

## Post-COVID Evolution of Indian Healthcare: The Impact of E-Pharmacy on Supply Chain Management

Ambika Bhatia<sup>1</sup>, Dr Meetu Bhatia Grover<sup>2</sup>, Dr Prabhat Mittal<sup>3</sup>

<sup>1</sup>Research scholar, Jagannath University, Jaipur

<sup>2</sup>Associate Professor, Miranda house, University of Delhi.

<sup>3</sup>Professor, Satyawati College, University of Delhi

[ambikabhatia@jimsindia.org](mailto:ambikabhatia@jimsindia.org), [bhatia.meetu@gmail.com](mailto:bhatia.meetu@gmail.com), [profmittal@gmail.com](mailto:profmittal@gmail.com)

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Cite this paper as: Ambika Bhatia, Meetu Bhatia Grover, Prabhat Mittal (2024) Post-COVID Evolution of Indian Healthcare: The Impact of E-Pharmacy on Supply Chain Management. *Frontiers in Health Informatics*, 13 (3), 3467-3476

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### Abstract

*This study examines the impact of e-pharmacy on healthcare supply chain management in the post-COVID landscape. Research during the pandemic demonstrated e-pharmacy's efficiency in maintaining medicine supply. The findings suggest that users are inclined to continue using e-pharmacy services beyond the pandemic. However, enhancements in the existing framework and supportive government policies are crucial for future success. Despite facing some technological challenges, e-pharmacy remains a viable solution. Its growth is driven by factors such as accessibility, convenience, competitive pricing, and growing consumer trust. Overall, e-pharmacy holds substantial potential for the Indian pharmaceutical sector, offering positive outcomes for consumers.*

**Keywords:** COVID 19, E-pharmacy, government, post-COVID, consumers, pharmacy.

### Introduction

The recent outbreak of the COVID 19 has made countries worldwide think about various aspects of the economy. Right from the businesses to the medical facilities and the pharma supplies, it impacted every sector adversely. The pandemic was one of the key factors that made people globally think about adoption of the new age technology and implementation of the strategic approaches. The key factor that drove such initiative was focused on managing the pandemic most efficiently and effectively. India is the sixth-largest economy by nominal GDP and third-largest by the purchasing power parity. According to a report published by Equity Master, The Indian pharmaceuticals market is the third-largest in terms of volume and 13th largest in terms of value globally. With over a range of drugs like generic drugs, OTC drugs, and patented products, the Indian market is one of the most booming and flourishing markets globally.

The Indian Retail Pharmacy is surely growing at a great pace, but still, few considerations are acting as the roadblock in the path of growth. The major challenges that the Indian Retail Pharmacy is facing in the current scenario are:

- Being highly competitive and fragmented, the margins are quite low.
- Rising pressure and price control have affected the stability leading to sustainability issues.

- Increased cases of sale of drugs with prescription is a rising concern.
- The sub-standards or counterfeit medicines are a serious concern that can affect the patient's health adversely.
- There is still a trend of selling medicines without a prescription, which affects tax collection, revenue, and many economic factors.
- The lack of feasibility and poor inventory management is a roadblock to help the pharmacy reach far and wide.
- Finally, the lack of accessibility in the interior areas during emergencies is a growing concern and life-threatening.

All these factors are a serious concern for the individuals of the country and the government. A solution to this is the Computerization of pharmacies, recording of transactions, and restricting cash transactions. This is short can be explained as the process of transforming the pharma industry to the very core. The requirement for one such transformation and implication was quite evident and highly appreciated during COVID19.

During the beginning quarter of 2020, when the outbreak of Coronavirus started, a swift decision to impose the lockdown was undertaken, as it was the ultimate need of the hour. It locked all the services, travel, educational institutions, entertainment houses, other institutions and established emergency services. This was the phase where all saw an increasing understanding of E-pharmacy among the people of the country.

The doorstep service from the pharmacy is not only time and cost-savvy. Still, it is also beneficial for the senior citizens or nuclear families who might need the medicine in an emergency. This paper discusses E-pharmacy as the new age solution for the supply chain management post COVID scenario.

### **1. About E-Pharmacy**

E-Pharmacy is comparatively a new concept gaining widespread recognition and acceptance due to its reach and acceptability. Moving out of the old brick-and-mortar form of the centers, e-pharmacy builds its base online to reach far and wide. E-pharmacy, undoubtedly, is more convenient to all the consumers. Still, one should also look into the regulatory norms for the selling of drugs online, as it is directly related to the consumers' health.

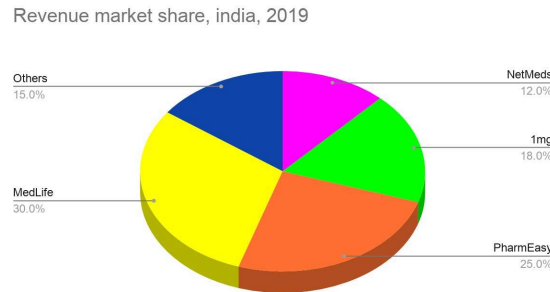
The Indian e-pharmacy market was estimated at US\$0.5b in 2019, with companies like NetMeds, PharmEasy, Medlife, and 1mg being the top players in the market. It is projected to reach US\$4.5b in 2025 at a CAGR of 44% for the period 2019-2025. It is estimated that the pharmaceutical sales will reach around 10%-12% by 2025, up from the current 2%-3% levels in 2019. All the statistics are offered by the reports published by Ernst and Young.

These statistics clearly state the growth prospects of E-pharma in India. The current status of the sector in India can be correctly placed as the nascent stage but is one with huge growth potential and outcomes that can help businesses boom across the country.

With innumerable established online sellers of pharma products like PharmaEasy, Merapharmacy, Medicare, 3G Chemist, Netmeds and many more, the reach e-pharmacy has proved to be going to be long-lasting and with an effective and efficient approach.

E-pharma's changing landscape is all governed by four major players, which amounts to around 85%.

Revenue marketshare of key e-pharmacy players, India, 2019 as depicted by Analysys Mason, 2019 is shared in the figure below:



Source: Analysys Mason, 2019

## 2.1 Benefits of E-pharmacy

E-pharmacy's blooming sector is considered the new age solution to the Indian healthcare supply chain management post coveted based on the benefits it offers to the various stakeholders. In this section, we will explore the benefits of the sector to various stakeholders.

### For Patients / Consumers:

- Increased convenience in terms of reach and accessibility can help fulfill vulnerable groups like senior citizens, nuclear families, and others.
- Improved accessibility allows people living in rural areas to have better enablement, allowing people to have easier access to life-saving drugs.
- With reduced cost, the medicines sold over e-pharmacy offer cost advantages based on discounts and offers.
- It offers a complete range of information, making it better for the consumers to know and improve compliance.
- Due to digital availability, ease of tracking, supply chain, and reduced drug counterfeit chances is a boon.

### For the Regulators/ Government:

- The e-pharmacy allows the online tracking of data related to medicines, batch number, dispensing pharmacy name and address, and others, allowing better analyzing.
- The e-pharmacy model allows us to keep a check on the transparency and authenticity of the medicine.
- 100% documentation helps to maintain proper records, improve taxation, and benefit the government.
- It is one of the most innovative models that allow better sync.

### For the Pharmacists:

- The e-pharmacy business model is an additional opportunity for retail pharmacies to grow and expand the business.
- This model allows pharmacists to have a better inventory consolidation model without loops.

- Enhanced service to the customers helps to develop a loyal base of customers.
- It helps in streamlining the complete process more effectively.

## 2.2 Challenges to E-Pharmacy

Before understanding the e-pharmacy model, it is important to know about the perceived issues that one might have with E-pharmacy. The problems range from governmental policies to technological, supply and demand, and access.

- The e-pharmacies require the prescription for delivery of medicines to ensure authenticity. For patients who are on long-run medication, this is a perceived issue.
- Although robust, the supply chain management is robust, but still there are chances that one might face the issue of delay in delivery service due to uncomprehended situations.
- Many e-pharmacy platforms required the consumer to contact their registered doctor to confirm an order-consuming process.
- One can face the quality issue, as an assurance of all the pharma stores online is not available. The chances of receiving counterfeit medicine are still there that can have side effects.
- The market is competitive. Not all the pharmacy stores need to offer one or the other discount always.

With chances of price fluctuations, consumers might face issues with competitive rates.

- Awareness is highly lacking among the customer base. Even when a complete description is offered and a notice to look for licenses before buying is suggested, one can still lose the hard-earned money to imposters.
- Not all users find it easy to place an order online. For the millennials, e-pharmacy is a boon, but the same is not the case with senior citizens.

Consumers worldwide saw e-pharmacy as one of the most comprehensive models during the pandemic. Though it supported a large number of consumers, the model still had its drawbacks that are required to be worked on to ensure better service to the consumers. E-pharmacy as a new age solution discussed in the next section.

## 2. The Intelligent Supply Chain Management Concept

In basic terms, supply chain management refers to the external interface of the logistics systems that connect the organization and all the outsourcing parties for delivering better customer service. E-pharmacy has changed the way consumers perceive the pharma industry. From offering the doorstep service to allowing the consumers to reach pharmaceuticals in an emergency, this has been a great accomplishment.

The benefits of the e-pharmacy as the supply chain management are:

- Superior customer value
- One-stop solution
- Better inventory management
- A higher level of strategic implementation
- Flexibility in approach

- Better market responsiveness
- Real-time information
- Optimization of the resources

COVID 19 is one period that brought the sector into the limelight and offered a greater insight on how one can benefit from better supply chain management. No delays and no lapses acted as the benchmark making the sector one of the best.

Deloitte's report suggested that the digital transformation of the supply chain in the pharmaceutical industry has never been more effective or pressing than during the COVID 19. Although the pharma chain is a complex one, one can easily manage the adversities and transform them into possibilities when managed reasonably.

Another article by Dr. Abhishek Dadhich (Assistant Professor at IIHMR University - Jaipur) reported that the impact of the COVID 19 had reflected the dependency of India on China for API procurement. Additionally, the Indian government needs to take the step to overcome the technical and financial barriers to develop a better API for the pharmaceutical industry.

Additionally, E-pharmacy's effectiveness as the new supply chain can be understood by the report of FICCI, which included a RedSeer Consumer Surveys (July 2020). It suggested that more than 75% of consumers said that their online purchase of medicine increased or remained the same during COVID19.

The basic steps involved in the development of the medicine to making it available to the ultimate consumers in the market are:

- Research and discovery of medicine
- Clinical Development of the medicine
- Manufacturing and supply chain management
- Launch and commercial
- Post-market surveillance and patient support system

Pre, during, and post COVID, e-pharmacy has played quite a crucial role in various researches. Online pharmacies in India have expanded because of developing E-business and minimal guidelines. Digitization being at the core, the supply chain of e-pharmacy is not only simple but well-integrated

### **3.1 Model of E-pharmacy including supply chain management**

An online pharmacy that operates over the internet is known as the E-pharmacy. From the manufacturing end point to the final consumer, the framework is fragile but yet very simple to understand.

The primary step is to deliver the medicine to the distributor which is the online pharmacy store. Now, the broad framework of the E-pharmacy can be understood by the details below:

The process is an ongoing process as once the customer finds the delivery suitable, re-orders will be made and the flow will be repeated.

### 3. Objective of study

The study's primary objective here is to understand E-pharmacy as one of the best new-age solutions to healthcare solutions during the post COVID era.

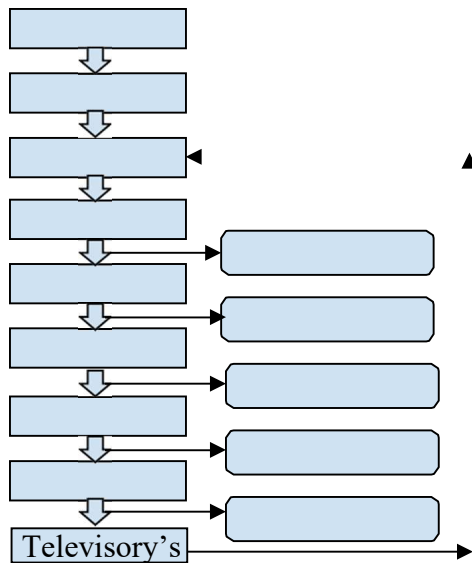
Further, inference to the outcomes and challenges that companies might face will also be established to offer further work insights.

### 4. Literature Review

Sahet. al. (2018) depicts in the research paper that online drug stores give a simple chance to buy an enormous medicines assortment. The study suggested that approximately 85.8% of respondents were aware of the digital pharmacies, but only 6% have used them to get the prescription.

In the study, Gautam et al. (2019) suggested that over 250 e-pharmacies have been introduced recently. Also, simplifying the e-pharmacy license will help eliminate significant concerns linked to the e-pharmacies.

Vipin et al. (2019) in the study analyzed the various aspects of Online Pharmacy. The overall study reflected that the majority of respondents are satisfied with the current pharmacy services. Additionally, most of the respondents were aware of the attractive features offered by the online pharmacy like competitive price, doorstep delivery, drug information, and a lot more.



Source:

ResearchAnother research published in a report of FICCI said that 70%+ E-pharmacy consumers would stick to E-pharmacy platforms in the post COVID-19 world because of the remarkable experience with the platforms. This is one of the great achievements that the E-pharmacies can have.

Shivani (2017) identified that the E- pharmacies could offer the service to the customers without much hassle. Also, researchers in the study stated that setting up the committee to offer the recommendations to bring the battle between the online and offline pharmacies is the need of the hour.

Ameex Technologies (2020), in one of their reports, suggested that the pharma supply chain is fragile and in bought to highlight due to the COVID 19. Attempts are required to be made to bring digital health and data analytics for better performance.

In the research, Chakraborty et al. (2019) tried to examine and analyze the offline and online pharmacies and the Government's role in this perspective. The study's outcome reflected that online pharmacies offer a greater degree of advantages in terms of privacy, choice, price, and convenience. But at the same time, no prescription orders can be harmful to patients. The intervention of the government is seen as important and vital in this aspect.

Himani et al. (2020) stated that e-pharmacy is considered a new opportunity. The report suggested that over 76% of respondents said that e-Pharmacy is more convenient than the existing mode of purchase. Implementing better regulation, government policies, and systems can be a boon to both society and the pharma industries in the long run.

FICCI (2020), in media coverage, claimed that the COVID-19 had accelerated the acceptance of digital innovation in the healthcare space. Moving ahead, the statement also suggested that the global telehealth market is expected to grow at a CAGR of 25.2%, from USD 61.40 billion in 2019 to USD 559.52 billion by 2027.

A survey by RedSeer Consumer Surveys (July 2020) of 300 respondents offered some great insights on different aspects of E- pharmacies. The responses received were:

- Will stick to ePharmacy apps as I have had a great experience - 71%
- Find it unsafe to visit offline pharmacies, hence will use ePharmacy apps - 16%
- Have subscribed to the ePharmacy platforms due to repeat purchase needs - 12%
- Will stop using ePharmacy as the offline pharmacies are becoming available - 27%

The result suggests that E-pharma has a great outlook even in the post COVID period as well.

### **5. Outcome: E-pharmacy postCOVID scenario**

Based on the literature review and research, the outcome that one can draw is that E- pharmacy has a positive and prosperous outlook even in the post COVID era. In the post COVID-19 period, consumers are expected to have a significant net change of online pharmacy platforms compared to the pre-COVID-19 period.

The E-pharmacy is expected to reach over 1.4x of its pre-COVID-19 household estimates and is expected to reach 70 million households by FY 25. Patients with chronic disease are one of the most potential bases for E-pharmacy in the future.

The new-age solution will offer the following benefits as per the studies conducted and analyzed:

- E-pharmacies are transforming to be the one-stop solution for all healthcare needs.
- It provides the value-added service to book the doctor's appointment for a consultation.
- It also provides E-consultation for minor conditions.
- A futuristic view will focus on collaborating with the diagnostic facilities for lab assistance

as well.

- The model focuses on providing affordability in the pharmacy market to all the potential customers.

Government pairing is one of the most crucial aspects that will lead to the establishment of E-pharmacy as one of the best and most widely accepted tools for a better future. Some of the plans developed are:

- Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP)
- Janaushadhi Sugam Mobile app
- Common Service Centre (CSC) Scheme
- Janaushadhi Pariyojana

## 6. Recommendations

Some of the recommendations that can help smoothen the supply chain management for the E-pharmacy to reach the potential customer base are:

- Formulating rules and regulations for the online working of the medicine supply
- Offering the licensed facility only to work and making it a mandate to display the license over the The address of the seller should be verifiable as per Part VI of the Drug Rules.
- Restriction of order acceptance with prescription only.
- Assuring check-points to avoid misuse of drugs.
- Mandating the qualified person only to operate the E-pharmacy
- All the information to be displayed on the website
- Involvement of government in case of OTC drugs/medicines to reach the rural and sub-urban consumers.

## 7. Limitations

Further study scope involves analyzing the current facilities available, the status of the technology, and the range of improvement. A detailed view about how one can enable E-pharmacy in the far located remote areas is one of the critical areas to look for. The government policies and framework are one of the limitations that one can address once a stringent framework is designed and established for all the E-pharmacies working.

## 8. Conclusion

The conclusion that can be inferred from the analysis suggests that the use of the technology and AI based platform to enable E-pharmacy in India is widely accepted even in the post COVID19. A major share of the customers prefer to stick to E-pharmacy for buying the medicines which is a sign of technological acceptance.

By leveraging the technology smartly and effectively by following stringent regulatory control, the E-pharmacy has a scope of adding immense value to India's existing retail industry and building a roadmap for

the new age solution to the Indian Healthcare industry.

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