Digitally enabled access to medicines: exploring the e-pharmacy ecosystem in India

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Bringing Evidence To Public Health Policy (EPHP) – 2024
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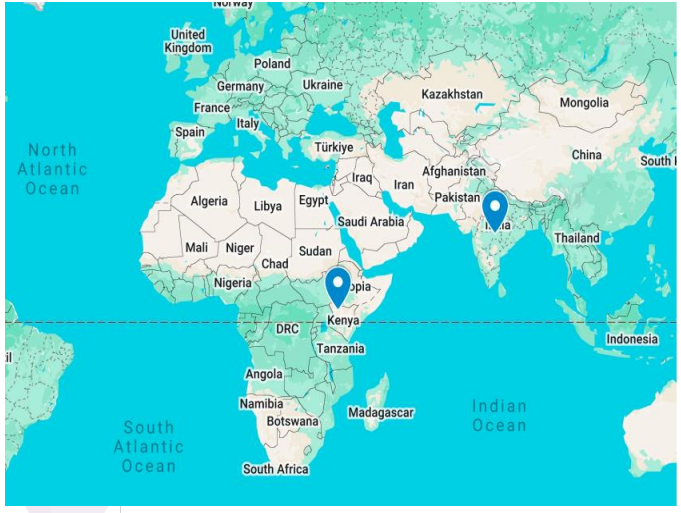
LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Strathmore UNIVERSITY BUSINESS SCHOOL

About the study: Regulating e-pharmacy: challenges and opportunities for access and quality of care in LMIC health systems

- Grew out of a Seed Award from Wellcome Trust
- Funded by UK FCDO, UK MRC, & Wellcome Trust
- 3 years: mid-2022 to mid-2025



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Objectives and Work Packages (WP)

WP1: Characterise e-pharmacy markets

WP2: Assess performance of e-pharmacies

WP3: Critical appraisal of regulatory systems

WP4: Understand policy processes influencing regulation

WP1: Characterize e-pharmacy markets

Identify sampling frame of e-pharmacies serving customers, India

- Internet search using common search terms to identify providers and volume of "hits"

Review of e-pharmacy websites & apps

- Document scope of products and services; payment methods; delivery strategies etc.
- Assess compliance with proposed regulations/best-practice standards using a checklist

In-depth interviews (IDIs) with e-pharmacy staff

- To understand business models and competitive strategies

WP 1: Regulating e-pharmacy: challenges and opportunities for access and quality of care in India

Objectives

- Business Model
- Workflows
- Technological Innovations
- Regulatory Framework

Definition

- Sells prescription-only medicines directly to consumers, with or without OTC or traditional medicines.
- Operates via website/app, with payments made remotely (online or on delivery),
- Delivery by mail or courier."

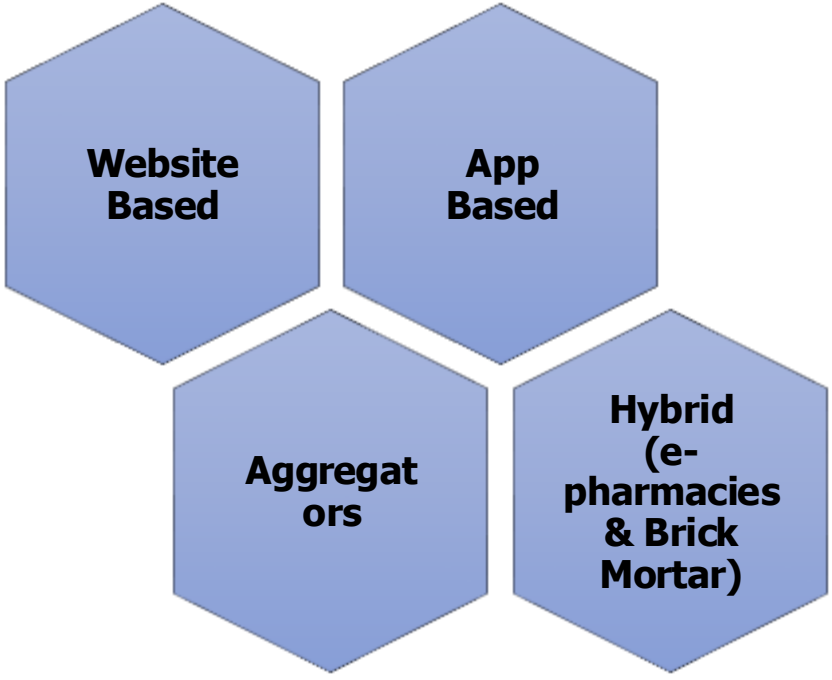
Methods

- Interviews with diverse e-pharmacy professionals, identified through e-pharmacy website reviews. (August 2023 - July 2024).

Total IDIs (N=08)

- Market Leader- 02
- Mid-level- 03
- Start Ups- 02
- Academics- 01

E-Pharmacy Models



Client Initiation

- Insurance products
- Lab services
- Web search engines
- Social media
- Word of mouth

Unique Selling Propositions

Tele-Consultations	**Patient Support Groups**	**Wellness Clinics**
Insurance Products	**OPD Wallet**	**PAN India delivery**
Multiple System of medicines	**Medical Devices and Products**	**Low Turn Around Time**

> *"So, we offer mostly the health and Wellness related products. So, we do have all the OTC personal care products, nutrition supplements, medical devices. Also have a very large ayurveda and homeopathy range"*

Geographical Reach

- Pan India (urban/rural)
- State level
- Metro Cities/ Urban Areas

Purchase Flow - Approvals

Mandatory Checks for prescriptions

- Prescribing doctors name
- Doctor's registration number
- Degree of the doctor
- Date of prescription
- Diagnosis
- List of medicines

Delivery of Medicines

- PIN Codes
- Own Pharmacy Stores
- Vendors/ Aggregators
- Courier Agencies

Disease Conditions

- During COVID-19, tele-consultation for cardiology, gynecology, psychology and general medicine
- Non-Communicable Diseases

Quality Assurance

> *"We are making sure that you are legally compliant to provide drugs which are like which are genuine nature. They would have the details that are required like **batch numbers, their expiry** and everything and they are genuine. And you in case if somebody's auditing, you would need to provide the **source** through which you have been **procuring those medicines**".*

> *"… Once the medicines are received, there are **various kinds of quality checks** …it is a non-cold chain medicine then the all the **batch numbers** along with the **expiry dates** etc all of that will be checked. …..The quality of the medicine each of the medicines will be checked that you know there's **no tampering**, etc…If there are cold chain medicines, all the each of the medicines, each of the units will be checked for the **temperature maintenance** at the time of receipt of those medicines.*

Existing Regulations

- **IRDAI - Wellness Industry**
- **Drugs and Cosmetics Act**
- **Digital Personal Data Protection Act**
- **Self Regulation**
- **No Protocols**

> *" …Drugs and Cosmetics Act was written in 1940 and it governs the sale of drugs. It is silent on the mechanism or the platform of sale of drugs. It doesn't say anything about anything on that, so now the current model of E pharmacy operates in compliance with whatever is the existing drugs and Cosmetics act and law of the land".*

Suggestions

> *" **Unique ID for a prescription**, even though it's a difficult thing, it is the only method to restrict multiple purchase using prescription written by a registered medical practitioner. If the prescription is catered by any of the stores the data will be uploaded to a central server which is handled by authority, mostly government authority".*

> *"There should be a proper clarity in all these policies. ……there should be a proper policy. How these e- pharmacies should be operated and all the all the protocols for running a pharmacy, should be clearly mentioned and **standard operating procedure** should be there for running E pharmacy. It's the main thing".*

Innovations in e-pharmacy sector

- **Database models** - creating long term personalized disease condition management programs.
- **Leverage technology** doctors can reduce patient interaction time while maintaining efficiency
- Technological assist in reading handwritten prescriptions
- Multi-language support and voice-based support
- Leveraging support of Common Service Centers

> *"All of that part can have **AI assist** and if the and the leaving the doctor with the most important part of just putting it all together into one coherent picture, validating that and using time to both comfort and explain to the patient how their healthcare journey will get better. So, it's a lot of that can be done. So, if all the **input data is taken by machines for the Doctor***

> *" …Yes, the **OCR** is going on for that. So, I was just coming to you when I was talking about a **written prescription**. So, the OCR helps, but frankly speaking for handwritten it has a very low confidence. So, they have this confidence interval for OCR's as well. So, for return they have a very low confidence interval.*

> *" … But yes, that's another in innovation. **Multi language and voice based** definitely needs to be a part of the platform. A lot of our data work is on using ML and AI. We have published a bunch of papers we do research on that and so we have a full data sciences team that is building these new models that is building new ways of digitization, personalization, all that is going to be at the core of it will be driven by data and that one application of AI."*

For Further Information

Thank You