1. Why to test
2. Whom to test
3. ICMR – Strategy for COVID 19 testing in India
4. How to test
5. Video – How to test
6. Packaging

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**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

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**Why test?**

**SARS-CoV**
- Sick transmitter
- High transmissibility (Ro=3)

**MERS-CoV**
- Asymptomatic transmitter
- Limited transmissibility (Ro<1)

**SARS-CoV-2**
- Asymptomatic transmitter
- Transmission in Incubation Phase, Convalescent Phase
- More highly transmissible than MERS-CoV (R0=2.24-3.58)

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Testing is key to containing the transmission
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 IIL within hotspots/containment zones.
7. All hospitalised patients who develop IIL symptoms.
8. All symptomatic IIL 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?

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

### 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
Sample Collection Video

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


How to Obtain a Nasopharyngeal Swab Specimen

Francisco M. Marty, M.D.
Kaiwen Chen, B.S.
Kelly A. Verrill, R.N.
Brigham and Women’s Hospital, Dana-Farber Cancer Institute, Boston Children’s Hospital, and Harvard Medical School
Watertight Primary Plastic Receptacle

*If multiple fragile primary receptacles are placed in a single secondary packaging, they must be either individually wrapped or separated so as to prevent contact between them.

Infectious Substance

Absorbent Packing Material (for liquids)

Cross Section of Closed Package

Watertight Secondary Packaging

List of Contents

Itemized List of Contents:

Rigid Outer Packaging

Infectious Substance Label

Proper Shipping Name and UN Number

UN Package Certification Mark

Shipper or Consignee Identification

Closure requires positive means of ensuring leakproof seal

Infectious Substance

Absorbent Packing Material