



SAOA

South African Optometric Association

SAOA

Guidelines for the

South African Optometric Practice

Amid

SARS-COV-2 and COVID-19

27 May 2020

TABLE OF CONTENTS

Contents

- 1 Glossary of Terms Abbreviations and Definition**
- 2 Introduction**
- 3 Recommended Guidelines:**
 - 3. Infection Prevention Control**
 - 3.1 Personal Protective Equipment**
 - 3.2 Prevention Measures:**
 - 3.2.1 Clean**
 - 3.2.2 Sanitize**
 - 3.2.3 Disinfect**
 - 3.2.4 Social distancing**
 - 3.3 Environment of the Optometric Practice**
 - 3.3.1 Signage on windows**
 - 3.3.2 Staff, Patient or Visitor entry and exit into and out of practice**
 - 3.3.3 Screening of Patient History**
 - 3.3.4 Staff training**
 - 3.3.5 Waiting areas and Consulting Rooms:**
 - 3.3.6 General Approach to Patients:**
 - 3.3.7 Clinical matters:**
 - 3.3.8 Aerosol generating procedures**
 - 3.3.9 Record-keeping**
- 4 Annexure**
 - 4.1 SAOA COVID-19 Screening Form**
 - 4.2 COVID-19 Testing Sites**
- 5 References**

1 GLOSSARY OF TERMS, ABBREVIATIONS AND DEFINITIONS

Understanding available information through scientific research, being cognisant of observation or trends around the SARS-COV-2 and COVID-19 guides safer optometric practice

TERMINOLOGY

1. **SARS-COV-2-CoV-2:** Severe Acute Respiratory Syndrome Corona virus 2 (SARS-COV-2)
 1. Novel corona virus
 2. Single stranded enveloped RNA
 3. The cause of Corona virus Disease 2019 (COVID-19)
 4. Started in Wuhan, Dec 2019, China and rapidly spread worldwide
 5. Little known about the pathogenesis, treatment and vaccination
 6. Population worldwide has no or little previous immunity

2. **Viral Transmission:** When a virus spreads between an infected person and another.

SARS-COV-2 transmission has many unknowns and controversial and its current transmission is between humans

1. **Respiratory Droplet transmission**

Occurs when the infected person coughs, sneezes, or talks and the droplets are transmitted to a susceptible host who is within 1 m or less and/ or has been in the presence of the infected person for 15minutes or more
The virus can rarely be transmitted through tears
2. **Fomite/Contact Transmission:** indirect transmission when a person touches a contaminated surface and touches his face before washing his hands. The virus can survive on stainless steel and plastic, cardboard, copper and aerosol for 72 hrs, 24 hrs, 4 hrs and 3 hrs, respectively.
3. **Airborne transmission/Aerosol generating transmission:**

The virus may suspend itself in the air and infect a host at a distances of greater than 1m. The viability of this may be influenced by time (3 hours), airflow (aerosol generating activities or procedures) and distances.
Follicular conjunctivitis may be due to the virus being transmitted by aerosol contact with the conjunctiva
4. **Faecal or oral route:**

Possible transmission may occur via this route (viral RNA was found in stool samples)

3. **Incubation period:** Time between the host being exposed to the virus and the onset of symptoms in the host

OR

the time the virus is detected in the body of the host even if there were no symptoms (also known as the pre-symptomatic period)

- 4 Median Incubation Period:** 5 -6 days (Range: 2-14 days/longer)
It is the basis for the quarantine period for cases and monitoring of exposed contacts
- 5 Exposure time:** Latest time a contact was exposed to the infectious person
- 6. Infectious Period:** The period during which an infected person is likely to spread the virus to a host. It varies and may present:
1. one to two days prior to symptoms
 2. during the symptomatic period when symptoms are mild and or non specific
 3. for 7-12 days in moderate cases and up to two weeks in severe cases.
 4. when a case is asymptomatic
- 7 Close contact:** When a host has face to face contact of less than 1 m with an infected person
Or
When the host was in a closed space for more than 15 minutes with an infected person
- 8. R0 (R nought or R zero): Reproductive Rate**
1. the number of cases that are expected to occur as a result of infection by a single individual at the start of an epidemic before immunity and immunisation is available
 2. It is used to track how many people, on average, will be infected for every one person who has the disease
 3. Indicates how infectious is the disease is i.e. COVID -19
 4. When the average R0 is less than 1; the infection spreads slowly and eventually dies out.
 5. average $R_0 > 1$, infection will spread exponentially
 6. the higher the value of R0, the faster an epidemic will progress.
 7. Number of Variables impact on R0
 - a. susceptibility, size and density of the population that the infection is introduced into matters
 - b. the infectiousness of the virus
 - 8 WHO R0 at the beginning of March: = 2 to 2.5
- 9. Re: Effective reproduction number**
1. Represents the number of people, in a population, who can be infected by an individual at any specific time of the pandemic as the population becomes increasingly immunized, either by individual immunity following infection or by vaccination, and as people die.
 2. Re is affected by the number of people with the infection and the number of susceptible people with who infected personis contact with. People's behaviour (e.g. social distancing) can also affect Re.
 3. The number of susceptible people falls as people die or become immunized by exposure. The sooner people recover or die, the smaller the value of Re will be at any given time.

- 10 Doubling Time:** The number of days it takes for the total number of infections to double.
A value of 1day is of concern and implies the infection is spreading rapidly resulting in steep curve
- 11. Co-morbidities:** Chronic medical conditions or diseases which are non- infectious and Infectious
Common South African co morbidities: hypertension, diabetes mellitus and cardiovascular diseases
Other co morbidities: chronic pulmonary disease, asthma, chronic renal diseases, active and past TB, malignancy, HIV, auto-immune conditions and those over 60 years
Other high risk patients are those with obesity, and mental and neurological health conditions such as dementia

12 Signs and Symptoms of COVID 19: patients may present with no to mild and severe symptoms

Common symptoms:production of phlegm, shortness of breath or difficulty breathing, chills or rigours, muscle pain, headache, sore throat, new loss of smell or taste

Less common symptoms/signs:

Nausea or vomiting, nasal congestion, diarrhoea, coughing up blood or blood-stained mucus, frost bite toe rashes, red spots rashes/hives on the body, Kawasaki Disease Inflammatory symptoms in children

Ocular symptoms

Conjunctivitis: red, weepy wet eye, swollen eyelids, light sensitivity, painful eye, and mild follicular conjunctivitis

Emergency symptoms/signs

Trouble breathing, persistent pain or pressure in the chest, new confusion or inability to arouse, bluish lips or face

- 13 Test:** **SARS CoV-2 PCR (NDOH)**
This is a Prescribed Minimum Benefit level of care for the investigation and/or diagnosis of COVID-19.
- 14 Isolation Times:** Asymptomatic patient - isolate for 14 days
Mild disease - isolate 14 days after onset of symptoms
Severe Disease - isolate 14 days after clinical stability is achieved
- 15 Median time from symptoms onset to clinical recovery:**
Mild cases (82%): approximately 2 weeks
Severe or critical disease(6%): 3 - 6 weeks
Among patients who have died, the time from symptom onset to outcome ranges from 2 - 8 week

Acronyms

1	IPC	Infection prevention and control
2	WHO	World Health Organisation
3	HCW	Health Care Workers
4	NICD	National Institute of Communicable Diseases
5	CDC	Centres for Disease Control and Prevention
6	NDOH	National Department of Health

2 Introduction:

Global

On the 11 March 2020, WHO confirmed the novel coronavirus disease (COVID-19) as a pandemic. At the time 118,000 cases in 114 countries were recorded and 4,291 people had lost their lives. All countries were called to take urgent and aggressive action. On the 27 May 2020, the number of reported cases was 5 701 337 across 216 countries with 357 688 deaths.

The first COVID-19 case, in South Africa, presented on the 5 March 2020. On the 15 March 2020 there were 61 positive cases recorded in South Africa. In the first 3 weeks the epidemic doubled every 2 days. A State of National Disaster was swiftly declared to safeguard the health and well being of South Africans.

A nation-wide lock down commenced on the 26 March 2020 with an alert level 5 being enforced. The purpose was to slow the spread of the virus, limit the number of new infections and deaths. A further benefit was to allow for early detection through screening, early diagnoses of COVID-19 cases through testing, timely tracing of contacts, isolations, quarantining and hospitalisation of patients. Health care facilities benefited with time to strengthen their infection prevention and control protocols, increase their ICU bed capacity, ventilators and personal protective equipment for health care workers to cope with the increase in COVID-19 cases.

Lockdown levels have migrated to level 4 in May 2020 and now to level 3 on the 1 June 2020. While the lockdown has slowed the spread of the virus, current statistics record 25 937 cases, 552 deaths, 13 451 recoveries and 634 996 conducted tests. The epidemic is on its exponential increase and expected to reach its peak in August to late September 2020 with an estimate of 40 000 deaths by November 2020. Many hotspot areas have been identified, with the largest number of cases in the Western Cape, Gauteng and Eastern Cape. These cases have started to flood the health care facilities.

Explanations proposed for the climb in case numbers are that more testing is being done and test kits and Personal Protective Equipment are insufficient. As the turnaround testing time is delayed early diagnosis of cases, timely tracing, isolation, quarantining and hospitalisation will be impacted on. The ease in lockdown regulations which allows people to congregate in groups at work, schools and other gatherings is also likely to contribute to the steep rise in cases.

Regulations that continue to be mandatory are social distancing of more than 2m, wearing of masks, hand hygiene, cough etiquette and safety protocols at work, amongst many listed in the Risk Adjusted Strategy.

High risk patients, in South Africa, for COVID-19 are those with co-morbidities, senior citizens > 60 years and health workers. Among the primary health workers in South Africa are a cadre of 3812 optometrists and 138 dispensing opticians who provide vision and eye health care to a population of 58.78 million people. Of these 273 optometrists are employed in the public sector. Optometrists examine, diagnose and manage vision and eye health disorders while detecting many systemic conditions and making appropriate referrals.

The clinical challenges that the practice of optometry and dispensing Opticianry may face are the close working distances between the practitioner and patients for many clinical procedures – some as close as a 5cm working distance and high touch contact of surfaces. Further, infectious patients may present asymptotically with COVID-19. There are many unknowns regarding the virus and its pathogenesis, the transmission modes, the condition of COVID-19, treatment, cures and vaccinations. Emerging scientific evidence is based on small sample sizes. Optometrists and dispensing opticians must take cognizance of observations and trends shared.

As Optometrists and Dispensing Opticians embrace the present and look ahead, SARS-COV-2 will continue to spread, resulting in many more COVID-19 cases until immunity is eventually provided or achieved. As the population of South Africa continues with their daily tasks, in the work environment or at home to generate an income, provide for their families and contribute to the economy of the country, optometrists and dispensing opticians and their staff have a responsibility to be aware of information on SARS-COV-2 and COVID-19, to ensure safety measures to help slow the spread of the virus while providing comprehensive vision and eye health care, screen patients for COVID 19 and contribute to national data that can generate country specific results and recommendations.

The Aim of recommendations in this guideline is to:

- 1 Familiarise all staff within the South African Optometric Practice with knowledge on SARS-COV-2 and COVID-19
- 2 Promote safety recommendations for the South African Optometric Practice amid SARS-COV-2 and COVID-19, while quality vision and eye health care is provided within the regulations of the HPSCA
- 3 Contribute to the COVID-19 screening (early detection of positive cases within communities and provide information to trace contacts)

The SAOA Prays that God will continue to Bless and Protect You, Your Staff, Your Patients and Families

3 Infection Prevention and Control (IPC) in the Optometric Practice amid SARS-COV-2 and COVID-19

Infection prevention and control is a keystone to providing safe health care. Employees are obliged to supply and uphold a safe workplace for the health of workers. Personal protective equipment, decontaminating of practices, social distancing, environmental considerations, and early detection of COVID-19 are imperatives to keep your patients and staff safe while providing quality vision and eye health care during the pandemic.

3.1 Personal Protective Equipment (PPE) in Environment of the SA Optometric Practice

Personal Protective Equipment offers protection to those who wear it and those they are in contact with.

3.1.1 Table 1: PPEs for Optometrist and Dispensing Optician in an Optometric Practice amid SARS-COV-2 and COVID-19

Personnel	Minimum PPE	Rationale
Optometrist and Dispensing Optician	Masks: Surgical (blue on outside and white on inside) *N95 Respirators if available (aerosol generating techniques)	Limit the risk of exposure to large respiratory droplets in the air via the nose and mouth Limit the risk of exposing patients to large respiratory droplets from the eye care professional Limit the risk of exposure to small and large respiratory droplets in the air via the nose and mouth Used when assessing TB patients
	Face Shields or Goggles:	Limit the risk of eye exposure to SARS-COV-2 via respiratory droplets and through contact
	Gloves: Disposable Gloves or (Re-usable gloves that can be sanitised or washed with Soap and Water). Be Cautious	Limit risk of exposure to SARS-COV-2 on hands via contact with contaminated surfaces or through contact with the nose, mouth and or eyes
	Soap and Water: Rub for 20 seconds and rinse Sanitizer: (Alcohol Based) Rub for a minimum of 15 seconds or until dry	The hydrophilic component of soap dissolves the lipids and break down the proteins of the virus Sanitizer \geq 60% alcohol content disrupts RNA molecules in the virus, limiting SARS-COV-2 viral replication
	Pen: Own	Limit transmission of SARS-COV-2 through shared contact

3.1.2 Table 2: PPEs for Staff in an Optometric Practice amid SARS-COV-2 and COVID-19

2 All Staff	Masks: Surgical (blue on outside and white on inside)	Limit the risk of exposure to large respiratory droplets in the air via the nose and mouth Limit the risk of exposing patients and other staff to large respiratory droplets from staff member
	Face Shields	Limit the risk of eye exposure to SARS-COV-2 via respiratory droplets and through contact
	Gloves: Disposable Gloves or Re-usable gloves (sanitised or washed with Soap and Water) Be cautious	Limit risk of exposure to SARS-COV-2 on hands via contact with contaminated surfaces or through contact with the nose, mouth and or eyes
	Soap and Water: Rub for 20 seconds and rinse Sanitizer: (Alcohol Based) Rub for a minimum of 30 seconds	The hydrophilic component of soap dissolves the lipids and break down the proteins of the virus Sanitizer \geq 60% alcohol content disrupts RNA molecules in the virus, limiting SARS-COV-2 replication
	Pen: Own	Limit exposure to SARS-COV-2 through shared contact

3.1.3 Table3: PPE for Patient and Any Visitor in an Optometric Practice amid SARS-COV-2 and COVID-19

Patient	<p>Mask: Cloth Mask</p> <p>Surgical Mask: Suspect patient with symptoms of Cold/flu /COVID-19:</p>	<p>limit exposure to large respiratory droplets in the air</p> <p>limit exposure to practice staff to large respiratory droplets from the patient</p>
	<p>Sanitizer: Rub for a minimum of 15 seconds</p>	<p>Minimize viral transmission and maximize virus inactivation</p>
	<p>Pen: Own</p>	<p>Limit exposure to SARS-COV-2 COV 2 through shared contact</p>

3.1.4 Other optional PPEs for Staff: disposable gowns, head covers, shoe covers

3.1.5 Donning and Doffing of Personal Protective Equipment:

Protection through the use of PPEs is possible if standards are met, if appropriate for the examinations conducted, is worn correctly, the procedure for donning (putting them on) and doffing (taking them off) is strictly followed and discarding of PPES is appropriately adhered to. Training and demonstrating competencies in these procedures, to minimise the risk of exposure to SARS-COV-2 COV-2, is crucial.

3.1.5.1 Donning:

Prerequisite:

1. Good hydration and use of the bathroom
2. Use light clothing (scrubs) easy to wash
3. Remove jewellery
4. Secure long hair and spectacles
5. Avoid nail polish

Procedure for Donning:

- 1 Disinfect hands
- 2 Apron over your head fasten at the back of neck
- 3 Mask
- 4 Face Shield or Goggles
- 5 Disinfect hands
- 6 Glove

Procedure for Doffing:

- 1 Gloves
- 2 Gown
- 3 Face Shield or Mask
- 4 Disinfect Hands

Doffing when getting home

1. Remove shoes before entering your home (wash/ disinfect on top and bottom)
2. Sanitise cell phone, spectacles, keys, work utensils, laptops
3. Remove clothes in an area where your family has no contact with them and place in the washer
4. Don't touch or sit on any couches chairs or beds
5. Shower, brush your teeth
6. Ready to interact with your family

Disposing of PPE: Double bag seal and dispense

3.2 Preventative Measures in Environment of SA Optometric Practice amid SARS-CoV-2 and COVID-19

3.2.1 Decontaminating: cleaning, sanitizing and disinfecting

3.2.1.1 Clean:

Definition: The removal of dirt or impurities from a surface

What to Use: a detergent/surfactant/soap and water or an ultrasonic cleaner

How does this impact on SARS-COV-2:

The hydrophilic (water-loving) component of soap dissolves the lipids and breaks down the proteins of SARS-CoV-2. This helps to limit the virus transmission

Cleaning of Hands of all Staff: use soap and water as frequently as is necessary

Wet the surface of your hands (palm and dorsal side). Dispense soap onto hands.

Rub it on all surfaces of the hand for 20 seconds (palm, dorsal side, in between the fingers, the thumb and web of the thumb, wrists).

Rinse thoroughly and dry hands using a paper towel. Discard used paper towel in a bin that has a double bag

Cleaning Surfaces in the Practice:

Frequency: daily and as frequently as is necessary to remove dirt before disinfecting

How: detergent and water with a paper towel and gloves or mop and gloves for floors

3.2.2 Sanitize:

Definition: decreases the number of germs on hands/on a surfaces to a safe level and reduces the risk of infection spread

Hands of Staff: before and after contact with commonly touched surfaces/equipment before donning and doffing of PPE, before and after cleaning and disinfecting surfaces

Hands of patient: on entry into practice, before and after contact with surfaces in the practice/trial of frames/devices and on exiting the practice

Procedure: first wash with Soap and water if dirty

What to Use: A Hand Sanitizer of $\geq 60\%$ alcohol content (AHS)

Mode of Action: AHS disrupts RNA molecules in the SARS-COV-2 thereby preventing viral replication.

Sanitising Hands with Alcohol Based Hand Sanitizer (AHS):

Dispense 2 squirts of sanitizer onto your hands and rub on all surfaces of your hand for a minimum of 15 seconds or until hands are dry. (palm, dorsal side, in between the fingers, the thumb and web of the thumb, wrists.) Rub

NB: AHS dispenser surface may be contaminated

3.2.3 Disinfection:

Definition: a process that kills micro-organisms (Bacteria, viruses and mould) from surfaces. Most effective if surfaces are first cleaned

Mode of Action: e.g. active ingredient in bleach, sodium hypochlorite can be used as a nonporous surface disinfectant by oxidizing or burning the protective membranes of bacteria and the protein shell of viruses, leaving them vulnerable to destruction.

What to Disinfect: All surfaces daily and as frequently as is necessary.

Focus on frequently touched surfaces, from cleanest to dirtiest, from the highest to the lowest points. Toilets and wash basins should be disinfected after use

All practice equipment, frames and accessories as per manufacturer's guidelines that come into contact with the patient before and after use

Disinfection of some equipment in the presence of the patient may provide the security and confidence of disinfection process

What to use: That which is available and applicable to surface type
Use gloves and paper towel and discard or gloves and a mop and decontaminate:

- e.g. 1 Acetate Frames: Soap and warm water
- 2 Spectacle Lenses: Lens wipes or rinse with water first then with non abrasive soap and water
- 3 Surface disinfectant: chlorine based or hypochlorite solution
- 4 Alcohol swabs/ bleach solution for tonometer probe. Inspect regularly for any abrasion on the probe

Types of Chemical Disinfectants:

1. sodium hypochlorite solution (bleach 5.25%) diluted 1: 100
2. Alcohol based disinfectant (> 60% ethanol or 60-70% isopropanol)
3. 0.5% hydrogen peroxide
4. Quaternary ammonium compounds and phenolic compounds (found in household cleaner)

NB: allow disinfectant to dry for 10 minutes before contact with the surface

3.2.4 Social Distancing: **Rational:** is to decrease R0 and decrease the infectiousness of the person with the virus

Within the Practice: Chairs, (that can be disinfected after every use must be placed 2m apart in the waiting and dispensing areas
The number of patients allowed into the practice must be based on available space
Distance between staff of 2m must be maintained

3.4 The Environment of the SA Optometric Practice amid SARS-COV-2 and COVID-19

3.3.1 Signage on windows:

1. Safety and health protocols to be displayed
2. Notice that doors are closed for purposes of social distancing
3. Doors may remain open if social distancing and pre-entry requirements are possible

3.3.2 Staff, Patient or Visitor entry and exit into and out of practice

1. Wear a mask
2. Sanitize hands
3. Temperature check
4. Fill out the COVID-19 questionnaire and keep register of all entries (Annexure A)
5. If staff/patient/visitor is unwell or presents as a COVID-19 suspect refer to the nearest testing facility /casualty facility and reschedule patient/ visitor

3.3.3 Patient History:

Via: telephone /email/Telemedicine if possible or on entry into the practice to elicit the chief concern and direct appropriately

3.3.4 Continuous Education of all Staff on the SARS-COV-2, COVID 19 and Health and Safety Recommendations refer to information in section 1,2,3 and 4)

3.3.5 Waiting areas and Consulting Rooms:

Keep items to a minimum

Refrain from allowing food, water or drinks to be consumed in the practice
Cough/breath guard on your slit lamp and sanitise after every patient

3.3.6 General Approach to Patients:

Optometrists and dispensing opticians must use their professional judgement to adapt the examination by using the safest and most efficient techniques.

3.3.7 Clinical matters:

Conjunctivitis has been reported as a potential sign of COVID19 infection.

Patients are to ensure proper hand washing and drying before inserting and removing contact lenses, Follow the daily wearing schedule as prescribed and clean contact lenses cases daily. Avoid touching your face (eyes) while wearing contact lenses. Cease wear of contact lenses if you are ill.

3.3.8 Aerosol generating procedures

Any aerosol generating procedure is to be used with caution.

3.3.9 Record-keeping

Document that the patient was examined during the COVID-19 pandemic to help explain your decision-making where necessary and for statistical purposes

4 Annexure A:



South African Optometric Association

SAOA Screening Form for COVID 19 of all persons entering the Optometry Practice

Name: _____ Date: _____ Time: _____
ID: _____ DOB: _____ Age: _____
Male ___ Female ___
Area: Dwelling _____
Area: Work: _____
Cell No: _____
Work No: _____
Home No: _____

Clinical Information:

- 1 Are you taking any medication for pain/temperature/analgesics?
Name: _____ (Panado; Ibuprofen...can mask a fever)
- 2 Exclude temperatures > 37.2. using an infrared non-contact thermometer. _____
- 3 Do you have cough Sore Throat Breathing difficulty/ shortness of breath
- 4 Record any systemic condition (high blood pressure, diabetes, asthma, respiratory illnesses, cancer, immune-compromised or any rare diseases)
- 7 Are you taking any other medications _____ (including immunosuppressive therapy)

If yes to 2 and or any in 3 reschedule patient and refer for testing to nearest outpatient facility for COVID 19 testing. Call COVID 19 Clinicians Hotline 082 883 9920

If patient has a normal temperature and is on analgesic, reschedule as this can mask a fever

Travel History:

- 1 Mode of transport from home to work _____
 - 2 Have you travelled outside of your province/country in the last 14 days?
 - 3 Has your seating distance, between you and the next passenger, during travel been less than 1m?
-

Exposure History:

Within the last 14 days did you:

- 1 Have direct contact with someone known to have contracted (COVID-19)
- 2 Have direct contact with someone known to have had symptoms of COVID -19?
- 3 Worked at or attended a facility that was treating any COVID-19 positive cases?
- 4 Attend any gathering at a religious place of worship, wedding or funeral?

If yes reschedule the appointment after isolation period for exposure has passed

NB: Information may support tracing of contacts of an index case if necessary

Annexure B
COVID-19 TESTING SITES (NDOH)

Province	Testing Site	Contact Number	Working Hours/Days
Western Cape	Groote Schuur Academic Hospital	Tel: 021 404 5201	Hours extended depending on the need.
		Tel: 021 404 5116	
	Tygerberg Academic Hospital	Tel: 021 938 9354	06:30 – 19:00 (Seven days a week)
		Tel: 021 938 9355	
Gauteng	Charlotte Maxeke Academic Hospital	Tel: 011 489 8853	07:00 – 19:00 (Seven days a week)
		Tel: 011 489 8880	
	Tshwane Academic Hospital		Testing is available daily including weekends
		Tel: 012 354 7000	
Dr George Mukhari Hospital	Tel: 012 521 4227 Tel: 012 521 4217	08:00 – 17:00	
KwaZulu-Natal	Inkosi Albert Luthuli Central Hospital	Tel: 031 240 2794	07:00 – 19:00(Monday to Friday)
Eastern Cape	NHLS Port Elizabeth Virology	Tel: 041 395 6120/6126	07:00 – 19:00(Monday to Friday) 08:00-12:00(Saturday)
Free State	Universitas Hospital	Tel: 051 405 2834	07:30 – 17:30
		Tel: 051 405 3162	

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