



Georgia Partnership for Telehealth

9th Annual Conference

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Telepharmacy: The Emerging Telehealth Success

Christopher B. Sullivan, PhD

Introduction to Speaker

Your speaker for this session is:

Christopher B. Sullivan, PhD

Statement of Disclosure:

“I have no vested interest or affiliation with any corporate organization offering financial support of grant money for this continuing education program, or any affiliation with an organization whose philosophy could potentially bias my presentation.”



Learning Objectives for This Session

1. Place telepharmacy within the continuum of telehealth solutions that address problems of access to health care.
2. Identify the health care needs that drive telepharmacy solutions in rural states.
3. Identify key telepharmacy regulations that provide direction at state and national levels.
4. Compare specific use cases and business examples that demonstrate different approaches for implementing telepharmacy solutions.
5. Summarize how telepharmacy will be the new telehealth success.

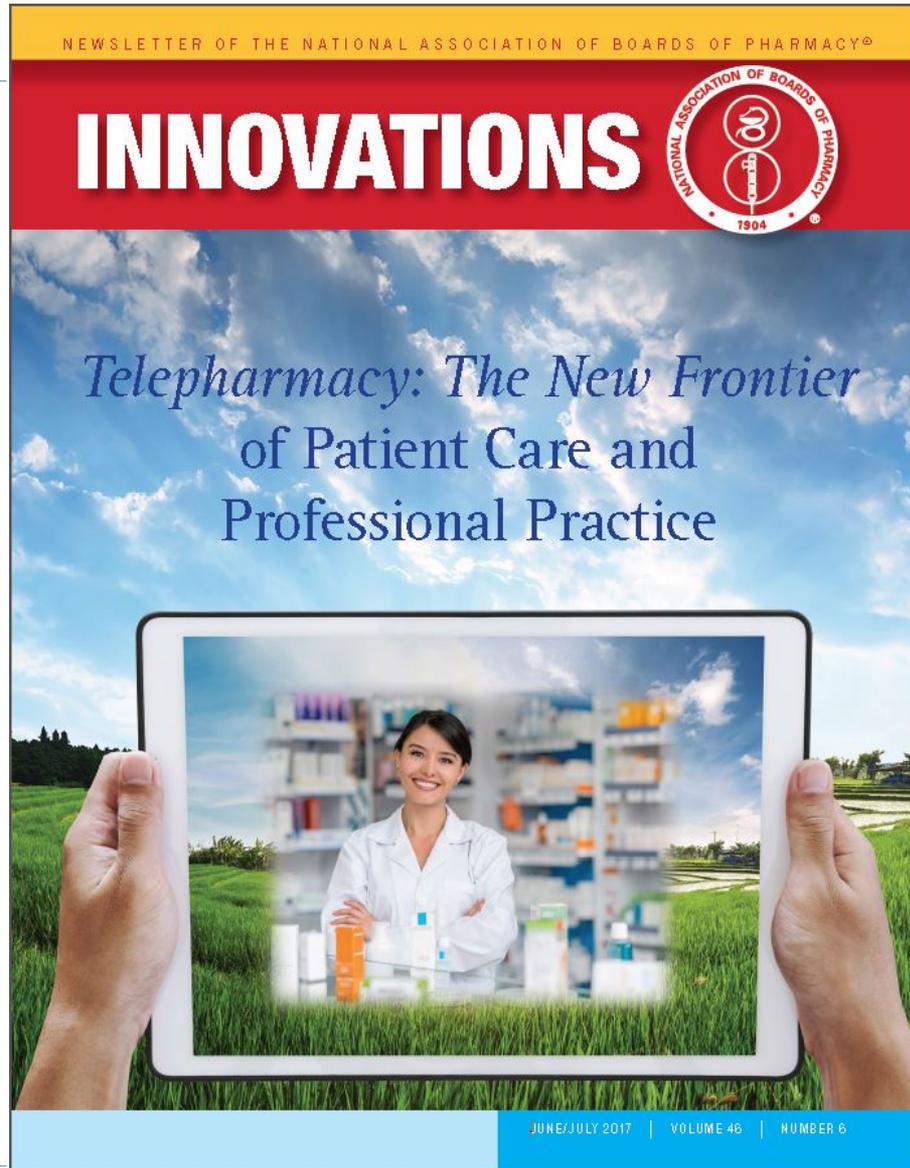


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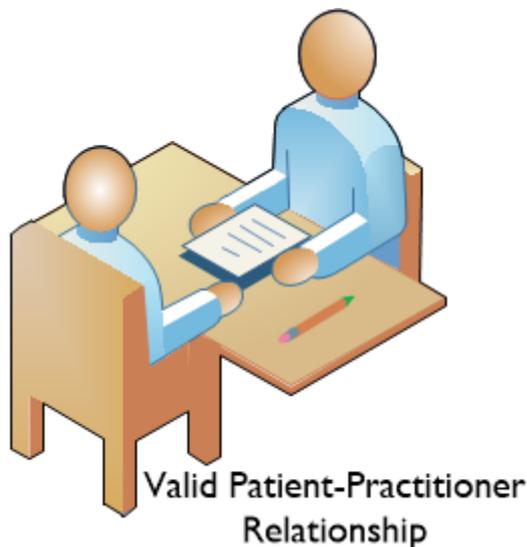
Introduction to Telepharmacy



Telepharmacy: The New Frontier

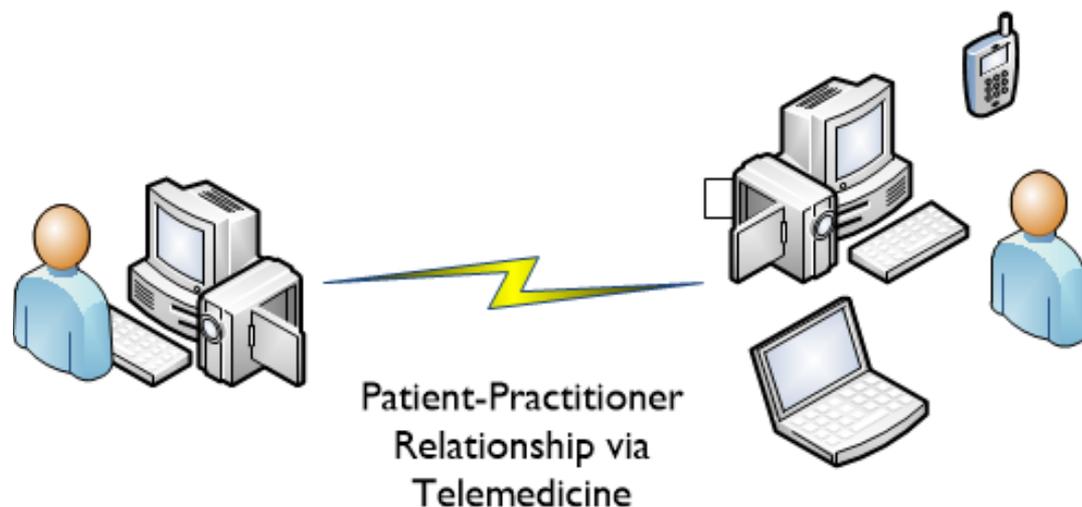


Transition from Face-to-Face to Telemedicine



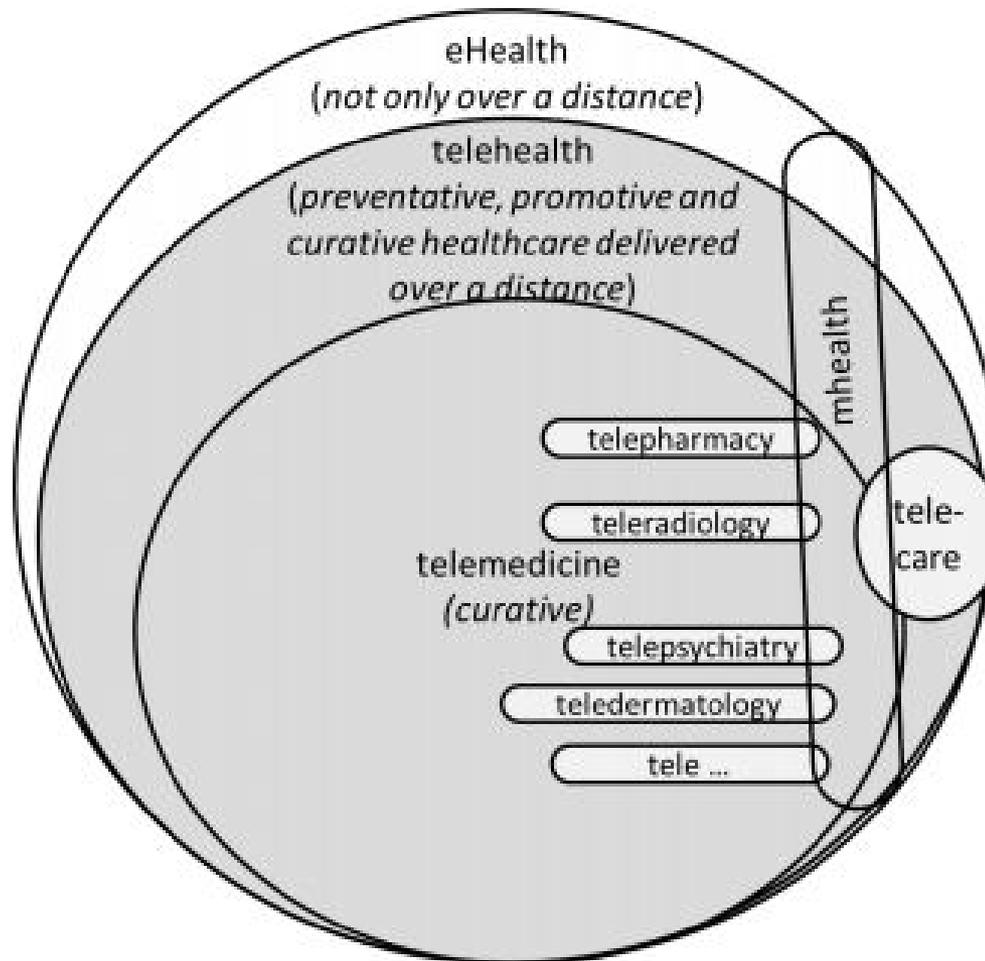
“Telemedicine involves... secure videoconferencing or store and forward technology to provide or support healthcare delivery by replicating a traditional, face-to-face encounter.”
(FSMB, 2014)

The social expectations of interpersonal communication shift with telehealth to include an electronic interface in a treatment setting



Telehealth and Telepharmacy are Synonymous

Figure 1. Telemedicine, ehealth, telehealth, telecare and mhealth.



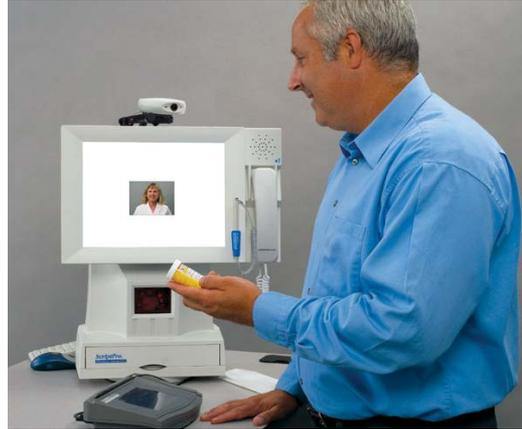
Telepharmacy Applications

There are numerous Telepharmacy services employed for remote pharmacy activities in rural areas:

- Electronically supervising remote technicians who are providing full-service pharmacy dispensing.
- Conducting remote consultations with another pharmacist.
- New pharmacist mentoring and consultation.
- Patient assessment and counseling through Medication Therapy Management (MTM).
- Reviewing new medication orders transmitted by fax or electronically and remotely releasing medication from an automated medication dispensing cabinet.

Example of Telepharmacy Vendor Products

Telepharmacy technologies used for remote pharmacy support



- Pharmacist Remote Inspection and Verification
- Patient Remote Counseling and Patient Education
- Technician Remote Pharmacy Management

Remote Telepharmacy Technologies



Bringing pharmacies back to rural Iowa

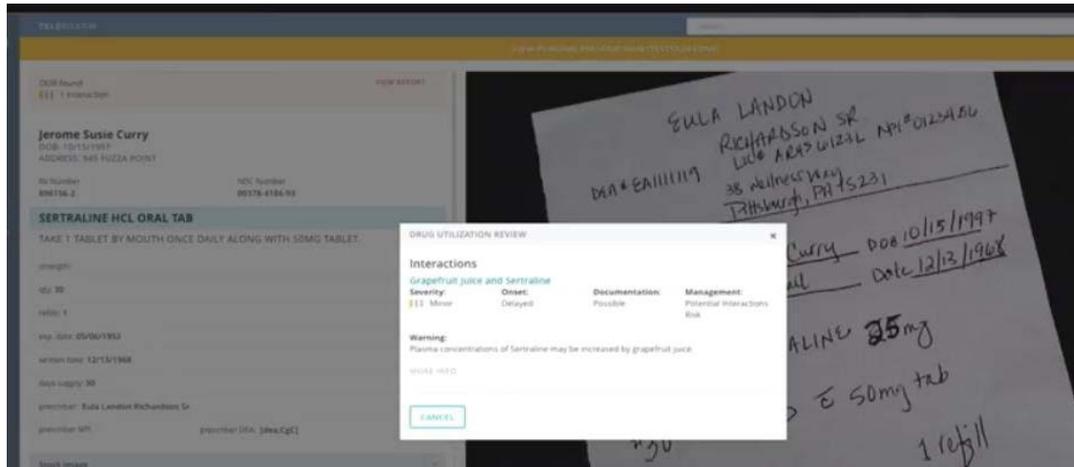
<https://www.iowafarmbureau.com/Article/Bringing-pharmacies-back-to-rural-iowa>

North Dakota Telepharmacy Project

<https://www.ndsu.edu/telepharmacy/>

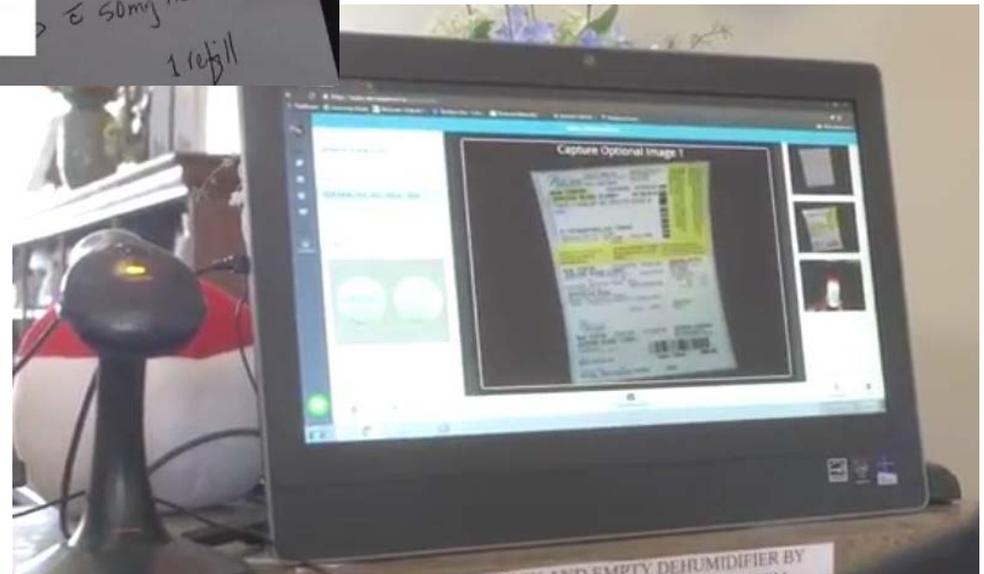
Telepharm Promotional Video

“How Telepharmacy Works”



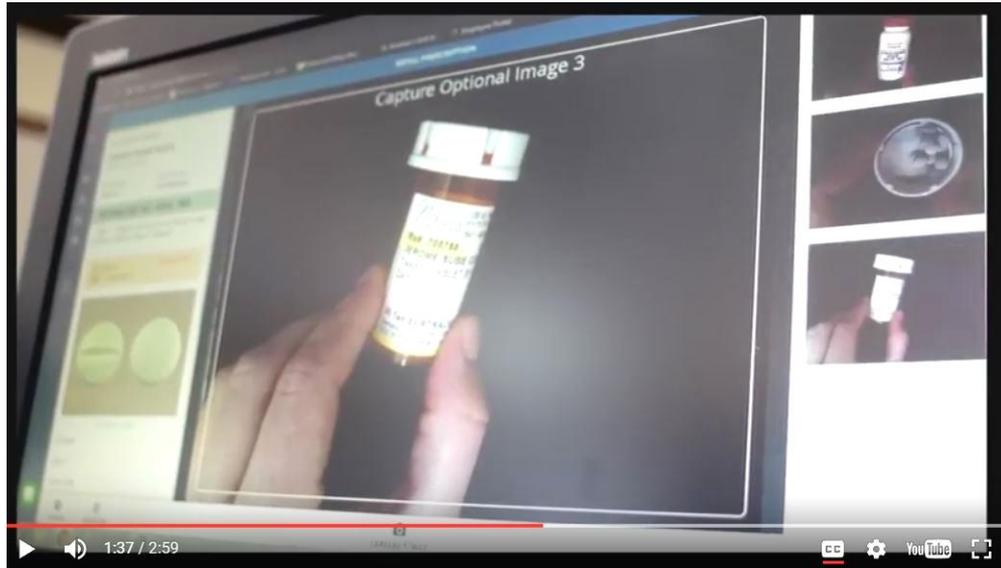
Pharmacist checks prescription accuracy and drug interactions

Technician receives medication instructions from the pharmacist



Telepharm Promotional Video

“How Telepharmacy Works”

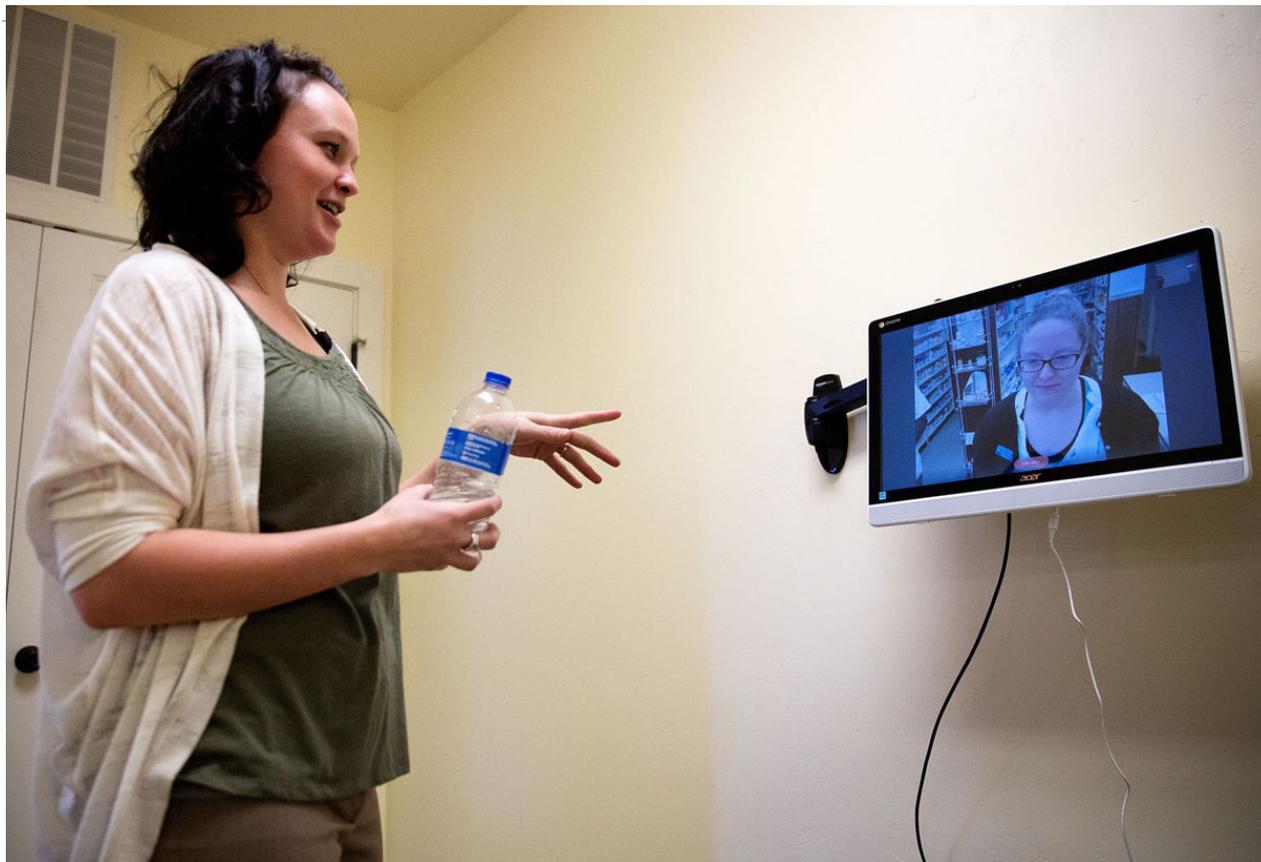


The Technician sends a video of the medication for dispensing

The Pharmacist can talk one-on-one with the customer

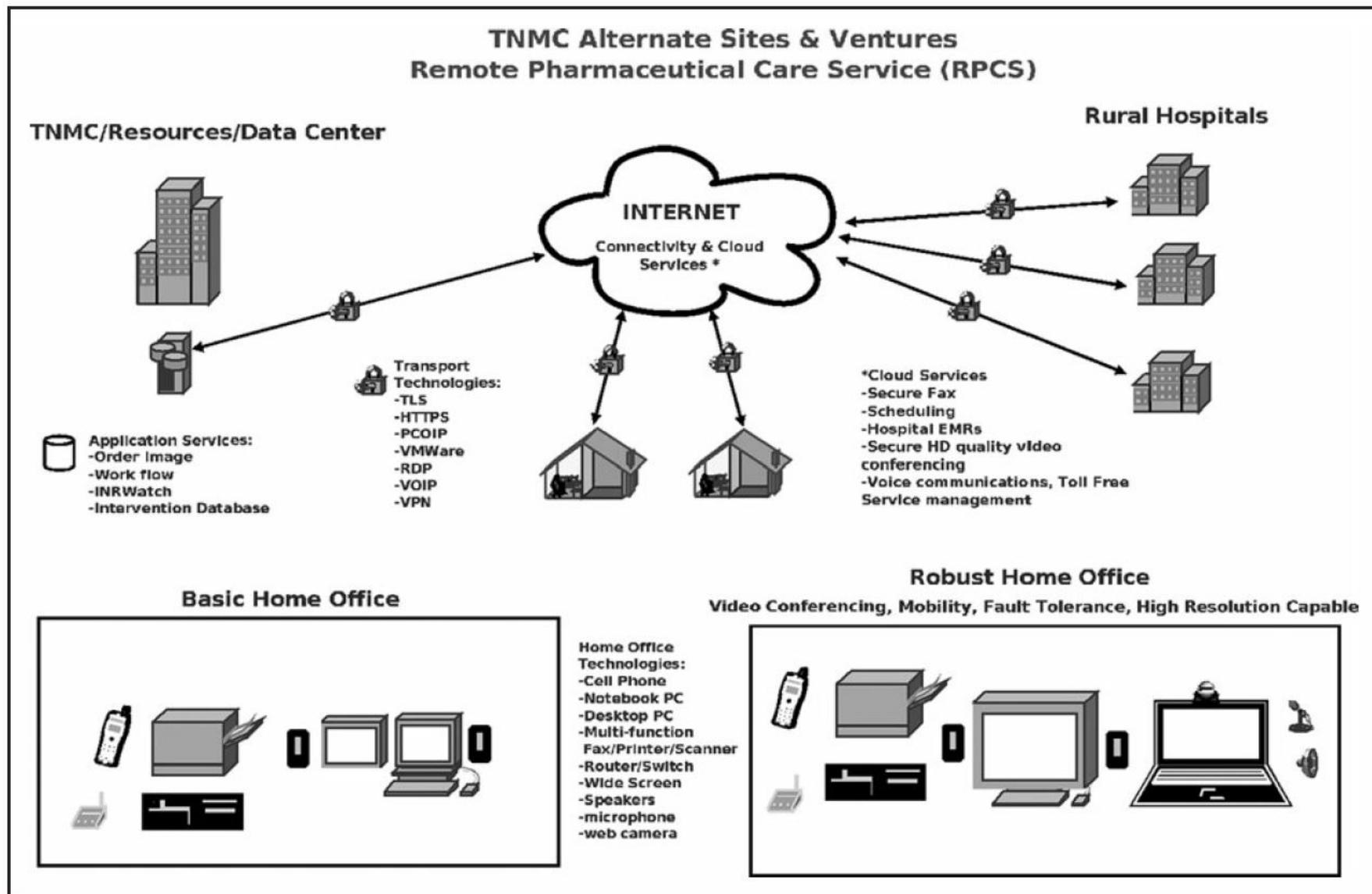


Telepharmacy Technology in the Home

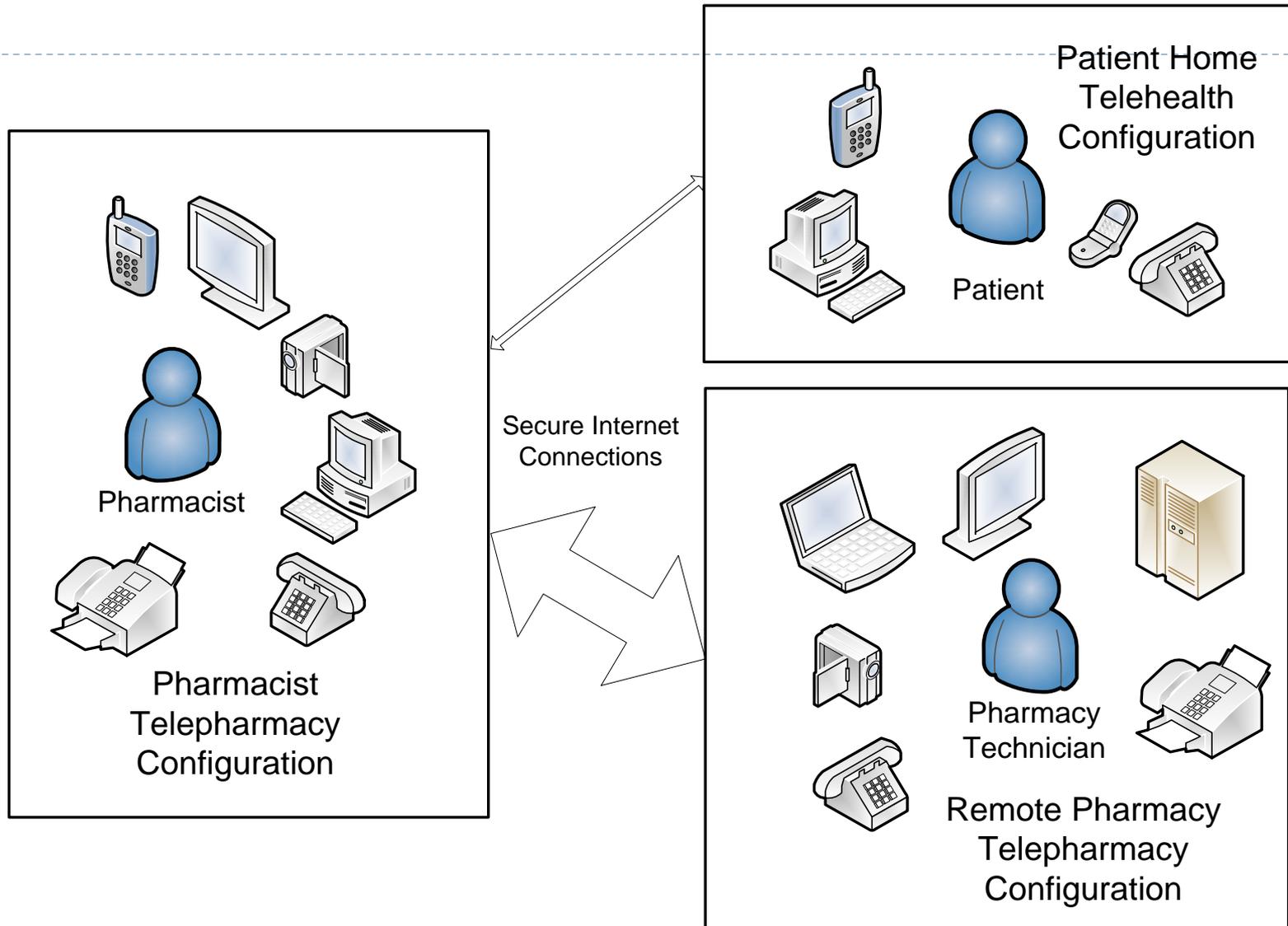


Telepharmacy connects rural patients

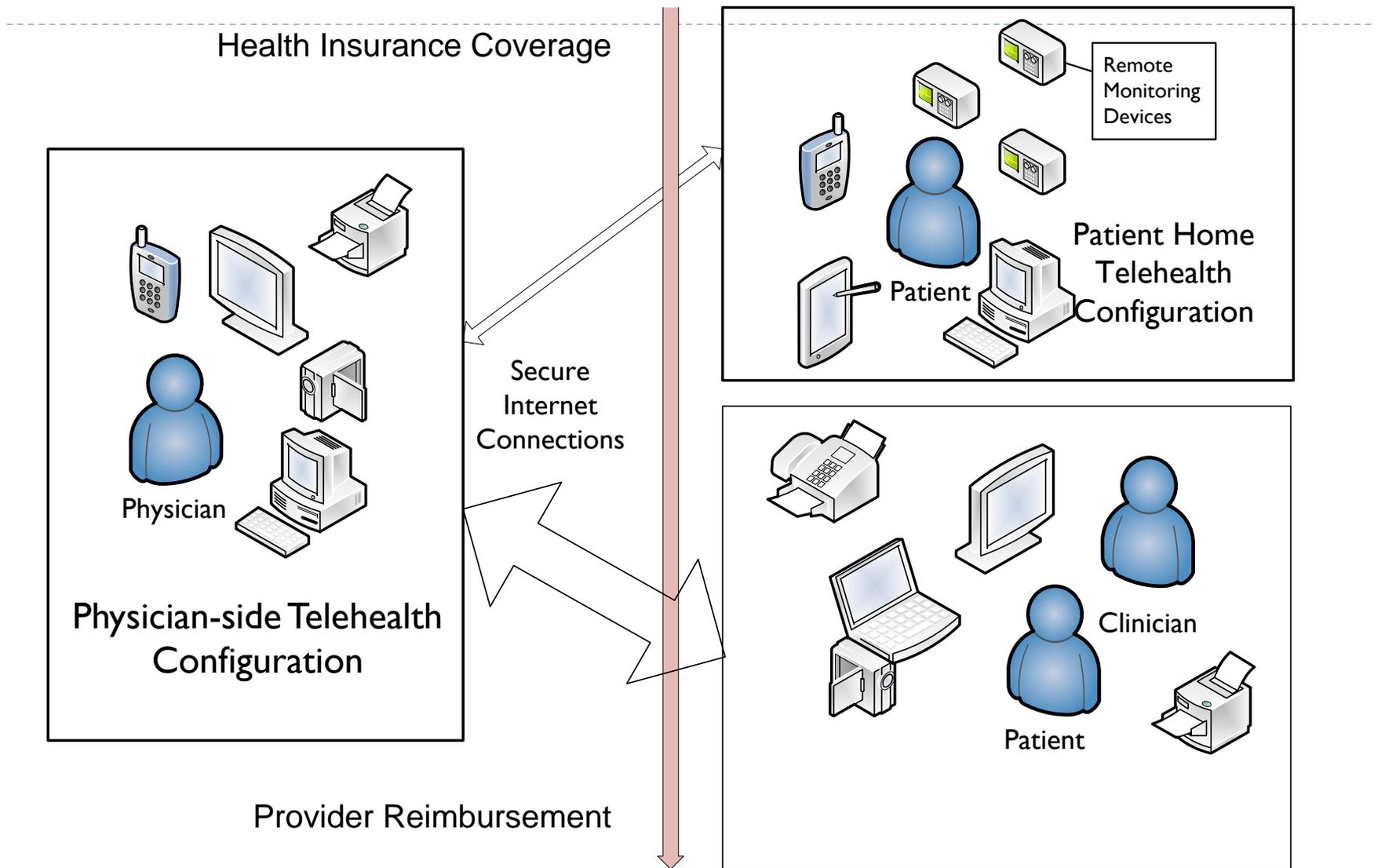
The Nebraska Medical Center Telepharmacy Model



Telepharmacy Technical Details

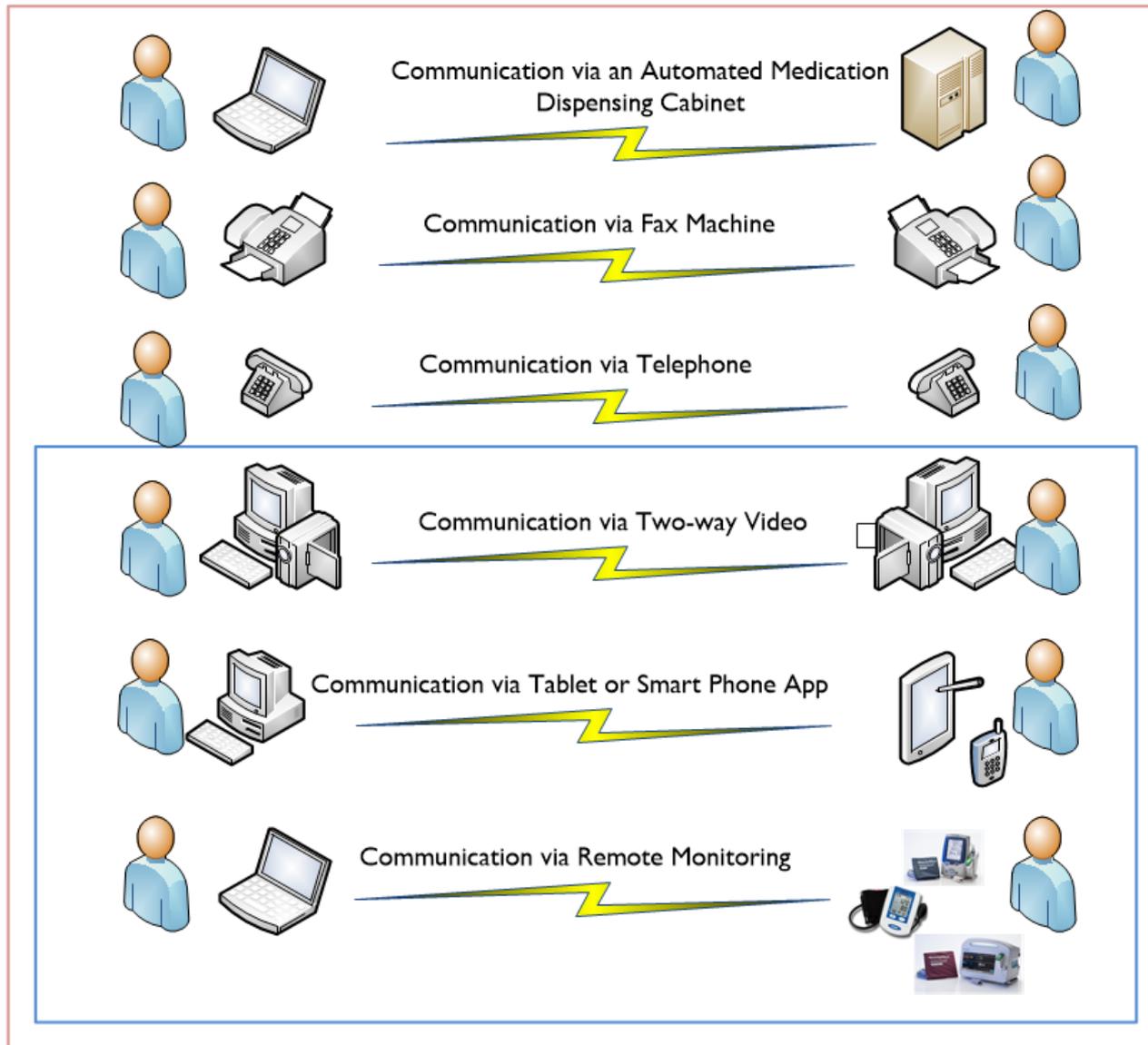


Telehealth Model of Engagement



Technical Scope of Telepharmacy vs Telehealth

Telepharmacy



Telehealth /
Telemedicine

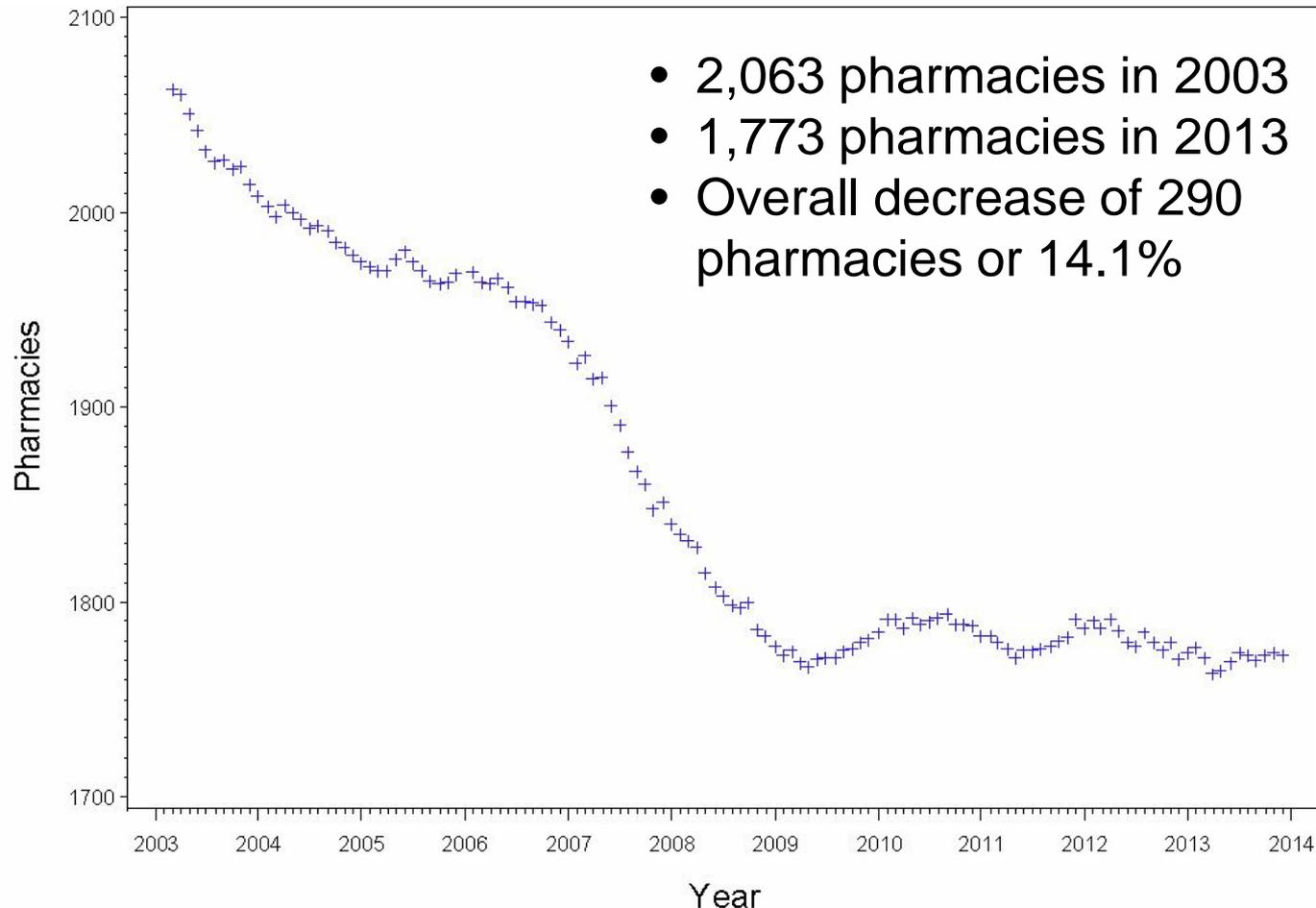


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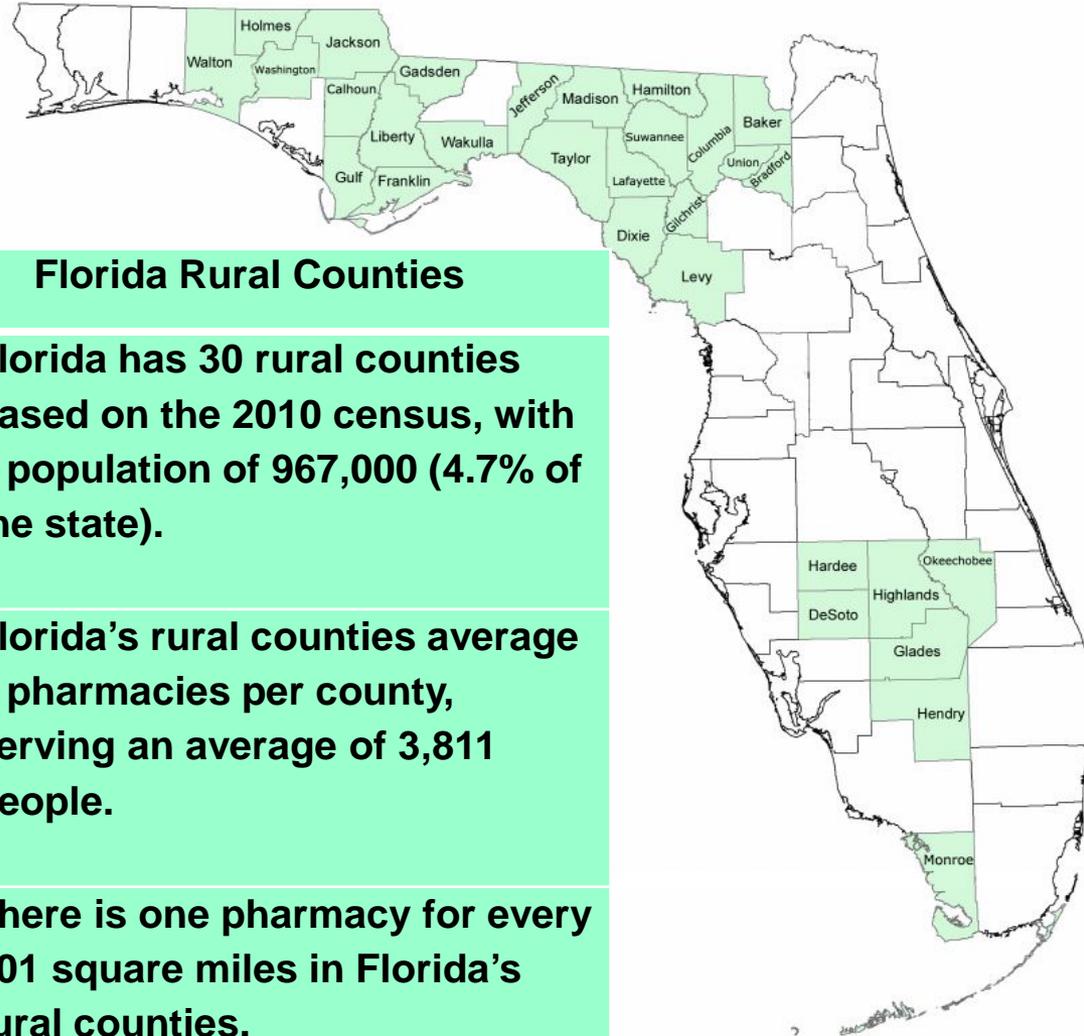
Rural Need Driving Telepharmacy

The Decline of Rural Independent Pharmacies

Monthly Count of Rural Independently Owned Pharmacies That Were the Only Pharmacy in a Community, 2003-2013



Rural Counties in Florida



Florida Urban Counties

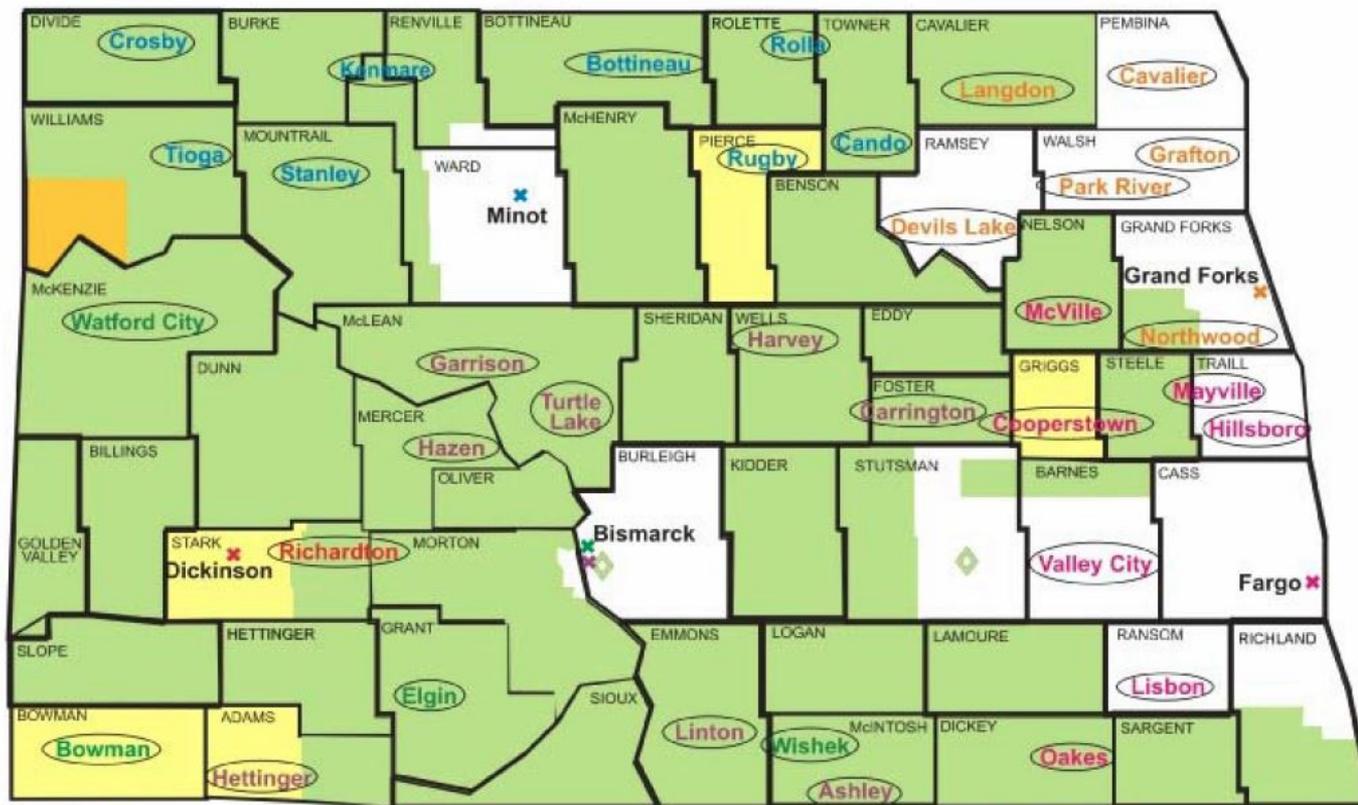
- Florida has 37 urban counties with a population of 19,500,000 (95.3% of the state).
- Florida's urban counties average 159 pharmacies per county, serving an average of 4,128 people.
- There is one pharmacy every 13 square miles in Florida's urban counties.

Florida Rural Counties

- Florida has 30 rural counties based on the 2010 census, with a population of 967,000 (4.7% of the state).
- Florida's rural counties average 9 pharmacies per county, serving an average of 3,811 people.
- There is one pharmacy for every 101 square miles in Florida's rural counties.

ND Telepharmacy Project – Rural Need

Exhibit 2. North Dakota Health Professional Shortage Areas, Critical Access Hospitals, and Network Affiliates



- Designated Geographic HPSAs
- Designated Low Income HPSA
- Proposed Low Income HPSA
- ◆ Designated Facility HPSAs
- Critical Access Hospital
- ★ Trinity Hospital
- ★ St. Joseph's Hospital & Health Center
- ★ Med Center One
- ★ St. Alexius Medical Center
- ★ Altru Hospital
- ★ MeritCare Hospital

5/08



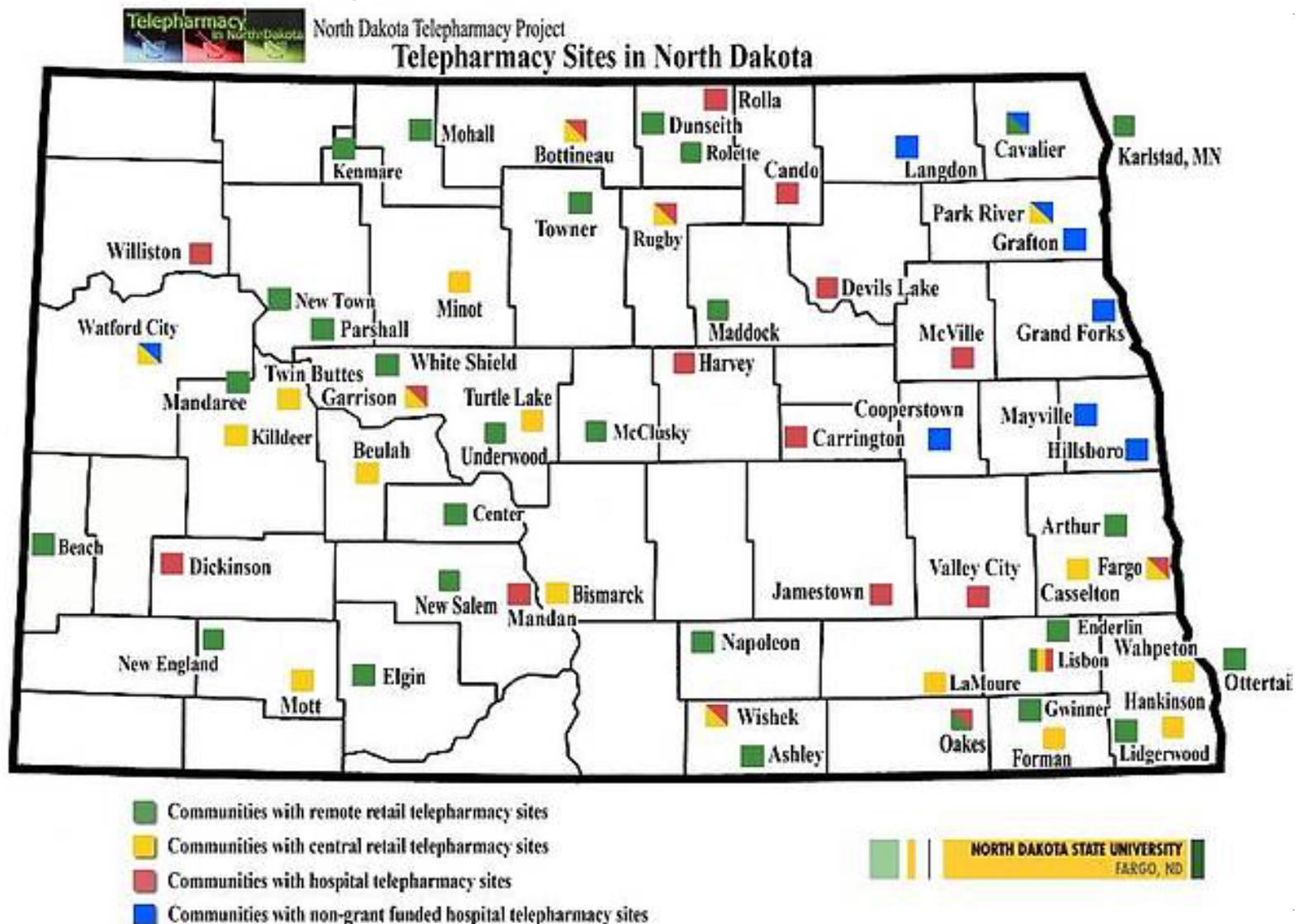
ND Telepharmacy Project – Pharmacy Rules

The North Dakota Telepharmacy rules allow for the following:

- Retail pharmacies can operate in remote areas of the state without a licensed pharmacist being physically present
- A licensed pharmacist supervises a registered pharmacy technician at a remote telepharmacy site:
 - The pharmacy and remote site are connected by a computer, video, and audio links
 - A registered pharmacy technician is physically present at the remote site
 - The pharmacist compares medications via the video link, checking the label checked for accuracy
 - The pharmacist can counsel the patient on prescriptions using the video and audio links

ND Telepharmacy Project Partners

Remote telepharmacy locations in North Dakota





ND Telepharmacy Project - Outcomes

The North Dakota Telepharmacy Project current status:

- 81 pharmacies are involved in the project
- Partnering pharmacies include central, remote, retail and hospital pharmacy sites
- 38 counties covered in North Dakota
 - 2 in Minnesota
- 80,000 rural citizens affected
- \$26.5 million in economic development
- 80-100 new jobs added
- Overall medication error rate at 1% versus 1.7% nationally
- North Dakota telepharmacy permits have increased with no decline in traditional pharmacy locations

Telepharmacy in a Rural Alberta Community Cancer Network

Telepharmacy services initiated in the absence of a pharmacist in rural cancer centers.

- Pharmacy technicians at two remote community cancer centers connected with pharmacists at a coordinating center
 - A video camera lets the pharmacist observe preparation of drugs based on checklists
 - Intravenous preparations were compounded for 47 cancer patients over the course of 109 treatment visits
- The project estimates it avoided about 27,000 miles of patient travel for treatment



Deployment of Telemedicine/Telehealth Technologies in Rural Alaska

Five different telemedicine technologies used to provide primary care services to patients throughout the Anchorage Service Unit

- Alaska Federal Health Care Access Network (AFHCAN) Telemedicine Cart
 - Mobile telemedicine workstation equipped with diagnostic devices to collect clinical data
- Video Teleconferencing (VTC) Cart
- *Medication Dispensing Unit*
 - *Automated medication dispensing machine*
- Home Health-Monitoring Unit
- Teleradiology Image Capturing System



Baptist Hospital South Florida Telepharmacy

ePharmacy Scenario:

A home health nurse feels a patient should talk to a pharmacist about medications that she is prescribed.

- The home health nurse contacts Baptist South Telepharmacy over a two-way video connection to discuss medications with a pharmacist.
- This 96 year old woman and home her health nurse talk to a Baptist South Florida ePharmacist over the computer.

Tele-pharmacy



Clinical pharmacist reviewing medications at home with the patient



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Regulatory Drivers for Telepharmacy



Regulatory Environment for Telepharmacy

Regulation of Telehealth and Telepharmacy is uneven across the fifty states.

In an article published in March 2016 in the Pharmacy Times, the authors comment that:

- “...as the scope of pharmacy practice and telecommunication technology continues to evolve, the breadth of telepharmacy services makes them difficult to regulate uniformly. “
- “Therefore, when states craft their telepharmacy laws, they often impose varying requirements.”



Regulatory approach to Telepharmacy

National Association of Boards of Pharmacy

“Practice of Telepharmacy” means

- The provision of Pharmacist Care Services by registered Pharmacies and Pharmacists located within US jurisdictions
- Through the use of telecommunications or other technologies
- To patients or their agents at distances that are located within US jurisdictions.

The Practice of Telepharmacy does not restrict the pharmacist to interactive, two-way telecommunications.

American Society of Health-System Pharmacists

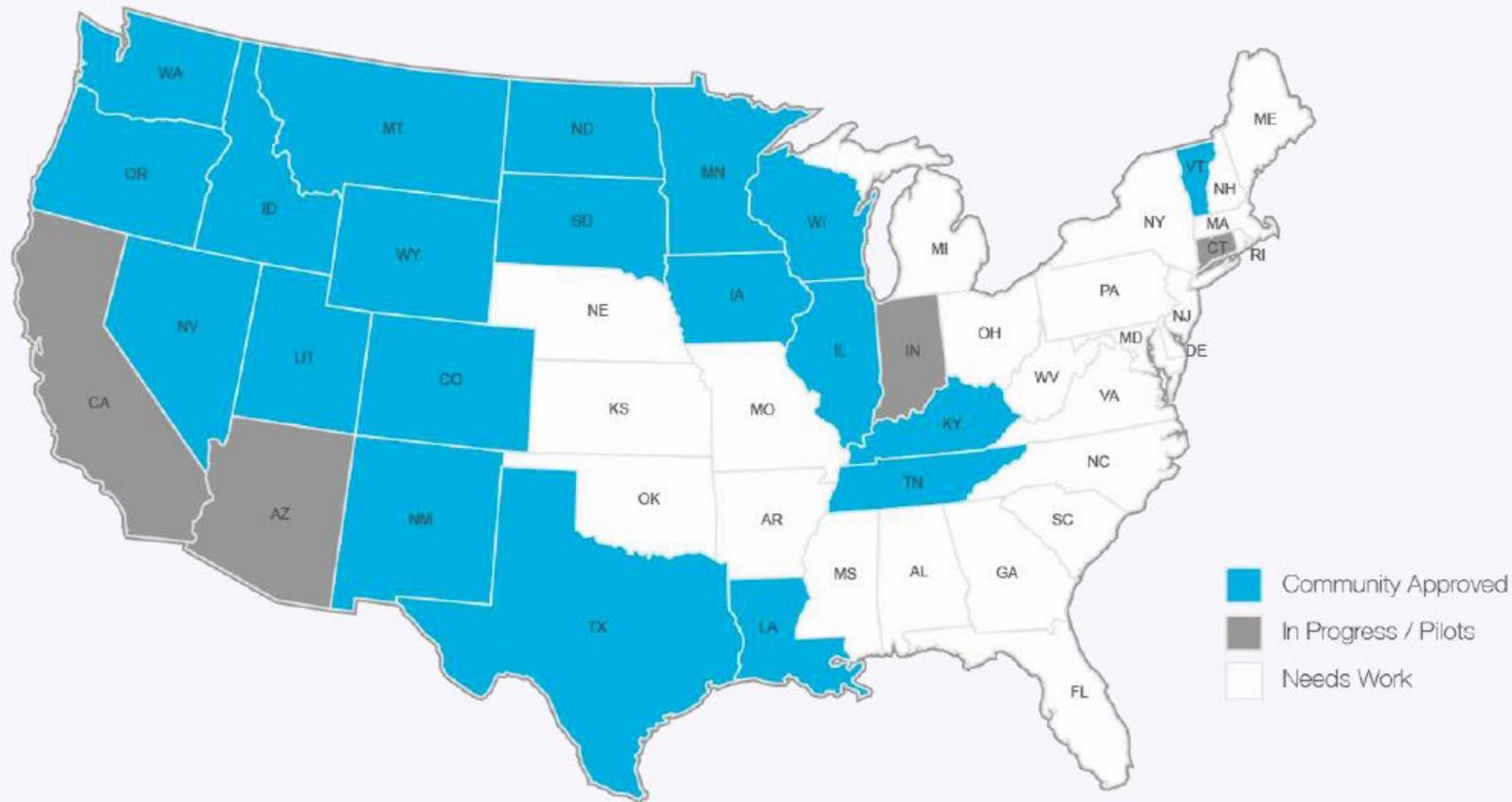
Telepharmacy is “a method used in pharmacy practice in which a pharmacist utilizes telecommunications technology to oversee aspects of pharmacy operations or provide patient care services.”

Telepharmacy operations and services may include:

- Drug review, monitoring and dispensing
- Sterile and nonsterile compounding verification
- Medication therapy management (MTM)
- Patient assessment and counseling
- Clinical consultation
- Outcomes assessment
- Decision support
- Drug information

States with Telepharmacy Rules and Projects

2016



Source: Quarles & Brady LLP analysis & report, July 2016



Telepharmacy Rules and Statutes in 50-States

States where telepharmacy is permitted or with pilot programs and waivers that enable telepharmacy initiatives:

Alaska, Colorado, Hawaii, Idaho, Illinois, Indiana, Iowa, Louisiana, Minnesota, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Tennessee, Texas, Utah, Vermont, West Virginia, Wisconsin, Wyoming, Connecticut, Kansas, Michigan, New Jersey, Virginia, Washington, Arizona, California, Maine, Massachusetts, North Carolina

No rules or legislation authorizing telepharmacy use

Alabama, Arkansas, Delaware, **Florida, Georgia**, Kentucky, Maryland, Mississippi, Missouri, New Hampshire, New York, Ohio, Oklahoma, Pennsylvania, South Carolina, Rhode Island



Regulatory Approach to Telepharmacy

Florida Administrative Code

Practice of Pharmacy

- Does not address Telepharmacy

Florida Statutes

- Florida statutes do not address Telepharmacy.
- CS/SB 848: Telepharmacy bill was introduced in the 2018 Florida Legislative session.
- The Telepharmacy bill passed through all of its committee hearings, but was withdrawn from consideration at the end of the session.



Proposed Florida Telepharmacy Regulations

CS/SB 848: Telepharmacy

Amends Florida statutes to define a Remote Dispensing Site Pharmacy (RDSP).

- Includes every location where medicinal drugs are prepared by a registered pharmacy technician who is electronically supervised by an offsite pharmacist.
- Dispensed to the patient after verification, certification, and counseling by the pharmacist.

An RDSP must be located in a rural area and at least 10 miles from an existing community pharmacy unless the RDSP is located in a hospital or a clinic.

- An RDSP may not lose its permit if a community pharmacy opens within 10 miles of the RDSP.



Proposed Florida Telepharmacy Regulations

CS/SB 848: Telepharmacy

Allows a registered pharmacy technician to dispense medicinal drugs at an RDSP when operating under electronic supervision of an offsite Florida licensed pharmacist.

Exempts a registered pharmacy technician working in an RDSP from restrictions on dispensing medicinal medications without an active pharmacist's license.

The bill exempts an RDSP from the requirement to close when a pharmacist is not present and on duty -

- If the pharmacist is remotely supervising a registered pharmacy technician at an RDSP.



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Business Drivers for Telepharmacy



Telepharmacy Startups in Rural America

Implementation of a Telepharmacy Service to Provide Round-the-clock Medication Order Review by Pharmacists



Mercy Health Network of small hospitals in 14 counties of Iowa installed a pharmacy information system to support around-the-clock medication order review by pharmacists.

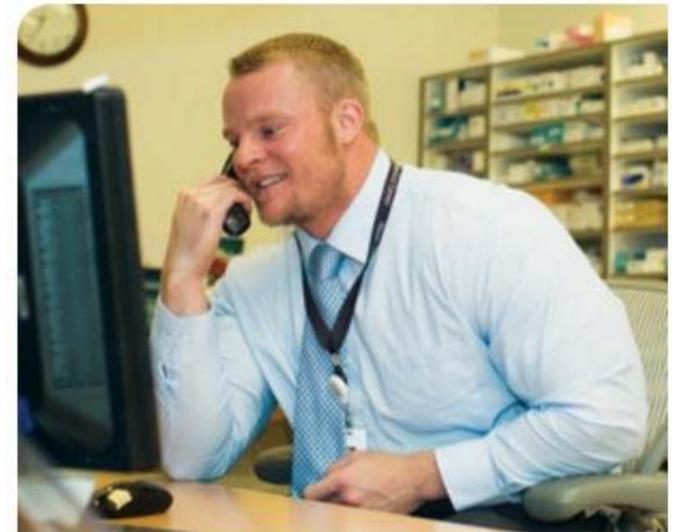
- Twenty-four hour medication order review was achieved by partnering with remotely located pharmacists.
- Critical access hospitals pay \$4 per medication order review.
 - Additional costs for the pharmacists' reviews are directly reimbursed for Medicare patients.
- Overall, about 58% of the total reviews were conducted by the remote pharmacists.

Telepharmacy Startups in Rural America

Around-the-Clock Review Via Telepharmacy

In 2012 the North Canyon Medical Center, a critical access hospital in Gooding, Idaho, had pharmacist coverage only from 7:30 AM to 4:00 PM each day.

- In 2013 the pharmacy director launched a telepharmacy service for five hospitals in which five pharmacists working from home provide 24/7 coverage.
 - Review and verify medication orders
 - Enter orders in patients' EHRs,
 - Check for drug interactions,
 - Review medication strength
 - Consult with physicians as needed



Telepharmacy Startups in Rural America

Telepharmacy at rural hospitals provides big savings, quality improvements



Grand River Hospital and Medical is a 13-bed critical access hospital in Western Colorado

- The hospital has saved about \$300,000 in staffing costs by using telehealth tools to establish a 24-hour pharmacy.

Grand River clinicians use PipelineRx to connect with remote pharmacists who verify orders, after which an automatic dispensing machine doles out the medications.

- About 95% of the medications delivered via the telepharmacy program are located in the dispensing machine.





Telepharmacy Startups in Rural America

Sustainability of the business model underlying the North Dakota Telepharmacy Project (NDTP)

The goal of the NDTP was to create the infrastructure necessary to support the development of telepharmacy sites.

- Survey responses indicated that telepharmacy sites - especially remote sites - generate small positive financial returns for the organization.
- Respondents also reported that the closure of their remote sites would significantly harm the communities they serve.

NDTP has promoted telepharmacy via investment and shared decision-making with pharmacy owners in North Dakota.

- The telepharmacy model is sustainable, even if it does not generate significant economic profit.

Telepharmacy Startups in Rural America

Illinois village loses pharmacy, gains telepharmacy

The pharmacy in the central Illinois village of Dieterich closed several years ago. But residents will be able to fill prescriptions locally again through a new telepharmacy.

- Telepharmacies allow off-site pharmacists to help patients via a secure video link.
- A pharmacist in the nearby city of Newton is providing telepharmacy services at the Dieterich clinic from her pharmacy.
- The telepharmacy will help patients who have been driving to Effingham or Newton to fill their prescriptions.



Telepharmacy Startups in Rural America

Phoning it in: Telepharmacy connects rural patients

For the first time in 15 years, Shoshone residents don't have to travel to another town to get their prescription medications.

- Shoshone Pharmacy opened Dec. 22, 2016 as the first telepharmacy in Idaho to open that is not affiliated with an existing hospital or clinic.
 - Shoshone Pharmacy allows an on-site pharmacist to approve orders remotely and do consultations with patients using live video conferencing.
 - “It’s bringing pharmacy back to rural Idaho.”



Telepharmacy Startups in Rural America

Telepharmacy expansion could help rural pharmacies survive

Newly enacted legislation in Iowa expanded a pilot project that will let so called telepharmacy services go statewide in communities with more than 500 residents, Radio Iowa reported.

- Telepharm, an Iowa City company, makes a licensed pharmacist available to remote locations in the state's first telepharmacy pilot project.
- TelePharm provides web-based pharmacy services.
- The company's platform offers a video conferencing system.



Telepharmacy Startups in Corporate America

Cardinal Health buys Iowa telepharmacy startup

Cardinal Health, a large provider of health care services, recently purchased a four year old Iowa startup, TelePharm, that was establishing telepharmacies across rural parts of the state.

Corridor startup TelePharm snapped up by Cardinal Health

Mr. Miller and his team developed a web based platform that allows pharmacists at a central location to:

- Oversee the dispensing of pharmaceuticals at remote locations.
- Communicate with customers



Telepharmacy Startups in Corporate America

The business case for telepharmacy: Remote dispensing of medications — tomorrow's telepharmacy

PipelineRx offers a telepharmacy technology platform called PowerGridRx.

- “This HIPAA-compliant solution is a remote telepharmacy service for next-generation medication order queue management. It’s an industry-first telepharmacy technology platform.”



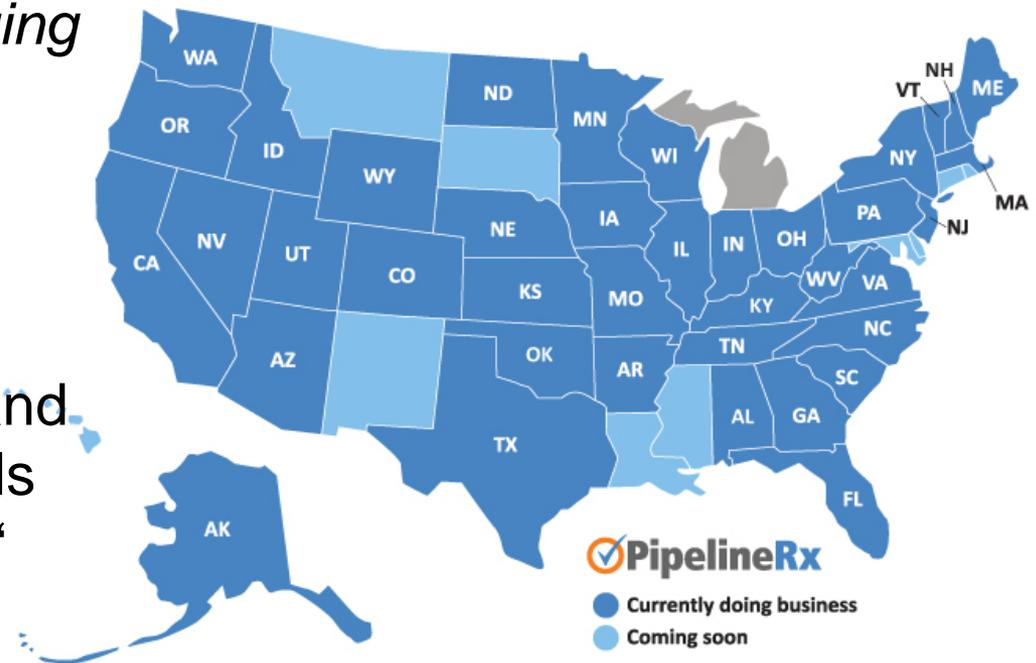
Telepharmacy Startups in Corporate America

Dartmouth-Hitchcock Center for Telehealth goes live with PipelineRx telepharmacy solutions

- “To help optimize pharmacy workflow and improve patient care.”

CPSI and PipelineRx Bringing Telepharmacy Services to Community Hospitals

- “To offer a cutting edge telepharmacy solution designed to help small and rural community hospitals provide first class care.”





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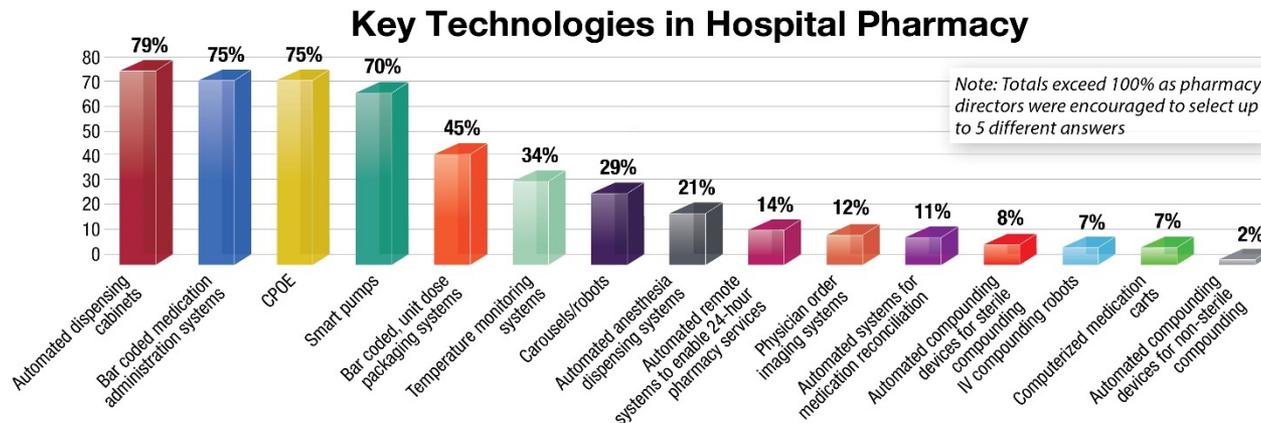
Some Telepharmacy Takeaways

Telepharmacy Predictions

1. The continuing technical development of two-way interactive telepharmacy platforms will make implementing telepharmacy systems more affordable and sustainable.



2. Pharmacies with a strong technology infrastructure will be in a good position to implement telepharmacy solutions.



▲ Automated dispensing cabinets, bar coded medication administration systems, CPOE, smart pumps, and bar coded, unit dose packaging systems were most frequently cited as key technologies in hospital pharmacy for 2016.



Telepharmacy Predictions

3. Telepharmacy implementation promises to be more successful than telehealth or telemedicine services:
- The use of automated medication dispensing systems can improve dispensing efficiency and reduce costs.
 - The use of two-way video improves the accessibility of pharmacists for medication therapy management.
 - Telepharmacy systems with two-way video primarily support direct pharmacist to remote technician interactions within a pharmacy organization.
 - Telepharmacy services do not require health insurance reimbursement to be successful, so they are more sustainable up front.

Questions?



Christopher B. Sullivan, PhD

Image Research, LLC

cbsullivan@imageresearch.com

850-591-2821

This presentation, with notes, is available at:

www.imageresearch.com/telepharmacy

