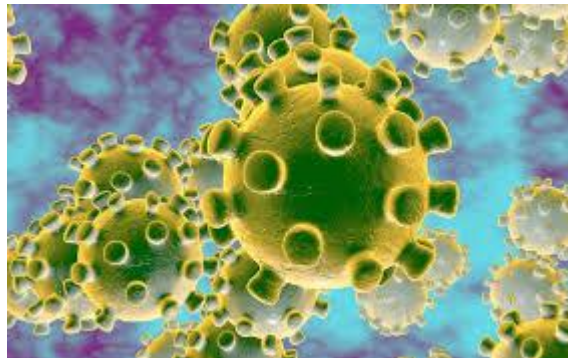




health

Department:  
Health  
REPUBLIC OF SOUTH AFRICA

# **STANDARD OPERATING PROCEDURES FOR PREPAREDNESS, DETECTION AND RESPONSE TO A CORONAVIRUS (2019-NCOV) OUTBREAK IN SOUTH AFRICA**



**National Department of Health  
Directorate: Communicable Diseases  
30 January 2020**

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Abbreviations

CDC	Communicable Disease Control
CIF	Case investigation form
EMS	Emergency Medical Services
NDOH	National Department of Health
NHLS	National Health Laboratory Service
NICD	National Institute for Communicable Diseases
PHO	Port Health Official/s
PHS	Port Health Service
PoE	Port/s of Entry

## 1. Purpose of the document

This document outlines the standard operating procedures for detection and response to case/s of suspected novel coronavirus disease (2019-nCoV) in South Africa. The content of this document should inform provincial preparedness plans.

## 2. References and links

### 2.1 Guidelines and policies

National guidelines on epidemic preparedness and response (NDOH):

<http://www.health.gov.za/index.php/primaryhealthcare/category/154-communicable-diseases?download=438:National%20Guidelines%20on%20Epidemic%20Preparedness%20and%20Response>

### 2.2 Useful links

Details on the diagnosis of the novel respiratory pathogen can be found on: [http://www.nicd.ac.za/wp-content/uploads/2019/05/NMC-case-definitions-FLIPCHART\\_v4\\_May-2019.pdf](http://www.nicd.ac.za/wp-content/uploads/2019/05/NMC-case-definitions-FLIPCHART_v4_May-2019.pdf).

South Africa has released case definitions and precautionary measures for 2019-nCoV which can be found on: <http://www.nicd.ac.za/novel-coronavirus-outbreak-in-wuhan-city-hubei-province-of-china/>

World Health Organization: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>

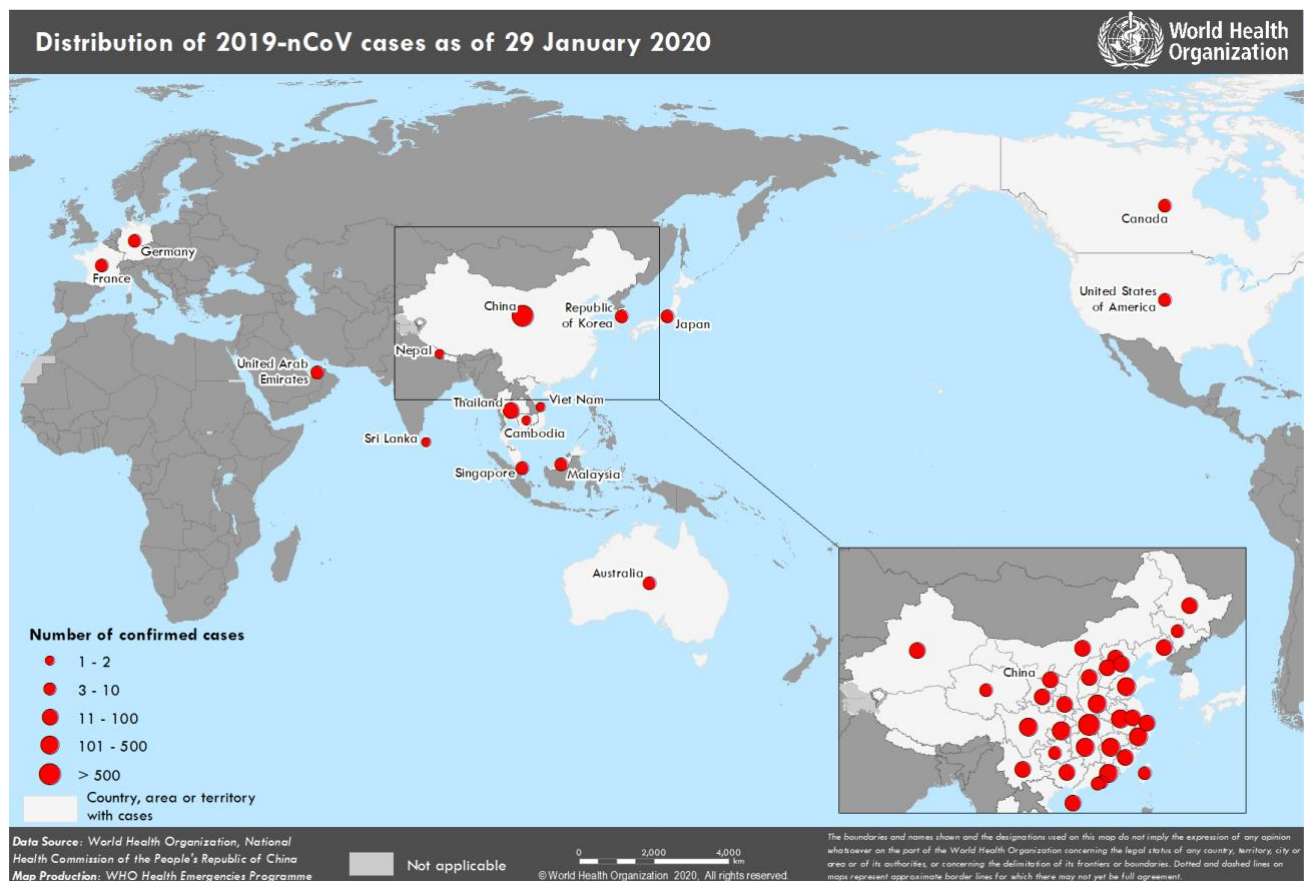
## 3. Background

On 31 December 2019, the World Health Organization (WHO) China Country Office was informed of cases of pneumonia of unknown cause detected in Wuhan City, Hubei Province of China. On 7 January 2020, the causative pathogen was identified as a novel coronavirus (2019-nCoV). The majority of these cases were linked to a seafood, poultry and live wildlife market in Wuhan City, suggesting that the novel coronavirus has a possible animal origin. According to WHO, as of 29 January 2020, 6065 cases have been reported globally; 5997 cases and 132 deaths were reported in China; 68 cases were reported from outside China (in 15 countries). It should be noted that the number of cases is increasing; for the latest update refer to <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>. The incubation period is currently estimated to be up to 14 days.

Coronaviruses belong to a large family of viruses causing a wide spectrum of illness, ranging from very mild to severe. Some cause illness in people; numerous other coronaviruses circulate among animals, including camels and some bat species. Rarely, some animal coronaviruses can evolve to cause illness in people. Sometimes coronaviruses may develop the ability to spread from person to person, for example the Middle East respiratory syndrome coronavirus (MERS-CoV), first reported from Saudi Arabia in 2012, and the severe acute respiratory syndrome coronavirus (SARS-CoV), first recognized in China in 2002.

A WHO Emergency Committee meeting was convened on Wednesday, 22 January 2020 by the WHO Director-General under the International Health Regulations (IHR2005) regarding the outbreak of novel 2019-nCoV in the People’s Republic of China. The WHO Expert Committee acknowledged that developments in China are concerning, noted the country’s intense efforts to investigate and contain the outbreak, but concluded that at this stage, a Public Health Emergency of International Concern (PHEIC) would not be declared. As infected travellers may appear in any country (to date, cases have been reported in Japan, Republic of Korea, Vietnam, Singapore, Australia, Malaysia, Cambodia, Thailand, Nepal, Sri Lanka, USA, Canada, France, Germany, United Arab Emirates, Hong Kong, Taiwan, and Macau) the committee recommended that all countries should be prepared for containment, including active surveillance, early detection, isolation and case management, contact tracing and prevention of onward spread of 2019-nCoV infection, and to share full data with WHO.

It should be noted that as of 29 January 2020, no cases of 2019-nCoV have been reported in South Africa. The National Institute for Communicable Diseases (NICD) is closely monitoring the situation, and will test patients that satisfy the criteria for suspected cases, bearing in mind that it is influenza season in the northern hemisphere and the expected respiratory tract infections are common.



#### 4. Process flow for detection of and response to suspected 2019-nCoV cases

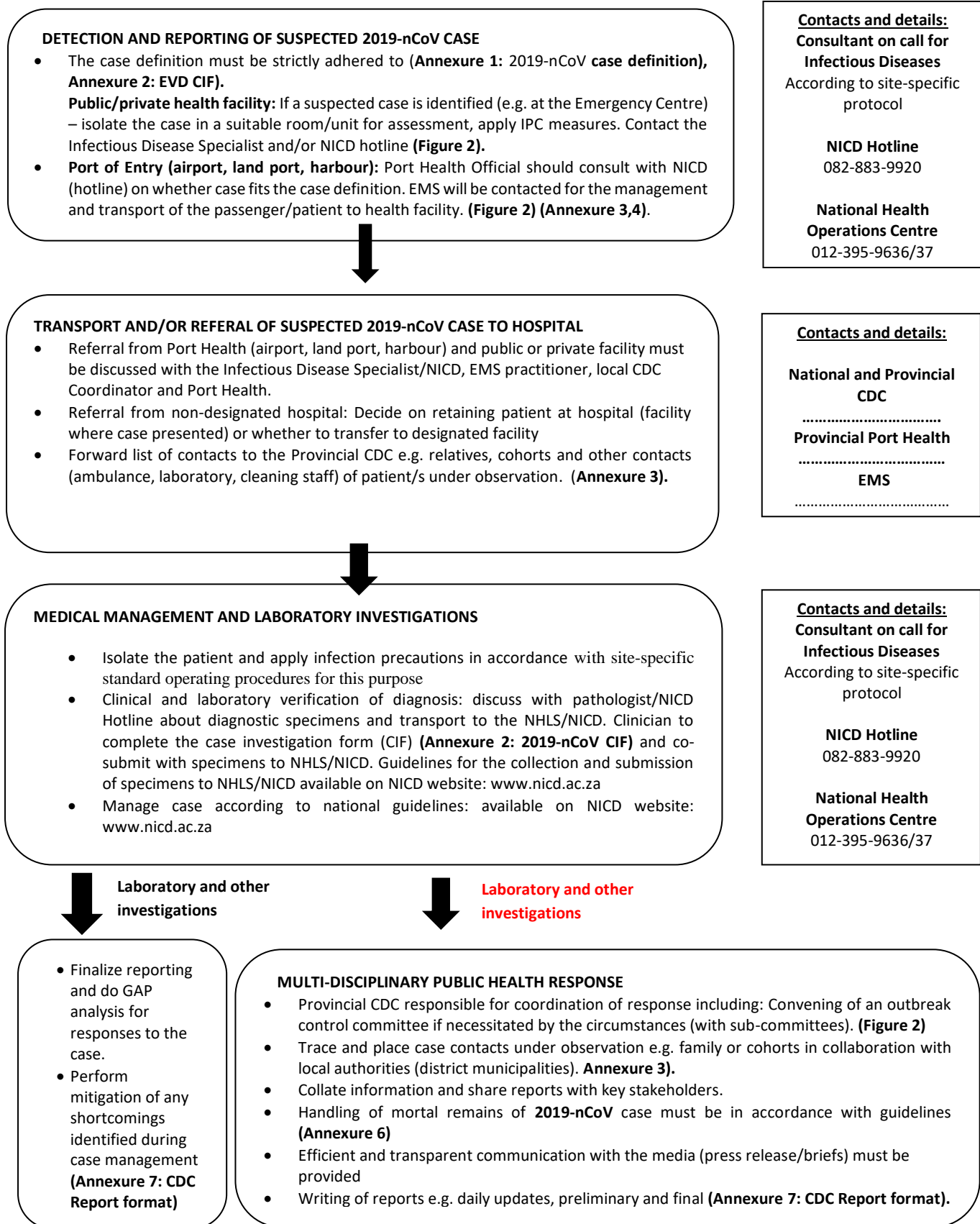
The overarching process flow for the detection and response of 2019-nCoV is provided in **Figure 1**. The roles and responsibilities of the different stakeholders are also depicted in **Figure 1** and **Figure 2**.

It is strongly recommended that these flow charts are used in conjunction with National Guidelines on Epidemic Preparedness and Response (2010).

All provinces should develop province-specific standard operating procedures for preparedness, detection and response which would include province-specific adaptation of the process flow depicted in this document.

#### DESIGNATED HOSPITALS FOR MANAGING 2019-nCoV CASES

Province	Designated Hospital	Designated Referral Hospital
Limpopo	Polokwane Hospital	
Mpumalanga	Rob Ferreira Hospital	
Gauteng	Charlotte Maxeke Hospital Steve Biko Hospital Thembisa Hospital	<b>Charlotte Maxeke Hospital</b>
KwaZulu-natal	Greys Hospital	
North West	Klerksdorp Hospital	
Free State	Pelonomi Hospital	
Northern cape	Kimberley Hospital	
Eastern Cape	Livingston Hospital	
Western Cape	Tygerberg Hospital	<b>Tygerberg Hospital</b>



**Figure 1: Process flow for the detection and response to a suspected EVD case.**

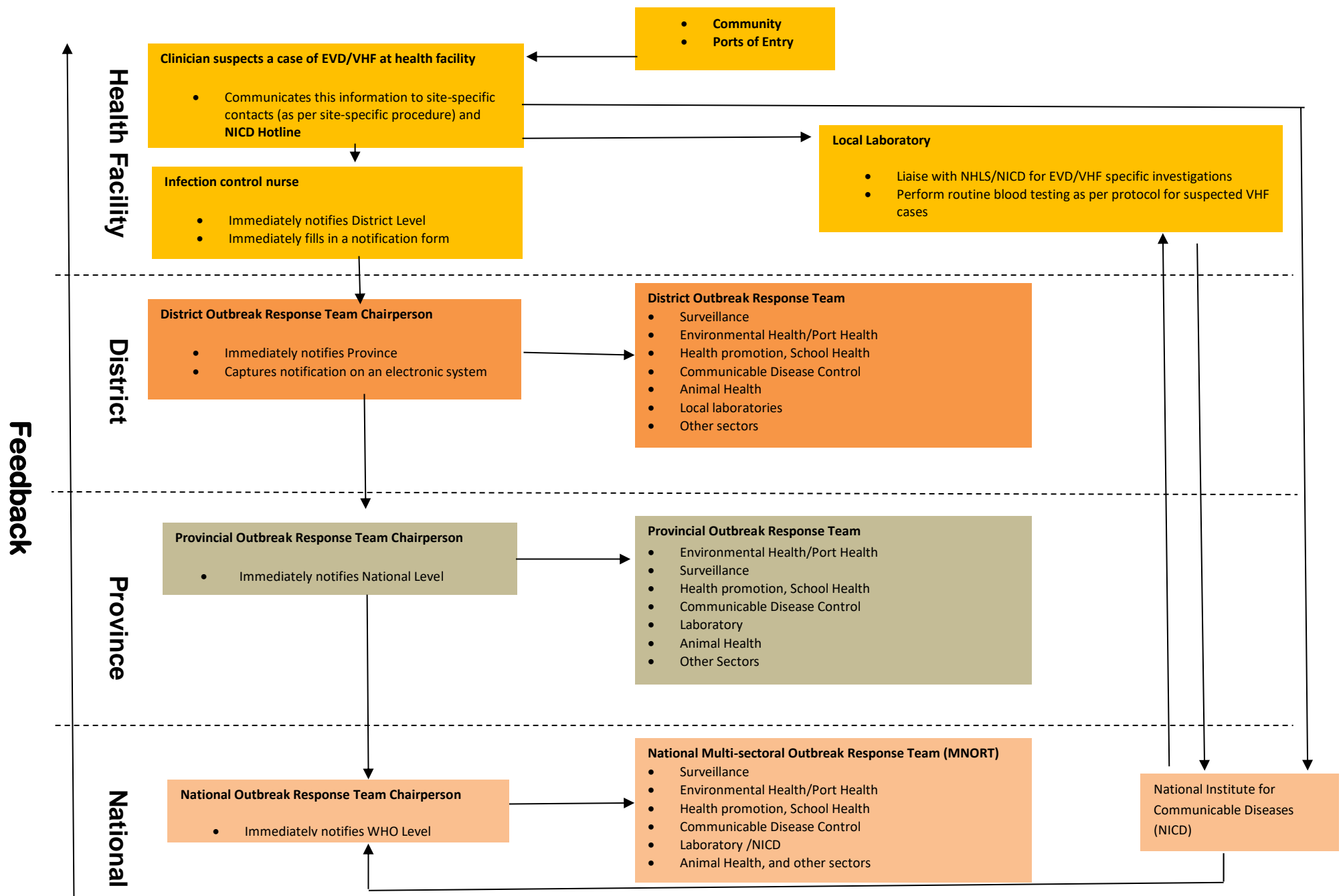



Figure 2: Flow of information for suspected EVD case notification and response.

## 5. Annexures

### Annexure 1: 2019 nCoV case definition

 <p><b>NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES</b> Division of the National Health Laboratory Service</p>	<h2>2019-nCoV Quick Reference for Health Workers</h2>
27 January 2020	<p>Centre for Respiratory Diseases and Meningitis National Institute for Communicable Diseases (NICD) 24-hours hotline number: 082-883-9920</p>
<p><b>Background:</b> On the 31<sup>st</sup> December 2019, the World Health Organization (WHO) China country office reported a cluster of pneumonia cases in Wuhan City, Hubei Province of China. A novel coronavirus (2019-nCoV) has been confirmed as the causative virus. Other cities in China as well as countries outside of China including, Japan, Italy, United States of America and Thailand have also reported cases. Most cases to date have links to Wuhan but person-person spread has been described.</p>	
<p><b>Clinical presentation and management of suspected cases</b> The main clinical signs and symptoms are fever and cough with a few patients presenting with difficulty in breathing and bilateral infiltrates on chest X-rays. Lymphopaenia may be present. Treatment is supportive.</p>	
<p><b>Clinical and epidemiological criteria for Person Under Investigation (PUI)</b></p> <p><b>Severe illness</b> Fever (<math>\geq 38^{\circ}\text{C}</math>) and cough with pneumonia or Acute Respiratory Distress Syndrome (ARDS) (clinical/ radiological) requiring admission <b>AND</b> any of</p> <ol style="list-style-type: none"><li>1. A documented travel history to Wuhan, Hubei Province, China within 14 days before symptom onset; or</li><li>2. Close physical contact with a confirmed patient with 2019-nCoV while he/she is symptomatic*; or</li><li>3. Patient is a healthcare worker who was exposed to patients with severe acute respiratory infections unless another aetiology has been identified to explain the clinical presentation</li></ol> <p><b>or</b></p> <p><b>Illness of any severity</b> A person with acute respiratory illness (ARI) of any degree of severity <b>AND</b> who within 14 days of onset of illness had been exposed to the following:</p> <ol style="list-style-type: none"><li>1. Close physical contact with a confirmed patient with 2019-nCoV while he/she is symptomatic*; or</li><li>2. Healthcare facility in a country where hospital-associated 2019-nCoV infections have been reported; or</li><li>3. Any direct contact with animal source in countries where 2019-nCoV is known or where human infections have occurred (due to the animal source remaining undetermined, guidance for this point will be updated)**; or</li><li>4. A documented travel history to Wuhan, Hubei Province, China within 14 days of symptom onset; and had visited an animal market in Wuhan City</li></ol> <p><small>*Close contact is defined as: healthcare-associated exposure, including providing direct care for nCoV patients, working with healthcare workers infected with nCoV, visiting patients or staying in the same close environment of a nCoV patient. This could also be defined as a healthcare worker working together in close proximity, sharing the same classroom environment with a nCoV patient, traveling together with nCoV patient in any kind of conveyance or living in the same household as a nCoV patient. ** To be added once/if animal source is identified as a source of infection.</small></p>	
<p><b>Infection control</b></p> <ol style="list-style-type: none"><li>1. Early detection is key - health care workers should maintain a high level of clinical suspicion</li><li>2. Patients should be asked to wear a surgical mask as soon as they are identified and evaluated in a private room</li><li>3. Isolate PUI (ideally an airborne infection isolation room if available)</li><li>4. Use appropriate infection control for PUI<ol style="list-style-type: none"><li>a. Adequate standard precautions for all patients</li><li>b. Add contact and droplet precautions for all patients</li><li>c. Apply airborne precautions (eg N95 mask) and eye protection must be used when performing aerosol-generating procedures</li><li>d. If available, airborne precautions can be used at all times</li><li>e. Limit movement of patient (e.g. use designated portable X-ray equipment)</li></ol></li></ol>	<p><b>Specimen collection for 2019-nCoV</b></p> <p>Collect appropriate samples. <b>Lower respiratory tract samples are preferred because the lower respiratory tract is the primary site of infection.</b></p> <ul style="list-style-type: none"><li>• <b>Respiratory samples</b> - Combined nasopharyngeal and oropharyngeal swab in ambulatory patients and sputum (if produced) and/or tracheal aspirate or bronchoalveolar lavage in patients with more severe respiratory disease.</li><li>• <b>Serum for serological testing</b> - acute and convalescent samples may be submitted in addition to respiratory samples. Respiratory samples are the primary method if diagnosis.</li><li>• Use universal/viral transport medium for swabs; sterile container for sputum and aspirates; clotted blood container for serum-see page 2 for instructions for collecting swabs.</li></ul> <p><i>A single negative test result, especially if from upper respiratory tract specimen, does not exclude infection. Repeat sampling and testing of lower respiratory tract samples is recommended for case with severe disease or in whom 2019-nCoV is strongly suspected.</i></p>



## COLLECTION OF NASO/OROPHARYNGEAL SWABS FOR DETECTION OF RESPIRATORY VIRUSES:

Respiratory viruses are best isolated from material that contains infected cells and secretions. Therefore, swabs should aim to brush cells and secretions off the mucous membranes of the upper respiratory tract. **Good specimen quality** (ie. containing sufficient cells and secretions), appropriate **packaging and transport** (i.e. to keep virus viable/detectable) **is essential**

**Please discuss plans to collect samples with doctor on call before collecting sample at NICD hotline - 0828839920**

### Step 1: Equipment and materials

1. Specimen submission form **and** case investigation form
2. Nasopharyngeal (NP) and oropharyngeal (OP) flocked swab
3. Tube containing universal transport medium (UTM)
4. Tongue depressor
5. Gloves
6. N95 mask (fit tested)
7. Biohazard bag for disposal of non-sharp materials
8. Tissue for patient to wipe nose after sample collection
9. Cooler box and cooled ice packs
10. Ziploc plastic specimen bag

### Step 2: Record keeping

1. Complete the specimen submission form **and** case investigation form (available on NICD website)
2. Place the specimen submission form into a ziplock bag
3. Label the tube of universal transport media (UTM) with the patient's name and date of birth

### Step 3: Collection of nasopharyngeal swab (NPS)

1. Don a pair of gloves, and an N95 respirator, making sure the respirator has a good fit. Open a sterile flocked swab at the plastic shaft
2. Ask the patient to tilt his/her head back. Estimate the distance from the patient's nose to the ear: This is how far the swab should be inserted
3. Gently insert swab into the nostril and back (not upwards) to the nasopharynx until a slight resistance is met
4. Rotate swab 2-3 times and hold in place for 2-3 seconds
5. If resistance is met remove and try another nostril
6. Slowly withdraw swab and without touching it, put it into a UTM
7. Break plastic shaft at the break point line and close the tube

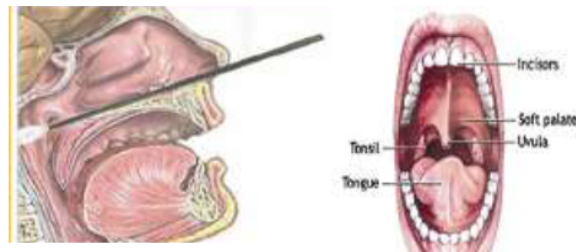
### Step 6: Contact details for assistance with sample transport

1. Linda de Gouveia [lindad@nicd.ac.za](mailto:lindad@nicd.ac.za) (011-555-0327) or
2. Amelia Buys [ameliab@nicd.ac.za](mailto:ameliab@nicd.ac.za) (011-386-6373) or
3. Cardia Fourie [cardiaf@nicd.ac.za](mailto:cardiaf@nicd.ac.za) (011-386-6373)

### Step 4: Collection of oropharyngeal swab (OPS)

1. Keeping the same pair of gloves on, and holding the UTM with the nasopharyngeal swab in, take a second flocked swab and open it at the plastic shaft
2. Ask the patient to tilt their head back and open mouth wide
3. Hold the tongue down with a tongue depressor
4. Have the patient say "aahh" to elevate the uvula
5. Swab each tonsil first, then the posterior pharynx in a "figure 8" movement
6. Avoid swabbing the soft palate and do not touch the tongue with the swab tip as this procedure can induce the gag reflex.
7. Place the swab into the same UTM tube with the NPS already in and break off the shaft at the break point line
8. Tightly close the tube
9. Place the closed tube with two swabs in the Ziploc
10. Remove gloves and N95 mask
11. Wash hands with soap and water

**Diagram:** How to collect a nasopharyngeal swab (left) and oropharyngeal swab (right)



### Step 5: Transport of specimens

1. Ensure the cooler box and ice packs stay at 2-8°C
2. Transport to CRDM, NICD on same day as collection
3. Mark: Suspected Novel coronavirus, CRDM  
NHLS/NICD, Centre for Respiratory Disease and Meningitis (CRDM)  
Lower North Wing, SAVP building 1 Modderfontein Rd, Sandringham, Johannesburg, 2131
4. NHLS laboratories use usual overnight regional courier service
5. Private laboratories/clinics organise shipment via Marken [NHLS account] or World couriers [WHO shipment fund]

Annexure 2: 2019-nCoV case investigation form (CIF)



Final version 1\_ 27 JANUARY 2020  
 RESPIRATORY DISEASES AND MENINGITIS  
 OUTBREAK RESPONSE, DIVISION OF PUBLIC HEALTH SURVEILLANCE AND RESPONSE

Internal use CRDM ID no: _____ CRDM unique no: _____
--

Case Investigation form: Request for 2019-nCoV Testing

Tel: (+27)38663392 / (+27) 38664130   Fax: (+27)11 3862580   Hotline: 082 883 9900   E-mail: <a href="mailto:ncov@nicd.ac.za">ncov@nicd.ac.za</a>		
Today's date: DD/MM/YYYY		Form completed by (Name, surname): _____
Contact number: _____		
Is this a: New clinical query <input type="checkbox"/> Contact of a known case <input type="checkbox"/>		If contact of a known case, Known case flat name: _____ Known case surname: _____ Known case DOB: DD/MM/YYYY
<b>PATIENT DETAILS</b>		<b>DOCTOR'S DETAILS</b>
Patient hospital number (if available): _____		Name: _____
First name: _____	Surname: _____	Surname: _____
DOB: DD/MM/YYYY	Gender: _____	Contact number/s: _____
Residency: SA resident <input type="checkbox"/> Non-SA resident <input type="checkbox"/> (specify) _____		
Current residential Address <sup>1</sup> : _____		
Patient's contact number/s: _____		
<b>NEXT OF KIN CONTACT DETAILS</b>		Facility name: _____
Relationship to the patient: _____		Contact number: _____
Date collected: DD/MM/YYYY		Email address: _____
Date of consultation/admission: DD/MM/YYYY		Date of symptom onset: DD/MM/YYYY
Symptoms (tick all that apply): Fever (≥38°C) <input type="checkbox"/> Cough <input type="checkbox"/> Chills <input type="checkbox"/> Sore throat <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Vomiting <input type="checkbox"/> Diarrhoea <input type="checkbox"/> Myalgia/body pains <input type="checkbox"/> Other <input type="checkbox"/> (specify if other) _____		
• Diagnostic: Did the patient have clinical or radiological evidence of pneumonia? Y <input type="checkbox"/> N <input type="checkbox"/> • Were chest X-rays (CXR) done: Y <input type="checkbox"/> N <input type="checkbox"/> If yes, CXR findings: _____ • Did the patient have clinical or radiological evidence of acute respiratory distress syndrome (ARDS)? Y <input type="checkbox"/> N <input type="checkbox"/> • Does the patient have another diagnosis/etiology for their respiratory illness? Y <input type="checkbox"/> (specify) _____ N <input type="checkbox"/> Unknown <input type="checkbox"/>		
This section is a prerequisite for testing, therefore, please fill out the below section to the best of your ability. <u>Laboratory testing will be delayed if</u> <u>information is incomplete or were filled in incorrectly.</u> In the <u>14 days before symptom onset</u> did the patient (mark all that apply):		
• Have close physical contact <sup>2</sup> with a known 2019-nCoV case? Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/> • Have close physical contact <sup>2</sup> with an ill traveler from China <sup>3</sup> or other countries where 2019-nCoV is circulating or where human infections have recently occurred? Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/> (If yes, complete section below for countries visited) • Patient is a healthcare worker? Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/> • Patient is a healthcare worker who was exposed to patients with severe acute respiratory infections? Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/> • Patient has visited a health care facility (as a patient or visitor) in China <sup>3</sup> or in other countries where 2019-nCoV is circulating or where human infections have recently occurred? Y <input type="checkbox"/> N <input type="checkbox"/> (If yes, complete section below for countries visited) • Is the patient part of a severe respiratory illness cluster of unknown aetiology that occurred within a 14-day period? Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/> • Has the patient travelled to/from Wuhan, China or in countries where 2019-nCoV is known to be circulating or where human infections have recently occurred? Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/> (If any travel outside SA in the last 14-days, please complete section below for countries visited)		
Country visited (Please specify the city travelled to)	Date of departure (travel to area)	Date of return (travel from area)
1. _____	DD/MM/YYYY	DD/MM/YYYY
2. _____	DD/MM/YYYY	DD/MM/YYYY
<b>Underlying factors/Co-morbid conditions</b>		<b>Treatment/management</b>
Asthma: Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/> Cardiac disease: Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/>		Patient hospitalised: Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/> Admitted to ICU: Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/>
Chronic kidney disease: Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/> Chronic liver disease: Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/>		Ventilation: Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/> On ECMO: Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/>
COPD/Chronic pulmonary disease: Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/> Diabetes: Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/>		Tamiflu/other antiviral drugs: Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/>
HIV: Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/> Obesity: Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/> Pregnancy: Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/>		Antibiotics: Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/> If Yes, list: _____
Tuberculosis: Y <input type="checkbox"/> N <input type="checkbox"/> Unkn <input type="checkbox"/> Other: Y <input type="checkbox"/> (specify): _____		Unknown: <input type="checkbox"/>
		White cell count total: _____
		Differential neutrophils/lymphocytes%: _____
Type of sample: Sputum <input type="checkbox"/> Bronchoalveolar lavage <input type="checkbox"/> Tracheal aspirate <input type="checkbox"/> Nasopharyngeal aspirate <input type="checkbox"/> Nasopharyngeal (NP) swab <input type="checkbox"/> Oropharyngeal (OP) swab <input type="checkbox"/> NP&OP swabs <input type="checkbox"/> Serum <input type="checkbox"/> Pleural fluid <input type="checkbox"/> Other <input type="checkbox"/> (specify if other) _____		
Patient outcome	Discharged <input type="checkbox"/> Discharge date: DD/MM/YYYY	
	Currently hospitalised: <input type="checkbox"/> Transferred <input type="checkbox"/> Name of facility: _____	
	Died <input type="checkbox"/> Date of death: DD/MM/YYYY	
	Other <input type="checkbox"/> (specify): _____	

<sup>1</sup>If patient is not a permanent resident, may you please provide their current residential address while residing in South Africa. <sup>2</sup>Close contact is defined as: a) being within approximately 0.5met (2 meters) or within the room or care area for a prolonged period of time (e.g., healthcare personnel, household members) while not wearing recommended personal protective equipment (i.e. gloves, respirator, eye protection); or b) having direct contact with infectious secretions (e.g., being coughed on) while not wearing recommended personal protective equipment. Currently brief interactions (walking by a person, are considered low-risk and do not constitute close contact). <sup>3</sup>Check who website for countries with reported 2019-nCoV cases: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/countries-affected>

### Annexure 3

#### Contact tracing

- A contact line list (see form below) should be completed for each suspected case at time of sample collection and completion of the CIF by the facility infection control focal point, attending clinician or designated port health officer. If the form cannot be completed at this time, the district or provincial CDC will complete the form when notified to the case. A copy of this form should be submitted to [ncov@nicd.ac.za](mailto:ncov@nicd.ac.za)
- Only details of close contacts will be collected on the contact line list. A close contact is defined as healthcare-associated exposure, including providing direct care for nCoV patients, working with healthcare workers infected with nCoV, visiting patients or staying in the same close environment of a nCoV patient. This could also be defined as a healthcare worker working together in close proximity, sharing the same classroom environment with a nCoV patient, traveling together with nCoV patient in any kind of conveyance or living in the same household as a nCoV patient.
- If laboratory testing confirms 2019-nCoV infection, the contact line list will be utilised to call each contact to complete the contact monitoring form (see form below). If any contact is found to be symptomatic, procedures will be followed for a suspected case.
- Contacts who do not have symptoms at time of the call, are to be monitored telephonically for 14 days by CDC or NICD call centre personnel post last exposure to the confirmed case.
- Monitoring of contacts may switch from telephonic monitoring to self-monitoring dependant on the number of contacts to be followed up.
- Contacts under monitoring should be advised to:
  - Avoid unnecessary social contact
  - Avoid travel
  - Remain reachable for monitoring
- Should a contact develop symptoms, a health care worker will visit the patient in their home to collect a specimen and to complete the required documentation. If a healthcare worker is not available, the patient will be requested to visit their nearest healthcare facility to have a specimen collected.
- The CDC should inform the healthcare facility of the incoming patient in order for the healthcare facility to use appropriate IPC measures.

## 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	
For cases who travelled long-distance (>2 hours in public transport) in the past 14 days		
Air/bus line	Flight/bus #	Seat #

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

**Details of contacts** (With close contact\* 14 days prior to symptom onset, or during symptomatic illness. Add rows if necessary.)

	Surname	First name(s)	Sex (M/F)	Age (Y)	Relation to case	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	Alternate contact person and phone detail	HCW**? (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					
9						DD/MM/YYYY					
10						DD/MM/YYYY					

\*Close contact is defined as: healthcare-associated exposure, including providing direct care for nCoV patients, working with healthcare workers infected with nCoV, visiting patients or staying in the same close environment of a nCoV patient. This could also be defined as a healthcare worker working together in close proximity, sharing the same classroom environment with a nCoV patient, traveling together with nCoV patient in any kind of conveyance or living in the same household as a nCoV patient. \*\*Healthcare worker.

## 2019-nCoV DAILY CONTACT MONITORING TOOL

Complete for each contact of confirmed case

Details of contact of case under investigation/confirmed case			Details of health official completing this form		Date completing form
NICD Identifier	Date of contact	DD/MM/YYYY	Surname	Name	DD/MM/YYYY
Surname	Name		Role	Facility name	
Date of birth	Gender		Email address	Telephone number	
Physical address	District		Province	Town	
House number	Street		Suburb		
Contact number	Alternative number		Next of Kin name and surname	Next of Kin contact number	

**Instructions for completion:** Mark “Y” if symptom present and “N” if not. If any first five symptoms are present collect a combined nasopharyngeal and oropharyngeal swab. Refer to 2019-nCoV Quick Guide (link) for additional details.

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Date (DD/MM)														
Fever	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Chills	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Cough	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Sore throat	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Shortness of breath	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Myalgia/body pains	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Diarrhea	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N

**Annexure 4:**

**Standard operating procedure for the management of suspected communicable disease at the points of entry and transportation to a designated hospital**

**1. INTRODUCTION**

Port Health Service (PHS) is defined as the first line of defence to protect the citizens of South Africa and visitors against the health risks associated with cross border movement of people, conveyances, baggage, cargo shipments and other imported consignments. It is thus vital for all points of entry to be on the alert and prepared to respond to a possible importation of a communicable disease, whether intentional or unintentional.

The following standard operating procedures detail measures that must be implemented by port health officials in preventing and responding to a suspected case of EVD.

**2. SCREENING MEASURES**

- a) Port Health Officials (PHO) must monitor all arriving conveyances from the affected countries and increase surveillance measures.
- b) Upon arrival of the conveyance, Port Health Officials must collect and verify the health documentation and interview the crew member/operator to determine if there is any sick passenger on board.
- c) In addition to the routine interview of crew members/operators, Port Health Officials must ask crew members questions specific to signs and symptoms of 2019-nCoV.
- d) If PHO is certain that there are no sick passengers on board and all health requirements have been met, the passengers may be allowed to disembark.
- e) All arriving travellers must be channelled through the thermal scanning processes.
- f) Travellers found to have elevated temperature must be escorted to the Port Health clinic where available, for further examination and must be interviewed to determine their travel history.
- g) Where Port Health Clinic is not available, Port Health must interview the traveller with elevated temperature to determine their travel history, record the details of the traveller and if required transfer the traveller to the nearest health facility.
- h) Travellers presenting with any one of these symptoms; fever, headache, joint and muscle aches, sore throat, and weakness, diarrhoea, vomiting, stomach pain and have travelled to the affected countries must be isolated and arrangements be made for transportation of the traveller to the nearest designated health facility (see table below) for further management.

<b>DESIGNATED HOSPITALS FOR MANAGING 2019-nCoV CASES</b>		
<b>Province</b>	<b>Designated Hospital</b>	<b>Designated Referral Hospital</b>
Limpopo	Polokwane Hospital	
Mpumalanga	Rob Ferreira Hospital	
Gauteng	Charlotte Maxeke Hospital Steve Biko Hospital Thembisa Hospital	<b>Charlotte Maxeke Hospital</b>
KwaZulu-natal	Greys Hospital	
North West	Klerksdorp Hospital	
Free State	Pelonomi Hospital	
Northern cape	Kimberley Hospital	
Eastern Cape	Livingston Hospital	
Western Cape	Tygerberg Hospital	<b>Tygerberg Hospital</b>

### 3. IN THE EVENT OF A SUSPECTED CASE

#### 3.1 Prior to arrival of conveyance

- a) If traveller presents with symptoms related to a communicable disease while on board a conveyance;
  - In case of airport/sea port the tower/captain will inform Operations/Agent who must inform PHO of the ill passenger,
  - In case of land port, PHO will be informed on arrival of the conveyance at the port.
- b) Suspected case is moved to an isolated area on the conveyance, if sufficient space is available.
- c) Nurse or Port Health Officials must contact the NICD to confirm whether the symptoms conform to 2019-nCoV case definition;
- d) Based on the information provided, Port Health must notify and make arrangements with the designated health facilities and ambulance for transportation of the ill traveller.
- e) Port Health must then notify the relevant Provincial Communicable Disease Control Coordinator.

#### 3.2 Once the conveyance has arrived at the Point of Entry

- a) Port Health Officials must board the conveyance, together with the clinical personnel and ensure entrance to the conveyance is secured and no person enters or leaves the conveyance.
- b) Port Health Officials must obtain and confirm the following information from the crew member:
  - number of cases,
  - signs and symptoms;
  - vector control measures, where required and
  - collect and verify the required health documentation and passenger list;
- c) Port Health Officials must brief the passengers that there is a possible case of 2019-nCoV on board, calm them and provide the necessary health information, including, reporting to the nearest health facility and inform the health worker of their travel history should they experience any symptoms;
- d) Port Health Officials must identify the contacts and allow all passengers except the sick passenger and contacts to disembark;
- e) Sick passenger may then be escorted from the aircraft and transported to the designated health facility (see section 5 below: Medical Evacuation Procedure);**
- f) Passenger locator cards and health information must be handed out to the contacts and inform them that they will be contacted for monitoring purposes;
- g) Contacts may then be allowed to disembark and channelled through thermal screening processes.
- h) Port Health must hand over passenger list and close contact details to Provincial Communicable Disease Control Coordinator for further monitoring;
- i) The ground handling and cleaning company of the conveyance operators should be notified at the same time so that preparations can be made for appropriate cleaning and/or disinfection of the conveyance after passengers have disembarked; if required;
- j) Port Health Officials must monitor the entire cleaning and/or disinfection process.

### 4. MANAGEMENT OF INTENTIONAL TRANSPORTATION OF A SICK PASSENGER INTO SOUTH AFRICA/CONFIRMED CASE

- a) Conveyance operators or medical companies transporting patients to South Africa for medical attention by commercial flight, charter flight or road ambulances must notify PHO beforehand utilising notification Form AC1 and include the medical history of the patient.
- b) Form AC2 must be completed by the medical crew for information on the symptoms of the patient.
- c) For patients arriving from the affected countries, Port Health must consult with the NICD and the Chief Director: Environmental Health & Port Health Services before a decision is taken to approve or disapprove the transportation of the patient.
- d) If approval to transport the patient is granted, Port Health Officials must issue Form PH1 to the applicant.

- e) In instances where a patient develops symptoms related to a communicable disease before or during transportation, the AC2 form must be completed and handed over to the PHO upon arrival at the airport.
- f) Port Health Officials and Port Health Nurse must assess the patient upon arrival and inform the hospital receiving the patient of the condition.
- g) All information related to the passenger must be communicated to the Provincial CDC to conduct a follow-up on the case.
- h) Port Health Official or Port Health Nurse must follow up with the hospital to receive an update prior to closing the file.

## 5. MEDICAL EVACUATION PROCEDURE

This section is referenced from the **Emergency Medical Services Standard Operating Procedures: Management of A Ebola Viral Diseases (EVD) Patient**. The SOP can be accessed from: <http://www.health.gov.za/index.php/shortcodes/2015-03-29-10-42-47/2015-04-30-08-29-27/2015-04-30-08-33-30>

### 1.1 Suspected/Confirmed 2019-nCoV medical evacuation procedure

- The provincial EMS manager must be contacted when an ambulance is requested to transfer a suspected or confirmed 2019-nCoV patient to and from a designated /referral hospital. (Annexure 8: Provincial EMS Managers' contact details)
- The Provincial CDC must be informed prior to EMS medical evacuation of any suspected/confirmed 2019-nCoV patient.
- Driver must not have any contact with patient and must act as liaison
- Ideally two trained EMS specialized response team personnel must accompany patient.
- Hand hygiene must be observed before and after every contact with patient.
- Don correct PPE.
- Focus of care is supportive and maintaining existing treatment. No invasive procedures should be done in transit. (No sharps to be used)
- Keep contact with designated referral hospital. Determine and communicate an estimated time of arrival (ETA) and report an update on patient's condition, as hospital needs to prepare: - isolation ward needs to be prepared, staff need to don PPE, security needs to clear public and staff from entrance and route.
- When arriving at hospital, the patient is to be kept inside ambulance until hospital indicates that the patient is allowed to enter.
- Provincial CDC must be informed after every 2019-nCoV transfer; crew must be placed on 14-day contact list and must submit temperature readings twice a day.

### 1.2 Unsuspected 2019-nCoV EMS medical evacuation procedure

- Normal call out to a home or healthcare facility and/ or after transporting has commenced, a suspicion for a possible 2019-nCoV case is raised.
- Immediately contact and report to Provincial CDC who will assist in advice and decision on where to take patient.
- Driver must not have any contact with patient and must act as liaison.
- Hand hygiene must be observed before and after every contact with patient.
- EMS personnel must Don correct PPE.
- Focus of care is supportive and maintaining existing treatment. No invasive procedures should be done in transit. (No sharps to be used)
- Keep contact with designated referral hospital. Determine and communicate an estimated time of arrival (ETA) and report an update on patient's condition, as hospital needs to prepare: - isolation ward needs to be prepared, staff need to don PPE, security needs to clear public and staff from entrance and route.
- When arriving at hospital, the patient is to be kept inside ambulance until hospital indicates that the patient is allowed to enter.



- Provincial CDC must be informed after every 2019-nCoV transfer, crew must be placed on 14-day contact list and must submit temperature readings twice a day.

### 1.3 Medical evacuation procedure of 2019-nCoV patient to and from a Healthcare facility

- When arriving at the healthcare facility, the patient and clinical team will remain inside the ambulance or isolation ward. The driver will liaise with healthcare staff and only after the indication from healthcare staff has been given that they are ready to receive/transfer the patient, can the patient be taken to/from the ambulance/isolation ward.
- Driver must ensure that healthcare facility is ready to receive or transfer the patient and that public are cleared from entrance and route that patient will be moved along.
- During the movement of the patient, ensure that all spills are immediately cleaned and decontaminated on the route that patient was moved.

### 1.4 Cleaning and decontamination

- Crew decontaminating the ambulance should wear correct PPE.
- During or after transport of a 2019-nCoV patient, vomitus, blood and other spillages should be flooded with disinfectant, namely chlorine solution with a concentration of 5000 ppm (0.5%) or 20x30g sachets of Biocide D Extra/10L water, covered with paper towels or absorbent material and left for at least 30 minutes before cleaning.
- Never use high pressure jet spray inside confined space of ambulance.
- Physical material like blood and vomitus must first be cleaned up and removed before terminal cleaning can start.
- All surfaces should be wiped down and washed at least two times, with 500 ppm (0.05%) chlorine solution. **Vehicle is ready to use again immediately after cleaning.**
- Containers with secretions, excretions and other waste products such as vomitus and blood should be flooded with a copious amount of disinfectant, namely chlorine solution with a concentration of 5000 ppm (0.5%) or 20x30g sachets of Biocide D Extra/10L water, for at least 30 minutes.
- All items leaving the ambulance should be enclosed and sealed in adequate layers of appropriate bags to prevent leakage. The outer surfaces of the bags should be wiped with chlorine disinfectant at a concentration of 0.05% (500 ppm) and labelled as bio hazardous. Disposable equipment should be disposed of by incineration (as per normal Health Care Waste Management (HCWM) Regulation Act 59, 2008), non-disposable equipment can be washed and disinfected (Autoclaved).
- If sharps bin, for any reason, was used it needs to be wiped down and placed inside plastic bag. Bag is wiped again and placed inside double red bag and sealed in waste box that should then be clearly marked as containing sharps.

### 1.5 Handling of Health care waste

- As per normal HCWM Regulation, ensure that waste is safely stored until the health care waste management company can pick it up. Ensure that the company knows and acknowledges that waste was generated by suspected or confirmed 2019-nCoV case.
- All bags, bins and boxes must be adequately sealed, as not to leak any fluids, and must be wiped down with 0.05% chlorine solution before being stored or removed.

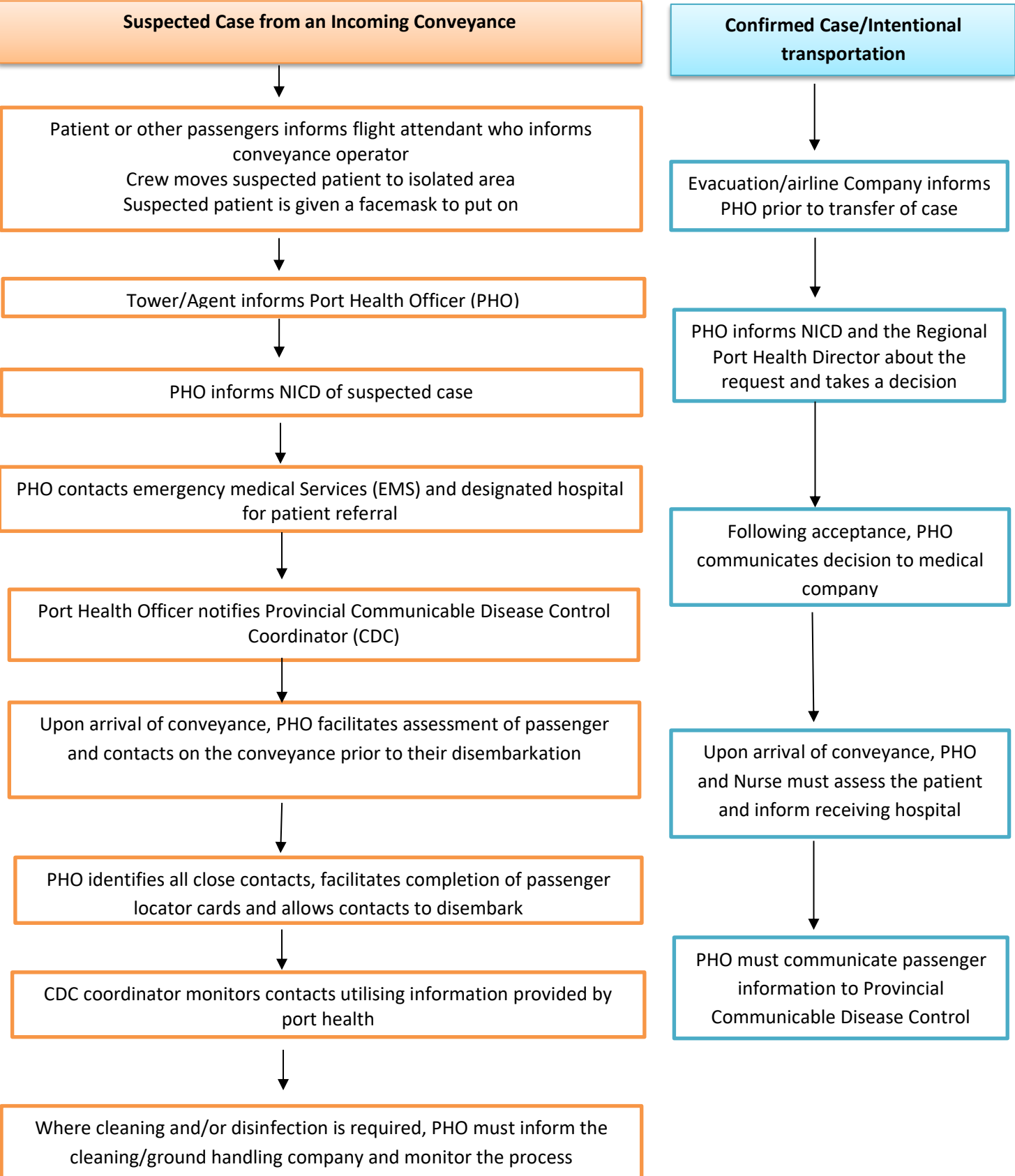
### 1.6 Handling of Suspected or Confirmed 2019-nCoV case mortal remains.

- If patient dies in transit, the EMS Provincial coordinator and Provincial CDC must be notified. A decision on where to take the corpse must be communicated to the ambulance crew.
- Provincial Environmental Health must be informed.
- Under no circumstances will the corpse be removed from ambulance other than at assigned facility that was communicated to ambulance crew.

- The corpse must be placed in double body bags that are fluid leak proof. The bags must be wiped down with a 0.05% chlorine solution before leaving the ambulance.
- The removal of a suspected 2019-nCoV corpse must be done under the directive of Environmental Health

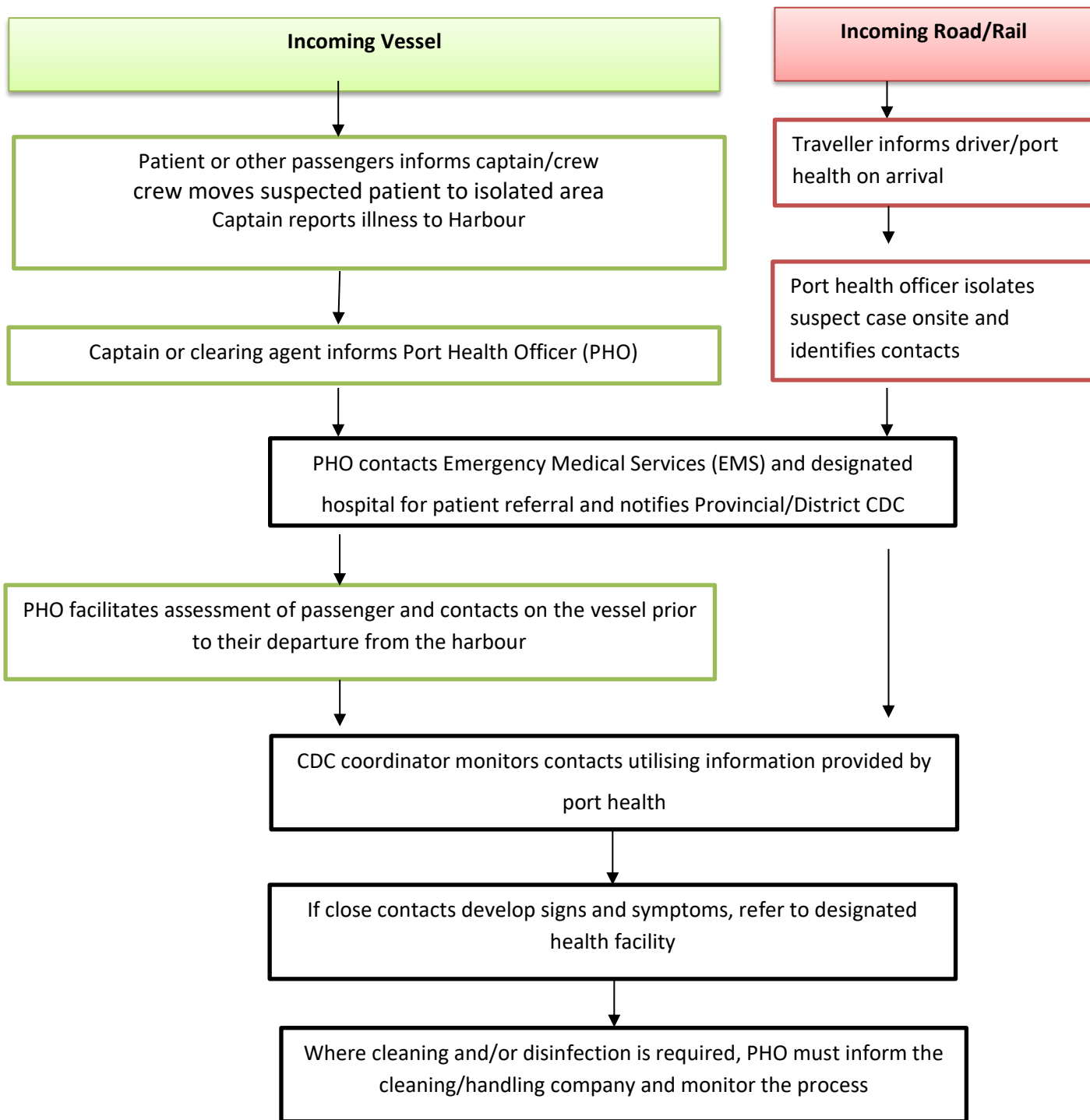
**Annexure 5.1:**

**Flow diagram depicting the approach to an imported possible/suspected or confirmed case of infectious disease at PoE**



**Annexure 5.2:**

**The flow diagram depicts the process flow for the management of a suspected or possible case from a country/area reporting outbreak of contagious infectious disease**



## **Annexure 6: Guidelines for the safe handling of human remains of confirmed/suspected 2019-nCoV case and Repatriation of Human Remains of a Person Who Died of Confirmed/Suspected 2019-nCoV**

- The human remains of a person who has died of a confirmed 2019-nCoV should be cremated.
- Where cremation is not possible, the repatriation of human remains who died of confirmed/suspected 2019-nCoV must be conducted in line with the Regulations Relating to the Management of Human Remains (Regulation 363 of 22 May 2013).
- A formal request for an import/export permit issued by the Director-General: Health must be made by the Department of International Relations and Cooperation (DIRCO) or through the embassies, prior to importation/exportation of the human remains.
- Once a permit has been issued by the Director-General, the human remains may be transported.
- The human remains must not be embalmed and shall be transported under the following precautions:
  - Be placed in leak proof triple body bag and in a non-transparent sealed coffin,
  - The first two body bags must be transparent and sealed and the third body bag non-transparent and not sealed
  - After the body has been placed in the triple body bag, the remains must be placed in a non-transparent coffin which is lined with 5cm saw dust to prevent any potential leakages.
- The import/export permit, death certificate and written declaration by an institution responsible for packaging the human remains that transportation of human remains will not constitute a health hazard must accompany the human remains at all times.
- No person must open the coffin or remove the human remains after they have been sealed without prior approval from an Environmental Health Practitioner.

### **In the case of importation;**

- Environmental Health Practitioner at a point of entry must inform forensic pathology of the arrival of the human remains for transportation to a mortuary of the designated hospital.
- Environmental Health Practitioner at a point of entry must monitor the removal of the remains from the conveyance to the forensic pathology vehicle.
- Environmental Health Practitioner at a Municipal level must monitor the handling of the human remains after arrival at the designated mortuary.

### **In the case of exportation;**

- The human remains must be transported from the mortuary of a designated hospital to the point of entry by Forensic Pathology in consultation with the embassy of which the deceased holds residence.
- Environmental Health Practitioner at a Municipal level must monitor the handling of the human remains at the designated mortuary.
- Environmental Health Practitioner at a point of entry must monitor the removal of the human remains from the forensic pathology vehicle to the conveyance.

## Management (handling, movement, storage and burial) of human remains of a person who died of 2019-nCoV

- Handling of the Human Remains must be strictly monitored by **Environmental Health Practitioners** throughout the process.
- Human remains shall be placed in a leak proof triple body bag both first two bags shall be transparent and sealed while the third one shall be non-transparent and unsealed.
- After the body has been placed in the triple body bag, the remains must be placed in a non-transparent coffin.
- The human remains must be transported in a manner that is in compliant with the provisions of the Regulations Relating to the Management of Human Remains.
- The Human remains are considered contagious and should be kept only in designated health facilities' mortuaries.
- Human Remains can only be transferred from one designated facility to another designated facility or from such to a cemetery or crematorium.
- Under no circumstances shall the human remains be directly handled, whether for aesthetic, hygiene preparations, cultural or religious reasons.
- The human remains may not be embalmed or viewed by breaking the seals of first two bags but by opening the third bag.
- Where it is feasible and acceptable to family culture and/or religion, it is strongly recommended that the remains be cremated.
- In all cases, remains should not be kept in households for vigil or any purpose but be kept in designated health facility mortuary premises and directly transported from designated health facility mortuary straight to place of burial or cremation or the home on the day of burial/cremation.
- The body should be buried in a sufficiently deep grave to prevent access by rodents and carnivores.
- Human remains shall be placed in a triple body bag both first two bags shall be transparent and sealed while the third one shall be non-transparent and unsealed zip-up body bag with handles and appropriate BIOHAZARD warning tag written "hazard Group 4 Pathogens" before transporting to designated health facility mortuary.

## Annexure 7: Communicable Disease Outbreak Report format

<b>TITLE</b>	
<b>PERIOD</b>	
<b>LOCATION</b>	
<b>DISTRICT</b>	
<b>PROVINCE</b>	

### Executive summary

.....  
 .....  
 .....  
 .....

#### I. Introduction:

- Background
- Reasons for investigation (public health significance, threshold met, etc.)
- Investigation and outbreak preparedness

#### II. Methods:

- Dates of investigation
- Site(s) of investigation (health care facilities, villages, other)
- Case finding (indicate what was done regarding case finding, e.g., register review, contact investigation, alerting other health facilities, other)
- Lab specimen collection
- Description of response and intervention (include dates)
- Data management

#### III. Results:

- Date and location of first known (index) case
- Date and health facility where first case was seen by the health care system
- Results of additional case finding
- Lab analysis and results
- With text, describe key features of results of time, place, and person analysis
- For detailed results by time (epi curve), place (map), and person characteristics (tables) and line lists
- Results of response and evidence of impact

#### IV. Self-evaluation of the timeliness and quality of preparedness, outbreak detection, investigation, and response

##### *Epidemic Preparedness*

<b>Indicator</b>	<b>Yes</b>	<b>No</b>
Were adequate drugs and medical supplies available at the onset of the outbreak		
Were treatment protocols available to health workers?		
Does the district epidemic management committee regularly meet as part of epidemic preparedness?		

##### **Outbreak Detection**

<b>Indicator</b>	<b>Date 1</b>	<b>Date 2</b>	<b>Interval</b>
Interval between onset of index case (or occurrence of an unusual cluster at the community level) [date 1] to arrival of first outbreak case at the health facility [date 2] (Target: <3 days)			

Interval between initial outbreak case seen at the health facility (or date of outbreak threshold crossing at the health facility) [date 1] and reporting to the district health team [date 2] (Target: within 24 hours)			
Cumulative interval between onset of index case (or occurrence of an unusual cluster at the community or health facility) [date 1] to notification to the district [date 2] (Target: <7 days)			

**Outbreak investigation**

Indicator	Yes	No
Were case forms and line lists completed?		
Were laboratory specimens taken (if required)?		

Indicator	Date 1	Date 2	Interval
Interval between notification of district [date 1] and district field investigation conducted [date 2] (Target: within 48 hours)			
Interval between sending specimens to the lab [date 1] and receipt of results by the district [date 2] (Target: 3-7 days, depending on type of test)			

**Outbreak response:**

Indicator	Date 1	Date 2	Interval
Interval between notification of outbreak to district [date 1] and concrete response by the district [date 2] (Target: within 48 hours of notification)			

**Evaluation and Feedback:**

Indicator	Date 1	Date 2	Interval
Interval between end of the outbreak [date 1] and finalization of outbreak report with case forms/line list sent to national level [date 2] (Target: 2 weeks)			
Indicator	Yes	No	
Did the outbreak management committee meet to review investigation results?			
Was feedback given to health facilities and community?			

**V. Evaluation of other aspects of the response:**

.....  
 .....

**VI. Interpretations, discussion, and conclusions:**

.....  
 .....

**VII. Recommended public health actions:**

**Comment on following levels: community, health facility, district, partners, provincial, and national**

.....  
 .....

**District Epidemic Committee Chairperson:**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date report completed: \_\_\_\_\_



### Annexure 8: Contact list

#### Provincial CDC, NICD Epis, NICD Hotline, Lab, Designated hospitals, Provincial Port Health, Provincial EMS

Institution/Province	Name	Email address	Telephone number
<b>National Department of Health</b>			
Communicable Disease Control	Tsakani Furumele	Tsakani.Furumele@health.gov.za	012 395 8096 / 0824199686
Malaria, Vector-borne and Zoonotic Diseases	Devanand Moonasar Wayne Ramkrishna	Patric.Moonasar@health.gov.za <a href="mailto:Wayne.Ramkrishna@health.gov.za">Wayne.Ramkrishna@health.gov.za</a>	082 578 3107 082 317 4687
Port Health	Funeka Bongweni	Funeka.Bongweni@health.gov.za	012 395 9728 / 0609930107
Environmental Health	Murdock Ramathuba	Murdock.Ramathuba@health.gov.za	012 395 8518 / 0814150093
Emergency Medical Services	Raveen Naidoo Ahmed Bham	<a href="mailto:Raveen.Naidoo@health.gov.za">Raveen.Naidoo@health.gov.za</a> Ahmed.Bham@health.gov.za	012 395 821 012 395 9636 / 0735716392
Hospital Services	Keneilwe Modise	Keneilwe.Modise@health.gov.za	012 395 8257 / 0829648888
Infection Prevention & Control	Ronel Steinhobel	Ronel.Steinhobel@health.gov.za	012 395 9198 / 0836275661
<b>Provincial Communicable Disease Control Directorate</b>			
Eastern Cape	Thomas Dlamini Nosimpiwo Mgobo	<a href="mailto:thomas.dlamini@echealth.gov.za">thomas.dlamini@echealth.gov.za</a> <a href="mailto:Nosimpiwo.Mgobo@echealth.gov.za">Nosimpiwo.Mgobo@echealth.gov.za</a>	083 378 0189 060 579 9027
Free State	Dikeledi Baleni Babsy Nyokong	<a href="mailto:balenid@fshealth.gov.za">balenid@fshealth.gov.za</a> <a href="mailto:nyokongb@fshealth.gov.za">nyokongb@fshealth.gov.za</a>	083 757 8217 082 463 7499
Gauteng	Chika Asomugha Caroline Kesebilwe	<a href="mailto:Chika.Asomugha@gauteng.gov.za">Chika.Asomugha@gauteng.gov.za</a> <a href="mailto:Caroline.kesebilwe@gauteng.gov.za">Caroline.kesebilwe@gauteng.gov.za</a>	082 330 1490 083 490 8165
KwaZulu-Natal	Premi Govender	<a href="mailto:premi.govender@kznhealth.gov.za">premi.govender@kznhealth.gov.za</a>	071 609 2505
Limpopo	Marlene Freda Ngobeni Mashudu P. Mudau	<a href="mailto:Marlene.Ngobeni@dhsd.limpopo.gov.za">Marlene.Ngobeni@dhsd.limpopo.gov.za</a> <a href="mailto:Prudence.Mudau@dhsd.limpopo.gov.za">Prudence.Mudau@dhsd.limpopo.gov.za</a>	079 491 1909 071 678 3864
Mpumalanga	Mandla Zwane Hluphi Mpangane	<a href="mailto:MandlaZw@mpuhealth.gov.za">MandlaZw@mpuhealth.gov.za</a> <a href="mailto:hluphim@mpuhealth.gov.za">hluphim@mpuhealth.gov.za</a>	082 229 8893 076 522 8511 / 013 766 3411
North West	Chriseldah Lebeko	<a href="mailto:clebeko@nwpg.gov.za">clebeko@nwpg.gov.za</a>	082 421 7985
Northern Cape	Gloria Hottie	<a href="mailto:hottieg@webmail.co.za">hottieg@webmail.co.za</a>	072 391 3345 / 053 830 0529
Western Cape	Charlene Jacobs	<a href="mailto:Charlene.Jacobs@westerncape.gov.za">Charlene.Jacobs@westerncape.gov.za</a>	072 356 5146 / 021 483 9964
<b>Port Health and Environmental Health</b>			
Central Region (Gauteng, Free-State, Northern Cape)	Funeka Bongweni	Funeka.Bongweni@health.gov.za	012 395 9728 060 993 0107
Northern Region (Limpopo, Mpumalanga, North West)	Ockert Jacobs	Ockert.Jacobs@health.gov.za	012 395 9417 082 372 0556
Coastal Region (KwaZulu Natal, Northern Cape, Western Cape)	Antoinette Hargreaves	Antoinette.Hargreaves@health.gov.za	031 301 0381 083 460 0935
<b>Emergency Medical Services (EMS)</b>			
<b>National Institute for Communicable Diseases (NICD)</b>			
Hotline (24-hours)	Doctor-on-call		082 883 9920
Outbreak Response Unit	Ann Mathews	<a href="mailto:anm@nicd.ac.za">anm@nicd.ac.za</a>	066 0463581
Laboratory	Jacqueline Weyer	<a href="mailto:jacquelinew@nicd.ac.za">jacquelinew@nicd.ac.za</a>	082 903 9131
	Kerrigan McCarthy	kerriganm@nicd.ac.za	0798717278
<b>Designated Hospitals</b>			
Eastern Cape:			041 405 2255

Livingston Hospital			
Free State: Pelonomi Hospital			051 405 1911
Gauteng: Charlotte Maxeke Hospital			011 717 1000
KwaZulu-Natal: Greys Hospital			033 897 3000
Limpopo: Polokwane Hospital			015 287 5000
Mpumalanga: Rob Ferreira Hospital			013 741 6100
North West: Klerksdorp Hospital			018 406 4600
Northern Cape: Kimberley Hospital			053 802 9111
Western Cape: Tygerberg Hospital			021 938 5454

## Provincial EMS Managers

PROVINCE	Contact Details	Contact Persons
<b>NDOH: EMS &amp; Disaster Medicine Directorate</b>	012 395 9636 / 081 324 4555 012395 9636 / 073 571 6392	Mr Raveen Naidoo (Director) Mr Ahmed Bham (EMS Ops Manager – Disaster Medicine )
<b>Gauteng</b>	011 564 2211 / 072 433 7450 011 564 2021	Mr. J.P. Von Benecke Mr Kgati Malebane ( Director EMS)
<b>Western cape</b>	012 937 0300 082 568 6489 / 021 948 9908	Mr. Arthur van Heerden Dr S De Vries ( Director EMS)
<b>Kwazulu Nata</b>	0834571242 083 501 1955 / 033 846 7237	Mr M Mabaso Ms B Zungu ( Director EMS)
<b>Free State</b>	0609856082 082 659 1600 / 051 408 1855	Mr R Ruiters (Provincial EMS Ops Manager) Dr Joe Khoali ( Director EMS)
<b>North West</b>	082 335 6034 / 018 473 0324	Mr B Redlinghys ( Director EMS)
<b>Limpopo</b>	082 040 5494 082 440 0802 / 015 295 2999	Mr F Masegela Dr Clive Sibanda ( Director EMS)
<b>Northern Cape</b>	053 802 2280 / 053 831 1954/5 083 335 6034 / 053 831 2884	Mr R. Dreyer Mr M Ntintelo ( Director EMS)
<b>Mpumalanga</b>	013 753 2288/ 082 907 3256 013 766 3302 / 082 828 6223	Mr. Scosh Mkhonto Mr Zungu ( Director EMS)
<b>Eastern cape</b>	060 572 9172 / 060 572 9172	Mr AK Munilil ( Director EMS)