

Sampling and Lab Protocols CCC/DCHC



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Why test?

SARS-CoV

- Sick transmitter
- High transmissibility ($R_0=3$)

MERS-CoV

- Asymptomatic transmitter
- Limited transmissibility ($R_0<1$)

SARS-CoV-2

- Asymptomatic transmitter
- Transmission in Incubation Phase, Convalescent Phase
- More highly transmissible than MERS-CoV ($R_0=2.24-3.58$)

Testing is key to
containing the
transmission

Whom to test?

Suspect Case

- ARI with travel to/ residence in locn with community transmission within 14 days of symptom onset **OR**
- ARI within 14 days of contact with confirmed/probable COVID-19 case
 - *Face-to-face; 1 meter; >15 mins.*
 - *Direct physical contact*
 - *Direct care of a patient (confirmed or probable) without proper PPE* **OR**
- SARI without alternative diagnosis

For asymptomatic cases: durn defined as -2 d to +14d from the date of sampling

Confirmed Case

- Lab test +ve irrespective of clinical signs & symptoms

Probable Case

- Suspect case with inconclusive test result
- Suspect case with unavailable test result

INDIAN COUNCIL OF MEDICAL RESEARCH DEPARTMENT OF HEALTH RESEARCH

Strategy for COVID19 testing in India (Version 5, dated 18/05/2020)

1. All symptomatic (ILI symptoms) individuals with history of international travel in the last 14 days.
2. All symptomatic (ILI symptoms) contacts of laboratory confirmed cases.
3. All symptomatic (ILI symptoms) health care workers / **frontline workers involved in containment and mitigation of COVID19.**
4. All patients of Severe Acute Respiratory Infection (SARI).
5. Asymptomatic direct and high-risk contacts of a confirmed case to be tested once **between day 5 and day 10 of coming into contact.**
6. All symptomatic ILI within hotspots/containment zones.
7. **All hospitalised patients who develop ILI symptoms.**
8. **All symptomatic ILI among returnees and migrants within 7 days of illness.**
9. **No emergency procedure (including deliveries) should be delayed for lack of test. However, sample can be sent for testing if indicated as above (1-8), simultaneously.**

Sampling and Lab Protocols

How to test?

Modality of choice

- Real Time PCR

Sample of choice Respiratory samples

A. Upper resp: NP Sw & OP Sw
(ambulatory pts)

B. Lower resp: Sputum, and/ or ETA/ BAL

Specimen type	Collection material	Storage till testing
Nasopharyngeal and oropharyngeal swab	Dacron or polyester flocced swabs	≤5 days: 4 °C >5 days: -70 °C
Bronchoalveolar lavage	Sterile container	≤48 hours: 4 °C >48 hours: -70 °C
Endotracheal aspirate, nasopharyngeal aspirate or nasal wash	Sterile container	≤48 hours: 4 °C >48 hours: -70 °C
Sputum	Sterile container	≤48 hours: 4 °C >48 hours: -70 °C
Tissue from biopsy or autopsy including from lung	Sterile container with saline	≤24 hours: 4 °C >24 hours: -70 °C
Serum (2 samples acute and convalescent possibly 2-4 weeks after acute phase)	Serum separator tubes (adults: collect 3-5 ml whole blood)	≤5 days: 4 °C >5 days: -70 °C
Whole blood	Collection tube	≤5 days: 4 °C >5 days: -70 °C
Urine	Urine collection container	≤5 days: 4 °C >5 days: -70 °C
Stool	Stool container	≤5 days: 4 °C >5 days: -70 °C



Sample Collection Video

<https://clintonhealth.app.box.com/file/670164499363>

https://www.nejm.org/doi/full/10.1056/NEJMvcm2010260?query=featured_coronavirus

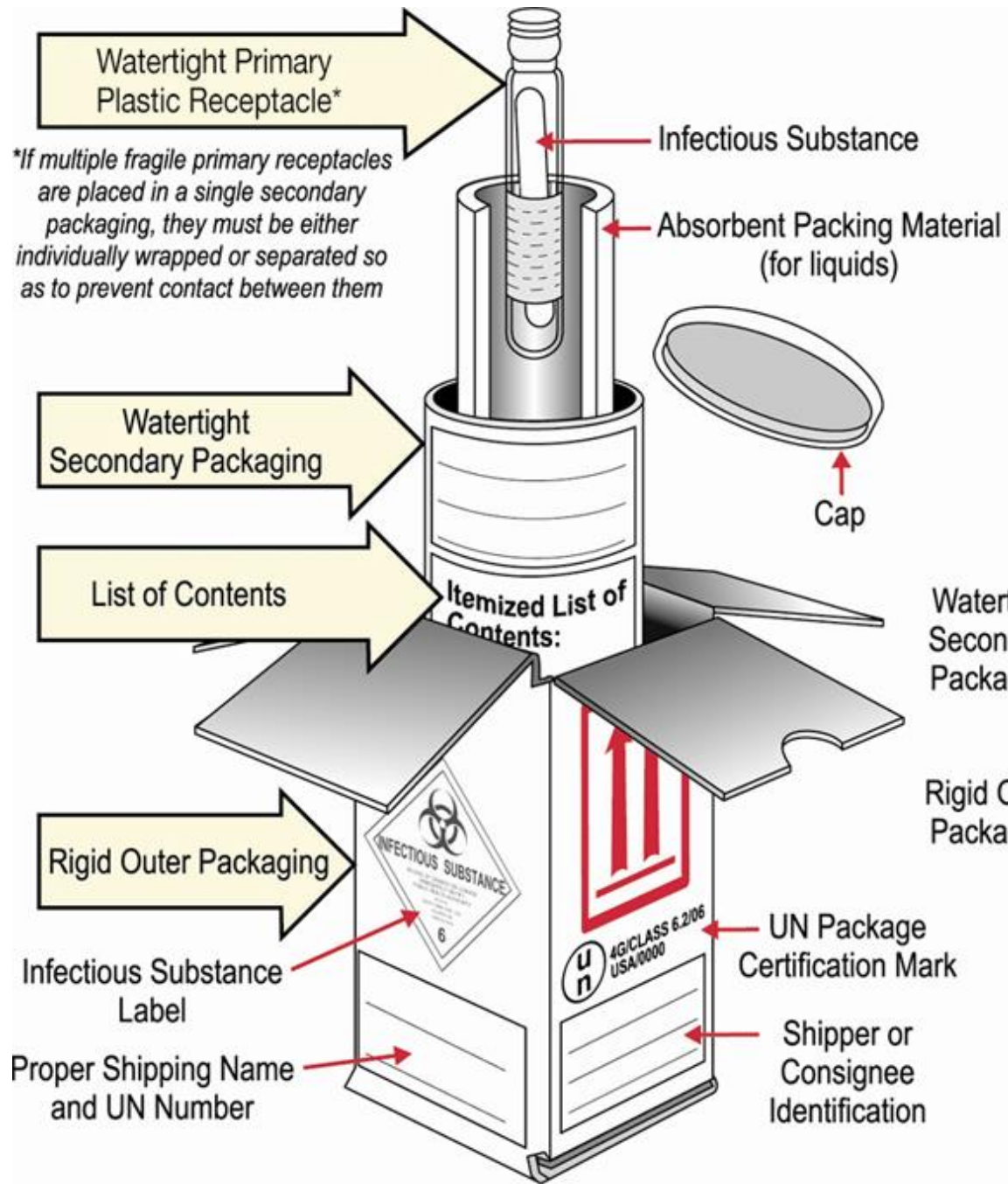


PERFORMING MEDICAL PROCEDURES

How to Obtain a Nasopharyngeal Swab Specimen

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Cross Section of Closed Package

