

Exploration of Telepharmacy: Bridging the Gap

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Disclosures

- No disclosures or conflicts to report.

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Pharmacist and Technician Objectives

- Describe the process of telepharmacy.
- Discuss advantages and disadvantages of telepharmacy.



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Telepharmacy Definition

- Branch of telemedicine
- Method used in pharmacy practice where a pharmacist uses telecommunication technology to oversee pharmacy operations or provide patient care services
- Examples
 - Drug review and monitoring
 - Dispensing
 - Oral and sterile compounding verification
 - Medication therapy management (MTM)
 - Patient assessment and counseling

National Association of Boards of Pharmacy. Model Act. Available at: www.nabp.net/publications/model-act/. Accessed August 1, 2014.

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History of Telepharmacy

- 2001: North Dakota became 1st state allowing retail pharmacies to operate without a pharmacist present
- 2001: Community Health Center of Spokane, Washington started a telepharmacy program at 6 urban and rural clinics
- 2002: North Dakota telepharmacy began
- 2003: Alaska Native Medical Center in Anchorage
- 2006: US Navy piloted a program in Florida and Washington
- 2010: US Navy implemented largest telepharmacy program worldwide

Peterson CD, Anderson HC. The North Dakota Telepharmacy Project: Restoring and Retaining Pharmacy Services in Rural Communities. *Journal of Pharmacy Technology*. 2004;20: 28–39.

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Process of Telepharmacy: Community Setting

- 1
 - Patient takes prescription to local telepharmacy
 - Gives prescription to registered technician to prepare script for dispensing by pharmacist
- 2
 - Pharmacist reviews patient profile
 - Examines digital picture of completed prescription for accuracy through videoconferencing equipment
- 3
 - Once approved by the pharmacist, pharmacy technician brings patient to private consultation room for counseling by the pharmacist
 - Patient counseling is required for all patients receiving telepharmacy services

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Process of Telepharmacy: Hospital Setting

- 1 • Registered pharmacy technician prepares requested medication
- 2 • Medication checked by a pharmacist at a different location through audio and video computer equipment before being dispensed and administered to patient
- 3 • A pharmacist may verify a prescription remotely to be dispensed from an automated dispensing machine

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Illinois Law: Remote Dispensing Site (RDS)

- Written prescriptions presented to RDS shall be scanned into electronic data processing equipment to ensure the original prescription may be viewed at both the RDS and home pharmacy site.
- All written prescriptions shall be delivered and filed to the home pharmacy within 72 hours.
- A remote site is under the supervision of the pharmacist-in-charge (PIC) of the home pharmacy.

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Illinois Law: Remote Dispensing Site (RDS)

- The technician must have one year of experience and be certified.
- Each pharmacist at the home pharmacy may electronically supervise no more than 3 RDS that are open simultaneously.
- A pharmacist at the home pharmacy must verify each prescription before leaving the RDS.
- Counseling must be performed on all new and refill prescriptions by a pharmacist through audio and video link prior to the release of the prescription.

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Illinois Law: Remote Consultation Site (RCS)

- No prescription inventory
- May be staffed with a pharmacy technician with knowledge of how to use computer audio/ video link for dispensing and consultation.
- Written prescriptions may be received at RCS.
- Security of filled prescriptions must be maintained by a separate locked drawer or cabinet.
- A separate room is required for patient counseling.

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Illinois Law: Remote Automated Pharmacy Systems (RAPS)

- Maintain prescription inventory.
- A pharmacist or prescriber must approve all orders before they are released from RAPS.
- Dispensing and counseling are performed by a pharmacist at the home pharmacy through audio and video link.
- RAPS must be licensed and is subject to random inspection.
- Dispensed medications at RAPS may only be packaged by a licensed manufacturer or repackager.

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Pharmacist Involvement

- Provide pharmaceutical services to remote telepharmacy sites for all prescriptions.
- Final check of prepared prescription prepared by the technician.
- Perform drug utilization review.
- Mandatory patient education and counseling.
- Pharmacist is responsible for professional oversight of patient care and technicians.

National Association of Boards of Pharmacy. Model Act. Available at:
www.nabp.net/publications/model-act/. Accessed August 1, 2014.
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**Technician Involvement:
Remote Site**

- Maintain prescription drug inventory
- Drug dispensing process
- Obtain prescription order
- Computer drug entry
- Product selection, preparation, packaging, labeling
- Third party billing
- Operate telepharmacy technology

Peterson CD and Anderson HC. Telepharmacy. In: Tracy J, Puskin D, editors. Telemedicine Technical Assistance Document: A Guide to Getting Started in Telemedicine. Office for the Advancement of Telehealth, Division of Health Resources and Services Administration of Health and Human Services; 2004. p.206-240.

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Beginning a Program

- Contact the State Board of Pharmacy
- Apply for telepharmacy license, permit, and registrations
- Assess the need
- Identify and secure a physical location
- Design and purchase equipment and inventory

Peterson CD and Anderson HC. Telepharmacy. In: Tracy J, Puskin D, editors. Telemedicine Technical Assistance Document: A Guide to Getting Started in Telemedicine. Office for the Advancement of Telehealth, Division of Health Resources and Services Administration of Health and Human Services; 2004. p.206-240.

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**Equipment Requirements:
Computer**

- Computer system with the same pharmacy operations software at each site is necessary
 - Adequate Random Access Memory (RAM)
 - Color monitor
 - Disk drive
 - Read/write CD with DVD
 - Speakers
 - Microphone/headset
 - Printer

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**Equipment Requirements:
Video**

- Allows pharmacist to view finished prescription prepared by the technician at the remote telepharmacy site
- Digital camera needs to be of sufficient quality to:
 - Allow the pharmacist to read the prescription
 - View label of the manufacturer’s original drug container
 - View label of prescription vial dispensed to patient
 - Zoom in and read an individual tablet or capsule

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**Equipment Requirements:
Video**

- Digital pictures of prescription can be stored on the computer hard-drive or writeable CD for review at a later time
- Real-time
- Polycom (Preferred)
 - Several videoconferencing equipment systems to choose from
- Cisco HealthPresence 2.5
- Sony

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**Equipment Requirements:
Transmission**

- DSL may be considered but have varying upload and download speeds. Quality of service is not guaranteed.
- Dedicated T-1 lines are ideal for delivering telepharmacy services.
 - Eliminates disruption in times of heavy Internet use

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Equipment Requirements: Security

- Transmission of personal and health related information.
- HIPAA compliant.
- Virtual Private Network (VPN)/firewall must be installed at both the central pharmacy and remote telepharmacy sites.
 - Encrypts information and protects privacy of the information
 - Already in dedicated T-1 lines and Polycom equipment

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Advantages

- Cost efficient
- Improves patient access in geographically limited areas
- Improves patient safety
- Provides 24-hours pharmacist review of all medication orders
- Quality assurance monitoring
- Medication error tracking
- Additional pharmacist coverage
- Technology may be utilized in the retail, hospital, and clinical setting

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Disadvantages

- Equipment malfunction
- Not involving the right people in the project
- State law variation
- Initial start-up costs

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Resources

- North Dakota State University: Telepharmacy
 - <http://www.ndsu.edu/telepharmacy/>
- Pipeline Rx
 - <http://www.pipelinerx.com/>
- ScriptPro Telepharmacy
 - <http://www.scriptpro.com/ScriptPro-Pharmacy-Automation/>
- Envision Telepharmacy
 - <http://www.envision-rx.com/>
- UIIC College of Pharmacy
 - HIV/Hepatitis C Telemedicine Programs
 - Contact: badowski@uic.edu

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Conclusion

- Telepharmacy improves patient outcomes, expands access to healthcare, and enhances patient safety through pharmacist and technician involvement



Questions?

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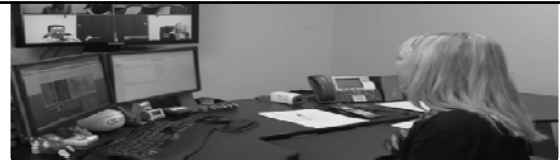
Which of the following is true as it relates to the practice of telepharmacy?

- The technician may provide counseling on prescription refills at the remote consultation site.
- All written prescriptions shall be delivered and filed to the home pharmacy within 72 hours.
- The pharmacist is required to provide education and counseling only on new prescriptions.
- Each pharmacist may be responsible for the oversight of up to five remote dispensing sites.

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Which of the following may be a disadvantage of telepharmacy?

- A. Increased workload for technicians and pharmacists.
- B. Equipment malfunction may lead to delayed patient care and services.
- C. Limits patient interactions with technicians and pharmacists.
- D. May increase the risk of patient medication errors.



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