



A REVIEW ON TELEPHARMACY- MODREN WAY OF PHARMACY

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ABSTRACT

The term “telepharmacy” indicates a form of pharmaceutical care in which pharmacists and patients are not in the same place and can interact using information and communication technology (ICT) facilities. Telepharmacy has been adopted to provide pharmaceutical services to underserved areas and to address the problem of pharmacist shortage. This paper has reviewed the phenomenon of telepharmacy, summarising different experiences in the area of patient care. Advantages and limitations of telepharmacy are discussed as well. In general, different telepharmacy services were effective and accompanied by a satisfaction of their targets. Nowadays, the shortage of health personnel, and in particular pharmacists, is a challenging issue that the health systems have to face. The use of a new technology such as telepharmacy can represent a possible option to solve these problems. However, there are unsolved limitations like legal implications that make greater diffusion of telepharmacy difficult.

INTRODUCTION

Industries of all dimensions are ante up the internet for e-trade and e-market. Eventual remunerations resulting from e-market upsurge when industries involve in the evolution of the economic revolution. Pharmacies are no exclusion to this revolution. Though employed on the scheme for the growth of an online pharmacy, joining a lead structure aimed at the prescription of medicines for minor diseases. It was fascinating to communicate that, the word Pharmacy was frequently animated up with alternative word Tele-pharmacy. This uncertainty drastically emulates an absence of conspicuousness on e-Pharmacy and Tele-pharmacy.

Telehealth is the use of electronic information and telecommunication technologies to provide long-distance health care and education to patients. And these strategies are used to provide patient care services and optimise subsequent outcomes from a distance.

These services include clinical applications such as drug therapy monitoring, patient counseling, prior authorization and refill authorization for prescription drugs, and monitoring of formulary compliance, remote monitoring, with the aid of teleconferencing or videoconferencing, and access to specialist services such as consultation and medical imaging, as well as nonclinical services such as provider training, administrative meetings, and continuing education of health professionals using information and communication technologies (ICTs).

Nowadays, there is scarcity of health professionals. Information and Communication Technologies (ICTs) applied to the health sector to face the problem of shortage of health professionals. Telepharmacy plays a vital role in addressing this issue.

Many patients from the remote and rural area have difficulties in accessing pharmacy services. Small pharmacies in rural areas, nursing homes, hospitals, medical offices, prisons, military bases, ships, etc. are the areas where telepharmacy services are mainly applicable. Endorser of the practice of telepharmacy believe that it is the most favourable way to provide patient care to rural and other medically underserved areas across the country.

Telepharmacy is a new opportunity for pharmacists to sprout and ally with technology to benefit patients. It endorse pharmacists to expand their role and access more people than ever.

Purpose of Tele-pharmacy

For rural and remote communities, as a technology Tele-pharmacy holds significant promise to improve access to pharmaceutical care. Clinical pharmacists are healthcare professionals trained to ensure medication-related assistance to hospital personnel and patients. The access to this service in rural and/or remote areas will overcome the shortage of healthcare providers. Tele-pharmacy provides various roles for the pharmacist, like dispensing, administrative and clinical pharmacy services. Being a dispensing pharmacist filling of

prescription and counseling the patients will be possible in video conferences. Practicing in a remote area, the clinical pharmacist can work along with physicians by maintaining electronic health records. Patient safety improves services backstop physicians in rural hospitals when their pharmacists are not on their premises. By using automation and information technology to widen the coverage of pharmacy services to underserved areas, Tele-pharmacy manages to bridge the gaps in pharmaceutical care to rural communities. It also helps in providing expert opinion to the remote areas that are deprived of advanced medical facilities

Types of Telepharmacies

- Inpatient (remote order-entry review)
- Remote dispensing (retail/outpatient/discharge)
- IV admixture
- Remote counselling

Inpatient (remote order-entry review): Inpatient telepharmacy refers to a pharmacist at a remote location performing remote order-entry services for an inpatient pharmacy at a hospital. The remote pharmacist reviews medication order before the hospital staff administers the drugs to the patient.

Uses: Hospital and health systems benefit from inpatient telepharmacy as it allows for real-time medication order review and verification. Remote order-entry review in a health system serves as extension of the in-house pharmacy. With inpatient telepharmacy, remote pharmacists are able to provide 24/7 coverage or fill-in during peak hours to help supplement and strengthen the inpatient pharmacy.

Remote Dispensing (retail/outpatient/discharge): A remote-dispensing site, or retail community telepharmacy, is a licensed brick-and-mortar pharmacy staffed by a certified pharmacy technician (or two, depending on volume). A pharmacist supervises the technician, reviews prescriptions and performs his or her duties from a remote location via technology. Imagine a traditional pharmacy, except the pharmacist is located off-site.

Uses: Typically used in retail community telepharmacy and outpatient/discharge pharmacy settings, telepharmacy gives patients convenient access to a pharmacist and prescription medication no matter geographic location. Remote dispensing allows healthcare organisations to open retail telepharmacy sites in areas where a traditional pharmacy would not be feasible by sharing the cost of a pharmacist across multiple stores. Additionally, telepharmacy works to reduce readmission rates by improving patient adherence, helps improve financial performance and creates a better patient experience all while expanding your geographic footprint.

IV Admixture: The Joint Commission on Accreditation

of Healthcare Organisations (JCAHO) defines IV admixture as, “the preparation of pharmaceutical product which requires the measured addition of a medication to a 50 mL or greater bag or bottle of intravenous fluid.” In layman's terms, IV admixture is the mixing of IV solution administered to patients in a hospital setting.

Uses: Hospital pharmacies can save time and money by implementing telepharmacy in the IV- admixture cleanroom. If a pharmacist can review the IV admixture remotely, they save the time needed to suit up and enter the cleanroom to review the solution. Freeing up pharmacists' time allows them to focus on clinical activities and other revenue-generating tasks. As an added bonus, implementing an image-based telepharmacy workflow such as ours in a cleanroom allows you to document each step of the process and minimise mistakes.

Remote Counselling: Remote-patient counselling equates to pharmacists providing patient counselling via a live-and-interactive video session, or by some means through telecommunications.

Uses: Remote-patient counselling allows pharmacists to consult and provide a variety of pharmacy- care services to patients via secure, live-video calls. Beyond being beneficial to retail independents, community, clinic and hospital-based pharmacies, remote counselling also provides opportunities for specialty counselling (diabetics/HIV/AIDS), discharge counselling and various clinical interactions with pharmacists.

• Advantages

1. Access to healthcare system: Telepharmacy provides the availability of health care services to the patients located in rural and remote areas. It is beneficial to provide the pharmaceutical care to rural or remote locations that have no or less availability of healthcare services.

2. Patient Satisfaction: Telepharmacy have an advantage of patient satisfaction. Many aged patients did not want to escape their homes to go clinic and hence they miss out their appointments in clinic. Telepharmacy enables pharmacists to review patients medication from remote location. This increases the patients satisfaction with the telepharmacy services.

3. Minimal Shortage Of Pharmacists: Many clinics, medical centres and hospitals in rural area are facing the problem of deficiency of pharmacy services. In these places, medications are provided without pharmacists. Where there are no pharmacists are available in rural areas then pharmacy services are carried out by nurses, doctors or other healthcare providers. They may be not trained for such services. This forms non-ideal systems which do not fulfil the government policies related to the quality of pharmaceutical services. Telepharmacy has potential to cope up with these problems. Telepharmacy

addresses the problem of pharmacists scarcity in rural areas and improves access to pharmaceutical services in rural areas.

4. Effective Patient Counselling: Telepharmacy provides the effective patient counselling. Telepharmacy assures gratification of patients with related to the counselling and time needed for receiving medication.

5. Economic Benefits: Telepharmacy has many economic benefits starting a new pharmacy store is more expensive than telepharmacy as telepharmacy only involves equipment and recruitment of pharmacy technician. Multiple sites can be handled by one skilled pharmacist. Hence, minimizes the cost associated with recruitment of additional pharmacists and salary. Telepharmacy also saves travel cost and travel time which are hurdles for rural elder peoples and disabled persons. Travel time and other expenses related with the travels are eliminated as there is no need to go to other sites.

• **Disadvantages**

1. Practical Challenges : Unquestionably, telepharmacy is an excellent concept, but in certain cases, it is challenging to implement in practice. There are many operational and resource challenges in rural hospitals and clinics to implement telepharmacy. Telepharmacy services require more complex and sophisticated equipment with high-speed digital connection which is often restricted in rural areas. Institutional culture is also a significant barrier for implantation of telepharmacy into existing healthcare system. Telepharmacy requires significant modifications in the current work flow for the rural and remote hospitals. They may experience difficulties in adopting these changes. Telepharmacy might often be enormous and less impulsive for both patient and healthcare providers.

2. Pharmacy Regulation Laws: Though telepharmacy has ubiquitous potential, the laws and policies that run the pharmacy functioning do not satisfactorily address the growing industry. There are many policy issues such as minimum duration of time that pharmacist must be on central site, the location of central pharmacist, type of equipment and technology used, and the duty of pharmacist, nurses, pharmacy technicians and other healthcare providers in distribution of medications, need to be taken into consideration. The regulations are important for the operation of overall medication use system, describing role of telepharmacy plays in pharmacy services and in the intensive care settings. Telehealth licensing remains a multi-layered effort with state-by-state inconsistencies that have restrained the wide application of telepharmacy.

3. Security: In telepharmacy, patient's personal and health related information is transmitted over the internet. Safety of information is of most importance as it is necessary to keep this tremendous data transmission

under control.

4. Plenty Of Time, Effort and Money: Initiation of telepharmacy requires enormous time, money and efforts. It also involves connectivity, hardware, software, operational cost and special equipment. Eventually, for rural hospitals having less number of patients, the issue of costing arises to be one of the biggest hurdles to telepharmacy services.

5. Inability To Use Technology: Aged peoples may not be able to adopt this technology. The pharmacist's may not be able to fully address patient's condition as there is no face-to-face interaction between patient and pharmacist.

Telepharmacy For Health System

- Improve clinical quality
- New opportunities for care
- Serve more patients at the point of care

Improve clinical quality

- Leverage your pharmacist beyond the traditional pharmacy counter, allowing them to spend more time with patients. Your pharmacist spends more time focused on revenue-generating tasks.
- Use a low-volume or centralized pharmacist to eliminate the need for on-site verification
- Bring the consultation to patient's bedside for discharge prescriptions using a portable device

New opportunities for care

- Open new locations or extend hours of operation to serve additional patients and customers and reduce outmigration of your patients
- Capture 340B or other high margin prescriptions at the point of care

Serve more patients at the point of care.

Open new telepharmacy or satellite remote dispensing locations where it is convenient for your patients. This leads to better access and a better patient experience.

- Urgent care and primary care clinics
 - Specialty centers
 - Rural communities
 - Nursing home campuses
- **Telepharmacy for retail pharmacies-** As retail telepharmacy emerges, we should remember the history of telepharmacy in the health system environment. Every single client that we have supported added telepharmacy to their hospital without reducing the existing professional hours of coverage. Despite the immense savings in hourly cost to the organization, clients did not trade on-site pharmacist coverage for telepharmacy coverage. Due to lower volume coverage times and efficiency, a telepharmacy program is likely to be 11-36% of the cost of normal staffing. The conclusion is that telepharmacy is an expansion of pharmacy services designed to improve patient outcomes and safety. The

new telepharmacy legislation in Michigan, recently signed into law by Gov. Whitmer is seemingly designed to make it more financially feasible to operate a pharmacy with lower revenue because the law allows for one pharmacist to oversee up to two remote pharmacies through telecommunication. This, along with the rules requiring telepharmacies not be within 10 miles of an existing pharmacy, make it seem like we could see pharmacies opening in small rural communities, making healthcare more accessible to residents. This option is great for communities that are just too small to support a traditional pharmacy. However, we should keep in mind that prescription reimbursement is at an all-time low, and creating a new pharmacy full of expensive drugs is not only expensive, but risky. This simply suggests that there is a limit as to the volume and revenue that would support even a retail telepharmacy operation.

Multiple ways to apply Telepharmacy Initiatives in a Retail Pharmacy

- Expanding service hours
- Remote pharmacy technicians
- Pharmacy call centres
- As needed telepharmacist support

Expanding Service Hours

Another great use of retail telepharmacy is making a pharmacy more competitive in its community by expanding service hours. In eligible stores, it is possible to envision having the pharmacist leave at the usual time, and allowing telepharmacy to take on additional hours of service, hand in hand with the client pharmacy's technicians and clerks. Low cost, extended hours, makes it easier for patients to get to their prescriptions earlier, later, or on days the pharmacy was otherwise closed. This model is financially attractive because it does not require a large investment in a new inventory, building, and start-up costs.

Remote Pharmacy Technicians

Another clever telepharmacy plan doesn't involve the pharmacist at all. In some stores, there are "slow times". While there is always work to be done, sometimes pharmacies staff a team of pharmacy technicians and pharmacists solely based on the technician's skill in prescription processing. An opportunity may exist in some stores to enable a pharmacist to stay on duty without a pharmacy technician, and let telepharmacy technicians process prescriptions for that pharmacy.

Like above, a remote pharmacy technician can also help an overly busy store. If there are predictable, or unpredictable workload peaks, consider additional throughput by leveraging a remote pharmacy technician. Some states have shortages of pharmacy technicians caused by new licensing requirements. In order to stretch existing resources, telepharmacy technicians at certain times may be a way to lower overall cost while shortening wait times.

Pharmacy Call Centres

Another non-pharmacist use of telepharmacy would be through the use of a pharmacy call centre. Phone calls are very important, as long as they are coming from a patient or provider. And, while decent phone technology exists, routing calls from providers, patients, and solicitors away from your counter may be a way to do more with less. Indispensable's new pharmacy call centre can manage calls, and keep the on-site staff focused on patient care.

The call centre can also be used after hours. Whether patients have clinical questions, or there is a need to be compliant with insurance contracts ensuring that you have an after-hours emergency service program, a pharmacy call centre team offers a store a competitive edge.

As Needed Telepharmacist Support

Telepharmacists are also available to support a retail operation by supporting the clinical functions of the pharmacy. Comprehensive medication reviews (CMRs) and Tips, adherence reminder calls, clinical follow-up, and handling patient drug information requests may be a way to off-load some work that tends to bog down the pharmacy throughput. A well-designed Telepharmacy program may enable a pharmacy to take care of sporadic, but clinically and financially important tasks, more efficiently than attempting to work them into existing efficient workflows.

Multiple types of telepharmacy services

- Telepharmacy service for hospitals
- Telepharmacy services for retail pharmacies and clinics
 - a. Retail pharmacist telepharmacy services
 - b. Retail pharmacy technicians telepharmacy services
 - c. After hours services for retail and long-term care pharmacies
- Telepharmacy on call

Telepharmacy Today: As with most telehealth solutions, telepharmacy practice has since expanded from a traditional rural retail to hospitals, physician offices, long-term care facilities, prisons, military bases, naval ships, prisons, etc. As more telepharmacies open across the US, many people are finding additional uses for this type of delivery of these services, especially in urban areas. Modern telepharmacy systems utilize newer technology to minimize the impact of the telepharmacy into the managing pharmacies' workflow. They also seamlessly communicate with the Pharmacy Management Systems to ensure the best possible experience. This has made it possible to put telepharmacies in more locations, provide more convenient access for patients, and grow the pharmacist's impact as an important member of the patient care team.

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