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**Regulatory and Law Conference**  
Florida Pharmacy Association  
April 22, 2017

**Telepharmacy:  
Path to the Telehealth Future**

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

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1. Explain how Telepharmacy and Telehealth services are part of a single continuum of telecommunication opportunities
2. Describe the type of communication systems required for Telehealth versus Telepharmacy solutions
3. Identify key Telehealth and Telepharmacy rules and regulations at the state and national levels
4. Compare specific use cases that demonstrate different approaches to Telepharmacy
5. Describe some key business examples for Telepharmacy
6. Summarize how Telepharmacy might change pharmaceutical practices in the future

## Baseline Question 1

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Are Telehealth and Telepharmacy the same?

- A. Yes
- B. No
- C. Sometimes
- D. Maybe
- E. Don't Know

## Baseline Question 2

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Telehealth is limited to two-way video interactions between a doctor and patient.

- A. Yes
- B. No
- C. Sometimes
- D. Maybe
- E. Don't Know

### Baseline Question 3

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Telepharmacy is strictly regulated across the United States.

- A. Yes
- B. No
- C. Sometimes
- D. Maybe
- E. Don't Know

## Baseline Question 4

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Prescriptions for controlled substances can be dispensed as long as a doctor has met with a patient over a telemedicine connection.

- A. Yes
- B. No
- C. Sometimes
- D. Maybe
- E. Don't Know

## Baseline Question 5

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Telemedicine can occur with any electronic telecommunications device.

- A. Yes
- B. No
- C. Sometimes
- D. Maybe
- E. Don't Know

# **Florida Pharmacy Association Regulatory and Law Conference**

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## **Introduction**

# Communication Responsibilities of Pharmacists

## Your pharmacist would like to speak with you today...

### The importance of your new medication

There are several reasons why it is important for you to take this medication as prescribed.

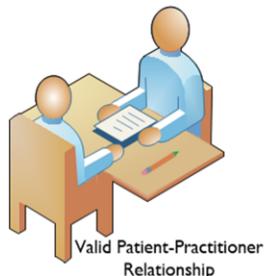
- Taking the medication regularly helps you better manage your health, even if your condition has no symptoms
- Some medications take days or even weeks to achieve their intended effect
- It may take time for your body to adjust to a medication
- Stopping this medication without first consulting with your physician may negatively affect your health

As your Pharmacist, I am here to discuss any questions about your medication and provide direction on how to avoid potential side effects. Please call anytime if I can be of assistance.

### Message Center

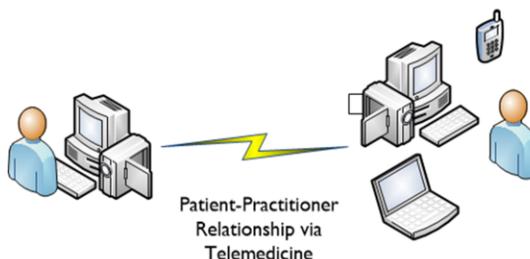
Scanned image of an tag appended to a bag with my prescription in it, courtesy of a large pharmacy company.

## 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.



Telepharmacy: Path to the Telehealth Future

### State and National Boards

#### MODEL POLICY FOR THE APPROPRIATE USE OF TELEMEDICINE TECHNOLOGIES IN THE PRACTICE OF MEDICINE

Report of the State Medical Boards' Appropriate Regulation of Telemedicine (SMART) Workgroup

Adopted as policy by the Federation of State Medical Boards in April 2014

Section Three. Definitions For the purpose of these guidelines, the following definitions apply: “Telemedicine” means the practice of medicine using electronic communications, information technology or other means between a licensee in one location, and a patient in another location with or without an intervening healthcare provider. Generally, telemedicine is not an audio-only, telephone conversation, e-mail/instant messaging conversation, or fax. It typically involves the application of secure videoconferencing or store and forward technology to provide or support healthcare delivery by replicating the interaction of a traditional, encounter in person between a provider and a patient.<sup>7</sup>

“Telemedicine Technologies” means technologies and devices enabling secure electronic communications and information exchange between a licensee in one location and a patient in another location with or without an intervening healthcare provider.

[https://www.fsmb.org/Media/Default/PDF/FSMB/Advocacy/FSMB\\_Telemedicine Poli](https://www.fsmb.org/Media/Default/PDF/FSMB/Advocacy/FSMB_Telemedicine_Poli)

[cy.pdf](#)

## Early Telemedicine



“The busy doctor, fifty years hence, will not be able to visit his patients as he does now. .. on the other hand, his patients cannot always come to him.

This is where the teledactyl and diagnosis by radio comes in.”

### Telemedicine Predicted in 1925

With video screens and remote control arms, any doctor could make a virtual housecall  
By [Matt Novak](#), March 14, 2012

Retrieved from: <http://www.smithsonianmag.com/history/telemedicine-predicted-in-1925-124140942>

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### Telemedicine Predicted in 1925

**With video screens and remote control arms, any doctor could make a virtual housecall**

By [Matt Novak](#)

smithsonian.com

March 14, 2012

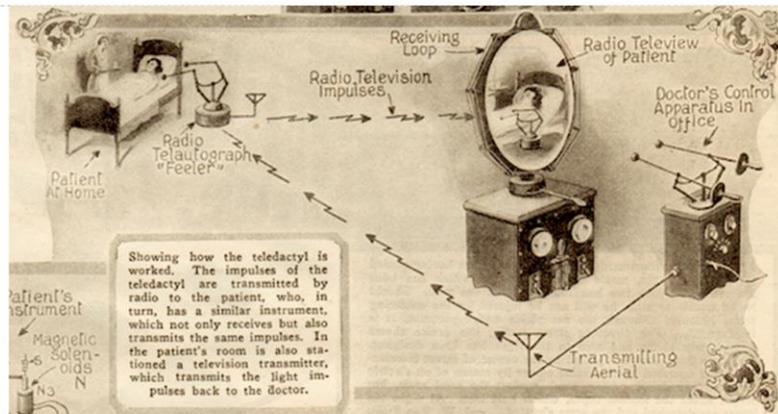
“The Teledactyl (Tele, far; Dactyl, finger — from the Greek) is a future instrument by which it will be possible for us to “feel at a distance.” This idea is not at all impossible, for the instrument can be built today with means available right now. It is simply the well known telautograph, translated into radio terms, with additional refinements. The doctor of the future, by means of this instrument, will be able to feel his patient, as it were, at a distance...The doctor manipulates his controls, which are then manipulated at the patient’s room in exactly the same manner. The doctor sees what is going on in the patient’s room by means of a television screen.”

“The busy doctor, fifty years hence, will not be able to visit his patients as he does now. It takes too much time, and he can only, at best, see a limited number today. Whereas the services of a really big doctor are so important that he should never have to leave his office; on the other hand, his patients cannot always come to him. This is where the teledactyl and diagnosis by radio comes in.”

Read more: <http://www.smithsonianmag.com/history/telemedicine-predicted-in-1925-124140942/#c5xoik02g2bChBXD.99>

Follow us: @SmithsonianMag on Twitter

## Early Telemedicine – The Teledactyl



“The Teledactyl (Tele, far; Dactyl, finger — from the Greek) is a future instrument by which it will be possible for us to “feel at a distance.”

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Telemedicine Predicted in 1925

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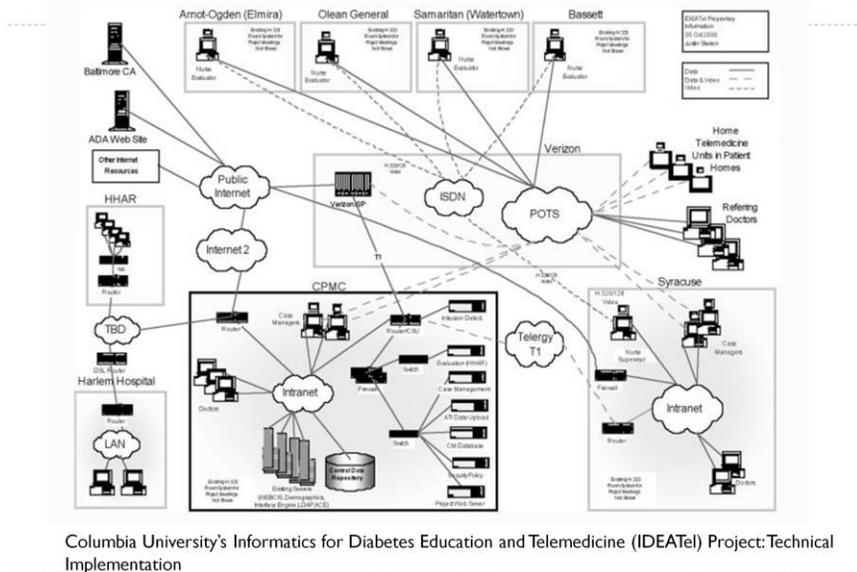
“The Teledactyl (Tele, far; Dactyl, finger — from the Greek) is a future instrument by which it will be possible for us to “feel at a distance.” This idea is not at all impossible, for the instrument can be built today with means available right now. It is simply the well known telautograph, translated into radio terms, with additional refinements. The doctor of the future, by means of this instrument, will be able to feel his patient, as it were, at a distance...The doctor manipulates his controls, which are then manipulated at the patient’s room in exactly the same manner. The doctor sees what is going on in the patient’s room by means of a television screen.”

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Read more: <http://www.smithsonianmag.com/history/telemedicine-predicted-in-1925-124140942/#c5xoik02g2bChBXD.99>

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## Diagram of a Telemedicine Project



Journal of the American Medical Informatics Association

Volume 9 Number 1 Jan / Feb 2002

Application of Information Technology ■

Columbia University's Informatics for Diabetes Education and Telemedicine (IDEATel) Project: Technical Implementation

JUSTIN STARREN, MD, PHD, GEORGE HRIPCSAK, MD, SOUMITRA SENGUPTA, PHD, C. R. ABRUSCATO, MSEE, PAUL E. KNUDSON, MD, RUTH S. WEINSTOCK, MD, PHD, STEVEN SHEA, MD

Abstract

The Columbia University Informatics for Diabetes Education and Telemedicine (IDEATel) project is a four-year demonstration project funded by the Centers for Medicare and Medicaid Services with the overall goal of evaluating the feasibility, acceptability, effectiveness, and cost-effectiveness of telemedicine. The focal point of the intervention is the home telemedicine unit (HTU), which provides four functions: synchronous videoconferencing over standard telephone lines, electronic transmission for fingerstick glucose and blood pressure readings, secure Web-based messaging and clinical data review, and access to Web-based educational materials. The HTU must be usable by elderly patients with no prior computer experience. Providing these functions through the HTU requires tight integration of six components: the HTU itself, case management software, a clinical information system, Web-based educational material, data security, and networking and

telecommunications. These six components were integrated through a variety of interfaces, providing a system that works well for patients and providers. With more than 400 HTUs installed, IDEATel has demonstrated the feasibility of large-scale home telemedicine. ■ J Am Med Inform Assoc. 2002;9:25–36.

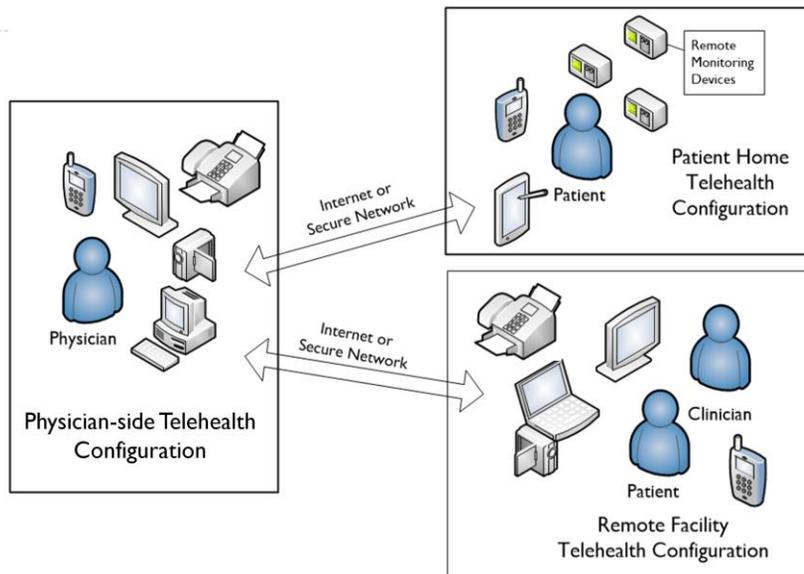
<http://jamia.bmj.com.ezproxylocal.library.nova.edu/content/9/1/25.full.pdf+html?sid=5d698fb3-fe15-4f90-ba57-2b6f623a505c>

Downloaded from <http://jamia.bmj.com/>

on November 16, 2014

Published by [group.bmj.com](http://group.bmj.com)

## Telehealth Technical Details



## Physician Office – Telehealth Technology



<http://www.intechopen.com/books/telemedicine/telemedicine-reducing-trauma-in-evaluating-abuse>

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### **Organizations Aim to Standardize Telehealth Practices**

By Cori Turner and Megan Phillips on June 9, 2014

Posted in Children's Hospitals and Pediatric Providers, Hospitals & Health Systems, Physicians, Post-Acute Care & Nursing Facilities, Technology & Information Systems

<http://www.intechopen.com/books/telemedicine/telemedicine-reducing-trauma-in-evaluating-abuse>

## Clinical Facility Telehealth Equipment

Telemedicine Hardware and Software – AMD Global Telemedicine



See: <http://www.amdtelemedicine.com/corporate/index.html>

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<http://www.amdtelemedicine.com/corporate/index.html>

## At Home – Telehealth Monitoring Technologies

### Telehealth Monitoring Equipment



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<http://www.connectorsupplier.com/101612-cs-medical-bieksha/>

Patient Care in the Medical Market

by [Jenny Bieksha](#) on October 16, 2012

By Jenny Bieksha, Bishop & Associates

October 16, 2012

<http://connectorsupplier.com/images/uploads/101612-CS-Medical-Bieksha-img4.jpg>

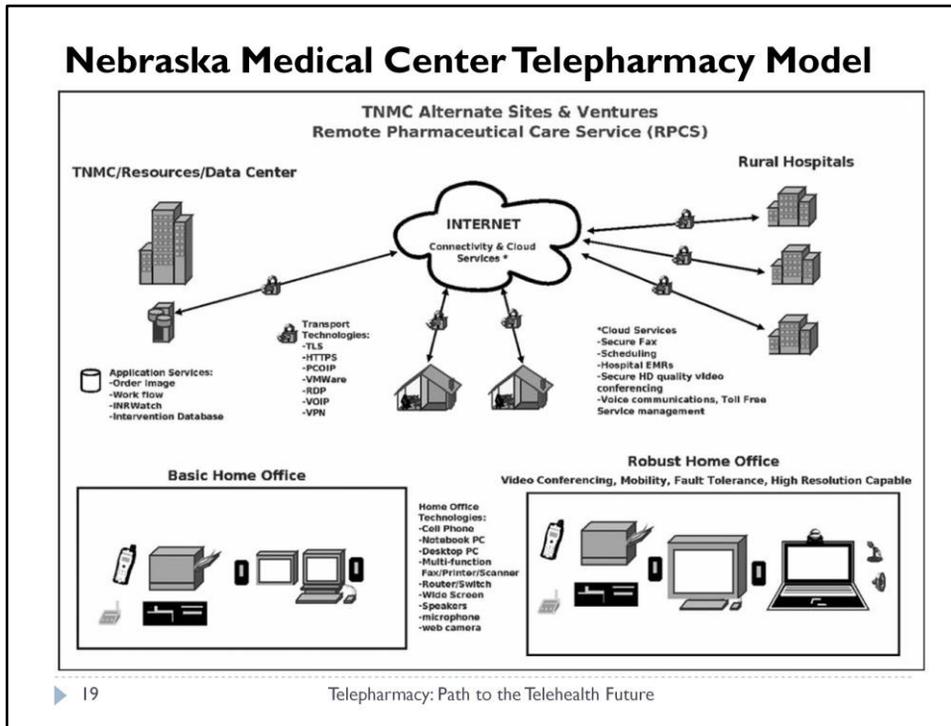
<https://www.veesag.com/telehealth-remote-patient-health-monitoring/>

TELEHEALTH REMOTE PATIENT HEALTH MONITORING

VEESAG provides pre-emptive health monitoring using proprietary Telehealth technologies developed for remote patient monitoring or remote health monitoring in conjunction with other medical devices.

[https://www.veesag.com/wp-content/uploads/2016/08/Telehealth-Remote-Health-Patient\\_Monitoring.png](https://www.veesag.com/wp-content/uploads/2016/08/Telehealth-Remote-Health-Patient_Monitoring.png)

## Nebraska Medical Center Telepharmacy Model



### A Retrospective Evaluation of Remote Pharmacist Interventions in a Telepharmacy Service Model Using a Conceptual Framework

Jayashri Sankaranarayanan, MPharm, PhD  
 School of Pharmacy, Department of Pharmacy Practice, University  
 of Connecticut, Hartford Hospital, Hartford, Connecticut.  
 College of Pharmacy, Department of Pharmacy Practice,  
 University of Nebraska Medical Center, Omaha, Nebraska.

Lori J. Murante, PharmD  
 Alternate Site Pharmacies & Clinical Decision Support,  
 The Nebraska Medical Center, Omaha, Nebraska.

Lisa M. Moffett, PharmD  
 Remote Pharmaceutical Care, Drug Information Service,  
 The Nebraska Medical Center, Omaha, Nebraska.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4188381/>

#### Abstract

Objectives: This retrospective cross-sectional study evaluated a telepharmacy service model using a conceptual framework to compare documented remote pharmacist

interventions by year, hospital, and remote pharmacist and across rural hospitals with or without an onsite rural hospital pharmacist.

**Materials and Methods:** Documented remote pharmacist interventions for patients at eight rural hospitals in the Midwestern United States during prospective prescription order review/entry from 2008 to 2011 were extracted from RxFusion database (a home-grown system, i.e., internally developed program at The Nebraska Medical Center (TNMC) for capturing remote pharmacist documented intervention data).

The study authors conceptualized an analytical framework, mapping the 37 classes of remote pharmacist interventions to three broader-level definitions: (a) intervention, eight categories (interaction/potential interaction, contraindication, adverse effects, anticoagulation monitoring, drug product selection, drug regimen, summary, and recommendation), (b) patient medication management, two categories (therapy review and action), and (c) health system-centered medication use process, four categories (prescribing, transcribing and documenting, administering, and monitoring). Frequencies of intervention levels were compared by year, hospital, remote pharmacist, and hospital pharmacy status (with a remote pharmacist and on-site pharmacist or with a remote pharmacist only) using chi squared test and univariate logistic regression analyses, as appropriate.

**Results:** For 450,000 prescription orders 19,222 remote pharmacist interventions were documented. Frequency of interventions significantly increased each year (36% in 2009, 55% in 2010, and 7% in 2011) versus the baseline year (2008, 3%) when service started. The frequency of interventions also differed significantly across the eight hospitals and 16 remote pharmacists for the three defined intervention levels and categories. Remote pharmacist interventions at hospitals with an on-site and remote pharmacist (n = 12,141) versus those with a remote pharmacist alone (n = 7,081) were significantly more likely to be (1) patient-centered, (2) related to “actionable” medication management recommendations (unadjusted odds ratio [OR]= 1.12), and (3) related to the “transcribing” (OR = 1.47) and “prescribing” (OR = 1.40) steps of the health system-centered medication use process level (all p < 0.01).

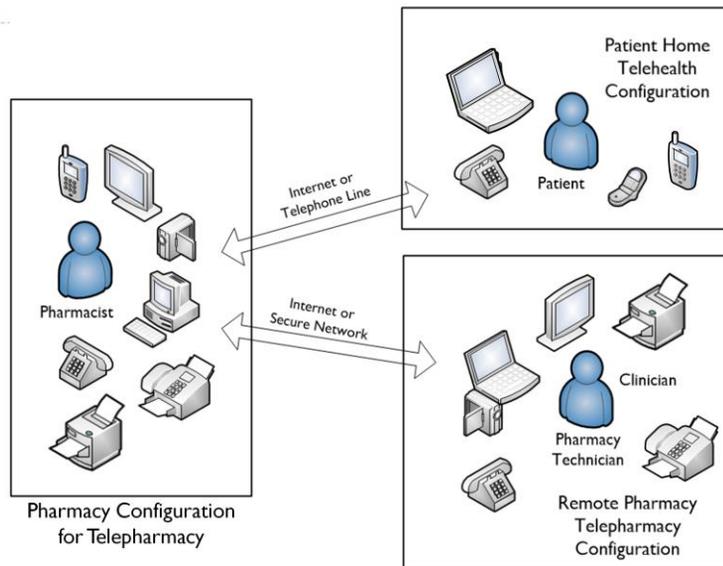
**Conclusions:** This is one of the first studies to demonstrate the patient- and health system-centered nature of pharmaceutical care delivered via a telepharmacy service model by evaluating documented remote pharmacist interventions with an analytical framework.

#### Technical Infrastructure of the Nebraska Medical Center’s Telepharmacy Service Model

Technology represented in the telepharmacy model, aside from computers and related equipment:

- EMR - Electronic medical record
- HD - High definition video
- TLS - Transport Layer Security over the Internet
- HTTPS - Hypertext transfer protocol secure (<https://>)
- PCOIP or PC-over-IP - Cloud-based virtual workplace
- VMWare - Virtualization and cloud computing software
- RDP - Remote desktop protocol
- VOIP - Voice over Internet protocol
- VPN - Virtual private network

## Telepharmacy Technical Details



## 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

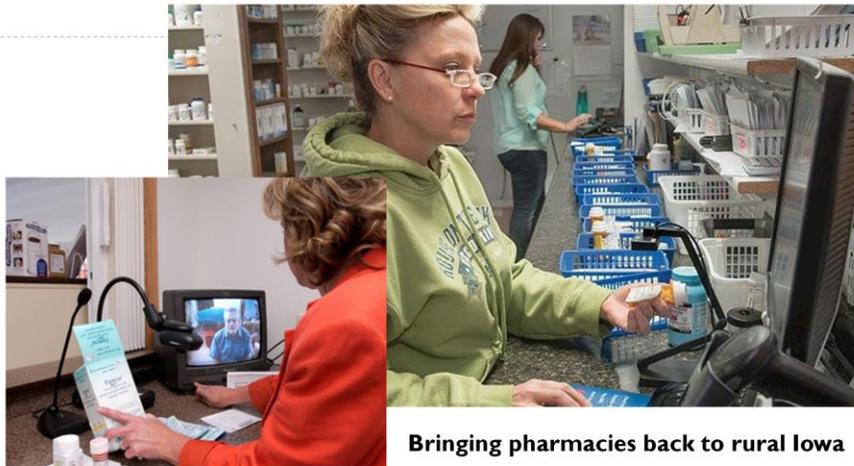
See: <http://www.scriptpro.com/About/Company-Information/>

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Telepharmacy: Path to the Telehealth Future

<http://www.scriptpro.com/About/Company-Information>

## Remote Telepharmacy Technologies



### Bringing pharmacies back to rural Iowa

#### North Dakota Telepharmacy Project

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

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

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Telepharmacy: Path to the Telehealth Future

### Bringing pharmacies back to rural Iowa

By Teresa Bjork

2/25/2016

The Brooklyn Pharmacy is part of a state pilot project to test a new-generation of telepharmacies in rural Iowa.

Iowa City-based company Telepharm helped launch the pilot project in a handful of eastern Iowa communities in 2012 to demonstrate how its software could help bring pharmacies back to rural towns.

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

<https://www.iowafarmbureau.com/Article/Live/titleImage?articleid=70031>

Welcome to Telepharmacy

*"Telepharmacy is working well in North Dakota. It is a great way to restore and retain pharmacy services for many remote rural communities throughout the state. Telepharmacy services produce the same quality as the traditional mode of delivery and provide some value-added features that are not found in traditional pharmacy practice."*

Dr. Charles D. Peterson

Dean, Professor, and Principal Investigator/Director

ND Telepharmacy Project

NDSU College of Health Professions

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

[https://www.ndsu.edu/fileadmin/\\_migrated/pics/Telepharmacypic..jpg](https://www.ndsu.edu/fileadmin/_migrated/pics/Telepharmacypic..jpg)

## Telepharmacy Technology in the Home



### Phoning it in: Telepharmacy connects rural patients

[http://magicvalley.com/news/local/phoning-it-in-telepharmacy-connects-rural-patients/article\\_2d27e4d6-efc3-5059-9dc9-23ef84dfe8b9.html](http://magicvalley.com/news/local/phoning-it-in-telepharmacy-connects-rural-patients/article_2d27e4d6-efc3-5059-9dc9-23ef84dfe8b9.html)

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Telepharmacy: Path to the Telehealth Future

Phoning it in: Telepharmacy connects rural patients

JULIE WOOTTON [jwootton@magicvalley.com](mailto:jwootton@magicvalley.com)

Jan 19, 2017

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

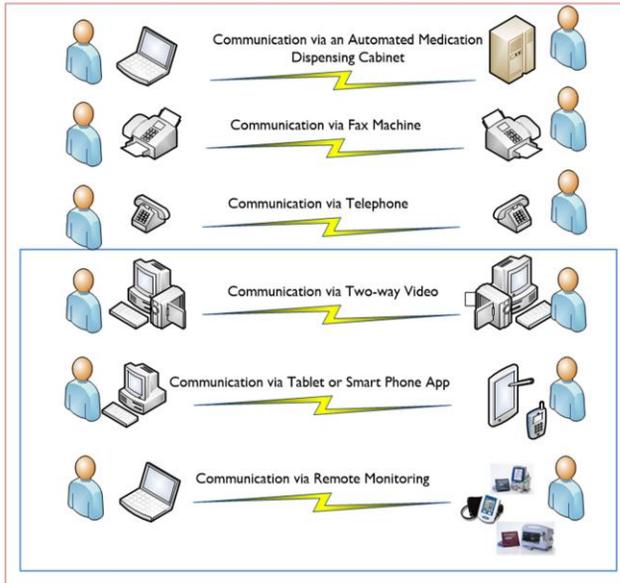
Shoshone Pharmacy opened Dec. 22 on South Apple Street. But it's not your average pharmacy.

The owner says it's the first telepharmacy in Idaho to open from the ground up — meaning it's not affiliated with an existing hospital or clinic. It allows an off-site pharmacist to approve orders remotely and do consultations with patients using live video conferencing.

[http://magicvalley.com/news/local/phoning-it-in-telepharmacy-connects-rural-patients/article\\_2d27e4d6-efc3-5059-9dc9-23ef84dfe8b9.html](http://magicvalley.com/news/local/phoning-it-in-telepharmacy-connects-rural-patients/article_2d27e4d6-efc3-5059-9dc9-23ef84dfe8b9.html)

# Technical Scope of Telepharmacy vs Telehealth

Telepharmacy



Telehealth /  
Telemedicine

**Florida Pharmacy Association  
Regulatory and Law Conference**

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**Definition and Scope of Telehealth and Telepharmacy**

## Definition of Telemedicine

### The American Telemedicine Association

- “...telemedicine is the use of medical information exchanged from one site to another via electronic communications to improve a patient’s clinical health status.”

### The World Health Organization

- Telemedicine often associated with “service delivery by physicians...”
- Telehealth refers to services “provided by health professionals in general...”
- For WHO telemedicine and telehealth are synonymous and used interchangeably.

## National Associations

The American Telemedicine Association - What is Telemedicine?

...telemedicine is the use of medical information exchanged from one site to another via electronic communications to improve a patient’s clinical health status.

[http://www.americantelemed.org/about-telemedicine/what-is-telemedicine#.VGTJlck\\_c7k](http://www.americantelemed.org/about-telemedicine/what-is-telemedicine#.VGTJlck_c7k)

## What is Telemedicine?

Formally defined, telemedicine is the use of medical information exchanged from one site to another via electronic communications to improve a patient’s clinical health status. Telemedicine includes a growing variety of applications and services using two-way video, email, smart phones, wireless tools and other forms of telecommunications technology

.. Telemedicine is not a separate medical specialty. Products and services related to telemedicine are often part of a larger investment by healthcare institutions in either information technology or the delivery of clinical care... ATA has historically considered telemedicine and telehealth to be interchangeable terms, encompassing a wide definition of remote healthcare. Patient consultations via video conferencing, transmission of still images, e-health including patient portals, remote monitoring of vital signs, continuing medical education, consumer-focused wireless applications and nursing call centers, among other applications, are all considered part of telemedicine and telehealth.

<http://www.americantelemed.org/about-telemedicine/what-is-telemedicine#.V-G83mZ4eHs>

### **World Health Organization**

TELEMEDICINE Opportunities and developments in Member States

Report on the second global survey on eHealth

Global Observatory for eHealth series - Volume 2

2010

Some distinguish telemedicine from telehealth with the former restricted to service delivery by physicians only, and the latter signifying services provided by health professionals in general, including nurses, pharmacists, and others. However, for the purpose of this report, telemedicine and telehealth are synonymous and used interchangeably.

Four elements are germane to telemedicine:

1. Its purpose is to provide clinical support.
2. It is intended to overcome geographical barriers, connecting users who are not in the same physical location.
3. It involves the use of various types of ICT.
4. Its goal is to improve health outcomes.

[http://www.who.int/goe/publications/goe\\_telemedicine\\_2010.pdf](http://www.who.int/goe/publications/goe_telemedicine_2010.pdf)

# Telehealth and Telepharmacy are Synonymous

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

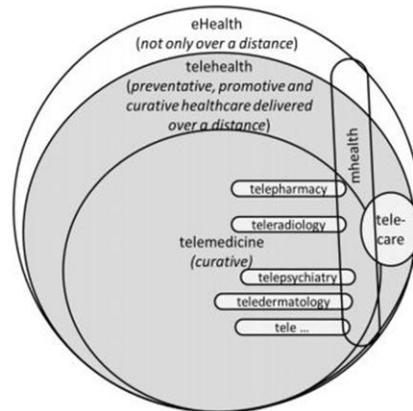


Figure reprinted from A Review of Telehealth Service Implementation Frameworks by van Dyk under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/3.0/>)

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International Journal of Environmental Research and Public Health  
ISSN 1660-4601

[www.mdpi.com/journal/ijerph](http://www.mdpi.com/journal/ijerph)

A Review of Telehealth Service Implementation Frameworks

Liezl van Dyk Industrial Engineering, Faculty of Engineering, North-West University,  
Potchefstroom Campus, Potchefstroom 2520, South Africa;

E-Mail: [liezl.vandyk@nwu.ac.za](mailto:liezl.vandyk@nwu.ac.za);

**Abstract:** Despite the potential of telehealth services to increase the quality and accessibility of healthcare, the success rate of such services has been disappointing. The purpose of this paper is to find and compare existing frameworks for the implementation of telehealth services that can contribute to the success rate of future endeavors. After a thorough discussion of these frameworks, this paper outlines the development methodologies in terms of theoretical background, methodology and validation. Finally, the common themes and formats are identified for consideration in future implementation. It was confirmed that a holistic implementation approach is needed, which includes technology, organizational structures, change management, economic feasibility, societal impacts, perceptions, user-friendliness, evaluation and evidence, legislation, policy and governance. Furthermore, there is some scope for scientifically rigorous framework development and validation approaches.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3945538/pdf/ijerph-11-01279.pdf>

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## Definition of 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.
- Florida Administrative Code, Practice of Pharmacy
  - Does not address Telepharmacy

## Model State Pharmacy Act and Model Rules of the National Association of Boards of Pharmacy

August 2016

### Section 105. Definitions.

“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.

“Practice of Telepharmacy Across State Lines” means the Practice of Telepharmacy when the patient is located within a US jurisdiction and the pharmacist is located in a different US jurisdiction.

“Practitioner” means an individual currently licensed, registered, or otherwise authorized by the appropriate jurisdiction to prescribe and Administer Drugs in the course of professional practice.

“Valid Patient-Practitioner Relationship” means the following have been established:

- a Patient has a medical complaint;
- a medical history has been taken;
- a face-to-face physical examination adequate to establish the medical complaint has been performed by the prescribing practitioner or in the instances of telemedicine through telemedicine practice approved by the appropriate Practitioner Board; and

some logical connection exists between the medical complaint, the medical history, and the physical examination and the Drug prescribed.

Section 105(q6). Comment.

A Valid Patient-Practitioner Relationship includes a relationship with a consulting Practitioner or a Practitioner to which a patient has been referred, or a covering Practitioner, or an appropriate Practitioner-Board-approved telemedicine Practitioner providing that a physical examination had been previously performed by the patient's primary Practitioner.

(c) the prescribing Practitioner is issuing a prescription through a telemedicine practice approved by the appropriate state agency that provides health care delivery, diagnosis, consultation, or treatment by means of audio, video, or data communications. Standard telephone, facsimile transmission, or both, in the absence of other integrated information or data, do not constitute telemedicine practices.

Section 301. Unlawful Practice.

(b) The provision of Pharmacist Care Services to an individual in this State, through the use of telecommunications, the Internet, or other technologies, regardless of the location of the pharmacist, shall constitute the Practice of Pharmacy and shall be subject to regulation.

(1) Licensed Pharmacies located outside this State that provide Pharmacist Care Services to individuals in this State must be licensed within this State under Article V of this Act.

(2) Pharmacists located outside this State who are providing Pharmacist Care Services outside of a licensed Pharmacy to individuals located in this State must register with this State to engage in the nonresident Practice of Pharmacy.

The "Practice of Telepharmacy" is deemed to occur within the jurisdiction in which the patient is located and the jurisdiction(s) in which the pharmacist and, if applicable, pharmacy are located; therefore, such practice will be subject to the Pharmacy practice regulations of all jurisdictions' Boards of Pharmacy.

The definition of "Practitioner" anticipates that those persons other than Pharmacists who are permitted to prescribe and Administer Drugs will be specifically so authorized in other legislation.

NABP recognizes that protection of the public health should extend across State borders. Accordingly, the NABP *Model Act* incorporates the Practice of Telepharmacy Across State Lines within the scope of the "Practice of Pharmacy" and requires an independently practicing pharmacist located outside this State to obtain full licensure for providing Pharmacist Care Services from outside the State to patients within the State.

<http://www.fsmb.org/Media/Default/PDF/Publications/FSMB%20Telemedicine%20P>

olicy%20News%20Release\_042614.pdf

## **Definition of Telemedicine by Medical Boards**

### **Federation of State Medical Boards, 2014**

- “Telemedicine” means the practice of medicine using electronic communications, information technology or other means between a licensee in one location, and a patient in another location

### **Florida Board of Medicine, 2016**

- “Telemedicine” means the practice of medicine by a licensed Florida physician or physician assistant where patient care, treatment, or services are provided through the use of medical information exchanged from one site to another via electronic communications.

### **State and National Boards**

#### MODEL POLICY FOR THE APPROPRIATE USE OF TELEMEDICINE TECHNOLOGIES IN THE PRACTICE OF MEDICINE

Report of the State Medical Boards’ Appropriate Regulation of Telemedicine (SMART) Workgroup

Adopted as policy by the Federation of State Medical Boards in April 2014

Section Three. Definitions For the purpose of these guidelines, the following definitions apply: “Telemedicine” means the practice of medicine using electronic communications, information technology or other means between a licensee in one location, and a patient in another location with or without an intervening healthcare provider. Generally, telemedicine is not an audio-only, telephone conversation, e-mail/instant messaging conversation, or fax. It typically involves the application of secure videoconferencing or store and forward technology to provide or support healthcare delivery by replicating the interaction of a traditional, encounter in person between a provider and a patient.<sup>7</sup>

“Telemedicine Technologies” means technologies and devices enabling secure electronic communications and information exchange between a licensee in one location and a patient in another location with or without an intervening healthcare provider.

[https://www.fsmb.org/Media/Default/PDF/FSMB/Advocacy/FSMB Telemedicine Poli](https://www.fsmb.org/Media/Default/PDF/FSMB/Advocacy/FSMB_Telemedicine_Poli)

[cy.pdf](#)

### **Florida Board of Medicine**

Florida Administrative Code 64B8-9.0141 Standards for Telemedicine Practice.

(1) "Telemedicine" means the practice of medicine by a licensed Florida physician or physician assistant where patient care, treatment, or services are provided through the use of medical information exchanged from one site to another via electronic communications. Telemedicine shall not include the provision of health care services only through an audio only telephone, email messages, text messages, facsimile transmission, U.S. Mail or other parcel service, or any combination thereof.

(4) Controlled substances shall not be prescribed through the use of telemedicine except for the treatment of psychiatric disorders. This provision does not preclude physicians or physician assistants from ordering controlled substances through the use of telemedicine for patients hospitalized in a facility licensed pursuant to Chapter 395, F.S.

(5) Prescribing medications based solely on an electronic medical questionnaire constitutes the failure to practice medicine with that level of care, skill, and treatment which is recognized by reasonably prudent physicians as being acceptable under similar conditions and circumstances, as well as prescribing legend drugs other than in the course of a physician's professional practice.

(6) Physicians and physician assistants shall not provide treatment recommendations, including issuing a prescription, via electronic or other means, unless the following elements have been met:

(a) A documented patient evaluation, including history and physical examination to establish the diagnosis for which any legend drug is prescribed.

(b) Discussion between the physician or the physician assistant and the patient regarding treatment options and the risks and benefits of treatment.

(c) Maintenance of contemporaneous medical records meeting the requirements of Rule 64B8-9.003, F.A.C.

(7) The practice of medicine by telemedicine does not alter any obligation of the physician or the physician assistant regarding patient confidentiality or recordkeeping.

### **Florida Board of Medicine - 64B8-9.0141**

"Telemedicine" means the practice of medicine by a licensed Florida physician or physician assistant where patient care, treatment, or services are provided through the use of medical information exchanged from one site to another via electronic communications.

Florida Board of Medicine - 64B8-9.0141 Standards for Telemedicine Practice.

<https://www.flrules.org/gateway/ruleNo.asp?id=64B8-9.0141>

## Definition of Telemedicine by CMS

### Florida Medicaid - 59G-1.057 Telemedicine

- Florida Medicaid reimburses for telemedicine services using interactive telecommunications equipment that includes, at a minimum audio and video equipment permitting two-way, real time, interactive communication between a recipient and a practitioner.

### Medicare

- Medicare reimburses for two-way, real time interactive communication between the patient and physician at a distant site over interactive audio and video equipment.
  - Medicare requires the patient facility to be located in a rural area to qualify for payment.

### Florida Administrative Code 59G-1.057 Telemedicine.

(1) This rule applies to any person or entity prescribing or reviewing a request for Florida Medicaid services and to all providers of Florida Medicaid services that are enrolled in or registered with the Florida Medicaid program.

(2) Definition. Telemedicine – The practice of health care delivery by a practitioner who is located at a site other than the site where a recipient is located for the purposes of evaluation, diagnosis, or treatment.

(3) Who Can Provide. Practitioners licensed within their scope of practice to perform the service.

(4) Coverage. Florida Medicaid reimburses for telemedicine services using interactive telecommunications equipment that includes, at a minimum audio and video equipment permitting two-way, real time, interactive communication between a recipient and a practitioner.

(5) Exclusion. Florida Medicaid does not reimburse for:

(a) Telephone conversations, chart review(s), electronic mail messages, or facsimile transmissions.

(b) Equipment required to provide telemedicine services.

(6) Reimbursement. The following applies to practitioners rendering services in the fee-for-service delivery system:

(a) Florida Medicaid reimburses the practitioner who is providing the evaluation, diagnosis, or treatment recommendation located at a site other than where the

recipient is located.

(b) Providers must include modifier GT on the CMS-1500 claim form, incorporated by reference in Rule 59G-4.001, F.A.C.

*Rulemaking Authority 409.919 FS. Law Implemented 409.905 FS. History—New 6-20-16.*

<https://www.flrules.org/gateway/ruleno.asp?id=59G-1.057>

#### Telemedicine

For purposes of Medicaid, telemedicine seeks to improve a patient's health by permitting two-way, real time interactive communication between the patient, and the physician or practitioner at the distant site. This electronic communication means the use of interactive telecommunications equipment that includes, at a minimum, audio and video equipment.

Telemedicine is viewed as a cost-effective alternative to the more traditional face-to-face way of providing medical care (e.g., face-to-face consultations or examinations between provider and patient) that states can choose to cover under Medicaid. This definition is modeled on Medicare's definition of telehealth services (42 CFR 410.78). Note that the federal Medicaid statute does not recognize telemedicine as a distinct service.

<https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Delivery-Systems/Telemedicine.html>

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<https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Delivery-Systems/Telemedicine.html>

## What Telemedicine is Not

### Florida Board of Medicine, 2016

- Telemedicine shall not include the provision of health care services only through an audio only telephone, email messages, text messages, facsimile transmission, U.S. Mail or other parcel service, or any combination thereof.

### Federation of State Medical Boards, 2014

- Telemedicine is not an audio-only, telephone conversation, e-mail/instant messaging conversation, or fax.

### Florida Medicaid does not reimburse for:

- (a) Telephone conversations, chart review(s), electronic mail messages, or facsimile transmissions.

### Florida Board of Medicine

64B8-9.0141 Standards for Telemedicine Practice.

(1) "Telemedicine" means the practice of medicine by a licensed Florida physician or physician assistant where patient care, treatment, or services are provided through the use of medical information exchanged from one site to another via electronic communications. Telemedicine shall not include the provision of health care services only through an audio only telephone, email messages, text messages, facsimile transmission, U.S. Mail or other parcel service, or any combination thereof.

(4) Controlled substances shall not be prescribed through the use of telemedicine except for the treatment of psychiatric disorders. This provision does not preclude physicians or physician assistants from ordering controlled substances through the use of telemedicine for patients hospitalized in a facility licensed pursuant to Chapter 395, F.S.

(5) Prescribing medications based solely on an electronic medical questionnaire constitutes the failure to practice medicine with that level of care, skill, and treatment which is recognized by reasonably prudent physicians as being acceptable under similar conditions and circumstances, as well as prescribing legend drugs other than in the course of a physician's professional practice.

(6) Physicians and physician assistants shall not provide treatment recommendations, including issuing a prescription, via electronic or other means, unless the following elements have been met:

(a) A documented patient evaluation, including history and physical examination to

establish the diagnosis for which any legend drug is prescribed.

(b) Discussion between the physician or the physician assistant and the patient regarding treatment options and the risks and benefits of treatment.

(c) Maintenance of contemporaneous medical records meeting the requirements of Rule 64B8-9.003, F.A.C.

(7) The practice of medicine by telemedicine does not alter any obligation of the physician or the physician assistant regarding patient confidentiality or recordkeeping.

**Florida Board of Medicine - 64B8-9.0141**

“Telemedicine” means the practice of medicine by a licensed Florida physician or physician assistant where patient care, treatment, or services are provided through the use of medical information exchanged from one site to another via electronic communications.

Florida Board of Medicine - 64B8-9.0141 Standards for Telemedicine Practice.

<https://www.flrules.org/gateway/ruleNo.asp?id=64B8-9.0141>

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**Regulatory Oversight of Telehealth and 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."

*State Regulation of Telepharmacy*, Anne Compton-Brown, JD, and Serj Mooradian, JD.  
Published by Pharmacy Times Wednesday, March 23, 2016. Retrieved from <http://www.pharmacytimes.com/news/state-regulation-of-telepharmacy>.

### State Regulation of Telepharmacy

Anne Compton-Brown, JD, and Serj Mooradian, JD

**Published Online:** Wednesday, March 23, 2016

- See more at: <http://www.pharmacytimes.com/news/state-regulation-of-telepharmacy>

State regulation of telepharmacy varies depending on the market-driven needs within each particular state. This article synthesizes the patchwork of telepharmacy laws to provide an overview of the regulation of telepharmacy in the United States.

However, 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. For example, the Connecticut legislature recognized that in practice, telepharmacy can be broader than pharmacy services provided to patients via remote or automated pharmacy locations, thus permitting telepharmacy to be used by hospital pharmacists to review and verify intravenous sterile compounding by remote pharmacy technicians.<sup>7</sup> This is just one example of the flexibility states have to regulate telepharmacy in a manner that aligns with current state telepharmacy and pharmacy practice. State differences in the regulation of telepharmacy also occur with respect to licensing and operational requirements.

### **Licensing Requirements for Telepharmacy Practice**

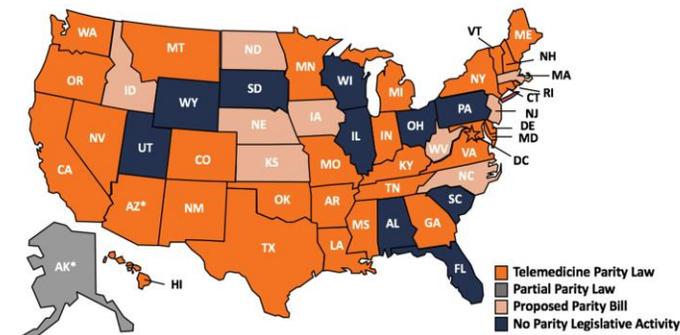
States may impose additional telepharmacy licensing requirements on central and remote pharmacy sites and pharmacists, above and beyond the requirement that those entities and individuals obtain the required state licensure to operate as a pharmacy or practice pharmacy within that state. For example, pharmacies that operate kiosks in Georgia must be licensed as a pharmacy in Georgia, obtain a separate license to install and operate the kiosks from the Georgia Board of Pharmacy, and pay the associated licensing fee.<sup>8</sup> Moreover, such pharmacies may only install and operate kiosks in a Georgia-licensed skilled nursing facility or hospice that does not have an onsite licensed pharmacy.<sup>8</sup> As in Georgia, other states also require such facilities to obtain state board of pharmacy approval for kiosks or remote dispensing sites prior to installing the kiosk or beginning operations.<sup>9</sup>

See more at: <http://www.pharmacytimes.com/news/state-regulation-of-telepharmacy>

## Regulatory Environment for Telehealth

The American Telemedicine Association publishes reports on the state telemedicine regulations, such as parity laws.

### States with Parity Laws for Private Insurance Coverage of Telemedicine (2017)



<http://www.americantelemed.org/policy-page/state-policy-resource-center>

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2017 State Telemedicine Legislation Tracking report

<http://www.americantelemed.org/policy-page/state-policy-resource-center>

ATA's State Policy Resource Center monitors telemedicine state policies, identifies and works to resolve barriers to state-level telemedicine use, and provides policy technical assistance to the ATA members and state policymakers.

Telemedicine Parity map

<https://higherlogicdownload.s3.amazonaws.com/AMERICANTELEMED/3c09839a-fffd-46f7-916c-692c11d78933/UploadedImages/Policy/State%20Policy%20Resource%20Center/31317%20parity%20map.jpg>





## Model State Pharmacy Act

### National Association of Boards of Pharmacy

A “Valid Patient-Practitioner Relationship” exists between a consulting Practitioner or Board-approved telemedicine Practitioner providing that a physical examination was previously performed by the patient’s primary Practitioner.

- The prescribing Practitioner is issuing a prescription through a telemedicine practice approved by the appropriate state agency by means of audio, video, or data communications.
- Standard telephone, facsimile transmission, or both, in the absence of other integrated information or data, do not constitute telemedicine practices.

<https://nabp.pharmacy/publications-reports/resource-documents/model-pharmacy-act-rules/>

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Telepharmacy: Path to the Telehealth Future

### Model State Pharmacy Act and Model Rules of the National Association of Boards of Pharmacy August 2016

Section 105(q6). Comment.

A Valid Patient-Practitioner Relationship includes a relationship with a consulting Practitioner or a Practitioner to which a patient has been referred, or a covering Practitioner, or an appropriate Practitioner-Board-approved telemedicine Practitioner providing that a physical examination had been previously performed by the patient’s primary Practitioner.

(c) the prescribing Practitioner is issuing a prescription through a telemedicine practice approved by the appropriate state agency that provides health care delivery, diagnosis, consultation, or treatment by means of audio, video, or data communications. Standard telephone, facsimile transmission, or both, in the absence of other integrated information or data, do not constitute telemedicine practices.

<https://nabp.pharmacy/publications-reports/resource-documents/model-pharmacy-act-rules/>

## **Florida Restriction on Prescription of Controlled Substances via Telemedicine**

### **Florida Board of Medicine, 2016**

- Controlled substances shall not be prescribed through the use of telemedicine except for the treatment of psychiatric disorders.
- This provision does not preclude physicians from ordering controlled substances through the use of telemedicine for patients hospitalized in a licensed facility.
- Physicians must not issue a prescription, via electronic or other means, unless a documented patient evaluation exists to establish the diagnosis for which any drug is prescribed.

### **Florida Board of Medicine**

64B8-9.0141 Standards for Telemedicine Practice.

(1) "Telemedicine" means the practice of medicine by a licensed Florida physician or physician assistant where patient care, treatment, or services are provided through the use of medical information exchanged from one site to another via electronic communications. Telemedicine shall not include the provision of health care services only through an audio only telephone, email messages, text messages, facsimile transmission, U.S. Mail or other parcel service, or any combination thereof.

(4) Controlled substances shall not be prescribed through the use of telemedicine except for the treatment of psychiatric disorders. This provision does not preclude physicians or physician assistants from ordering controlled substances through the use of telemedicine for patients hospitalized in a facility licensed pursuant to Chapter 395, F.S.

(5) Prescribing medications based solely on an electronic medical questionnaire constitutes the failure to practice medicine with that level of care, skill, and treatment which is recognized by reasonably prudent physicians as being acceptable under similar conditions and circumstances, as well as prescribing legend drugs other than in the course of a physician's professional practice.

(6) Physicians and physician assistants shall not provide treatment recommendations, including issuing a prescription, via electronic or other means, unless the following elements have been met:

(a) A documented patient evaluation, including history and physical examination to

establish the diagnosis for which any legend drug is prescribed.

(b) Discussion between the physician or the physician assistant and the patient regarding treatment options and the risks and benefits of treatment.

(c) Maintenance of contemporaneous medical records meeting the requirements of Rule 64B8-9.003, F.A.C.

(7) The practice of medicine by telemedicine does not alter any obligation of the physician or the physician assistant regarding patient confidentiality or recordkeeping.

**Florida Board of Medicine - 64B8-9.0141**

“Telemedicine” means the practice of medicine by a licensed Florida physician or physician assistant where patient care, treatment, or services are provided through the use of medical information exchanged from one site to another via electronic communications.

Florida Board of Medicine - 64B8-9.0141 Standards for Telemedicine Practice.

<https://www.flrules.org/gateway/ruleNo.asp?id=64B8-9.0141>

## Florida House Telehealth Bill, 2017

HB 7011 2017 - An act relating to health care access

456.47 Use of telehealth to provide services.—

588 (2) PRACTICE STANDARD.—

589 (b) A telehealth provider may not use telehealth to  
590 prescribe a controlled substance to treat chronic nonmalignant  
591 pain, as defined under s. 456.44, unless the controlled  
592 substance is ordered for inpatient treatment at a hospital  
593 licensed under chapter 395, is prescribed for a patient  
594 receiving hospice services, as defined under s. 400.601, or is  
595 prescribed for a resident of a nursing home facility as defined  
596 under s. 400.021(12).

### Model State Pharmacy Act and Model Rules of the National Association of Boards of Pharmacy August 2016

Section 105(q6). Comment.

A Valid Patient-Practitioner Relationship includes a relationship with a consulting Practitioner or a Practitioner to which a patient has been referred, or a covering Practitioner, or an appropriate Practitioner-Board-approved telemedicine Practitioner providing that a physical examination had been previously performed by the patient's primary Practitioner.

(c) the prescribing Practitioner is issuing a prescription through a telemedicine practice approved by the appropriate state agency that provides health care delivery, diagnosis, consultation, or treatment by means of audio, video, or data communications. Standard telephone, facsimile transmission, or both, in the absence of other integrated information or data, do not constitute telemedicine practices.

## **Federal Regulation: Ryan Haight Online Pharmacy Consumer Protection Act of 2008**

### **Sec. 2. Requirement of a Valid Prescription for Controlled Substances Dispensed by Means of the Internet**

- “No controlled substance that is a prescription drug as determined under the Federal Food, Drug, and Cosmetic Act may be delivered, distributed, or dispensed by means of the Internet without a valid prescription.”
- A “valid prescription” is a prescription written by a medical practitioner for a “legitimate medical purpose.”
- The prescription can be written only following at least one in-person medical evaluation, in “the physical presence of the practitioner.”

H. R. 6353

Ryan Haight Online Pharmacy Consumer Protection Act of 2008.

### **SEC. 2. REQUIREMENT OF A VALID PRESCRIPTION FOR CONTROLLED SUBSTANCES DISPENSED BY MEANS OF THE INTERNET.**

“(1) No controlled substance that is a prescription drug as determined under the Federal Food, Drug, and Cosmetic Act may be delivered, distributed, or dispensed by means of the Internet without a valid prescription.

“(2) As used in this subsection:

“(A) The term ‘valid prescription’ means a prescription that is issued for a legitimate medical purpose in the usual course of professional practice by—

“(i) a practitioner who has conducted at least 1 in-person medical evaluation of the patient; or “(ii) a covering practitioner.

“(B)(i) The term ‘in-person medical evaluation’ means a medical evaluation that is conducted with the patient in the physical presence of the practitioner, without regard to whether portions of the evaluation are conducted by other health professionals.

“(54) The term ‘practice of telemedicine’ means, for purposes of this title, the practice of medicine in accordance with applicable Federal and State laws by a practitioner (other than a pharmacist) who is at a location remote from the patient and is communicating with the patient, or health care professional who is treating the patient, using a telecommunications system referred to in section 1834(m) of the

Social Security Act, which practice—

“(A) is being conducted—

“(i) while the patient is being treated by, and physically located in, a hospital or clinic registered under section 303(f); and

“(ii) by a practitioner—

“(I) acting in the usual course of professional practice;

“(II) acting in accordance with applicable State law; and

“(III) registered under section 303(f) in the State in which the patient is located,

<https://www.govtrack.us/congress/bills/110/hr6353/text>

## **Federal Regulation: Ryan Haight Online Pharmacy Consumer Protection Act of 2008**

### **Telemedicine Requirements**

The term 'practice of telemedicine' means... the practice of medicine in accordance with applicable Federal and State laws by a practitioner (other than a pharmacist) who:

- Is at a location remote from the patient
- Is communicating with the patient or with a health care professional who is treating the patient
- Is using a telecommunications system physically located in a hospital or clinic registered with the DEA
- Is working in the usual course of his or her professional practice, according to state law

H. R. 6353

Ryan Haight Online Pharmacy Consumer Protection Act of 2008.

### **SEC. 2. REQUIREMENT OF A VALID PRESCRIPTION FOR CONTROLLED SUBSTANCES DISPENSED BY MEANS OF THE INTERNET.**

“(1) No controlled substance that is a prescription drug as determined under the Federal Food, Drug, and Cosmetic Act may be delivered, distributed, or dispensed by means of the Internet without a valid prescription.

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“(i) a practitioner who has conducted at least 1 in-person medical evaluation of the patient; or “(ii) a covering practitioner.

“(B)(i) The term ‘in-person medical evaluation’ means a medical evaluation that is conducted with the patient in the physical presence of the practitioner, without regard to whether portions of the evaluation are conducted by other health professionals.

“(54) The term ‘practice of telemedicine’ means, for purposes of this title, the practice of medicine in accordance with applicable Federal and State laws by a practitioner (other than a pharmacist) who is at a location remote from the patient and is communicating with the patient, or health care professional who is treating the patient, using a telecommunications system referred to in section 1834(m) of the

Social Security Act, which practice—

“(A) is being conducted—

“(i) while the patient is being treated by, and physically located in, a hospital or clinic registered under section 303(f); and

“(ii) by a practitioner—

“(I) acting in the usual course of professional practice;

“(II) acting in accordance with applicable State law; and

“(III) registered under section 303(f) in the State in which the patient is located,

<https://www.govtrack.us/congress/bills/110/hr6353/text>

## HIPAA Security Rule

### § 164.312 Technical safeguards

Standard: Transmission security.

Implement technical security measures to prevent unauthorized access to ePHI transmitted over an electronic communications network.

#### **Encryption - Addressable**

Encrypt ePHI whenever appropriate

- Under the HIPAA Omnibus Rule, Electronic Protected Health Information (ePHI) that is not encrypted is considered “Unsecure” and liable for penalties if breached
- Encrypted ePHI is “Secure” and not liable for penalties if breached

U.S. Department of Health and Human Services  
Office for Civil Rights  
2006

HIPAA Administrative Simplification Regulation Text, 45 CFR Parts 160, 162, and 164  
(2006)

<http://www.hhs.gov/ocr/privacy/hipaa/administrative/privacyrule/adminsimpregtext.pdf>

### § 164.312 Technical safeguards

(e)(1) **Standard:** Transmission security. Implement technical security measures to guard against unauthorized access to electronic protected health information that is being transmitted over an electronic communications network.

#### (2) **Implementation specifications:**

(i) *Integrity controls* (Addressable). Implement security measures to ensure that electronically transmitted electronic protected health information is not improperly modified without detection until disposed of.

(ii) *Encryption* (Addressable). Implement a mechanism to encrypt electronic protected health information whenever deemed appropriate.

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**Examples of Telepharmacy Projects**

## 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 and Medication Therapy Management (MTM)
- Reviewing new medication orders transmitted by fax or electronically and remotely releasing medication from an automated medication dispensing cabinet

# North Dakota Telepharmacy Project

## North Dakota

### Three rural definitions based on Census Urban Areas

Rural locations are those outside Census Urban Areas with a population...

...greater than or equal to 2,500

Outside Census Urban Areas  $\geq$  2,500

...greater than or equal to 10,000

Outside Census Urban Areas  $\geq$  2,500

Census Urban Areas: 2,500 - 9,999

...greater than or equal to 50,000

Outside Census Urban Areas  $\geq$  2,500

Census Urban Areas: 2,500 - 9,999

Census Urban Areas: 10,000 - 49,999

Urban locations under all three definitions:

Census Urban Areas:  $\geq$  50,000

## Rural Areas in North Dakota



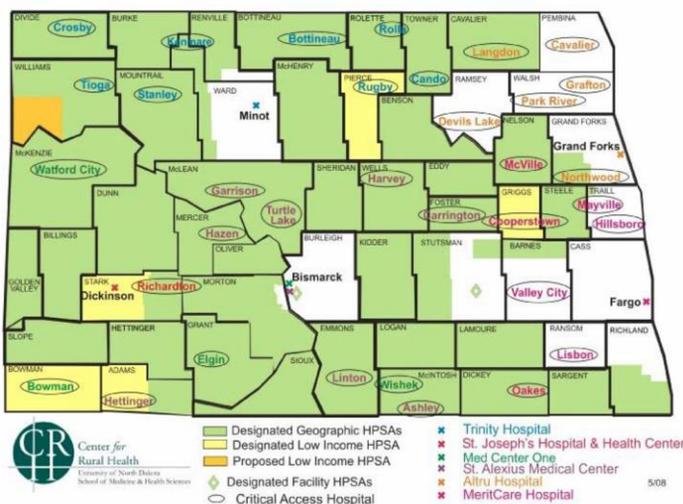
[https://www.ers.usda.gov/webdocs/DataFiles/Rural\\_Definitions\\_\\_18009/25588\\_ND.pdf?v=39329](https://www.ers.usda.gov/webdocs/DataFiles/Rural_Definitions__18009/25588_ND.pdf?v=39329)

## North Dakota Rural Map Map

[https://www.ers.usda.gov/webdocs/DataFiles/Rural\\_Definitions\\_\\_18009/25588\\_ND.pdf?v=39329](https://www.ers.usda.gov/webdocs/DataFiles/Rural_Definitions__18009/25588_ND.pdf?v=39329)

## ND Telepharmacy Project – Rural Need

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



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Telepharmacy: Path to the Telehealth Future

## THE NORTH DAKOTA EXPERIENCE: ACHIEVING HIGH-PERFORMANCE HEALTH CARE THROUGH RURAL INNOVATION AND COOPERATION

Douglas McCarthy, Rachel Nuzum, Stephanie Mika, Jennifer Wrenn, and Mary Wakefield

The Commonwealth Fund, May 2008

<http://www.commonwealthfund.org/publications/fund-reports/2008/may/the-north-dakota-experience--achieving-high-performance-health-care-through-rural-innovation-and-coo>

**ABSTRACT:** Resource constraints and the desire to preserve the local economy have made necessary the mother of invention in North Dakota, driving health care providers and policymakers to try new approaches to care and to institute better practices relatively quickly. Collaboration to support primary care and the concept of a medical home, organization of care through cooperative networks of providers, and innovative use of technology to meet patient needs and hold down costs are examples of how North Dakota is able to provide its citizens with accessible, quality, and efficient health care despite the challenges of a rural setting. Rural communities have a unique context of community trust and interdependence, a social capital that allows them to innovate in meeting patients' needs. A strong sense of mission, vigilance to process and outcomes, and enhanced communication and collaboration among health care providers are key to improvements made in North Dakota health care.

[http://www.commonwealthfund.org/usr\\_doc/1130\\_McCarthy\\_North\\_Dakota\\_experience.pdf?section=4039](http://www.commonwealthfund.org/usr_doc/1130_McCarthy_North_Dakota_experience.pdf?section=4039)

## ND Telepharmacy Project – Initial Drivers

- In 2001 the North Dakota State Board of Pharmacy established Pilot Telepharmacy Rules to restore and retain pharmacy services in medically underserved remote rural communities
- In September of 2002, the NDSU College of Pharmacy received a HRSA grant to implement a state-wide telepharmacy program to prevent rural pharmacies from closing
- In June 2003 the North Dakota State Board of Pharmacy established permanent rules allowing telepharmacy to be practiced on a broader scale in North Dakota

### History and Progress of HRSA/OAT Telepharmacy Funding

#### Early History of Telepharmacy

In 2001, in response to an escalation of rural community pharmacy closings in the state, the North Dakota State Board of Pharmacy established Pilot Telepharmacy Rules to explore the feasibility of using telepharmacy to restore and retain pharmacy services in medically underserved remote rural communities of North Dakota.

In September of 2002, the NDSU College of Pharmacy received a federal grant from the Office for the Advancement of Telehealth (OAT), Division of Health Resources and Services Administration, Department of Health and Human Services, to implement a state-wide telepharmacy program to save rural pharmacies from closing and to test the new telepharmacy pilot rules established by the Board of Pharmacy. In FY'2002, a total of ten North Dakota rural communities were involved in the first year of the federal OAT grant. Four central pharmacy sites in Killdeer, Watford City, Rugby, and Forman, North Dakota, were established to serve six remote telepharmacy sites in Beach, New England, New Town, Rolette, Maddock, and Gwinner, North Dakota.

To date there are eighty-one pharmacies involved in the North Dakota Telepharmacy Project, twenty-five central pharmacy sites and fifty-six remote telepharmacy sites. Of the eighty-one pharmacies involved, fifty-three are retail pharmacies and twenty-eight are hospital pharmacies. Thirty-eight (73%) of North Dakota's fifty-three counties are involved in the project and two in Minnesota. Approximately 80,000

rural citizens have had pharmacy services restored, retained or established through the North Dakota Telepharmacy Project since its inception. The project has restored valuable access to health care in remote medically underserved areas of the state and has added approximately \$26.5 million in economic development to the local rural economy.

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

## 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

### TELEPHARMACY

By: Kevin E. McCarthy, Principal Analyst  
November 25, 2013

#### ***North Dakota***

In 2001, North Dakota became the first state to pass regulations allowing retail pharmacies to operate without requiring a pharmacist to be physically present. In response to an increasing number of rural community pharmacy closings, the state Board of Pharmacy established pilot telepharmacy rules to explore the feasibility of using telepharmacy to restore and retain pharmacy services in medically underserved remote rural communities.

In September of 2002, the state College of Pharmacy received a federal grant to implement a statewide program to save rural pharmacies from closing and to test the new telepharmacy pilot rules. Ten rural communities were involved in the first year of the grant. The next year, state agencies and grants established the North Dakota Telepharmacy Project, which now supports more than 50 remote retail and hospital pharmacy sites throughout North Dakota. In this program, a licensed pharmacist at a central site communicates with remote site pharmacy technicians and patients through videoconferencing.

In 2003, due to the success of the pilot project, the state Board of Pharmacy established permanent [rules](#) allowing telepharmacy to be practiced on a broader scale (N.D. § 61-02-08-01 et seq.). The permanent rules allow (1) a retail pharmacy to

open and operate in certain remote rural areas of the state without a licensed pharmacist being physically present in the store and (2) a pharmacist to supervise a registered pharmacy technician at a remote telepharmacy site using telepharmacy technology to dispense prescriptions to patients, provide drug utilization review, and counsel patients. Among other things, the rules require that:

1. the pharmacy and remote site be connected by a computer, video, and audio links;
2. a registered pharmacy technician be present at the remote site;
3. the pharmacist compare the stock bottle, drug dispensed, and its strength via the video link, with the entire label checked for accuracy; and
4. the pharmacist must counsel the patient or his or her agent on all new prescriptions and refills using the video and audio links.

The project has expanded over time and there are 81 pharmacies currently involved (25 central pharmacies and 56 remote sites). Of the pharmacies, 53 are retail pharmacies and 28 are hospital pharmacies. Thirty-eight (73%) of the state's counties are involved in the project, as well as two counties in Minnesota. Since the project began, approximately 80,000 rural residents have had pharmacy services restored, retained, or established through the project. According to the project's [website](#), it has restored access to health care in remote, medically underserved areas and added approximately \$26.5 million in economic development to the local rural economy.

<https://www.cga.ct.gov/2013/rpt/2013-R-0423.htm>

## ND Telepharmacy Project – Technician Education

North Dakota State College of Science Certified Pharmacy Technicians Program offers three pharmacy technician training program options:

- One and two year Associate in Applied Science degrees.
  - Both of these include an internship of eight weeks in community and hospital pharmacies.
- Pharmacist-Assisted Technician Self-Instructional Modules (PATSIM) are ASHP-accredited for pharmacy technicians .
- A Grandfathered technician is one who registered in 1994 but did not complete one of the formal training programs in North Dakota.

All pharmacy technicians are registered with the North Dakota Board of Pharmacy.

### Assessment of Pharmacy Technicians' Salary, Benefits, and Responsibilities in North Dakota

David M Scott, PhD and Diane Halvorson

J Pharm Technology, Volume 23, May/June 2007

<http://journals.sagepub.com/doi/abs/10.1177/875512250702300304>

**Background:** While the number of pharmacist workforce studies being published is growing, few studies report accurate information concerning the wages, benefits, and responsibilities of pharmacy technicians.

**Objective:** To evaluate the wages, benefits, and responsibilities of pharmacy technicians in North Dakota.

**Methods:** A mail survey for pharmacy technicians was modified based on the Wage and Benefit Survey for pharmacists used in the Upper Midwest Pharmacists Workforce Study. A list of responsibilities was added to this survey to represent technicians' responsibilities in North Dakota. A survey packet then was mailed to the 456 pharmacy technicians registered in North Dakota. A follow-up postcard and a second survey were mailed to nonrespondents at 4 and 8 weeks, respectively.

**Results:** Overall, 256 (56.1%) completed surveys were available for analysis. Pharmacy technicians reported that they worked in a primary employment setting (n = 228) an average of 36.8 hours per week and received an average of 2.3 weeks of vacation. The average hourly rate was \$12.34 (\$7.00–25.48) and the gross 2004 salary (excluding benefits) was \$21,627 (\$880–41,600). Hospitals had the highest average

hourly pay rate (\$12.40), followed by independent (\$12.35) and chain (\$12.01) pharmacies. Grandfathered technicians (those registered in 1994 when the registration requirement was passed in North Dakota) received the highest average hourly pay rate at \$13.11, followed by 1 year, 2 year, and Pharmacist-Assisted Technician Self- Instructional Modules (PATSIM) graduates. The hourly rate for grandfathered pharmacy technicians who have since become certified (\$13.30) was highest. Differences between certified and noncertified groups were \$0.10 more for 1 year graduates and \$0.20 for PATSIM graduates; the difference between grandfathered technicians and 2 year graduates was \$0.30. Commonly reported benefits included paid vacation (80%), health insurance for the employee (67%), sick leave (56%), and tax-sheltered plans (54%). Other benefits received were discounts on purchases (61%) and discounts on prescription drugs (54%). Among the most frequently cited distributive functions that technicians perform in their work setting included retrieving products from stock, followed by working with inventory, checking in and putting away medications, filling routine stock supplies, and affixing prescription labels to containers.

**Conclusions:** Pharmacy technician wages, benefits, and responsibilities in North Dakota are reflective of levels of training, experience, and certification status. While similar assessments have been conducted on pharmacists in other states, there is a need for similar data on pharmacy technicians.

*J Pharm Technol* 2007;23:148-57.

## **ND Telepharmacy Project - Remote Technicians**

### **Technician Responsibilities**

- Retrieve product from stock
- Count solid dosage forms
- Fill routine stock supplies
- Pour liquid dosage forms
- Receive written prescription from patient
- Input prescriptions into computer
- Affix prescription label to a container
- Request refill authorization from the prescriber
- Obtain patient medication history information
- Order from wholesaler to maintain adequate stock
- Work with inventory, checking in and filing medication order
- Responsible for outdated drug products

▶ 50

Telepharmacy: Path to the Telehealth Future

### **Assessment of Pharmacy Technicians' Salary, Benefits, and Responsibilities in North Dakota**

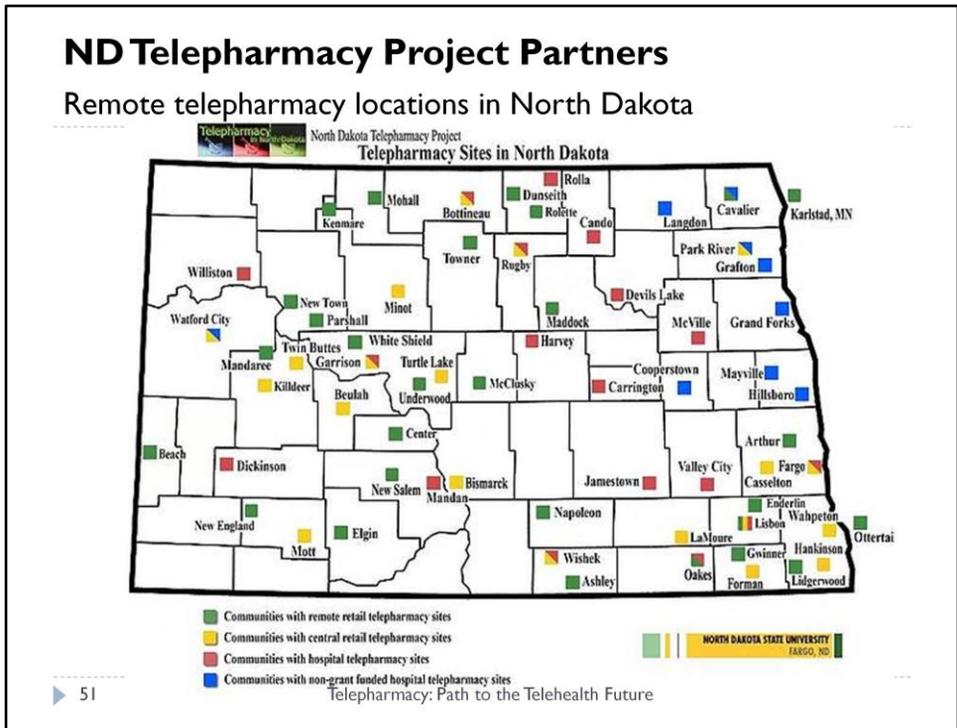
David M Scott, PhD and Diane Halvorson

J Pharm Technology, Volume 23, May/June 2007

<http://journals.sagepub.com/doi/abs/10.1177/875512250702300304>

# ND Telepharmacy Project Partners

Remote telepharmacy locations in North Dakota



Telepharmacy Map

[https://www.ndsu.edu/telepharmacy/telepharmacy\\_map/](https://www.ndsu.edu/telepharmacy/telepharmacy_map/)

[https://www.ndsu.edu/fileadmin/\\_migrated/pics/Telepharmacypic.jpg](https://www.ndsu.edu/fileadmin/_migrated/pics/Telepharmacypic.jpg)

## ND Telepharmacy Project - Outcomes

The North Dakota Telepharmacy Project current status:

- 81 pharmacies involved in the project
- Partnering pharmacies include:
  - Central pharmacy sites
  - Remote telepharmacy sites
  - Retail pharmacies
  - Hospital pharmacies
- 38 counties covered in North Dakota, two 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

### What is telepharmacy?

Through the use of state-of-the-art telecommunications technology, pharmacists are able to provide pharmaceutical care to patients at a distance. Telepharmacy expands access to quality health care to communities nationwide, primarily in rural, medically-underserved areas.

Through the North Dakota Telepharmacy Project, a licensed pharmacist at a central pharmacy site supervises a registered pharmacy technician at a remote telepharmacy site through the use of video conferencing technology. The technician prepares the prescription drug for dispensing by the pharmacist. The pharmacist communicates face-to-face in real time with the technician and the patient through audio and video computer links. The North Dakota Telepharmacy Project is a collaboration of the NDSU College of Pharmacy, Nursing, and Allied Sciences, the North Dakota Board of Pharmacy, and the North Dakota Pharmacists Association. North Dakota was the first state to pass administrative rules allowing retail pharmacies to operate in certain remote areas without requiring a pharmacist to be present.

To date there are eighty-one pharmacies involved in the North Dakota Telepharmacy Project, twenty-five central pharmacy sites and fifty-six remote telepharmacy sites. Of the eighty-one pharmacies involved, fifty-three are retail pharmacies and twenty-eight are hospital pharmacies. Thirty-eight counties (73%) in North Dakota are involved in the project and two in Minnesota. (See the [North Dakota Pharmacy Services Map](#) link for details).

Approximately 80,000 rural citizens have had their pharmacy services restored, retained, or established through the North Dakota Telepharmacy Project since its inception. The project has restored valuable access to health care in remote medically underserved areas of the state and has added approximately \$26.5 million in economic development to the local rural economy including adding 80-100 new jobs.

Licensed pharmacists provide traditional pharmacy services, including drug utilization review, prescription verification, and patient counseling to a remote site via telepharmacy technology. Retaining the active role of the pharmacist helps assure the delivery of safe, high quality pharmacy services that can be at risk when the pharmacist is left out as in the case of internet and mail-order pharmacies. Telepharmacy sites in North Dakota are full service pharmacies that have complete drug inventories, including over-the-counter and prescription drugs as well as health and beauty aids and other general store merchandise.

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

Do remote community telepharmacies have higher medication error rates than traditional community pharmacies? Evidence from the North Dakota Telepharmacy Project.

Friesner DL, Scott DM, Rathke AM, Peterson CD, Anderson HC.

J Am Pharm Assoc (2003). 2011 SepOct;51(5):58090.

<https://www.ncbi.nlm.nih.gov/pubmed/21896455>

Conclusion: This study reported a lower overall rate (1.0%) and a slight difference in medication

dispensing error rates between remote telepharmacy sites (1.3%) and comparison sites (0.8%).

Both rates are comparable with nationally reported levels (1.7% error rate for 50 pharmacies).

## Telepharmacy in a Rural Alberta Community Cancer Network

Telepharmacy services were initiated because of the absence of a pharmacist in rural Cancer Centers.

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

### Telepharmacy in a rural Alberta Community Cancer Network

[Gordon HL](#), [Hoerber M](#), [Schneider A](#).

[J Oncol Pharm Pract](#). 2012 Sep;18(3):366-76. doi: 10.1177/1078155211431858. Epub 2012 Feb 29.

<http://www.ncbi.nlm.nih.gov/pubmed/22378811>

#### Abstract

Telepharmacy services were developed and adopted to compensate for the absence of a pharmacist in rural Cancer Centers. Preparation included the formation of an advisory committee, development of a training and certification process, establishing new policies and operating procedures, collecting utilization data and a survey of patient and user satisfaction. Pharmacy technicians at two remote community cancer centers were connected by telehealth with pharmacists at one of the two coordinating centers to oversee the compounding of intravenous (I.V.) chemotherapy and provide clinical review of physician orders. In 8 months of telepharmacy use, 247 intravenous preparations were compounded for 47 cancer patients during 109 treatment visits. Approximately 45,000 km (27,000 miles) of patient travel were averted. Pharmacy staff estimates requires an average of 10 additional minutes to process and compound each chemotherapy preparation. Nurses estimate an average of 27.5 additional minutes required to coordinate information for each patient order.

## 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

### Availability and Deployment of Telemedicine/Telehealth Technologies in Rural Alaska

Mr. Burhan Khan, Ms. Vanessa Y. Hiratsuka, MPH, Dr. Denise Dillard, PhD, Dr. Renee Robinson, PharmD, MPH, and Dr. Marjorie Mau, MD

HHS Public Access Author manuscript Fed Pract. Author manuscript; available in PMC 2015 December 23.

Published in final edited form as: Fed Pract. 2012 December ; 29(12): 19–21.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4689206/>

#### Abstract

Telemedicine technologies are important lifelines for patients in rural areas. This study found 5 different telemedicine technologies used by patients throughout the Anchorage Service Unit and sheds light on the diverse internal and external teams involved in these services.

#### RESULTS

There were 5 different telemedicine technologies used to provide primary care services to patients throughout the Anchorage Service Unit:

## Baptist Health South Florida - Telehealth

BHSF telehealth programs include:

- eICU LifeGuard covering 147 ICU and step-down beds
  - Telehealth equipment linked to remote monitoring site
  - Computers programmed for each patient's medical needs
  - Tele-ICU intensivist can talk with both patient and nurse in the ICU using video and two-way audio

- Home health programs and remote monitoring
- Telepsych on cruise lines
- ePrimary care
- Virtual Urgent Care
- eSitter program
- ePharmacy services

<https://baptisthealth.net/en/health-services/eicu-lifeguard/pages/default.aspx>

### What is eICU LifeGuard?

When you or your loved one is in critical condition, nothing can replace the personal care given by the doctors and nurses in the intensive care unit (ICU). An important member of the ICU team is an intensivist, a doctor who specializes in the treatment of critically ill patients. Because an intensivist is involved with the care of all ICU patients, it has been impossible for that doctor to be at every patient's bedside all of the time, until now.

The equipment used to monitor a patient's condition is linked to the remote monitoring site, where computers are specifically programmed for each patient's medical needs. Computer software monitors vital signs, shows lab results and X-rays, and details a patient's medical history. The data makes a "virtual" medical chart, providing a complete picture of a patient's condition as it changes — minute by minute — without pages and pages of documents to flip through.

When needed, the LifeGuard intensivist and critical care nurses talk with a patient and bedside nurse using video and two-way audio and medical information equipment installed in Baptist Health's critical care rooms. The eICU LifeGuard system can help doctors determine the best course of treatment. A real-time video can be turned on as needed to zoom in on a patient for a closer assessment. The lens is so

powerful that it can be used to examine a patient's pupils. For privacy, a bell sounds in the room to let the patient and staff know when the video camera is on.

With Baptist Health's eICU LifeGuard, you have the comfort of knowing that nurses and doctors in the ICU are backed by highly trained critical care professionals working tirelessly behind the scenes to ensure the best possible care.

**eICU LifeGuard means:**

**Improved patient safety:** Electronic monitoring can detect small, subtle changes in a patient's condition. Physicians and nurses at the command center alert the ICU team in the hospital immediately so that they can intervene and proactively treat problems before serious complications develop.

**Improved patient recovery:** Studies have documented a 27 percent reduction in deaths and a 14 percent reduction in the length of stay for ICU patients monitored electronically. Fewer complications means better outcomes.

**Improved patient care:** eICU LifeGuard is a safety net for critically ill patients. The technology allows specialists to continuously monitor and manage ICU patients.

## 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 nurse contacts Baptist South Telepharmacy to discuss the patient's medications with a pharmacist over a video connection
- The patient and home health nurse talk to a Baptist South ePharmacist over the computer - as this 96 year old woman is doing in the picture

### Tele-pharmacy



Clinical pharmacist reviewing medications at home with the patient

▶ 56

Telepharmacy: Path to the Telehealth Future

Watch Now: e-Pharmacy, A Vital Connection

<https://baptisthealth.net/baptist-health-news/electronic-pharmacy/>

Sitting within Baptist Health's Telehealth Center in Coral Gables, pharmacist Gloria Kelly works with the doctors in the hospitals' ICUs to ensure the right medications and dosages are being administered to the patients.

Ms. Kelly also works closely with patients of [Baptist Health Home Care](#) to review the medications with which they are sent home from the hospital and the ones they take at home, including over-the-counter products. One goal: To prevent harmful interactions, omissions of necessary medications, double doses or inadequate doses. The ultimate goal: To keep patients, like Marcial Garcia, safe.

Through video chat, Ms. Kelly connects with Mr. Garcia, checks up on his medications and educates him about important health risks associated with what he has been prescribed.

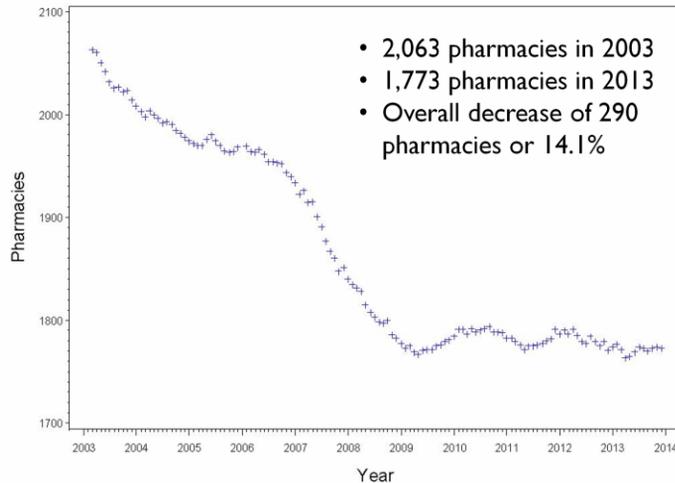
**Florida Pharmacy Association  
Regulatory and Law Conference**

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**Business Drivers for Telepharmacy**

## The Decline of Rural Independent Pharmacies

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



▶ 58

telepharmacy: Path to the telehealth Future

### Update: Independently Owned Pharmacy Closures in Rural America, 2003-2013

Fred Ullrich, BA; Keith J. Mueller, PhD

Brief No. 2014-7 June 2014 [www.public-health.uiowa.edu/rupri](http://www.public-health.uiowa.edu/rupri)

<http://cph.uiowa.edu/rupri/publications/policybriefs/2014/Pharm%20Closure%20Brief%20June%202014.pdf>

The number of retail pharmacies that were the only pharmacy in the community declined fairly steadily between March 2003 and May 2009 (from 2,063 to 1,767) but has remained relatively unchanged since then, with 1,773 such pharmacies in December 2013 (Figure 2).

## 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.”



### Phoning it in: Telepharmacy connects rural patients

JULIE WOOTTON [jwootton@magicvalley.com](mailto:jwootton@magicvalley.com) Jan 19, 2017

SHOSHONE — 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 on South Apple Street. But it's not your average pharmacy. The owner says it's the first telepharmacy in Idaho to open from the ground up — meaning it's not affiliated with an existing hospital or clinic. It allows an on-site pharmacist to approve orders remotely and do consultations with patients using live video conferencing.

It will allow Shoshone's 1,500 residents to fill prescription medications they rely on without having to travel to another town. “It's bringing pharmacy back to rural Idaho,” owner/pharmacist Jason Reading said.

And beyond Shoshone, many Magic Valley hospitals use telemedicine services and are looking to expand their offerings.

[http://magicvalley.com/news/local/phoning-it-in-telepharmacy-connects-rural-patients/article\\_2d27e4d6efc350599dc923ef84dfe8b9.html](http://magicvalley.com/news/local/phoning-it-in-telepharmacy-connects-rural-patients/article_2d27e4d6efc350599dc923ef84dfe8b9.html)

[http://magicvalley.com/news/local/phoning-it-in-telepharmacy-connects-rural-patients/article\\_2d27e4d6-efc3-5059-9dc9-23ef84dfe8b9.html](http://magicvalley.com/news/local/phoning-it-in-telepharmacy-connects-rural-patients/article_2d27e4d6-efc3-5059-9dc9-23ef84dfe8b9.html)

## 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 tele pharmacy.

- Telepharmacies allow off-site pharmacists to help patients via a secure video link.
- A pharmacist in the nearby city of Newton. will provide tele pharmacy 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.

### Illinois village loses pharmacy, gains telepharmacy

DIETERICH, Ill. -- The pharmacy in the central Illinois village of Dieterich closed several years ago. But the town of 600 residents soon will be able to fill prescriptions locally again through a new tele pharmacy.

Tele pharmacies allow off-site pharmacists to help patients via a secure video link.

The Effingham Daily News reports ~~{~~<http://bit.ly/2906fMP> } pharmacist LaDonna Poehler will provide tele pharmacy services at the Dieterich clinic from her pharmacy in the nearby city of Newton.

Dr. Michelle Braddy practices medicine in Dieterich. She says the telepharmacy will help patients who have been driving to Effingham or Newton to fill their prescriptions.

<http://www.dailyherald.com/article/20160629/news/306299805/>

## **Telepharmacy Startups in Rural America**

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

Seven critical access hospitals in Idaho implemented an EHR and pharmacy information system to support around-the-clock medication order review by pharmacists.

- Around-the-clock medication order review was achieved by partnering with remotely located pharmacists.
- CAHs pay \$4 per medication order reviewed via this system but the additional costs for the pharmacists' reviews for Medicare patients are directly reimbursable.
- 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



### Around-the-Clock Review Via Telepharmacy

Pharmacy Practice News

OCTOBER 11, 2016

When Tyson Frodin, PharmD, became the pharmacy director of North Canyon Medical Center in Gooding, Idaho, in 2012, the 15-bed critical access hospital only had pharmacist coverage from 7:30 a.m. to 4 p.m. each day.

Dr. Frodin suggested an arrangement in which he would cover the hospital remotely from home after hours. The medical center's senior leadership loved the idea but suggested he expand it to include other hospitals in their regional cooperative. The result? A telepharmacy service, established in 2013, that covers five hospitals 24/7, in which Dr. Frodin and four other telepharmacists—all current or former employees of those hospitals—review and verify medication orders, enter orders in patients' EHRs, check for drug interactions, review medication strength and route, and consult with physicians as needed.

Through the Idaho service, telepharmacists work from home offices using dedicated laptop computers with secure access to each hospital's EHR and pharmacy system. They promise 15-minute turnaround times to verify and enter stat orders and 60-minute turnaround times for standard orders, although they're averaging 13-minute turnaround times on all. It's been so successful that they want to bring on another three hospitals this fall, Dr. Frodin said.

<http://www.pharmacypracticenews.com/Technology/Article/10%AD16/Around%ADt>

he%ADClock%ADReview%ADVia%ADTelepharmacy/38231/ses=ogst

## Telepharmacy Startups in Rural America

### Telepharmacy expansion could help rural pharmacies survive

Newly enacted legislation in Idaho 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 offers the services of a licensed pharmacist to remote locations was the state's first telepharmacy pilot project.
- TelePharm provides web-based way pharmacy services, such as approving prescriptions. The company's platform also offers a video conferencing system so patients can speak to a pharmacist who is not physically present.

▶ 63

Telepharmacy: Path to the Telehealth Future

### Telepharmacy expansion could help rural pharmacies survive

Monday, April 25, 2016 10:25 AM

Business Record

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

Gov. Terry Branstad last week signed the bill effective July 1, which allows qualifying pharmacies without a pharmacist on staff to offer customers telepharmacy services. Telepharm, an Iowa City company which offers the services of a licensed pharmacist to remote locations in 12 other states, was the state's first telepharmacy pilot project.

"There's a lot of pharmacies that have closed in rural Iowa over the last couple of years, so this will bring back a lot of pharmacies," owner Roby Miller said. "It will also save a lot of pharmacies from closing."

Business Record

<http://www.businessrecord.com/Content/Default/AllLatestNews/>

[Article/Telepharmacyexpansioncouldhelpruralpharmaciessurvive/3/248/72929](http://www.businessrecord.com/Content/Default/AllLatestNews/Article/Telepharmacyexpansioncouldhelpruralpharmaciessurvive/3/248/72929)

## Telepharmacy Startups in Corporate America

### Cardinal Health buys Iowa telepharmacy startup

Cardinal Health, a large provider of health care services, has purchased a four year old Iowa startup, TelePharm, that sets up 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 communicate with customers and oversee the dispensing of pharmaceuticals at remote locations.



▶ 64

Telepharmacy: Path to the Telehealth Future

### Cardinal Health buys Iowa telepharmacy startup

Matthew Patane , mpatane@dmreg.com

Aug. 26, 2016

Cardinal Health, a large provider of health care services, has purchased a four year old Iowa startup that has focused on setting up telepharmacies across rural parts of the state.

Ohio based Cardinal health acquired TelePharm, based in Iowa City, in a deal that closed last month, representatives from both companies confirmed to the Register Friday.

TelePharm provides a web based way to offer remote pharmacy services, such as approving prescriptions. The company's platform also offers a type of video conferencing system so patients can speak to a pharmacist who is not physically present.

<http://www.desmoinesregister.com/story/tech/2016/08/26/cardinal-health-buys-iowa-telepharmacy-startup/89222040/>

### Corridor startup TelePharm snapped up by Cardinal Health

By Dave DeWitte

August 29, 2016

dave@corridorbusiness.com

With a quiet but lucrative sale to health care giant Cardinal Health, Iowa City's TelePharm has gained a strong partner in its goal to improve access to pharmacy

services and demonstrated that the Corridor's growing entrepreneurship support network is working.

Cardinal Health, a \$26 billion public company by market capitalization, acquired TelePharm in July for an undisclosed amount. TelePharm will maintain its headquarters in Iowa City, and its team of 18, including founder Roby Miller, will remain under Cardinal Health, which is based in Dublin, Ohio.

Mr. Miller and his team developed a web based platform that allows pharmacists at a central location to communicate with customers and oversee the dispensing of pharmaceuticals at remote locations. The system was used to open Iowa's first telepharmacy in 2012 in Victor, and has since helped retain or restore pharmacies in many rural communities, many of which can't support an onsite pharmacist.

<http://www.corridorbusiness.com/news/corridorstartuptelepharmsnappedupbycardinalhealth/>

## 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.

### **PipelineRx™ Telepharmacy Services**

Our fully managed and staffed Telepharmacy Services option provides 24x7 access to experienced clinical pharmacists for expert order processing, including on-demand coverage.

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

By Peter B. Nichol

OCT 4, 2016

CIO

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. The system provides 24/7, real-time medication order review and verification, improves medication order workflow visibility and operational control, and benefits from national coverage. What's the bottom line? It has the potential to save better than 20% of costs when compared to in-house staffing. One of the benefits is that PowerGridRx allows the telepharmacist one processing view of orders from all IT systems, and across various hospitals and care settings. PowerGridRx creates a clear benefit not only for rural towns but also for traditional pharmacies that are looking to compete with the larger chains.

In February 2016, Dartmouth-Hitchcock (D-H) Medical Center selected the PowerGridRx technology platform to help optimize pharmacy workflow and improve patient care. Founded in 2009, today, PipelineRx has 120 folks supporting its operations, with \$14.92 million raised in funding.

### **PipelineRx™ Telepharmacy Services**

Our fully managed and staffed Telepharmacy Services option provides 24x7 access to experienced clinical pharmacists for expert order processing, including on-demand coverage. Click here to view our current service area.

This solution is designed for organizations that want to:

- Provide 24x7, real-time medication order review and verification
- Improve medication order workflow visibility and operational control
- Comply with all regulatory requirements regarding order retention
- Consolidate data for reporting and analysis
- Access best practices and standardizations
- Benefit from national coverage

[http://www.pipelinex.com/solutions/pipelinexremotetelepharmacyservices/#.WOLHI\\_nyuHs](http://www.pipelinex.com/solutions/pipelinexremotetelepharmacyservices/#.WOLHI_nyuHs)

## **Telepharmacy Startups in Corporate America**

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

PipelineRx, a leading medication management technology company focused on clinical telepharmacy, today announced that Dartmouth-Hitchcock (D-H) Medical Center has selected the Company's PowerGridRx technology platform to help optimize pharmacy workflow and improve patient care.

### **CPSI and PipelineRx Bringing Telepharmacy Services to Community Hospitals**

CPSI a leading provider of healthcare information solutions, today announced that the Company has teamed with PipelineRx to offer a cutting edge telepharmacy solution designed to help small and rural community hospitals provide first class care.

▶ 66

Telepharmacy: Path to the Telehealth Future

### **PipelineRx™ Telepharmacy Services**

Our fully managed and staffed Telepharmacy Services option provides 24x7 access to experienced clinical pharmacists for expert order processing, including on-demand coverage. Click here to view our current service area.

This solution is designed for organizations that want to:

- Provide 24x7, real-time medication order review and verification
- Improve medication order workflow visibility and operational control
- Comply with all regulatory requirements regarding order retention
- Consolidate data for reporting and analysis
- Access best practices and standardizations
- Benefit from national coverage

[http://www.pipelinrx.com/solutions/pipelinrxremotetelepharmacyservices/#.WOLHI\\_nyuHs](http://www.pipelinrx.com/solutions/pipelinrxremotetelepharmacyservices/#.WOLHI_nyuHs)

### **CPSI and PipelineRx Bringing Telepharmacy Services to Community Hospitals**

CPSI Adds Remote Pharmacy Services to Aid Small and Rural Hospitals with Efficiency, Quality of Care

November 17, 2016 10:00 AM Eastern Standard Time

MOBILE, Ala. (BUSINESS WIRE) CPSI

(NASDAQ: CPSI), a leading provider of healthcare information solutions, today announced that the Company has teamed with PipelineRx to offer a cutting edge telepharmacy solution designed to help small and rural community hospitals provide

firstclass care. The remote pharmacy solution through PipelineRx will be sold by TruBridge, the member of the CPSI family that provides business, IT and management consulting and services.

<http://www.businesswire.com/news/home/20161117005175/en/CPSI-PipelineRx-Bringing-Telepharmacy-Services-Community-Hospitals>

## Is Telepharmacy a Benefit to Pharmacists?

### Telepharmacy Now: A Look at Telepharmacy for Independent Pharmacies

Question: Does Telepharmacy eliminate pharmacists' jobs?

- According to Adam Chesler, Director of regulatory affairs at Cardinal Health:
  - "Rural pharmacies are closing at an alarming rate, and when a rural pharmacy closes, that's the loss of a job."
  - "When you add a telepharmacy, you're not only helping the overall economy of that town, but you're actually increasing the amount of pharmacists' jobs there; you're increasing access to the pharmacists."
  - "Every time you open a telepharmacy you're creating jobs."

### Telepharmacy Now: A Look at Telepharmacy for Independent Pharmacies

December 15, 2016

PBA Health

<https://www.pbahealth.com/telepharmacynowalookattelepharmacyandwhyforindependentpharmacies/>

The number of independent pharmacies has decreased steadily over the past five years from 23,106 in 2011 to 22,160 in 2015, according to the 2016 edition of the NCPA Digest, an annual publication from the National Community Pharmacists Association (NCPA) that profiles the independent community pharmacy market. With the number of independent pharmacies dwindling, those operating must consider how to compete to stay in business.

A possible solution is telepharmacy. Telepharmacy serves as an extension of a pharmacy's current business, and allows for remote dispensing of prescriptions. Telepharmacy eliminates pharmacists' jobs. "Rural pharmacies are closing at an alarming rate, and when a rural pharmacy closes, that's the loss of a job," said Adam Chesler, director of regulatory affairs at Cardinal Health. "When you add a telepharmacy, you're not only helping the overall economy of that town, but you're actually increasing the amount of pharmacists' jobs there; you're increasing access to the pharmacists. Every time you open a telepharmacy you're creating jobs."

Telepharmacy will take prescription business away from your other pharmacy.

"Telepharmacy is actually improving adherence, which increases the overall number

of filled prescriptions,” Chesler said.

Telepharmacy increases the risk of diversion or robbery. “If someone wants to rob a pharmacy, they’re going to rob a pharmacy, whether a pharmacist is on site or not,” Chesler said. “Telepharmacies have cameras covering every square foot of their facility and panic buttons are also put in place. Regarding diversion, you want your top technicians in these pharmacies; the ones who look at their profession as a career, and are ready to take that next step in advancing their role.”

Telepharmacy is less accurate. “Telepharmacy, when performed correctly, can be more accurate than a traditional pharmacy due to all the additional checks and balances that are built into the system,” Chesler said.

Telepharmacy is similar to FaceTime and Skype. “Telepharmacy is not FaceTime or Skype, but a secure pointtopoint video feed that is electronically documented and barcode scanned of a prescription to the patient from point of entry through remote dispense,” said Brian Glaves, director of sales at ScriptPro.

**Florida Pharmacy Association  
Regulatory and Law Conference**

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**Some Telepharmacy Takeaways**

## **Telehealth/Telepharmacy Takeaways**

Telehealth and Telepharmacy projects develop out of health care need, typically the delivery of care to remote populations.

- Many telehealth projects start with grant funding and involve a university or other health care organization to create the initial technical system.
- Regulatory oversight and legislation is often required before the Telehealth or Telepharmacy project can begin.
- Many Telehealth and Telepharmacy projects are anchored in medical centers that can afford the overhead of the project and its telecommunication infrastructure.
- With the success of initial Telehealth and Telepharmacy projects, larger health care corporations are realizing the value of investment in Telepharmacy and Telehealth.

## Telehealth/Telepharmacy Predictions

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1. With the headlong technology rush to mobile communications, the two-way interactive video features of Telehealth and Telepharmacy applications will become a standard means of health care communication.
2. With more access to secure Internet connections via smart phones, tablets, computers and even “wearable” technology and home monitoring systems, demand will increase for interactive access to health care professionals.
3. With the ongoing creation of applications for mobile communications and interoperability, Telepharmacy and Telehealth systems will be on the front end of health care development.

## Follow-up Question I

The Ryan Haight Online Pharmacy Consumer Protection Act of 2008 was passed to shut down all sales of controlled substances over the Internet.

- A. Yes
- B. No
- C. Sometimes
- D. Maybe
- E. Don't Know

## Follow-up Question 2

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A Valid Patient-Practitioner Relationship requires at least one in-person meeting between doctor and patient.

- A. Yes
- B. No
- C. Sometimes
- D. Maybe
- E. Don't Know

### Follow-up Question 3

HIPAA Security regulations make it almost impossible to implement Telepharmacy projects.

- A. Yes
- B. No
- C. Sometimes
- D. Maybe
- E. Don't Know

## Follow-up Question 5

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Telepharmacy projects can create jobs and income for people in rural areas.

- A. Yes
- B. No
- C. Sometimes
- D. Maybe
- E. Don't Know

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## Questions?



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This presentation, with notes, is available at:  
[www.imageresearch.com/telepharmacy](http://www.imageresearch.com/telepharmacy)