

Tygerberg Hospital COVID-19 screening: *experiences & lessons learnt*



Arifa Parker

Division of Infectious Diseases

Tygerberg Hospital & Stellenbosch University

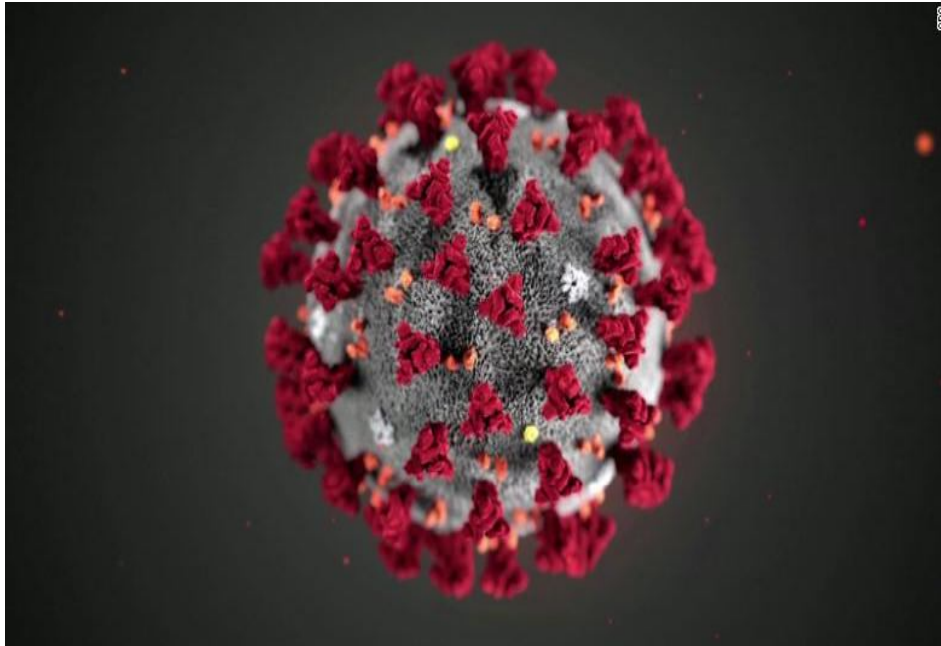
Cape Town, South Africa



UNIVERSITEIT
STELLENBOSCH
UNIVERSITY



COVID-19



- Respiratory virus
- Contact and Droplet spread
- Highly infectious R_0 2-2,5 (likely higher), below 1 = end pandemic

Rationale for screening & triage

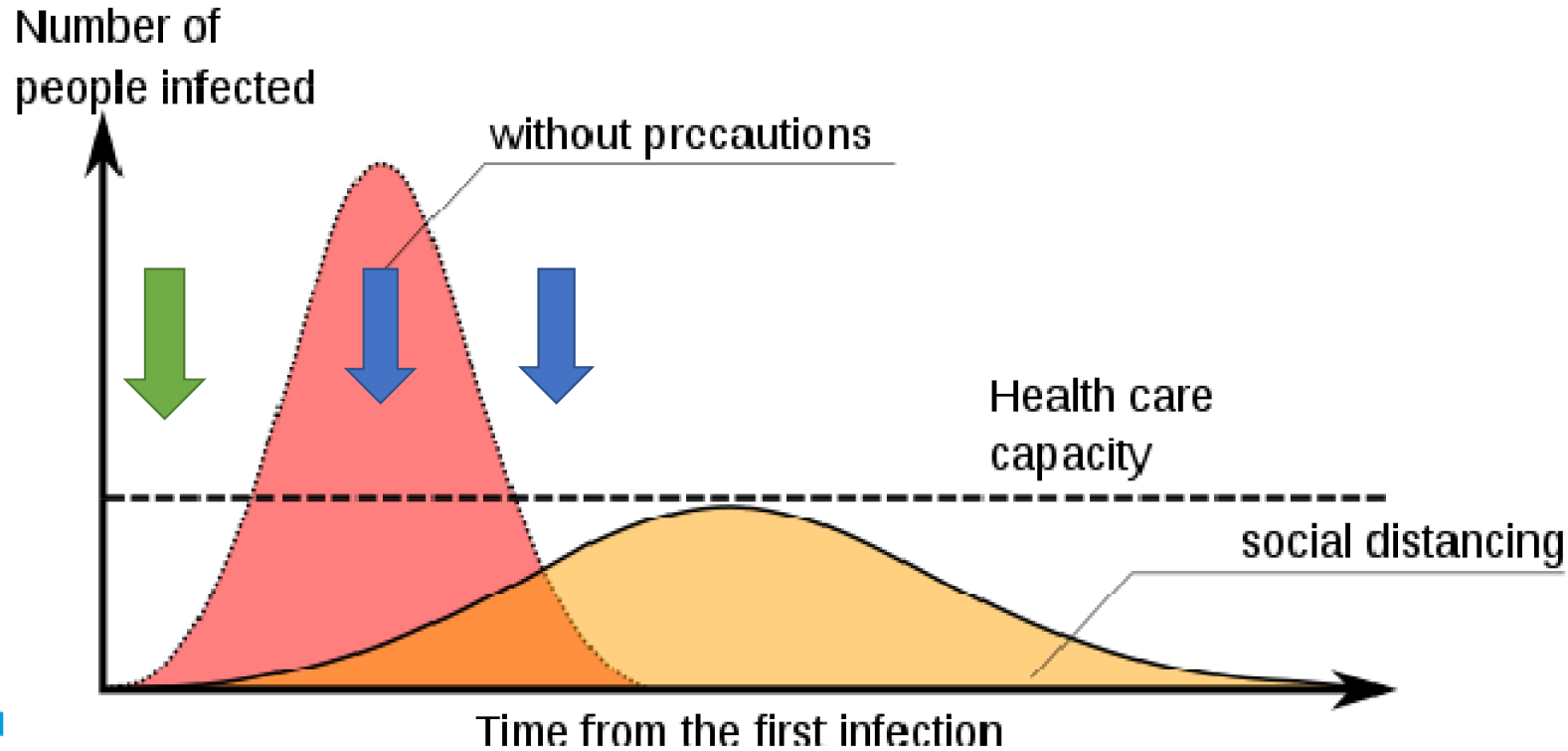


Table 1: Considerations for laboratory testing for each transmission scenario*

	No Cases	Sporadic Cases	Clusters of Cases	Community Transmission
Transmission scenario	No reported cases	One or more cases, imported or locally acquired	Most cases of local transmission linked to chains of transmission	Outbreaks with the inability to relate confirmed cases through chains of transmission for a large number of cases, or by increasing positive tests through sentinel samples (routine systematic testing of respiratory samples from established laboratories)
Public health aim	Stop transmission and prevent spread	Stop transmission and prevent spread	Stop transmission and prevent spread	Slow transmission, reduce case numbers, end community outbreaks
Testing strategy guidance documents	<p>Test all individuals meeting the suspected case definition</p> <p>Test a subset of samples from SARI/ILI surveillance for COVID-19</p> <p>Test patients with unexpected clinical presentation or an increase in hospital admissions in a specific demographic group that could be COVID-19</p>	<p>Test all individuals meeting the suspected case definition</p> <p>Considerations in the investigation of cases and clusters of COVID-19</p> <p>Clinical management of severe acute respiratory infections when novel coronavirus is suspected.</p> <p>SARI/ILI surveillance for COVID-19 and reporting: see Interim operational considerations for COVID-19 surveillance using GISRS.</p>	<p>Test all individuals meeting the suspected case definition</p> <p>Considerations in the investigation of cases and clusters of COVID-19.</p> <p>Clinical management of severe acute respiratory infections when novel coronavirus is suspected.</p> <p>SARI/ILI surveillance for COVID-19 and reporting: see Interim operational considerations for COVID-19 surveillance using GISRS.</p>	<p>If diagnostic capacity is insufficient, implement prioritized testing and measures that can reduce spread (e.g. isolation), including:</p> <ul style="list-style-type: none"> • people who are at risk of developing severe disease and vulnerable populations, who will require hospitalization and advanced care for COVID-19 (see Clinical management of severe acute respiratory infections when novel coronavirus is suspected). • health workers (including emergency services and non-clinical staff) regardless of whether they are a contact of a confirmed case (to protect health workers and reduce the risk of nosocomial transmission) • the first symptomatic individuals in a closed setting (e.g. schools, long term living facilities, prisons, hospitals) to quickly identify outbreaks and ensure containment measures

*In all scenarios, if feasible, test for treatable diseases (according to local protocols)

Screening processes

- Screening process
 - IPC principles – pens, papers, chairs, distancing, masks, hand hygiene
 - Streaming to single secure point of entry
 - Meet and greet, Pre-screening checklist
 - Risk assessment – patient information
 - Correct demographic data – tel, email
 - Testing
- Results tracking, notification, and callout

Videos



Collecting a SARS-CoV2 Specimen

Helena Rabie



PPE for Aerosol-generating
Procedures

Helena Rabie



PPE for General Care

Helena Rabie

The TBH experience

- Location
- Signage and directions
- Triage of ill
 - Powers of observation
 - looks 'unwell', RR
 - 'Happy hypoxics'
 - SaO2/HR – minimal touching



Criteria for mild disease - may be sent home to self isolate

- Respiratory rate < 25 breaths per minute
- Normal mental status
- Normal mobility status
- Peripheral O2 saturation SaO2 \geq 95 % while breathing ambient air (optional)
- Temperature 36-39OC (optional)
- Pulse rate < 120 beats per minute (optional)

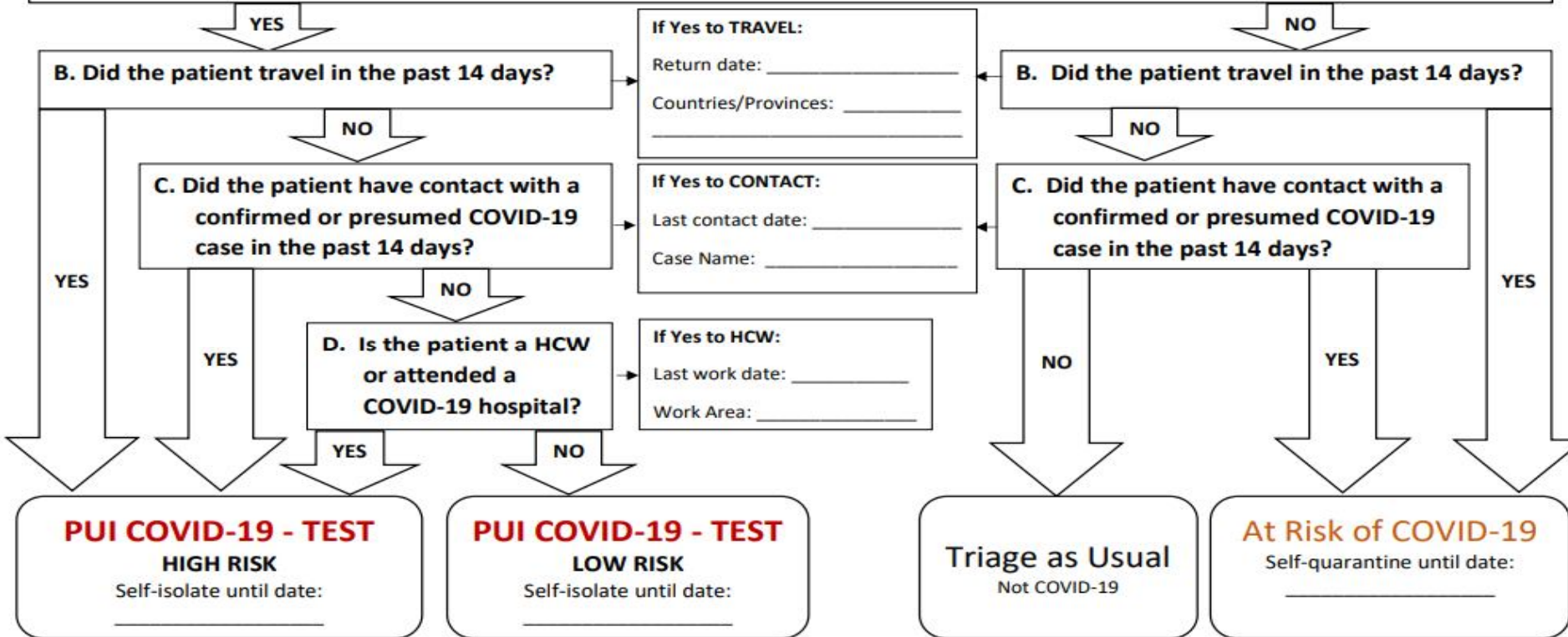


Date: _____ Time: _____

TBH COVID-19 PRE-SCREENING CHECKLIST v7:04/04/2020

Name:	Surname:	DOB:
Contact numbers:	Email address:	Address:

A. Does patient have an acute respiratory illness with sudden onset with at least one of the following Sx: Sx start date: _____
Circle: fever, cough, shortness of breath, sore throat, loss of smell, loss of taste, other: _____





You have been screened at the Tygerberg Hospital Coronavirus Unit and do not meet the current NICD criteria for coronavirus testing. You may have been exposed to the virus through travel to areas where a large numbers of people are infected OR through contact with a person who has the virus. Since you do not have symptoms of the virus you do not need a coronavirus test.

We do however recommend that you remain in **self-quarantine** for a period of **14 days**.

Who should self-quarantine?

Self-quarantine for COVID-19 is recommended for individuals without symptoms who have been directly exposed to the virus or who have traveled to areas where there are large numbers of people infected in order to prevent further transmission.

Self-quarantine steps

- Stay home. Only go out if you need medical care.
- Monitor your symptoms: Fever, cough, shortness of breath
- Get medical attention as soon as possible if you become ill.
- Make sure you know, and follow, the steps to seeking care.
 - ✓ Call the Western Cape COVID-19 Hotline on [021\) 928 4102](tel:021-9284102) as soon as you develop symptoms so that you may be directed to your closest health care facility
 - ✓ Put on a facemask before you enter the healthcare facility.

Self-quarantine practices

Do not go to work, school, or public areas. Avoid using public transportation, or taxis.

Separate yourself from other people and animals in your home. If you can, use a separate bathroom.

Facemasks should be used to help prevent the spread of the disease to others. Cough or sneeze into the fold of your elbow. Alternatively, cover your mouth and nose with a tissue when you cough or sneeze.

Clean your hands often. With soap and water for at least 20 seconds or with an alcohol-based hand sanitizer that contains 60-95% alcohol.

Avoid touching your eyes, nose, and mouth with unwashed hands.

Clean surfaces like counters, tabletops, doorknobs, bathroom fixtures, toilets, phones, keyboards, tablets, and bedside tables every day.

Coronavirus (Information leaflet for discharged persons)

You have been diagnosed with , or may have the new Corona virus 2019 infection. Remember , in the overwhelming majority of persons this is a mild to moderately disease and we expect persons to recover without any long term consequences.

We have assessed you as having mild to moderate disease and think that it is safe for you to go home. If we did any testing on you the results will take 2-3 days. You do not have to return to get the results we will call you. You may have the infection and you should consider yourself infected until you are given you the "all clear" by the Department of Health.

What should you do?

- Make sure we have your correct address and phone number so that we can contact you.
- Manage your symptoms by resting, keeping hydrated and taking paracetamol, or aspirin or over the counter flu medication. If your child is involved, avoid aspirin and over the counter flu medication and use paracetamol. Antibiotics are not needed and will not help.
- Isolate yourself in a separate, well-ventilated room at home and avoid contact with others
 - o Do not go to work or participate in any activities outside the house
 - o Do not leave your home unnecessarily until you have been given the "all clear" by a member of staff from the Department of Health.
 - o Do not have visitors over to your home
 - o If you don't have a separate room keep distance between yourself and other members of the family
- If others are in close proximity to you (due to necessity), please ensure that you are wearing a surgical mask that is fitted tightly around your nose and mouth
- Always cover your cough and sneeze
 - o Cough and sneeze into a tissue that you discard immediately OR Cough into your elbow AND
 - o Turn away and move away from others when you sneeze or cough
- Wash your hands with soap and water after coughing or sneezing and regularly throughout the day. You can also use a hand rub.
- Clean and disinfect frequently touched objects and surfaces. You can use a commercial product or household bleach, 4 -5 teaspoons per liter of water
- Don't share toiletries towels and eating utensils.
- If you share a bathroom and kitchen use it after the other members of the household and wipe down with bleach solution afterwards (this includes the outside of the toilet)
- Do your laundry with hot water (80 degrees or more) if possible. Iron with a hot iron if fabric allows.
- **You should contact us on 021-_____ if you experience :**
 - o Shortness of breath or Difficulty breathing OR persistent fever more than 2-3 days OR weakness .
 - o If your child is involved, watch for fast breathing and chest indrawing, inability to drink, sleepiness and fever for more than 2-3 days.

For more information:

<https://drive.google.com/open?id=1WHhdfsvxrahBVy-qPxaMJW7bAKJPN0i4>



Screening & Triage staffing

- **Support services essential for TTC**
- Patient admin clerk with IT equipment
- Cleaning staff and equipment for chair and environmental cleaning
- Security personnel for entry exit point control
- Waste management
- **Supply Chain essentials**
- Stationery for screening
- Educational material
- PPE supplies
- Hand hygiene supplies
- Biohazard Waste consumables

Table 2. Example situations and management alternatives if testing capacity is overwhelmed

Situation	Alternatives if system is overwhelmed and testing is not possible
Suspected case, mild, with no risk factors	Register as a suspected case, home isolate according to WHO guidance, and do not test
Suspected case requiring admission to health care facility regardless of severity	Strongly recommended to test. If testing is not possible, implement isolation measures warding against nosocomial transmission (thus no cohort isolation possible)
Symptomatic health care worker identified as a contact	Strongly recommended to test
Symptomatic health care worker with no known COVID-19 contact	In areas with COVID-19 community transmission, test
Increased number of suspected cases in a specific demographic group (potential cluster)	Test a subset of the cases
Closed settings, including schools, hospitals, long-term living facilities	Test initial cases. Consider all other symptomatic individuals as probable cases
Recovering patient who has tested negative twice	If clinically recovered, discharge after an additional 14 days in self-isolation
Contact tracing in areas of community transmission	Quarantine contacts for 14 days, If symptomatic, assume COVID-19 and extend quarantine



More lessons learnt

- There are no COVID experts – be humble
- We adapt as we learn – be flexible
- Unlearn and relearn
- Teamwork on multiple levels essential – be a team player
- Try to stay ahead of the curve – anticipate
- Protect staff – PPE, address fears, recreation/rest rooms
- Hand hygiene, masks, physical distancing, cough etiquette



Thank you

- Parker, A., Karamchand, S., Schrueder, N., Lahri, S., Rabie, H., Aucamp, A., Abrahams, R., Ciapparelli, P., Erasmus, D., Cotton, M., Lalla, U., Leisegang, R., Meintjes, J., Mistry, R., Moosa, M., Mowlana, A., Koegelenberg, C., Prozesky, H., Smith, W., van Schalkwyk, M., & Taljaard, J. (2020). Leadership and early strategic response to the SARS-CoV- 2 pandemic at a COVID-19 designated hospital in South Africa. *South African Medical Journal*, 110(6). doi:10.7196/SAMJ.2020v110i6.14809
- All staff involved in COVID-19 response