

How to manage the threat of COVID in your workplace or institution

3 MARCH 2020



NATIONAL HEALTH
LABORATORY SERVICE



NATIONAL INSTITUTE FOR
COMMUNICABLE DISEASES

Division of the National Health Laboratory Service

Outline

- COVID-19, what is it, and where are we at?
- What are the risks to life and livelihood for South African businesses and institutions?
- How can we mitigate these risks
- Specific contexts
- Questions and answers

HOW TO STAY INFORMED:

THIS SITUATION IS RAPIDLY EVOLVING

Please check for updates on the NICD and NDoH websites
(www.nicd.ac.za and www.ndoh.gov.za)

Find the latest information from WHO on where COVID-19 is spreading:
<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>

Advice and guidance from WHO on COVID-19
<https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
<https://www.epi-win.com/>

Coronavirus Disease 2019 (COVID-19)

WHO 11th February 2020

OUT

Novel Corona virus-2019 (NCoV-19)



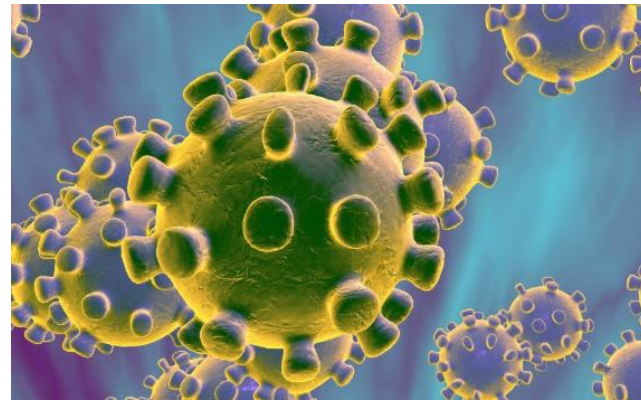
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The clinical condition caused by the virus is called COVID-19; (CoronaVirus Disease-2019)

The virus itself is called SARS-CoV-2



COVID-19: what is it and where
are we at?



COVID-19: what is it and where are we at?

- 31 December 2019, the World Health Organization (WHO) China country office reported a cluster of pneumonia cases in Wuhan, Hubei Province of China
- 7 January 2020, causative pathogen identified as a novel coronavirus (COVID-2019)
- Initially person-to-person transmission not apparent, majority of the cases were epidemiologically linked to a seafood, poultry and live wildlife market (Huanan Seafood Wholesale Market) in Jiangnan District of Hubei Province
- Number of cases continued to increase rapidly, and evidence of person-to-person transmission mounted

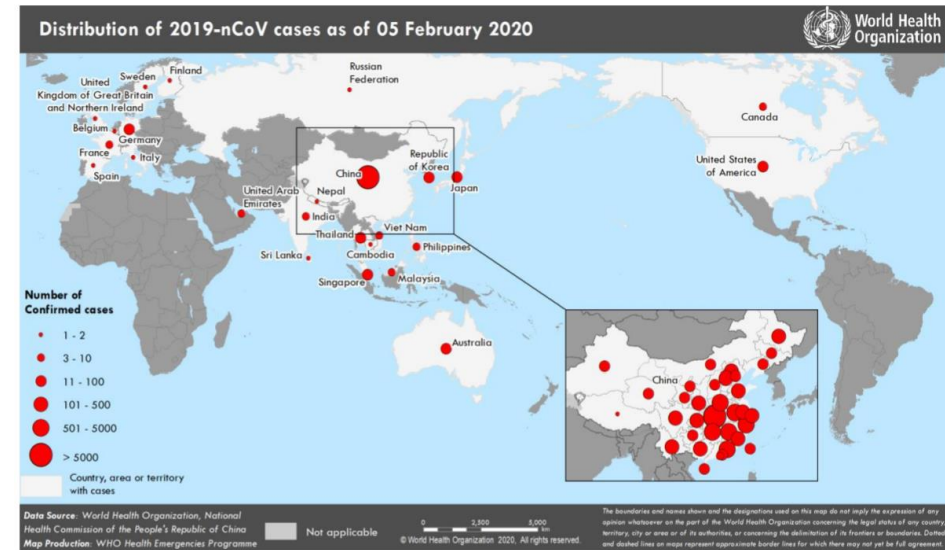
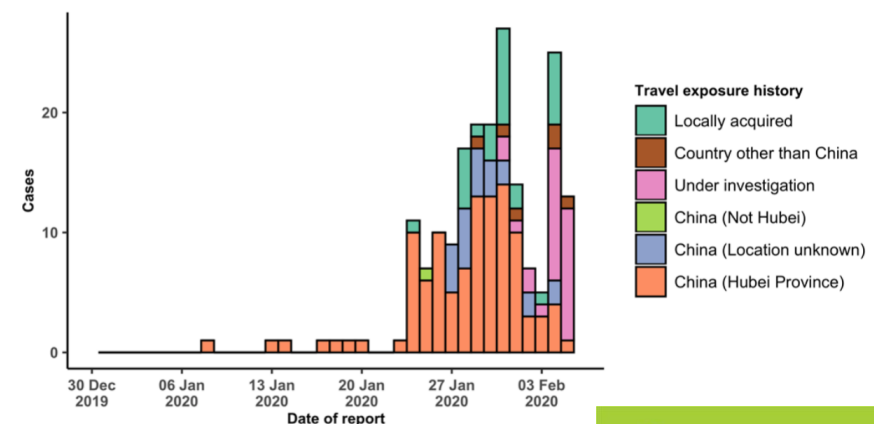
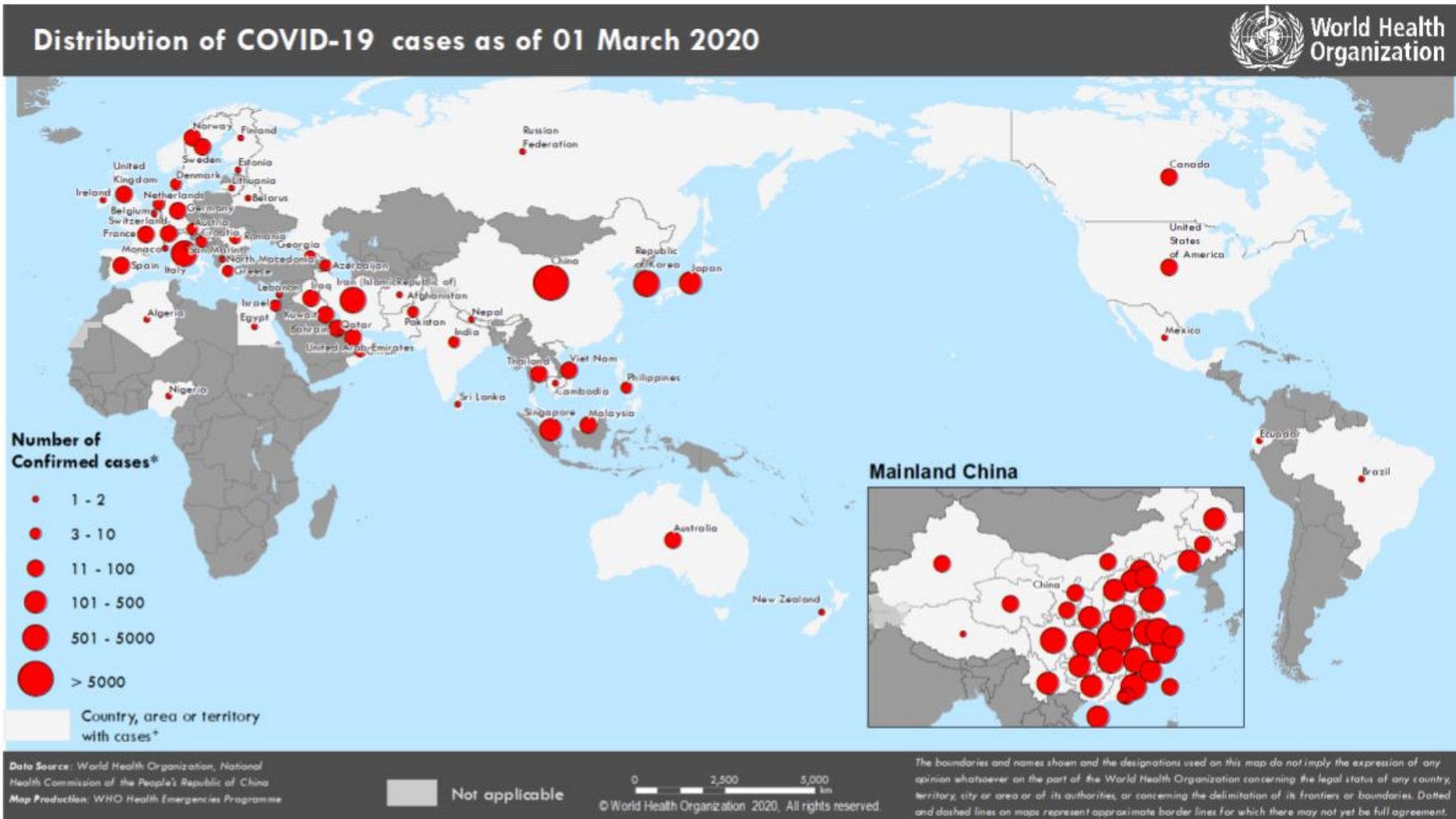


Figure 3: Epidemic curve of 2019-nCoV cases (n=191) identified outside of China, by date of reporting and travel history, 5 February 2020

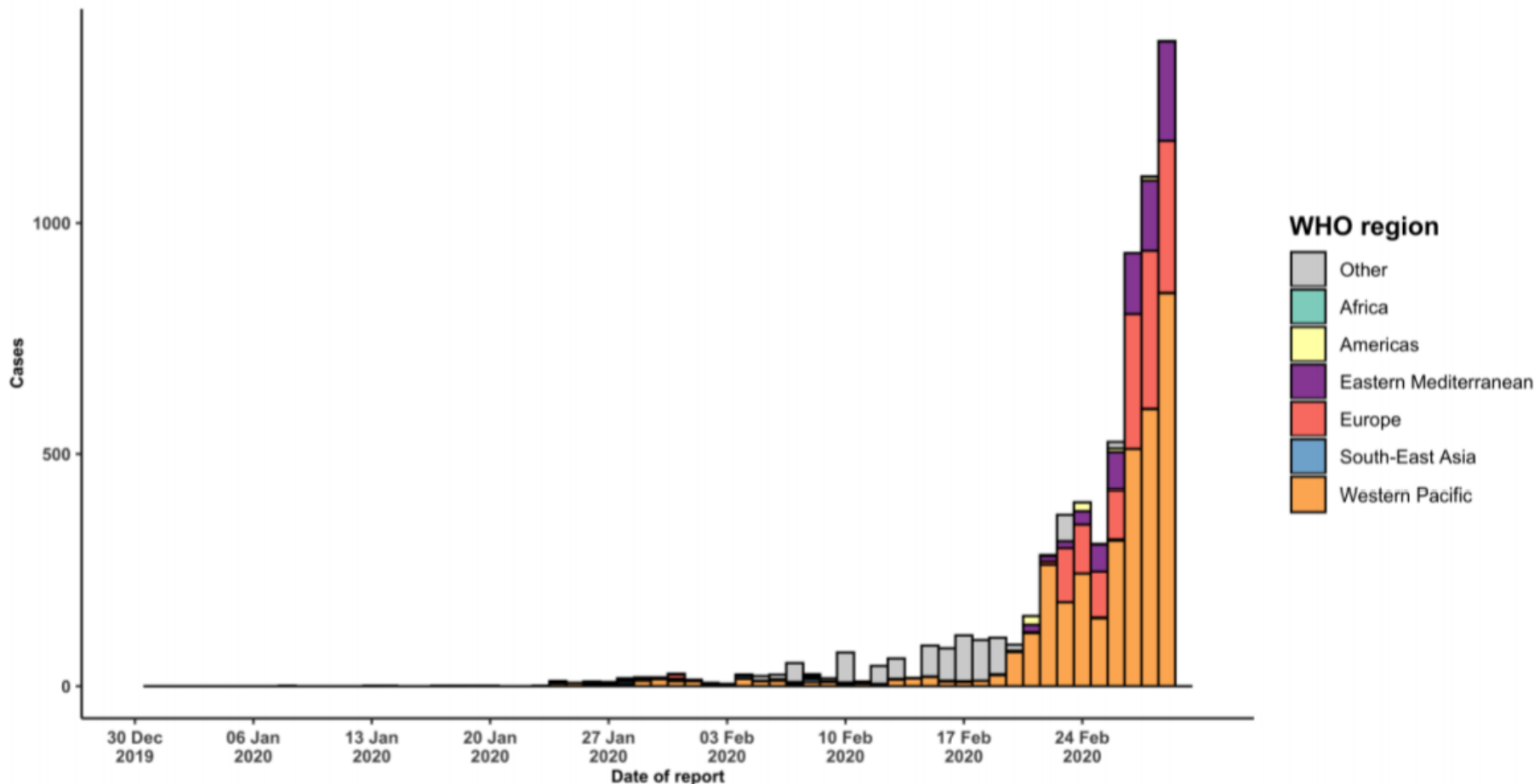


COVID-19: what is it and where are we at?



COVID-19: what is it and where are we at?

Figure 2. Epidemic curve of confirmed COVID-19 cases (n=6567) reported outside of China, by date of report and WHO region with complete days of reporting through 29 February 2020



COVID-19: what is it and where are we at?

- Coronaviruses cause disease among animals and humans
- Some HCoVs cause common **mild upper respiratory tract infections** (URTIs) (*HCoV-229E*, *HCoV-OC43*, *HCoV-NL63*, *HCoV-HKU1*)
- Some coronaviruses have crossed the species barrier and caused ‘zoonoses’
 - SARS-CoV (2002-2003 global outbreak; spread to **37 countries within 2 weeks** of original outbreak reporting; **8,098 probable cases and 774 deaths**)
 - MERS-CoV (first ID-ed in 2012; as of Oct 2019 **>2400 lab-confirmed cases with >850 deaths**; high mortality; mostly contained within the Middle East, but has been detected in 17 other countries.)



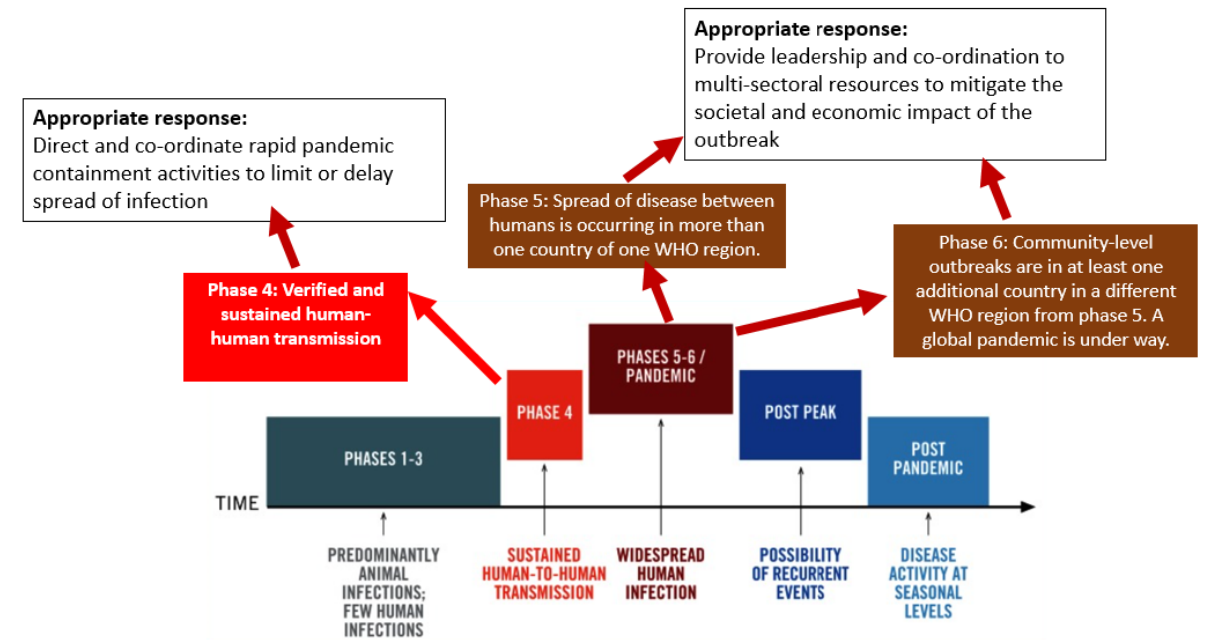
COVID-19: what is it and where are we at?

- How is COVID-19 diagnosed
 - Samples from the respiratory tract (sputum, throat swab)
 - A molecular test to identify genetic material (RNA) of the virus
 - The test will only be positive if a person has active disease (which may vary from very mild to severe)
 - The test does not identify persons who are incubating the infection
 - A turn-around time of 24 hours after reaching the lab.
- Who is tested?
 - See next section
 - We DO NOT test asymptomatic persons
 - We do not test to understand if someone has been exposed, or to give them an 'all clear'



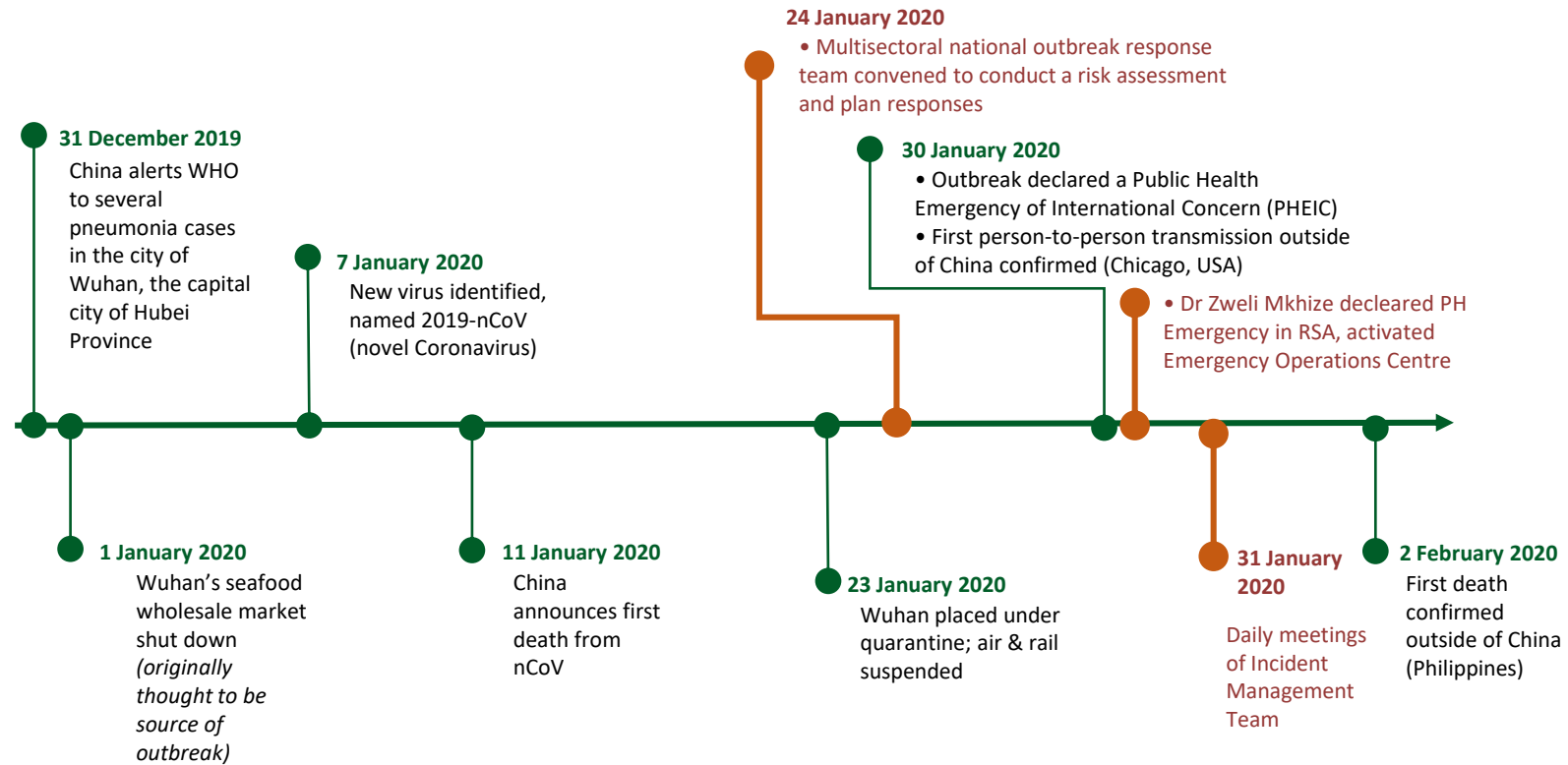
COVID-19: what is it and where are we at?

- Areas with no imported cases of COVID are adopting a containment approach when responding to detected cases
- Aim of containment:
 - Prevent secondary cases
 - Identify those at risk, followed by early detection and isolation of cases
 - Quarantine may be considered for those at risk
 - Persons returned from areas where there is widespread community transmission are deemed at risk



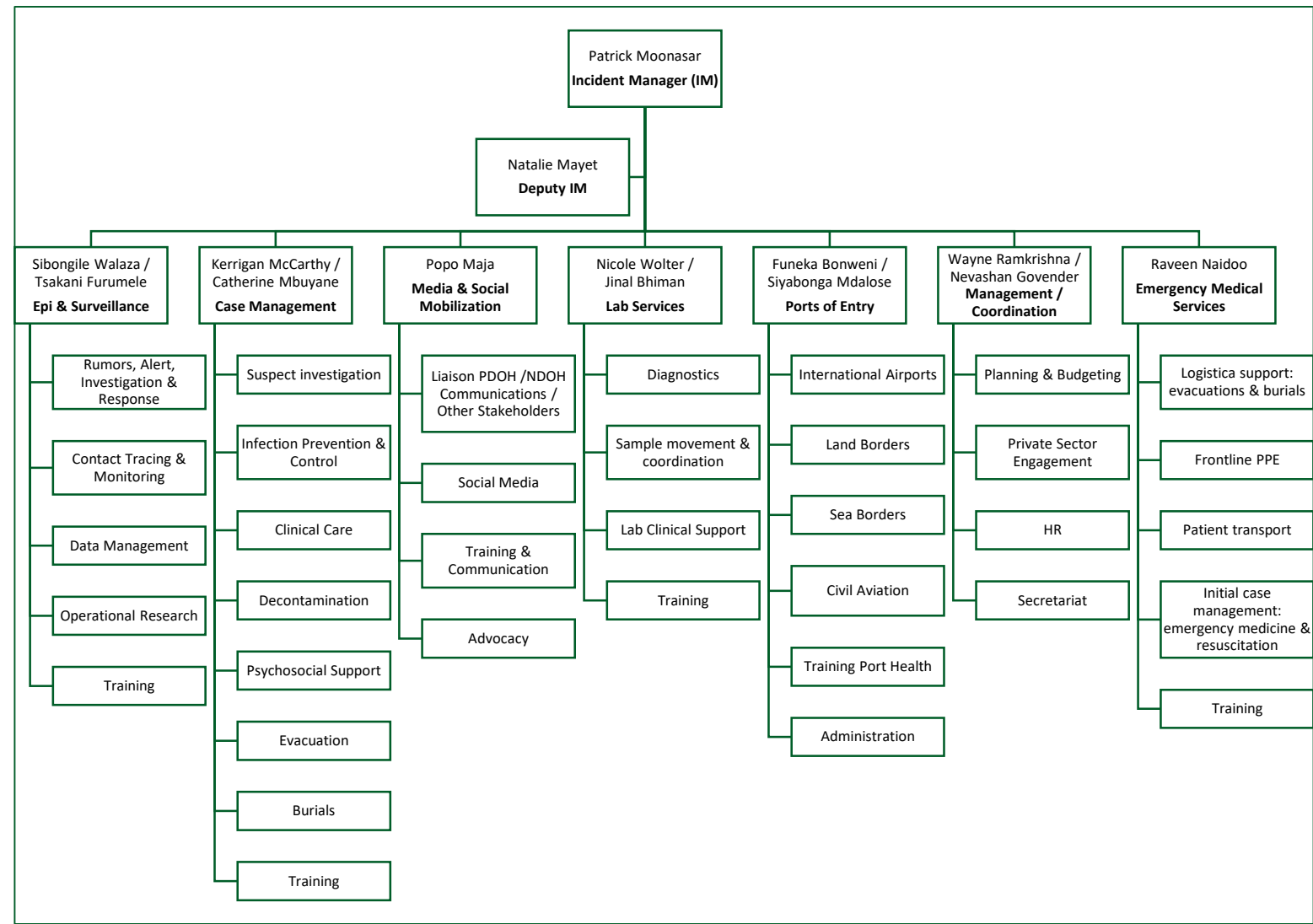
COVID-19: what is it and where are we at?

South Africa's response



COVID-19: what is it and where are we at?

- How is RSA preparing?
 - An incident management structure
 - Epi and surveillance
 - Case management and facility readiness
 - Laboratory services
 - Ports of entry
 - Emergency medical services
 - Communication
 - Logistics and HR
 - Regular meetings
 - Situation reports

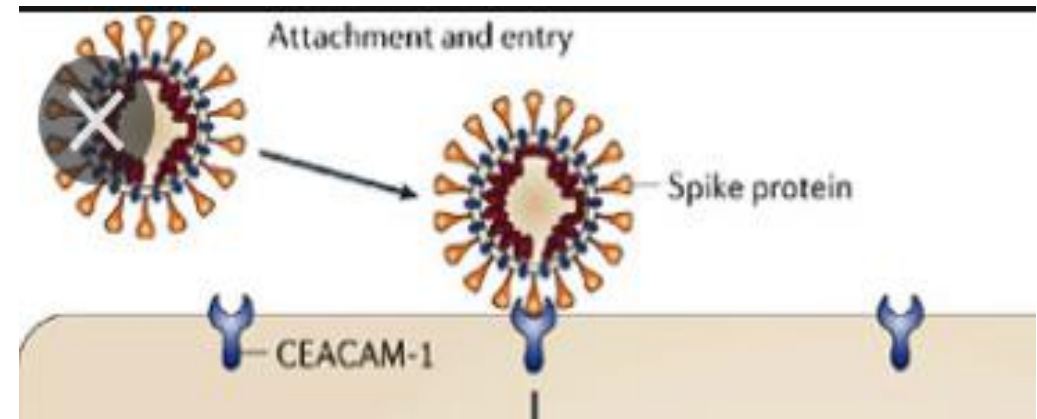


COVID-19: what are the risks to life and livelihood?



COVID-19: what are the risks to life and livelihood?

- How is SARS-CoV-2 transmitted?
 - Before causing disease, a bacterium or virus must ATTACH to a cell
 - Viruses attach to specific proteins on the surface of human cells
 - After attachment, they are able to enter the cell and cause disease.
 - The site of the specific receptor tells us how the organism is transmitted.

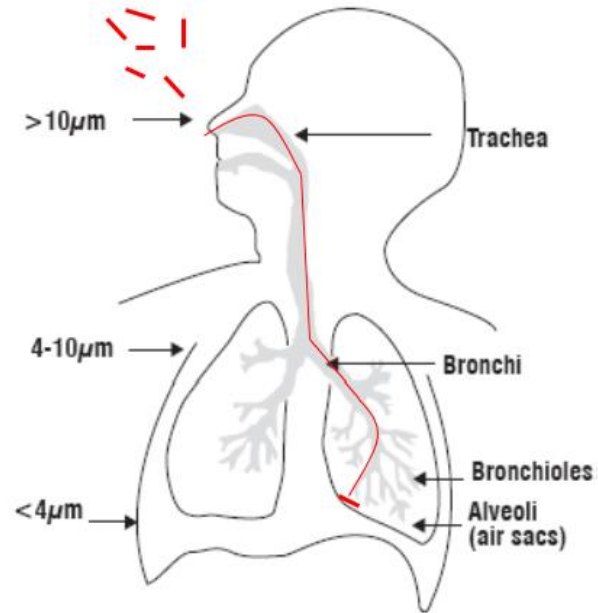


COVID-19: what are the risks to life and livelihood?

- Coronaviruses of the beta-coronavirus clade must attach to proteins on the surface of epithelial cells in the **upper airways** called angiotensin converting enzyme (ACE)
- Therefore 'carrier droplets' need not be very small.



Figure 2. Sizes of droplet nuclei and site of deposition in the respiratory tract.



- Tuberculosis bacteria must attach to proteins on the surface of the alveolar macrophage
- Therefore the 'carrier droplets' must be very small to enter the alveoli

COVID-19: what are the risks to life and livelihood?

- Coughing generates droplets of different sizes
- Larger droplets fall to the ground within a 1-2m radius of the person within a few seconds



COVID-19: what are the risks to life and livelihood?

- Survival in the environment depends on
 - pH
 - Innoculum size
 - Dryness
 - Temperature
 - Exposure to disinfectants



Journal of Hospital Infection

journal homepage: www.elsevierhealth.com/journals/jhin



Review

Transmission of SARS and MERS coronaviruses and influenza virus in healthcare settings: the possible role of dry surface contamination[☆]

J.A. Otter^{a,*}, C. Donskey^b, S. Yezli^c, S. Douthwaite^d, S.D. Goldenberg^d, D.J. Weber^e

^aImperial College Healthcare NHS Trust, London, UK

SARS-CoV and MERS-CoV appear to have an unusual capacity to survive on dry surfaces compared with other human coronaviruses (229E, OC43, and NL63).^{17,28,27,31,44} SARS-CoV, like the non-enveloped adenovirus comparator, survived for more than six days when dried on to Petri dishes compared with human coronavirus HCoV-229E, which survived for less than 72 h.²⁸ Although data are limited, it appears that MERS-CoV may survive on surfaces for longer than most human coronaviruses.¹⁶ Since other human coronaviruses do not share the

^bSt. James's Foundation Trust & King's College

^cH5N1, and H5N7 influenza viruses, and Middle East respiratory syndrome (MERS) viruses. SARS-CoV, MERS-CoV, and influenza viruses, sometimes up to months. Factors

very limited capacity to survive on dry surfaces.^{13–15} However, several studies suggest that SARS-CoV, MERS-CoV and influenza virus have the capacity to survive on dry surfaces for a sufficient duration to facilitate onward transmission.^{16–18} SARS-CoV

COVID-19: what are the risks to life and livelihood?

Coronavirus



Direct contact

- Touching an ill person or a contaminated surface
- E.g. agents of diarrhoea, skin infections, common cold, ebola virus

Control

- Gloves, +/- gowns, masks, visors (to prevent mucous membrane splashes, contamination of clothing)



Droplet transmission

- Inhaling droplets (up to 1/4mm in diameter)
- Persons within 2m radius are at risk. On aircraft, 2 rows behind and in front
- E.g. agents of bacterial pneumonia, Neisseria meningitidis

Control

- Gloves, surgical masks, +/- gowns, masks, visors (to prevent mucous membrane splashes, contamination of clothing)

Airborne transmission

- Inhaling droplets smaller (10-20um in diameter)
- Persons breathing the same air
- E.g. influenza, measles, chickenpox,

Control

- Gloves, N95 masks, +/- gowns, masks, visors (to prevent mucous membrane splashes, contamination of clothing)



Vector transmission

- Contact with vector
- E.g. malaria, dengue, Zika,

Control

- Prevent/eliminate exposure to vector
- Chemoprophylaxis if possible



COVID-19: what are the risks to life and livelihood?

- Mean incubation period 5.2 days (95% confidence interval [CI], 4.1 to 7.0), 95th percentile of the distribution at 12.5 days.
- 14 days of isolation or quarantine is suggested as it allows a window of 1.5 additional days. (Li, 2020)
- In early stages, epidemic doubled in size every 7.4 days
- Basic reproductive number was estimated 2.2 (95% CI, 1.4 to 3.9) - on average each infectious case gives rise to just over 2 infectious cases.



COVID-19: what are the risks to life and livelihood?

- **Clinical presentation and outcome**

- Fever, cough, shortness of breath
 - 80% of persons have mild-moderate disease (as severe as 'flu' or the common cold)
 - 15% of cases require hospital admission
 - 5 % of cases are become critically ill and require ICU of which 2% die.
 - Persons with underlying co-morbid illness esp pulmonary disease, and the elderly are more at risk.
 - Very few children under 15 years of age
- Case fatality is around 2.%, higher in critically ill and elderly
 - Likely a substantial overestimation of the true case fatality ratio:
 - More severe disease tends to be reported first
 - Initial case definition in China really focused on patients with pneumonia
 - Possible backlog in testing and confirming cases in China

COVID-19: what are the risks to life and livelihood?

- Health consequences
 - Time off work (80%)
 - Admission with extensive time off work (15%)
 - Loss of staff (2%)
- Economic consequences

COVID-19: how can we mitigate risks to life and livelihood?



How can we mitigate these risks?

- Educate and inform (risk communication)
- Minimise risks of transmission in the workplace / institution
- Identify persons at risk early and respond appropriately
- Respond appropriately to a case of COVID amongst staff
- Business continuity and pandemic preparedness

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- Give people facts about how the disease is transmitted
- Clear policies regarding sick leave.
 - Don't punish people for staying away for 'flu'
 - Make it possible to work from home
- Understand travel risks and make informed decisions re risk-benefit of travelling
- Public Hotline number 0800 029 999



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Simple ways to prevent the spread of COVID-19 in your workplace

- Surfaces (e.g. desks and tables) and objects (e.g. telephones, keyboards) disinfection
- Promote regular and thorough hand-washing by employees, contractors and customers
 - Make it easy!
- Respiratory hygiene
 - Make it easy
- Encourage / insist that symptomatic persons stay away / self isolate



World Health
Organization

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Regarding travel

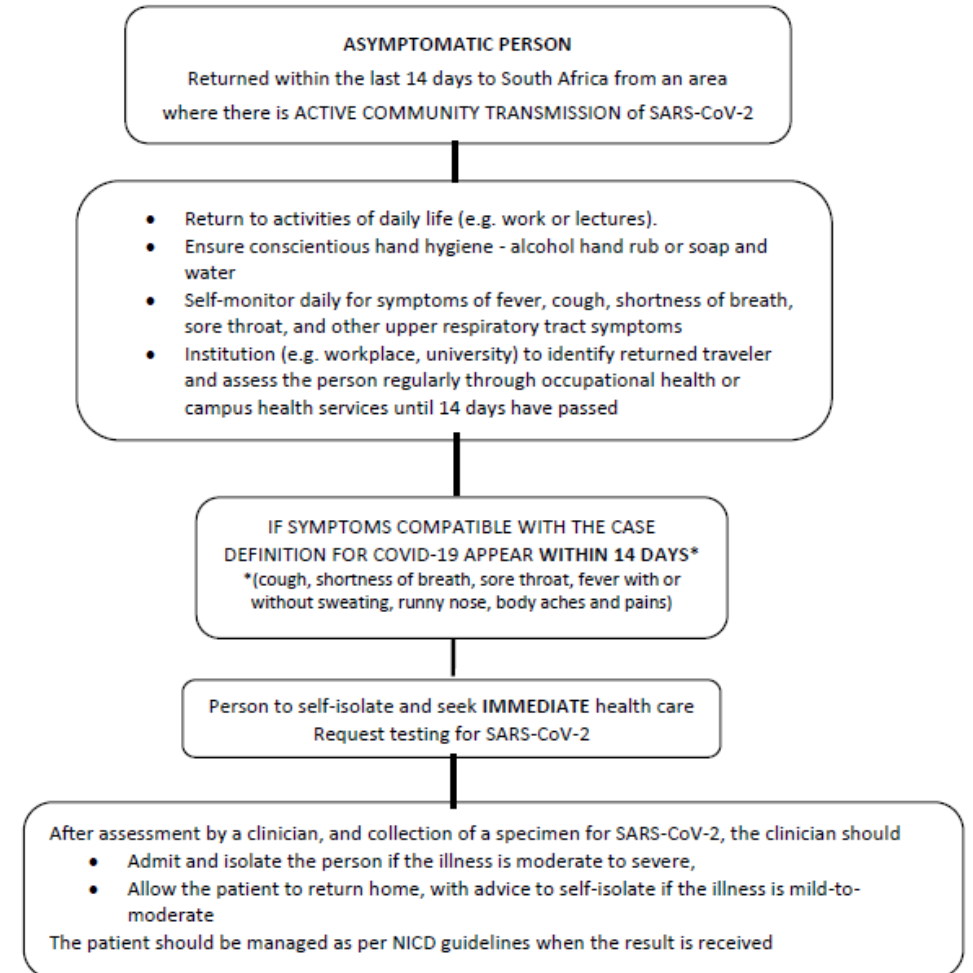
- Before
 - Evaluate the necessity for travel through risk-benefit assessment.
 - Be informed
 - Persons with underlying illness or older persons are at higher risk of severe illness
- During
 - Wash hands regularly, avoid sick persons, practice cough etiquette.
 - Masks not helpful



World Health
Organization

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- Educate and inform (risk communication)
 - Minimise risks of transmission in the workplace / institution
 - Identify persons at risk early and respond appropriately
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- While there is no official policy on quarantine of persons returning from an area with community transmission of COVID, asymptomatic persons should self-monitor for symptoms for 14 days after return
 - If symptoms develop, self-isolate until testing confirms a negative result



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- Which countries have community transmission?
 - Check NICD website for latest case definition
 - Check WHO situation report for country tables.

Table 2. Countries, territories or areas outside China with reported laboratory-confirmed COVID-19 cases and deaths. Data as of 01 March 2020



Country	Total confirmed* cases (new)	Total deaths (new)	Transmission classification†	Days since last reported case
Western Pacific Region				
Republic of Korea	3736 (586)	18 (1)	Local transmission	0
Japan	239 (9)	5 (0)	Local transmission	0
Singapore	102 (4)	0 (0)	Local transmission	0
Australia	25 (1)	0 (0)	Local transmission	0
Malaysia	24 (0)	0 (0)	Local transmission	2
Viet Nam	16 (0)	0 (0)	Local transmission	17
Philippines	3 (0)	1 (0)	Imported cases only	26
Cambodia	1 (0)	0 (0)	Imported cases only	34
New Zealand	1 (0)	0 (0)	Imported cases only	2

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- Maintain a risk register of persons who have travelled or are at other risk of developing COVID
 - Request them to self-monitor if they are asymptomatic
 - If they are contacts of confirmed cases, they need to self-quarantine
- Support these persons by regular enquiries regarding their health
- Avoid stigma
- Enable quarantine through sick leave policies

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- Amongst symptomatic persons, be aware of the case definition
 - Persons with acute respiratory illness with sudden onset of at least one of the following: cough, sore throat, shortness of breath or fever [$\geq 38^{\circ}\text{C}$ (measured) or history of fever (subjective)] irrespective of admission status **AND**
 - In the 14 days prior to onset of symptoms, met at least one of the following epidemiological criteria:
 - Were in close contact¹ with a confirmed² or probable³ case of SARS-CoV-2 infection;
OR
 - Had a history of travel to areas with presumed [ongoing community transmission of SARS-CoV-2](#); i.e., Mainland China, South Korea, Singapore, Japan, Iran, Hong Kong, Italy, Vietnam and Taiwan.
OR
 - Worked in, or attended a health care facility where patients with SARS-CoV-2 infections were being treated
OR
 - Admitted with severe pneumonia of unknown aetiology.

How can we mitigate these risks?

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Amongst symptomatic persons, be aware of the contact definition

- **Close contact:**
 - *A person having had face-to-face contact or was in a closed environment with a COVID-19 case; this includes, amongst others, all persons living in the same household as a COVID-19 case and, people working closely in the same environment as a case.*
 - *A healthcare worker or other person providing direct care for a COVID-19 case, while not wearing recommended personal protective equipment or PPE (e.g., gowns, gloves, NIOSH-certified disposable N95 respirator, eye protection).*
 - *A contact in an aircraft sitting within two seats (in any direction) of the COVID-19 case, travel companions or persons providing care, and crew members serving in the section of the aircraft where the index case was seated.*

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Other definitions

- *Quarantine*
 - *Separation of asymptomatic persons for a period longer than the incubation period of the disease*
- *Isolation*
 - *Separation of a symptomatic (ill) person to ensure that the disease is not transmitted*

How can we mitigate these risks?

- Educate and inform (risk communication)
 - Minimise risks of transmission in the workplace / institution
 - Identify persons at risk early and respond appropriately
 - Respond appropriately to a case of COVID amongst staff
 - Business continuity and pandemic preparedness
- Who should be tested?
 - Presently, the only persons who should undergo testing for COVID-2019 are those described above under Person Under Investigation (PUI).
 - All case to be discussed with NICD doctor on call before collecting samples
 - The test will be free of charge for patients meeting the case definitions above

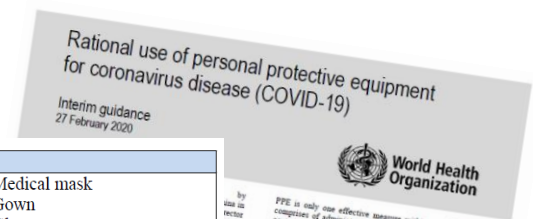
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- Person meets case definition
 - Isolate person
 - Provide mask for person
 - Contact NICD hotline
 - Determine whether the occupational practitioner will submit specimen or whether patient will be referred to another provider for specimen collection
 - If specimen to be collected by occupational health
 - Have specimen collection material ready, including specimen submission form, and patient under investigation form.
 - If patient to be referred
 - Know the referral pathways, arrange with the practitioner

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- Educate and inform (risk communication)
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- Personal protective equipment for occupational health practitioners
 - Don't let a person who meets the case definition catch you by surprise
 - Put posters in the waiting room
 - Provide tissues/mask in the waiting area
 - Follow WHO guidelines for PPE
 - When taking specimens use N95 respirator and eye protection

Outpatient facilities			
Consultation room	Health care workers	Physical examination of patient with respiratory symptoms	Medical mask Gown Gloves Eye protection
	Health care workers	Physical examination of patients without respiratory symptoms	PPE according to standard precautions and risk assessment
	Patients with respiratory symptoms	Any type	Medical mask if tolerated
	Patients without respiratory symptoms	Any	No PPE required
	Cleaners	After/between consultations with patient with respiratory symptoms	Medical mask Gown Heavy duty gloves Eye protection (if risk of splash of organic material or chemicals) Boots or closed work shoes



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- At the health care facility the following will be done
 - The clinician will contact NICD hotline
 - The specimen will be collected (naso/oro pharyngeal swabs, sputum)
 - Transport of specimen to NICD asap
 - Patient isolated / wears mask
 - Health Care Worker contact and droplet precautions, airborne precautions while collecting specimens/procedures that generate aerosols
 - Hospital IPC informed
 - Contact line list developed
 - NMC category-1 notified
 - Provincial Communicable Disease Cluster/Provincial IPC informed

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If a person meets the case definition

- Isolate the patient using appropriate infection prevention control (see next section)
- Collect a specimen ASAP (see next section)

Once laboratory testing confirms COVID-2019 infection:

- Close contacts MUST self-quarantine at home for 14 days after exposure to the confirmed COVID-2019 and take their temperature daily (thermometers need to be issued)
- CDC / NICD/ delegated person will call contacts telephonically to identify if symptoms are present

Close contacts under monitoring should be advised to:

- Remain at home (NICD can provide an official letter for employment or education facilities)
- Avoid unnecessary social contact
- Avoid travel
- Remain reachable for monitoring

Transparent communication with employees whilst maintaining confidentiality and avoid stigma

Close Contact Monitoring Tool



2019-nCoV DAILY SYMPTOM MONITORING TOOL



Complete for each contact of confirmed case.

Use electronic database if possible.

If not captured electronically at site, forward to ncov@nicd.ac.za, on completion of last day of monitoring.

Details of contact of case under investigation/confirmed case		
NICD Identifier	Date last contact	Place last contact
Surname	Name	
Date of birth	Age (Years)	Sex M ☐ F ☐
Contact #	Alternative contact #	
Relation to case	Place of contact	
Healthcare worker	Facility name	
Traced	Contact type*	Close ☐ Casual ☐
Email	Monitoring method**	Direct ☐ Self-digital ☐ Self-telephonic ☐ Active-telephonic ☐
Quarantine	Facility where quarantined	
Physical address (for next month, in South Africa)		
House #	Street	Suburb
Town	Municipality	
District	Province	
Next of kin or alternative contact person details		
Name, surname	Contact number(s)	

Details of health official completing form		Today's date
Surname	Name	DD/MM/YYYY
Role	Facility name	
Email address	Telephone number(s)	

Instructions for completion: Mark "Y" if symptom present and "N" if not. If any symptoms are present collect, contact _____ immediately and make immediate arrangements for the collection of a combined nasopharyngeal and oropharyngeal swab. Refer to 2019-nCoV Quick Guide on the NICD website for additional details.

DAY	1	2	3	4	5	6	7
Date (DD/MM)							
Fever ($\geq 38^{\circ}\text{C}$)	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Chills	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Cough	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Sore throat	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Shortness of breath	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Myalgia/body pains	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Diarrhoea	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N

DAY	8	9	10	11	12	13	14
Date (DD/MM)							
Fever ($\geq 38^{\circ}\text{C}$)	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Chills	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Cough	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Sore throat	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Shortness of breath	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Myalgia/body pains	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Diarrhoea	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N

PDF version at: <http://www.nicd.ac.za/diseases-a-z-index/novel-coronavirus-infection/>

Contact line List



2019-nCoV CONTACT LINE LIST

Complete a contact line list for every case under investigation and every confirmed case



Details of case under investigation/confirmed case			
NICD Identifier		Date Symptom Onset	DD/MM/YYYY
Surname		Name	
Contact number		Alternative number	
Travel (provide details of all: 7 days before onset)		Travelled by	Bus ☐ Plane ☐
Air/bus line		Flight/bus #	Seat #

Details of health official completing this form		Today's date
Surname		DD/MM/YYYY
Role		Name
Email address		Facility name
		Telephone number(s)

Details of contacts (With close contact¹ 7 days prior to symptom onset, or during symptomatic illness.)

	Surname	First name(s)	Sex (M/F)	Age (Y)	Relation to case ²	Date of last contact with case	Place of last contact with case (Provide name and address)	Residential address (for next month)	Phone number(s), separate by semicolon	HCW? ³ (Y/N) If Yes, facility name
1						DD/MM/YYYY				
2						DD/MM/YYYY				
3						DD/MM/YYYY				
4						DD/MM/YYYY				
5						DD/MM/YYYY				
6						DD/MM/YYYY				
7						DD/MM/YYYY				
8						DD/MM/YYYY				

¹ Close contact: A person having had face-to-face contact (≤ 2 metres) or was in a closed environment with a 2019-nCoV case; this includes, amongst others, all persons living in the same household as a 2019-nCoV case and, people working closely in the same environment as a case. A healthcare worker or other person providing direct care for a 2019-nCoV case, while not wearing recommended personal protective equipment or PPE (e.g., gowns, gloves, NIOSH-certified disposable N95 respirator, eye protection). A contact in an aircraft sitting within two seats (in any direction) of the 2019-nCoV case, travel companions or persons providing care, and crew members serving in the section of the aircraft where the index case was seated.. ² Chose from: Aunt, Child, Class mate, Colleague, Cousin, Father, Friend, Grandfather, Grandmother, Healthcare worker taking care of, Mother, Nephew, Niece, Other relative, Uncle. ³ Healthcare worker.

How can we mitigate these risks?

- Educate and inform (risk communication)
 - Minimise risks of transmission in the workplace / institution
 - Identify persons at risk early and respond appropriately
 - Respond appropriately to a case of COVID amongst staff
 - Business continuity and pandemic preparedness
- Aim
 - to ensure smooth business operations during a time of social change/crisis
 - Benefits
 - ensures comprehensive and co-ordinated response to crisis whilst keeping employees safe and business operational
 - Commercial aspects
 - Supply chain
 - Business operations continuity
 - Human resources
 - Key staff
 - Surge or relief capacity
 - Health
 - Scenario planning - Actions to follow in event of a suspected or confirmed case
 - Emphasize key points such as the importance of staying away from work even if they have only mild symptoms or have had to take simple medications (e.g. paracetamol, ibuprofen) which may mask the symptoms
 - Address the mental health and social consequences of a case of COVID-19,
 - Partnerships with local authorities

COVID-19: Risk mitigation in specific contexts



Schools and universities

- Students/families returning from areas with community transmission of COVID-19
 - Return to activities of daily life
 - Self-monitor, if symptomatic self-isolate until test negative
- Contacts of confirmed cases
 - Follow NDoH guidance; self-quarantine will be required
- Residences and dining halls
 - Monitor students health and identify cases early
- Community transmission in RSA
 - School closure has not been shown to influence the course of influenza outbreaks in many studies across the world
 - Decisions on mass school closure will be made by government authorities
 - Symptomatic persons MUST not attend school/work and should self-isolate

Crèches

- Children are infrequently ill with COVID-19
 - We don't understand how children respond
 - Are they infected but don't show symptoms?
 - Can they transmit if they are not symptomatic?
- Adults should remain at home if symptoms of respiratory illness develop
- Children should not share utensils
- Handwashing should be incorporated into daily routines
- The environment should be cleaned regularly with soap and water, and standard environmental disinfectants.

Religious institutions

- Encourage congregation members
 - Cover their mouth and nose when coughing
 - Limit hand-shaking
 - Provide opportunities for hand-washing
 - Provide alternatives to sharing the communion cup
 - Encourage congregation members to remain away if they are ill
- When doing home visits
 - Affected persons should wear mask
 - Visiting persons should maintain distance, observe hand washing

Acknowledgements

- Netcare, Mande Toubkin
- Irma Latsky
- NICD staff