

E-Governance in Government Health Sector specifically during Covid -19 in India: Challenges, Opportunities and Solutions

Asha Ravikumar^{1*}, Dr. Ansuman Rabboni²

1 PhD Research Scholar, Department of Public Administration,, Madras Christian College,
Chennai, Tamil Nadu, India
ashar.24890@gmail.com

2 Head of the Department, Department of Public Administration, Madras Christian College,
Chennai, Tamil Nadu, India

Abstract: The Government health sector in India has witnessed a drastic change and development in the management and administration of its services in the last few years. There has been a booming efficiency and effectiveness of services with the advancement in technology and communication. Electronic governance plays a major role in the health sector in India. The Government of India has introduced several policies in the last decade such as e-hospital by the Ministry of Health and Family Welfare, the digitization of Central Health Government Schemes, Online registration system using the AADHAAR card, National Health portal for health related information, and several state government programs that help in reaching out to the needs of the people. This research paper aims to highlight the advantages and challenges of digitization of the health service in India. It throws light on the significance of making technology based health care systems to counter pandemics and diseases.

There has never been better emphasis on Public Healthcare during the current COVID-19 situation. There is a dire need to fulfil the growing needs of the public and the Government of India has been planning and implementing strategies to do the same with innovative ideas and better e-governance. With the help of the aadhaar card the programs for vaccination and tracking of COVID positive individuals (Geographical positioning) has become easier. E-governance has enabled in implementing better policies for health and welfare by keeping a check on the health services availed by the individual. The hospitals and the corporations keep track of the health of the people and the vaccination process. The study focuses on the need to enhance the efficiency and effectiveness of the Public sector Healthcare the Government of India needs to formulate policies and strategies, thereby creating awareness of IT and e-governance amongst the people of the country. Continuous awareness programs on handling technology and systems are a prerequisite. The people need to be taught about the initiatives and policies in the regional or local languages. The basic necessities such as electricity need to be fulfilled before the introduction of e-governance systems. User-friendly processes need to be introduced to the people. Workshops need to be conducted to sensitize the people on the advantages of e-governance. With effective partnership between the government and the people the Health sector can be made better and accessible to every citizen of the country.

Keywords: ICT , Partnership, Health Care system ,Covid -19, Aadhar, governance, policy, digitization.

INTRODUCTION

India's Healthcare system is one of the most diversified services. The manpower, technology and processes are state-of-the-art yet these services are unable to reach every citizen of the country. The Government health sector in India has witnessed a drastic change and development in the management and administration of its services in the last few years. There has been a booming efficiency and effectiveness of services with the advancement in technology and communication. Electronic governance plays a major role in the health sector in India.

Methodology: This research paper was conducted based on a panel discussion involving responses from medical practitioners and individuals who use the government initiative applications such as e-hospital, Arogya Setu app and the COWIN app. The respondents are from various age groups and from different strata of the society. The data was collected in the form of survey and an unstructured interview (Refer Annexure1 for questions). Secondary data for the research was also collected from various books and government ministry websites that provide information on the initiatives and applications for better e-governance.

The aim of this research study is

- a. To ascertain the status of health care system in India through e-governance initiatives
- b. To identify the challenges faced by Indian Health sector due to e-governance initiatives
- c. To identify and analyse the obstacles faced by citizens and government in the implementation of effective e-governance
- d. To enlist the causes for gaps in efficient implementation of e-governance initiatives
- e. To discuss the different opportunities, initiatives and solutions of e-governance issues especially in tackling the pandemic situation.

The Government of India has introduced several policies in the last decade such as e-hospital by the ministry of Health and Family Welfare, the digitization of Central Health Government Schemes, Online registration system using the AADHAAR card, National Health portal for health related information, and several state government programs that help in reaching out to the needs of the people. There are several advantages and disadvantages to this growth. E-governance has helped in

1. The quick delivery of services and efficient management of systems and processes within the organizations.
2. Saves time, energy and cost, the three most important resources required in the country.
3. Minimizes errors in delivering services to the people
4. Saves space in the organization as there is no need to stack up the paperwork
5. Focus on deploying manpower in other necessary areas than desk work
6. Creates an awareness to IT literacy
7. Better transparency in carrying out processes

The need for the study: This study analyses the level of awareness in the society about e-governance initiatives and opportunities provided by the government of India. The study also describes the gaps in implementation of these initiatives that beyond the several initiatives, there are certain basic needs that need to be attended to, so that better health care can be provided to the people. This study calls for more detailed investigation into the subject and provides for better policies in order to make the e-governance initiatives efficient.

The challenges faced by health care e-governance

Though the system may help the betterment of country's health, there are several challenges that the government and the people face in terms of handling e-governance.

1. **Low Computer or technological knowledge** - The computer literacy rate in India is very minimal and hence people fail to comprehend the need for e-governance. This needs to be addressed by implementing advertisements and awareness programs and teaching the people basic computer and mobile skills which can save time and energy.
2. **Irrelevance of obsolete technologies and systems** – Several villages and towns in India still use the old-fashioned computers which cannot store data beyond a certain level and also have technical issues. Such systems should be replaced with new systems and more cloud data must be stored than hard disks.
3. **Privacy and confidentiality of documents** – In the event of making healthcare digitalized, citizens are required to share sensitive and confidential data such as

ADHAAR card number and other document numbers which need to be secured as there are many chances of cyber-crime and misuse of such confidential data.

4. **Lack of doctors and other healthcare workers in rural areas-** there is a dearth of social workers and medical practitioners in rural areas which deprives these areas of a concrete hospital or clinics for safety and better treatment services. In most places, private doctors hold clinics on service grounds and help the needy.
5. **Cost of advanced technologies-** e-governance involves technology and equipment that delivers fast and guaranteed services to the people of the country. This involves a check on the status of every individual under the purview of the government, which requires both machine and man power to a great extent. The cost incurred may be high but necessary to be spent.
6. Lack of basic supplies for technology such as electricity, internet etc
7. Difficulty in covering the health of the entire population of the country
8. Under trained practitioners

A brief discussion on Covid-19 situation

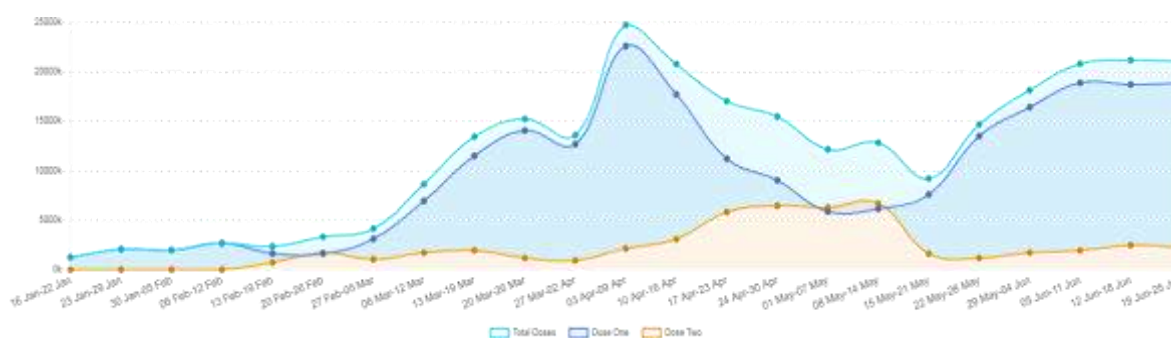
There has never been better emphasis on Public Healthcare than the current covid-19 situation. There is a dire need to fulfil the growing needs of the public and the government of India has been planning and implementing strategies to do the same with innovative ideas and better e-governance. With the help of the aadhar card the programs for vaccination and tracking of covid positive individuals (Geographical positioning) has become easier. E-governance has enabled in implementing better policies for health and welfare by keeping a check on the health services availed by the individual. The hospitals and the corporations keep track of the health of the people and the vaccination process.

With the rising scare in COVID-19 cases and death tolls in India, it has been a humungous challenge to reach awareness to every citizen of the country. The movement of covid-affected patients and the tracking of covid affected areas has become a very serious challenge in handling the situation. On the wake of this crisis situation the Government of India along with National Informatics centre had designed and launched an application Arogya Setu, which helps in identifying and containing hotspots thereby reducing the spread of the infection. It is

defined as a “contact tracing, syndromic mapping and self-assessment digital service”. With the help of this app the Government has been able to largely control the movement of a major population.

The next problem that the country faced was the reach of the vaccination to curb the pandemic. The Government of India launched the COWIN application, which enabled citizens to identify vaccination hubs and the availability of vaccines of their choice.

This helped in avoiding crowding and leading to spread of the virus. Citizens could book their slots for vaccination and the website also produces a completion certificate of their vaccine and gives a possible date for the next dose. UMANG, an exclusive e-governance tool is also linked to the COWIN website. With the effective and efficient use of this, vaccination drives have been made easier and quicker to reach the people. There has been a tremendously positive response ever since the website has been launched. Below is the trend of the vaccinations taken by people of the country.



Source: <https://dashboard.cowin.gov.in/>

- The above trend shows that with the effective and efficient use of the COWIN website, the vaccinations registered and completed have risen consistently and reached its highest in the months of March, April and May. The second doses have also been carried out.
- The trends are also classified based on Age groups. The graph shows that the people above 60 have completed their both doses before the month of April while the group 45yrs-60 have completed by July and the rest follows.
- The graphs and trends shown in the dashboard also analyses the male female ratio of vaccines taken and the preference of vaccines taken by the people, which states that people have preferred more of Covishield than Covaxin.

- The Arogya Setu app also provides for a statewise data on the cases, the measures, the vaccines taken and points of contact in case of emergency.
- COWIN also gives information about the whereabouts of different strands of the virus and necessary information for awareness.

Initiatives and Opportunities provided by the Government

Recent e-governance developments include several programmes initiated by the government, such as:

1. Intensified Mission Indradhanush 3.0 is aimed at covering the unreached population to improve immunization coverage as a part of routine immunization for pregnant mothers and children against several diseases amidst the covid-19 situation. A portal has been set up to manage the reporting and analysis and to update the activities and also capture post-campaign indicators.
2. E-hospital is a one-stop solution to connect patients, hospitals and the doctors set up as a cloud-based hospital management system to digitalize the workflow and processes. Under this service, the patients can register online for appointments. It also has an e-bloodbank for any blood requirements.
3. Mera Aspathaal is an e-service initiative to track and analyse patient feedback on the services provided by both public sector and empanelled private sector hospitals. This initiative works through multiple channels such as SMS, Dialing, portal and mobile application.
4. eRakt Kosh is an initiative to maintain effective management of the quality and quantity of the donated blood. It ensures the maintenance of a donor repository by linking the aadhaar card details, ensures reduced Turnaround time for blood donation and also keeps track of donor's health and donation history.
5. Swasth Bharath is a mobile application designed and released by the National Health Portal which provides authentic and reliable information about any disease or condition or health setbacks in the country. Knowledge about the disease is as important as trying to prevent it.

6. Kilkaari mobile app creates awareness among pregnant women, new parents and health workers about the importance of antenatal care, institutional delivery, post natal care and immunization.

Recommendations for efficient and effective Health care

- To enhance the efficiency and effectiveness of the Public sector Healthcare the Government of India needs to formulate policies and strategies, thereby creating awareness of IT and e-governance amongst the people of the country.
- As there is a larger population who don't understand technology or even know the existence of such easy communication, there needs to be continuous awareness programs on handling technology and systems. Banners, posters, lectures and awareness campaigns need to be held regularly for people to understand the systems and processes.
- India is a diverse country with several regional languages and hence all apparels and documents need to be in the local language. The people need to be taught initiatives and policies in the regional or local languages. The apps or websites should also be translated in the local language.
- In a vast country like India, there are several villages and towns that donot have enough basic facilities such as power, sanitation and network. The basic necessities such as electricity and sanitation needs to be fulfilled before the introduction of e-governance systems.
- User-friendly processes need to be introduced to the people. Workshops need to be help to sensitize the people on the advantages of e-governance. With effective partnership between the government and the people the Health sector can be made better and accessible to every citizen of the country.
- There must be grievance redressal cells for every area or region, where the people of that area can approach in order to clarify doubts, or raise complaints or escalate delay in services. This will ensure the visibility of the government in every area assigned, thereby creating trust in the people.

- Local government bodies should work in unison with the state and the central government to bring about efficient e-governance strategies and solutions for the people's needs. The local bodies would know better about the needs of the people in their particular locality which needs to be communicated to the higher authorities.
- Training of ASHA (Accredited Social Health Activists) workers in computer technology and mobile applications thereby enabling them to teach the villagers and illiterate population under their purview.
- Health and hygiene factors must be given prime importance in the administration of the villages and towns as they solely believe in government aided programs than private organizations. Thus the schemes and programmes need to be focussed more on the rural India than Urban societies.

As much as the Nation strives to make Healthcare available to every citizen in the country, be in remote village or towns, there seems to be a need to develop manpower, machines and quicker systems along with serious awareness programs to make every citizen understand the need of information technology in providing better health. However, India is on the trending line where the government strives to make available healthcare to all through new schemes, discounts and subsidies.

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ANNEXURE 1

Questions for Respondents

1. Have you used any application or website for healthcare?
2. How helpful is information from government websites? Does it create awareness?
3. Have you been Vaccinated for the covid-19, and if yes did you use COWIN app?
4. Has the cowin app been helpful ?
5. Are you aware of the othe e-governance initiatives provided by the government?
6. Do you think websites and applications help reach good healthcare to the people in need?
7. Are you tech savvy? If no, how do you go about registering yourself for healthcare?
8. Would you recommend any other e-governance measures for the citizens?