

*An urgent open source guide to promote a safe working environment; protect the jobs of our citizens; and to support the economic recovery!*

**BACKGROUND:**

On 31st December 2019, the World Health Organization (WHO) was alerted to a cluster of pneumonia of unknown cause in patients in Wuhan City, Hubei Province of China. One week later the novel coronavirus (severe acute respiratory syndrome coronavirus 2: SARS-CoV-2) was identified as the cause. The resulting illness was named COVID-19 on the 11th February 2020. The condition of COVID-19 ranges from an asymptomatic or mild flu-like illness to a severe pneumonia requiring critical care. WHO has been criticized for their slow action and subsequent slow response to avert a global pandemic.

The South African response was swift and our President responded by implementing a 5 week lock down. The lock down is seen as an interim measure to suppress transmission of the virus, but not, sufficient to burn the disease out. For this to be effective a six-month lockdown is required. South Africa as a developing economy cannot sustain the halt in production and the country will have to exit the lock down in a step wise manner ensuring for the return to factory production and expansion of essential services. The risk still exists that if this is done haphazardly or in totality then the transmission risk will increase exponentially.

The urgency to prepare factories, mining houses, and small medium sized industries has pre-empted the penning of this document.

Please feel free to utilize all or any parts of this document for your written policies and to guide your day to day processes ensuring the safety of staff, clients or customers reducing the spread of infection.

This document is applicable to the following departments: human resources; health and safety; occupational health; and management.

**UNDERSTANDING THE INFECTIOUS PROCESS AND EPIDEMIOLOGY:**

The median incubation period (time from exposure to start of symptoms) for COVID-19 is estimated to be 4-6 days but can be up to 14 days or longer.

The extend of transmission from asymptomatic patients is unknown.

The reproductive number (Ro) for the virus is approximately 2.2 (meaning that on average each person spread the infection to two others).

**What does this mean to you?****1. Problem statement 1**

Any person could be infective but without symptoms. This is an invisible enemy. How then does any company prevent the spread of disease in their environment?

Policy guidance

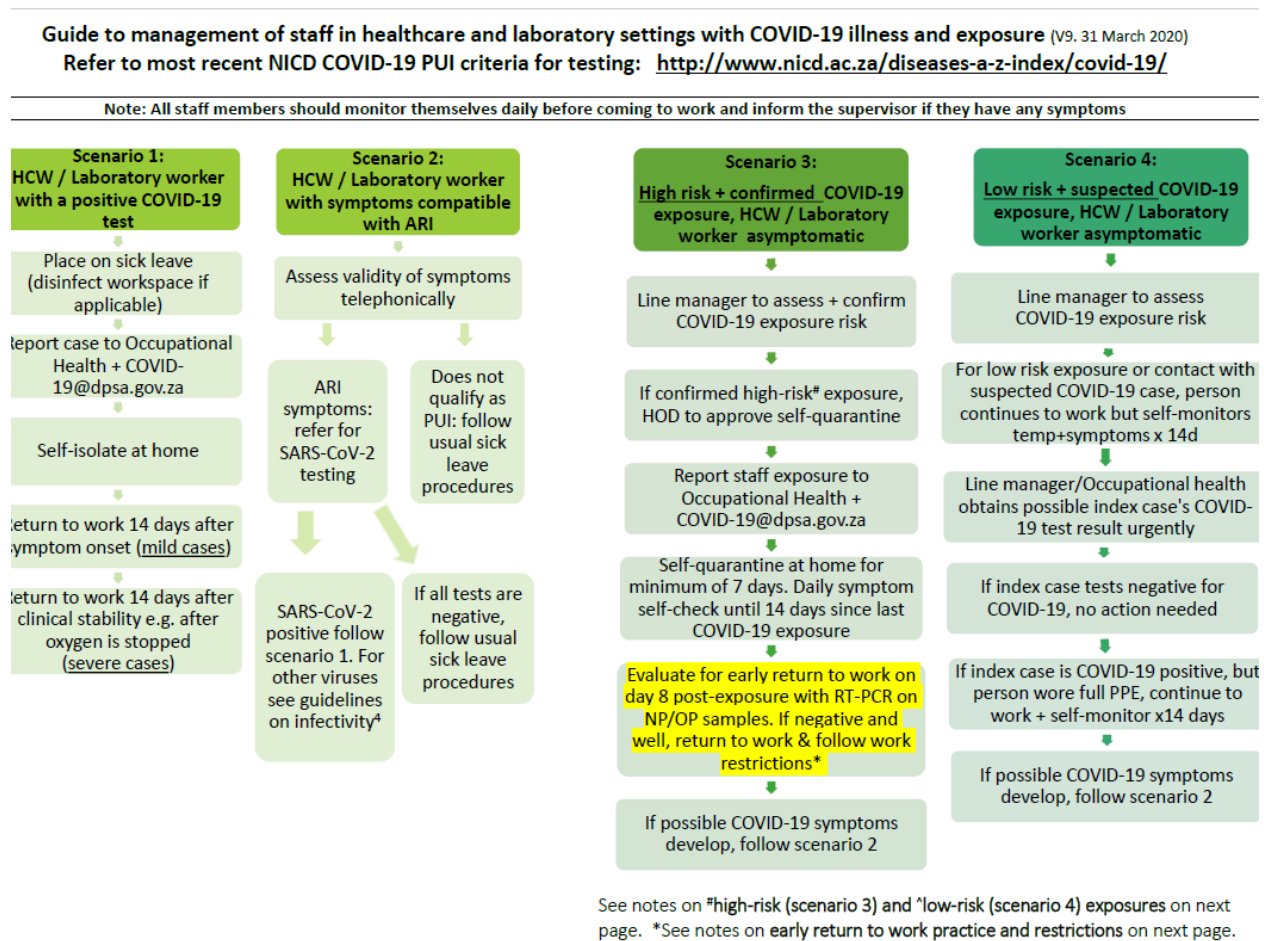
- a. Universal masking prevents the spread of infection between two people. According to the CDC, a person's risk of exposure is reduced considerably and considered low risk when both parties are wearing face masks, even face cloth masks. All companies, businesses, offices, should incorporate a universal mask wearing policy and educate staff on the use of masks. Clear posters should be placed at common work places demonstrating the importance of wearing a face mask, the correct method of wearing the face mask and related hand washing and hygiene. Employers should provide face masks for the employees where possible or make this available for sale at the place of employment.
  - b. Importance of physical distancing- the distance between two persons as well as limited the time of contact between two persons reduces the risk of exposure. Businesses should evaluate their workspace and evaluate the opportunities to introduce physical barriers or utilize spacing allocations and markers to guide employees. Where space limitation prevents spacing, the use of barriers or back to back positioning may be beneficial.
  - c. Ventilation- open windows and natural ventilation reduces the risk of transmission and the accumulation of viral particles in the air. All employers should function in areas of adequate ventilation and where this is insufficient, extractors should be utilized to cleanse the air. The use of fans may add to infection transmission.
  - d. Screening- companies should invest in a floor by floor screening every morning. This can be accomplished by adding a compulsory requirement for any employee who is feeling unwell or has a fever to compulsory report this to their manager. Importantly any employee that has a family member with covid-19 should advise the HR/Manager of this as well. The temperature of every employee should be taken before the commencement of a shift and at the end of the day. Any fever 37,8 degrees or more should be reported to the occupational health nurse on site or Manager.
2. Problem statement two
- How does a company manage employees that have been exposed; are asymptomatic and infective; infective and symptomatic.

#### Policy guidance

- All staff should be temperature screened twice daily using a contactless infrared thermometer.
- All staff that have flue like symptoms should be evaluated by a health care practitioner.
- All staff that have flue like symptoms and have a fever should be screened for covid-19
- Any staff member who has been in contact with an infective covid-19 positive person should be quarantined for the period of days as stipulated by NICD. Depending on the nature of the employment, employees may be tested at 7 days and where negative may return to work.

- Any person who has been in contact with a covid-19 positive person should test themselves if they develop any symptoms
- Any staff member who has been exposed to a covid-9 positive member and has not taken the necessary precautionary measures adopted will have to be quarantined.
- Any staff member that has been in contact with a covid-19 positive person but both colleagues were wearing a face mask, then the staff member is considered a low risk contact and should be able to continue working with daily temperature checks and symptom check in place. There is no need to quarantine and take a leave of absence.
- All companies need to agree with their unions the necessary labor relations norms on covid-19 prevention requirements.

The diagram below applies mainly for Healthcare workers but one can utilize it as a guide:



## **OUTCOMES AND PROGNOSIS:**

The vast majority of cases will make a full recovery, though this may take several weeks, particularly in severe cases. In a minority of cases, COVID-19 has been associated with rapid progression to acute respiratory distress syndrome (ARDS), multiple organ failure and sometimes death. The case fatality ratio is currently unknown, but is estimated to be within the range of 0.5-4%.

## **NEW NICD CASE DEFINITIONS AS AT 2 APRIL 2020**

### **Criteria for person under investigation (PUI), i.e. a person to be tested for COVID-19**

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.

(NB: With flu season approaching, it would be hard to differentiate so my approach is to treat all as COVID 19 until proven otherwise)

### **Characteristics of persons at highest risk**

Persons at a highest risk are those who have an acute respiratory illness and who, in the 14 days prior to onset of symptoms, met at least one of the following epidemiological criteria:

- Were in close contact (1) with a confirmed (2) or probable (3) case of SARS-CoV-2 infection; OR
- Had a history of travel to areas with local transmission of SARS-CoV-2; (NB Affected countries will change with time, consult NICD website for current updates); OR
- Worked in (4), or attended a health care facility where patients with SARS-CoV-2 infections were being treated; OR
- Admitted with severe pneumonia of unknown aetiology (cause).

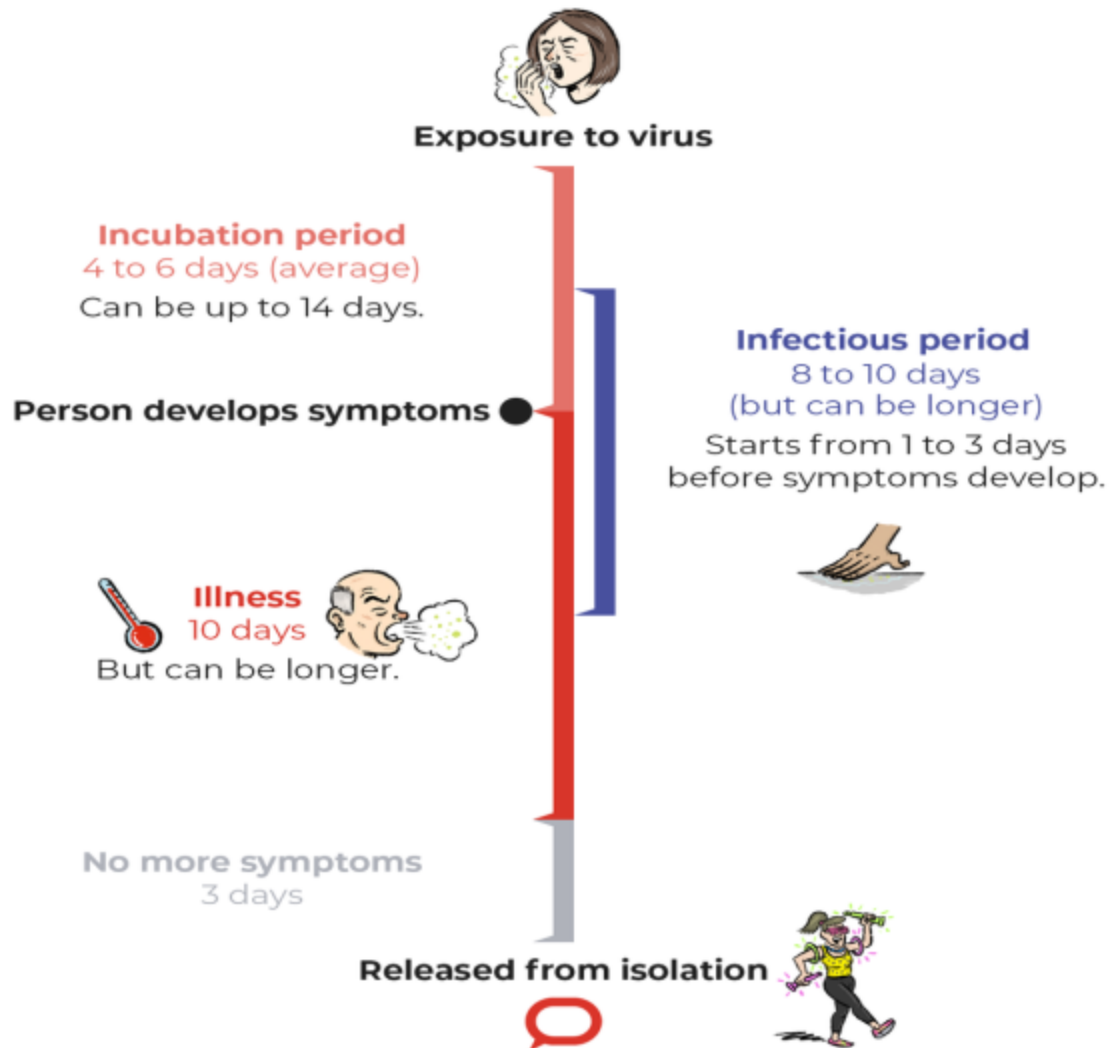
(1). Close contact: A person having had face-to-face contact ( $\leq 1$  metre) or in a closed space with a COVID-19 case for at least 15 minutes. This includes, amongst others, all persons living in the same household as a COVID-19 case and, people working closely in the same environment as a case. 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 case, travel companions or persons providing care, and crew members serving in the section of the aircraft where the case was seated.

(2). Confirmed case: A person with laboratory confirmation of SARS-CoV-2 infection (using an RT-PCR assay), irrespective of clinical signs and symptoms. Symptomatic cases are considered infectious from 2 days before symptom onset to 14 days after symptom onset.

(3). Probable case: A PUI for whom testing for SARS-CoV-2 is inconclusive (the result of the test reported by the laboratory) or who tested positive on a pan-coronavirus assay.

(4). Working in a health care facility includes healthcare workers as well as administrative and support staff such as cleaning staff

## Coronavirus progression in majority of cases



Source: [www.theconversation.com](http://www.theconversation.com)

NOTE: These above progression is a guide. Infectiousness can be up to 7 days before symptoms appear.

If you were exposed to a confirmed COVID 19 positive person, then you must self-isolate for 14 days provided you did not develop symptoms.

If you are COVID 19 positive, then you will need to self-isolate until healed and you have NO symptoms for 3 days.

If you have been admitted for a more severe illness, on discharge you are required to have 2 tests 24 hours apart. If both are negative, its presumed you are well and no further isolation is required.

If one or both of the tests upon discharge are positive, then continue self-isolation for a further 10 days and be symptom free for further 3 days before returning to work.

#### **RISK ASSESSMENT:**

**According to the Occupational Health and safety Act (Act 85 of 1993) section 8 (1), “Every Employer shall provide and maintain, as far as is reasonably practicable, a working environment that is safe and without risk to the health of his Employees”.**

The above will apply not only to physical, chemical and such hazards but also biological eg. COVID 19.

One should also look at the Regulations for Hazardous Biological Agents (HBA) and the Notice on Compensation for occupationally acquired Covid 19 disease under the Compensation for Occupational Injuries and diseases Act (COIDA), Act 130 of 1993.

Thus it’s the duty of every Company to undertake a risk assessment and mitigate the risks. Part of the response should be education and implementation of measures to reduce transmission of the virus at the workplace.

The Risk assessment team should include HR, Safety, Management, Employee unions and Healthcare.

Please follow this link for an example of risk assessment:

[https://www.hsa.ie/eng/Education/Managing\\_Safety\\_and\\_Health\\_in\\_Schools/Interactive\\_Risk\\_Assessments\\_%E2%80%93\\_Primary/Tool-4-Risk-Assessment-Templates.pdf](https://www.hsa.ie/eng/Education/Managing_Safety_and_Health_in_Schools/Interactive_Risk_Assessments_%E2%80%93_Primary/Tool-4-Risk-Assessment-Templates.pdf)

The main components for risk assessment are:

1. Identify the Hazard (in this case COVID 19)
2. Identify who is at risk (Full time, part-time Employees, Contractors, Visitors etc)
3. Evaluate the risk and mitigate for it (Using risk matrix)
4. Record your findings and implement them
5. Review your risk assessment (The Pandemic is changing and your risk assessment needs to account for these changes and new information).

The basic risk matrix will look like the one below but it can be adapted to your unique situation.

Likelihood	Consequences				
	Insignificant <i>(Minor problem easily handled by normal day to day processes )</i>	Minor <i>(Some disruption possible, e.g. damage equal to \$500k )</i>	Moderate <i>(Significant time/resources required, e.g. damage equal to \$1million)</i>	Major <i>(Operations severely damaged, e.g. damage equal to \$10 million )</i>	Catastrophic <i>(Business survival is at risk damage equal to \$25 Million)</i>
Almost certain (e.g. >90% chance)	High	High	Extreme	Extreme	Extreme
Likely (e.g. between 50% and 90% chance)	Moderate	High	High	Extreme	Extreme
Moderate (e.g. between 10% and 50% chance)	Low	Moderate	High	Extreme	Extreme
Unlikely (e.g. between 3% and 10% chance)	Low	Low	Moderate	High	Extreme
Rare (e.g. <3%)	Low	Low	Moderate	High	High

Source: [www.expressbcp.com/our-template](http://www.expressbcp.com/our-template)

#### HSSE AND LINE MANAGERS:

Some companies who are not ESSENTIAL services may have people working from home. Companies who are ESSENTIAL services will have Employees onsite and offsite (including those working from home).

Besides the usual safety function the department will need to consider COVID 19 and its implications.

Guidance needs to be provided on how to create a designated safe work place at home, correct ergonomics (Chair, table, Computer etc), how to maintain productivity, time management, keeping work area and home COVID 19 free, electrical safety, IT security, report illness/symptoms to Company healthcare facility/service provider.

For those working on-site or off-site, guidance must be provided on measures not only for safety but COVID 19 infection prevention and protecting ones' family.

Information sharing and toolbox talks, posters, reminders on PC or alarm to wash/disinfect hands etc. The main actions to reduce spread are:

1. Stay at home where possible
2. Frequent Hand sanitizing on Entry at premises and regularly throughout the day, before and after use of toilets, before and after eating.
3. Disinfect work station regularly. Preferably not share desks and computers.
4. Avoid touching your face, beard, hair, ears, nose etc. This will lead to self-inoculation.
5. The use of a facemask should be encouraged and consider making it compulsory.
6. Report symptoms to manager and healthcare and not to come to work.

## **HUMAN RESOURCES (HR):**

The main considerations from an HR perspective are:

1. Policy formulation and guidance.
2. Management of leave, ill health, incapacity and scenarios specific to lockdown. Some of these have not been tested and consultation with Labour law experts is advisable.
3. UIF and other relief options.
4. Medical requests eg. Pre-employment (limitations on tests that can be done)
5. Covid 19 testing - when, who, which test, interpretation etc. Consultation with Healthcare Specialist advised.
6. Consideration for mental health issues eg. emotional stress, anxiety, adjustment disorder and bereavement

## **HEALTHCARE (HC):**

Some Companies have an onsite clinic, some utilize the service of an occupational health service provider and some may not have either. The main concerns for Healthcare at this stage is to give guidance on responses to the Covid 19 pandemic. The following aspects need to be considered:

1. Limit staff to those essential for services. Stop non-essential medicals as lung tests and audiograms may pose additional risk of disease spread.
2. Identify high risk Employees eg. Over 60 years, diabetics, immune-compromised etc, so these Individuals can work from home or if vital to come on-site, then to mitigate the risk.
3. Medicals which are expiring may be extended unless it's a high risk job or Employee.
4. Consultations at the clinic should be limited and preferable for Employee to phone and discuss medical condition/concern before coming to the clinic.
5. Healthcare staff to use appropriate PPE and disinfect work and examination areas regularly.
6. Area for Employee isolation whilst awaiting transfer to home/GP/Hospital.
7. Be aware of hospitals that are still functional so appropriate referrals can be done.
8. Assess and advise Employees on Return to work after illness and follow up after returning to work.
9. Pre-employment medicals – alternate to lung function tests ?, audiogram (whisper test), consideration for Covid 19 tests as part of pre-employment.
10. Management reports



## SYMPTOMS for COVID-19, Flu, Common Cold, and Allergies

	Primary Symptoms	Less Frequent Symptoms
<b>COVID-19</b>	<ul style="list-style-type: none"> <li>• dry cough</li> <li>• fever</li> <li>• shortness of breath</li> <li>• fatigue</li> </ul>	<ul style="list-style-type: none"> <li>• diarrhea</li> <li>• aches and pains</li> <li>• nasal congestion</li> <li>• runny nose</li> <li>• sore throat</li> </ul>
<b>SEASONAL FLU</b> (Influenza)	<ul style="list-style-type: none"> <li>• fever or feeling feverish/chills (not all flu cases include fever, however)</li> <li>• cough</li> <li>• muscle or body aches</li> <li>• headache</li> <li>• fatigue</li> </ul>	<ul style="list-style-type: none"> <li>• sneezing</li> <li>• sore throat</li> <li>• runny or stuffy nose</li> <li>• nausea</li> <li>• diarrhea</li> </ul>
<b>COMMON COLD</b>	<ul style="list-style-type: none"> <li>• sneezing</li> <li>• stuffy nose</li> <li>• sore throat</li> <li>• mild to moderate chest discomfort and cough</li> </ul>	<ul style="list-style-type: none"> <li>• fatigue</li> <li>• body aches</li> </ul>
<b>SEASONAL ALLERGIES</b> (Hay Fever)	<ul style="list-style-type: none"> <li>• runny nose</li> <li>• itchy eyes, mouth, or skin</li> <li>• sneezing</li> <li>• stuffy nose</li> </ul>	<ul style="list-style-type: none"> <li>• wheezing</li> <li>• shortness of breath</li> <li>• fatigue due to lack of sleep</li> </ul>



### Symptoms Requiring Immediate Medical Attention (COVID-19)

- difficulty breathing or shortness of breath
- persistent pain or pressure in the chest
- new confusion or difficulties waking up
- bluish lips or face

Source: Centers for Disease Control and Prevention, World Health Organization, American College of Allergy, Asthma, and Immunology

**healthline**

The above comparison tells us that its sometimes difficult to differentiate Covid 19 from Flu. It may be prudent to follow the NICD guidelines and if in doubt, rather test for Covid 19.

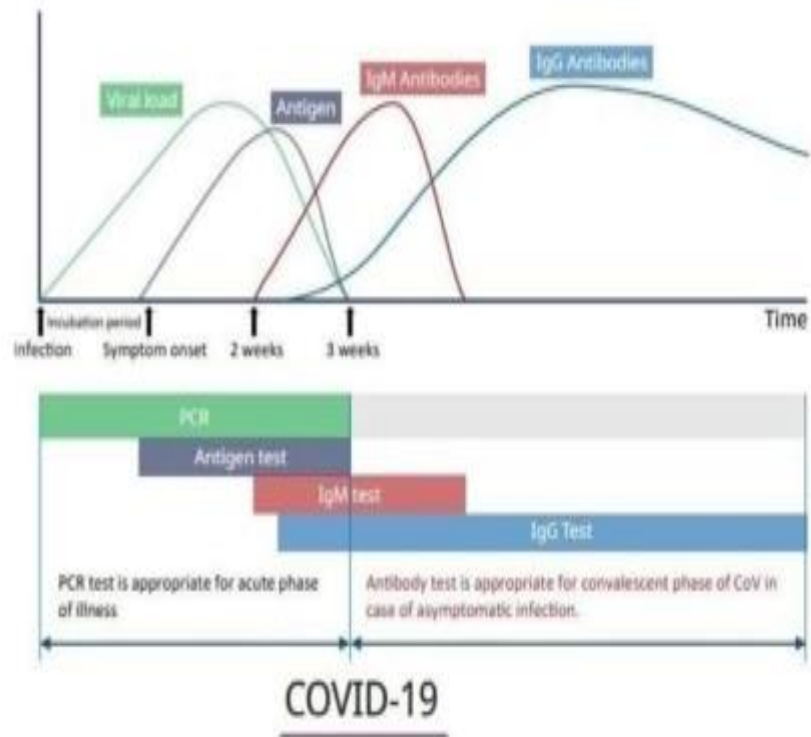
## TESTING:

The current NICD guidelines give us direction on who to test. There is still the concern of asymptomatic individuals who are infectious and this could be a factor that will also drive the Pandemic. Thus the case for mass testing. Some Companies are embarking on this.

# Covid-19 versus disease onset and progress

## Virology & Serological response

1. RT-PCR
2. Ag Detection
3. Abs Detection



The recommended test is the PCR, which detects the Corona Virus RNA. It thus detects recent and active disease.

Detection of antibodies ([serology](#)) can be used both for diagnosis and population surveillance. Antibody tests show how many people have had the disease, including those whose symptoms were minor or who were asymptomatic. An accurate mortality rate of the disease and the level of “herd immunity” in the population can be determined from the results of this test.

Part of the immune response to infection is the production of antibodies including IgM and IgG. According to the FDA (The Food and Drug Administration – USA), IgM antibodies to SARS-CoV-2 (Covid 19) are generally detectable in blood several days after initial infection, although levels over the course of infection are not well characterized. IgG antibodies to SARS-CoV-2 become detectable later and normally peak around 28 days after the onset of infection. Antibody tests can be used to determine the percentage of the population that has contracted the disease and that is therefore immune.

NB: This document is valid now. Please also search for updates on the internet.

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