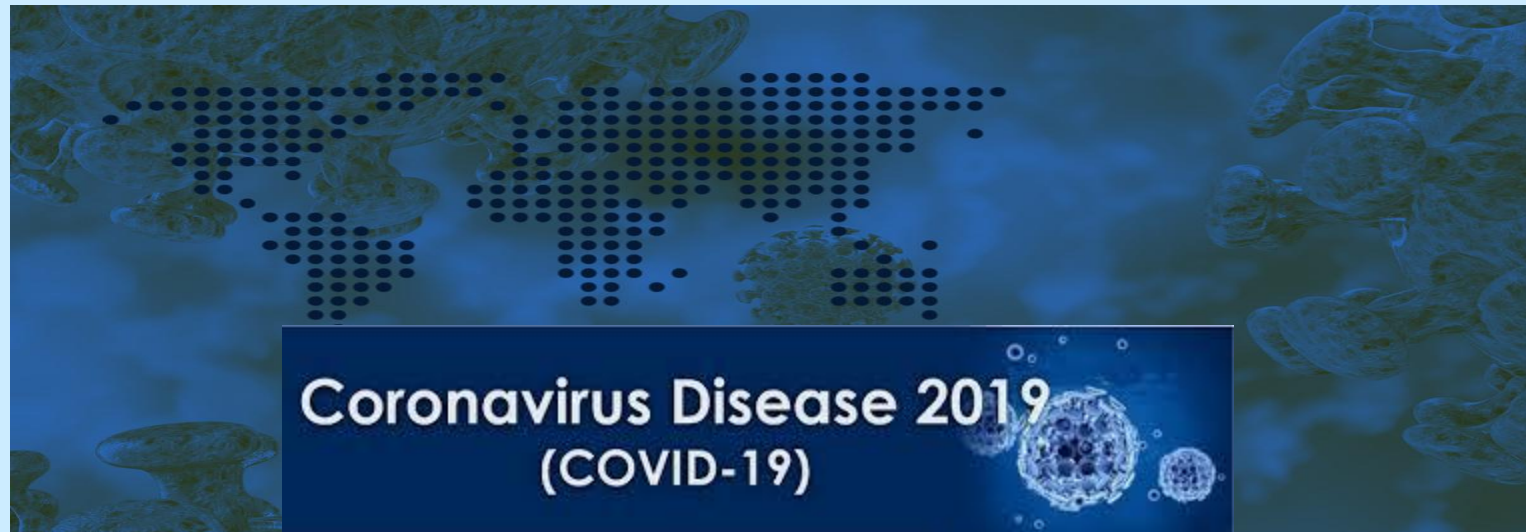




# Clinical Specimen Collection & Packing & Transport



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# General Guidelines

- Consider all specimens as **POTENTIALLY HAZARDOUS / INFECTIOUS**
- Handle all specimens with gloves in a secure manner (**universal precaution**)
- Ensure that specimens are **labeled** properly
- Ensure **correct container** is used for collection
- **Do not contaminate the outside** of the specimen container
- Do not handle **laboratory requisition** forms with gloves
- Ensure that **no unauthorized access** to the specimen takes place
- Ensure **no adulteration or tampering** of the specimen takes place

# WHOM TO TEST AND WHEN TO TEST; GUIDELINES OF ICMR/MOHFW dated 20.3.20

## Current testing strategy:

1. All asymptomatic people who have undertaken International travel: They should stay in home quarantine for 14 days. - They should be tested only if they become symptomatic (fever, breathing etc.). If test result is positive, then they should be isolated and treated protocol.
2. All contacts of laboratory confirmed positive cases: They should stay in home quarantine for 14 days. - They should be tested only if they become symptomatic (fever, breathing etc.). - If test result is positive, then they should be isolated and treated protocol.
3. Health care workers managing respiratory distress / Severe illness should be tested when they are symptomatic. cough, difficulty in as per the standard cough, difficulty in as per the standard Acute Respiratory illness should be tested if they are symptomatic.
4. All symptomatic healthcare workers.
5. All hospitalised patients with SARI”.



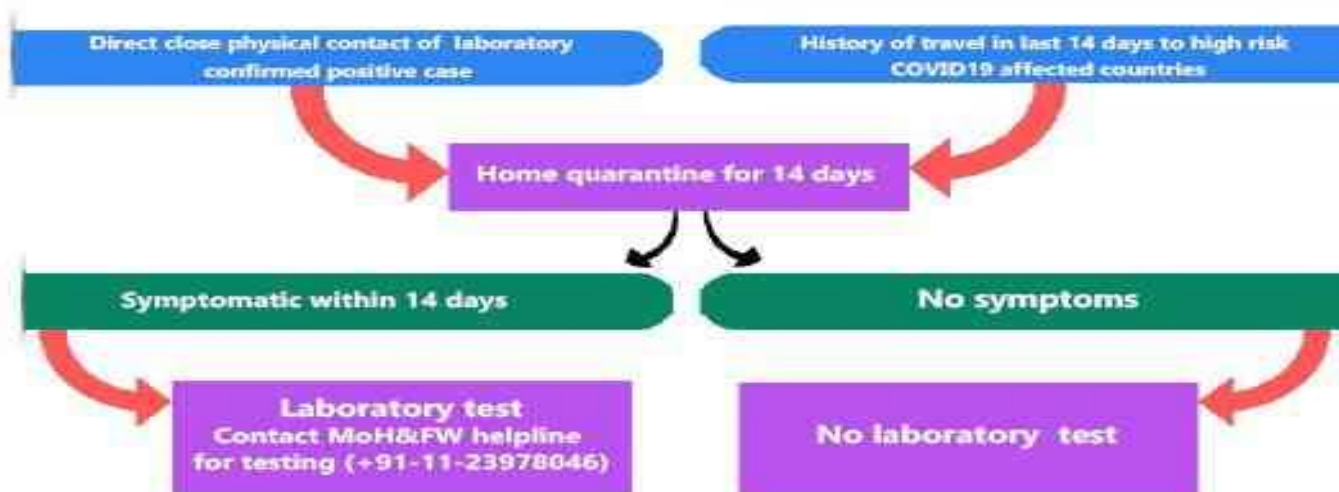
## Revised COVID19 Testing Strategy in India: 16/03/2020



- > There is currently no community transmission of COVID19.
- > Disease is primarily reported in individuals with travel history to the affected countries or close contacts of positive cases.
- > Therefore all individuals **need not be** tested



### WHOM TO TEST



- > Throat swab + nasal swabs taken in Viral Transport Medium in one tube in cold chain.
- > List of testing facilities: [www.icmr.nic.in/content/covid-19](http://www.icmr.nic.in/content/covid-19)
- > Health care workers managing respiratory distress / Severe Acute Respiratory Illness patients should be tested when symptomatic with acute respiratory illness.

**\*This is an evolving strategy**

# Retesting's strategies for COVID 19 PCR positive patients' according to ICMR

Keep testing NS/TS sample by RT-PCR of Asymptomatic COVID + cases every Alternate day/48hr ;  
Till the 2 sample become negative.

# Equipments Required for NS/TS collection, Packing, & Transport

## Trained HCP collecting sample

- All PPE: Gloves, Gown, Mask, all protective equipments.

## For Sample collection:

- Requisition form
- Label
- Marker pen,
- Sterile swab sticks
- Vial containing Viral transport medium
- Scissors
- Tissue

## For packaging

- Vaccine container/ Thermancol box
- Ice packs
- Packing material like cotton, tissue
- Cellotape

# Labeling of Specimens

- Specimens for laboratory testing should have labels
- Label should include
  - ∅ Patient's name
  - ∅ Age & gender
  - ∅ Patient's unique identification number/hospital registration number
  - ∅ Hospital/Ward
- Label specimens using markerpen & put a celloptape to protect ink from fading away
- Tighten the tube cap and may use the tube with celloptape to seal the cap.



# Requisition form

- All specimens must be accompanied by a requisition form with the following details:
  - Hospital/Laboratory Name
  - Patient Identification Number
  - Patient Name, Age/Gender
  - Patient Contact Details (phone, email, address)
  - Travel and contact history
  - Date and Time of collection and sending to the laboratory
  - Type, source, and volume of specimen
  - Brief clinical history and relevant investigational results
  - Test Required
  - Sender's signature



**ICMR- National Institute of Virology, Pune  
Specimen Referral Form for 2019 Novel Coronavirus (2019-nCoV)**

**INSTRUCTIONS:**

- Inform the local / district / state health authorities, especially surveillance officer for further guidance.
- Seek guidance on requirements for the clinical specimen collection and transport from nodal officer.
- This form may be filled in and shared with the IDSP and also ICMR-NIV nodal officer in advance.

**PERSON DETAILS**

Name of patient: .....	Age:.....Years.....Month Gender: Male <input type="checkbox"/> Female <input type="checkbox"/>
Address: .....	Date of birth: ...../...../..... (dd/mm/yyyy)
City: .....	Mobile/phone: .....
State: .....	Email: .....

**EXPOSURE HISTORY (2 WEEKS BEFORE THE ONSET OF SYMPTOMS)**

Recent stay/travel in area (Wuhan, China): Yes  No  If yes, stay/travel duration with date  
 History of visit to wet/seafood market: Yes  No  From:...../...../..... to:...../...../.....  
 Close contact with confirmed case Yes  NO  Close contact with animal/birds Yes / N  
 Recent travel to any other country Yes  NO  Travel place: .....

Health care worker working in hospital involved in managing patients YES / NO,  
 Hospitalization date: ...../...../..... Discharge date: ...../...../.....

**CLINICAL SYMPTOMS AND SIGNS**

Date of onset of symptoms: ...../...../..... First symptom: .....

Symptoms	Yes	No	Symptoms	Yes	No	Symptoms	Yes	No	Symptoms	Yes	No
Fever at evaluation	<input type="checkbox"/>	<input type="checkbox"/>	Cough	<input type="checkbox"/>	<input type="checkbox"/>	Diarrhoea	<input type="checkbox"/>	<input type="checkbox"/>	Abdominal pain	<input type="checkbox"/>	<input type="checkbox"/>
History of fever	<input type="checkbox"/>	<input type="checkbox"/>	Breathlessness	<input type="checkbox"/>	<input type="checkbox"/>	Nausea	<input type="checkbox"/>	<input type="checkbox"/>	Vomiting	<input type="checkbox"/>	<input type="checkbox"/>
Chest pain	<input type="checkbox"/>	<input type="checkbox"/>	Sore throat	<input type="checkbox"/>	<input type="checkbox"/>	Body-ache	<input type="checkbox"/>	<input type="checkbox"/>	Haemoptysis	<input type="checkbox"/>	<input type="checkbox"/>
			Sputum	<input type="checkbox"/>	<input type="checkbox"/>				Nasal discharge	<input type="checkbox"/>	<input type="checkbox"/>
Signs	Yes	No	Sign	Yes	No	Sign	Yes	No		Yes	No
Wheeze	<input type="checkbox"/>	<input type="checkbox"/>	Stridor	<input type="checkbox"/>	<input type="checkbox"/>	Lower chest indrawing	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
Nasal flaring	<input type="checkbox"/>	<input type="checkbox"/>	Crepitation	<input type="checkbox"/>	<input type="checkbox"/>	Accessory muscle use	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

**UNDERLYING MEDICAL CONDITIONS**

Condition	Yes	No	Condition	Yes	No	Condition	Yes	No	Condition	Yes	No
COPD	<input type="checkbox"/>	<input type="checkbox"/>	Bronchitis	<input type="checkbox"/>	<input type="checkbox"/>	Diabetes	<input type="checkbox"/>	<input type="checkbox"/>	Hypertension	<input type="checkbox"/>	<input type="checkbox"/>
Chronic renal disease	<input type="checkbox"/>	<input type="checkbox"/>	Malignancy	<input type="checkbox"/>	<input type="checkbox"/>	Heart disease	<input type="checkbox"/>	<input type="checkbox"/>	Asthma	<input type="checkbox"/>	<input type="checkbox"/>

**IMMUNOCOMPROMISED CONDITION:** YES / NO \_\_\_\_\_ Other: .....

**HOSPITALIZATION, TREATMENT AND INVESTIGATION**

HOSPITALIZATION date: ...../...../.....	<b>DIAGNOSIS:</b> .....
<b>DIFFERENTIAL DIAGNOSIS:</b> .....	<b>ETIOLOGY IDENTIFIED:</b> .....
<b>ATYPICAL PRESENTATION:</b> YES / NO _____	<b>UNUSUAL / UNEXPECTED COURSE:</b> YES / NO _____
<b>OUTCOME:</b> Discharge / Death / .....	<b>OUTCOME date:</b> ...../...../.....

Treatment	Yes	No	Treatment	Yes	No	Treatment	Yes	No	Treatment	Yes	No
Antibiotics	<input type="checkbox"/>	<input type="checkbox"/>	Ventilation	<input type="checkbox"/>	<input type="checkbox"/>	Antivirals	<input type="checkbox"/>	<input type="checkbox"/>	Steroids	<input type="checkbox"/>	<input type="checkbox"/>
Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	CPAP	<input type="checkbox"/>	<input type="checkbox"/>	Bronchodilators	<input type="checkbox"/>	<input type="checkbox"/>	Other:		

Investigation findings: Haematocrit: ..... Hb: ..... WBC (leukocyte count): .....  
 Differential Leukocyte count: Lymphocytes (%): ..... Monocytes (%): ..... Neutrophils (%): .....  
 Basophils (%): ..... Eosinophil (%): ..... Platelet (Thrombocyte) count: ..... ESR: .....

Investigation details: Chest X ray: Yes  No  yes (findings): .....  
 Blood culture findings (if any): ..... Other investigation details: .....

**SPECIMEN INFORMATION FROM REFERRING AGENCY**

Specimen type	Collection date	Label	FOR OFFICE USE ICMR-NIV →	Specimen ID	Test performed	Result	
1. BAL/ETA/...							
2. TS/NPS/NS							
3. Blood in EDTA							
4. Acute sera							
5 Convalescent sera							

Name of Doctor: ..... Hospital Name/address: .....  
 Phone/mobile number: ..... Signature and date: .....

# USE Personal Protective Equipments

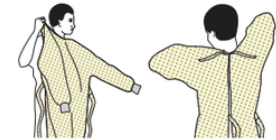
Wear PPE, before  
collecting COVID 19  
Patient sample

## SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

### 1. GOWN

- Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
- Fasten in back of neck and waist



### 2. MASK OR RESPIRATOR

- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Fit-check respirator



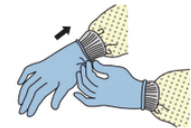
### 3. GOGGLES OR FACE SHIELD

- Place over face and eyes and adjust to fit



### 4. GLOVES

- Extend to cover wrist of isolation gown

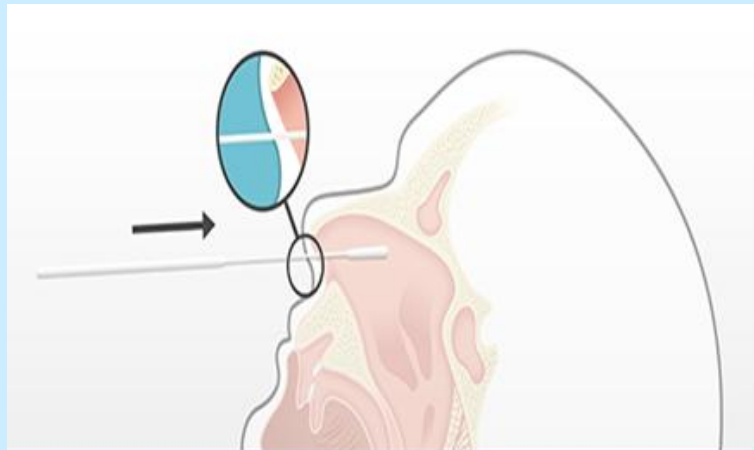


## USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

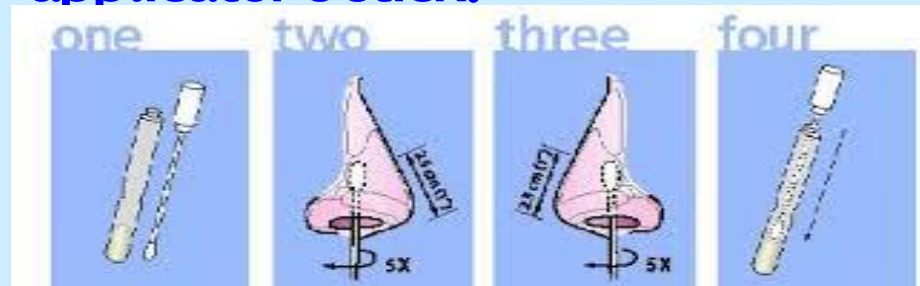
- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene



# Nasal Swab Collection



- Nasal Swab is collected from the anterior turbinate
- Insert dry swab into nostril upto 1 inch.
- Slowly remove swab while slightly rotating it
- Use a same swab for another nostril.
- Put tip of swab into vial containing VTM, breaking applicator's stick.

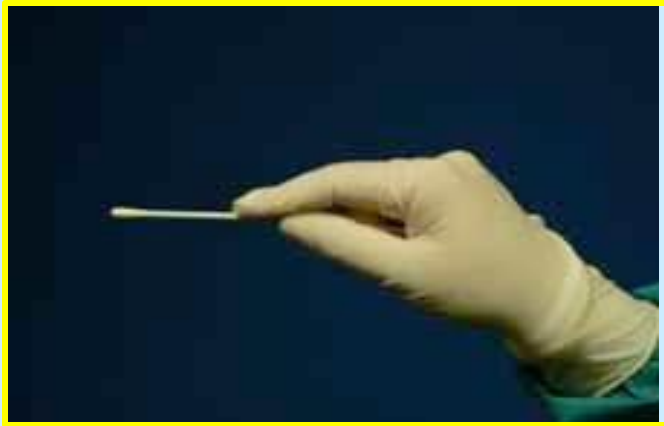


# Throat Swab collection



- Have the patient open his/her mouth wide open
- Use tongue depressor
- Sweep the swab over the back of throat including tonsils
- Send both nasal and throat swab of one patient in a single VTM tube.
- Send filed requisition form also

# Do's and Don'ts



- Swab held between thumb & 1st , 2nd fingers with shaft protruding beyond web of thumb (like a pencil)
- **Not** between thumb & forefinger with base in palm of hand
- If patient makes a movement as a reaction to swabbing the swab will slide out of harm's way if held the 1<sup>st</sup> way but not if held the 2<sup>nd</sup> way
- Control over the swab is much greater if it is held correctly.

# Guidelines for Packaging & transport for COVID 19 patient

- General guidelines for SpecimenTransport (**IATA Protocol**)
- Diagnostic specimens obtained from patients with suspected infectious diseases may contain infectious agent
- Potential source of infection due to transport mishap
- Diagnostic specimens must be packaged, labeled and transported as an infectious substance
- Diagnostic specimens collected during an investigation of an outbreak of a serious disease of unknown cause must be handled as infectious substances

# Triple layer sample packaging

## Main goals

- protects the environment, the carrier
- protects the sample
- arrival in good condition for analysis

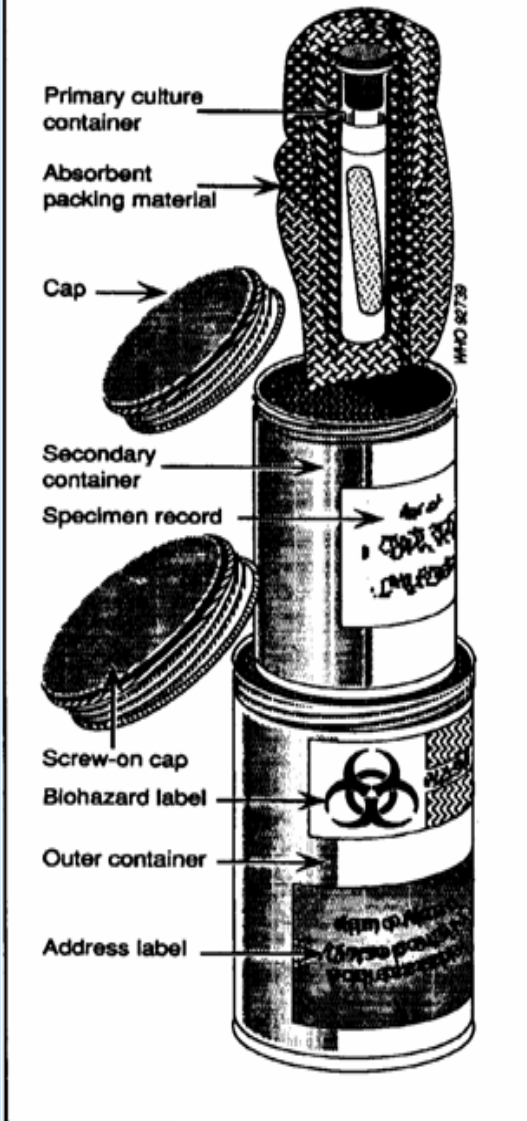
# Triple packaging system

*To avoid leakage and for shock absorption during transport*

Primary Container	Secondary Container	Outer Container/ Packaging Box
<ul style="list-style-type: none"><li>• Watertight and leak proof</li><li>• Cap correctly and securely closed.</li><li>• Keep in upright position during transport</li></ul>	<ul style="list-style-type: none"><li>• Watertight</li><li>• Several clinical specimens in 1 secondary container</li><li>• Containers have to be cleansed and disinfected if re-used</li></ul> <p>E.g.: Disposable, zip-lock plastic bags; Large centrifuge tubes (50 ml) with screw caps</p>	<ul style="list-style-type: none"><li>• Made of strong material that can be cleansed and disinfected</li><li>• Should have the Biohazard warning label</li><li>• A content list in a sealed plastic bag inside the transport box may also be included</li></ul>



## Triple packaging system



Screw-on cap

Itemized list of contents

## Absorbant packing material

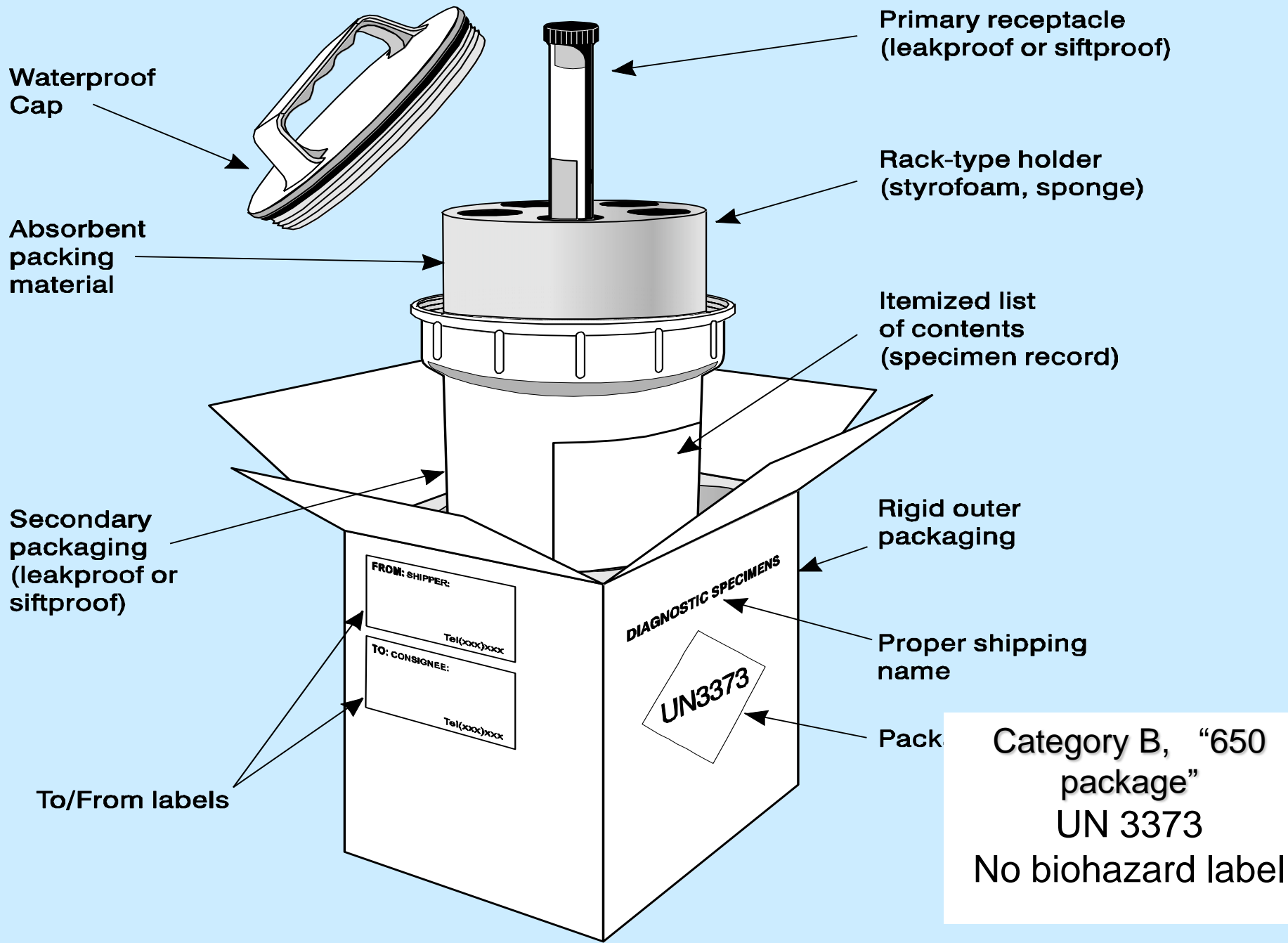
(Sufficient absorbant material must be placed between the primary and secondary receptacles)

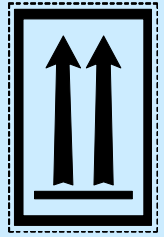
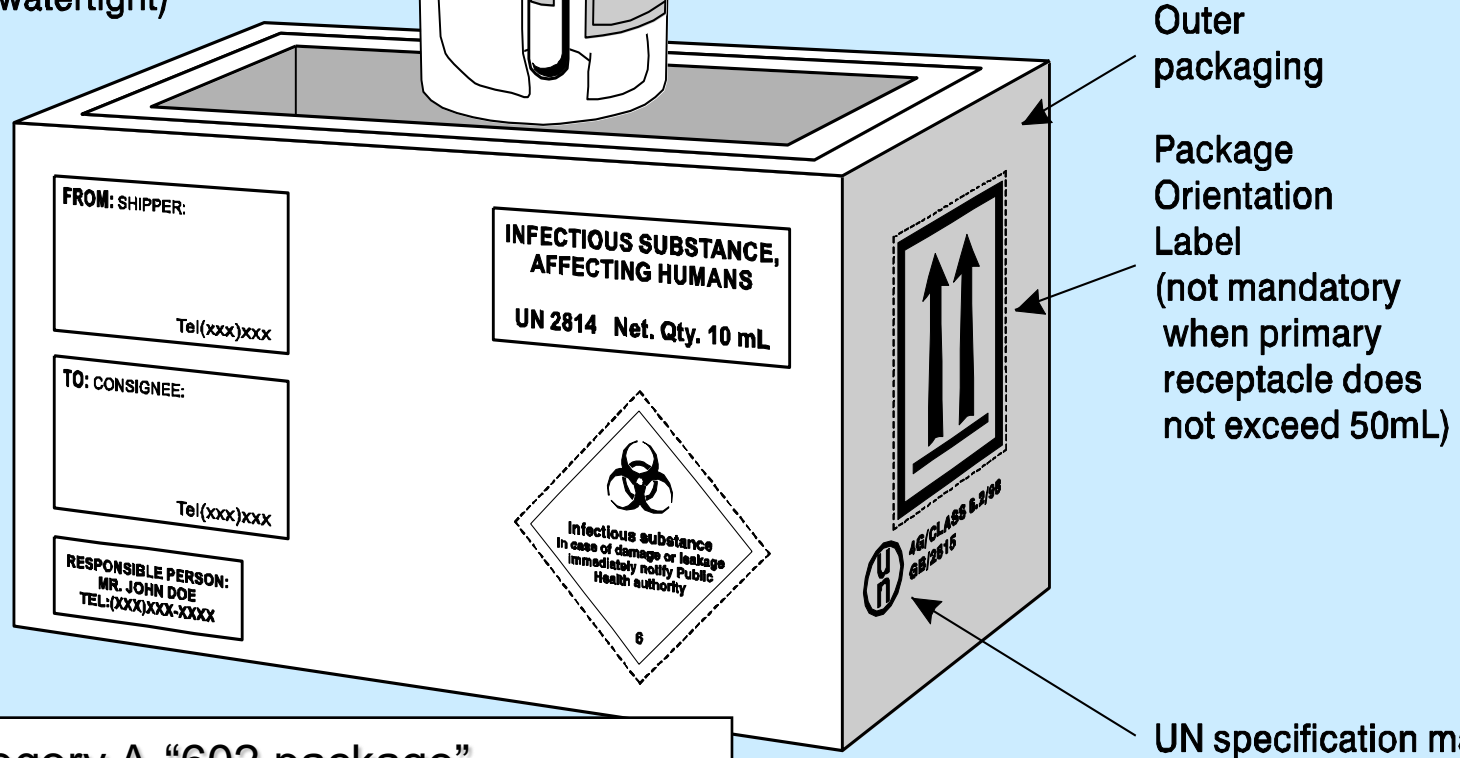
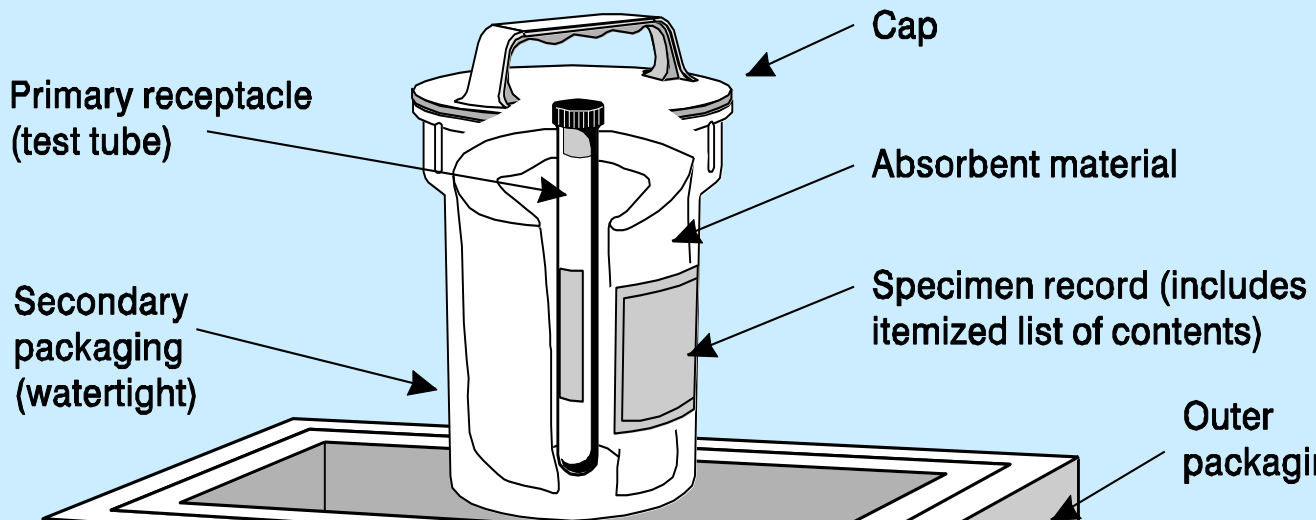


1. Primary receptacle (leakproof, 95kPa)

2. Secondary receptacle (leakproof)

3. Outer container (w/list of itemized contents)





Category A "602 package"  
Labels: UN 2814 UN 2900 Biohazard

# Transport Conditions

Specimen	Media	Temperature
Nasal swab/Throat swab	VTM	2-8 °C
NPA/ swab	VTM	2-8 °C

- Transport the specimen immediately to Microbiology laboratory

# Packaging & Transport



- Put the sealed samples in the thermacoal box/ vaccine carrier with frozen ice packs.
- Put enough cotton and pack the samples.
- Seal the box with cellotape
- Label it as ‘Sample of COVID 19 patient’ with Biohazard sign.
- Send along with filled and complete requisition form.

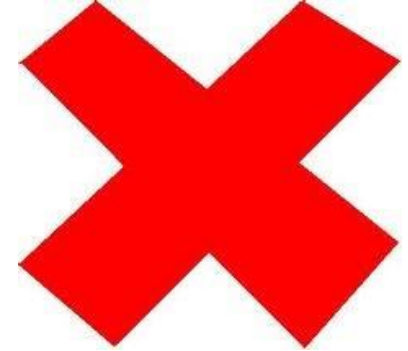


# Acceptance Criteria



- Ensure that the specimens are properly labeled with unique identification number and date
- Cross check the specimen label (unique identification number and date) with the request form
- Ensure that the specimen received is in **good condition**
- Record all primary specimens in the laboratory register /computer after receiving them in the laboratory

# Rejection Criteria:



- **Unsuitable Specimen for Procedure**

- Reject specimens which are **unsuitable** (e.g. leaking/broken specimen container) for the procedure requested or if the specimen has been in transit too long for a valid result.
- Improperly or unlabelled.
- With no or incomplete case sheet.

# Handling of Specimen Leakage and Spillage

- Leaking specimens are hazardous to all staff involved in handling
- Such specimens should be rejected or discarded
- When leakage of fluid content to the outside of the outer container is encountered during transport **within laboratory**:
  - Report to laboratory staff immediately;
  - People in the vicinity should be alerted and instructed to stay away from the affected site
  - The spill should be decontaminated as soon as possible according to the **Spill Clean-up Procedure**



# Spill Clean Up

- Decontaminate spills - 10% bleach after wiping the surface clean
- Place waste in leak-proof biohazard bags - ensure safe final management of waste (autoclaving)
- Protect cleaning personnel with PPE

# Any person want to get tested for COVID -19

First call District CMO-

CMO will collect and sent the sample to appropriate laboratory.

Some contact number

Central helpline number, +91-11-23978046 for COVID-19 related queries.

Uttar Pradesh Help line number: 18001805145

Email UP; [ncov2019@gmail.com](mailto:ncov2019@gmail.com).

CMO Complaint Cell Helpline Number- 1076



## Coronavirus: What you need to do



**Wash your  
hands**



**Use a tissue  
for coughs**



**Avoid touching  
your face**

**STAY SAFE DONOT PASS IT ON**