it exists - may last, given that **antigenic drift** may be possible with this virus.

Clinical Features

Coronaviruses are a large and diverse family of viruses that include viruses that are known to cause illness of **variable** severity in humans, ranging from the common cold, to severe and fatal illness.

Risk factors for severe disease include:

1. Increasing age
2. Immunosuppression
3. Significant co-morbidities
4. High SOFA score

Signs of **COVID-19** are predominantly **respiratory** and so may include:

1. Fever:
 - May or *may not* be present
2. Non-specific constitutional symptoms, (as for virtually any infection):
 - Headache
 - Malaise/ lethargy
 - Myalgias
 - Anorexia / nausea/ vomiting
- 3 Upper respiratory tract symptoms:

- Sore throat
 - Rhinorrhea
 - Dry cough
- 4 Lower respiratory tract symptoms:
- Cough (dry or productive)
 - Chest pain
 - Dyspnea

Clinical illness can range from mild to severe to **fatal pneumonia**.

As of March 2020, the case fatality rate for **COVID-19** appears to be around **3% overall**, however this depends on a numbers of variables including:

1. Age, with much lower rates in children and higher rates being seen in the elderly (around **15%** by the age of **80 years**) - see **Appendix 2 below**.
The case fatality rate for **SARS** was reported to be around **10%**
The case fatality rate for **MERS** was reported to be around **40%**
2. Comorbidities
3. Immunosuppression
4. Local factors:
 - Epidemiological
 - Medical resources / expertise
 - Public education

Coinfection:

Routine **influenza / RSV swabs** should be considered.

Coinfections were initially considered unlikely; however, more recent reports, yet to be peer reviewed, suggest coinfection rates of up to 20% of all patients, with even higher percentages in critically ill patients, (*EMRAP COVID-19 CorePendum, March 2020*).

Resolution of Illness:

CDC recommendations, (as of March 2020) include:

TEST BASED

When a **test-based** strategy is used, patients may discontinue home isolation when there is:

- Resolution of fever (without the use of fever-reducing medications).

AND

- **Improvement** in respiratory symptoms (e.g., cough, shortness of breath)

AND

- Negative PCR results from at least **2 consecutive** nasopharyngeal swab specimens collected **≥ 24 hours apart**.

NON-TEST BASED:

When a **non-test-based** strategy is used, patients may discontinue home isolation when the following criteria are met:

- **> 7 days** have passed since symptoms first appeared

AND

- **> 3 days (i.e 72 hours)** have passed since **recovery** of symptoms - defined as:

- ♥ Resolution of fever without the use of fever-reducing medications

And

- ♥ Improvement in respiratory symptoms (e.g., cough, shortness of breath)

Investigations

Blood tests (routine):

1. FBE:

- Lymphocytopenia is present in 70% - 80% of patients
- Leukopenia
- Thrombocytopenia

Patients with more severe disease tend to have more prominent lymphocytopenia and leukopenia than non-severe patients.

2. CRP is elevated.
3. U&Es/ glucose
4. Coagulation profile
 - Prolonged prothrombin times.
5. D-dimers:
 - Elevated (and may correlate with severity)
6. LTFs
7. Lactate dehydrogenase (LDH)
 - Levels are elevated.

PCR testing:

PCR testing can be done on respiratory samples, i.e

- Nasopharyngeal swabs
- Oropharyngeal swabs
- Sputum
- Endotracheal aspirates / endobronchial washings.
- Lung tissue biopsy

Lower respiratory tract specimens are likely to contain the highest virus loads based on past experience with the SARS and MERS coronaviruses.

There are currently 2 types of molecular (PCR) test available for **COVID-19** at the Victorian Infectious Diseases Reference Laboratory, (VIDRL):

VIDRL has the ability to test for

1. **A Pan-coronavirus PCR assay:**
 - This is a gene sequence that is *common* to all known coronaviruses.

2. Real-time specific COVID-19 PCR assays:

- These tests takes approximately 2-3 hours to perform.

They are *specific* tests for COVID-19

There are 2 tests:

- ♥ An RNA-dependent RNA polymerase (RdRp) gene
- ♥ An E gene test

If the RdRp test is negative, then the test is reported as negative for COVID-19 infection.

If the RdRp test is positive, then this is followed up with the E test as confirmation of a positive result.

If the RdRp test is positive, but the E gene test is negative, then further *specialized* genetic testing is possible

Routine **influenza** / RSV **swabs** should be considered to rule out coinfections.

Exclusion of 2019-nCoV infection through testing:

A **single** negative test result, particularly if this is from an *upper* respiratory tract specimen, may not necessarily exclude infection.

Repeat sampling and testing of **lower** respiratory specimens is strongly recommended in **severe or progressive** disease.

A positive **alternate pathogen** does **not** rule out **co-infection** 2019-nCoV infection.

Serology:

At the current time there is **no widely** available serological testing for **COVID-19**.

Blood when received at VIDRL is being stored for *future* testing, when this becomes available.

Reports suggest:

- **IgM** and **IgA** detection at **5 days** after symptom onset.
- The median time to **IgG** detection is 14 days after symptom onset

Other biological samples:

The Victorian Department of Health is *continuously* reviewing whether there is a requirement for other specimens such as **stool** or **urine** to be sent to VIDRL.

At the current time these are **not** recommended in cases of **respiratory** illness.

Viral culture:

Viral culture can be undertaken from positive samples under **high containment conditions**, however these are done more for research purposes *not* as a diagnostic modality.

Chest radiography:

CXR may show:

- Ground glass opacities
- Local or bilateral patchy shadowing
- Interstitial abnormalities.
- The outline of the heart and costophrenic angles may be unclear

Ultrasound:

The role of lung ultrasound is evolving rapidly.

As of March 2020, the following observations (*EMRAP COVID-19 CorePendum, March 2020*) have been made:

Reported ultrasound findings:

1. Posterior lung field involvement, primarily posterior lower fields
2. B-lines (a comet-tail, hyperechoic, vertical artifact arising from the pleural line that is well defined and extends indefinitely).
3. The pleural line is irregular
4. Subpleural consolidations
5. Air bronchogram sign
6. Interstitial thickening and edema with surrounding localized pleural effusions

The potential benefits of ultrasound include:

1. Peripheral location of lesions can be well visualized on ultrasound.
2. Ultrasound can be used to assist in diagnosis when other imaging modalities are difficult to obtain.
3. Ultrasound can be used to monitor illness progression.

The limitations of ultrasound include:

1. Requires sterile probe covers and sterilization of the ultrasound machine after use.
2. The sonographer will be in close proximity to the patient.
3. Sensitivity and specificity of findings are yet to be determined.
4. Deep lung lesions are not well detected; however, peripheral lesions are more common in COVID-19 infection.
5. Obesity may limit visualization of lung parenchyma.

CT scanning:

Computed tomography (CT)

Two early reports from China have suggested that some *specific* CT findings may be present in patients with severe disease.

CT findings include:

1. Multilobar involvement (70-75%)
2. Ground glass opacities (45-57%)
3. Consolidation (31-33%)

Ground glass opacities and consolidations most often occur together.

4. Crazy-paving patterning:
 - A crazy-paving pattern is a *non-specific* finding on **high resolution** chest CT that refers to ground glass opacities with superimposed interlobular and intralobular septal thickening.
5. Reverse halo sign was found in a small number of patients, and pulmonary nodules with a halo sign were found in around 15% of patients.

- The halo sign is a ground glass opacity around a pulmonary nodule. It is seen on a lung window setting and represents a hemorrhage.
- The **reverse halo** sign is a ground glass opacity surrounded by a dense crescent-or ring-shaped consolidation that is at least 2 mm thick. It is also called the atoll sign.

Management

Prevention:

Chemoprophylaxis:

There is no chemoprophylaxis available for contacts.

Vaccine:

No vaccine is currently available

Personal Protective Equipment:

Full **Personal Protective Equipment** (PPE) must be used, including:

Airborne protection:

- Single-use **N95 mask** face masks

Note that **surgical masks** provide only for *droplet* protection, (not airborne) although these are probably sufficient as well, if N95 masks are not available.

N95 masks are essential for any aerosolization procedures.

Droplet protection:

- Eye protection (e.g. goggles or face shield)
- Long-sleeved gown
- Gloves (can be non-sterile)

All PPE should be **single-use** and **disposed** of into clinical waste when removed.

Hand Hygiene:

For **hand hygiene**, at the “**5 moments**” use:

- An alcohol-based hand rub if hands are visibly clean

- Soap and water when hands are visibly soiled.

Isolation:

Where available patients should be placed in a **negative pressure** isolation room.

Suspected cases of **COVID-19** infection may be *cohorting together* where single rooms are not available.

Maintain a **record** of all persons entering the patient's room including all staff and visitors.

Transfers to other healthcare facilities should be **avoided** unless it is necessary for medical care.

Patients should remain isolated until **no longer infectious**. This should be discussed with the **Department of Health**, but as an interim measure, this is likely to be until **24 hours after the resolution of symptoms**.

Minimize transfers around the ED and within the hospital

Social Distancing

- This is currently recommended at **1.5 meters**.
- Minimize any hand contact with others.
- Minimize touching one's own face (autoinoculation)
- Respiratory etiquette (e.g. sneezing into tissues or cubital fossa, as opposed to the hand).
- Adhere to Government recommendations for any unnecessary travel or gatherings.

Treatment:

No specific treatment is currently available.

1. Treatment therefore is entirely **supportive**.
2. Use of NSAIDs:
 - The European Medicines Agency (EMA) and the WHO do NOT (as of March 2020) recommend that NSAIDs be avoided when clinically indicated.

3. **Board spectrum antibiotics** should be given for very unwell patients in order to prevent / treat secondary bacterial infection.

4. **Aerosol generating procedures**

The potential for **aerosol spread** should be kept in mind when **aerosol generating procedures** are undertaken. **Full PPE must be worn.**

These may include:

- Nebulized medications
- High flow nasal oxygen
- NIV
- Intubation
- Bag-valve -mask manual ventilation.
- CPR
- Airway suctioning

5. Intubation and ventilation:

In contrast to usual practice the safety of the Health Care Worker is paramount and takes preference over the safety of the patient.

Full **PPE** for **airborne precautions** are essential

Procedures for **minimizing aerosolization** must be established at **local levels**.

Intubation must be performed by the **most experienced operator**.

Disposition:

Admission to hospital should be considered when **medically necessary**, although in consultation with the **Department of Health**, there may be circumstances where admission is warranted in order to **reduce the risk of transmission if the case resides in a communal environment, such as a hostel.**

In consultation with the **Department of Health** there *may* be agreement for a person not requiring hospitalisation who has confirmed novel coronavirus to be managed at home.

The **Department of Health** will conduct **contact tracing** for **confirmed** cases.

Exclusion/ Quarantine:

Close contacts are required to avoid **all public settings**, including schools, health services, residential and aged care services and other public settings, during the **14 days** after last unprotected contact with a potentially infectious case.

Casual contacts do not need to restrict their movement. However they should isolate themselves and contact the Department of Health if they develop symptoms in the 14 days after last casual contact with an infectious case.

Notification:

All Victorian health services and general practitioners must **phone the Department of Health** urgently on **1300 651 160, 24 hours a day**, and notify the department of any individual who meets the criteria for a **suspected case** of **COVID-19** infection.

Resources

- State Government Victoria:

www.dhhs.vic.gov.au/novelcoronavirus

- WHO Situation Reports:

www.who.int/

Appendix 1

Countries, areas or territories with COVID-19 cases reported in the last 7 days,
as of 29 March 2020, 10:00 (CET)



[1] All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

Number of cases of Serbia and Kosovo (UNSCR 1244, 1999) have been aggregated for visualization purposes.

Data Source: World Health Organization
Map Production: WHO Health Emergencies Programme

Not applicable

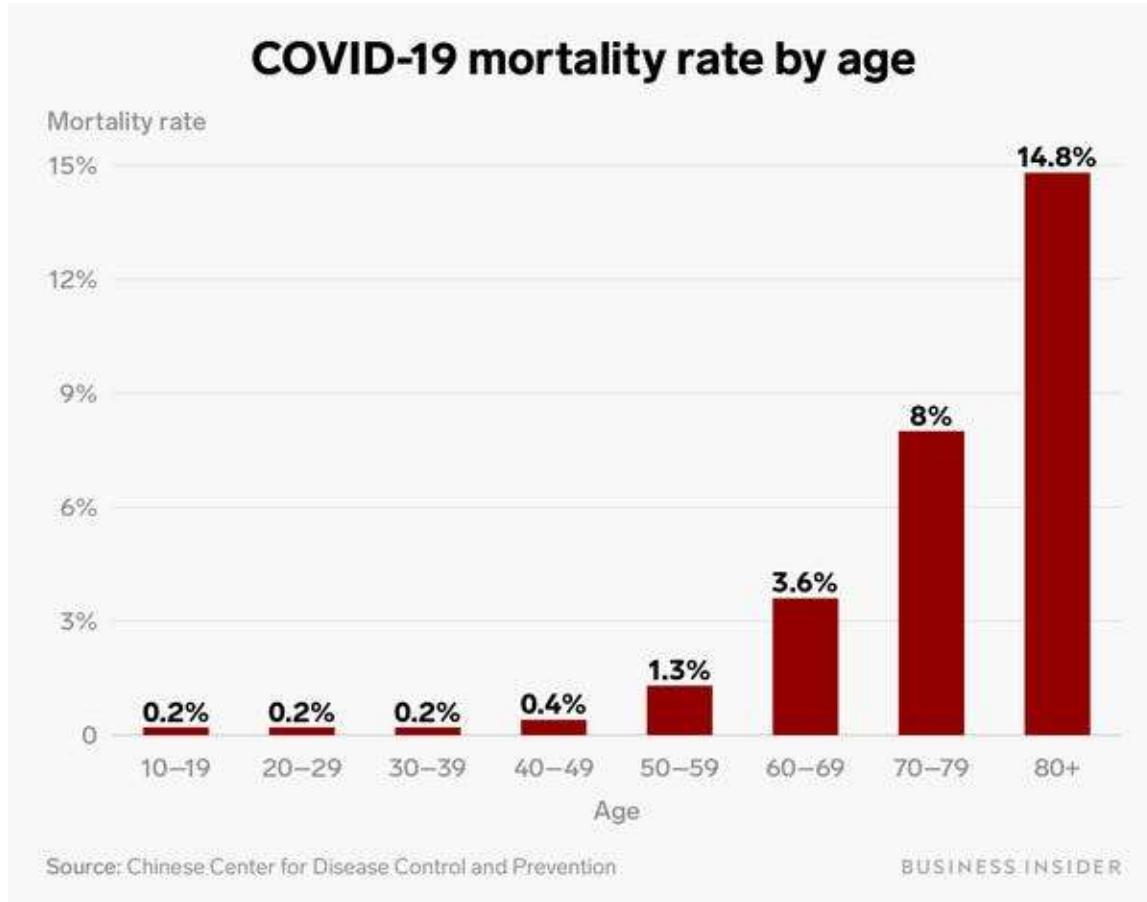
0 2,000 3,000 Km

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The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines are maps representing approximate border lines for which there may not yet be full agreement.

Locations of COVID-19 cases as of 31 March 2020 - WHO.

Appendix 2



References

1. Guidelines for Health Services and General Practitioners; ongoing Updates, **State Government, Victoria.**
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