IIHMR UNIVERSITY

SUMMER TRAINING REPORT

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UNDER THE GUIDANCE OF
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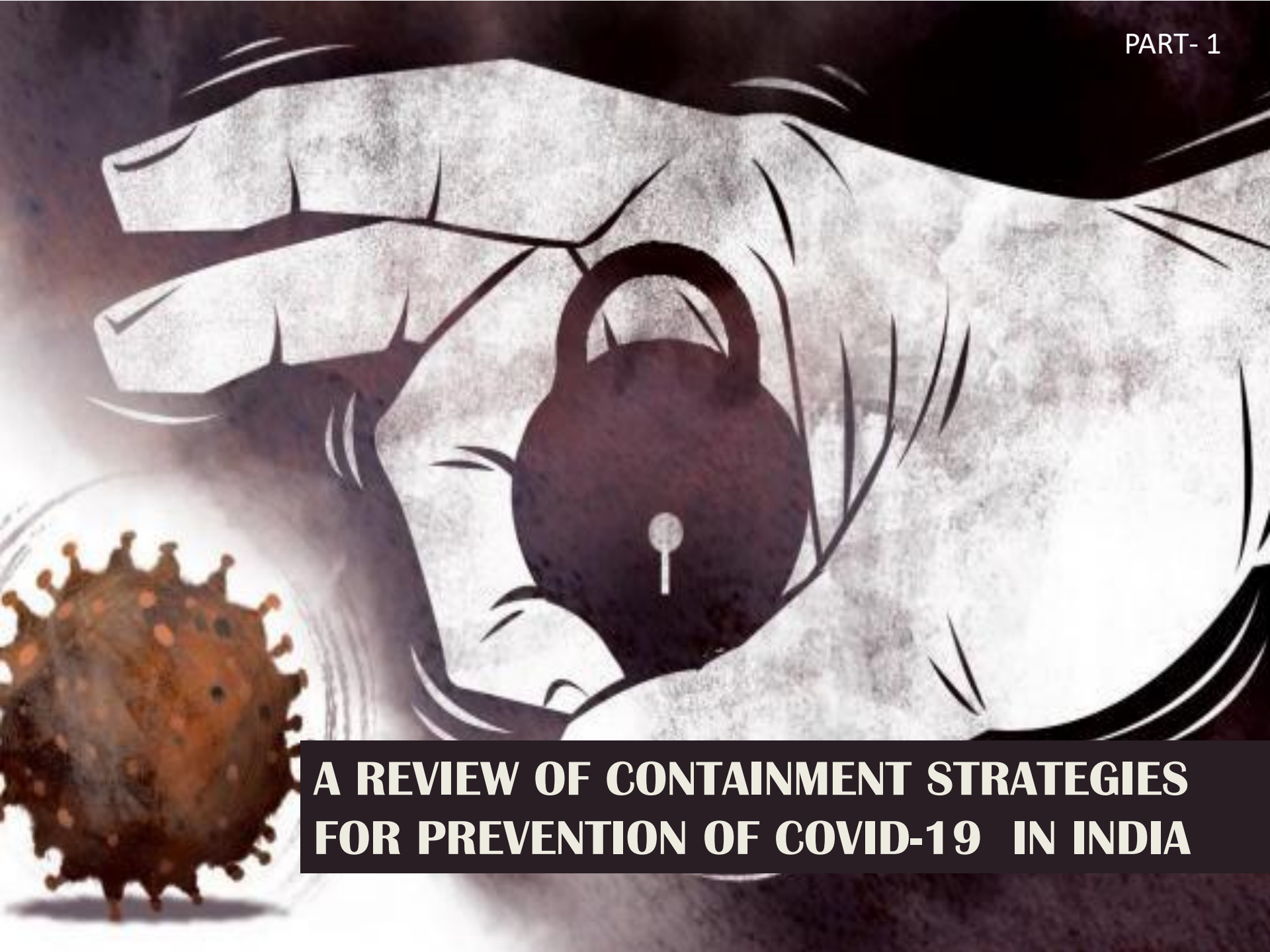
PART- 1



A REVIEW OF CONTAINMENT STRATEGIES FOR PREVENTION OF COVID-19 IN INDIA

INTRODUCTION

- A few months ago when the corona virus infected and altered the entire society, we could have never imagined we would be living the way we do now.

- Indian government had earlier divided the entire nation into mainly three zones.
  - Red zone-Where the sizeable number of cases were detected or areas which were declared as hotspots. Districts with more than 200 positive cases.
  - Orange zones-Where only a limited number of cases were found in the past with no recent increase in the number of positive cases.
  - Green zone- Areas with zero confirmed cases till date or no confirmed cases in the last 21 days.

- But the rate of infection continued to increase with every passing day therefore the government has now decided to implement the Cluster Containment Strategy in various districts instead of dividing it into the already existing 3 zones to contain the spread of COVID 19.

- The Cluster containment strategy is basically a measure taken to control the spread of infection within a defined geographical area by early detection of cases, breaking the chain of transmission and preventing the infection from spreading to other areas.

- This would include geographic quarantine, active surveillance, detection of suspected cases, isolation of the cases, quarantine of contacts , risk communication to create awareness among the public and also following the social distancing norms.

- The cluster containment strategy that is being used to control COVID 19 spread was earlier used by the Government of Rajasthan to contain the outbreak from Zika Virus transmission in Jaipur in 2018.The strategy yielded positive results and the government was able to control the spread of infection.


Objectives

PRIMARY OBJECTIVE

- To review the case load in all the states with respect to COVID- 19 outbreak.

SECONDARY OBJECTIVE

- To examine the containment strategies proposed in these states
- To investigate the change after implementation of containment strategy.


METHODOLOGY
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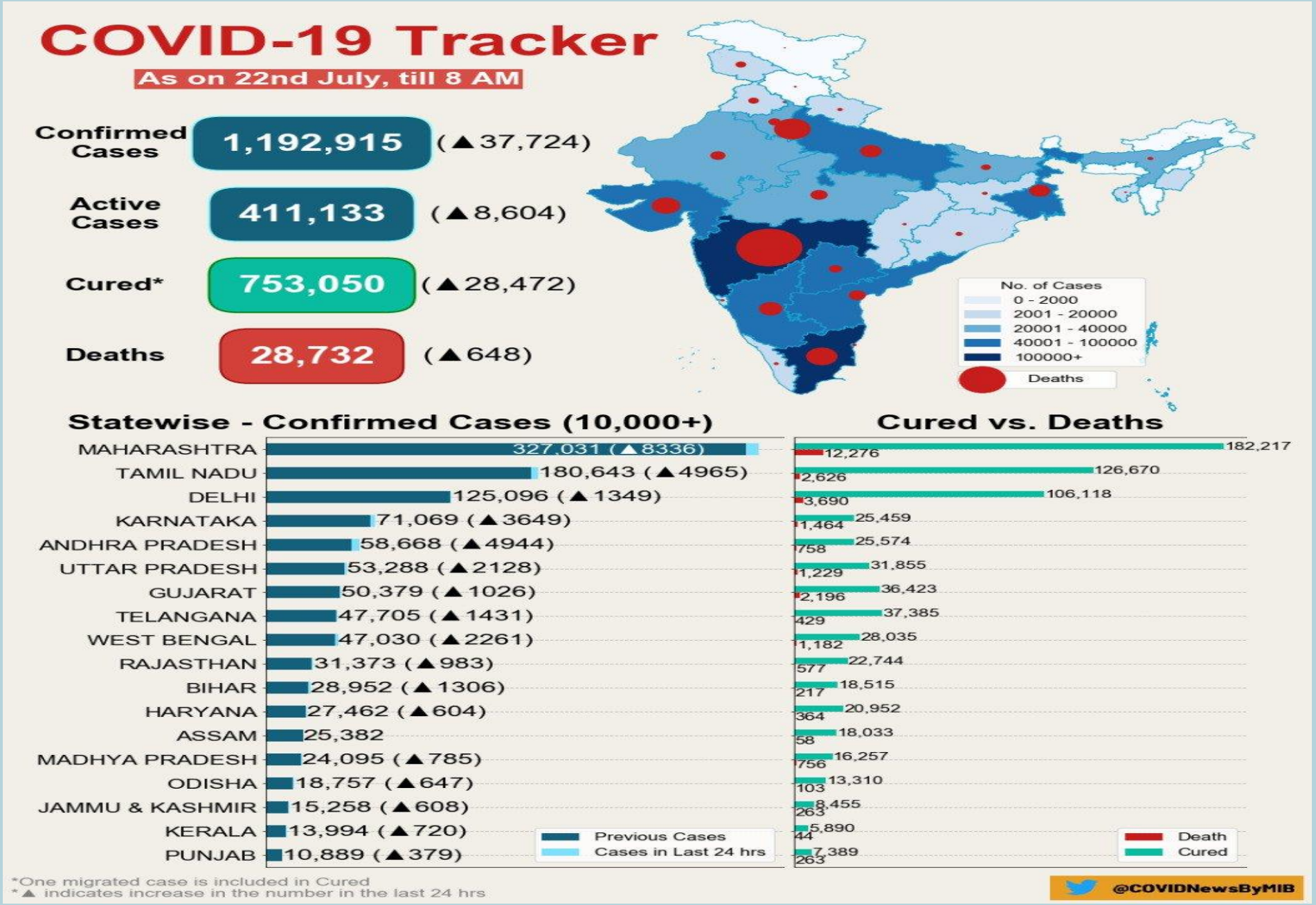
- DESCRIPTIVE STUDY DESIGN
- DATA IS COLLECTED FROM THE SECONDARY DATA SOURCE AVAILABLE LIKE THE NEWSPAPER ARTICLE, GOVERNMENT REPORTS AND GUIDELINES, WEBSITES , RESEARCH PAPERS.

- <u>REVIEW OF LITERATURE – PUBLISHED LITERATURE</u>

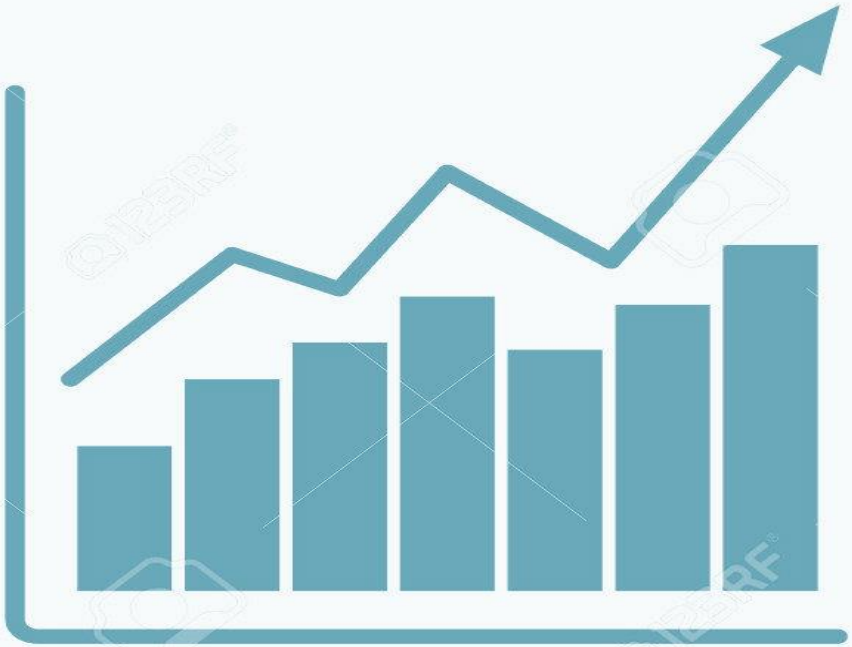
TYPE OF ARTICLE	NAME & DATE OF THE ARTICLE	KEY FACTS	STATES MENTIONED
News article –Economic Times	COVID 19- health ministry comes out with cluster containment strategy. 16.05.20	The containment technique for the Cluster is essentially a step taken to monitor the spread of the virus within a given geographic region through early identification of infections, breaking the transmission chain and avoiding the spread of Infection to other regions. This will include Quarantine Geography	Delhi
News article-India Today	What is India's outbreak management strategy for hotspots? 15.04.2020	In India the infected areas have been further divided into buffer zones and containment zones. Containment zones have been divided into sectors with 50houses each (30 houses in difficult areas).On the other hand the buffer zones are an additional of 5km radius (7kms in rural areas) around the epicenter	Maharashtra, UP, Karnataka
Global survey-Statista	Number of COVID19 cases across Indian states and union territories as of 15th June	The south western state of MH reported the highest number of cases as of June 15th followed by Delhi and TN, however with a relatively lower causality.	Maharashtra , TN, Delhi
News article-World economic forum	Why India has the upper hand against COVID19	Our country's cluster containment strategy helped in early detection of the patients infected with the virus. This strategy helped to flatten the curve in various parts of the country. The WHO complimented our nation for its rigid and commendable efforts to control the infection.	Kerala, Rajasthan
New article-India today	4lockdowns later, how do states flare in flattening the COVID19 curve? 3.06.2020	Overall the rate at which the cases were doubling in India has slowed down and is now taking a longer time for the increase to take place	UP, Kerala, WB, Delhi
News article- Mathrubhumi.com	PM suggests to follow Punjab's COVID containment strategy 16.06.2020	The government of Punjab decided to go for the micro level containment in the places where less than fifteen cases of	Punjab

RESULT AND DISCUSSION

The Caseloads in Different States of India-



- The Top Ten Worst Affected States In India With The Highest Number Of Confirmed Positive Patients Include Maharashtra, TN, Delhi, Karnataka, Andhra Pradesh, UP Gujarat, Telangana, WB And Rajasthan .



- The Total Number Of Confirmed Cases As On July 23, 2020 Was 12,34,269.
- There Have Been 29, 396 Deaths That Have Occurred as on July 23, 2020.

Strategies Implemented In The Most Affected States In India To Combat The Infection

- In order to control the spread of infection, various states that are worst affected by the virus have come up with various strategies to contain the spread of infection.

- Colour coding strategy used by the government in lockdown 2.0 where the country was divided into 3 zones namely red, orange and green zone

- However the government decided to do away with the colour coding and implement the cluster containment strategy to contain the infection. There is complete prohibition of all movements of vehicles or personnel and ban on entering or leaving the containment zone unless they are identified as providers of essential services.

- Next the COVID19 testing strategy was introduced in India. It involved the rapid antigen test which is reliant on the amount of virus on the nasal swab and can produce the result in 30 minutes. The positive results will be considered confirmed and in case of a negative result an RT-PCR would be done for reconfirmation.

- The next strategy used by India to combat the coronavirus is contact tracing which is a process of identifying, assessing and managing the contacts of those who have tested positive for COVID19 in order to avoid further transmission.

STRATEGY

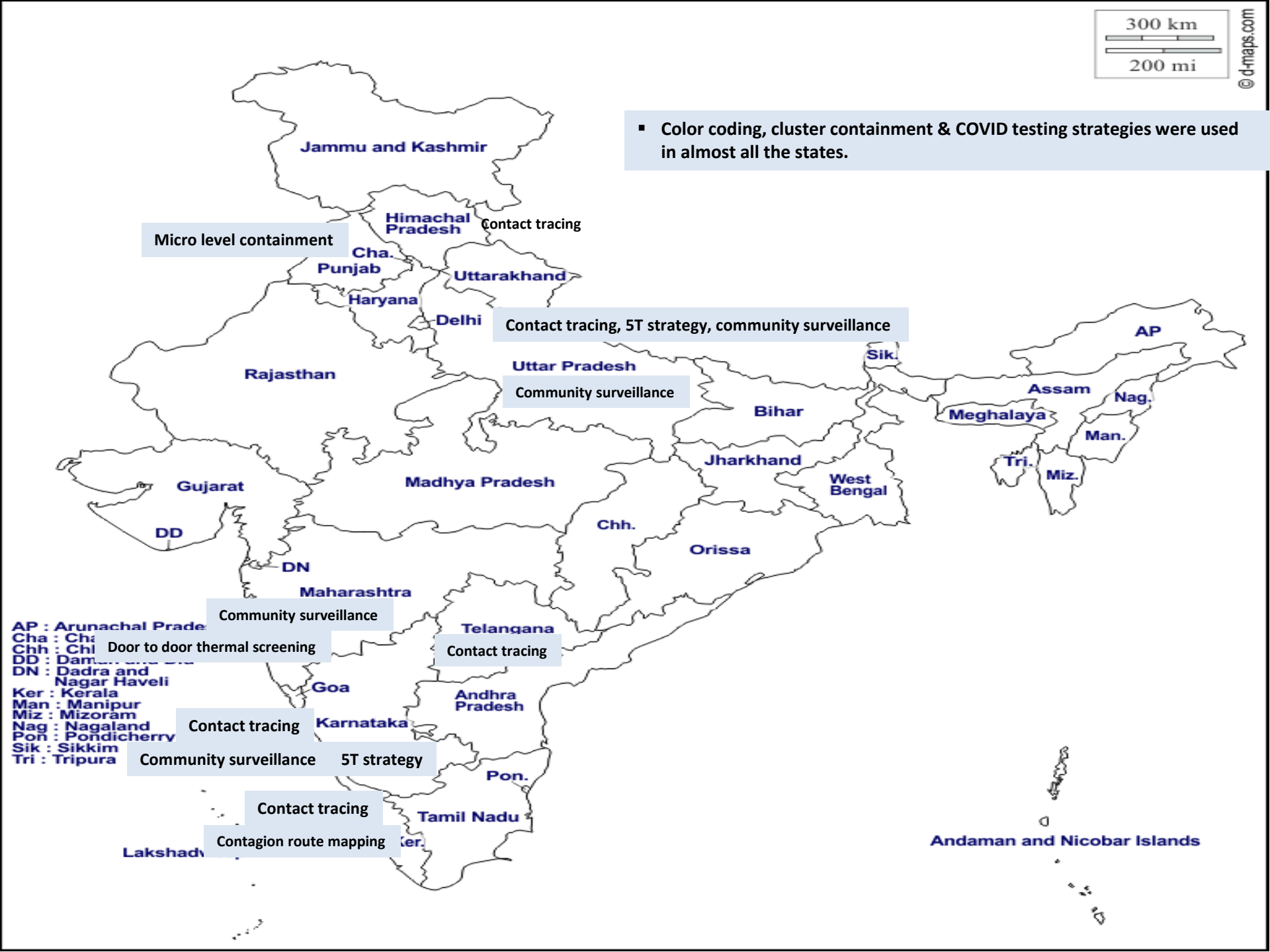
- Another very important strategy proposed by the government to fight the virus was the 5T strategy which included testing, tracing, treatment, teamwork and tracking and monitoring of the virus.

- Contagion route mapping strategy was proposed and implemented by the government of Kerala to flatten its infection curve. This included making route maps of the positive cases to ensure no contacts slip through.

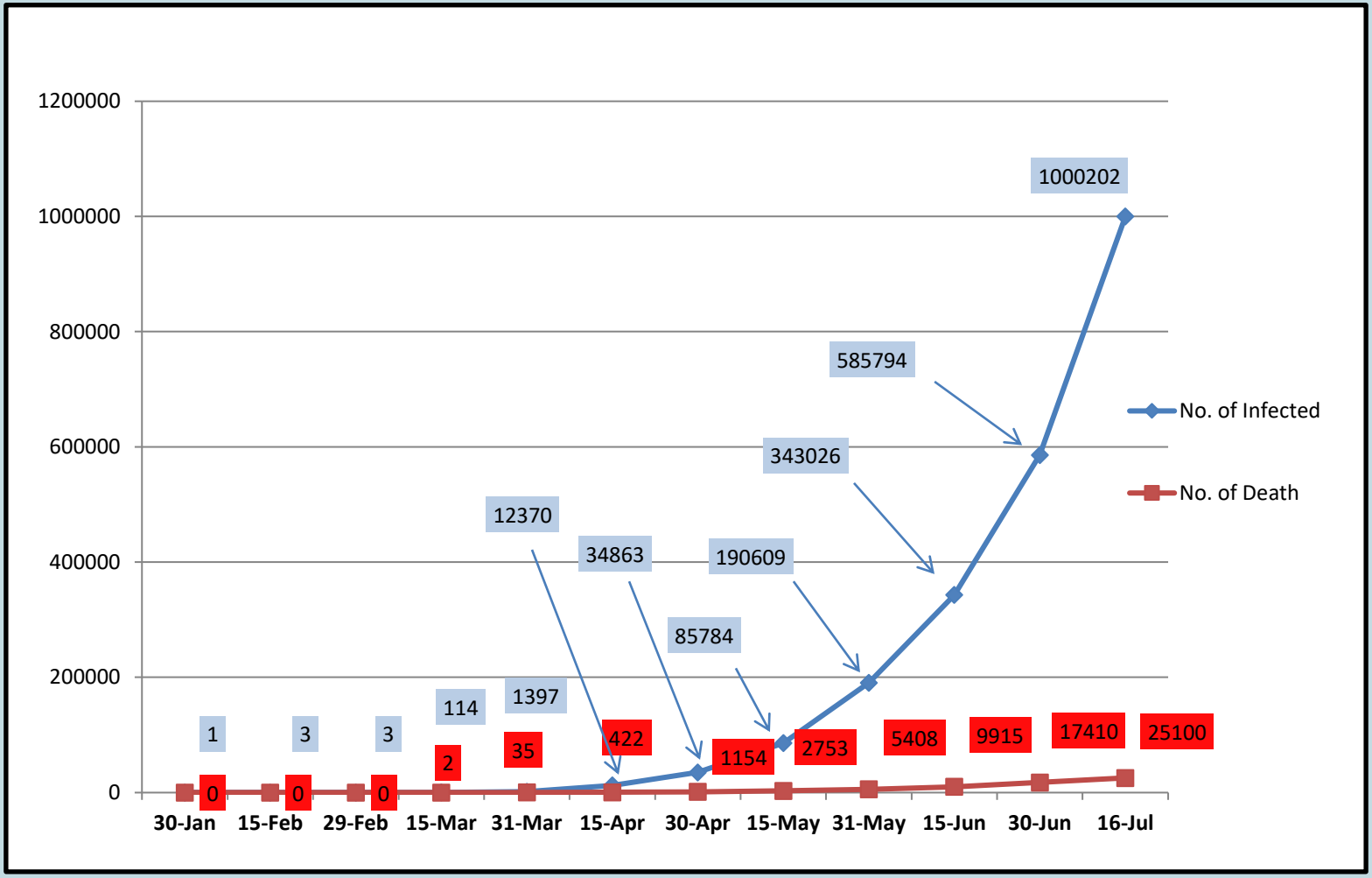
- The states are now seen to be adopting the community surveillance strategy to stop the spread of corona virus, which includes contact tracing of positive cases and physical and phone based household survey which covered a large number of households.

- Punjab government moved to go in for micro level containment in areas where less than 15 cases of novel coronavirus have been reported from a cluster .The idea was to be more micro and pick them early rather than let the cases increase to 15 or 20.

- Mumbai has come up with a smart helmet to allow door to door thermal screening in order to contain the virus.

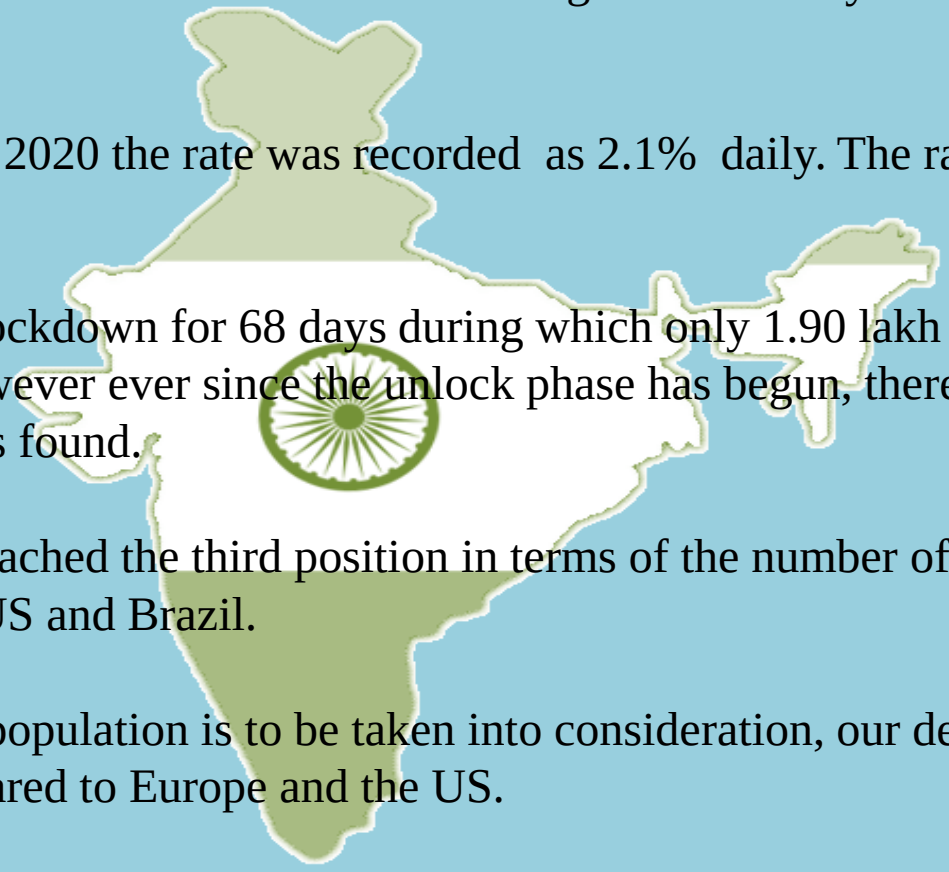

300 km
200 mi
© d-maps.com
Color coding, cluster containment & COVID testing strategies were used in almost all the states.
Micro level containment
Contact tracing
Contact tracing, 5T strategy, community surveillance
Community surveillance
Community surveillance
Door to door thermal screening
Contact tracing
Contact tracing
Community surveillance
5T strategy
Contact tracing
Contagion route mapping
Jammu and Kashmir
Himachal Pradesh
Cha.
Punjab
Uttarakhand
Haryana
Delhi
Rajasthan
Uttar Pradesh
Bihar
Sik.
AP
Assam
Nag.
Meghalaya
Man.
Tri.
Miz.
Jharkhand
West Bengal
Gujarat
Madhya Pradesh
Chh.
Orissa
DD
DN
Maharashtra
Telangana
Goa
Andhra Pradesh
Karnataka
Pon.
Tamil Nadu
Andaman and Nicobar Islands
AP : Arunachal Prade
Cha : Cha
Chh : Chi
DD : Dam
DN : Dadra and Nagar Haveli
Ker : Kerala
Man : Manipur
Miz : Mizoram
Nag : Nagaland
Pon : Pondicherry
Sik : Sikkim
Tri : Tripura

Corona Trend In INDIA

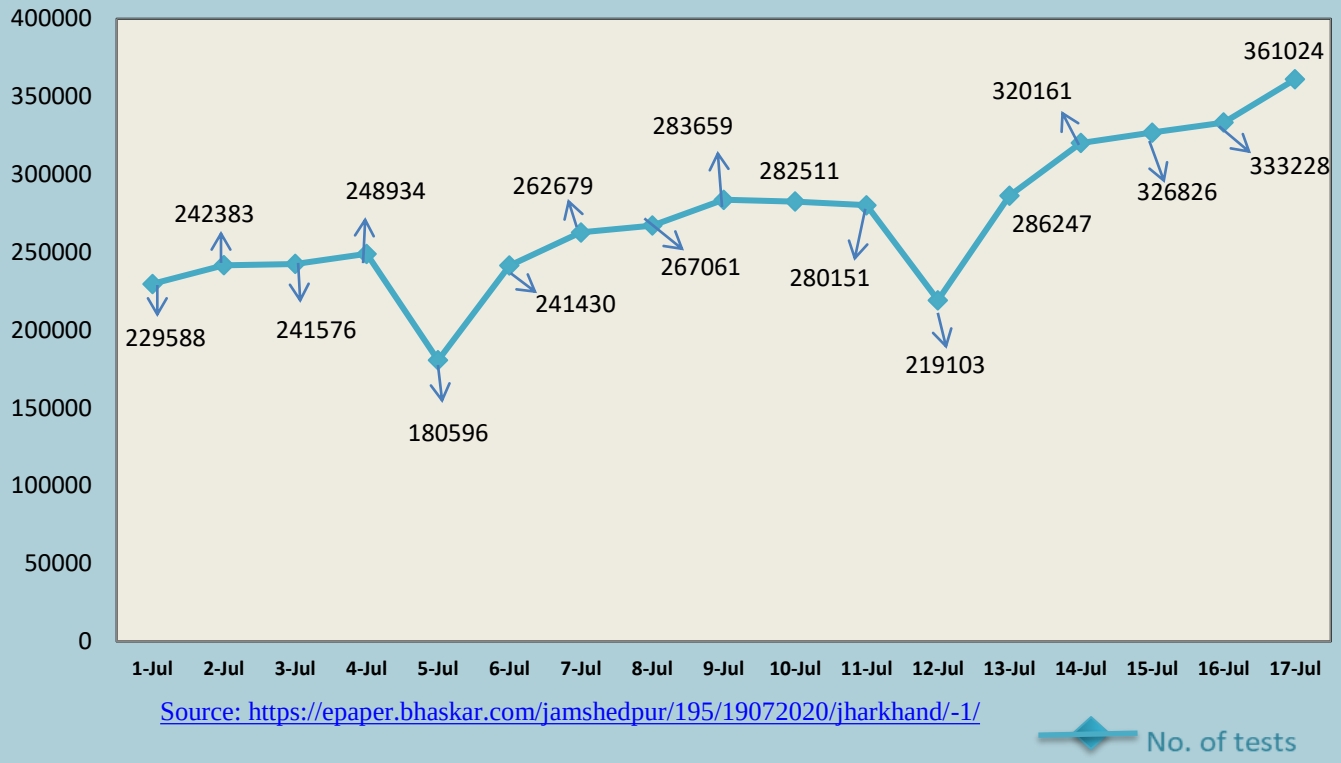


source: https://epaper.bhaskar.com/jamshedpur/195/17072020/jharkhand/-2/

- 5 lakh new cases were recorded in the last 20 days whereas, earlier 5 lakh cases were found in 149 days.
- The rate at which the cases had been increasing in the country has begun after April 15, 2020.
- Before April 15, 2020 the rate was recorded as 2.1% daily. The rate has now gone up to 3.5%.
- India was on a lockdown for 68 days during which only 1.90 lakh infected patients were found. However ever since the unlock phase has begun, there have been 8.10lakh patients found.
- India has now reached the third position in terms of the number of infected patients found after the US and Brazil.
- However if our population is to be taken into consideration, our death rate is still very low when compared to Europe and the US.
- If the recovery rate is taken into consideration, India has one of the best recovery rates in the world of 63.02% as seen on July13, 2020.



No. of tests done as seen in July



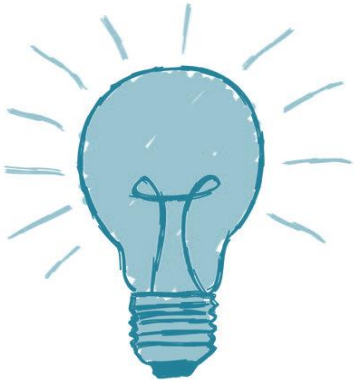
Source: https://epaper.bhaskar.com/jamshedpur/195/19072020/jharkhand/-1/

- Only 1% of our entire country's population have been tested till date.


CONCLUSION

- The entire world is fighting against the corona virus by implementing various strategies and plans.
- The country was put on a lockdown when there were just 500 cases. An early shutdown of almost all the activities prevented the numbers from reaching sky rocket.
- Now the country has started producing its own testing kits and the rate at which the tests are being conducted all across the nation has increased.
- Further the government has come up with innovative ideas like the development of Arogya setu app and tele consultation helpline numbers to keep a check on the number of positive cases.
- However the rate of infection has also gone up in the last few days and has crossed the mark of 12 lakhs.
- The state of TN is one of the best performing states in the country when it comes to testing. States of Rajasthan, Punjab, Goa, Kerala, Odisha have been able to contain the infection to an extent through implementing various strategies.
- The cases have started to rise ever since the unlock phase has been implemented but we have to understand that a country cannot remain on lockdown forever since the government also has to take charge of the dwindling economy.
- We need to understand that we might have entered the unlock phase but the virus is not yet gone so we still need to follow the COVID19 guidelines issued by the ministry of health and family welfare for our own safety and safety of the others

recommendation



- It is recommended that the testing should be done in each and every house in the containment zone irrespective of whether or not they are symptomatic.
- The testing capacity of the country needs to be increased intensively.
- Adapt certain strategies from different countries for instance , Chile, where they have been using trained dogs to identify the infected people. These dogs have been kept on duty at the airports and railway stations.
- The international flights should be called of for the time being. If this cant be done, at least have a close monitoring of those arriving from abroad by making them wear a special bracelet that has an in built GPS in it which would further help in tracking their whereabouts.
- Although India has come up with its own app Arogya Setu to track presence of corona positive patients in our close proximity, the app still needs a reboot. A series of mobile alert messages regarding the patient lets the public know about his whereabouts and hence this way the awareness is increased.
- The culture of wearing a mask outside the house should be made mandatory. Strict laws should be implemented and violation of the COVID-19 protocols should lead to imposition of stricter penalties or fines.
- The telemedicine should be put on a fastrack. An online Chabot can be developed to screen for those potentially infected with the virus.
- If possible store the travel history of individuals to alert the physicians about the possible cases to prevent community transmission.

Reference

- Sharma N. May 1, 2020. Colour-coding of districts in battle against COVID-19. https://economictimes.indiatimes.com/news/politics-and-nation/colour-coding-of-districts-in-battle-against-covid-19/articleshow/75416339.cms?from=mdr
- Ghosh P. June 18, 2020. No Lockdown Extension: Four States That Have Already Changed COVID-19 Strategy. https://www.india.com/news/india/no-lockdown-extension-four-states-that-have-already-changed-covid-19-strategy-check-list-4061152/
- Srivastav T. April 17, 2020. Why India Has The Upper Hand Against COVID-19. https://www.weforum.org/agenda/2020/04/india-covid19-coronavirus-response-kerala-uttar-pradesh/
- Rampal N. June 3, 2020. Four Lockdowns Later, How Do States Fare In Flattening The COVID19 Curve? https://www.indiatoday.in/diu/story/four-lockdowns-later-how-do-states-fare-in-flattening-the-covid-19-curve-1684940-2020-06-03
- Express News Service. June 15, 2020. Daily COVID-19 Cases Largely Constant In Maharashtra, Flattening Of Curve To Start Soon: Govt. https://www.newindianexpress.com/nation/2020/jun/15/daily-covid-19-cases-largely-constant-in-maharashtra-flattening-of-curve-to-start-soon-govt-2156916.html
- Kapoor S. April 11, 2020. Inside coronavirus cluster zones: from identifying hotspots to following quarantine protocols, how states are containing Pandemic. https://www.firstpost.com/health/inside-coronavirus-cluster-zones-from-identifying-hotspots-to-following-quarantine-protocols-how-states-are-containing-pandemic-8249141.html
- Mehrotra K. June 25, 2020. Explained: a look at India's evolving strategy on testing for COVID-19. https://indianexpress.com/article/explained/coronavirus-testing-icmr-updated-strategy-covid-19-drugs-6474855/
- Bode, Craven, Markers, Leopolseder, Rutten and Wilson. May 8, 2020. Contact tracing for COVID-19: New considerations for its practical application. https://www.mckinsey.com/industries/public-sector/our-insights/contact-tracing-for-covid-19-new-considerations-for-its-practical-application#
- Philip S. April 12, 2020. Coronavirus route map, geo tag, screening: How a Kerala district did it. https://indianexpress.com/article/coronavirus/covid-19-route-map-geo-tag-screening-how-a-kerala-district-did-it-6358361/

PART -2

Report on the Course - Improving Global Health: Focusing On Quality and Safety

Course Description

- This particular course explains us how we can do better so that healthcare can be a part of the solution and not part of the problem.
- tells us how to measure and improve healthcare for ourselves, for the institution we work for or for our own country.
- It defines quality, discusses about the various ways of measuring it in order to improve our existing situation and deals with ways of improving patient safety measures in the hospitals.
- It is mainly designed for the physician, nurse, healthcare provider, students of medicine, public health or health policy or a patient who simply cares about getting good care in the healthcare centers.

Learning Objectives

- To develop a proper understanding and thinking about healthcare quality.
- Approaches to quality measurement.
- To understand the role of information and communication technology in improving quality
- To develop knowledge about the quality standards and accreditation systems.
- To learn the importance of managerial role in improving quality of care.
- To understand the importance of patient centered care and how to measure it.
- To develop knowledge about the quality movement and the triple aim of healthcare.

Course Content

Module	Content
1. Burden and Harm	Causes
	Preventability
	Ambulatory care
	Medication errors
	High and low income countries

Module	Content
2. Quality Variation	Public private variation
	Geographic variation
	Global issues
	Overuse and underuse of resources
	Surveillance

Module	Content
3. Global Metrics	Introduction
	HCQI indicators of focus

Module	Content
4. Standards	Legal systems and regulations
	Accreditation
	Compensation, deterrence and negligence
	Transparency
	Patient compensation
	Defensive medicine

Module	Content
5. Quality improvement	System issues
	Building will
	PDSA
	Leadership

Module	Content
6. Patients	Importance of patient centered care
	Measuring patient experience
	Process improvement
	Improving quality in maternal and newborn care

Module	Content
7. Health information and technology	Introduction & Definitions
	Evidence and implementation
	mHealth

Module	Content
8. Role of management	Management in Healthcare
	Measuring quality of management
	Role of middle managers

Module	Content
9. The quality movement	Era’s in healthcare
	Triple aim of healthcare

Methodology

- The entire course was taught to us in the form of a discussion that took place between the course coordinator Dr. Ashish Jha and the very eminent personalities from the health sector. Edx was the platform used.

- There were a total of sixty videos in this course, each mainly focusing on the various aspects of healthcare quality and its improvement.

- There were mainly two graded assignments that existed in the entire course .

- Homework's that comprised 70% of the final course grade.

- For each new topic presented, the students received an assignment at the end of each video that they had to solve individually in about a week's time. The assignments mainly comprised multiple choice questions & carried one mark each.

- A final project which comprised 30% of the final course grade had to be submitted at the end of the course which was assessed by three other learners in the course.

- There were also certain suggested readings available at the end of certain modules.

➢ Ashish K. Jha, et al., "The Global Burden of Unsafe Medical Care: Analytic Modelling of Observational Studies," *BMJ Qual Saf* 2013; 22:809-815.

➢ Institute of Medicine, *Crossing the Quality Chasm: A New Health System for the 21st Century*, Executive Summary, March 2001.

- There were also a couple of case studies discussed by the expert speakers for certain important topics.

➢ The Toyota plant factory by Virginia Mason

➢ The Case of India by T.S. Ravikumar

Key Learning's

- The course teaches us about the emerging field of global healthcare quality. It describes about the various ways by which a patient who visits a hospital can get affected.

- It also discusses about how many of these conditions are preventable and can be prevented in a real life scenario if the healthcare quality is improved.

- The risk of getting affected or harmed at the health care facility varies from high income countries to low income countries.

- The course also deals with the medication error, its stages, the difference between medication errors and adverse drug events and ways by which we can reduce such errors in a hospital setting.

- Further we learnt that India has the highest burden of TB in the world and we are still lagging behind in the treatment of TB.

- Another very serious problem that the low to medium income countries around the world is currently facing is that just 5% of the patients receive the right treatment for a particular condition.

- We learnt about the global metrics which includes the OECD.

- There are three ways by which the law helps in assuring that we have high quality or safe care in a country and that is setting minimum standards and regulations, liability and finally it is the financial incentives.

- The course also dealt with information and communication technologies and how the electronic health record could actually help in improving the quality of care.

- the role of management in healthcare and how they are important in quality improvement.

- The importance of patient centered care and how the patient centered care is one of the key domains of quality in the institute of medicine.

- One of the major tools in measuring patient experience is HCAHPS that is hospital consumer assessment of healthcare providers and systems.

- The three different eras of quality movement which includes era 1- era of heroism, professional trust and professional dominance; era 2- accountability, contingency pay for performance and reporting and era 3- where the patient and families are given much more authority and voice than the care giver.

- We also dealt with the triple aim of healthcare for improving the quality of care.

- The 6 domains of healthcare quality services established by the institute of medicine which includes safety, effectiveness ,equality , timeliness ,patient centeredness and efficiency.

VERIFIED
CERTIFICATE *of* ACHIEVEMENT

HarvardX

This is to certify that

Dr Shreosee Mukherjee

successfully completed and received a passing grade in

PH555x: Improving Global Health: Focusing on Quality and Safety

a course of study offered by HarvardX, an online learning initiative of Harvard University.

Ashish Jha, MD, MPH

K.T. Li Professor of International Health and Director, Harvard Global Health Institute

Harvard T.H. Chan School of Public Health

VERIFIED CERTIFICATE
Issued April 28, 2020

VALID CERTIFICATE ID
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THANK YOU