संचालनालय स्वास्थ्य सेवायें मध्यप्रदेश

क्र./कोविड-19/आई.डी.एस.पी./2020/145-

प्रति,

समस्त मुख्य चिकित्सा एवं स्वास्थ्य अधिकारी,
मध्यप्रदेश

विषय :-प्रदेश में कोविड-19 Outbreak हेतु नियंत्रण की तैयारियाँ व क्रियान्वयन के संबंध में।

संदर्भ :-AIIMS, Bhopal के विशेषज्ञों की गठित केंद्रीय Rapid Response Team द्वारा जिला इंदौर में कोविड-19 Outbreak की नियंत्रण व क्रियान्वयन गतिविधियों के संबंध में प्रस्तुत प्रतिवेदन दिनांक 02/04/2020

विषयार्थ स्पष्ट है कि म.प्र. शासन के अनुरोध पर AIIMS, Bhopal के विशेषज्ञों की गठित केंद्रीय Rapid Response Team द्वारा जिला इंदौर में कोविड-19 Outbreak की नियंत्रण एवं क्रियान्वयन गतिविधियों के संबंध में नवीकरणात्मक अभ्यास किया गया है, अभ्यास के मुख्य हिन्दु निरन्तर है :-

- कोविड-19 का प्रारंभ इंदौर में 24 मार्च 2020 को घटना एवं प्रकरणों में बल्लर आपसिन रूप में हुआ जहाँ पर यह संक्रमण पॉजिटिव व्यक्तियों के संपर्क में आए अन्य लोगों तक पैला।
- लगभग 1 तिथि में संबंधित पुरुष रोगियों को उम्र 15-45 होना पाया गया एवं अधिकांश पॉजिटिव महिलाएं पॉजिटिव रोगी के पश्चिमा की सदस्यी थीं।
- पुष्ट पाये गये रोगियों को Epicenter मानते हुए दिनांक 2 अप्रैल 2020 तक कुल 23 Containment Zone का निर्देशन दिया गया जिससे इंदौर एवं अभी तक की आबादी को क्षेत्र क्रमशः के बीच हेतु केंद्रीय एवं समुदायी मानव संसाधन तथा मानव सेवाओं में रोकथाम किया गया।
- Contact Tracing के लिए चिकित्सा अधिकारियों, दल चिकित्सक, आप, अंगपाल कार्यकर्ताओं एवं अन्य प्रशासनीय विभागों के में दस्तावेज़ की तैयारियाँ की गयी ताकि इंदौर में मोबाइल नैदिकल दल का गठन किया गया जिसके द्वारा पॉजिटिव प्रकरण के संपर्क व्यक्तियों (Contact) की जोड़ कर सेमपल एक्स़ट्रीकरण, आवश्यकता अनुसार अस्पतालों में रूककर सुनिश्चित किया गया।
- जिला इंदौर में दल चिकित्सकों को सेमपल एक्स़ट्रीकरण में प्रतिकृतियों दिया जाकर PPE किट उपलब्ध कराई गई एवं दल चिकित्सकों को सेमपल एक्स़ट्रीकरण के लिए वैक्सिन गाइड मानव संसाधन के रूप में मनोबलित किया गया जो कि प्रदेश में सीमित स्वास्थ्य मानव संसाधन की उपलब्धता को दृष्टिगत उधड़कर हुआ अनुभव है।
- जिला प्रशासन द्वारा संसाधन Quarantine हेतु सभी मुख्य क्षेत्र वाले 12 वैक्सिन हॉल का चित्रकार्य किया गया।
- पुष्ट रोगियों के Primary एवं Secondary संपर्कों का सुविधामय किया गया जिससे प्रत्येक कोविड-19 पुष्ट रोगी को लगभग 7 व्यक्तियों से संपर्क (Primary Contact) द्वारा परिलक्षित हुआ है।
- कोविड-19 के संदर्भ में निर्दिष्ट प्रत्येक जोड़ हेतु सेमपल एक्स़ट्रीकरण से रिपोर्ट प्राप्त होने में लगभग 1.5 से 2 घंटों को देखी होना परिलक्षित हुआ।
- जूनिका, इंदौर जिले में कोविड-19 के प्रभाव 4 माह के प्रति एक्स़ट्रीकरण की दिनांक 24 मार्च 2020 को मुख्य हुई जबकि इन सभी रोगियों को लक्ष्य लगभग 15 माह को/उसके बाद से अन-Incubation अवधि को दृष्टिगत रखकर हेतु संक्रमण की चुनौती लगभग 8 से 11 मार्च 2020 के मध्य होना संभावित रहा गया।
AIIMS, Bhopal के केंद्रीय Rapid Response Team द्वारा जिला इंदौर में कोविड-19 Outbreak की नियंत्रण एवं प्रीप्रावरण गतिविधियों की संख्या में प्राप्त प्रतिबंधन एवं अनुशासनों को दृष्टिगत रूप से निष्ठावत रखने के लिए निर्देशित किया जाता है:

1. कोरोना वायरस संक्रमण का पारस्परिक लक्षण - गुफाएँ, रस्ती खारी या सांस लेने में कठिनाई जैसे लक्षणों के संचार में सहायक को सामान रूप से जागरूक किया जाए। उपरोक्त साथ इन्फ़्लुएन्सा लाइक इलिजन्स (ILI) के लक्षण उच्चतम होने पर तालाब विकिरणसेट के प्रमाण प्राप्त किए जाए एवं आयुक्त पर चाकू देता जाए।

2. पॉजिटिव मामले गायन शीर्षीय रोगियों की संपूर्ण Contact Tracing सूचनित का जाए ताकि संक्रमण के फैलाव को नियंत्रित करने के लिए लक्षण का शीघ्र प्रकाशन व अन्य अंतर्गत की गतिविधियों का उत्तरार्ध अनुसरित कर इलेक्ट्रॉनिक रोड को चुनौती पाए।

3. जिला इंदौर में कोविड-19 के पुष्ट रोगियों में उच्च गूढ़रंग से यह परिलक्षित होता है कि प्रान्त: संदिग्ध मरीजों का गतिविधियों/Notification में विशेष रूप से उचित Information Management के कारण हुआ जिसके कारण Advance Stage में चेक का प्रवाह प्रारंभ हुआ।

4. यह भी संभव है कि सामान्य में कोरोना वायरस के प्राप्तार्थक मार्करों के संचार में अवज्ञाता के कारण पुष्ट रोगियों के अस्पताल आने में दीर्घ हुई जिससे यथार्थता प्रवाह प्रारंभ हुआ।

5. संदिग्ध व्यक्ति से जांच नगृह प्राप्त करने पर लेकर व्यक्ति को जांच रिपोर्ट की जानकारी देने के लिए परिलक्षित विशेष लिखी लेख में निर्देश के प्रस्ताव, प्रयोगशाला में Sample Processing, राज्य तरीका आई.डी.एस.पी. रोल को जांच रिपोर्ट प्रेषण, राज्य स्तर से पॉजिटिव रिजल्ट का जिसली तक प्रारंभ तथा जिला स्तर से पॉजिटिव व्यक्ति को सूचित करने संबंधी कार्यालयों को सुदृढ़ किया जाए।

6. इस इलेवन प्रश्नों में 1 नोडल अधिकारी (यथानांतर जिला एपिडिमियोलोजिस्ट) को निर्देशित किया जाए ताकि प्रयोगशाला, राज्य राज्य आई.डी.एस.पी. शाखा तथा संदिग्ध/पुष्ट रोगी तक सूचना पहुँचाने व जिला प्रशासन ने प्रशासन तक निर्देश आयोजित गतिविधियों के क्षेत्र में हेटु आयोजन तालमेल सूचित किया जा सके। इस कार्य के लिये एक अन्य प्रथम श्रेणी अधिकारी की दृष्टि में लगाया जाय जो एपिडिमियोलोजिस्ट का सहयोग करे।

7. निर्देशित प्रयोगशालाओं को जांच किरण का दृष्टिगत रूप से संपूर्ण प्रस्ताव तथा संस्था संबंधी प्रमाणित प्रयोगशालाओं की श्रेणी की जाए ताकि इसी प्रयोगशाला में व्यक्ति के अवधि जांच नमूनों के जमावत के कारण Back-log/Pendency को निर्देशित किया जा सके।

8. राज्य सरकारी संस्थाएँ में आया है कि जिलों द्वारा कोविड-19 के Symptomatic रोगियों द्वारा राष्ट्रीय National Centre for Disease Control द्वारा जारी CIF Form (प्रारूप संलग्न) नहीं मिला जा रहा है जिसे Isolation Facility/Treating Hospital पर अनुसरण कर सके।

9. कोविड-19 के गूढ़रंग के CIF Form मूल्य के 24 घंटे में शीतल राज्य स्तर पर आई.डी.एस.पी. शाखा को अनुसरण कर सके प्रेरित किया जा रहा ताकि ऐसे प्रकार की Death-Audit सूचित की जा सके।

संलग्न : 1. AIIMS, Bhopal के Rapid Response Team प्रतिष्ठित दिनांक 02/04/2020
2. कोविड-19 द्वारा राष्ट्रीय National Centre for Disease Control द्वारा जारी CIF Form
लोक स्वास्थ्य एवं परिवार कल्याण विभाग,
म.प्र. शासन
COVID-19 Outbreak in Indore

Report of visit of RRT to Indore (Dated 2\textsuperscript{nd} April 2020)

Team Members
Dr Abhijit Pkhare, Associate Professor, Community and Family Medicine, AIIMS Bhopal
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Background

EMR Division of MoHFW have deputed a Central Rapid Response Team of faculty members of AIIMS Bhopal to Madhya Pradesh for technical support in preparedness of containment plans and their implementation. (Annexure-1). On 1st April 2020, consequent to this order, Director AIIMS Bhopal, instructed team for completing the assigned task. Team visited office of Additional Director Health Services and Health Commissioner on 1st April 2020. It was decided that team will visit Indore for overall situation assessment.

Team visited Indore on 2nd April 2020. Team interacted with CMHO, DSO, Civil Surgeon, Epidemiologist, DPM and other key stakeholders of CMHO Office. District administration representatives (ADM) were also present. Then two quarantine facilities were visited and team also interacted with contacts of cases who were quarantined. A visit was also made to MGM Medical College, Indore and interaction with Dean, Faculty I/C COVID-19 response, HoD Community Medicine and Microbiology was done. Laboratory facility was visited. Community Medicine Department is providing data management support to CMHO Office, a meeting was held with concerned faculty and suggestions for analysis and mapping were provided. Debriefing was done with CMHO and concerned stakeholders.

Descriptive epidemiology of COVID-19 Outbreak in Indore

Confirmation of outbreak

Four cases of COVID-19 were confirmed on 24th March 2020. Out of these four cases 3 cases were admitted at Bombay Hospital and one was admitted at Arihant Hospital. Two (50/F and 49/M) of them were admitted on 22nd March 2020 with Severe Acute Respiratory Illness (SARI). Samples of these were sent for SARS-CoV-2 RT-PCR testing in authorized laboratory and they were announced positive on 24th March 2020. These patients with SARI were tested for SARS-CoV-2, consequent to changes in testing strategy as suggested by ICMR on 20th March 2020. Duration of development of severe infection from onset of illness is reported to be around 5 to 6 days. In order to identify what would have been potential date of infection, we have constructed an epidemic curve.
Time Distribution (Epidemic Curve)

Line list of positive cases along with their laboratory forms was analyzed. Out of 75 cases positive till 1st April 2020, 37 cases were having symptoms (fever or cough or breathlessness), however we could not get date of onset for 3 cases. Remaining 38 cases were among the close contacts who were not having symptoms at the time of sample collection.

It is evident from Figure-1, that first 6 cases were having symptoms on 14 to 15 March 2020, considering incubation period of 5-6 days (as reported in various studies across the globe), probable date of contraction of infection must be between 8 to 11 March 2020. It is important to note that, these cases have simultaneous date of onset of illness and were not directly related to each other. To explore their geographic linkages, we have obtained geographic coordinates from their detailed address available in the line list.

![No. of Cases by Date of Onset of Illness](image)

*Figure 1: Epidemic curve by date of onset of illness*

Place Distribution (Clusters)

Figure-2 shows spatial distribution of case cluster by date of onset. Initial dates are shown in lighter shade and later dates in darker shade. It is evident that at the beginning only, out of the cases which had date of onset on or before 15th March there were three distinct locations which didn’t had any direct relation. This indicates virus spread must have started
simultaneously at these locations (Ranipur and Khajrana) with unknown primary case source and probable date of contraction would have been between 8-11 March 2020. Figure-3 shows cluster locations for all cases i.e. symptomatic cases as well their positive contacts.

Based on location of cases, district administration has identified containment zones and activities have been initiated.

*Figure 2: Clusters by Date of Onset*

*Figure 3: Clusters of all reported cases including contacts*
Person Distribution

More than one third of the cases were men of age between 15-45 years of age. Those below 15 years were mainly positive contacts of confirmed cases. Among females, most (19/26) were contacts of positive case in same household. Age-wise attack rates can’t be calculated at this moment owing to non-availability of denominator (number tested from each group) and in fact this is an evolving outbreak.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5 to 15</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>15 to 45</td>
<td>26</td>
<td>9</td>
<td>35</td>
</tr>
<tr>
<td>45 to 60</td>
<td>10</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>&gt; 60</td>
<td>9</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>26</td>
<td>74</td>
</tr>
</tbody>
</table>

![Age and Gender Distribution of Cases](image)

*Figure 4: Age and Gender Distribution*

Out of 47 people who were younger than 45 years only 17 (36 %) were symptomatic while 23 out of 28 (82%) were symptomatic from those with age > 45 years.
Epidemiologic linkages

We have tried to assess epidemiological linkages from available data, i.e. travel related history as well as contact tracing details. Following table shows distribution by epidemiological linkages. We were able to trace epidemiologic linkage of 66 out of 75 cases (88%). For 9 cases there are unknown primary cases which might have been responsible for spread of an outbreak. Figure-5 depicts a network of cases and their contacts.

<table>
<thead>
<tr>
<th>Epidemiologic Linkage</th>
<th>n</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact of Lab Confirmed Case</td>
<td>40</td>
<td>53.33%</td>
</tr>
<tr>
<td>Contact with person of Travel History</td>
<td>3</td>
<td>4.00%</td>
</tr>
<tr>
<td>Doctor General Practice in COVID Cluster (Khajarana)</td>
<td>2</td>
<td>2.67%</td>
</tr>
<tr>
<td>Resident of COVID Affected Cluster</td>
<td>14</td>
<td>18.67%</td>
</tr>
<tr>
<td>Travel History</td>
<td>6</td>
<td>8.00%</td>
</tr>
<tr>
<td>Under Investigation</td>
<td>9</td>
<td>12.00%</td>
</tr>
<tr>
<td>Visit to COVID Affected Cluster</td>
<td>1</td>
<td>1.33%</td>
</tr>
</tbody>
</table>

*Figure 5: Network Diagram Showing Cases and their contacts*
Response and cluster containment

Containment zone identification

District Administration and CMHO Office has done mapping of cases and identified affected wards. Figure-6 shows map used for this purpose. As on 2nd April 2020, a total of 23 containment zones were identified and activities were initiated.

![Figure 6: Cluster Identification in CMHO Office](image)

Containment zone activities

Identified containment zones are cordoned and public movement is restricted. Team of medical officer, dentist, ASHA, Anaganwadi Worker and members from other administrative departments are deployed. Mobile Medical Units are also deployed. Team conducts contact tracing of confirmed cases and identified screened for any symptoms. Samples of eligible contacts are also taken. Then identified primary contacts are sent for institutional quarantine. MMU examines suspected patients and advises investigations and management as per requirement. If any patient needs to be shifted in hospital, then field teams call control room and ambulance is arranged.
Surveillance teams

Active case finding is being done through team of ASHAs and Anganwadi Workers. However, considering the size of containment clusters, ASHAs and AWWs from nearby areas are also mobilized. On the day of visit, active case finding was started in few containment zones and micro-plans for team deployment were under preparation. Surveillance Medical Officer, WHO NPSP- Indore was providing technical support in these activities.

Current status of population under surveillance, daily population interviewed, daily suspect cases identified, examined, swabs collected, patients referred in hospital, patients confirmed as positive etc for each containment zone must be gathered. This information will provide intelligence for adapting response and modifying strategy as per situation. It is recommended to use these formats which are available in model micro-plan of cluster containment.

Contact tracing

Contact tracing was being done through teams deployed in containment zones. Self-declaration form was used for this purpose. This database was maintained in excel; it also had a column for date of sampling done. One person had responsibility to enter contacts of confirmed case while other person had list of contacts who’s samples were taken. Field teams bring hard copies from containment clusters and then IDSP team enters it in excel sheet. It is suggested to use a shared spreadsheet application like Google Sheet, so that all concerned stakeholders can view details of contact tracing.

There are platforms Commcare (Dimagi Inc; https://www.dimagi.com/covid-19/ ) and go.Data (WHO; https://www.who.int/godata ) which have developed templates for COVID-19 contact tracing applications. These are ready to deploy applications with minimum customization. These can be deployed with facilitation from Information Technology Personnel from concerned departments in district or divisional headquarters.

Necessity to complete contact tracing at the earliest was emphasized. As on 2nd April 2020 contact tracing of 43 patients was completed and there was lag of more than 24 hours in completion of contact tracing. Every single contact traced gives an opportunity to early identification of COVID patient and thereby reduces probability of transmission. It was also suggested to maintain database of contacts along with their symptom status for 14 days by active surveillance and up to 28 days by passive surveillance.
Sampling teams
Field sampling team were constituted with the help of dental surgeons. This can be considered as best practice of human resource capacity utilization from Indore district. Government Dental College is situated in Indore, dental surgeons were trained in swab collection and provided requisite PPE.

Reconstitution of RRTs
RRTs were formed, however it was suggested to reconstitute teams as per guideline issued by DHS MP – IDSP /2020/40 dated 30th March 2020. It’s workflow will be as depicted in Figure-7

![Diagram](image)

Figure 7: Work flow for cluster containment

Epidemiologist have informed that, teams will be constituted in these manners at the earliest.

Institutional quarantine
District administration has identified 12 Marriage Halls as quarantine facility and its tentative capacity is around 2000. It was observed that, all primary contacts of confirmed case were shifted to institutional quarantine in order to identify new COVID cases at the earliest. A line list of primary and secondary contacts was available for first 52 cases which indicated 362
persons as primary contacts and 359 persons as secondary contacts. Thus, on an average each case had 7 primary contacts. If practice of placing all primary contacts is continued, then institutional quarantine facility will be saturated when case count reaches 250. Thus, it is suggested that only those primary contacts at high risk (age > 60 years and presence of co-morbidity like chronic disease) may be placed in institutional quarantine and all other asymptomatic contacts may be home quarantined in line with guidelines issued by MoHFW, GoI.

Team visited, two quarantine facilities and interacted with quarantined persons. Overall accommodation and food arrangements were good, and people were also satisfied with same. Periodicity of medical examination, risk communication and mechanisms for psychosocial support of those quarantined needs to be improved.
Laboratory – Sampling and reporting situation

Team members visited VRDL, MGM Medical College (MGMMC), Indore for the updates on the preparedness of VRDL (Virology Lab) and Medical College Lab for Laboratory Support towards new coronavirus outbreak cases detection. Team interacted with Dr. Anitha Mutha, HOD Microbiology and In-charge of Virology Lab and her team member at Virology Lab, MGM Medical College (MGMMC), Indore and discussed the recent updates on the preparedness of laboratory support. She shared the routine protocol approved and duty roster of staff members and upgrades the daily capacity to 150 samples (as per Duty roster). She also updated and explained the Guideline for sample collection and transportation at the center, sufficient PPE, Swabs and VTM Kits, training is done for PEP donning/doffing, Refrigerators & Deep Refrigerators for reagent storage and facility of disposable (Biomedical waste as per biomedical waste).

There were concerns regarding rejection of samples owing to incomplete laboratory form and some instances of non-eligible samples. It was reinforced that, testing strategy recommended by ICMR on 20th March 2020 has to be followed to avoid such instances.

Since Indore is divisional headquarter, it also receives samples from other districts. Thus, samples are also sent to AIIMS Bhopal laboratory. CMHO officials had concern regarding interval between sample submission and report confirmation. VRDL sends report to state IDSP division from which it is transmitted to district and then to respective hospitals. It is suggested that, nodal persons at respective places be identified and sharing of reports can be expedited through use of continuous communication. State headquarter or MoHFW can think of developing a portal for same or give access to VRDL portal for report viewing to selected district level officials. Interval between sampling, transportation, sample processing, result transmission and receipt of results is detrimental to further actions at patient level as well as public health actions like contact tracing and cluster containment activities. Figure-8 depicts potential for such delays which needs to be reduced.
Figure 8: Potential delays in sampling and laboratory reporting
Hospital Preparedness

Identification and categorization of hospitals

District administration has categorized hospitals as Red- dedicated for COVID-19 Positive cases, Yellow- which will cater to suspected COVID-19 patients and Green- which will cater to other patients. List is attached in Annexure.

Hospital beds, ICU beds and Ventilator availability

Following table shows distribution of total available hospital beds, ICU beds and ventilators.

Tabletop simulation for expected hospitalizations

In line with MoHFW guidelines it is suggested to develop surge capacity and increase the current bed, ICU and ventilator capacity considering potential for spread. Preparedness should be done keeping in mind total population of Indore and nearby districts. Assuming that nearly 15 percent of infected will need hospital care (secondary level) and 5 percent will need ICU/critical care expected utilization is simulated for different levels of incidence (i.e. 0.5 percent, 1, 5, 10, 15, 20, 25 and 30 percent). These are crude calculations (without using any sophisticated modelling assumptions) and doesn’t take into account age distribution, different attack rates for different ages etc. But these may serve as guide for development of capacity. These estimates may not be assumed as predictions.

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<th>Attack Rate</th>
<th>500 per 100000</th>
<th>1000 per 100000</th>
<th>5000 per 100000</th>
<th>10000 per 100000</th>
<th>15000 per 100000</th>
<th>20000 per 100000</th>
<th>25000 per 100000</th>
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<tr>
<td>Attack Rate in Percent of Population</td>
<td>0.5%</td>
<td>1%</td>
<td>5%</td>
<td>10%</td>
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<td>20%</td>
<td>25%</td>
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<tr>
<td>Population</td>
<td>1 Cr</td>
<td>1 Cr</td>
<td>1 Cr</td>
<td>1 Cr</td>
<td>1 Cr</td>
<td>1 Cr</td>
<td>1 Cr</td>
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<tr>
<td>Infected (Total)</td>
<td>500000</td>
<td>100000</td>
<td>500000</td>
<td>100000</td>
<td>150000</td>
<td>200000</td>
<td>250000</td>
<td>300000</td>
</tr>
<tr>
<td>Hospitalizations (15%)</td>
<td>7500</td>
<td>15000</td>
<td>75000</td>
<td>150000</td>
<td>225000</td>
<td>300000</td>
<td>375000</td>
<td>450000</td>
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<tr>
<td>ICU (5%)</td>
<td>2500</td>
<td>5000</td>
<td>25000</td>
<td>50000</td>
<td>75000</td>
<td>100000</td>
<td>125000</td>
<td>150000</td>
</tr>
<tr>
<td>Total Hospitalizations (Non-ICU +ICU)</td>
<td>100000</td>
<td>200000</td>
<td>100000</td>
<td>200000</td>
<td>300000</td>
<td>400000</td>
<td>500000</td>
<td>600000</td>
</tr>
</tbody>
</table>

It should be noted that, average hospital stay is 5 days while average ICU stay is 14 days as reported in various studies. Also, these calculations doesn’t take in to account 80% of patients who will have mild or asymptomatic phase. But these patients will also need care with respect to medical examination, psychosocial support and logistics for infection prevention e.g. masks etc.
Conclusions and recommendations

- Outbreak of COVID 19 in Indore was confirmed with four cases of COVID-19 on 24th March 2020. Date of onset of illness was on or before 15th March 2020 for first six cases, therefore accounting for incubation period of approximately 5-6 days it can be concluded that they might have contracted illness between 8-11 March 2020. These cases were detected simultaneously from distinct geographic area (Ranipura and Khajrana) but their primary cases are unknown.
- Epidemiologic linkage of 66 out of 75 cases till 2nd April 2020 was established.
- 23 containment zones have been identified by the District Administration and CMHO Office and activities have been initiated as per the protocols. Containment zones are cordoned, and public movement is restricted.
- Necessity to complete contact tracing at the earliest was emphasized. It was also suggested to maintain database of contacts along with their symptom status for 14 days by active surveillance and up to 28 days by passive surveillance.
- RRTs were formed in Indore, however it was suggested to reconstitute teams with the addition of Sub- RRTs as per guideline issued by DHS MP – IDSP /2020/40 dated 30th March 2020.
- Practice of placing all primary contacts under institutional quarantine facility needs to be relooked considering the saturation of quarantine facilities when case count reaches 250. Thus, it is suggested that only those primary contacts at high risk (age > 60 years and presence of co-morbidity like chronic disease) may be placed in institutional quarantine and all other asymptomatic contacts may be home quarantined in line with guidelines issued by MoHFW, GoI. Periodicity of medical examination, risk communication and mechanisms for psychosocial support of those quarantined needs to be improved.
- Regional Virology Lab at MGM Medical College (MGMMC), Indore has upgraded its daily capacity to 150 samples. There were concerns regarding rejection of samples earlier owing to incomplete laboratory form and some instances of non-eligible samples. It was reinforced that, testing strategy recommended by ICMR on 20th March 2020 has to be followed to avoid such instances.
- To deal with the delay in the interval between sample submission and report confirmation; it is suggested that, nodal persons at respective places be identified and sharing of reports can be expedited through use of continuous communication. State headquarter or MoHFW can think of developing a portal for same or give access to VRDL portal for report viewing to selected district level officials. Interval between sampling, transportation, sample processing, result transmission and receipt of results is detrimental to further actions at patient level as well as public health actions like contact tracing and cluster containment activities.

- District administration has categorized hospitals as Red- dedicated for COVID-19 Positive cases, Yellow- which will cater to suspected COVID-19 patients and Green- which will cater to other patients. In line with MoHFW guidelines it is suggested to develop surge capacity and increase the current bed, ICU and ventilator capacity considering potential for spread. Preparedness should be done keeping in mind total population of Indore and nearby districts.
OFFICE MEMORANDUM

Subject: Deputation of Central Rapid Response Team to Madhya Pradesh to support and facilitate in implementation of preparedness measures for COVID – 19 – regarding.

Ministry of Health and Family Welfare, Govt. of India has decided to depute a Central Rapid Response team to Madhya Pradesh to support State Health Department of Madhya Pradesh in preparedness measures including implementation of Cluster Containment Plan and Social distancing measures for COVID – 19. Details of team members are:

1. Dr. Abhijit P Pakhare (Assoc. Prof.) Deptt. of Community Medicine, AIIMS Bhopal.
2. Dr. Anand Kumar Maurya (Asst. Prof) Deptt. of Microbiology, AIIMS Bhopal.
3. Senior Resident - Community Medicine – to be nominated by HoD, Deptt. of Community Medicine, AIIMS Bhopal.

The team will submit a report to Principal Secretary (Health & FW), Govt. of Madhya Pradesh with copy to Joint Secretary (Public Health), Ministry of Health and Family Welfare, Govt. of India.

Sr. Regional Director (RoHFW) Bhopal will coordinate with State Health Department of Madhya Pradesh for visit of the above team.

TA/ DA expenditure of the above experts will be borne by their concerned institution.

This issues with approval of competent authority in Ministry of Health and Family Welfare, Govt. of India.

(St. U. B. Das)
Chief Medical Officer (SAG) EMR,
Room No: 507, D Wing,
Tel: 23063440.

Copy to:

1. Principal Secretary (Health & FW), Govt. of Madhya Pradesh, 4th Floor Annex – III, New Mantralaya, Arera Hill, Bhopal - 462004.
2. Mission Director, National Health Mission, Govt. of Madhya Pradesh, 8 Arera Hill, Bhopal - 462004.
3. Director, All India Institute of Medical Sciences Bhopal, Saket Nagar, Habib Ganji, Bhopal - 462026.
4. Director, National Centre for Disease Control, 22 Shannath Marg, Delhi – 110054.
5. Sr. Regional Director (RoHFW), A – 28, Vidya Nagar, Hoshangabad Road, Bhopal – 0755 – 2416200, 2410092.

Copy for information:
1. Secretary (Health & FW), MoHFW, Govt. of India, Nirman Bhawan, New Delhi.
2. Special Secretary (Health), MoHFW, Govt. of India, Nirman Bhawan, New Delhi.
3. Jt. Secretary (Public Health), MoHFW, Govt. of India, Nirman Bhawan, New Delhi.

Personal copy to:
1. Dr. Abhijit P Pakhare (Assoc. Prof.) Deptt. of Community Medicine, AIIMS Bhopal.
2. Dr. Anand Kumar Maurya (Asst. Prof) Deptt. of Microbiology, AIIMS Bhopal.

Nirman Bhawan, New Delhi,
Dated 22nd March 2020.
OFFICE ORDER

Sub.: Central Rapid Response Team to Support MP Health Department and facilitate in implementation of preparedness measures for COVID-19.

In compliance of OM – F.No. Z.28015/01/2020-EMR the Ministry of Health & Family Welfare, Govt. of India has constituted a Central Rapid Response Team to Support State health Department of MP in preparedness measures including implementation of Cluster Containment Plan and Social distancing measures of COVID – 19 vide OM No. Z28015/01/2020-EMR. Details of team members are as under:

1. Dr. Abhijit P Pakhare, Associate Professor (CFM), AIIMS, Bhopal
2. Dr. Anand Kumar Maurya, Assistant Professor (Microbiology), AIIMS, Bhopal
3. Dr. Parmeshwar Satpathy, Senior Resident (CFM), AIIMS, Bhopal

The team will submit a report to the Principle Secretary (Health & FW), Govt. of Madhya Pradesh with copy to Joint Secretary (Public Health), Ministry of Health and Family Welfare, Govt. of India.

Sr. Regional Director (RoHFW) Bhopal will coordinate with coordinate with State Health Department of Madhya Pradesh for visit of the above team.

TA/DA expenditure of the above experts will be borne by AIIMS, Bhopal.

This is issued with the approval of the Director, AIIMS, Bhopal.

Senior Administrative Officer
AIIMS, Bhopal

To,

All Members concerned

Copy to:
1. Dean (Academics), AIIMS, Bhopal
2. HOD (CFM & Microbiology), AIIMS, Bhopal
3. DD(A)/MS/FA, AIIMS, Bhopal
4. PPS to Director, AIIMS, Bhopal
5. Personal File / Guard File
TO WHOM SO EVER IT MAY CONCERN

This is to bring in knowledge that Ministry of Health and Family Welfare, Govt. of India has deputed a Central Rapid Response team to Madhya Pradesh to support State Health Department to support preparedness measures and to support in implementing Cluster Containment Plan and Social Distancing Measures for COVID-19. State Response Team will accompany Central Team to extend support during visit.

Details of Central and State team members are as:

1) Dr. Abhijit P. Pakhare (Asso. Prof.) Dept of Community Medicine, AIIMS Bhopal.
2) Dr. Anand Kumar Maurya (Asst. Prof.) Dept of Microbiology, AIIMS Bhopal.
3) Dr. Parmeshwar Satpathy, Senior Resident- (CFM) AIIMS, Bhopal
4) Dr. Indrajeet Sikarwar, Dy. Director, Director of Health Services, Bhopal.
5) Mr. Rupesh Rai, Div. BME, Indore

Kindly permit the team to cross district border and provide necessary support.

Prateek Hajela
OSD cum Health Commissioner
Department of Health & Family Welfare
Government of Madhya Pradesh
राज्यालाग्य स्वास्थ्य सेवाएं
सतपुड़ा भवन, भोपाल, मध्यप्रदेश
E-mail: ldsppsu@mp.gov.in,
Phone: 0755-4094192

भोपाल, दिनांक 01.04.2020

प्रति,

मुख्य चिकित्सा एवं स्वास्थ्य अधिकारी
जिला - इंदौर

विषय:- सेंट्रल रेपिड रिस्योर्स टीम के भरण याचता।

उपरोक्त विषयार्थित लेख है कि दिनांक 02.04.2020 को 05 राज्यीय टीम सेंट्रल रेपिड रिस्योर्स टीम तथा इंदौर जिले का भरण किया जायेगा। टीम द्वारा आवश्यकतानुसार संकेतित क्षेत्रों का भरण भी किया जायेगा।

अतः टीम के भरण हेतु डी.पी.एम./डी.एस.ओ. को सहयोग कर टीम के साथ रहने हेतु निर्देशित करें एवं आवश्यकतानुसार जानकारी/डेटा की उपलब्धता सुनिश्चित कराने का काम करें।

(डॉ. वीणा सिंह)
अपर संचालक
राज्यालाग्य स्वास्थ्य सेवाएं
भोपाल, दिनांक 01.04.2020

पू. क्रमांक/आई.डी.एस.पी. / 2020/366

प्रतिलिपि:- कृपया सुनाता एवं आवश्यक कार्यवाही हेतु :-
01. प्रमुख सहायक, मध्य प्रदेश शासन, लोक स्वास्थ्य एवं परिवार कल्याण विभाग, मंत्रालय, विद्युत भवन, भोपाल म.प्र।
02. आयुर्वेद स्वास्थ्य, राज्यालाग्य स्वास्थ्य सेवाएं, सतपुड़ा भवन भोपाल, म.प्र।
03. मिशन संचालक, एन.एच.एच., अर्थसंचालन, जेल रोड, भोपाल।
04. तलेबर्ट, जिला इंदौर।

अपर संचालक
राज्यालाग्य स्वास्थ्य सेवाएं
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**Form A**
NATIONAL CENTRE FOR DISEASE CONTROL
(To be filled COVID-19 Acute Respiratory Disease)

**A**
**PATIENT INFORMATION**
1. Name of patient: ____________________ Age: ___ yr ___ mo (___ / ___ / ___) Date of Interview: ________
   Gender: M/F, Religion: H / M / O
2. Name of Health Facility where isolated: ____________________ District (Isolation facility): ____________________
   State (Isolation facility): ____________________
3. Name of interviewer: ____________________ Designation of interviewer: ____________________ Contact Number of interviewer: ________
4. Case Classification: Confirmed [ ] Suspect [ ]
5. Current status of case: Stable [ ] Admitted in ICU [ ] Deceased [ ]

**B**
**SOCIODEMOGRAPHIC PROFILE**
Nationality: Indian Non-Indian (Name of country) _____________________________________________
Father's name: ____________________ House No: ____________________ Setting: Rural / Urban
Village/Mohalla: ____________________ Block: ____________________ District: ____________________
State: ____________________ Phone number: ________ email id: ____________________

**C**
**CLINICAL INFORMATION**
1. Patient clinical course
   1.1 Date of Onset of symptoms: ___ / ___ / ______ ; Initial Symptoms:
   1.2 Details of contact with health facility after the date of onset
   Name of facility: ____________________ Address: ____________________ 
   Phone number: ____________________ Dates case visited:
      Did health facility report the case Yes/No 1 2 3 4
   1.3 Date of admission in isolation facility: ________
   1.4 Outcome (encircle): Under treatment/ Discharged/ LAMA/ Died ______
   1.5 Date of outcome (if applicable) ___ / ___ / ______
   1.6 Cause of death (As mentioned in death certificate):

2. Patient Symptoms at admission (encircle all reported)
   a) Fever/chills b) Sore throat c) Nausea/Vomiting
d) General weakness e) Breathlessness f) Headache
g) Cough h) Diarrhea i) Irritability/confusion
j) Runny nose k) Pain(encircle): muscular, chest, abdominal, joint
l) Any other(specify)

3. Patient signs at admission: Details of following Signs to be taken from the case sheet if the patient is admitted
   a) Temperature (in Fahrenheit): ________ b) Abnormal Lung X-Ray/CT scan findings: Yes / No
c) Coma: Yes / No
d) Stridor: Yes / No e) Tachypnoea: Yes / No f) Seizure: Yes / No
g) Redness of eyes: Yes / No h) Abnormal lung auscultation: Yes / No
     i) Any other(specify):

4. Underlying medical conditions (encircle all that apply)
a) COPD b) Hypertension c) Chronic neurological or neuromuscular disease
d) Chronic Renal Disease e) Asthma f) Heart disease
g) Bronchitis h) Pregnancy (trimester) i) Immunocompromised condition including HIV, TB
j) Malignancy k) Post-partum (< 6 weeks) l) Any other(mention)
m) Diabetes n) Liver Disease o) None

**D**
**EXPOSURE HISTORY**
5. Occupation (circle): Student/ Businessman/ Health care worker/Health care lab worker/ animal handler/ any other (specify) ____________
6. H/O contact with COVID-19 case (encircle): Lab confirmed case of COVID-19 / Suspect case under investigation / No contact / Not known; (If contact with Lab confirmed case, mention its EPID number: COV-IND-__________)
   6.1 If contact is with lab confirmed COVID-19 case, then mention contact setting (encircle all that apply)
   a) While taking samples/ other investigations b) Visit to a place where COVID-19 cases are treated/ sampled (specify)
| c) | Clinical care of case (among HCW) | d) | Immigration Staff at Point of Entry (details of place) | e) | Housekeeping (Hospital) |
| f) | Caregiver of the case (specify details of case) | g) | Living in the same household | h) | Providing services to the household |
| i) | Living in the neighborhood | j) | Others, Specify |

7 Is patient a member of a cluster of patients with severe acute respiratory illness (e.g., fever and pneumonia requiring hospitalization) or COVID-19? Yes/No

8 Patient attended festival or mass gathering in last 1 month? (Yes/No/Unknown) if yes, specify:

E  **TRAVEL HISTORY**

9 Have you travelled outside India in the past one month? Yes/No. If yes, then fill details in Q. 9.1 onwards else skip to Q.10

9.1 Name of the country (City) | Date of arrival | Date of departure |
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9.2 Did you visit Wuhan (yes/no) | During your stay, did you visit any animal market? Yes/No |
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9.3 Date of arrival in India (including transit flights in India): __/__/____ Flight No: ___________ Seat No: ___________

10 Have you travelled within India in the past one month? Yes/No. If no, skip to Section F

If yes, details of places visited in chronological order; flight / train / vehicle number; seat/berth, coach number etc

<table>
<thead>
<tr>
<th>a)</th>
<th>Place &amp; Duration of stay:</th>
<th>Date of arrival:</th>
<th>Date of departure:</th>
<th>Mode of travel:</th>
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<td>Details:</td>
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<thead>
<tr>
<th>b)</th>
<th>Place &amp; Duration of stay:</th>
<th>Date of arrival:</th>
<th>Date of departure:</th>
<th>Mode of travel:</th>
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<td>Details:</td>
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<tr>
<th>c)</th>
<th>Place &amp; Duration of stay:</th>
<th>Date of arrival:</th>
<th>Date of departure:</th>
<th>Mode of travel:</th>
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<td>Details:</td>
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**F  LABORATORY INFORMATION (to be obtained from treating physician/DSO)**

11 Sample collected for confirmation of COVID-19 case: Yes / No, if Yes, fill the details and update the results:

<table>
<thead>
<tr>
<th>a)</th>
<th>Type of sample collected</th>
<th>Name of sample collection center</th>
<th>Date of sample collection</th>
<th>Sent to which Lab</th>
<th>Result (Positive/Negative)</th>
<th>Date of lab result</th>
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Reason if sample not collected:

b) Name of lab that confirmed result:

G **CLINICAL COURSE [Complication] Encircle where applicable**

12a) Hospitalization: Yes / No Date of hospitalization:  

<table>
<thead>
<tr>
<th>b)</th>
<th>ICU Admission: Yes / No</th>
<th>Date of ICU admission:</th>
<th>Date of discharge from ICU:</th>
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<tr>
<th>Mechanical Ventilation: Yes / No</th>
<th>Date of mechanical ventilation Start:</th>
<th>Date of mechanical ventilation Stop:</th>
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ARDS: Yes / No Cardiac failure: Yes / No

Pneumonia by Chest X-ray: Yes / No Acute Renal Failure: Yes / No

Consumptive coagulopathy: Yes / No Other complication: Yes / No, if yes please specify:

H **PUBLIC HEALTH RESPONSE**

<table>
<thead>
<tr>
<th>a)</th>
<th>Total no. of high risk contacts: _____; No. of high risk contacts traced: _____; No. of samples collected in high risk contacts: _____; No. of high risk contacts developed symptoms: _____; No. of high risk contacts tested positive: _____</th>
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<table>
<thead>
<tr>
<th>b)</th>
<th>Total no. of low risk contacts: _____; No. of low risk contacts become symptomatic: _____; No. of low risk contacts tested: _____; No. of low risk contacts tested positive: _____</th>
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