

Hygiene and Social Distancing for Novel Coronavirus

For Manningham Probus club members March/April 2020

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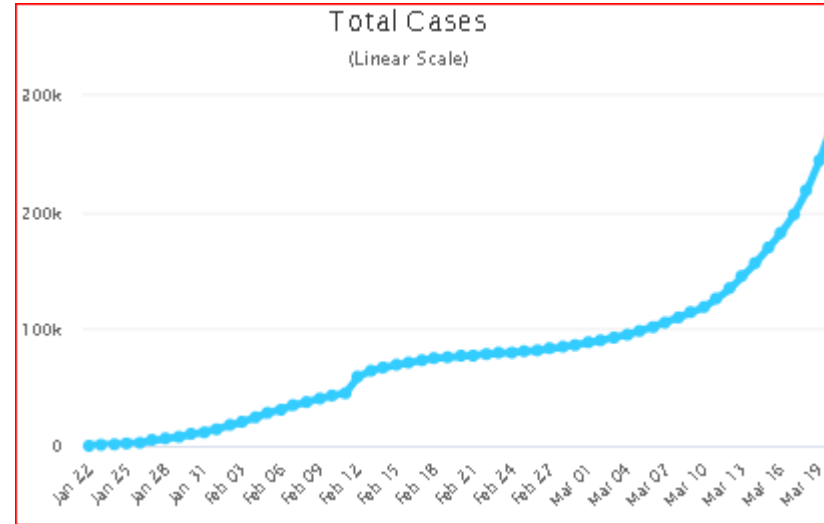
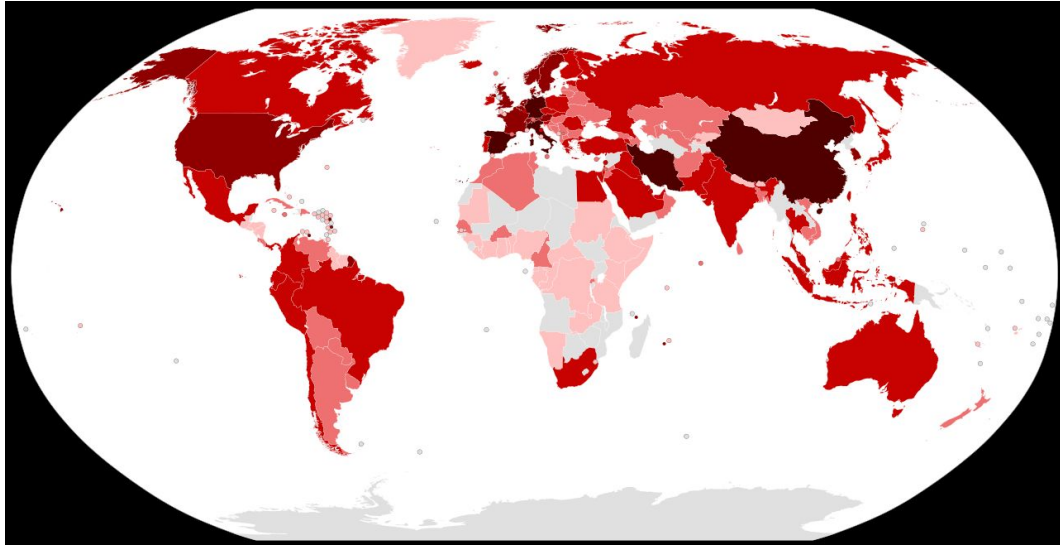
1. Background comments about COVID-19 Pandemic
2. Hygiene precautions to minimize our individual risk
3. Practical Implementation of “Social Distancing”
4. What to do if suspicious symptoms develop
5. For any questions

My phone: 0408390009

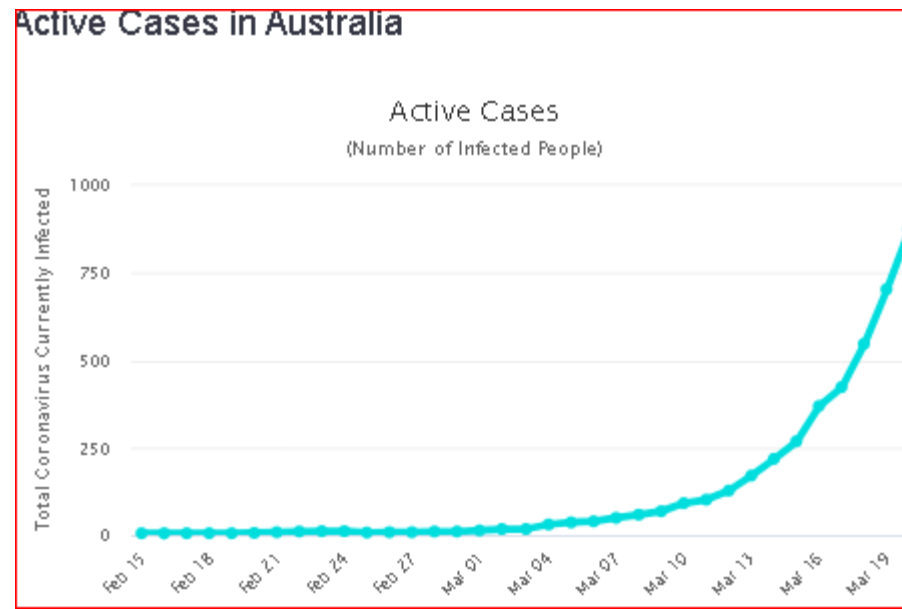
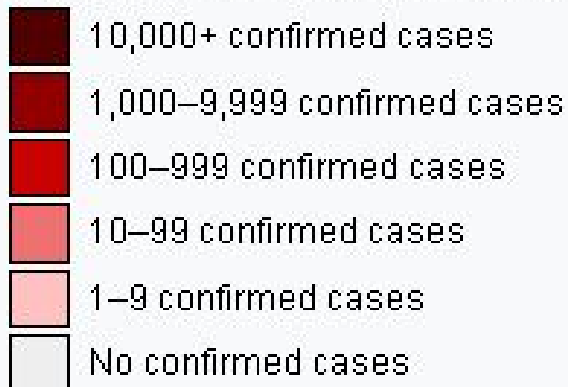
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Novel Coronavirus (CoV) Pandemic 2019-20

Virus name: SARS-CoV-2 Disease Name: COVID-19



Map of total confirmed cases as of 18 March 2020



What causes a Pandemic?

1 A Virus which is adapted to live in an animal transmits to Humans

e.g. COVID-19 in BATS ->



Pangolins ->



Humans



2. Virus may kill both itself and humans until it adapts to new host

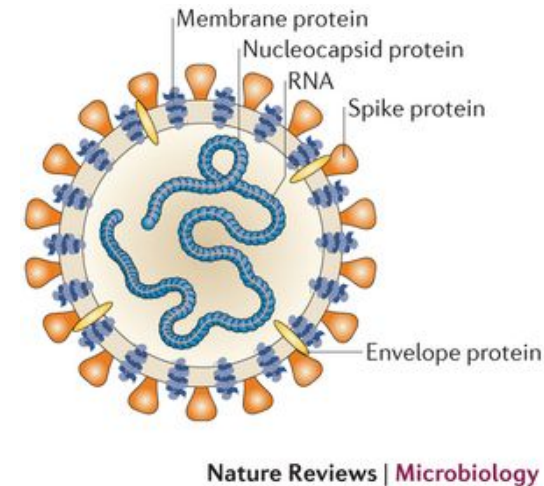
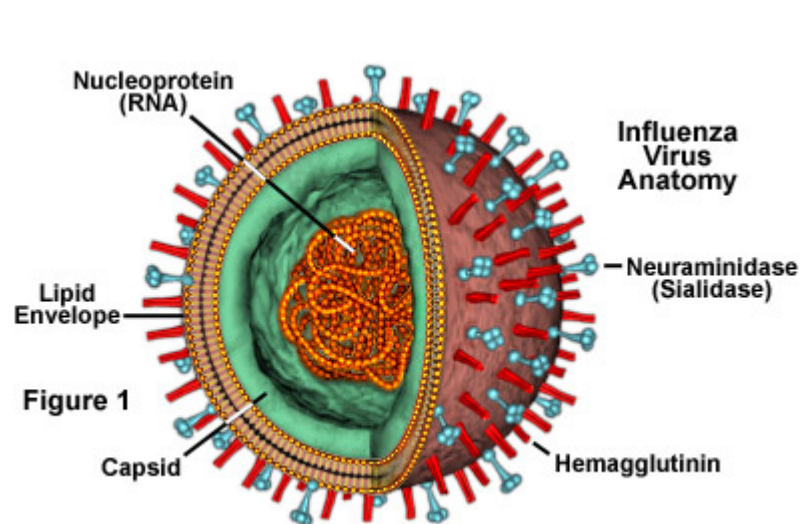
3. If it transmits easily from person to person it may then cause a pandemic

Ways that Pandemics end

(any mixture of factors below)

1. Virus adapts to host so both die less often (~1 year)
Eg 1918 Spanish flu fatal in ~100 per 1000 -> only 1 per 1000 in 1919
2. Virus infects 50%-70% of people in the world, -> spread slows
3. Vaccine developed to accelerate immunization (~12 – 18 mths)
4. New Medications eg Antiviral drugs and some others
5. Meticulous hygiene and “Social distancing” reduce transmission
 - For COVID-19 Extreme implementation of BOTH is recommended esp > 65 yrs
 - Hygiene alone is not enough for this virus, as it spreads so easily

Influenza Virus vs Novel Coronavirus (structure and function)



Both have single “error prone” RNA Nucleoprotein core rather than DNA

This means rapid mutation -> Vaccine for both will change year to year

Surface envelope inactivated by 60% alcohol & by soap

Envelope of COVID-19 binds to Angiotensin 2 receptors

? blocked by Ibesartan class antihypertensives

Influenza Virus vs Novel Coronavirus (clinical differences)

	Influenza	Novel CoronaVirus
Average Incubation Period	1-2 days	4-8 days
Early Symptoms	Severe	Mild
Risk to primary school kids	moderate	Very Minimal
Risk <65 years	low	Low - Moderate
Risk > 65 years	Moderate	High – Very high

How Sars CoronaVirus 2 spreads

(* = Less widely acknowledged modes of spread)

1. Cough/Sneeze droplet spread (~ 2 metres range)
2. Droplet contaminated surfaces -> Hand -> mouth, eyes, nose
 - Virus may survive 1 or 2 days at room temperature
3. * Microscopic aerosol exhaled from infected lungs (~30 m range)
 - Probably occurs in minority of patients, who may be asymptomatic
 - Suspended viruses float throughout air of affected rooms and last for ~1 -3 hr
 - Patients infected by breathing microscopic viral particles into lungs
4. * Gastrointestinal/faecal spread – coronavirus is often in faeces
 - esp in those patients with diarrhea (~10%)

1 Cough/Sneeze droplet protection

- Sneeze or cough into elbow
- Prefer single “use & dispose” tissues rather than hankies
- Patients with suspected coronavirus to wear masks in public
 - - Remove by straps to avoid contamination and spread
- Avoid all people who are coughing - including relatives & partners
- Avoid crowds, to reduce contact with coughing patients
- Avoid touching eyes, nose and mouth with hand
- Prefer glasses/ goggles to contact lenses for eye protection

2 Droplet-contaminated surfaces protection (Part a)

- Avoid shaking hands and touching others
- Wash hands frequently with careful technique
 - At Home: Warm water and soap for 30 secs +
 - Out: Hand lotion with >60% alcohol
- Wash before eating, & after toilet visit & touching suspect surfaces
- Suspect surfaces include stairwell rails, lift buttons, door knobs etc
- Touch exclusively your own:
 - ipad/tablet /smartphone
 - TV controller
 - Car steering wheel, chair etc

2 Droplet contaminated surfaces protection (Part b)

- Disposable gloves
 - May Use when it is needed to touch shared surfaces (eg Stair rail & in Gym)
 - Standard Gym swabs DO NOT WORK
 - Peel off without touching exterior



- Sterilize suspect surfaces at home with detergents or bleaches or Lysol
- Clothes can be effectively sterilised by WARM washing with any detergent

3 Microscopic aerosol spread protection

- Risk is greatest in crowded enclosed spaces
 - E.g Church services in Korea, Iran, Singapore, Sydney -> numerous infections



- Also avoid cruise ships, picture theatres, crowded public transport etc
- Passengers should sit in back seat – air volume in cars is limited
- This is a reason for smaller “social distancing” crowd limits indoors
- Some dental procedures can produce virus aerosol from infected patients

4 Gastrointestinal/faecal spread protection

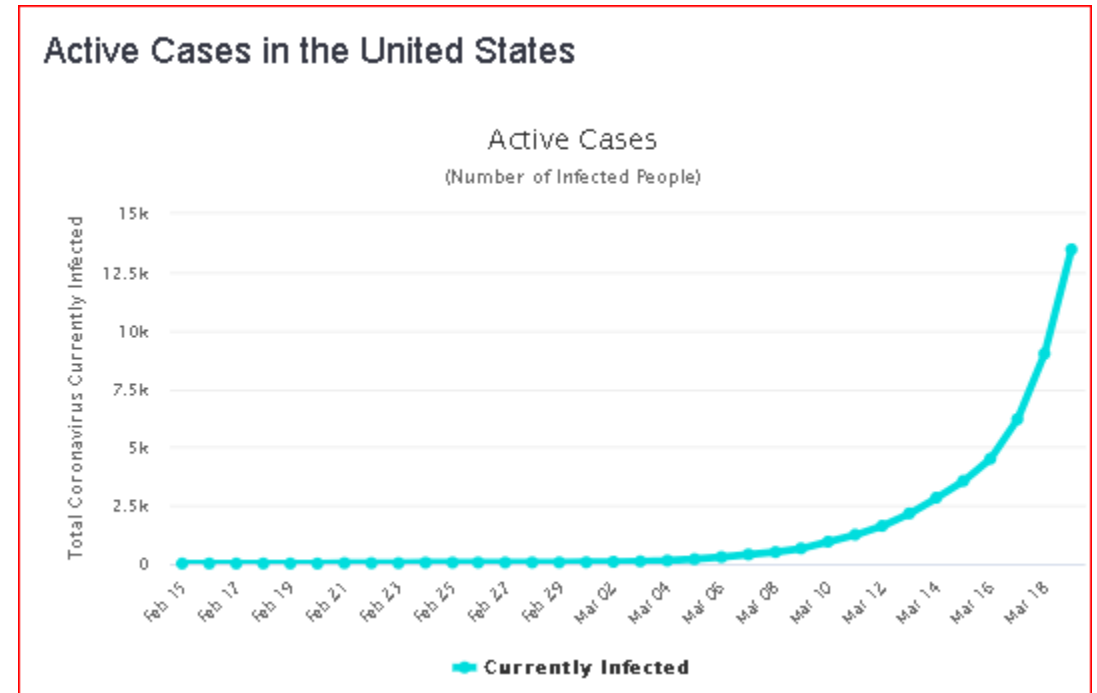
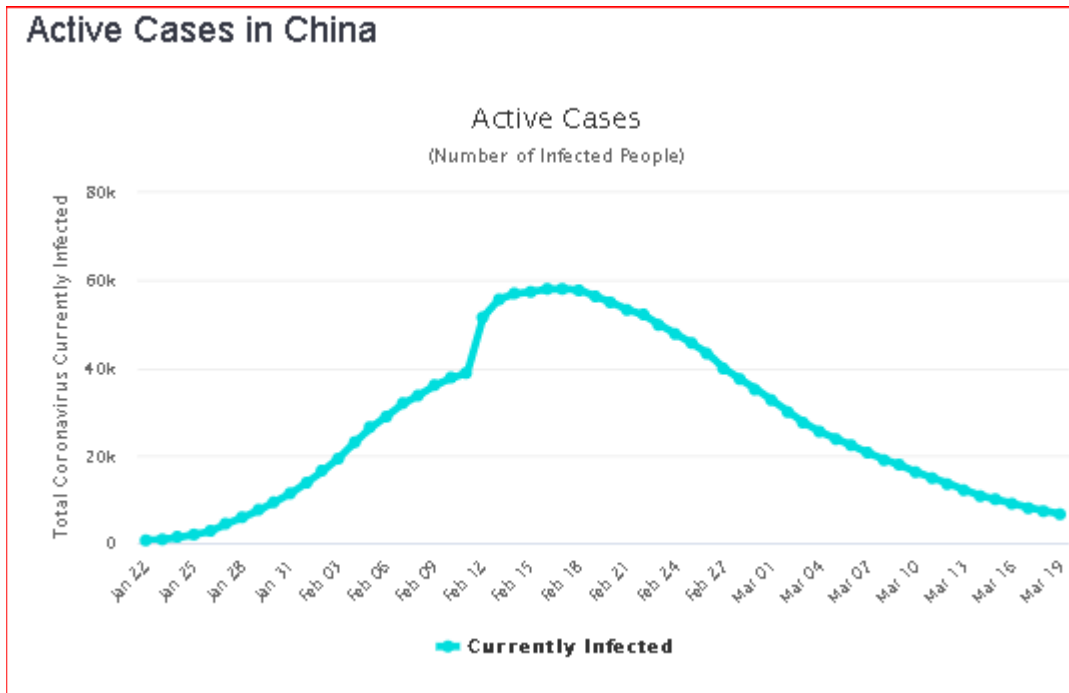
- Avoid shared toilets when possible
- Else use meticulous hygiene
- Flush toilet with lid down (?? Aerosol spread from loo)
- Avoid buffet smorgasbord meals or sharing food touched by hands
- Beware sewerage/ plumbing cross contamination in high rise units

Social Distancing

- This slows spread by:
 - Increasing distance beyond cough droplet range of ~1.5 -2.0 m
 - Reduce number of people exposed to any one infected patient
 - Reduce opportunity for aerosol spread in enclosed areas
- Hygiene precautions alone are insufficient to protect from this virus

Social Distancing can work

Aggressive social distancing in China vs Absence in United States



Social Distancing rules - applied to our age

- Avoid outdoor gatherings > 500 people
- Avoid indoor Gatherings > 100 people
 - No more than one person per 4 Square metres
- At all gatherings avoid personal contact < 2 metres
 - Even at home this is desirable for our age group and is largely achievable
 - Dr Anthony Fauci (US Director of National Institute of Allergy & Infections) “All Individuals > 65 yrs should self isolate as much as practical now and for several months, because of their extreme vulnerability” (20 Mar 2020)
 - See attached Vic DHSS guide to self isolation



Money and food

- Where possible make payments by electronic means
 - Tap and go cards
 - Online orders Credit Card or Paypal
 - Smart Phone payment systems
- Where possible obtain food by “contactless” delivery
 - E.g Meals by Ubereats, Menulog, Deliveroo, etc
 - E.g. Groceries ordered on line and delivered by Woolworths, Coles etc
 - (When Available again)
 - Eg Personal delivery by more mobile younger relatives & friends

The Big Picture - Major sources of infection

1. Hospitals and health centres
 - ~10% of victims are healthcare workers, and many were hospital visitors
 - Do not visit patients in hospital (phone them)
2. Most infections occur within family homes
 - If possible, use separate bedrooms, toilets & distance ≥ 2 M at home
 - If household member develops symptoms start full isolation ASAP
3. Social gatherings a major risk – especially in enclosed areas
 - < 500 people outdoors in fresh air, where aerosol spread is less likely
 - < 100 indoors with shared air - min 4 Sq M per person ($\equiv 2$ M distance)
 - Also avoid use of crowded public transport

If Symptoms suggest Possible COVID-19

(Cough or fever or sore throat)

- Telephone For Medical advice BEFORE attending anywhere
 - Call either GP or Coronavirus hotline 1800 675 398
 - Need for testing will be decided by a Dr
 - Usually done at special clinics setup near public Hospitals (e.g. near Austin ED)
 - Attendance instructions may include a mask to protect staff and other patients
- While travelling to testing site either self-drive or sit in back seat of car
 - Drivers have been infected by front-seat patients
- Self Isolate from 1st symptom until Negative test result is obtained
- Follow medical advice from there

If Diagnosed with COVID-19

- Usually symptoms are mild, so treat at home with Paracetamol & fluids
 - Beware - other over the counter medicines may be harmful
 - Follow medical advice
- Home isolation confined to own room + toilet etc
 - As per 3 page DHS Vic document “Quarantine at home – coping tips” (attached)
 - <https://www.betterhealth.vic.gov.au/health/ConditionsAndTreatments/quarantine-at-home-coping-tips?viewAsPdf=true>
- In most cases, symptoms remain mild, and settle after a week or two
- Seek further medical advice if shortness of breath develops
 - This is most likely after 3 - 10 days of mild symptoms and > 65 yrs
 - This might be due to the virus spreading to lungs and causing pneumonia

Conclusion

- Please take great care of yourselves so that we can meet again later this year and once again enjoy each other's company