

SUMMER TRAINING REPORT

**Part - 1 (A Review of Containment Strategies
For Prevention of COVID 19 in India)**

**Part - 2 (Course on Improving Global Health: Focusing on
Quality & Safety)**

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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. In order to curb the progress of the infection the 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.

However now the government is preparing to gradually remove the lockdown situation prevailing in the entire nation by taking smaller steps (will be done in 3 steps-unlock 1, 2 & 3) and providing a few relaxations in various parts of the country. But the rate of infection is also increasing 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(a barrier created around the foci of infection i.e. there will be no movement of people allowed to and from the area where there is an outbreak),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 by active surveillance, lab testing, sequencing of virus, intersectoral coordination, risk communication and social mobilization in the predefined geographic area around the epicenter.

Objectives:

PRIMARY OBJECTIVES

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

SECONDARY OBJECTIVE

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

Methodology:

The containment zones are created by the government to locate the transmission of disease and control the infection from spreading further. The rapid response team (RRT) identifies these containment zones based on the extent of cases.

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 where there is an outbreak of infection.

The study is descriptive in nature and the data has been collected from a number of secondary sources like newspaper article, government reports, websites and research articles.

REVIEW OF LITERATURE- PUBLISHED LITERATURE:

TYPE OF ARTICLE	NAME & DATE OF THE ARTICLE	KEY FACTS	STATES MENTIONED
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 15 th June 15.06.2020	The south western state of MH reported the highest number of cases as of June 15 th 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 17.04.2020	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

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New article-India today	4 lockdowns later, how do states flare in flattening the COVID19 curve? 03.06.2020	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 coronavirus infection have been reported from a cluster.	Punjab

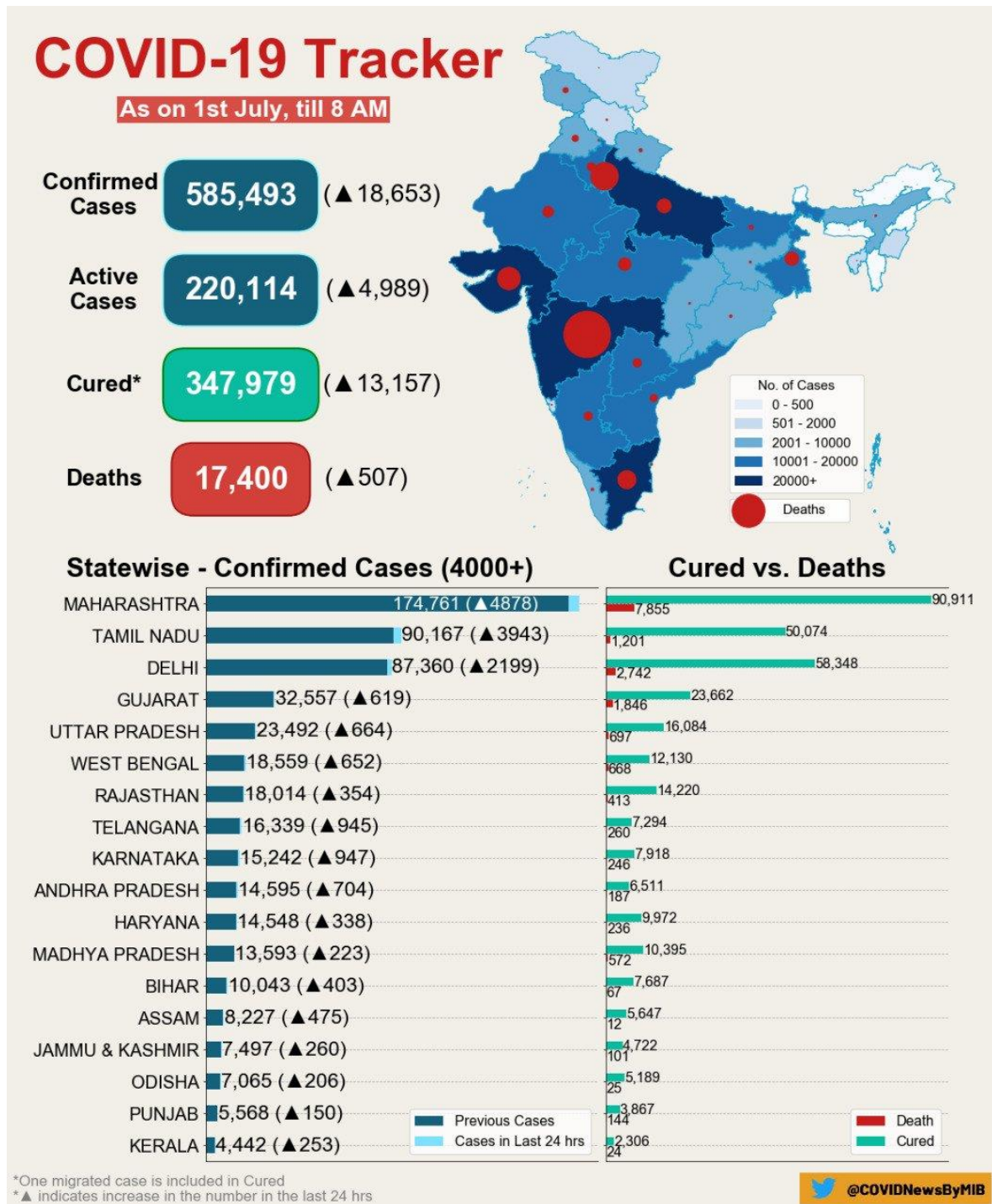
REVIEW OF LITERATURE- GREY LITERATURE:

TYPE OF ARTICLE	NAME & DATE OF THE ARTICLE	KEY FACTS	STATES MENTIONED
Govt. guidelines-ministry of health and family welfare	The containment plan 16.05.2020	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

Result:

- Caseloads in different states of India
- The strategy proposed in different Indian states

1. The Caseloads in Different States of India-



As per the data reported by the government, Maharashtra, Tamil Nadu, Delhi, Gujarat and UP continue to remain the most affected states with the maximum number of infected and deceased

patients in the nation. The death rate in India has shown a rise in number and has reached 20139(as on 7th July 2020).Maharashtra continues to remain the worst affected state in India with its maximum number of cases being recorded in cities of Mumbai, Pune and district of Thane. Mumbai's Dharavi has recorded the maximum number of cases thereby making Mumbai alone account for 55% of Maharashtra's total cases. This has led to making India the 3rd worst affected countries in the world if the total rate of infection is concerned which has reached a number of 711878 whereas if the death rates are concerned, India has reached the 3rd position defeating Russia as in the month of July.

There has certainly been a surge in the number of cases in the nation in the month of July. According the reports on 6th July 2020, Maharashtra has recorded 206619 cases with 8822 deaths remaining the still most badly affected state followed by Tamil Nadu with 111151 infected and 1510 deaths. The cases have also risen in the capital and Delhi has recorded 99444 infected cases with 3067 deaths. Next in the row is Gujarat with 36123 infected cases and 1944 deaths followed by UP with 27707 number of infection and 785 deaths. In the recent few days there has also been a rapid increase in the number of patients infected with the virus in the southern states of Telangana and Karnataka with Telangana recording 23902 number of infected cases and 295 deaths whereas the latter with 23474 number of positive cases and 372 deaths. West Bengal has a total of 22826 infected cases and 757 deaths while Rajasthan which was once among the top five worst affected states in the country is seen to have controlled the infection to an extent and slowed down the rate of infection and has now a total of 20164 infections and 456 deaths followed by Andhra Pradesh with 18697 infected cases and 232 deaths. These ten states still remain the most affected states in India.

Further the states which have recorded a significant number of cases in the nation includes Haryana with 17005 infected and 265 death cases followed by MP with 14930 cases and 608 deaths recorded. Bihar has also shown an increase in the total number of cases with 11736 infected and 95 deaths recorded. Assam is next in the row with 11736 infections and 14 deaths. Odisha has 9526 cases and 38 deaths. The valleys of J&K have a total of 8,429 cases and 132 deaths followed by Punjab which has recorded a total of 6,283 confirmed cases and 164 deaths. Kerala which initially was one among the worst affected states in the country has also been able to flatten its curve and now has 5429 cases and 25 deaths followed by Chhattisgarh with 3207 infected cases and 14 deaths. Uttarakhand has 3124 infected and 42 death cases whereas Jharkhand has 2781 confirmed cases and 19 deaths. Goa has 1761 cases and 7 deaths and HP has 1063 infected people and 11 deaths. Puducherry has recorded 802 infected cases and 12 deaths Arunachal Pradesh have 269 cases and 1 death. Andaman islands has recorded 125 infected and 0 death cases. Nagaland has a total of 590 confirmed cases with 0 deaths and Lakshadweep islands have recorded 0 cases and 0 deaths in the country.

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

Our honorable Prime Minister has made it very clear that there will not be any further extension of lockdown in the nation. We have now entered the unlock strategy and the Central government has given most of the powers to the State governments to implement different strategies in different parts of the country according to their convenience. Therefore 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. Many states in India have in fact completely removed the Colour Coding system and have chosen to implement the containment zone strategy. In this strategy the number changes on a daily basis.

However, initially the government had divided all the districts in the country into three zones, namely red, orange and green. This was the Colour coding strategy used by the government in lockdown 2.0 where the red zone similar to the red traffic light brought all activities on road to a halt except for the essential services. The zone or the district that qualified for red zone contributed to more than 80% of cases and a doubling rate of less than 4 days. Delhi, WB, Maharashtra, Gujarat, Rajasthan and UP topped in the share of red zone. Orange zones saw restrictions but also some form of ease of the lockdown measures for instance opening of the limited transport and exemptions for essential services, personnel, farming and harvest activity for the ongoing season. States of Telangana, Punjab and Haryana had maximum orange zones. A red zone can also be declared as an orange zone if no new cases were reported in 14 days. Green zone saw the maximum ease of lockdown being provided for instance opening of the MSMEs. An orange zone was declared as a green zone only when a new case wasn't reported for 28 days. The states of Jharkhand, Odisha, Chattisgarh, Assam and the North Eastern states were among the big states that had more than 50% districts in green zone.

However the government decided to do away with the colour coding and implement the cluster containment strategy to contain the infection. Further the clusters were classified based on the existing situation-

Existing Scenario	Containment Zone Characteristics
A small cluster in closed environment such as a residential school, military barracks, hostels	Containment zone will be determined by mapping of the persons in such institution including cases and contacts. A buffer zone of additional 5km radius will be identified
Single cluster in a residential colony	Administrative boundary of the residential colony and a buffer zone of additional 5km radius
Multiple clusters in communities with an administrative jurisdiction like the offices, hospitals	Administrative boundary of the urban district and a buffer zone of neighboring urban district
Multiple clusters spatially separated in different parts of administrative districts or cities	Administrative boundary of city/town and congruent population in the semi urban areas as the buffer zone
Cluster in a rural setting	3km radius of containment zone and additional 7km radius of buffer zone

The movement of all the vehicles or personnel is totally not allowed. Nobody is even allowed to enter or leave the containment area until and unless they are the COVID volunteers who are responsible for delivering the essential goods and services to combat the infection. Buffer zones are the area surrounding the containment area where there are chances for the new to occur widely. Almost all the states in India are now following the cluster containment strategy namely Delhi, Maharashtra, UP, MP, TN, Telangana, Andhra Pradesh, Karnataka, Gujarat etc.

Next the COVID19 testing strategy was introduced in India and it has evolved a lot since then. In the updated strategy the ICMR has decided to test all the symptomatic individuals anywhere across the nation. On June 15th ICMR has approved a new on site diagnostic kit for containment zones and healthcare settings which can give rapid, low cost results without needing a laboratory. The rapid antigen test is reliant on the amount of virus on the nasal swab. It can produce the result in 30 minutes. In containment zones, rapid antigen test was encouraged for all the people with fever, cough and all contacts of a case who are direct, asymptomatic and have high co-morbidities. In healthcare settings, the test will be used for all patients of influenza like illnesses suspected of having the infection and asymptomatic patients who are immunosuppressed or have other co morbidities. It will also be available for the asymptomatic patients undergoing certain procedures like neurosurgeries, dialysis etc. while the positive results will be considered

confirmed, in case of a negative result an RT-PCR would be done for reconfirmation. The real time polymerase chain reaction test, which is conducted on swab collected from the back of the throat, a liquid sample from the lower respiratory tract or a simple saliva sample which is further tested in the lab. Maharashtra, UP, TN, WB, Delhi, Kerala are the states that have increased their testing capacity considerably.

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. This strategy will break the chain of transmission of COVID19 and is an essential public health tool for controlling the virus. This method begins with those who have tested positive, then contacts of those positive patients are identified and listed, further these contacts are notified of their status and the next steps such as how to find care and finally the contacts are monitored regularly for symptoms and tested for infection. The results of monitoring helps to determine the most suitable intervention including quarantine. The states where this strategy is being extensively used are Kerala, Delhi, Telangana, Karnataka, Himachal Pradesh

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. The cities that approved this plan included Delhi and Karnataka.

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. A flow chart was publicized to help people see if they were present at a stated travel path at a particular time. After these maps were published, more people could be traced and many voluntarily reported to the government officials. The people who were traced could be then tested and asked to follow self-isolation intervention including quarantine measures.

The states are now seen to be adopting the community surveillance strategy to stop the spread of corona virus. This model was first adopted by the Karnataka government which include contact tracing of positive cases and physical and phone based household survey which covered a large number of households. With a view to identify, protect and treat high risk people the government conducted surveillance. The survey was done and polling booth level officers were engaged in collecting necessary information with the help of health survey apps. The data collected was complemented by the information already available with health department. Tele consultation

Helpline numbers have been set up by government to reach out to the households at risk through interactive voice response system and outbound calls. An app called Arogya setu has also been established by the Centre to keep a check on the number of positive cases in the nation. Apart from Karnataka, the states of UP, Maharashtra and Delhi have also adopted the community surveillance strategy

The Prime Minister advised most of the states to consider the strategy implemented by the chief minister of Punjab in order to control the spread of infection. Their government decided to go in for micro level containment in areas where less than 15 cases of coronavirus infection have been reported from a cluster. The idea is to be more micro and pick them early rather than let the cases increase to 15 or 20. Technical committees have been formed for spot mapping and defining the exact boundaries along with the population in the containment zone, micro planning for house to house search for suspected Covid 19 patients as well as data analysis of the activity. As per the government a micro containment zone is a street or two adjoining streets, either whole in case of a small society or a part of it in case of a large society. Such zones will have no entry or exit except for essential services. The plan also included house to house surveillance strategy which would engage the Asha workers and community volunteers who go from door to door to get data about symptomatic persons and those with co-morbidities usually above the age of 30. The monitoring is being done through a mobile based app called Ghar Ghar Nigrani.

Discussion:

The cluster containment strategy of our nation mainly concentrated on early detection of the infected people.

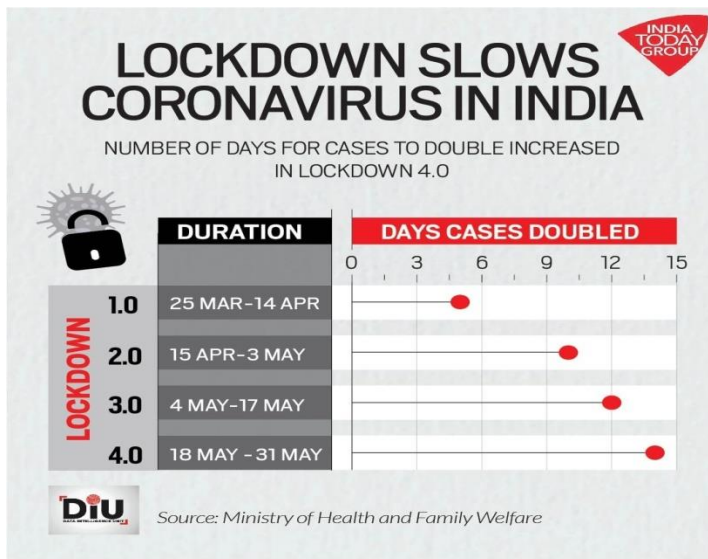
This strategy helped to flatten the curve in various parts of the country.

The WHO lately, had also complimented our country for its rigid and timely action to contain the spread of coronavirus infection. The strategies implemented in various states helped to prevent community transmission of the virus. The growth factor of cases has declined by 40% according to recent press briefings from the union health ministry.

The Bhilwara district model is being replicated in other districts of RJ and has received praise from the entire country. When they decided to seal the border, the government did it immediately. Before announcing complete curfew, the officials surveyed how much milk each household was consuming so that when the curfew was imposed, all they had to do was deliver an average amount of essentials to each household. In this way the entire district of Bhilwara which was one of the most affected initially was able to be declared corona free with no new cases.

However if the recovery rate of India is to be compared with the rest of the world then the nation seems to be at the 5th position with a recovery rate of 60.74%(Germany being at the top with a recovery rate of 92%)which can be considered as positive sign. The death rate of our country is 2.89% whereas for the world its 4.70%. The recovery rate of the world is around 56.72%.

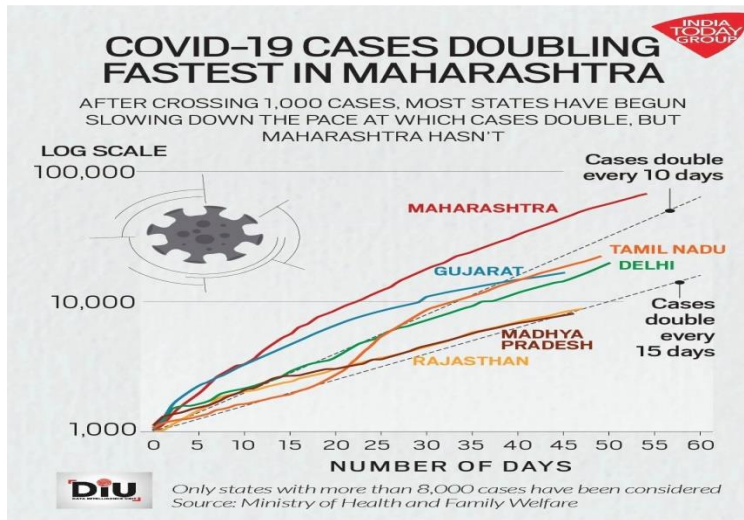
The number of active cases in the country is increasing at a rate of just 1.4% which means that it will take around 50days for the active patients to get doubled which ideally can be considered a good sign since the doubling rate has reduced to an extent.



Punjab has recorded the slowest growth in the month of June. The coronavirus cases in Punjab are increasing very slowly and would double every 47 days .Gujarat once the second most impacted state has also slowed down the speed of infection spread significantly.

In the month of July 31 states and UT have shown a more than 50% of the patients getting recovered from the infection. In one month only the states of telangana, Punjab, Goa and Andaman islands have shown a decrease in the recovery rate whereas Delhi, Haryana ,Bihar, W.B have shown a simultaneous increase in the rate of infection and recovery rate.

In the last one month the top 10 states with the maximum recovery rate includes Chandigarh(86%), Uttarakhand(81.40%), Rajasthan(80.21%), Chhattisgarh(79.51%), Tripura(78.62%), Mizoram(77.28%), Laddakh(77.62%), MP(77.28%), Bihar(74.99%) and Jharkhand(74.25%).



As seen in June

Since the last few days the daily fresh COVID 19 cases in MH have remained almost constant between 3000-3500 according the state health department. The number of those who have tested positive seem to have hit a plateau after a sudden rise across the state .More patients are getting cured . More than 50000 patients have been discharged from the hospitals .if the current trend continued then the government would achieve its target and win against the virus.

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.

Conclusion:

The entire world is fighting against the corona virus by implementing various strategies and plans. However it seems that the pandemic is here to stay for long, but we still have been able to fight the virus in a commendable manner the spread considering the fact that India has the second highest population in the world. 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. Initially the rate at which the tests were being conducted in the nation was quite slow, however 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. Color coding strategy, cluster containment, contact tracing, contagion route mapping and surveillance techniques to contain the infection and as per the reports they have shown some improvement. Our death rate is lower than many developed countries like the US and UK.

According to the reports, there have been 1.18 crore tests that have been conducted in the country as on 6th July 2020. However the rate of infection has also gone up in the last few days and has crossed the mark of 7 lakhs. There are 10 positive cases for every 100 tests that's being done in India which is higher than the US. However considering the population of India there have been just 0.72% tests done which is still very low. 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, Jharkhand, Odisha have been able to contain the infection to an extent through implementing various strategies. However initially there were just 4 patients found positive in every 100 tests that were done and now there are 10 patients being tested positive that is 4.34%. According to WHO 5% and above is considered as a threatful situation so therefore I feel that in order to contain the infection and put an halt to the growing numbers we as the responsible citizens of the country should follow the norms of social distancing and help the government in improving the existing conditions. We still need to increase the rate of testing so that immediate treatment is provided to the patients and the chain of transmission is broken down. 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. According to me the government is trying its best to control the spread of infection but now it's our responsibility as a citizen of India to follow the WHO guidelines and voluntarily report the suspected cases so that the government can take an immediate action. The surveillance strategy of the nation still needs a reboot to keep a close check on the ones who are found violating the COVID19 protocols and strict action needs to be taken against such individuals so that it serves as an example to the rest of the people. 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 our government for our own safety and safety of the others.

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PART 2

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

Summer Training Report

2019 - 2021

Title of the Course	Improving Global Health: Focusing on Quality & Safety
University which offered the course	Harvard University
Duration	10 weeks
Date of completion	06.05.2020
Submitted by	Shreosee Mukherjee
	As a part of summer training

Course Description:

When folks think regarding how they can make life better, they reckon about the severe diseases such as HIV, TB, malaria etc. and how to get rid of it. There is one more thing that deserves to be put on the list and that's the poor health systems. There are thousands of persons in the society who get injured in health facilities every year due to unsafe patient service. That is an immense toll and we can do much better.

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. This course tells us how to measure and improve healthcare for ourselves, for the institution we work for or for our own country. This course mainly deals with the quality of care that is provided in various hospitals and healthcare centers. 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. This course 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 learn the relationship between quality and population health.
- 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 in the world.
- 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.

Learning Outcomes:

- By the end of the course the learner should have a better understanding of what the quality of healthcare means and why is it important for an overall development of the healthcare systems across the world
- They should be able put their learning's into practical use to bring about quality improvement at their work place
- They should be able to define PDSA, HCQI indicators, affordable care act, HCAHPS etc.
- By the end of this course as a healthcare management student we should realize the importance of managers in the healthcare systems and try to develop efficient managerial skills to further contribute in the improvement of healthcare quality
- Enhanced knowledge on patient centered care and patient safety , a better understanding of what a PFAC report means and as a patient what are our rights and what we ideally deserve when we visit a healthcare facility.

Course Content:

The course mainly deals with the following contents:-

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

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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

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

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

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

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

Learning Methodology:

The entire course was taught to us in the form of a discussion that takes place between the course coordinator and the very eminent personalities from the health sector.

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

Topics/lectures	total videos	Content
Burden	14	It mainly described about the causes of burden and harm, whether the various kinds of harms caused to the patients in the hospitals could be prevented, the variation in the burden in high and low income countries and the medication errors that occurs in the healthcare facility. They also finally discussed about the burden of tuberculosis in the world & the care provided by the public & private Sector
Measurements	14	It dealt with the quality variation in the public and private sector, the global issues and the geographic variation, allocation of resources and their efficient use, the HCQI indicators and their use
Standards	7	The videos mainly described about the legal systems and regulations, accreditation and patient compensation across the world
Improvements	4	Dealt with an introduction of system issues, building of will and PDSA
IT and Data	4	Discussed about the health information system and mHealth
Management	10	Discussed about the role of management in improving the quality of healthcare, measurement of quality of

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		management and finally the Toyota factory case study and the case of India is discussed to explain the importance of management in any industry.
Patients	13	Dealt with the importance of patient centered care, measuring it and process improvement. It also dealt with the role of quality in maternal and newborn care
Public systems	4	The last section described about the quality movement which included the three eras in healthcare quality and the triple aim of healthcare.

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.

The final project was a short written assignment where we had to describe an example of improvement of healthcare quality in our own country for instance the NGO named ABC, presence of an application called Practo.com, Tata Health etc.

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

1. Ashish K. Jha, et al., "[The Global Burden of Unsafe Medical Care: Analytic Modelling of Observational Studies](#)," *BMJ Qual Saf* 2013; 22:809-815.
2. Institute of Medicine, [Crossing the Quality Chasm: A New Health System for the 21st Century](#), Executive Summary, March 2001.
3. Institute of Medicine, [To Err is Human: Building a Safer Health System](#), Executive Summary, November 1999.
4. [The Lancet Global Health Commission on High Quality Health Systems in the SDG Era](#)

5. Smits, H., Supachutikul, A., & Mate, K. S. (2014). [Hospital accreditation: lessons from low-and middle-income countries](#). *Globalization and health*, 10(1), 65.

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

Platform	edX
Type	Self-paced
Duration	10 weeks
Primary setting	Online/Distant learning
Procedure	Video transcription (audio & video)
Medium	English
Course coordinator	Dr. Ashish Jha

Key Learning's:

The course is teaches us about the emerging field of global healthcare quality.

It opens with the various ways by which a patient who visits a hospital can get affected. These are the various causes of harm and include a fall, hospital acquired infection, pressure ulcers , surgical complication, adverse drug event. 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.

It also teaches us how the risk of getting affected or harmed at the health care facility varies from high income countries to low income countries. For instance the rate of infection and surgical complication is higher in the low income countries; however the risk of adverse drug event is lower in the LMIC when compared to high income countries. This is because in the developing countries the birth rates are very high and so birth related injuries or infection is also very high and the resources available to deal with the problems are limited. This explains the burden of population on quality of healthcare.

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 because of the very little budget available and the prevalence of the Zeil nelson smear microscopy which is considered to be the least sensitive of all TB diagnostic tools available. We also learnt that the public sector is better in treating the TB cases when compared to private sectors because they provide the patient with 6months of short therapy so there is no question of stock outs .They also assign the patients with a DOTs provider and if the patient doesn't show up at the clinic there is a home visit done.

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. Through the various studies done across the world it has been found out that the doctors spend very less time with the patients and therefore there exists a communication gap between the doctor and the patient which leads to the inability of the healthcare provider in prescribing the right treatment for a particular condition. These are some of the global issues in the health care sector across the entire globe.

Further we learnt about the global metrics which includes the OECD (organization for economic cooperation and development) which does in depth country studies where they try to find out how to link the performance indicators and information of quality of care in the place.

Next we learnt that 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 which the practitioner or a hospital must meet if they want to practice . Next is liability and finally it is the financial incentives for hospitals and physicians with regard to how they behave or what they do. Further we learnt that JCI is recognized worldwide as a symbol of quality and it has certified more than 20,500 healthcare organization globally.

The course also dealt with information and communication technologies and how the electronic health record could actually help in improving the quality of care by helping the caregiver to identify where the problems are, who is doing well and why are they doing well.

Further we learnt about the role of management in healthcare and how they are important in quality improvement. This is because they have a good sense of responsibility and are well aware of what is happening around them. Also the hospitals that score well on the management grid are the ones which have a strong management system.

Next we studied about 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. The main determinants of patient experience are related to clinician patient interaction. One of the major tools in measuring patient experience is HCAHPS that is hospital consumer assessment of healthcare providers and systems.

And finally we learnt about 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 and last but not the least we studied about the 6 domains of healthcare quality services established by the institute of medicine which includes safety, effectiveness, equality, timeliness, patient centeredness and efficiency. However the fragmented professional silos and inability to see the defects have led to the slow embracement of the science of quality improvements by the healthcare industry; however with the changing world there are many new advancements being made in the health sector that is leading to the improvement of quality of care.



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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

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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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