SUMMER TRAINING REPORT

SUBMITTED BY

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MBA HOSPITAL & HEALTH MANAGEMENT 2019-2021

IIHMR UNIVERSITY

Part A – Research Project

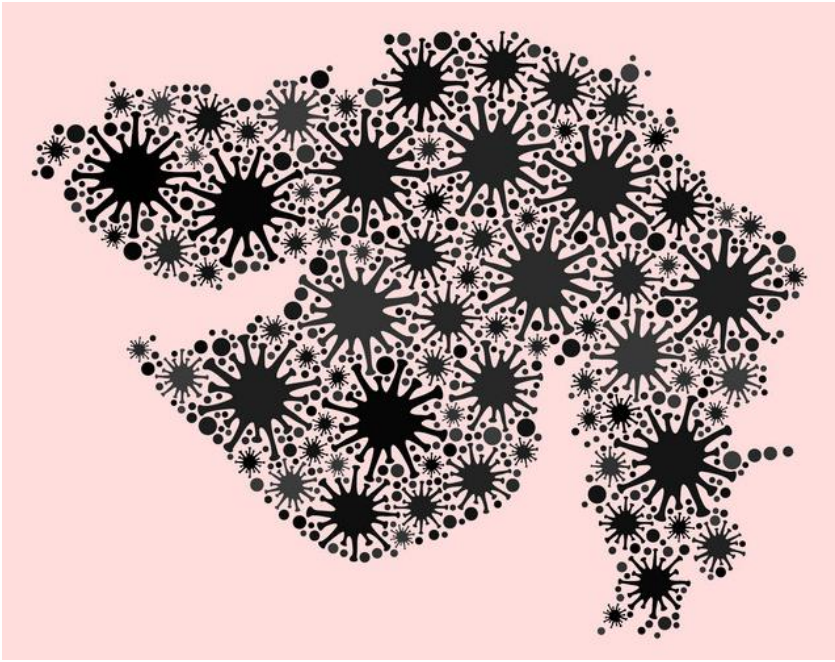
IIHMR UNIVERSITY

COVID -19 – THE EMINENT THREAT IN GUJARAT

Divided we stand… The safer we will be…

Introduction

- Corona virus also called as Covid-19 an infectious disease caused by a new virus , the first case was reported in December 2019 in Wuhan china.
- The first case was reported on 30th January in Kerala India.
- According to MoHFW total confirmed cases in India 978,229 and 25602 deaths and Recovered cases are 6,35,756 till 16th July 2020.
- In Gujarat, the total confirmed cases are 43,392 , active cases 11,289 2089 deaths and recovery cases 32,103 according to MoHFW.
- Gujarat has the highest death rate in the country at 6.2% which is double than the global mortality rate evaluated by WHO at 3.2 % as of June 16.
- Gujarat has taken some safety and preventive measures to control the spread of coronavirus in the states. Some positive steps taken by the government of Gujarat after lockdown announced by PM Narendra Modi.



- On 17th march statue of unity closed for tourists for the preventive measures of Covid-19 in Gujarat

- On 18th march the director of Sabarmati Ashram decided to Close the ashram to control the spread of Covid-19 in Gujarat.
- Gujarat Reports the first two Positive cases of Covid on 19th March.

- As Janta Curfew was announced by PM, Narendra Modi CM of Gujarat, Vijay rupani announced to close all state buses on 22 March followed by the decision of PM.

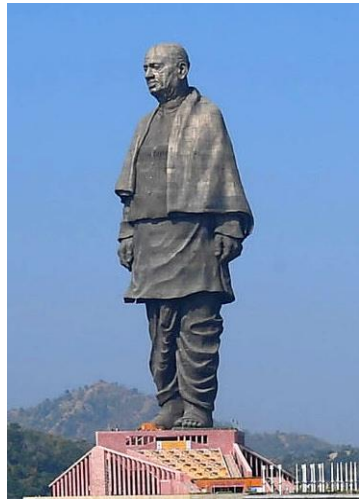
- 24th March PM Narendra Modi announced complete Lockdown in entire country for 21 days.

- As on 5th April cases crossed up to 50-mark CM announced the shortage of ventilators and within 10 days as local industrialist have successfully made ventilators.

- Ahmedabad, Surat, Bhavnagar and Vadodara Covid Hotspots in state till 6 th April.

- On 16th May no of cases crossed 10,000 mark and Gujarat has highest mortality rate as compare to the other states in India.

- On 16th July the cases crossed to 45,000 mark and recoveries in Gujarat crossed 32,000 mark.



LITERATURE REVIEW

Journal & Date	Title	Authors and link	Main question	Key facts
CDDEP **20 APR 2020**	COVID-19 in India : State-wise estimates of current hospital beds, intensive care unit (ICU) beds and ventilators	Geetanjali Kapoor, Aditi Sriram, Jyoti Joshi, Arindam Nandi, Ramanan Laxminarayan https://cddep.org/wp-content/uploads/2020/04/	What are the Statewise estimates of current hospital beds, intensive care unit (ICU) beds and ventilators in India?	->Most of the beds and ventilators in India are concentrated in seven States - Uttar Pradesh (14.8%), Karnataka (13.8%), Maharashtra (12.2%), Tamil Nadu (8.1%), West Bengal (5.9%), Telangana (5.2%) and Kerala (5.2%). The total number of hospital beds are 64,862 among them 20,172 beds in public hospitals 44,690 beds in private hospitals. The total number of ICU beds are 3,243 in both sectors- 1,009 beds in public and 2,234 in private sector. Ventilators - 1,622 (Both Public and private sector) 504 available ventilators in public and 1,117 in private sector.
THE LANCET 16 JULY 2020	A vulnerability index for the management of and response to COVID-19 epidemic in India: An ecological study	Rajib Acharya, PhD https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(20)30300-4/fulltext	Which Indian states are more vulnerable to COVID-19 crises in the country?	A number of districts in nine large states—Bihar, Madhya Pradesh, Telangana, Jharkhand, Uttar Pradesh, Maharashtra, West Bengal, Odisha, and Gujarat—located in every region of the country except the northeast, were found to have high overall vulnerability (index value more than 0·75).

Journal & Date	Title	Authors and link	Main question	Key facts
The Indian Journal Of Paediatrics, IJP 13MAR2020	A Review of Corona Virus Disease -2019 (COVID-19)	Tanu Singhal https://link.springer.com/article/10.1007/s12098-020-03263-6	Challenges faced by the outbreak	Healthcare professionals should take travel history of all patients suffering from respiratory symptoms and any international travel. People should stop spreading myth and false information about the disease. Efforts should be made to prevent future outbreaks of zoonotic origin
Asian Journal of Psychiatry 10APR2020	COVID-19-Impact of Lockdown on Mental Health and tips to Overcome	Pavan Hiremath, C S Suhas Kowshik, Maitri Manjunath, and Manjunath Shettar	What is the impact of Lockdown on mental health of people and how to overcome it?	Problems like depression, anxiety, and panic disorder have been observed in the people during the lockdown due COVID-19 pandemic. Anxiety and depression can be overcome by planning your day to day routine and indulging in the activites and hobbies the person likes as per his or her own interest

OBJECTIVE

- To know the Mortality, Morbidity and recovery indicators among total tested positive Covid-19 individual in Gujarat
- To know the total number of districts affected by covid-19 in Gujarat
- To find out the Availability of Hospital beds and Ventilators in Gujarat with respect to other states of India.
- To enlist the positive steps taken by the Gujarat Government to control the spread of covid 19 in Gujarat.

Methodology

- In this study, a quantitative approach is used to an observational study design to determine the situation of covid -19 in Gujarat on various parameters like Mortality, Morbidity and Recovery indicators. Data was collected through secondary research from Relevant articles, Journals ,Website and newspaper.

- Sources of data- WHO , MoHFW, India Covid tracker.

Sources of Data

WHO

Globally, there are 13,378,853 confirmed cases of Covid-19, 580,045 deaths.

According to situation report 24 – India (July 12th 2020)

Active Cases- 292,258
Cured/Discharged- 534,629
Migrated -1
Deaths- 22,674

REGIONS	CONFIRMED CASES	DEATHS
Western pacific Region	249786	7833
European Region	2987256	205006
Southeast Asia Region	1268923	31297
Eastern Mediterranean	1331893	32776
Region of the Americas	7016851	294301
African Region	523403	8819

- **MOFHW (Ministry of Health and Family Welfare) Till 16 th July 2020**

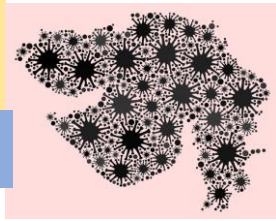
India		Gujarat	
Active Cases	3,42,473	Active Cases	11,289
Cured/Discharged	6,35,756	Cured/Discharged	32,103
Migrated	1	Migrated	
Deaths	25,602	Deaths	2089

- **India Covid-19 Tracker www.covid19india.org till 16th July 2020**

India		Gujarat	
Confirmed cases	10,16,325	Confirmed cases	45,567
Active Cases	3,46,572	Active Cases	11,303
Cured/Discharged	6,43,587	Cured/Discharged	32,174
Deaths	25,776	Deaths	2,090

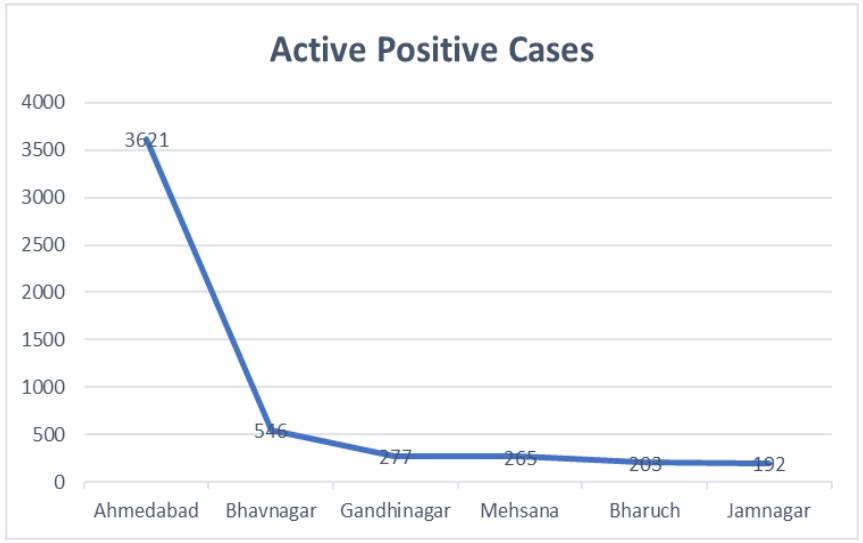
- 671 out of every 1 million people in Gujarat have tested positive for the virus.
- Recovery rate (70.61%) For every 100 confirmed cases, 71 have recovered from the virus.
- The active cases are 24.81% For every 100 confirmed cases, 25 are currently infected.
- Mortality rate - 4.59% For every 100 confirmed cases, 5 have unfortunately passed away from the virus.

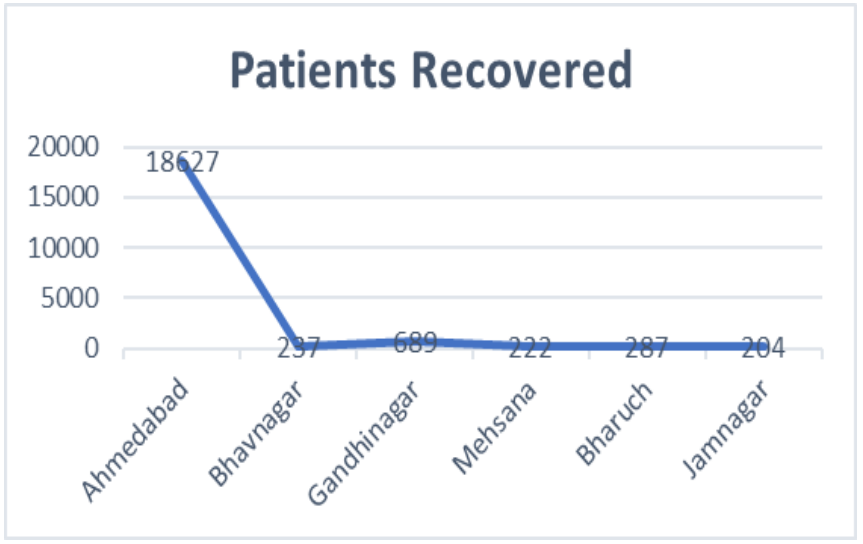
FINDINGS ON COVID-19 SITUATION IN GUJARAT

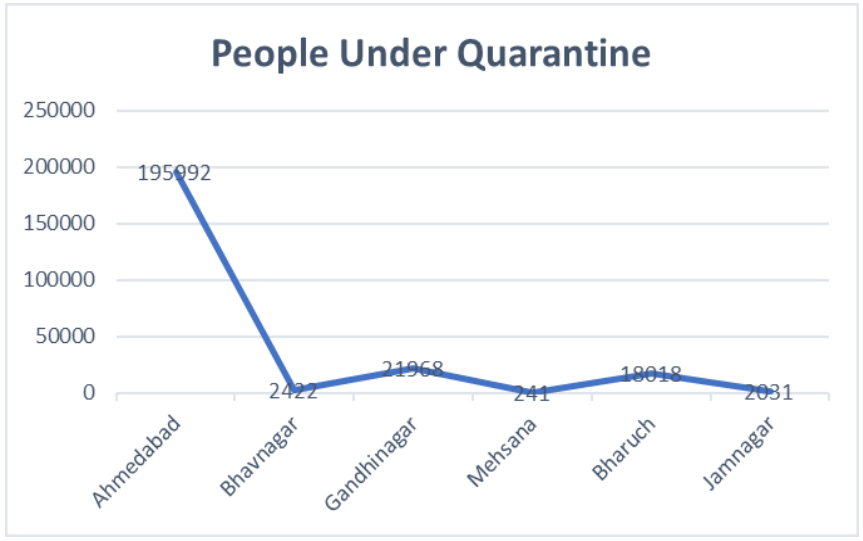


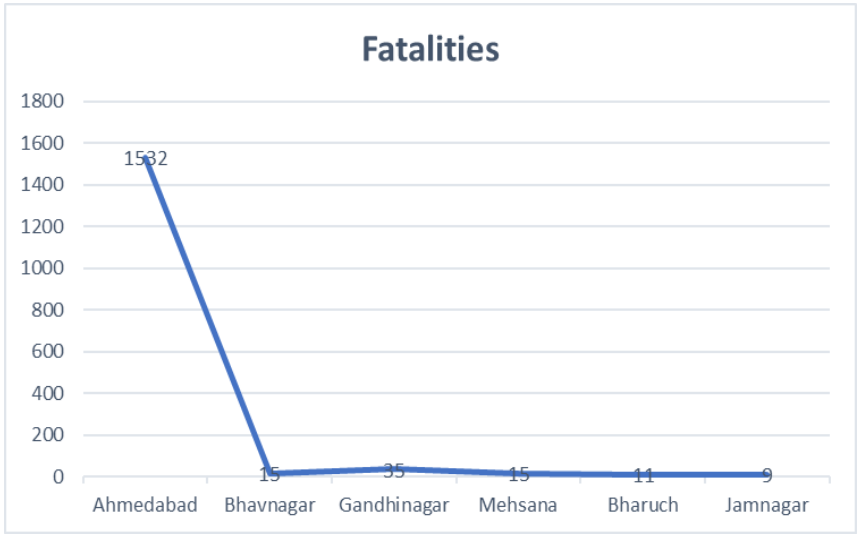
As of 16th July 2020

TOP 6 AFFECTED DISTRICTS IN GUJARAT

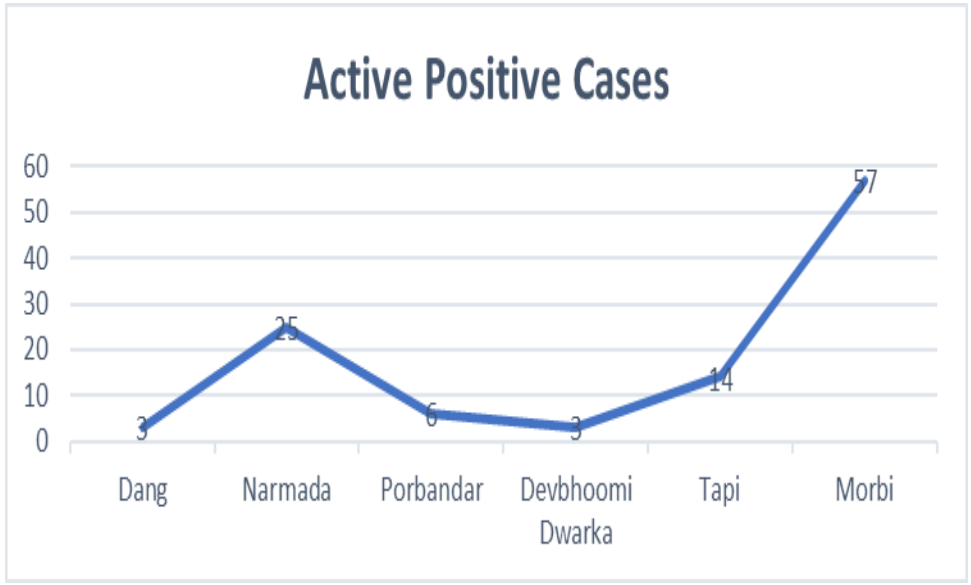


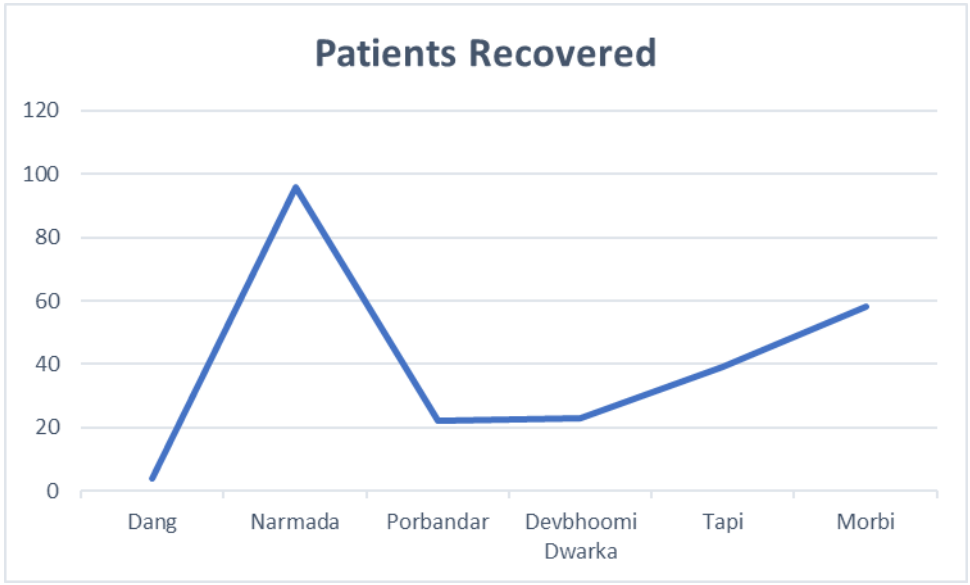


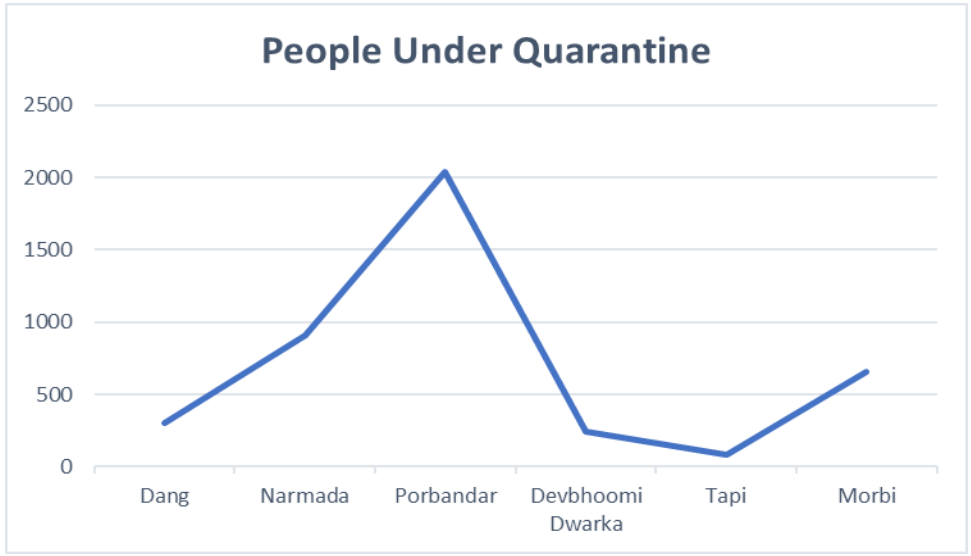


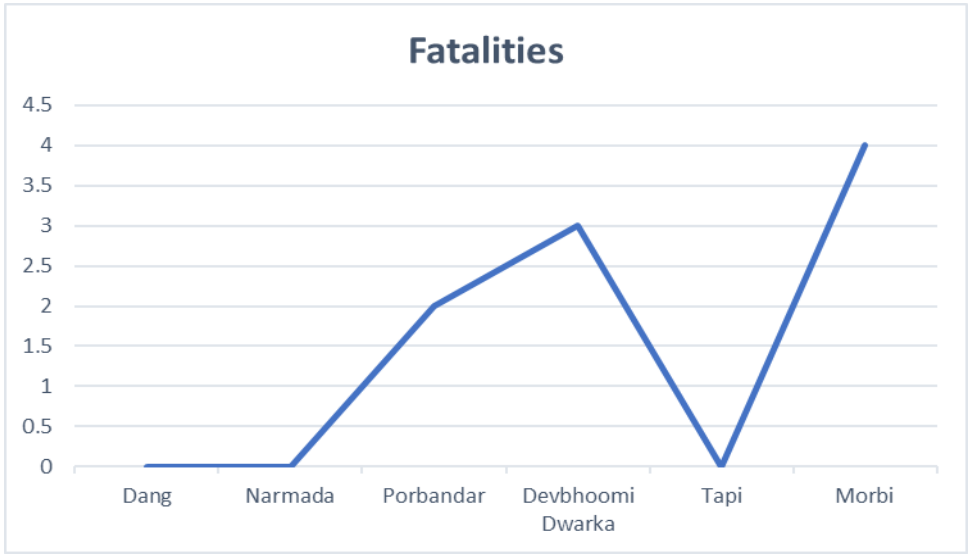


TOP LEAST AFFECTED DISTRICTS IN GUJARAT









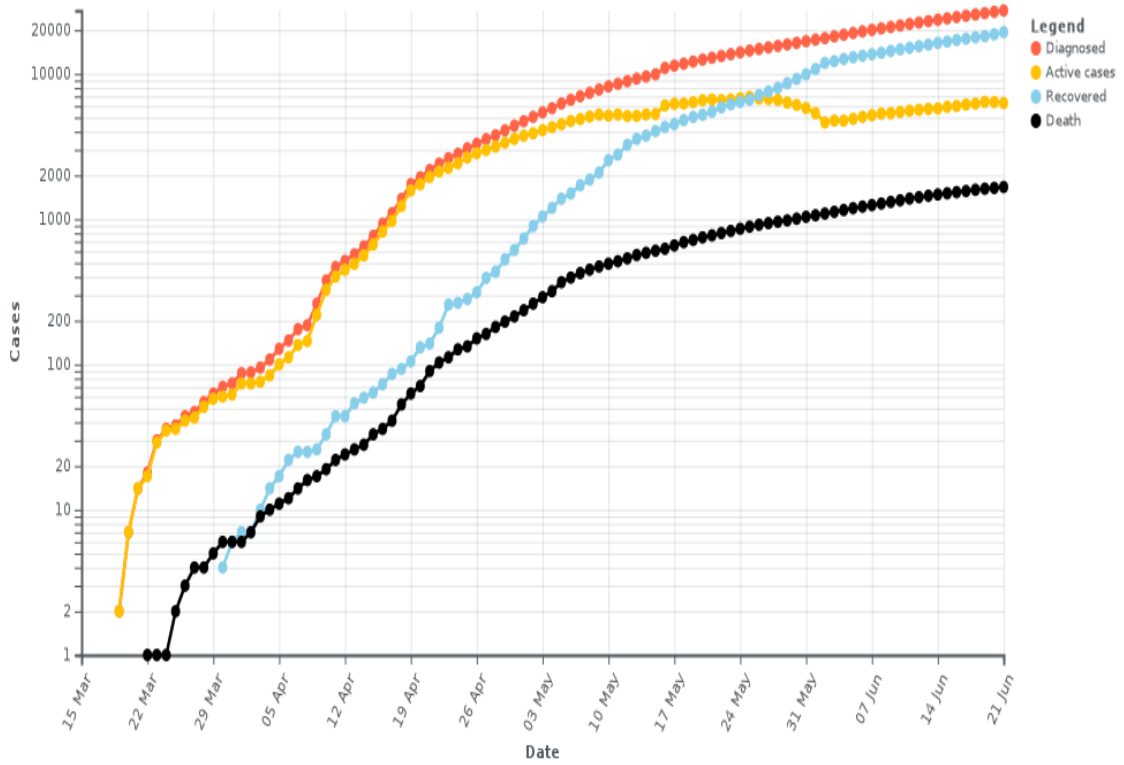
Test Statistics in Gujarat

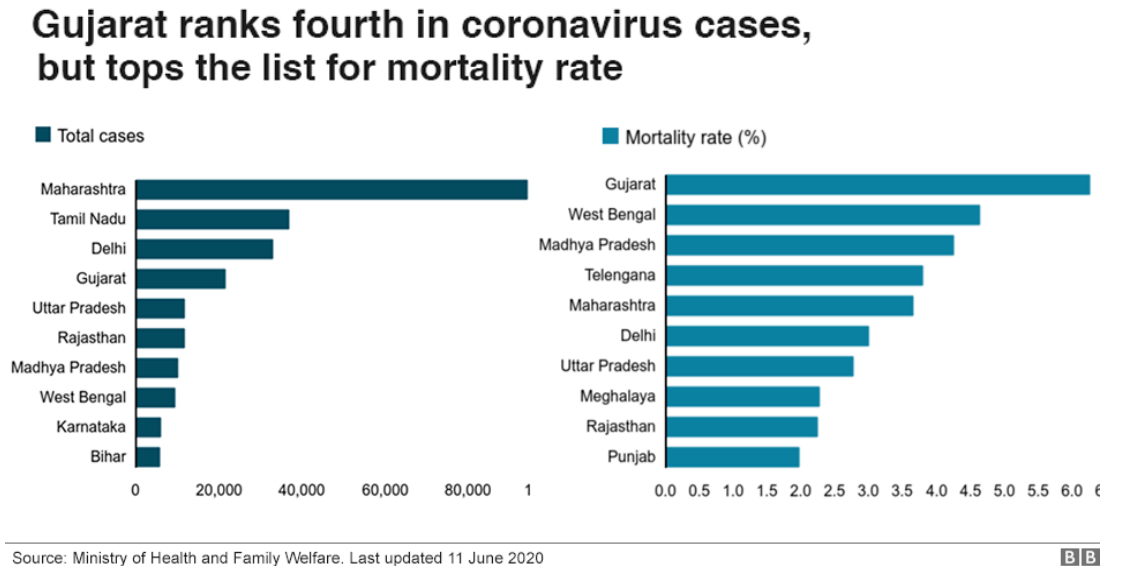
Summary of test results

Samples tested	6,06,718
Positive	53,631
Positive %	8.84%
As of 24 July 2020	

- In Gujarat, the daily testing rate for Covid-19 in July has been increased by 41% compared to previous months.
- The positive cases per 100 tests has increased marginally from 8.84% to 9 .8 and now 10% in July
- Gujarat states has highest doubling rate cases which is 31.47 days which is way higher than compare to the other states and even country's average is 19.6.
- The Case Fatality rate of Gujarat is 6.25
- The Case positive rate is 8.23 which is lower than Maharashtra.

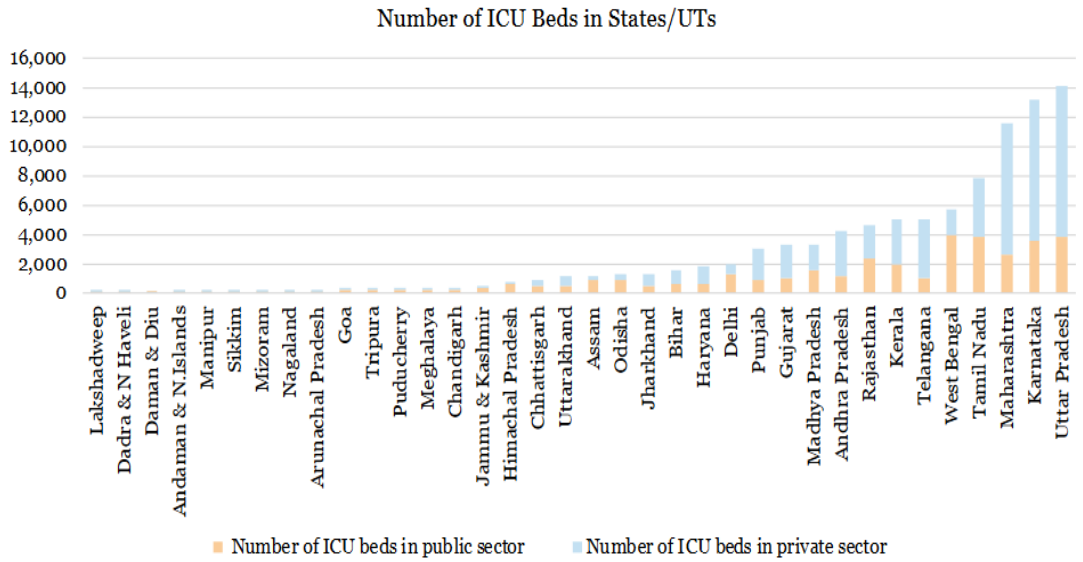
17th June





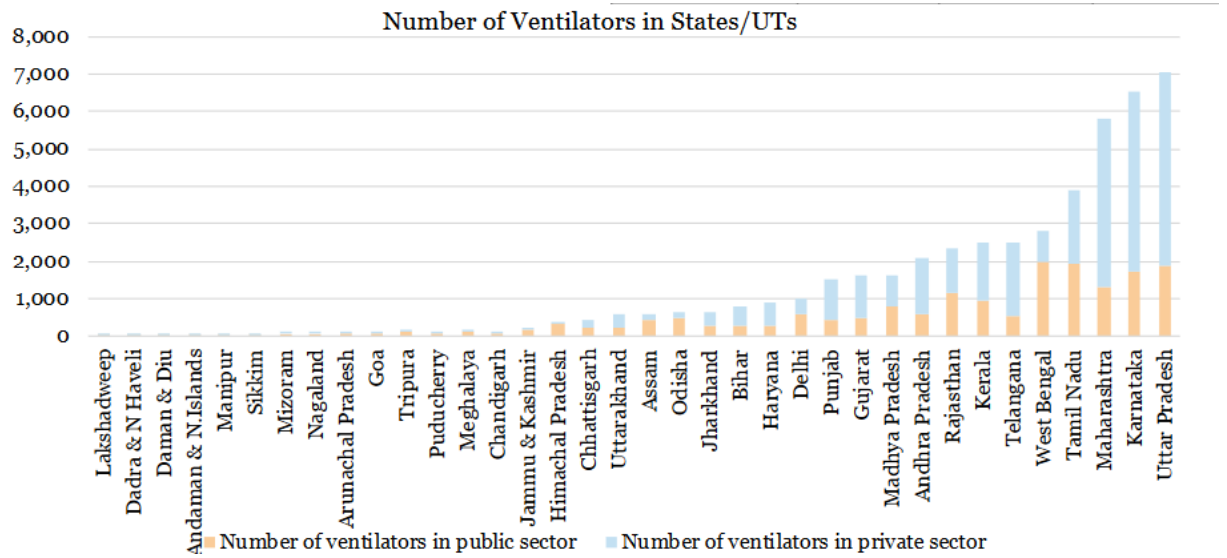
Availability of ICU beds in Gujarat vs India

- India has 7,13,986 government hospitals beds available which amounts to 0.55 beds per 1000 population.
- The total number of beds in public and private hospitals are 18,99,228.
- The total number of ICU beds in public and private sector 94,961 among them 35,699 beds in public sector, 59,262 beds in private sector.
- Gujarat comes under state which lie below the national figure of 0.55 beds per 1000 population.
- While in Gujarat, the total number of hospital beds are 64,862 among them 20,172 beds in public hospitals 44,690 beds in private hospitals.
- The total number of ICU beds are 3,243 in both sectors- 1,009 beds in public and 2,234 in private sector.
- Gujarat Ranks 11th in number of ICU Beds in India as compare to other states.



Availability of Ventilators in Gujarat vs India

- Ventilators – **47,481** available number of ventilators in both public and private sector. **17,850** in public sector and **29,631** Private sector in India.
- In Gujarat -1,622 (Both Public and private sector) 504 available ventilators in public and 1,117 in private sector.
- Due to insufficient resources CM of Gujarat Vijay rupani announced the scarcity of the Icu beds and ventilators.
- Thus, many local industrialist of Gujarat have prepared Ventilators in 10-14 days.
- Gujarat Ranks 11th in number of ventilators as compare to the other states.



Steps taken by government of India and Gujarat

- PM Narendra Modi of India call for Janta curfew is a unique proposal for voluntary lock down & after that 21 days completely lock down, a preventive action for safety and social distancing.

- The government suspended all existing visas, except for limited categories.

- Government(MoHFW) has issued a notification declaring coronavirus as an epidemic disease under the Indian Epidemic Act, 1897.

- A man with history of coming in contact with suspected or confirmed cases, or having travelled in countries or areas where coronavirus has been reported, is required to isolate himself at home for 14 days, and report to the nearest government hospital.

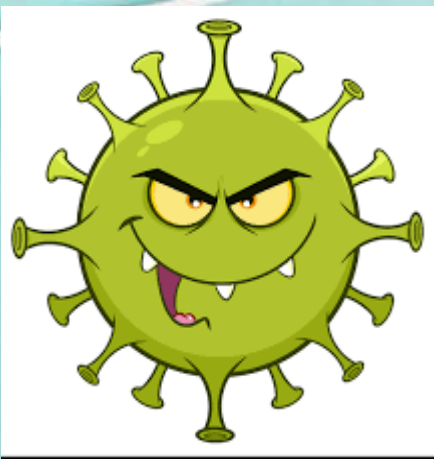
- The government introduce Arogya setu app to educate citizen about coronavirus and help them make informed decision amid the crisis.

- The Gujarat state government banned conferences, seminars and workshops till March 31, and appealed to the public to avoid large gathering and postpone any such events till **March 31**.
- The entire state will be under lockdown till 31 March. "State borders have been sealed. Action will be taken against the people who will violate the lockdown.
- As per the regulations, district administration has been empowered to seal the geographical area from where coronavirus has been reported, bar entry and exit of the population in that area, close schools, offices, ban vehicular movement, isolate suspected cases in hospital, among others.
- The state government has banned spitting in open. Those who caught spitting in open will be fined Rs **500**.
- The government has stocked enough triple-layer masks, and sanitisers, and created **572 isolation beds** and **204 ventilators** to deal with the coronavirus threat.
- Government of Gujarat reserve **1200 bed Civil hospital** only for Coivd-19 patients.
- **38 quarantine facilities have been created with 1,117 beds.**
- **Initially started with** Conducting **3000 Tests** Everyday and now 12,800 samples Everyday.

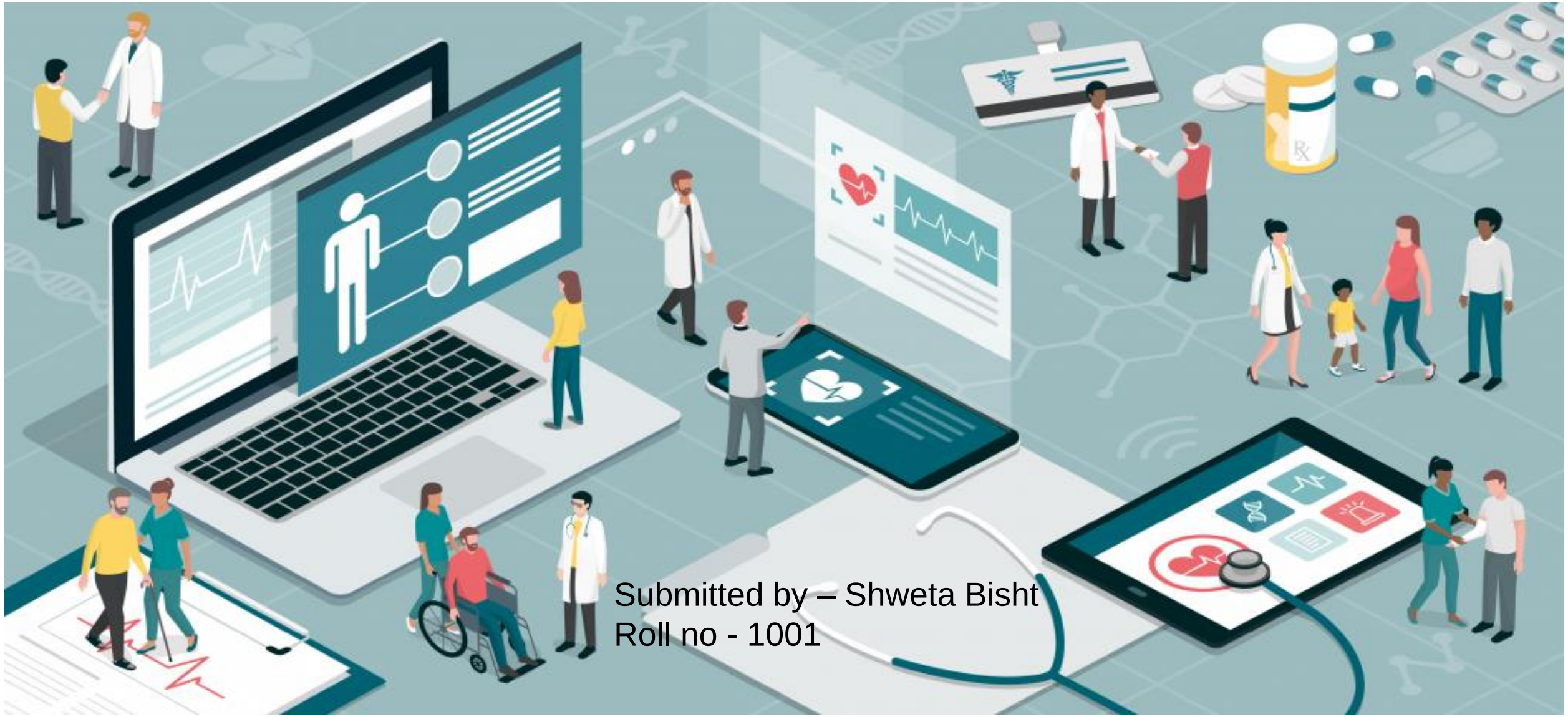
CONCLUSION

- As per the findings , the recovery rate of India is improving day by day.
- In India, the rate of recovery stands 63.4% on 16th July 2020 as it was 60.96 on 16th April 2020.
- Despite of lockdown and Janta curfew the doubling rate of Gujarat remains highest with 31.47 days which is even more than the national rate.
- Gujarat has highest mortality rate, but large amount of deaths occurs in old age people.
- Gujarat has three types of Covid-19 facilities—dedicated hospitals, health centres and care centres. Currently, the state has 133 dedicated hospitals with more than 12,000 beds; there are 2,200 ICU beds and 1,200 ventilators. Still due to cases increased the state face shortage of hospitals as well as equipment.
- Dang,Narmada, Devbhumi dwaraka, Porbandar are among the least affected districts of Gujarat and able to control the spread of virus.
- According to the Mahatma Gandhi Labour Institute in the state, nearly 1.5 million workers left Gujarat in April on Shramik special trains due to increasing cases in Ahmedabad.
- A helpline has also been started to ensure medical help reaches people in less than two hours.
- Ahmedabad, Surat, Baroda, Rajkot are still in the top worst affected districts.
- Government Hospitals and even train are kept to provide the facility to patients.
- Gujarat government started rapid pool testing to keep check on Covid 19 patients.
- Due to increasing cases, the government hospitals not able to provide services to patients and facing shortage for beds and ventilators.

Thank you



Part – 2
E-Health More than just an Electronic Record



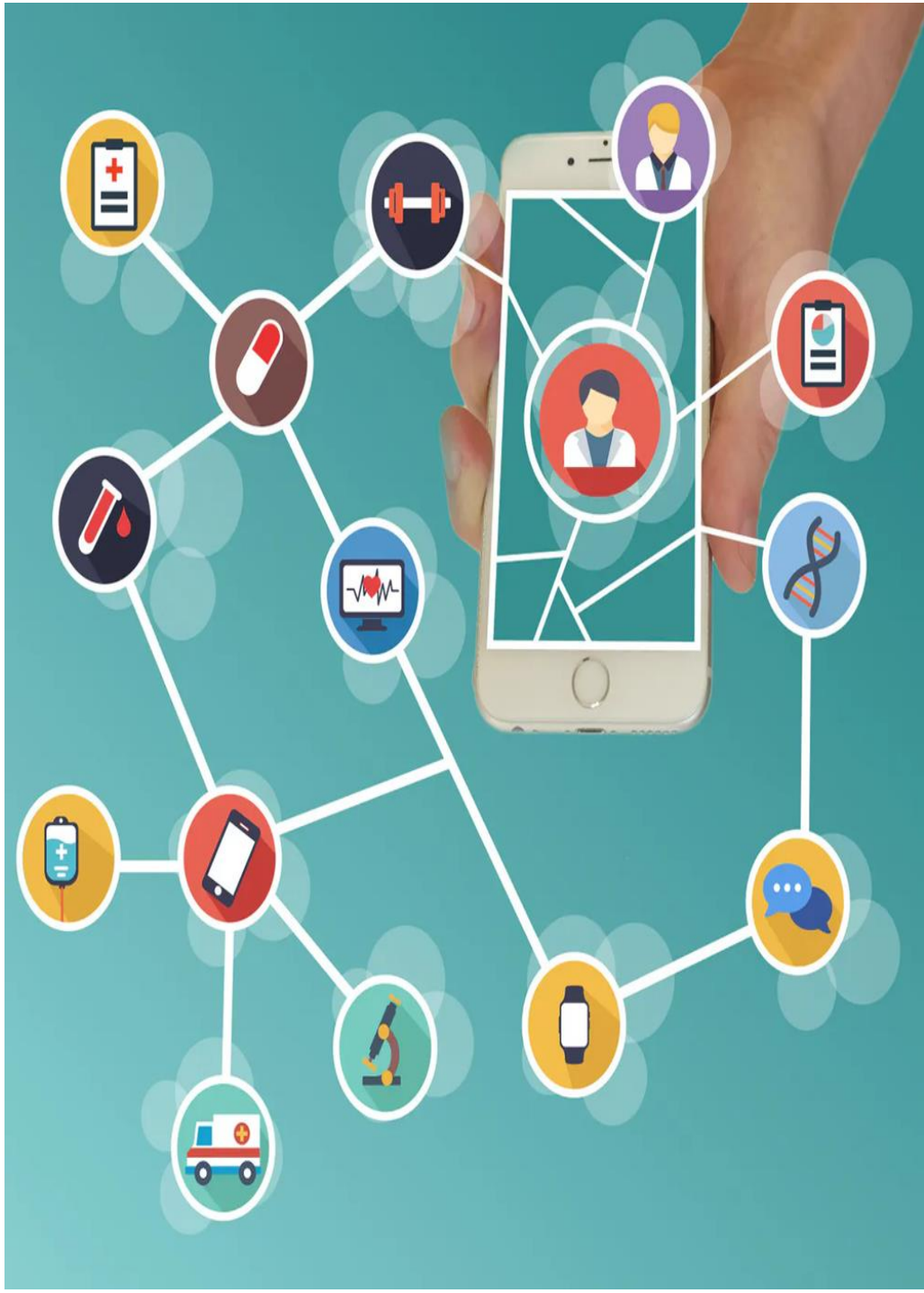
Submitted by – Shweta Bisht
Roll no - 1001

Name of the course :- E- Health more than just an Electronic record

Platform- Coursera
(The University of Sydney)

Duration of the Course- 15 hours

Description of the course :- The course starts with defining the term e-health ,Model for e- Health and the future innovations and emerging technologies. The model for e- health states that there are three overlapping domains firstly – Health in our hands Secondly, the impact of new technologies on how health professionals communicate with patients, as well as how they communicate with each other. Thirdly, data records in the quantified self.



Objective of the course :-

To understand the fundamentals of e- Health
To know that what kind of data we are currently collecting and how it will transfer in future.
To know how new technologies are helping health consumers participate in their own healthcare and how eHealth can improve the coordination and efficiency of healthcare.

Learning Methodology :-

The course was delivered with total 5 modules in 5 weeks. Each module has one assignment each and quiz . The last module includes case studies and peer review assignment. The Quiz includes the general questions about e- health or much you know about e- health and development in the field of health and information technology. Along with that after completing each module one opinion related questions asked and peer review will add to that information.

What is E- Health ?

Who Definition of E- Health : E-Health is the cost effective & secure use of information & communications technologies in support of health & health-related fields.

According to me –
E- health is application of the internet & other technologies in the healthcare industry.

- To improve access
- Efficiency
- Effectiveness
- Quality of treatment utilized by health organizations, patients, Health practitioners & consumers using HIT
- To improve health status of patients.

Traditionally when one thinks E-health , people refer to EHR which is not true. The most transforming area of e-health relates to health in our hands. This includes apps, website& wearable devices.

A Model for E- Health

There are three overlapping domains :-

- Health in the hands of consumers :-This includes the growing use of wearable devices, apps and social media to monitor and report on our health and wellness.

- The impact of new technologies on how health professionals communicate with patients, as well as how they communicate with each other.

- Data records in the quantified self -This includes how we store data in traditional medical records through to how we store data associated with devices and apps.

Challenges :-

- The implementation of the ideas of e-health is practically difficult one. eHealth is a potent catalyst for change in healthcare delivery. We have to be right up there with our education.

- One of the biggest concerns that society has nowadays is how all this big data we are collecting about people's appearances about people's behaviours, about people's social connections, will be used currently and in the long-term future. This is such a difficult issue with so many possible answers.

- Ensuring the data privacy & security is biggest challenge. Patients and healthcare professionals need to feel one hundred percent confident about the confidentiality of digital health systems.

- There are a lot of apps available now, need to be better absorbed into healthcare systems. They also need to be rationalised, standardised & Simplified to aid value & usability

- Health in our hands

Applications or apps, wearable devices, online health information and social media are all being used to motivate healthy behaviours and monitor existing conditions.

Wearables collecting your own data :- People use their phones to click information for blood pressure, pulse, weight, BMI connecting through Wi-Fi get results of BP motivates them to look after their health.

Apps like Pedometer- which gives motivation to a person to walk & offering winner week trophy motivates them to achieve more towards health. Sleep tracker – Which allows to diagnose someone has sleep apnea. Fitbit – can track gym sessions too & people can chat to their friends & relatives about sessions, Healthy diet habits.

- Social media for health

Communication now includes being social in an online environment and India has a total population of over 1.36 billion people.

Of that population, 230 million or 70% are active social media users.

Indian users spend 2.4 hours on social media a day. Today mostly young people will be found using smart phones & tablets or access many social media platforms such as Facebook, twitter, Instagram, YouTube etc.

- Evaluating Health App
- Mobile app rating scale is a well known standardized tool developed by the Queensland university.
- Five broad categories and criteria were identified, including four objective quality scales. Engagement, functionality, aesthetics and information quality, and one subjective quality scale, which were refined and developed into a 23-item MARS tool.
- Data and Quantified self

Electronic Health Record

- Digitizing paper records is clearly beneficial. It enables a patient's medical history to be tracked over time.
- To alert patients for routine or follow up consultations, to monitor patients' vital signs.
- And overall, to improve the quality of care. In terms of now having more information that's real-time about patients about having a vast amount of information.

Interacting with Health Professionals using New Technologies

- Improving access to healthcare

Case study of physiotherapist :-

In remote and rural areas there is a lack of access to quality injury management. **Physios Online** people can get a full assessment done of their injury, come up with a diagnosis of what they're dealing with and give them a rehab plan to continue on with, all at a distance. It means theyy can access millions and millions of patients without burdening the health system as much as it would.

The patients need supportive care and cant spare full time so they can connect through conferencing and skype calls.

One of the biggest benefits is sort of the ability to access a broader patient group, otherwise be able to access in our traditional face to face clinics.