

संचालनालय स्वास्थ्य सेवायें  
मध्यप्रदेश

महत्वपूर्ण

क्र./कोविड-19/आई.डी.एस.पी./2020/415

भोपाल, दिनांक 11/04/2020

प्रति,

समस्त मुख्य चिकित्सा एवं स्वास्थ्य अधिकारी,  
मध्यप्रदेश

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

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

विषयांतर्गत लेख है कि म.प्र. शासन के अनुरोध पर AIIMS, Bhopal के विशेषज्ञों की गठित केन्द्रीय Rapid Response Team द्वारा जिला इंदौर में कोविड-19 Outbreak की नियंत्रण एवं क्रियान्वयन गतिविधियों के संबंध में विश्लेषणात्मक अध्ययन किया गया है. अध्ययन के मुख्य बिन्दु निम्नानुसार हैं :-

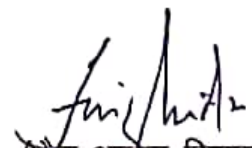
- कोविड-19 का प्रसार इंदौर में दिनांक 24 मार्च 2020 को पुष्ट हुए प्रकरणों में क्लस्टर आधारित रूप में हुआ जहां से यह संक्रमण पॉजिटिव व्यक्तियों के संपर्क में आए अन्य लोगों तक फैला।
- लगभग 1 तिहाई संक्रमित पुरुष रोगियों की उम्र 15-45 होना पाया गया एवं अधिकांश पॉजिटिव महिलाएं पॉजिटिव रोगी के परिवार की सदस्य थीं।
- पुष्ट पाये गये रोगियों को Epicenter मानते हुए दिनांक 2 अप्रैल 2020 तक कुल 23 Containment Zone का चिन्हांकन किया गया जिसमें प्रशारण द्वारा आमजनों की आवजाही को प्रतिबंधित किया गया।
- Contact Tracing के लिए चिकित्सा अधिकारियों, दन्त चिकित्सक, आशा, आंगनवाड़ी कार्यकर्ता व अन्य प्रशासकीय विभागों के मैदानी कर्मियों को तैनात किया गया साथ ही मोबाईल मेडिकल दलों का गठन किया गया जिनके द्वारा पॉजिटिव प्रकरण के संपर्क व्यक्तियों (Contact) की जाँच कर सेम्पल एकत्रीकरण, आवश्यकता अनुसार अस्पतालों में रेफरल सुनिश्चित किया गया।
- जिला इंदौर में दन्त चिकित्सकों को सेम्पल एकत्रीकरण में प्रशिक्षण दिया जाकर PPE किट उपलब्ध कराई गई एवं दन्त चिकित्सकों को सेम्पल एकत्रीकरण के लिए वैकल्पिक मानव संसाधन के रूप में चिन्हांकित किया गया जो कि प्रदेश में सीमित स्वास्थ्य मानव संसाधन की उपलब्धता को दृष्टिगत रखते हुए अनुकरणीय है।
- जिला प्रशासन द्वारा संस्थागत Quarantine हेतु लगभग 2000 व्यक्तियों की क्षमता वाले 12 मैरिज हॉल का चिन्हांकन किया गया।
- पुष्ट रोगियों के Primary एवं Secondary संपर्कों को सूचीबद्ध किया गया जिससे प्रत्येक कोविड-19 पुष्ट रोगी के लगभग 7 व्यक्तियों से संपर्क (Primary Contact) होना परिलक्षित हुआ है।
- कोविड-19 के संदिग्ध के चिन्हांकन उपरांत जाँच हेतु सेम्पल एकत्रीकरण से रिपोर्ट प्राप्त होने में लगभग 1.5 से 2 दिन की देरी होना परिलक्षित हुआ।
- चूंकि, इंदौर जिले में कोविड-19 के प्रथम 4 प्रकरणों की दिनांक 24 मार्च 2020 को पुष्ट हुई जबकि इन सभी रोगियों को लक्षण लगभग 15 मार्च को/उसके पूर्व से थे अतः Incubation अवधि को दृष्टिगत रखते हुए संक्रमण की शुरुआत लगभग 8 से 11 मार्च 2020 के मध्य होना संभावित पाया गया।

AIIMS, Bhopal के केन्द्रीय Rapid Response Team द्वारा जिला इंदौर में कोविड-19 Outbreak की नियंत्रण एवं क्रियान्वयन गतिविधियों के संबंध में प्राप्त प्रतिवेदन व अनुशंशाओं को दृष्टिगत रखते हुए निम्नानुसार निर्देशित किया जाता है :-

1. कोरोना वायरस संक्रमण के प्रारंभिक लक्षण - बुखार, राती खांसी व सांस लेने में कठिनाई जैसे लक्षणों के संबंध में समुदाय को साधन रूप से जागरूक किया जाए। उपरोक्तानुसार Influenza Like Illness (ILI) के लक्षण उत्पन्न होने पर तत्काल चिकित्साकीय परामर्श प्राप्त किया जाए एवं आवश्यकता पड़ने पर कोविड-19 हेतु जाँच कराई जाए।
2. पॉजिटिव पाये गये रोगियों की संपूर्ण Contact Tracing सुनिश्चित की जाए ताकि संक्रमण के फैलाव को नियंत्रित करते हुए लक्षणों का शीघ्र प्रबंधन व अन्य अंतर्निहित बीमारियों का उपचार सुनिश्चित कर कोविड-19 से होने वाली मृत्यु को रोका जा सके।
3. जिला इंदौर में कोविड-19 के पुष्ट रोगियों में उच्च मृत्युदर से यह परिलक्षित होता है कि संभवतः संदिग्ध मरीजों का चिन्हांकन/Notification में विलंब शिथिल Information Management के कारण हुआ जिसके कारण Advance Stage में रोग का प्रबंधन प्रारंभ हुआ।
4. यह भी संभव है कि समुदाय में कोरोना वायरस के प्रारंभिक लक्षणों के संबंध में अज्ञानता के कारण पुष्ट रोगियों के अस्पताल आने में देरी हुई जिससे यथोचित प्रबंधन बाधित हुआ।
5. संदिग्ध व्यक्ति से जाँच नमूना प्राप्त करने से लेकर व्यक्ति को जाँच रिपोर्ट की जानकारी देने के मध्य परिलक्षित विलंब को रोकने हेतु जाँच नमूना प्राप्त करने, चिन्हांकित लैब में नमूने का प्रेषण, प्रयोगशाला में Sample Processing, राज्य स्तरीय आई.डी.एस.पी. सेल को जाँच रिपोर्ट प्रेषण, राज्य स्तर से पॉजिटिव रिजल्ट का जिलों तक प्रसार तथा जिला स्तर से पॉजिटिव व्यक्ति को सूचित करने संबंधी कार्यवाही को सुदृढ़ किया जाए।
6. इस हेतु प्रत्येक जिले में 1 नोडल अधिकारी (यथासंभव जिला एपीडिमियोलॉजिस्ट) को चिन्हांकित किया जाए ताकि प्रयोगशाला, राज्य स्तरीय आई.डी.एस.पी. शाखा तथा संदिग्ध/पुष्ट रोगी तक सूचना पहुंचाने व जिला प्रशासन से रिजल्ट आधारित गतिविधियों के क्रियान्वयन हेतु आवश्यक तालमेल सुनिश्चित किया जा सके। इस कार्य के लिये एक अन्य प्रथम श्रेणी अधिकारी की ड्यूटी लगाई जाये जो एपिडिमियोलॉजिस्ट का सहयोग करे।
7. चिन्हांकित प्रयोगशालाओं की जाँच क्षमता को दृष्टिगत रखते हुए सेम्पल प्रेषण के पूर्व समस्त चिन्हांकित प्रयोगशालाओं की मैपिंग की जाए ताकि किसी भी 1 प्रयोगशाला में क्षमता से अधिक जांच नमूनों के जमावट के कारण Back-log/Pendency को नियंत्रित किया जा सके।
8. राज्य स्तरीय संज्ञान में आया है कि जिलों द्वारा कोविड-19 के Symptomatic रोगियों हेतु National Centre for Disease Control द्वारा जारी CIF Form (प्रारूप संलग्न) नहीं भरा जा रहा है जिसे Isolation Facility/Treating Hospital पर अनिवार्य रूप से भरा जाए।
9. कोविड-19 के मृत्यु प्रकरणों का CIF Form मृत्यु के 24 घण्टे की भीतर राज्य स्तर पर आई.डी.एस.पी. शाखा को अनिवार्य रूप से प्रेषित किया जाए ताकि ऐसे प्रकरणों की Death-Audit सुनिश्चित की जा सके।

संलग्न : 1. AIIMS, Bhopal के Rapid Response Team प्रतिवेदन दिनांक 02/04/2020

2. कोविड-19 हेतु National Centre for Disease Control द्वारा जारी CIF Form

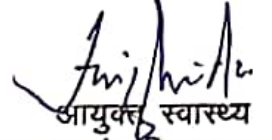
  
(फौज अहमद कदवई)

आयुक्त स्वास्थ्य

लोक स्वास्थ्य एवं परिवार कल्याण विभाग,  
म.प्र. शासन

प्रतिलिपि:- सूचनार्थ एवं आवश्यक कार्यवाही हेतु -

1. प्रमुख सचिव, मध्य प्रदेश शासन, लोक स्वास्थ्य एवं परिवार कल्याण विभाग, मंत्रालय, वल्लभ भवन, भोपाल म.प्र।
2. समस्त संभागायुक्त, म.प्र।
3. मिशन संचालक, एन.एच.एम., भोपाल, म.प्र।
4. संचालक, संचालनालय स्वास्थ्य सेवाएँ, रातपुड़ा भवन, भोपाल, म.प्र।
5. समस्त क्षेत्रीय संचालक, संगामीय स्वास्थ्य सेवाएँ, म.प्र।
6. समस्त जिला कलेक्टर, म.प्र।
7. समस्त सिविल सर्जन सह मुख्य अस्पताल अधीक्षक, म.प्र।
8. समस्त जिला सर्विलेन्स अधिकारी/जिला एपीडियोलॉजिस्ट/जिला डाटा मैनेजर (आई.डी.एस.पी.), म.प्र।

  
आयुक्त, स्वास्थ्य

लोक स्वास्थ्य एवं परिवार कल्याण विभाग,  
म.प्र. शासन



# COVID-19 Outbreak in Indore

## **Report of visit of RRT to Indore (Dated 2<sup>nd</sup> April 2020)**

### **Team Members**

**Dr Abhijit Pakhare, Associate Professor, Community and Family Medicine, AIIMS Bhopal**

**Dr Anand Maurya, Assistant Professor, Microbiology, AIIMS Bhopal**

**Dr Parmeshwar Satpathy, Senior Resident, 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 1<sup>st</sup> 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 1<sup>st</sup> April 2020. It was decided that team will visit Indore for overall situation assessment.

Team visited Indore on 2<sup>nd</sup> 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 24<sup>th</sup> 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 22<sup>nd</sup> 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 24<sup>th</sup> March 2020. These patients with SARI were tested for SARS-CoV-2, consequent to changes in testing strategy as suggested by ICMR on 20<sup>th</sup> 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 1<sup>st</sup> 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.

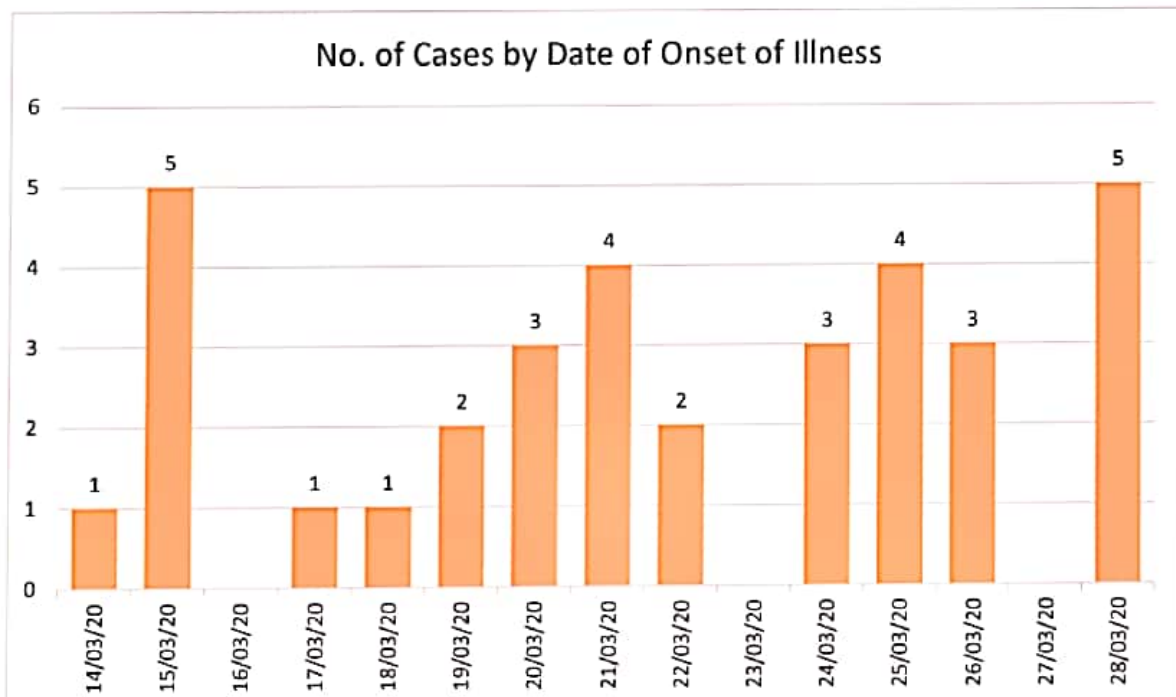


Figure 1: Epidemic curve by date of onset of illness

### 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 15<sup>th</sup> March there were three distinct locations which didn't had any direct relation. This indicates virus spread must have started

simultaneously at these locations (Ranipura 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.

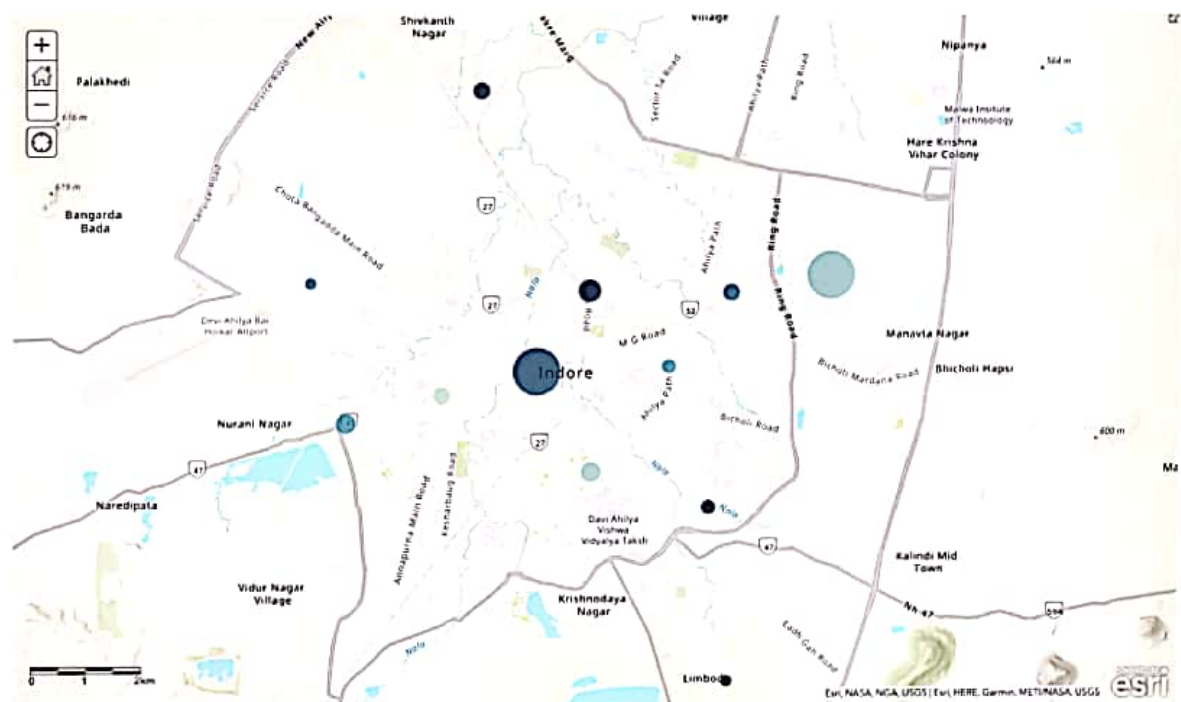


Figure 2: Clusters by Date of Onset

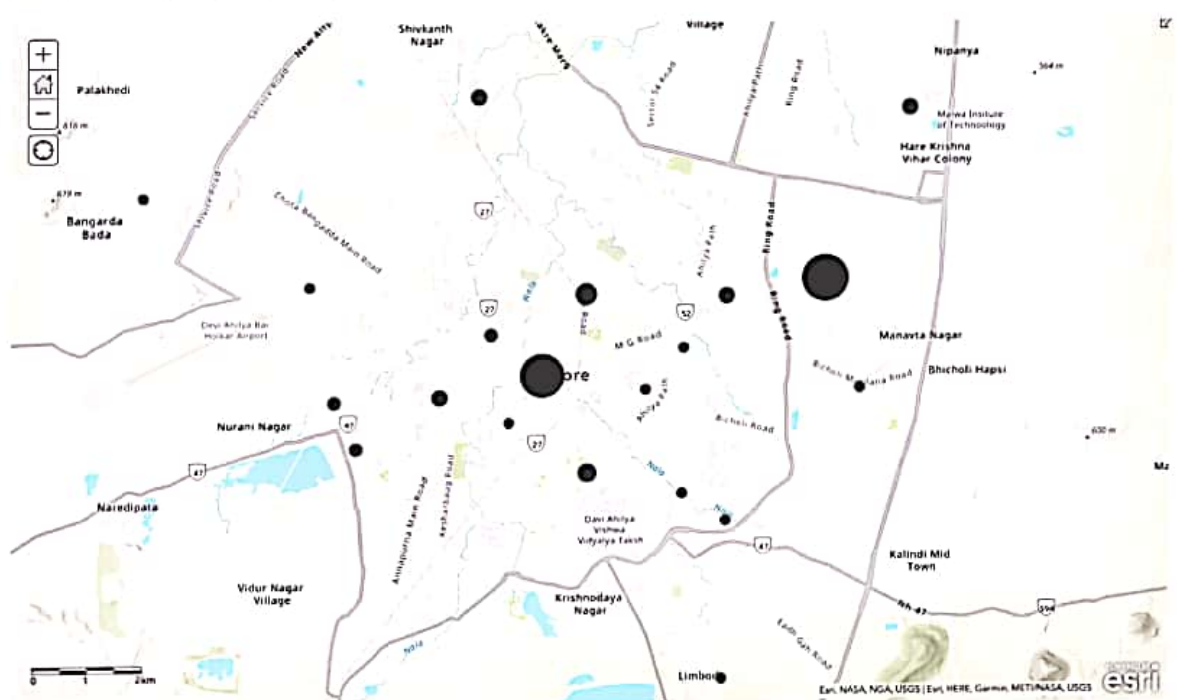


Figure 3: Clusters of all reported cases including contacts



### 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.

Age Group	Males	Females	Total
<5	0	2	2
5 to 15	3	4	7
15 to 45	26	9	35
45 to 60	10	4	14
> 60	9	7	16
Total	48	26	74

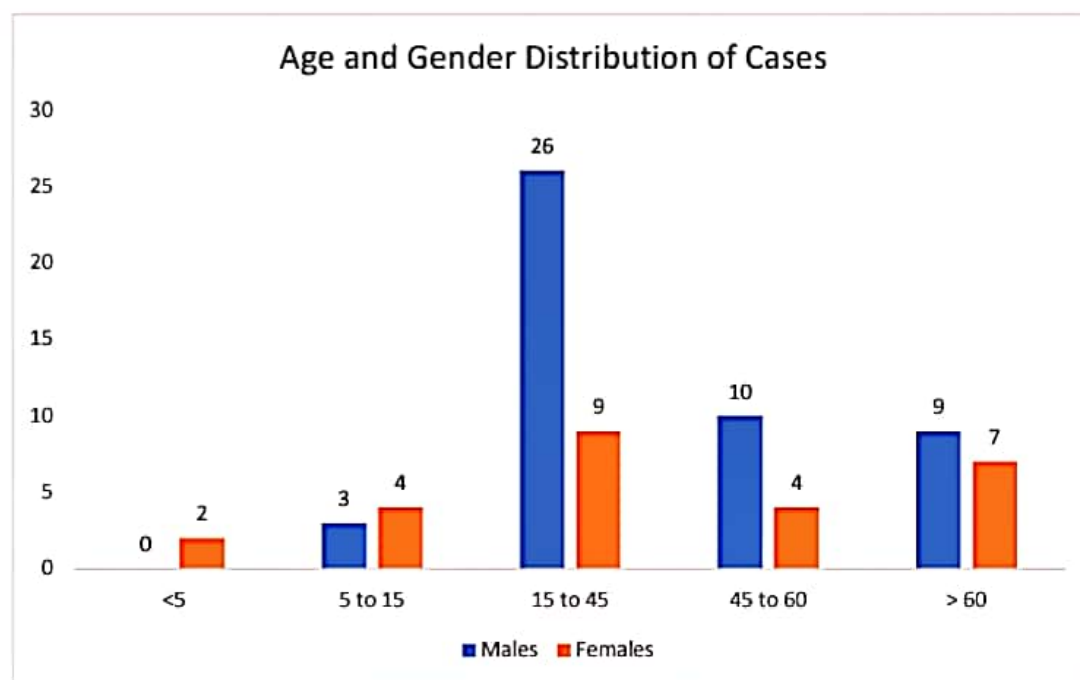


Figure 4: Age and Gender Distribution

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.

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

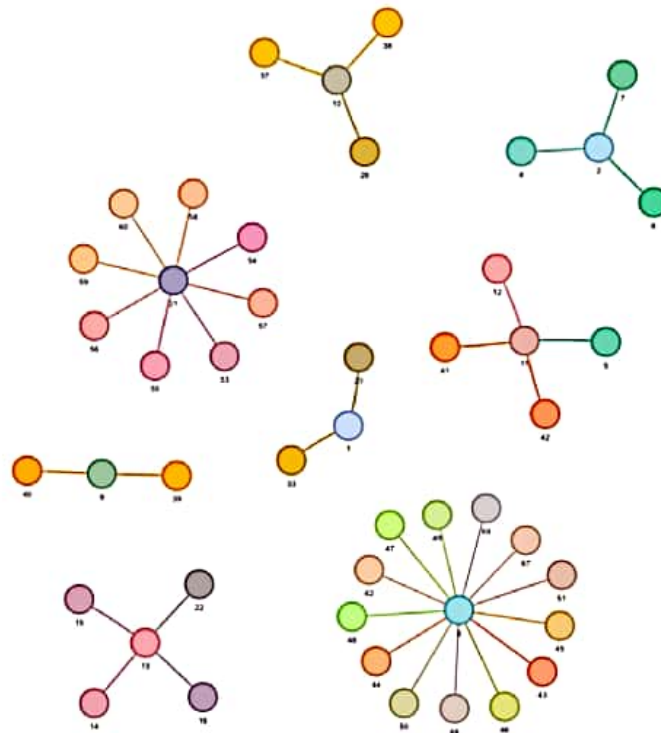
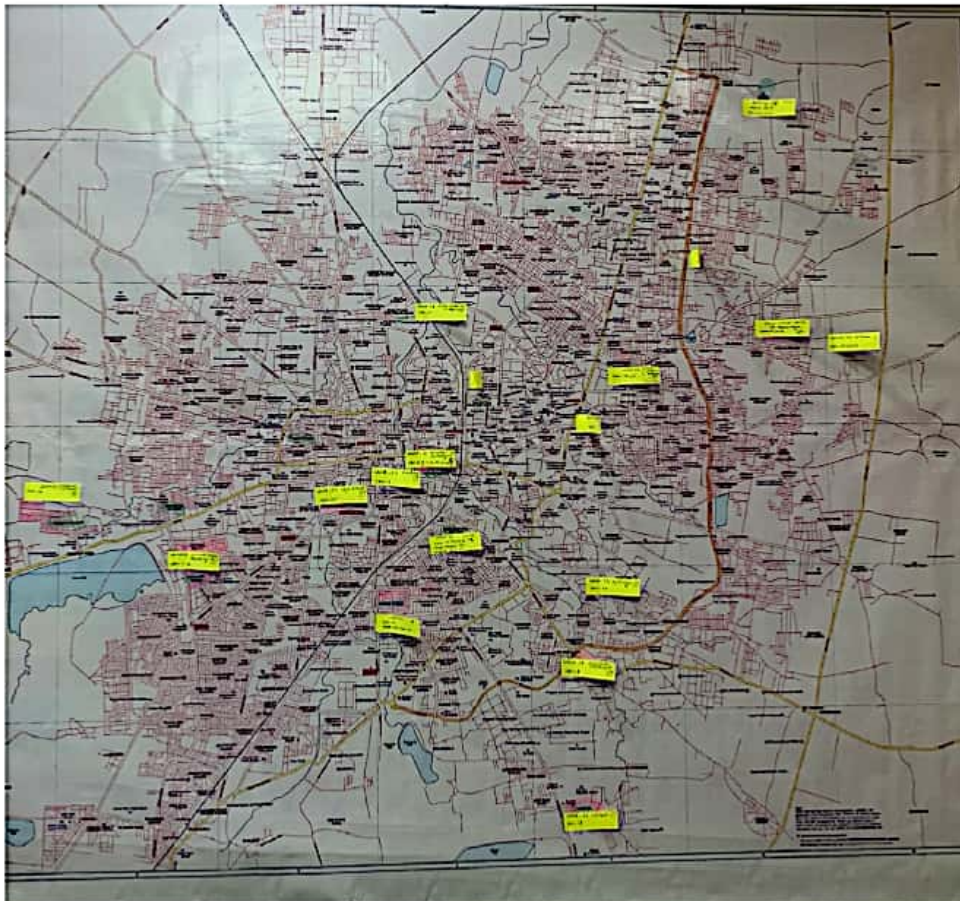


Figure 5: Network Diagram Showing Cases and their contacts

## 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 2<sup>nd</sup> April 2020, a total of 23 containment zones were identified and activities were initiated.



*Figure 6: Cluster identification in CMHO Office*

### 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 2<sup>nd</sup> 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 30<sup>th</sup> March 2020. It's workflow will be as depicted in Figure-

7

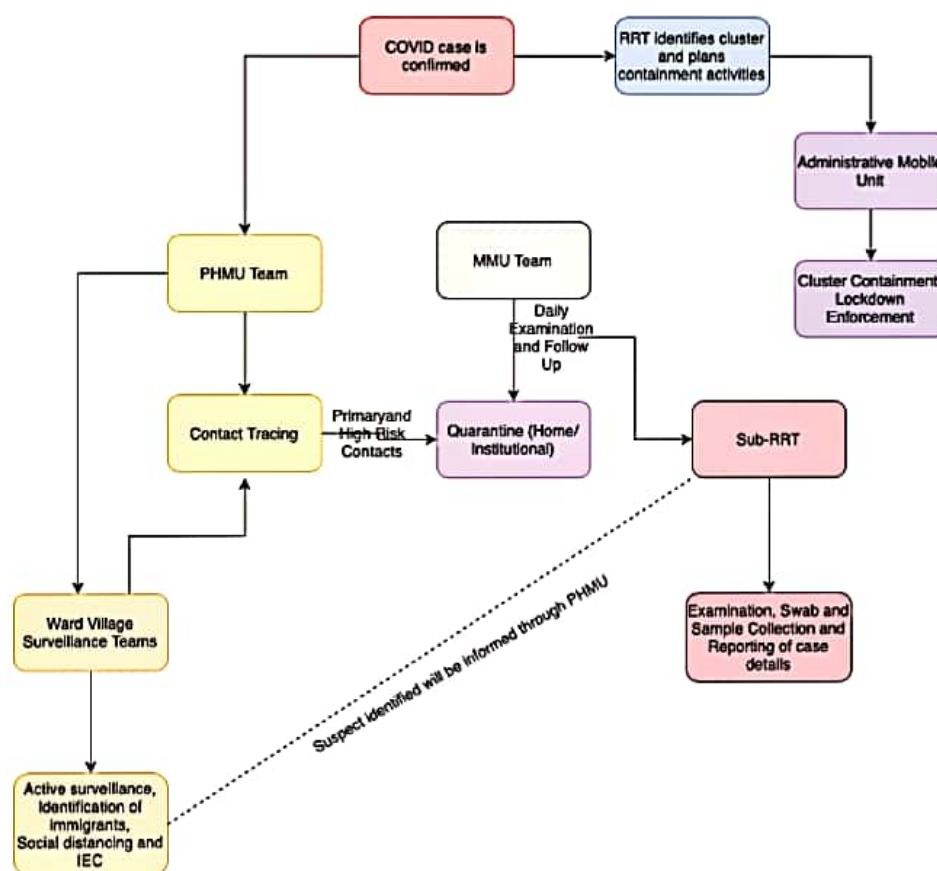


Figure 7: Work flow for cluster containment

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, Govt.

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 20<sup>th</sup> 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.

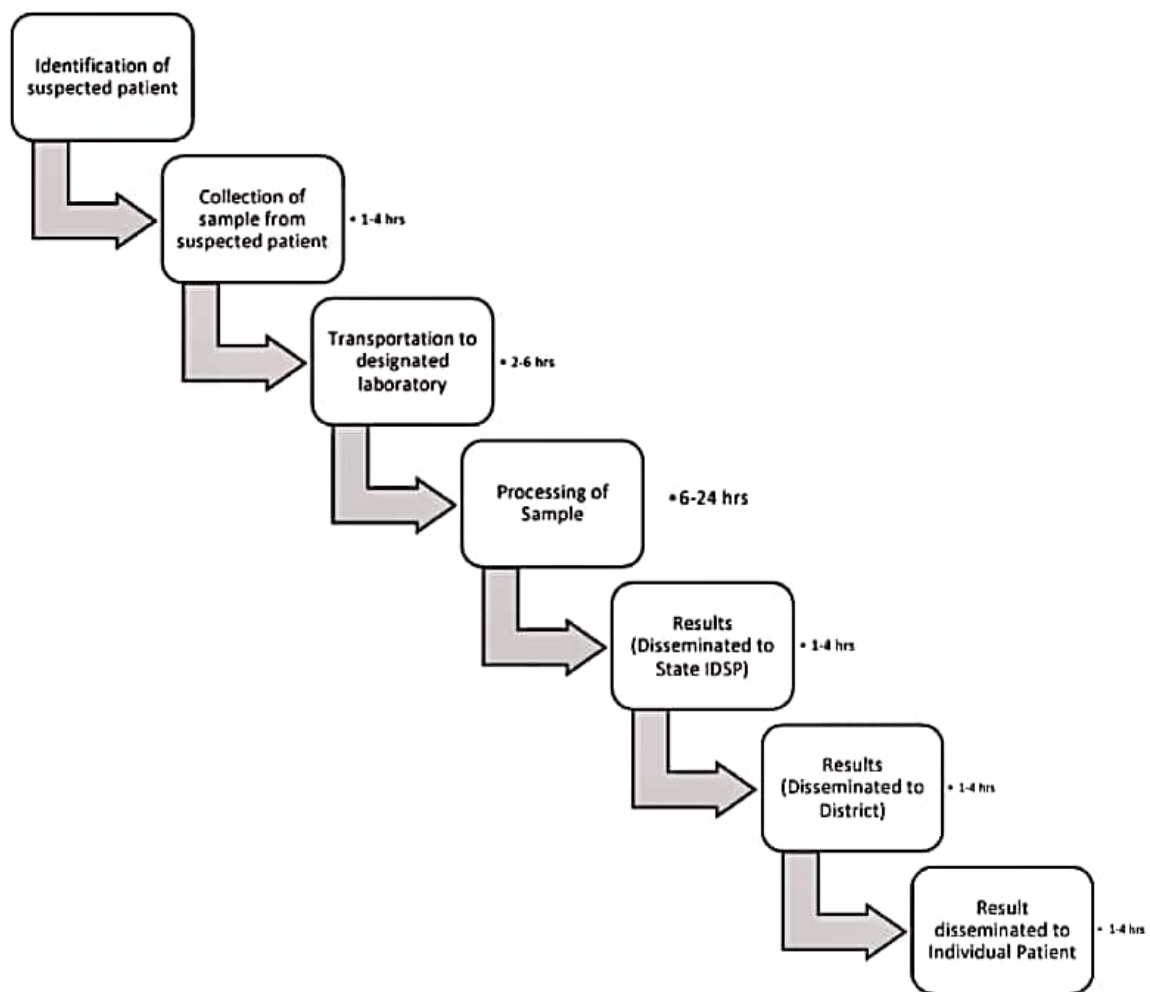


Figure 8: Potential delays in sampling and laboratory reporting



## 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.

Attack Rate	500 per 100000	1000 per 100000	5000 per 100000	10000 per 100000	15000 per 100000	20000 per 100000	25000 per 100000	30000 per 100000
Attack Rate in Percent of Population	0.5%	1%	5%	10%	15%	20%	25%	30%
Population	1 Cr	1 Cr	1 Cr	1 Cr	1 Cr	1 Cr	1 Cr	1 Cr
Infected (Total)	50000	100000	500000	1000000	1500000	2000000	2500000	3000000
Hospitalizations (15%)	7500	15000	75000	150000	225000	300000	375000	450000
ICU (5%)	2500	5000	25000	50000	75000	100000	125000	150000
Total Hospitalizations (Non-ICU +ICU)	10000	20000	100000	200000	300000	400000	500000	600000

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 24<sup>th</sup> March 2020. Date of onset of illness was on or before 15<sup>th</sup> 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 2<sup>nd</sup> 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 30<sup>th</sup> 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, Govt. 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 20<sup>th</sup> 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.



F. No. Z.28015/01/2020-EMR  
Government of India  
Ministry of Health & Family Welfare  
Directorate General of Health Services  
Emergency Medical Relief

Nirman Bhawan, New Delhi,  
Dated 22<sup>nd</sup> March 2020.

**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:

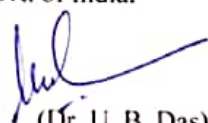
1. Dr. Abhijit P Pakhare (Assoc. Prof.) Deptt. of Community Medicine, AIIMS Bhopal.
2. Dr. Anand Kumar Maurya (Asst. Prof) Deptt. of Microbiology, AIIMS Bhopal.
3. Senior Resident - Community Medicine – to be nominated by HoD, Deptt. of Community Medicine, AIIMS Bhopal.

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.

  
(Dr. 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, 4<sup>th</sup> Floor Annex – III, New Mantralaya, Arera Hill, Bhopal - 462004.
2. Mission Direction, National Health Mission, Govt. of Madhya Pradesh, 8 Arera Hill, Bhopal – 462004.
3. Director, All India Institute of Medical Sciences Bhopal, Saket Nagar, Habib Ganj, Bhopal – 462026.
4. Director, National Centre for Disease Control, 22 Shamnath 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.





अखिल भारतीय आयुर्विज्ञान संस्थान  
ALL INDIA INSTITUTE OF MEDICAL SCIENCES  
साकेत नगर भोपाल (मध्य प्रदेश) – 462020  
Saket Nagar, Bhopal (M.P.) – 462020

No. ADM/15(1)/AIIMS/BPL/ 1235

Dated: 01/03/2020  
04

**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:

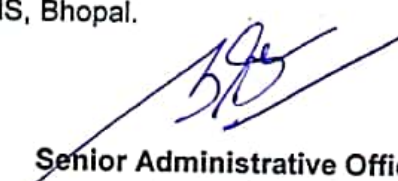
1. Dr. Abhijit P Pakhare, Associate Professor (CFM), AIIMS, Bhopal
2. Dr. Anand Kumar Maurya, Assistant Professor (Microbiology), AIIMS, Bhopal
3. Dr. Parmeshwar Satpathy, Senior Resident (CFM), AIIMS, Bhopal

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



कार्यालय संचालनालय स्वास्थ्य सेवायें  
सतपुड़ा भवन, भोपाल मध्यप्रदेश

क्रमांक 799/DHS/6E  
भोपाल, दिनांक 01/04/2020

**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



संचालनालय स्वास्थ्य सेवाएँ  
सतपुड़ा भवन, भोपाल, मध्यप्रदेश

E-mail : idspssu@mp.gov.in,

Phone : 0755-4094192



क्रमांक/आई.डी.एस.पी./2020/365

भोपाल, दिनांक 02.04.2020

प्रति,

मुख्य निमित्त एवं स्वास्थ्य अधिकारी  
जिला - इंदौर

विषय:- सेंट्रल रेपिड रिस्पोंस टीम के भ्रमण बाबत।

उपरोक्त विषयांतर्गत लेख है कि दिनांक 02.04.2020 को 05 सदसीय टीम सेंट्रल रेपिड रिस्पोंस टीम द्वारा इंदौर जिले का भ्रमण किया जायेगा। टीम द्वारा आवश्यकतानुसार संलग्नित क्षेत्रों का भ्रमण भी किया जायेगा।

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

(डॉ. वीणा सिन्हा)

अपर संचालक

संचालनालय स्वास्थ्य सेवायें  
भोपाल, दिनांक 02.04.2020

पृ. क्रमांक/आई.डी.एस.पी./2020/366

प्रतिलिपि:-कृपया सूचनार्थ एवं आवश्यक कार्यवाही हेतु :-

01. प्रमुख सचिव, मध्य प्रदेश शासन, लोक स्वास्थ्य एवं परिवार कल्याण विभाग, मंत्रालय, वल्लभ भवन, भोपाल म.प्र।
02. आयुक्त स्वास्थ्य, संचालनालय स्वास्थ्य सेवाएँ, सतपुड़ा भवन भोपाल, म.प्र।
03. मिशन संचालक, एन.एच.एम, अरेरा हिल्स, जेल रोड, भोपाल।
04. कलेक्टर, जिला इंदौर।

(डॉ. वीणा सिन्हा)

अपर संचालक

संचालनालय स्वास्थ्य सेवायें



इन्दौर शहर के “रेड” अस्पतालों की सूची	
"RED" HOSPITALS FOR COVID-19 +VE PATIENT	
क्र.	अस्पताल का नाम
1	मनोरमा राजे टी.बी. हॉस्पिटल
2	चेस्ट सेंटर, एम. व्हाय. एच.
3	श्री अरविन्दो इंस्टीट्यूट ऑफ मेडिकल कॉलेज

इन्दौर शहर के “येलो” अस्पतालों की सूची	
"YELLOW" HOSPITALS FOR COVID-19 SUSPECTED PATIENT	
क्र.	अस्पताल का नाम
1	प्रशांति हॉस्पिटल, सिमरोल रोड, महु
2	मयूर हॉस्पिटल एण्ड रिसर्च सेंटर, रिंग रोड के पास, इंदौर
3	गोकुलदास हॉस्पिटल, ढक्कन वाला कुआं के पास, इंदौर
4	सुयश हॉस्पिटल प्रा.लि., एम.जी.एम. मेडिकल कॉलेज के सामने, इंदौर
5	इंडेक्स मेडिकल कॉलेज, हॉस्पिटल एण्ड रिसर्च सेंटर, मौछद हाट, नेमावर रोड, इंदौर
6	श्री अरिहन्त हॉस्पिटल एण्ड रिसर्च सेंटर, गुमास्ता नगर, इंदौर
7	सिनर्जी हॉस्पिटल, स्कीम नं. 74, विजय नगर, इंदौर
8	विशेष हॉस्पिटल, गीता भवन चौराहा, इंदौर



## इन्दौर शहर के “ग्रीन” अस्पतालों की सूची

### "GREEN" HOSPITALS FOR OTHER NORMAL PATIENT

क्र.	अस्पताल का नाम
1	मिलेट्री हॉस्पिटल, महू
2	शासकीय एम. व्हाय. हॉस्पिटल, इंदौर
3	सी. एच. एल. अपोलो, एल. आई. जी. चौराहा, ए.बी. रोड, इंदौर
4	अपोलो राजश्री हॉस्पिटल एण्ड रिसर्च सेंटर, सी-सेक्टर, डी विजय नगर, इंदौर
5	भण्डारी हॉस्पिटल एण्ड रिसर्च सेंटर, स्कीम नं. 54, मेघदूत गार्डन, इंदौर
6	मेदान्ता हॉस्पिटल, स्कीम नं. 54, इंदौर
7	लाईफ केयर हॉस्पिटल, स्कीम नं. 78, इंदौर
8	ग्लोबल सी.एन.जी. हॉस्पिटल, 16 / 1 तुकोगंज, इंदौर
9	चौईथराम हॉस्पिटल एण्ड रिसर्च सेंटर, माणिकबाग रोड, इंदौर
10	ग्रेटर कैलाश हॉस्पिटल, ओल्ड पलासिया, इंदौर
11	गुर्जर हॉस्पिटल एण्ड इन्डोरकोपी सेंटर, स्कीम नं. 44, बी भंवरकुआं, इंदौर
12	बॉम्बे हॉस्पिटल, स्कीम नं. 54, रिंग रोड, इंदौर
13	एप्पल इंदौर हॉस्पिटल, ट्रांसपोर्ट नगर, इंदौर
14	शैलबी हॉस्पिटल, आर.एस. भंडारी मार्ग, इंदौर
15	विशेष डायग्नोस्टिक प्रा. लि., रिंग रोड, स्कीम नं. 94, चितावद, इंदौर
16	क्योरवेल हॉस्पिटल, 20, न्यू पलासिया, इंदौर
17	सिटी नर्सिंग होम प्रा. लि., 209, जवाहर मार्ग रोड, राज मोहल्ला, इंदौर
18	यूनिक सुपर स्पेसिलिटी सेंटर, ए स्कीम नं. 71, इंदौर
19	नोबल हॉस्पिटल, भिचौली हप्सी, इंदौर
20	लाहोटी मेडिकेयर प्रा. लि., ओल्ड पलासिया, इंदौर
21	गीता भवन हॉस्पिटल, मनोरमागंज, इंदौर
22	इंदौर क्लॉथ मार्केट हॉस्पिटल, एम. ओ. जी. लाईन, इंदौर

EPID Number filled at district  
COV-IND- \_\_\_\_\_

**Form A**  
**NATIONAL CENTRE FOR DISEASE CONTROL**  
(To be filled COVID-19 Acute Respiratory Disease)

**CENTRAL CASE NUMBER**  
To be filled at NCDC

<b>A</b>	<b>PATIENT INFORMATION</b>			
1.	Name of patient:	Age: ____yr ____mo (____/____/____) Gender: M/F, Religion: H / M / O	Date of interview:	
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 <input type="checkbox"/> Suspect <input type="checkbox"/>			
5.	Current status of case: Stable <input type="checkbox"/> Admitted in ICU <input type="checkbox"/> Deceased <input type="checkbox"/>			
<b>B</b>	<b>SOCIODEMOGRAPHIC PROFILE</b>			
	Nationality: Indian		Non-Indian (Name of country) _____	
	Father's name:		House No.	Setting: Rural / Urban
	Village/Mohalla: Block:	District: State:	Phone number: email id:	
<b>C</b>	<b>CLINICAL INFORMATION</b>			
<b>1</b>	<b>Patient clinical course</b>			
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:	1	2	3
	Address:			
	Phone number:			
	Dates case visited:			
	Did health facility report the case	Yes/No	Yes/No	Yes/No
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):			
<b>2</b>	<b>Patient Symptoms at admission (encircle all reported)</b>			
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)	
<b>3</b>	<b>Patient signs at admission: Details of following Signs to be taken from the case sheet if the patient is admitted</b>			
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):	
<b>4</b>	<b>Underlying medical conditions (encircle all that apply)</b>			
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	
<b>D</b>	<b>EXPOSURE HISTORY</b>			
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	<b>TRAVEL HISTORY</b>																																			
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	<table border="1"> <tr> <th>Name of the country (City)</th><th>Date of arrival</th><th>Date of departure</th></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>			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																																		
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																																			
a)	Place & Duration of stay:	Date of arrival: Date of departure:	Mode of travel: Details:																																	
b)	Place & Duration of stay:	Date of arrival: Date of departure:	Mode of travel: Details:																																	
c)	Place & Duration of stay:	Date of arrival: Date of departure:	Mode of travel: Details:																																	
F	<b>LABORATORY INFORMATION (to be obtained from treating physician/DSO)</b>																																			
11	Sample collected for confirmation of COVID-19 case: Yes / No, if Yes, fill the details and update the results																																			
a)	<table border="1"> <tr> <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></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>						Type of sample collected	Name of sample collection center	Date of sample collection	Sent to which Lab	Result (Positive/Negative)	Date of lab result																								
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	Reason if sample not collected:																																			
b)	Name of lab that confirmed result:																																			
G	<b>CLINICAL COURSE (Complication)</b> Encircle where applicable																																			
12a)	Hospitalization: Yes / No		Date of hospitalization:																																	
b)	ICU Admission: Yes / No		Date of ICU admission:		Date of discharge from ICU:																															
	Mechanical Ventilation: Yes / No		Date of mechanical ventilation Start: Date of mechanical ventilation Stop:																																	
	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	<b>PUBLIC HEALTH RESPONSE</b>																																			
a)	Total no. of high risk contacts: _____; No. of samples collected in high risk contacts: _____; No. of high risk contacts tested positive: _____			No. of high risk contacts traced: _____; No. of high risk contacts developed symptoms _____;																																
b)	Total no. of low risk contacts: _____ No. of low risk contacts tested: _____			No. of low risk contacts become symptomatic: _____ No. of low risk contacts tested positive: _____																																