



Preparing the Workplace for Coronavirus

TEACHERS

Dr Odette Volmink
Occupational Medicine Specialist
NIOH

Practice No.: 5200296

Office: + 27 (0) 11 712 6400

Email: info@nioh.ac.za

Website: <http://www.nhls.ac.za>; <http://www.nioh.ac.za>; <http://www.nicd.ac.za>



NHLS

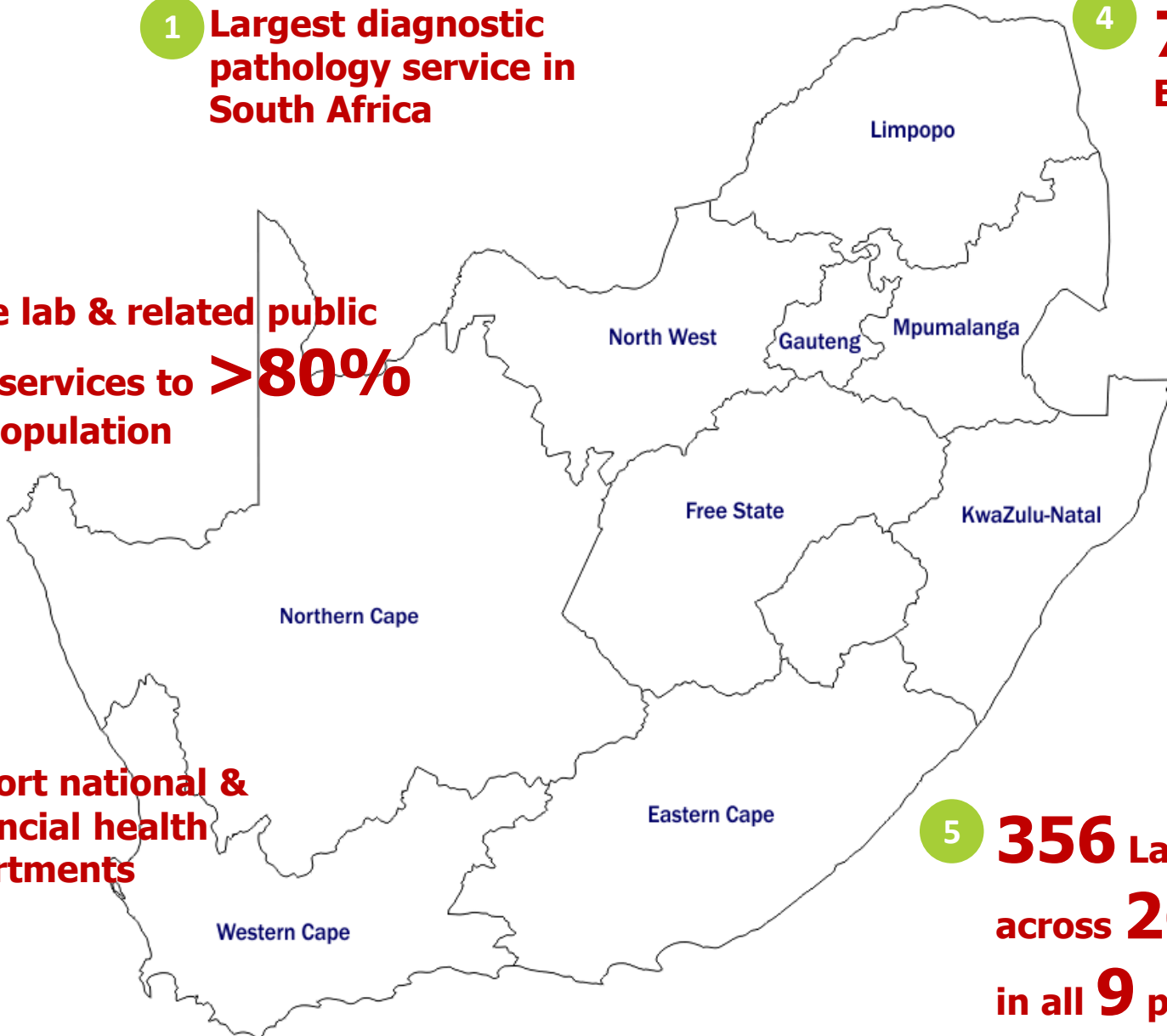
1 Largest diagnostic pathology service in South Africa

4 **7515** Employees

2 Provide lab & related public health services to **>80%** of SA population

3 Support national & provincial health departments

5 **356** Laboratories across **260** sites, in all **9** provinces





Healthy, Safe and Sustainable Workplaces

PROMOTING DECENT WORK THROUGH CUTTING EDGE RESEARCH SERVICE DELIVERY AND TRAINING



Improve and promote workers' health and safety



Catalyst for a mind set change towards greater prevention



Inform regulation, policy and standards



Public and private sectors of the economy



Formal and informal economies



HOW TO STAY INFORMED:

THIS SITUATION IS RAPIDLY EVOLVING

Please check for updates on the NHLS, NIOH , NICD, and NDOH websites

www.nhls.ac.za | www.nioh.ac.za | www.nicd.ac.za | www.ndoh.gov.za

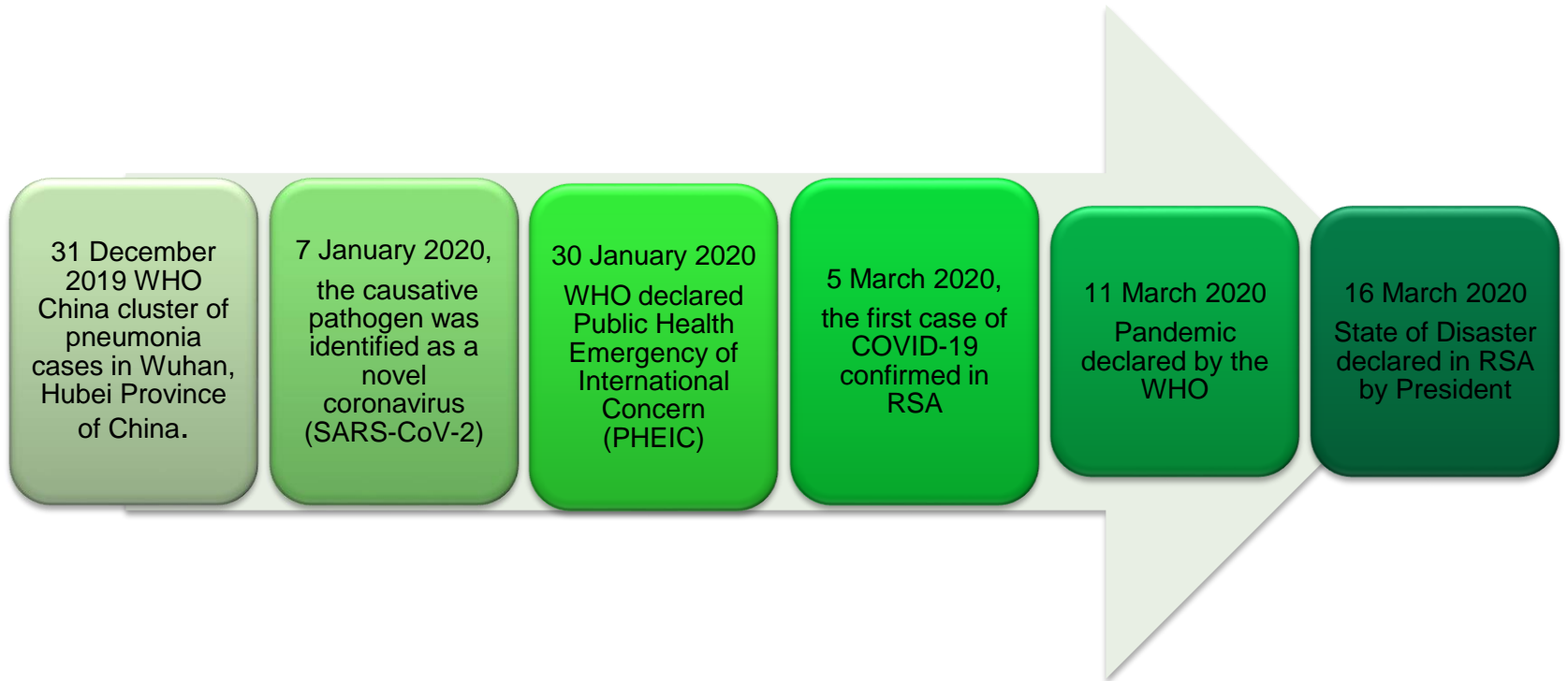
Latest updated information on the spread of COVID-19

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>

Advice and guidance

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
https://www.ilo.org/beijing/information-resources/public-information/WCMS_736744/lang--en/index.htm

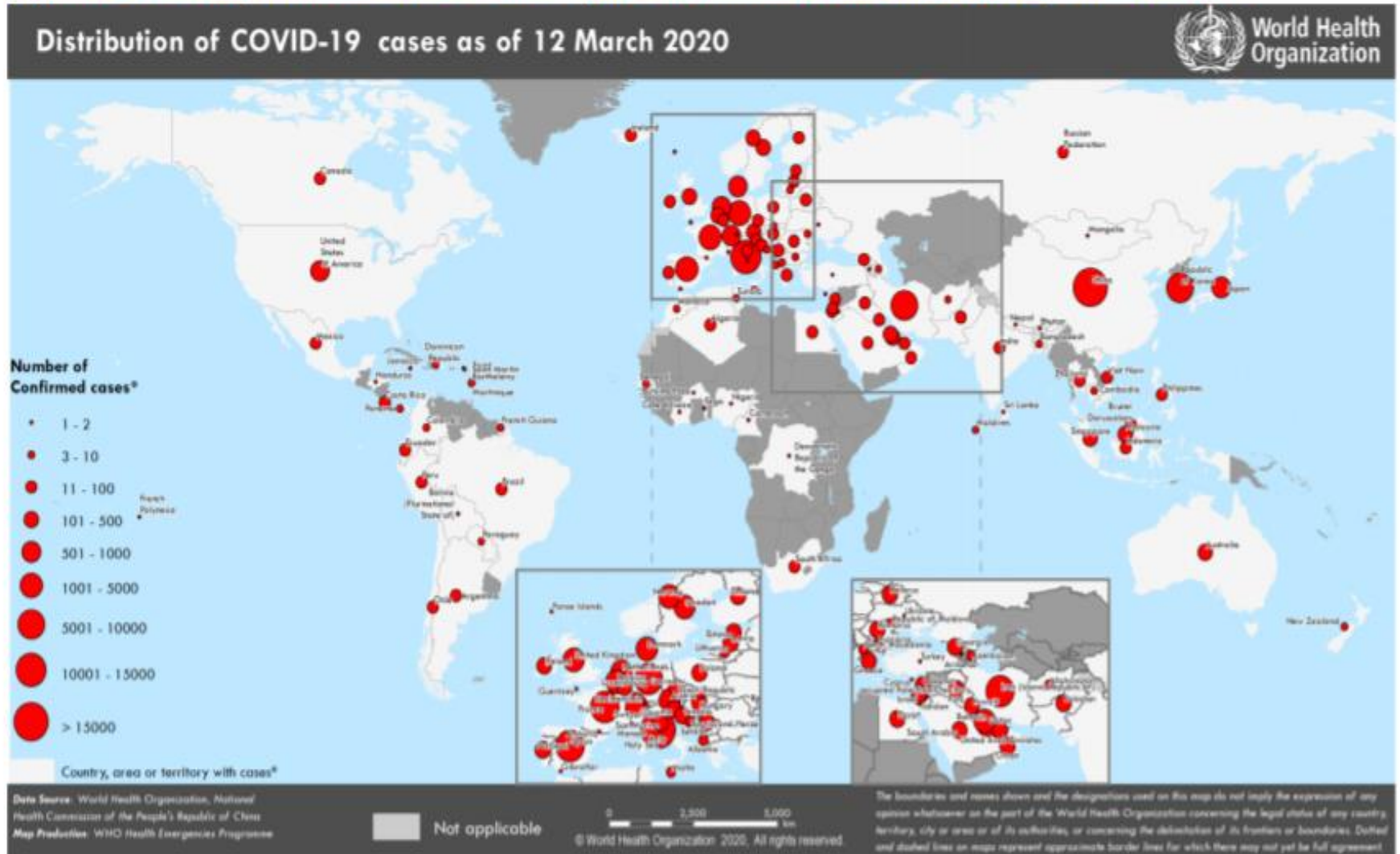
Background



Global cases-142 539 confirmed

Deaths- 5393

Figure 1. Countries, territories or areas with reported confirmed cases of COVID-19, 12 March 2020



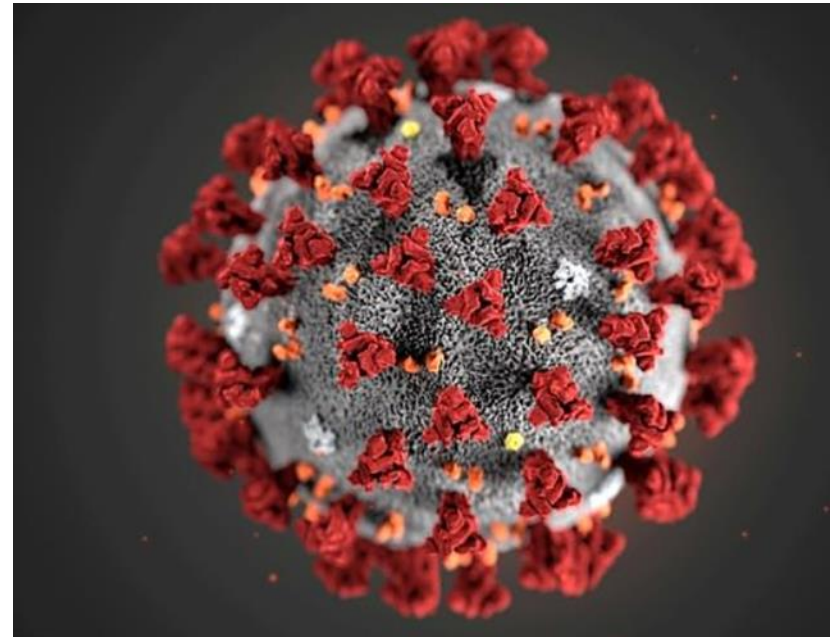
South African COVID-19 cases (NICD website)

- 5 March 2020, South African Minister of Health Dr. Zweli Mkhize announced the country's first confirmed coronavirus (COVID-19) case.
- 61 confirmed cases
- With travel and community acquired spread



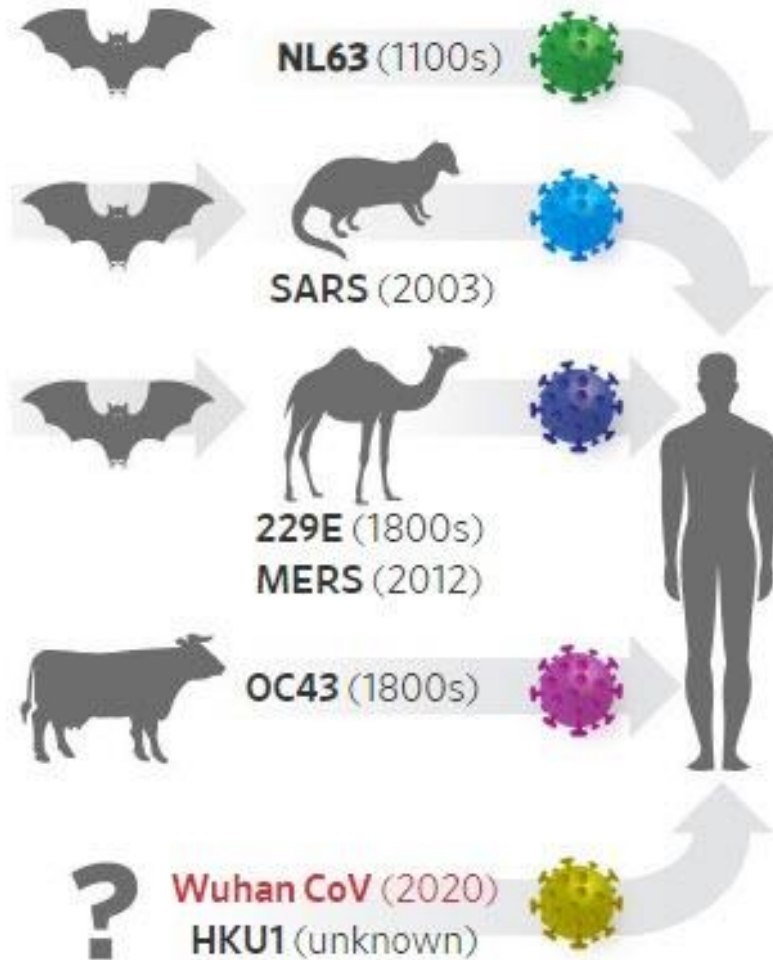
Microbiology and epidemiology

- Coronaviruses are enveloped, single-stranded positive-sense RNA viruses.
- The envelope of the coronaviruses is covered with club-shaped glycoproteins which look like 'crowns', or 'halos' – hence the name 'coronavirus.'
- **Coronaviruses are responsible for the common cold, and usually cause self-limited upper respiratory tract infections.**



Epidemic Potential

Coronaviruses are jumping increasingly from animals to humans, creating new threats

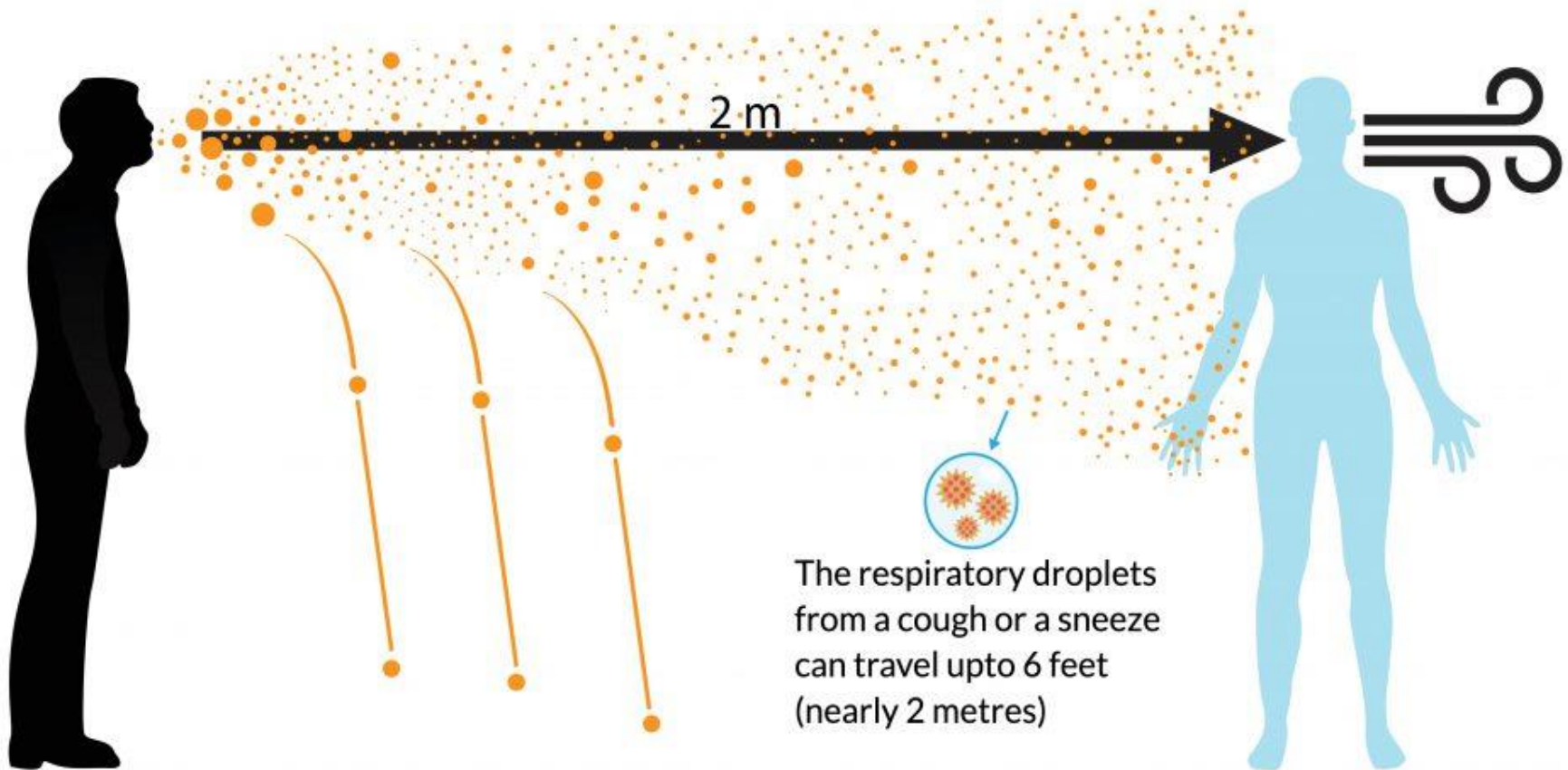


- SARS-CoV (2002-2003 global outbreak; spread to **37 countries** within **2 weeks** of original outbreak reporting; **8,098** probable cases and **774 deaths**)
- MERS-CoV (first ID-ed in 2012; **>2400 lab-confirmed cases** with **>850 deaths**; high mortality; mostly contained within the **Middle East**, but has been detected in **17 other countries**.)

How it spreads?

How does COVID-19 spread ?

- Person to person
- Touching contaminated surfaces



Estimated incubation period is between 2-14 days

More infectious when symptoms show (e.g. coughing & sneezing)

TRANSMISSION



Direct contact: **Touching an ill persons or a contaminated surface**

Droplet transmission: **inhaling droplets**

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

Update on persistence of COVID-19



- COVID-19 virus has a fragile outer membrane - it is less stable in the environment and can be killed by simple disinfectants
- There is no evidence, to date, on survival of the COVID-19 virus in water or sewage. Based on its structure, it probably does not survive long.
- It is not certain how long COVID-19 virus survives on surfaces: studies have shown survival on inanimate surface – 12 hrs - 6 days
- Survival time in the environment depends on
 - pH
 - Inoculum size
 - Dryness
 - Temperature
 - Exposure to disinfectants
 - Type of surface
- Common disinfectants such as 70% ethanol and bleach can kill the virus

Symptomatic persons – case definition

acute respiratory illness with sudden onset of the following:

- cough,
- sore throat,
- shortness of breath or
- fever [$\geq 38^{\circ}\text{C}$ (measured) or history of fever

AND

- In the 14 days prior to onset of symptoms,

- Were in **close contact** with a confirmed or probable case of SARS-CoV-2 infection;

OR

- **History of travel** to areas with presumed ongoing community transmission of SARS-CoV-2

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**

Symptoms and clinical outcome

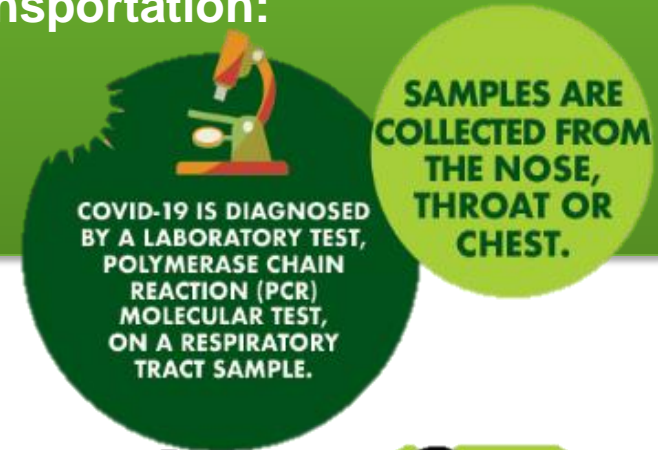


- 80% of persons have mild-moderate disease (common 'flu' or cold)
- 15% of cases require hospital admission
- 5 % of cases are become critically ill and require ICU of which 2% die
- Persons with underlying co-morbid illness esp pulmonary disease, elderly

HOW IS COVID-19 DIAGNOSED

Who should be tested?

- Currently, only persons who are Person Under Investigation (PUI).
- All cases to be discussed with NICD doctor on call before collecting samples
- Costs - free of charge for patients meeting the case definitions above
- For specific guidance on sample collection and transportation:
- PLEASE VISIT THE NICD WEBSITE
- <http://www.nicd.ac.za>
- TOLL-FREE NUMBER 0800 029 999



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 48 hours after reaching the lab.

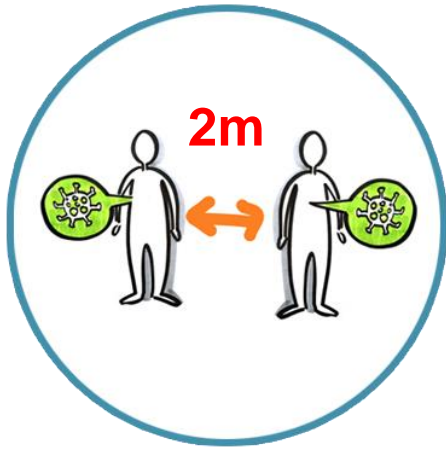
Asymptomatic persons are not tested

Testing is not done to determine exposure or give the 'all clear'

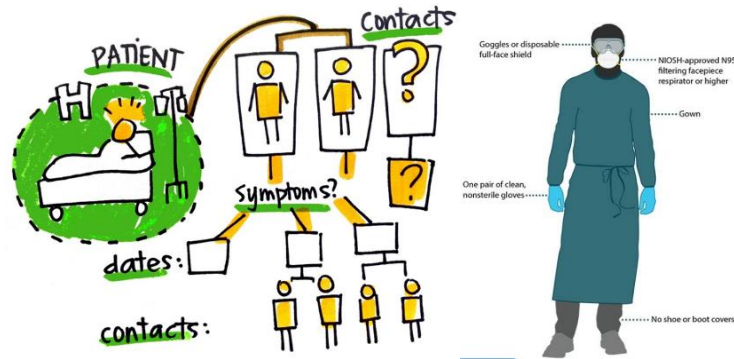


CONTACT TRACING

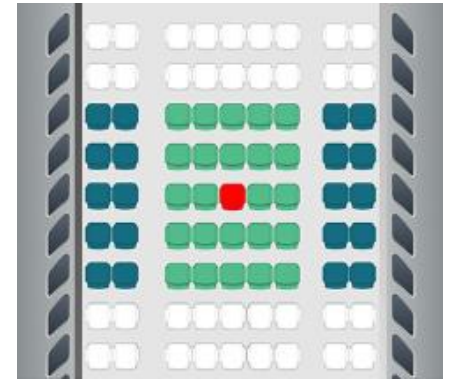
Any person who has had **close contact with a confirmed case** while the confirmed case was **ill** or in the **7 days preceding illness**:



Face-to-face or close environment



HCW or other person providing care while not wearing recommended PPE



CDC's 2 row seating guidance

Close contacts under monitoring should be advised to:

- Close contacts **MUST** self-quarantine at home for 14 days after exposure to the confirmed COVID-2019 and take their temperature daily
- Remain at home (NICD/CDC will provide an official letter for employment or education facilities)
- Avoid unnecessary social contact or travel
- Remain reachable for monitoring

Isolation and quarantine

- 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

Treatment



- Currently **no specific treatment** for disease caused by SARS-CoV-2 infection
- Early supportive **therapy and monitoring**
- **Info available on the WHO website and NICD guidance document**

Vaccinations

- Currently no vaccines for COVID-19 however
- Advisable to take the flu vaccine to prevent influenza and unnecessary testing for COVID-19



Workers at risk of infection

- Every person may be at risk of exposure to COVID-19, however..
- The risk is higher for workers interacting with persons that may be potentially infected
- Immunocompromised workers are at higher risk of infection e.g. pre-existing conditions such as
 - asthma
 - diabetes
 - heart disease
 - cancer

High exposure risk group workers

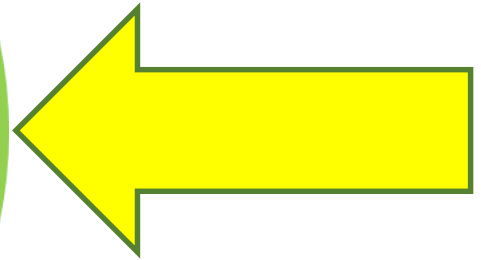
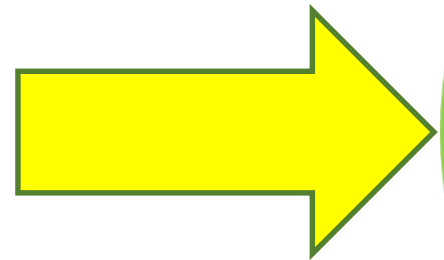
- **Airline operations** (e.g. airline cabin crew, aircraft cleaners, mechanics)
- **Boarder control** (e.g. security officials, and other boarder officials)
- **Health care** (e.g. EMS workers, nurses, doctors, other medical staff)
- **Laboratories** (e.g. medical technologists, scientists, laboratory aids and researchers)
- **Pathology and funeral services** (e.g. mortuary attendants, autopsy technicians and funeral directors)
- **Solid waste and wastewater management** (e.g. waste pickers, water treatment plant workers)
- **Carers and teachers**



POTENTIAL SOURCES OF EXPOSURE IN THE WORKPLACE (school or office)

**Community
acquired**

**Workplace
acquired**



workplace

Legislation

SOUTH AFRICAN SCHOOLS ACT 84 of 1996

[ASSENTED TO 6 NOVEMBER, 1996]

[ENGLISH TEXT SIGNED BY THE PRESIDENT]

[DATE OF COMMENCEMENT: 1 JANUARY, 1997]

No. 18491

GOVERNMENT GAZETTE, 5 DECEMBER 1997

Act No. 75.1997

BASIC CONDITIONS OF EMPLOYMENT ACT, 1997

2 No. 14918

GOVERNMENT GAZETTE, 2 JULY 1993

Act No. 85, 1993

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993

ACT

To provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith.

*(English text signed by the State President.)
(Assented to 23 June 1993.)*

ACT

To give effect to the right to fair labour practices referred to in section 23(1) of the Constitution by establishing and making provision for the regulation of basic conditions of employment; and thereby to comply with the obligations of the Republic as a member state of the International Labour Organisation; and to provide for matters connected therewith.

GOVERNMENT NOTICE GOEWERMENTSKENNISGEWING

DEPARTMENT OF LABOUR
DEPARTEMENT VAN ARBEID

J. R. 1390

27 December 2001

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993
REGULATIONS FOR HAZARDOUS BIOLOGICAL AGENTS

The Minister of Labour has under section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) on the recommendation of the Advisory Council for Occupational Health and Safety, made the regulations in the Schedule.

DEPARTMENT OF LABOUR NOTICE 191 OF 2019

COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT, 1993 (ACT NO.130 OF 1993), AS AMENDED

Occupational categories that may be exposed

- Teaching staff
- Persons interacting
- Cleaners
- Security worker
- Transport people
- Canteen staff
- Tuck shop workers
- Maintenance staff
- Visitors

MINIMUM EXPECTATIONS OF THE EMPLOYER

- Top Management commitment
- Provide a safe and healthy workplace
 - Occupational health & safety policy
 - Risk management matrix
- Finance
- HR support
- Business continuity plan

Educate and inform (risk communication)

- Communication platforms... accessible to all workers
- Relevant and credible information around COVID-19
 - **Facts about how the disease is transmitted**
 - **An updated list of affected countries.**
 - **Latest 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**



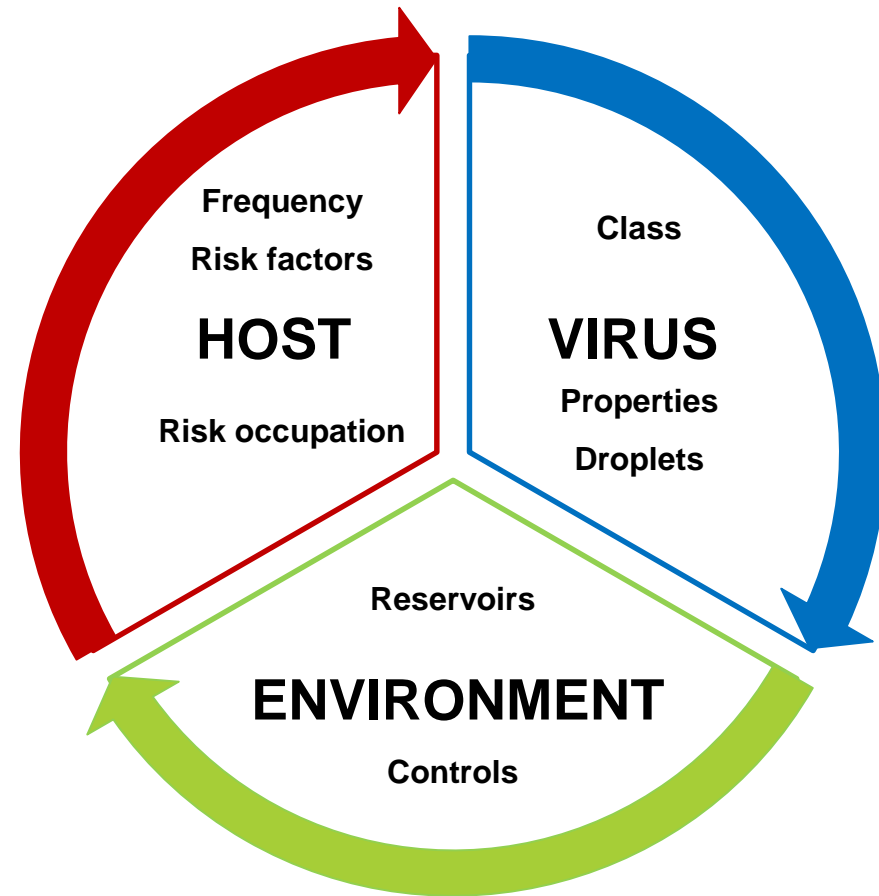
OCCUPATIONAL HEALTH & SAFETY SYSTEM (Minimum recommendations)

- H&S Strategic Committee
- H&S Policies & Standard operating procedures (SOPs) in place
- Workplace specific policies and SOPs
- Human resources: H&S Reps, H&S Committees, Managers
- Service delivery:
 - Risk assessments (direct contact, droplets etc.)
 - Incident management programme (management reporting system) and appropriate follow up
 - Programme of continuous improvement
- OHS Training programme (information sharing sessions, presentations, etc.)

Back to basics....

Hazard identification & Risk assessment

- A risk assessment should be conducted in the workplace to determine the **RISK** of **EXPOSURE** to **COVID-19** and be **communicated to all workers**.
- This should be assessed with all other hazards
 - Biological, Physical, Chemical, Ergonomic
 - Psychosocial - exposure to long working hours, psychological distress, fatigue, occupational burnout, stigma, physical and psychological violence



Different workers have different risk exposures: based on job specific risk assessments, consider the following:



Possible support system

- Other labour laws, other relevant legislation and HR policies
- Travel records
 - International -travel ban on high risk countries is now in place
 - Local – now non essential travel is discouraged
- Clear conditions of employment
- Leave records
 - Sick leave
 - IOD leave
 - Trends monitored
- Wellness & EAP



Risk & Consequence: Employer

RISK	CONSEQUENCE
Risk of unknown	Challenge to assessing the risk
Disruption of services	Impact school programmes
Quarantine, absenteeism*	Decrease in services
Increases expenses (relief teachers and cross teaching, audio-visual technology, virtual classrooms)	Economic loss
Access to equipment and maintenance (e.g. service contractors etc.)	Staff not adequately trained and protected.
Work-related disease	Increases burden of occupational injury & disease & negative perception of employer
Organised labour	Disrupted service delivery

* School closure – some may have to take leave if no support systems



Risk & Consequence: Employees

RISK	CONSEQUENCE
Risk of exposure	Infection (acquired & transmit)
Financial risk	e.g. Medical aid, sick leave (exhausted)
No medical aid cover	Use of already overburdened public services
Asymptomatic workers and learners	Transmissions to others
Mental health	Psychological and psychiatric disorders
Return to work / disability	Rehabilitation and accommodation of employee



Mitigation of risk:

- School management should take the lead on occupational health and public health response
- Recommendations to reduce transmission
 1. School closure
 2. Clean and hygienic workplaces
 3. Handwashing / sanitizing
 4. Respiratory hygiene
 5. Educate and create awareness
 6. Travel considerations
 7. Flu vaccines
 8. Only use appropriate Personal protective equipment (PPE)
 9. Policy review
 10. Avoid mass gatherings

Prevention practices



Practice good hand and respiratory hygiene.



Avoid close contact with people who are coughing.



Stay at home if you are ill.



Wipe down all surfaces with disinfectant.

If you suspect you have been exposed to COVID-19

- ▶▶ Alert your supervisor and occupational health clinic immediately
- ▶▶ If you are experiencing symptoms, inform your health care provider about any contacts and recent travel to areas affected by COVID-19

Enquiries : info@nioh.ac.za

For more information contact NICD: 080 002 9999

www.nicd.ac.za or www.nioh.ac.za

ACKNOWLEDGEMENTS

- NHLS Management
- NIOH Outbreak Response Team
- NICD



Guidance document from the department of education

- deals with role of school, learners who may be exposed, confirmed cases in your facility, what to do if the school is dismissed