India’s Public Health Response

WHO

23rd April 2020
India’s Graded Response

(As on 23rd April 2020)

- Surveillance of China & Hong Kong flights at 3 airports
- Screening for All Int’l Flights
- Social Distance Advisory
- WHO Declares Pandemic
- All Int’l passenger Flights banned
- Janta Curfew
- First Case

Positive Cases

Cases - Deaths - Discharged

Surveillance of China & Hong Kong flights at 3 airports
Screening for All Int’l Flights
Social Distance Advisory
WHO Declares Pandemic
All Int’l passenger Flights banned
Janta Curfew
First Case

Passenger Screening and Travel Restrictions
Social Distancing, Closures, Heightened Travel Restrictions

Initial Lockdown Period
Lockdown Extended

Cases
Deaths
Discharged
Journey of India after 5,000 cases vis-à-vis major affected countries as on 21st April 2020

- Post 5,000 cases, India reported less than half cases vis-à-vis Italy, China, Spain & France

Source: WHO situation report
Institutional Response Framework

- Hon’ PM daily Monitoring & Oversight
- Continuous engagement with Chief Ministers and State Health Ministers
- Group of Ministers (GoM) Monitoring
- Health Ministry Review Meetings & Advisories to States since 17th Jan
- Committee of Secretaries (CoS) coordinating response
- Regular interaction with States by Government of India
- 11 Empowered Groups formed by Government of India for Integrated Response
- National Task Force of eminent medical & public health experts guiding Strategy
- Senior Officials deputed to States to act as a continuous Link
Strategic Interventions for COVID Management

- Training of airport/port staff, identified hospitals and RRTs
- Mainstream and social media, and community level organizations
- Isolation beds, critical care management and infection prevention
- Airports, Shipping, land borders - especially Nepal
- Through Integrated Disease Surveillance Network
- Personal Protection Kits, N-95 marks, diagnostic reagents
- Early and timely sample testing through lab networks

Institutional Response

- Capacity Building
- Surveillance at Points of Entry
- Community surveillance
- Logistics
- Laboratory testing
- Hospital Preparedness
- Risk Communication
Surveillance – Airports

- 18 Jan: Surveillance at 3 airports for China and Hong Kong
- Thermal screening at all airports for all international flights
- Health risk profiling of passengers and quarantine as per protocol
- Information shared with states for community level screening

15.25 lakhs passengers screened at 30 international airports till 23 Mar
Surveillance - Seaports & Land borders

Sea Ports

- Thermal screening at **12 Major Ports** and **65 Non-major Ports**
- Isolation wards set up at major ports
- Cruise ships prohibited
- 1062 vessels and **49,588 passengers** screened

Land Borders

- Thermal Screening at integrated check posts since 29 Jan
- Movement through land borders **restricted** to **20 Check posts** & ICPs having robust screening
- **20.70 lakh people** screened
## Evacuation

<table>
<thead>
<tr>
<th>From</th>
<th>Indians</th>
<th>Date of Arrival</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wuhan, China</strong></td>
<td>723</td>
<td>1 - 27 Feb</td>
</tr>
<tr>
<td><strong>Diamond Princess Cruise, Japan</strong></td>
<td>119</td>
<td>27 Feb</td>
</tr>
<tr>
<td><strong>Iran</strong></td>
<td>1,138</td>
<td>10 - 29 Mar</td>
</tr>
<tr>
<td><strong>Italy</strong></td>
<td>564</td>
<td>11 - 22 Mar</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,544</strong></td>
<td></td>
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</tbody>
</table>
Community Surveillance

- Monitoring by State & District **Surveillance Officers** with support from **Rapid Response Teams**
  - 17 Jan - **Advisory** to all States for **acute respiratory illness** surveillance
  - 9,42,225 passengers brought under **community surveillance**
  - 70,841 found **symptomatic and referred**
  - 14,017 hospitalized
  - Confirmed cases hospitalized & **Contact Tracing** initiated
Tracing Travel History of COVID Positive Patient

Case: 23 years, Male student in Wuhan, Hubei - 162 contacts traced

25th Jan: Flight 6E 7302 from Guangzhou, to Kolkata

25th Jan: Flight 6E 994 from Kolkata to Bengaluru

25th Jan: From Bengaluru Airport to Hotel in a Taxi

25th/26th Jan: Stay at Hotel Capital O

26th Jan: Travel from Hotel to Bengaluru Airport

26th Jan: Flight 6E 463 from Bengaluru to Cochin

26th Jan: From Bengaluru Airport to Hotel in a Taxi

26th/27th Jan: Stayed in hotel St Mary’s Residence

26th Jan: Aluva Railway station to Angamali by Train (Malabar Express) at midnight. Reached hotel by an auto rickshaw

26th Jan: Cochin Airport to Aluva Railway station by Taxi

Reached Home by own Car (20.00 hrs) from Kanhangad Railway Station

From Aluva at 13:37 to Kanhangad (19.30 hrs) by Mangala Lakshadweep Train (S2 Coach seat no. 27 & 30).
India Testing Strategy - From Searching for Virus to Saving Lives

TESTING STRATEGY

- RT-PCR based tests
  - All Symptomatic: Intl Travel in last 14 days
  - All symptomatic contacts of lab confirmed case
  - All symptomatic healthcare workers
  - All hospitalized patients of Severe Acute Respiratory Illness (SARI)
  - Asymptomatic high risk contacts (HCW, family members) of lab confirmed cases (5-14 days)

- Rapid Antibody Test
  - ILI patients from Containment Zone

Judicious Testing & Efficient Response

As on 23rd April, 2020

Total Numbers Tested: 4,97,209

- Tested on 18th April : 37,173
- Tested on 19th April : 29,742
- Tested on 20th April : 35,852
- Tested on 21st April : 28,273
- Tested on 22nd April : 35,074

COVID-19 Testing - Plan to increase from 55,000 tests / day (22 Apr, 2020) to 1,00,000 tests / day (31 May, 2020)
Laboratory network

- Government Labs
  - 230 laboratories approved

- Private Laboratories
  - 87 NABL accredited laboratory chains, including the most extensive networks such as SRL, Metropolis, Lal PathLabs, Thyrocare, Apollo hospitals
  - 16,000 collection centres pan India

<table>
<thead>
<tr>
<th>Date</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>31-Jan</td>
<td>1</td>
</tr>
<tr>
<td>20-Mar</td>
<td>75</td>
</tr>
<tr>
<td>02-Apr</td>
<td>190</td>
</tr>
<tr>
<td>10-Apr</td>
<td>220</td>
</tr>
<tr>
<td>30-Apr</td>
<td>300</td>
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</table>

COVID-19 labs – Planned (Apr - May)
Mapping of Patients to Care Centers

- **Severe/Critical Symptoms**:
  - Dedicated COVID hospitals (DCH)
    - ICUs, Ventilators and Oxygen support
    - Private hospitals also designated
    - Referral centers for Dedicated COVID Health Centers & COVID Care Centers
  - Mapped to 1 or more DCH
  - Beds with assured Oxygen support
  - Dedicated Basic Life Support Ambulance (BLSA) equipped with oxygen support

- **Moderate Clinical Symptoms**:
  - Dedicated COVID Health Center (DCHC)
    - Makeshift facilities to be set up in hostels, hotels, schools, stadiums, etc, both public and private
    - Beds with assured Oxygen support
    - Mapped to 1/more DCHC & at least one DCH for referral

- **Mild/Very Mild Symptoms**:
  - COVID Care Center
    - Makeshift facilities to be set up in hostels, hotels, schools, stadiums, etc, both public and private
    - Beds with assured Oxygen support
    - Mapped to 1/more DCHC & at least one DCH for referral
## Hospital Infrastructure

<table>
<thead>
<tr>
<th>State/UTs</th>
<th>Dedicated Covid Hospitals (DCHs)</th>
<th>Dedicated Covid Health Centres (DCHCs)</th>
<th>Total Functional COVID Dedicated Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No of DCHs</td>
<td>Total Isolation beds (excluding ICU Beds)</td>
<td>Total ICU beds</td>
</tr>
<tr>
<td>States and Central Facilities</td>
<td>736</td>
<td>1,13,458</td>
<td>15,931</td>
</tr>
</tbody>
</table>

### Dedicated Covid Care Centers

<table>
<thead>
<tr>
<th>#</th>
<th>State / UT Name</th>
<th>No of Facility</th>
<th>No of Districts Covered</th>
<th>Total Isolation beds (excluding ICU beds)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>States and Central Ministries</td>
<td>1741</td>
<td>195</td>
<td>1,66,960</td>
</tr>
</tbody>
</table>
Community Engagement

- Daily Press Briefing and media release
- Risk communication material - distributed through print, electronic & social media
- IEC material distributed to states in regional languages
- Dos and Don’ts – 5.5 billion SMSs
- Caller-tune messages to 11.7 billion telecom subscribers in 13 Languages
- 24x7 National Control Room (011-23978046 & 1075 Toll Free)
- 104 Helpline – also being used for COVID by State Call Centers
• MyGov platform using Web, App, Chatbot and Social Media for creating awareness with more than 161 million impressions.

• Dedicated Twitter handle #IndiaFightsCorona, daily news bulletin and fact check PIB unit for responding to queries.

<table>
<thead>
<tr>
<th>Tweets</th>
<th>Facebook Posts</th>
<th>YouTube Videos</th>
<th>Press Releases</th>
<th>Press Briefings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1099</td>
<td>858</td>
<td>77</td>
<td>124</td>
<td>69</td>
</tr>
</tbody>
</table>
Capacity building for healthcare personnel

- Dec 2019 – Training on managing **high hazard pathogens**
- 6 Mar – National-level **Training of Trainers**
- 9 & 11 Mar – **States**-level trainings
- **District & Facilities-level** training completed
- 21 Mar – Web-based training on **ventilator management** by AIIMS
- 22 Mar – **Mock Drill** for **Corona preparedness** in all hospitals across country
- Series of Trainings by **AIIMS Delhi**:  
  - IMA members and **Private Doctors**  
  - Designated **Hospitals**  
  - **IGOT Platform** for anytime, anywhere & across all channels **resources material** for online training
Current Status

All districts

Hotspots (Red Zone)
- Hotspot districts with large outbreaks
- Hotspot districts with clusters

Non-hotspot districts
- Non hotspot districts with clusters

Non infected Districts (Green Zone)
- No case in last 14 days

Criteria for shifting categories:
- A district currently in hotspots can move to green category if no new cases arise in 28 days.
Hotspots - Clusters and Large Outbreaks

- **Large Outbreak**
  - Localized increase in the incidence of COVID-19 cases occurring within a defined geographic area e.g., in a village, town, or city.
  - Cases may not be epidemiologically linked
  - More than 15 cases
  - Implies progression of a small cluster or evolvement of multiple clusters

- **Cluster**
  - Less than 15 cases in a limited area
  - Cases are epidemiologically linked
Continuous engagement with **Districts Collectors, Municipal Commissioners, Surveillance officers, SPs and States**

- Orientation on **Containment Action Plan**
- **Best practices** shared by districts
- Focus on over **preparedness** at district level
- Continued focus on **surveillance, contact tracing, patient management**
Leveraging Digital Interventions

**Aarogya Setu App**
(Total downloads: 72.19 million)

- It enables citizens to **assess the risk** of catching the Corona Virus infection.
- Designed in 11 languages, and uses cutting edge technology such as Bluetooth technology, algorithms and artificial intelligence in calculating the **COVID risk around the user**

**Healthcare Infrastructure Gap Analysis at a Peak Load Tool**

- This tool helps in analyzing the **gap in infrastructure** (Isolation Bed without O2 and with O2, ICU Bed, Ventilator) at maximum cases in a State or District/City.

**Case Load and Healthcare Infrastructure Forecasting Tool**

- This tool helps in **forecasting number of cases based on the historical trend or assumed growth rate** of confirmed cases and analyze infrastructure sufficiency over a period of time.
India – Overall Update

21,393 total cases

8.7 days doubling rate over last 14 days

681 deaths (3.2% fatality rate vs. 6.9% global)

4,258 recovered

Hotspots or 'Red Zones'
Non-hotspot districts or 'Orange Zones'
Non-infected districts or 'Green Zones'

District Heat Map
TECHNOLOGICAL INTERVENTIONS

• Involving **start-ups, academia, R&D Labs and industry**

• **Virus isolated**: India amongst 5 countries to do so.

• **Consortium** formed to support the development of **Medical equipment, Diagnostics, Therapeutics, Drugs & Vaccines**

• **First Indigenous kit** developed by Start up - MyLabs in Pune; Manufacturing scaled up

• Manufacturing facility for **indigenous development of Ventilators, imaging equipment and ultrasound & high end radiology equipment**

• **Vaccine development** supported

• Research on **Therapeutic and drug development** initiated

• **Surveillance** using digital and molecular methods, including **genome sequencing** of the virus strains

• **Repurposing drugs** and **developing new drugs** etc

• R&D in Hospital assistive equipment
Government of India Relief and Support Measures

**PM Garib Kalyan Ann Yojana (Grains and Pulses) (PMGKP)**
- **Target Beneficiaries**: 80 Cr for grains and 19.4 Cr for pulses
- **Amount**: Rs. 51,061 Cr (~USD 6.7 bn)

**COVID-19 Emergency Response and Health System Preparedness**
- **Strengthen and build resilient National and State health systems**
- **Amount**: Rs. 15,000 Cr (~USD 2 bn)

**PM Kisan Yojana**
- **Target Beneficiaries**: 8 Cr
- **Amount**: Rs. 16,000 Cr (~USD 2.1 bn)

**PM Jan Dhan Yojana**
- **Target Beneficiaries**: 20.4 crore
- **Amount**: Rs. 31,000 Cr (~USD 4.1 bn)

**PM Ujjwala Yojana**
- **Target Beneficiaries**: 8.0246 crore (Free gas cylinders for 3 months)
- **Amount**: Rs. 13,500 Cr (~USD 1.8 bn)

**Health Insurance for health workers**
- **Target Beneficiaries**: 22.12 Lakh
- **Amount**: Rs. 130.508 Cr (~USD 17 mn)
Focus Areas

Surveillance
- **International** passengers and **Migrant** workers
- **Contact tracing** and management
- Survey and **Testing** of **Influenza** and **Respiratory** illnesses

Dedicated COVID Hospitals
- Isolation beds, ICU beds, ventilators, PPEs
- Focus on preventing **Case Fatality**

Human Resource Upgradation
- Continued **Trainings** on clinical management, infection prevention and control, and biomedical waste management
- **Online training** from AIIMS, M/o Health etc
- Involve **ex-servicemen**, **retired** healthcare professionals, **NGOs**, NCC & NSS
Focus Areas

- Senior state officials - supervisory role
- DM – overall coordinator
- Geographic quarantine - strict perimeter control / lockdown
- Deployment of Rapid Response Teams
- Demarcation of Containment and Buffer zone
- House-to-house surveillance through special teams
- Rigorous contact tracing
- Enhanced surveillance within containment zone and nearby areas (for ILI / SARI)
- Isolation and treatment of cases in COVID-19 hospitals
- Risk communication and community engagement
Focus Areas

Social Distancing

• Social distancing as a behavioral changes approach.

• The most potent Social Vaccine available presently
THANK YOU