

Review Article on E-Pharmacy

Vikesh Rathwa¹, Avnish Paswan², Anand Thakor³, Keshav Mahla⁴, Dhritika Patel⁵
^{1,2,3,4,5} B.Pharm Scholar, Shivam Pharmaceutical Studies & Research Centre,
 Valasan, Anand, Gujarat

Rikin Patel, Vedish Patel, Talha Vahora
 Assistant Professor, Department of Pharmaceutics,
 Shivam Pharmaceutical Studies & Research Centre,
 Valasan, Anand, Gujarat

Dr. Richa Dayaramani
 Principal, Shivam Pharmaceutical Studies
 & Research Centre, Valasan,
 Anand, Gujarat

Abstract:- In current years there's a first rate growth in web purchasing for distinctive commodities like cloth, jewelry and the trade of medication had been extended thru online /internet. Online pharmacy is one of the era improvements this is approximately to create a big call for in the future days. Though it's far handy to get them. There is excessive hazard of self medicine and abuse of drug specially that get nearer below schedule H and schedule X. Online buy of medication is likewise growing constantly because of creation of numerous online pharmacies in India and those online drug shops offer the humans with numerous blessings like domestic shipping of medication, big reductions and beneficial offer. Despite those blessings to the purchaser the protection situation associated with those e- shops also are on rise. For instance, the drugs quality, irrational dispensing, loss of supervision are the high situation arisen from those e-pharmacies, however, this fashion with right guidelines is pretty famous in western international however it's been these days followed in India. Covid-19 disease is spreading everywhere in the international, mostly pharmacy act a pillar at this prevalent state of affairs for the overall community healthiness. Today's e-pharmacy to be tailored due to the fact medicine may be ordered in a single click.

Keywords:- E-pharmacy, E-pharmacy model, Laws of pharmacy, Types of e-pharmacy, Current key players of e-pharmacy, Advantages and Disadvantages of e-pharmacy.

I. INTRODUCTION

- The internet has taken over the world in all aspects. Not sparing any field, it is not surprising that even pharmacies have gone online.
- An online pharmacy refer to a business association that is involved in sale of pharmaceutical preparation like non prescription and prescription only drug, by ordering them online.
- In India the internet usage has been extensively increased over the period of modern year. In this technological era, there is also quick increase in online purchasing of any goods like garments, hardware, staple.
- Online drug purchase has also become a common practice among the Indian patient because introduction of various online retail store in India.
- Coming out of e-pharmacies has considerably transformed the aspect of doctor and patient relationship involving diagnosis, prescription generation & filling.

- These modern shops have enable the patient to buy their medicine online after by passing the safety standard those are provided by the traditional offline method of dispensing .
- India has become the center for the various health concern like fast growing and unrestrained infections, cardiovascular disease, diabetes, arthritis, various kind of malignancies and so on.

A. Online pharmacies may be classified basically as:

- Legitimate net pharmacy web sites offering excessive fine pharmacy service in line with verification standard, and
- Illegitimate online pharmacies that aren't confirmed and might not observe country wide or global expert preferred and regulation.

II. AIM

- A Review on E-pharmacy

III. OBJECTIVES

- To analyze the merits and demerits of E-pharmacy.
- To learn the role of E-pharmacy.
- To study the rules and regulations of E-pharmacy.
- To be familiar with the factors liable for buying medicines from E-pharmacy.

IV. ONLINE PHARMACY^{1, 2}

- An e-pharmacy is a pharmacy that run over the internet by selling drug, medicine and distribution them to the customer.
- Internet making all the things easy & suitable.
- Patient can now buy use of prescription of registered medical practitioner order the medicine via use of internet & receive them at their own doorsteps.
- They are a massive hit & more and more people are choose to them rather than turn down to local pharmacy.¹
- In addition, growing usage of e – prescription with inside the hospital, globally, has additionally brought about the increase of this industry.
- In beyond time hand written prescription technique for supply of medication changed into good however the marketplace of medication distribution is being changed betwixt the growth with inside the e-trade so the medication additionally dispensed on line through giving digital prescription and usually referred to as e-pharmacy and additionally referred to as online /net pharmacy.

- It is anticipated that pharmacy income in India will be stricken by e-pharmacy version approx 5-15%, if it's far held among in large part accesses to the medication for under-served populations
- It is importantly the ones sufferers who've continual disorder in a binuclear family and people sufferers who has now no longer capable of exit to pharmacy
- In 2018 the file suggests that international e-pharmacy marketplace changed into about USD 42.32 billion and it's far anticipated to create round USD 107.fifty three billion through 2025 ,at a CAGR of round 14.26 between 2019 and 2025 (Glob information cord 2019).
- Key players of e-pharmacy are PharmEasy, Medlife, IMG, Netmeds Myra, caring and Pharma secure run net business.

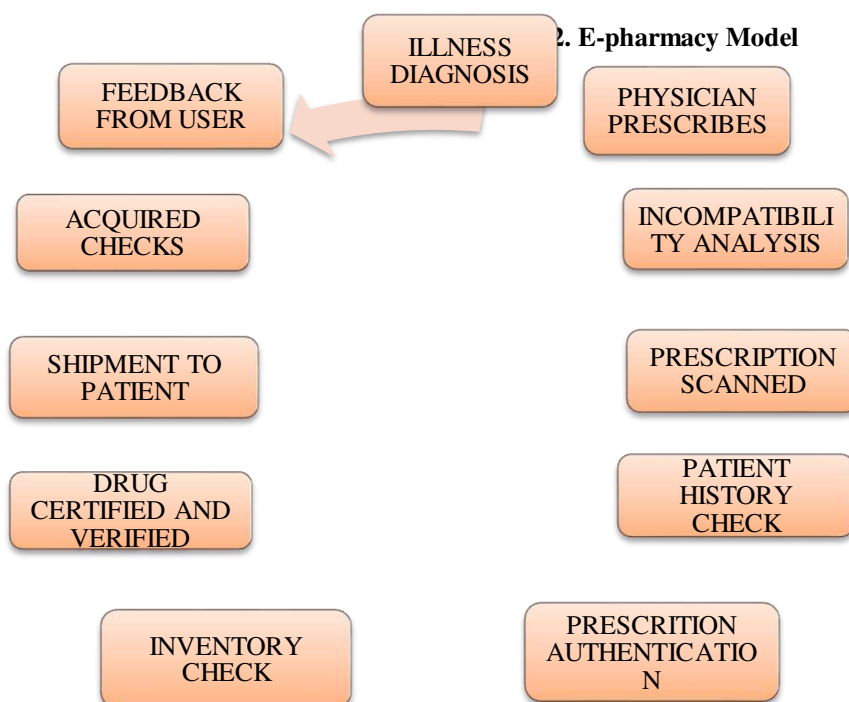
V. WORKING OF E- PHARMACY³

- Customers need to upload the scanned photocopy of the prescription and placing a request for drugs.
- All orders are required to be validated and verified by registered pharmacists.
- The verified prescriptions are forwards to the pharmacy shop from which place the drugs are dispensed by the registered pharmacists.
- The online-based pharmacy is regulated below the Information Technology Act (2000) and this act promotes the connection among customers and pharmacy shops. Electronic records and online interchanges are also covered in this act.



Fig. 1: How online pharmacy work

VI. E-PHARMACY MODEL³



VII. LAW'S OF PHARMACY⁴

According to supreme court declaration, except in emergency cases, doctor cannot consult through phone. As far as India is concerned, there are no dedicated e-health and telemedicine laws in India.

There are no well defined laws for online pharmacies. The laws applicable are:

- Drug and cosmetic Act 1940.
- Drug and cosmetic rules 1945.
- Pharmacy Act 1948.
- Indian Medical Act 1956.
- Laws related to web marketing are defined under the Information Technology Act 2000.

The regulatory stance of the meals and drug management concerning net pharmacies⁵

Under the Federal Food, Drug, and Cosmetic Act, FDA has the legal authority to do so against:

- The importation, sale, or distribution of an adulterated or misbranded drug;
- The importation, sale, or distribution of an unapproved new drug;
- Illegal advertising of a drug;
- The sale or to give a prescription drug without a legitimate prescription; and
- Counterfeit drugs.

FDA officers agree with that due to the fact it's far the drug industry's products being offered, those businesses should play a greater lively function in tracking Internet pharmacies. FDA in addition believes that troubles raised via way of means of Internet pharmacies should be treated via way of means of country regulatory boards and different suitable agencies. FDA purports to lack each the sources and group of workers had to cope with the troubles raised via way of means of Internet pharmacies and on line prescribing. FDA's Office of Regulatory Affairs and Office of Compliance in the Center for Drug Evaluation and Research, however, are reviewing drug income of Internet pharmacies which might be pronounced to seem violative of modern federal law. FDA plans to put in a seek engine to assist its group of workers quick locate web sites promoting prescriptions. Additionally, FDA has sent caution letters to businesses illegally promoting unapproved new drugs online and has contacted online dealers of unlawful overseas pharmaceuticals. FDA considers overseas-primarily based totally Internet pharmacies to be the maximum tough problem. FDA additionally contacts internet site managers and asks for his or her voluntary cooperation in disposing of violative web sites. FDA in addition goals web sites making unsubstantiated claims or misrepresentations of drugs, and web sites failing to offer a honest stability of data concerning the drugs' dangers and benefits. Finally, FDA plans to consciousness its enforcement sports at the regions of unapproved new drugs, fitness fraud, and prescribed drugs offered without a legitimate prescription of unique subject is the sale of unlawful and non-FDA accepted products.

VIII. REGULATION E-PHARMACIES⁵

According to the World Health Organization (WHO), it acknowledges opportunities, benefits and problems of online prescribing. In 1997, the World Health Assembly (WHA) advised the Global Network to work together to regulate the advertising and sales of unlicensed medicines that could pose a health risk to the public. At a meeting in May 1998, WHA told Member States, "Reviewing existing laws, regulations and policies to cover, develop, evaluate and sell health product advertising, promotion and sales issues over the Internet. And implement monitoring, monitoring, and enforcement strategies. "

In conclusion, WHA urged the WHO DG to encourage Member States to identify and record such cross-border interests and to record problematic cases at WHO. The WHA also urged the Secretary to extend the handbook to teach Internet consumers to obtain "reliable, impartial and compatible" information about scientific products. This request produced the WHO Handbook "Medical Devices and the Internet: A Guide to Finding Reliable Information".

A model act for the regulation of internet pharmacies⁵

- Anyone who commercially operates or sells medicines, medicines, or other medicine services at retail or wholesale prices in the state, and pharmacies that provide services over the Internet, are licensed to state pharmacies as drug distributors. Or you need to register.
- Non-resident specialty pharmacy registration is granted by the Board of Directors after disclosure and confirmation by the pharmacy.
- All pharmacies registered or licensed to state pharmacies that sell or sell drugs at retail or wholesale prices on the Internet to persons regularly determined by the state or other states are subject to all state and federal regulatory laws. Only according to the control of the legal distribution of drugs that should be sold as such. Failure to comply may result in government approval or revocation of registration.
- Pharmacies registered or licensed to sell or sell drugs at retail or wholesale prices on the Internet to persons regularly designated by the state or other states are available on the web form for medical consultation. In addition, all pharmacies included in this section should associate the positioning with a website, company, or doctor who has a prescription for the drug, in the sense of an online survey for medical consultations or a website associated with them is forbidden.
- Websites owned and / or maintained by government-registered or licensed drug distributors should clearly display the following data on the website:
 - a) The name under this drug distributor is the full address and signaling of a website that has been licensed or registered to attempt a business in the state and has been licensed or registered.
 - b) The name of the person responsible on the drug seller's license or registration, and a signal of where to contact the person;

- c) The Pharmacy tell number and business hours;
- d) A list of states in which drug distributors may wholesale or retail prescription drugs, and a list of states in which drug distributors may legally ban wholesale or retail sales of prescription drugs.;
- e) The name of every druggist dispensing the drugs;
- f) The name, company address, phone number, and officer or homeowner of the internet business that provides prescription drugs (if completely different from the pharmacy or doctor);
- g) A privacy policy that guarantees the validity, accuracy, and security of electronically submitted prescription orders. In addition, pharmacies need to ensure the protection of personal information stored on computers and transferred between computers.
- h) The name, address, and phone number of each state drug law enforcement agency that an individual may attempt to do business with. This may include a link to the Drug Enforcement Department's information processing system and / or its email address.
- i) The date the knowledge displayed on the site was last updated. In addition; this data needs to be updated monthly.

IX. DRAFT RULES ON E-PHARMACY³

The MoHFW, in the notice G.S.R. 817 (E) published a draft regulation in August 2018 explaining the sale of drugs by e-pharmacies as a revision of drug and cosmetics regulations.

A. Key points from the draft rules licensing

Anyone with the intention of performing the business of E-pharmacy will need to register with the Central Licensing Authority (CLA) by providing complete information in accordance with Form 18AA together with a registration charge of Rupees 50,000. The CLA is a licensing agency appointed through the central Government under the D&C Rules (1945). If the e-pharmacy is charged by a registered pharmacist and the internet portal is situated in India only the registration is granted.

Form 21 AA under Rule 67N is used for the grant of registration, the validity of three years when all requirements of the applications are fulfilled. For the renewal of registration Form 18AA together with specific documents are submitted.

B. Registration

The specified conditions for the registration of an e-pharmacy registration holder are enacted in rule 67-M. A number of conditions encompass being complying with Information Technology Act, information's about patients to be preserved confidential, the availability of medicines being formed towards cash generated over the e-pharmacy portal, reporting the Central License Authority (CLA) in the instance of any alteration in the organization of the firm takes place, e-pharmacy proceedings had not been conducted with regard to any medicine mentioned in e Narcotic Drugs and Psychotropic Substances Act, 1985, and the medicines be indicated in the Schedule X of the Rules .

C. Periodic Inspection

The assumption where ever the online pharmacy company is carried out will be inspected every two years by the CLA.

X. PROCEDURE FOR DISTRIBUTION OF SALE OF MEDICINE BY E-PHARMACY³

It is the responsibility of the registered pharmacist in support of the e-pharmacy registration owner to affirm the information of the registered medical practitioner, patients, and set up for dispense of the medicines.

A. E-pharmacy portals

All purchase orders for online pharmacies must be placed mainly by using the E-pharmacy portal. Hence, an E-pharmacy portal is required for each and every E-pharmacy.

B. Protection of privacy

E-pharmacy must preserve entire consumer details confidential comprising prescription relevant data and adhere to pertinent computer-based rules in India. Furthermore, the E-pharmacy portal must be authorized in India and therefore the data acquired must be localized.

C. Prevention of unauthorized sale

All E-pharmacies will need to preserve and upgrade details concerning the medicines available, varieties of medicines presented for purchase, supply chains or seller lists, information about registered medical practitioners, and registered pharmacists.

XI. FACTORS OF ATTRACTION TO BUY MEDICINE ONLINE⁶

- Choice of delivery time and address (18.56%).
- Reduce visits to pharmacy (26.94%).
- Attractive discounts on prices and offers (32.63%).
- Freedom to choose any brand of drugs of given generic name (14.67%).
- Some times they sell drugs without prescription (7.18%).

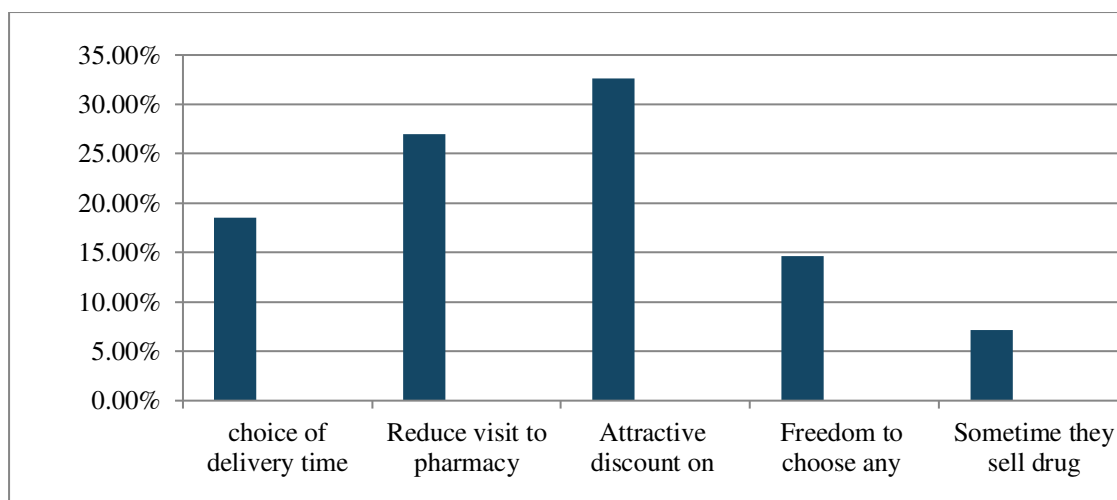


Fig. 3: Factors of attraction

XII. TYPES OF E- PHARMACY³

A. Organized E-pharmacy

- **Market place model** – The official organized connected with community accredited pharmacy store to the end –customer.
- **Inventory based model** – E-pharmacy which is a network service from the off-line certified pharmacy.

B. Non-organized E-pharmacy

In the category of pharmacies, prescription drug are ordered with non authenticated prescription.

Here is not any form on the reliability of the order because of the deficiencies of competent pharmacist.

Also, illegal record retaining and no inspection is an important aspects of concern. The stock primarily based totally version method items and offerings bought to clients immediately in e-business. The market place vicinity primarily based totally fashions method that it affords facts era platform among a client and a dealer via digital.

XIII. SOME START UP OF THE E-PHARMACY IN INDIA²

Sr. No.	Online Startup	Location	Website	Target
	1 mg 2015	India	www.1mg.com	Online pharmacy market-region with health practitioner list and tele session service.
	Healthkart 2011	India	www.healthkart.com	Online keep for health, sports activities and dietary supplements.
	Medlife 2014	India	www.medlife.com	Medlife gives an app for getting medicines
	Emedix 2016	India	www.emedix.com	It offers higher transport and high quality carrier to the customers nation wide.
	Netmeds 2015	India	www.netmeds.com	It gives a online platform selling prescription, non-prescription drug and healthcare and well-being product..
	PharmEasy 2015	India	www.pharmeasy.com	Mobile-first hyper-local platform for drug ordering and diagnostic testing.

Table No.1

XIV. THE ONGOING PREDICAMENT OF E-PHARMACIES IN INDIA⁷

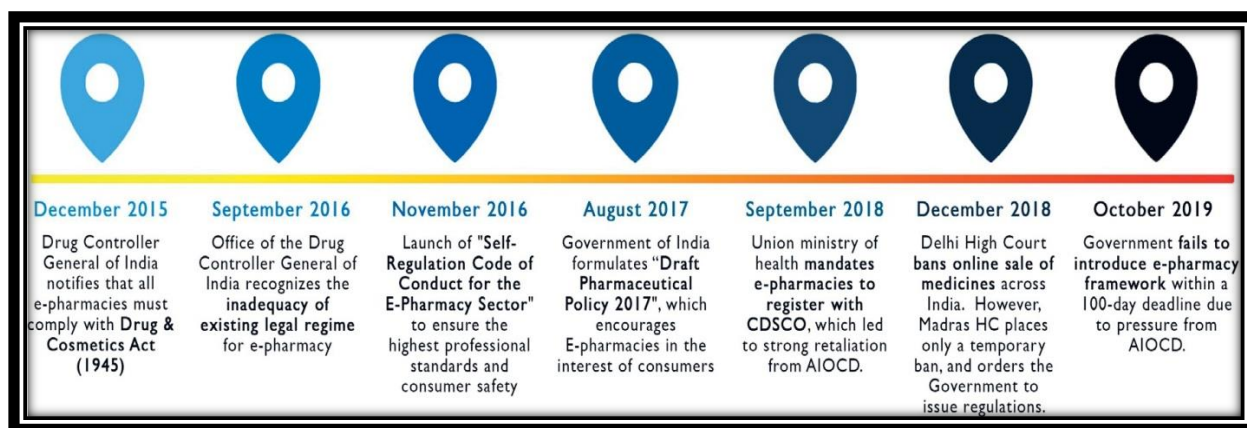


Fig No. 4

XV. COMPARISON BETWEEN ONLINE PHARMACY VS OFFLINE PHARMACY²

Sr. no.	Online Pharmacy	Offline Pharmacy
1.	More convenient as one can order drug online from anywhere	Less convenient as patient need to go to a store to buy medicine
2.	Save time	Time consuming
3.	Offer lower prices by passing the saving on the bulk buying to customer in the form of discount	Margin are lower so they are not in position to offer discount like online pharmacy
4.	Larger inventory and procurement ability	Limited inventory
5.	Many provide suggestion on substitutes and have a great range.	Limited range
6.	Maintain confidentially and privacy of patient about drug and disease	Since patient ask for drug while standing at store they find it hard to describe their need.

Table No: 2

XVI. CHALLENGES & DIFFICULTIES^{2,3}

- For governing e-pharmacies in India a substantial legal guidelines is need.
- To promote drug to the minor.
- Reach of era pushed version to uneducated humans because of lack of know-how approximately internet.
- Speed of internet.
- Prescription associated issue.
- Identity and consistency of immoral e-pharmacy.
- Safety of consumer right.
- Accessibility virtual signature.
- Shipping or sale of drugs to youngsters.
- Safeguard Of client rights.
- Privacy and confidentiality of details interchanged.
- Unclear suggestions and legal guidelines on inter-nation transfer of drugs.

XVII. MEASURE TAKEN TO AVOID MISUSE OF E-PHARMACY^{3,4}

- Before stopping the misuse of online pharmacy, patients must stop the non medical use of prescribed drugs like stimulants, sedatives or opiod ache relievers.

- Patients can take steps to make certain that they use prescription medicinal drugs correctly through:
- Never change a dosing routine without first discussing it with the doctor Sever the usage of some other person's prescription, and never giving their prescription medicinal drugs to others.
- Storing prescription stimulants, sedatives, and opioids safely.
- Patients must well discard unused or expired medicinal drugs.
- Schedule H and schedule X drugs can't be offered without prescription as it is simple for nearby pharmacy shops to confirm the authenticity of a prescription, because it consists of information like registration wide variety of scientific practitioner and call of the health facility and there's no such checking through net shops.
- According to the document of excessive stage authorities assembly seeing that doctor's prescription is obligatory for getting medicines, e-pharmacy will want to require show the portal hyperlink on their web page for authenticity verification through patients or customers.

XVIII. ROLE OF PRESCRIPTION⁴

- E-pharmacies will encourage drug abuse, drug misuse, self-medication, etc. Self-medication is a rampant practice in India, and online sale of drugs would only encourage it.
- Any medication taken without the permission of doctors may be dangerous and even potentially life-threatening.
- A prescription issued by a doctor cannot be re-used randomly. There is a danger that scheduled drugs can be re-ordered and misused by the consumer.
- The D&C Act 1940, and the D&C Rules 1945 has guidelines on the sale of Schedule H and Schedule X drugs. These may be sold only on prescription, and there are particular rules, including for labeling and bar coding.
- Schedule X drugs like narcotics and psychotropic substances. Chances of drug misuse and addiction are higher with the Schedule X category. Schedule X drugs require meticulous storage and dispensing records. The prescription has must be in duplicate and one copy of which is to be retained by the licensed pharmacist for 2 years.

XIX. SOME ISSUES RELATED WITH ONLINE AVAILABILITY OF MEDICINE⁴

- This encourages extra self-medication like OTC.
- The drugs require suitable storage for preserving effectiveness.
- There is not guarantee of temperature manipulate both at their storage space factors or all through transfer.
- The sufferers loose the possibility to have a head to head dialogue with the expert pharmacists.
- The brand names can also additionally frequently purpose uncertainty.
- There can be the equal brand however with extraordinary drugs. Ultimately, the affected person is at receiving and getting incorrect drugs.
- The maximum concerned factor is the sale of antibiotics; India is already combating towards antibiotic resistance for unreasonable use of antibiotic.

XX. E-PHARMACY IMPACT ON ECONOMY GROWTH²

Web medicine have accepted on the time of lockdown through governments, hospitals, E-pharmacies or even company for his or her worker wellness. In 2016 E-Pharmacy marketplace become valued USD 33.03 billion is projected to grow at a CAGR of 14.8% at some point of the forecast period. Use of net elevated each day which effect at the advanced healthcare infrastructure, speedy growing of the public and e-commerce growth. Furthermore, growing adoption of e-commerce and virtual technology in healthcare region is anticipated to propel growth. Online pharmacy marketplace in India is in an rising level compared to the opposite evolved economies and the most important growing economies. In latest years round 250 online pharmacies have sprung up with inside the country.

XXI. E-PHARMACY IMPACT ON SOCIETY²

Some highlighted factor while it's far useful to the society on the pandemic situation. E-pharmacy might be work with different healthcare organizations, professionals, and authorities corporations to deal with in that panic state for customers. As already mentioned E-pharmacies supply upload cost with inside the fitness care device due to the fact it's far extra handy and without problems on hand with inside the pandemic situation while clients aren't pass outdoor because of lockdown and protection problem matter. It is likewise approachable offerings because of transparency of price, medication reminder with fitness care carrier company scheme. Some elements why e-pharmacy profits recognition are India ranks excessive in untimely deaths due to non communicable sicknesses in keeping with the WHO. Day via way of means of day those persistent sicknesses in India are developing very fast. These non communicable sicknesses have an effect on via way of means of fast urbanization, mechanization, multiplied motorization and sedentary lifestyle, mainly in adults. Access of drugs with inside the far off villages is lacking. The web give information of all of the drugs with the assist of licensed professionals and doctors, so it tough for bodily discover consumer. Through telemedicine, a village dweller in India also can have interaction with pinnacle professionals everywhere in massive cities, or possibly even worldwide. The e-pharmacy web sites offer fitness blogs which give facts approximately the medication bought like indications, unfavorable consequences and dosage requirement. They additionally offer facts and focus approximately diverse clinical situations to growth affected person training and focus. E-Pharmacy version additionally supply information approximately the sicknesses, preventive measure, facet impact, natural remedies and unfavorable impact and interplay of drug.

XXII. GOVERNMENT INITIATIVE²

Government of India headed Digital India application perceiving a change of a country into digitally empowered society with financial knowledge. This application insures that assistance of Government's are to be had to residents via way of means of electronically. Government projects in E-fitness care machine. The Ministry of Health & Family Welfare has undertaken diverse projects the usage of Information & Communication Technologies (ICT) for enhancing the performance and effectiveness of the general public healthcare machine. The elements of the e-fitness care are National fitness portal, e-Hospital @ nic, on-line registration machine and SUGAM 28. These authorities projects will offer web platform for the patient's offerings and additionally make humans acquainted approximately on-line fitness machine. Another scheme is Ayushman Bharat Health Insurance Scheme which gives ser-vice to create a healthy, capable, and content. Some e-pharmacy startups with have tie-ups with fitness insurers and clients get drugs at less expensive charges which affectively boom the ratio of purchasing drugs through e-Pharmacy portals. For giving push to the make in India initiative DCGI introduced a plan of single-window facility begin quickly for aiming ease of doing business. Jan Aushadhi Program: This version creates consciousness and

without difficulty get admission to low rate medication to the populace with none compromise in great. Jan Aushadhi shops offer excessive great well-known tablets at low charges, create realization thru schooling and exposure that unnecessary charges of drug does now no longer suggest excessive efficacy and potency, Encourage doctors, extra in particular in authorities hospitals to prescribe well-known drugs.

XXIII. ROLE OF CONSUMER'S⁶

Consumer consciousness is the key to restrain such fraudulent practice; consumer need to be educated about the need to confirm the authenticity of the service provider as well as the product and to keep away from sites that sell drugs without a legal prescription.

Good online pharmacies have well defined safety and quality benchmarks, uncomplicated privacy and security policies, a variable physical address and licensed pharmacist on the roll.

Clinicians should familiarize themselves with a few reputable and legitimate online pharmacies that they may recommend to their patients.

XXIV. CURRENT KEY PLAYERS OF E-PHARMACY

- Netmeds
- Practo
- 1mg
- PharmEasy
- Apollo Pharmacy
- Medlife

XXV. DETAIL INFORMATION OF SOME E-PHARMACY APP ACORDING TO THE YEAR 2021-22⁹*A. NetMeds:*

- Founder and CEO-Pardeep Dadha
- Headquater-chennai ,Tamil Nadu,INDIA
- Last 30 days download-353,365
- Total funding amount-\$99M
- Vice president –Aman madan
- Number of funding : 03

B. Practo

- Location: Bangalorekarn-atakaIndia
- Total funding amount-\$228.2M
- Last 30 days download-19,150
- Number of investor-14
- Co -Founder- Abhinav lal
- Monthly visit-14,376,647

C. Pharm Easy:



- Location- Mumbai ,Maharashtra,India
- Total Funding -\$1.5B
- Last 30 days download-36,272
- Monthly visit: 8,353,060
- Co-Founder- Dharmil Seth

D. 1Mg:



- CEO- Prashant Tandon_ (2012--)
- Headquarter: Gurugram
- Parent: Tata Digital (Majority stake)
- Last 30 days download-245,968
- Founders: Prashant Tandon, Vikash Chauhan, Gaurav.

E. MedLife



- Parent: PharmEasy (100%)
- Headquarters location: Bengaluru
- Number of employees: 5,000
- Subsidiaries: PinHealth; Medlife Xpress (MyraMed)
- Founders: Ananth Narayanan, Tushar Kumar, Prashant Singh

F. Apollo pharmacy:



- Location : Chennai ,Tamil Nadu ,India
- Total funding amount :5.3B
- Monthly visit:6,640,694
- Founder : prathap Chandra Reddy
- Number of funding :1

XXVI. COMPARISON OF SOME E-PHARMACY APPLICATION

E-pharmacy Players Snapshot



	1mg	VS	API Holdings (PharmEasy + Medlife)	VS	Vitalic (Netmeds)
Business Model	1mg Bringing Care to Health Tie-ups with local stores (Marketplace)		PharmEasy MEDLIFE Online + Offline stores (20+ cities)		netmeds.com RIL to go for aggregator model with local pharmacy stores
Funding	\$169 M (\$240 M valuation)		\$650+ M * Parent Valuation: \$1.5B		\$109 M (\$138 M valuation)
Key Investors	Tata, Sequoia, Omidyar Network, Bill & Melinda Gates Foundation, Maverick Ventures		Prosus Ventures, TPG, Naspers, Temasek, Matrix partners, Times Internet, Orios		Reliance Retail Ventures, OrbiMed Healthcare Fund
# of App installs (Dec 2020)	16.1 M		Pharmeasy: 12.7 M Medlife: 10 M		5.1 M
Revenue from operations (FY20)	\$47.7 M		Pharmeasy: \$85 M Medlife: \$48.4 M (FY19)		\$6.2 M

*Doesn't include Medlife

XXVII. ADVANTAGES OF E-PHARMACY^{1,2,4}

- Money saving.
- Time saving.
- Consumer comfort is increased.
- Medicines accessibility is improved.
- Easy accessibility to medicine.
- 24/7 available possibility.
- Policy of refund.
- One can without problems examine drugs in terms of cost.
- Grows in purchaser facts & facts interchange.
- Privacy on buy of medicine.
- Delivery of drugs at favored area at favored time possible.
- Increased distribution.
- Increased desire as wider kind of drugs accessible.
- Convenient for a few sufferers and vintage age those who can't go away their home.
- Better best of medicine because of desire of many brands.
- Discounts and offers on prices
- Freedom to select tablets of any brands.

XXVIII. DISADVANTAGE OF E-PHARMACY^{1,2,4}

- Chances of drug abuse.
- Lack of patient counseling.
- Counterfeit/fake/outdated medicines.
- Probability of drug abuse.
- Misdiagnosis of drug is a possibility.
- Encourage people to self-medicate.
- The clarity and quality of drugs are not guaranteed.
- Economic privacy concerns.
- There is a risk associated with purchasing drugs online.
- Some e-pharmacies sell drugs without a prescription, which can have dangerous consequences.
- Illegal substances are easily accessible.
- Without consulting a doctor, an electronic prescription is issued.
- Affects the offline pharmacist's commercial enterprise.
- Online physician and pharmacist confirmation does not address labeling and packaging issues.
- Temperature touchy drug delivery is complicated.
- Differentiation among valid and illegitimate web sites for e-pharmacy is tough.
- Unavailability of online services in many places.

XXIX. CONCLUSION

- At the end of project on Online pharmacy ;
 - By doing work on online pharmacy we learn many new things about the online pharmacy and it was a wonderful learning experience for us.
 - We learn a proper rules and regulations, proper usage steps of e-pharmacy and factors of attraction of online pharmacy.
 - By the survey on e-pharmacy we know the proper advantages and disadvantages and we know about the current online application.

ACKNOWLEDGEMENT

We have worked hard on this project. However, it might now no longer had been viable without the kind of guide and assist of my individuals. We would really like to increase our honest thanks to all of them.

We are extremely thankful to Mr. Rikin Patel, Assistant Professor, Shivam Pharmaceutical Studies & Research Centre for their assistance and continuous supervision as well as for providing necessary information about the project and also for their sustain in completing the project. Her regular assistance and motivation to share her vast knowledge made us understand this project and its manifestations in great depths and helped us to complete the assign tasks in good time.

We also like to thanks Dr. Hetal Solanki, H.O.D, S.P.S.R.C and all the teaching staff who helped us anytime whenever we need any help.

We acknowledge our deep experience of gratitude to our loving dad and mom for being a steady supply of idea and motivation. We additionally thank our buddies who've performed a great function at some stage in the project and life.

REFERENCES

- [1.] S. V. Chordiya, B. M. Garge "E-pharmacy VS conventional pharmacy", A Review article, IP International Journal Of Comprehensive and Advanced Pharmacology:, 2018, Page No.121.
- [2.] Singh H, Majundar A , Malviya N, "E-Pharmacy Impact on Society and Pharma Sector in Economical Pandemic Situation"; A Review, "Journal of Drug Delivery and Therapeutics", 2020; Page No.335-336.
- [3.] A.Roshani, G.M Pavithara, Venugopal. N, "E-Pharmacy- A boon or bane" Research Article, International Journal of Pharmaceutical Research;, 2021, Page no.1801-1804.
- [4.] G. Prashanti, S.Shravani, Seleha Noorie , "A REVIEW ON ONLINE PHARMACY", IOSR Journal of Pharmacy Biological Science;, Pg no.32-34.
- [5.] Aswin kumar Chaturvedi, Umesh kumar Singh, Amrish kumar, "online pharmacy; A Review article, "ONLINE PHARMACY; An e-strategy for Medication", International Journal of Frontire Research;, 2011,Page No.151-153.
- [6.] Architha Aithal . Shabaraya A. R, "Users Perspective on Online Pharmacy Model", International Journal of Health Science and pharmacy, 2018.
- [7.] <http://dx.doi.org/10.5281/zenodo.1292790>.
- [8.] Gautam sethees, Sandra Puthan, Vaibhav Chaudhary. "E-pharmacies in India ;can they improve the pharmaceutical service delivery?" june 2020, Page No-2. www.jogh.org
- [9.] Mr.Avinash B Thalkari, Mr.pawan N Karwa, Mr. Chandrakant S. **Gawli**, "A Review on Online Pharmacy; Views and Counter views" <https://ajptonline.com>
- [10.] Chetan Dasharathbhai Parikh, Chetan Kalpan Desai , Megha Kiritkumar Shah, Vishalramesh Chandra Mishra, "An Evolution of Online Pharmacies for compliance to Regulatory Criteria and Price Variation of Listed Medicines" , J Young Pharm,2019.
- [11.] <https://www.crunchbase.com/>
- [12.] Sadiya Fartima, Rashmi Malpani, Savita Sodhi , Anupam Ghosh, "E-Buying of Medicines: Trends and Factors Influencing Online Pharmacy", International Journal of Marketing and business Communication, 2019.
- [13.] <http://publishingindia.com/ijmbc/>
- [14.] Dipankar Dutta, Bedanta Bhattacharjee, "Consumer Preference and Buying Pattern of Medicines Through E-Pharmacy During the COVID-19 Pandemic in silchar", Assam , curr Trends Pharm Res , 2018.
- [15.] <https://pharmatour.org/articles/current-status-of-e-pharmacy-in-india-2019-review>.