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RESOURCE CENTER



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TELEHEALTH

## **Florida Telehealth Summit**

November 9, 2017

### **Telepharmacy as a Telehealth Solution - For Better or Worse**

**Christopher B. Sullivan, PhD**

**Angela S. Garcia, PharmD, MPH, CPh**

# Telehealth and Telepharmacy are Synonymous

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

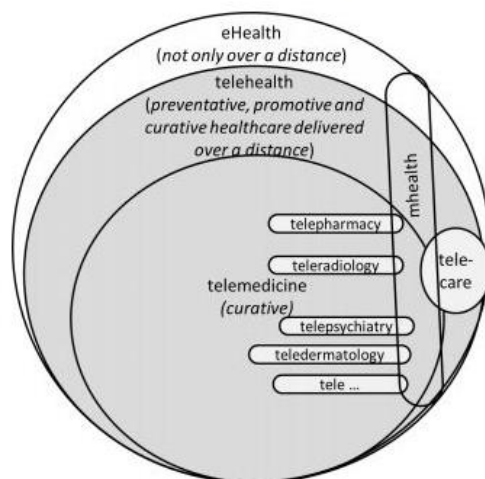


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Telepharmacy as a Telehealth Solution

2

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

A Review of Telehealth Service Implementation Frameworks

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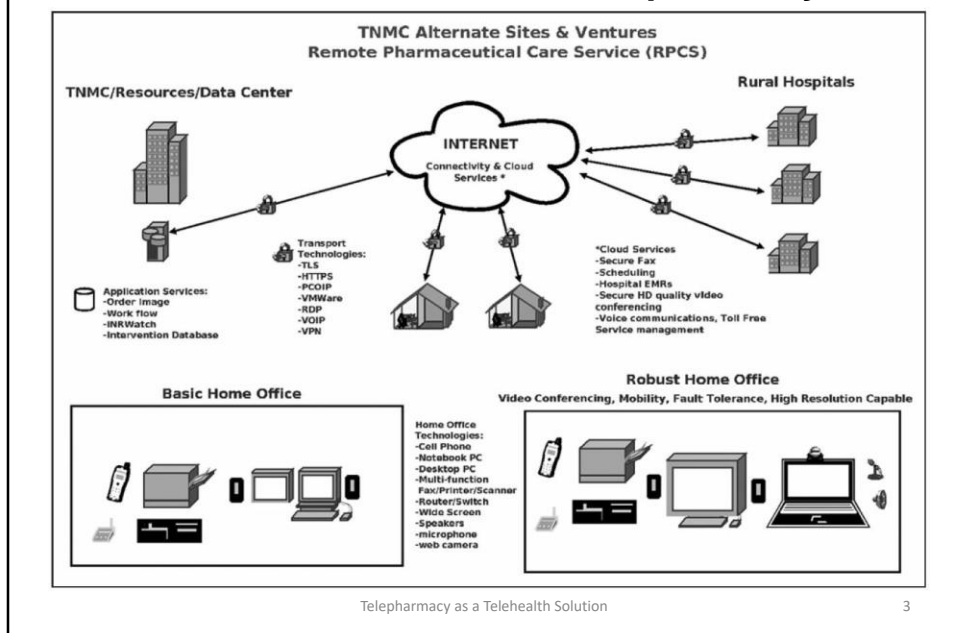
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**Abstract:** Despite the potential of telehealth services to increase the quality and accessibility of healthcare, the success rate of such services has been disappointing. The purpose of this paper is to find and compare existing frameworks for the 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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## The Nebraska Medical Center Telepharmacy Model



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

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<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  $p < 0.01$ ).

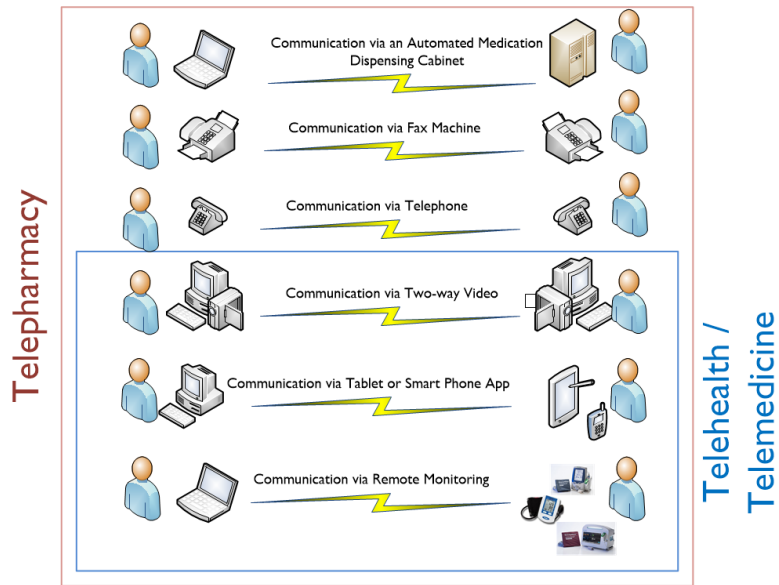
**Conclusions:** This is one of the first studies to demonstrate the patient- and health system-centered nature of pharmaceutical care delivered via a telepharmacy service model by evaluating documented remote pharmacist interventions with an analytical framework.

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

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

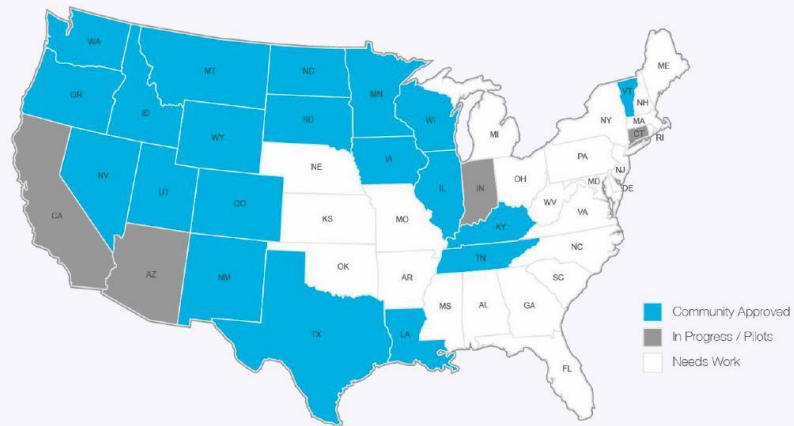
- EMR - Electronic medical record
- HD - High definition video
- TLS - Transport Layer Security over the Internet
- HTTPS - Hypertext transfer protocol secure (<https://>)
- PCOIP or PC-over-IP - Cloud-based virtual workplace
- VMWare - Virtualization and cloud computing software
- RDP - Remote desktop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

# Comparison of Telepharmacy vs Telehealth



Telepharmacy as a Telehealth Solution

2016



<http://www.telehealthresourcecenter.org/node/764>

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

## Telepharmacy as a Telehealth Solution

5

## What You Need to Know About Telepharmacy

Greg Janes, Zachary Schladetzky

## TelePharm, Cardinal Health

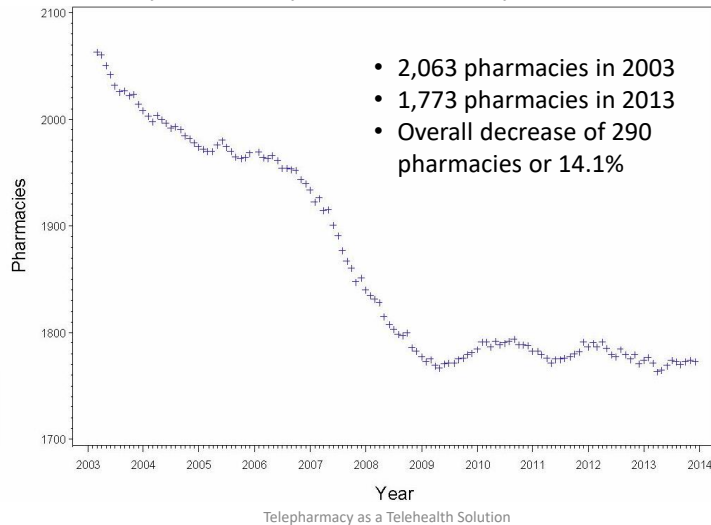
Thursday, December 15, 2016

<http://www.telehealthresourcecenter.org/node/764>



## The Decline of Rural Independent Pharmacies

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



6

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

*Fred Ullrich, BA; Keith J. Mueller, PhD*

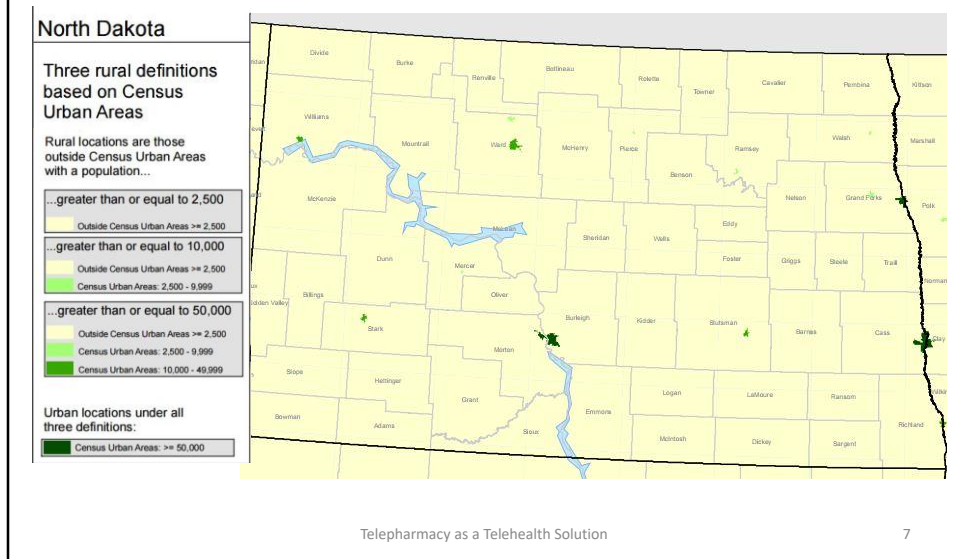
**Brief No. 2014-7 June 2014** [www.public-health.uiowa.edu/rupri](http://www.public-health.uiowa.edu/rupri)

<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).

# North Dakota Telepharmacy Project

## Rural and Urban Areas in North Dakota



## 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)

## 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:

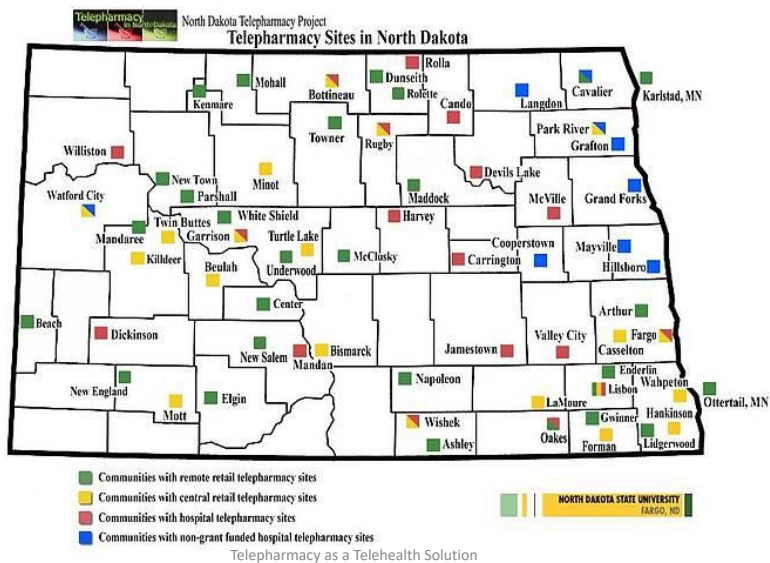
1. the pharmacy and remote site be connected by a computer, video, and audio links;
2. a registered pharmacy technician be present at the remote site;
3. the pharmacist compare the stock bottle, drug dispensed, and its strength via the video link, with the entire label checked for accuracy; and
4. the 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>

## North Dakota 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 – Pharmacy Rules

The North Dakota Telepharmacy rules allow for the following:

- Retail pharmacies can operate in remote areas of the state without a licensed pharmacist being physically present
- A licensed pharmacist supervises a registered pharmacy technician at a remote telepharmacy site:
  - The pharmacy and remote site are connected by a computer, video, and audio links
  - A registered pharmacy technician is physically present at the remote site

- The pharmacist compares medications via the video link, checking the label checked for accuracy
- The pharmacist can counsel the patient on prescriptions using the video and audio links

### **ND Telepharmacy Project – Outcomes**

The North Dakota Telepharmacy Project current status:

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

### **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 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 will provide telepharmacy services at the Dieterich clinic from her pharmacy in the nearby city of Newton.
- The telepharmacy will help patients who have been driving to Effingham or Newton to fill their prescriptions.



Telepharmacy as a Telehealth Solution

9

### 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/>

[http://www.effinghamdailynews.com/news/local\\_news/closer-look-telepharmacies-gaining-popularity-in-small-towns-like-dieterich/article\\_d21e1f63-1cd9-5383-93d1-8959334f94da.html](http://www.effinghamdailynews.com/news/local_news/closer-look-telepharmacies-gaining-popularity-in-small-towns-like-dieterich/article_d21e1f63-1cd9-5383-93d1-8959334f94da.html)

## 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 a pharmacist in the hospital only during the day.

- In 2013 its pharmacy director launched a telepharmacy service in which pharmacists work from home to provide pharmacy coverage during the off hours to five hospitals.
  - Review and verify medication orders
  - Enter orders in patients' EHRs
  - Check for drug interactions
  - Review medication strength
  - Consult with physicians as needed



Telepharmacy as a Telehealth Solution

10

### 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 in a Rural Alberta Community Cancer Network

With the absence of a pharmacist in a rural cancer center, telepharmacy services were introduced.

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



Telepharmacy as a Telehealth Solution

11

### Telepharmacy in a rural Alberta Community Cancer Network

[Gordon HL](#), [Hoeber 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.

## 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 calls 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.

Tele-pharmacy



Clinical pharmacist reviewing medications at home with the patient

Telepharmacy as a Telehealth Solution

12

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.

## Telepharmacy Startups in Corporate America

### Cardinal Health buys Iowa telepharmacy startup

- Cardinal Health, a large health care provider recently purchased a four year old Iowa startup, TelePharm.
- Telepharm is a company that provides a remote telepharmacy platform for rural pharmacies.
- Mr. Miller and his team developed a web-based platform that lets pharmacists at a central pharmacy communicate with customers and oversee the dispensing of pharmaceuticals at remote locations.



Telepharmacy as a Telehealth Solution

13

### 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/>

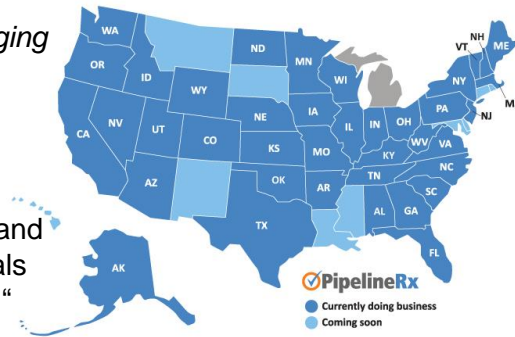
## Telepharmacy Startups in Corporate America

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

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

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

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



Telepharmacy as a Telehealth Solution

14

### PipelineRx™ Telepharmacy Services

Our fully managed and staffed Telepharmacy Services option provides 24×7 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 24×7, 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.pipelinerrx.com/solutions/pipelinerrxremotetelepharmacyservices/#.WOLHI\\_nyuHs](http://www.pipelinerrx.com/solutions/pipelinerrxremotetelepharmacyservices/#.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>

<http://www.pipelinerrx.com/assets/telepharmacy-map-03-22-2017.jpg>

<http://itelemedicine.com/wp-content/uploads/2015/07/telepharmacy-market11.jpg>

## **Clinical Application of Telepharmacy: Good vs Evil**

There are three areas of telepharmacy with an intended application to:

- Enhance clinical services,
- Improve patient outcomes, and
- Optimize pharmacists contributions to the clinical team

These are:

- Remote Order Entry/Verification
- Remote Dispensing
- Remote Counseling

Telepharmacy as a Telehealth Solution

15

## **References**

### **Telepharmacy: New Jobs, Expanded Opportunities**

**Telepharmacy is more than just phoning it in.**

<http://drugtopics.modernmedicine.com/tag/vaccination-and-immunization-resource-center>

### **Kmart Opens First Telepharmacy with Plans for More**

**The first test store in Des Plaines could be just the start.**

<http://drugtopics.modernmedicine.com/drug-topics/news/kmart-opens-first-telepharmacy-plans-more>

### **State Regulation of Telepharmacy**

MARCH 23, 2016

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

<http://www.pharmacytimes.com/news/state-regulation-of-telepharmacy?p=2>

Current practices and state regulations regarding telepharmacy in rural hospitals. Am J Health Syst Pharm. 2010 Jul 1;67(13):1085-92



## **Clinical Application of Telepharmacy: Good vs Evil**

There should be a distinct balance between addressing true clinical outcomes from a population, public or community health needs perspective

Versus

An approach with the undertone first for profit driven motives or reducing costs by eliminating the pharmacist

- Telepharmacy Models (traditional and automated dispensing)
- Statements on Telepharmacy from national pharmacy organizations

## **What does Telepharmacy look like in practice?**

### **Remote Order Entry/Verification**

- Inpatient or outpatient practice settings:
  - Allows for 'fill-in' verification or product review during peak hours or to extend
  - Provides support for technical duties while the onsite pharmacist engages in more clinical roles through direct patient care or patient-related services

## **What does Telepharmacy look like in practice?**

### **Remote Dispensing**

- Requires certification of technicians who are onsite while an offsite pharmacist performs 'regular duties' and remains available to the patient with the goal of extending the coverage of a pharmacist regardless of geographic location

### **Remote Counseling**

- Provides for pharmacy related services through secure live video calls in several settings for either general pharmacy or specialty pharmacy services

## **Using Progress for the Good of the Patient and Profession**

- Reaching patients who are removed from or limited by access to care
- Allowing pharmacies to have extended hours
- Clear, concise state laws with regulations and safety standards
- Increased access to specialists or additional counseling to address complicated medication regimens, specialty care services, travel medicine (domestic or foreign)

## **Using Progress for the Good of the Patient and Profession**

- Enhancing services that are directly related to improved patient care outcomes
- Reducing costs (direct and indirect) to the patient, institution, or health care system by:
  - Increasing adherence,
  - Reducing medication errors,
  - Identifying side effects or problems early,
  - Increasing health literacy,
  - Providing opportunities for comprehensive care management.

## **What Telepharmacy Requires besides Technology**

- Highly qualified, certified and/or licensed technicians
- Accountability that pharmacists are providing the supervision without distractions 'offsite' and strong documentation or recordkeeping
- State regulations and diversion protections with strong collaborations between local law enforcement supported by strong state policies

## **What Telepharmacy Requires besides Technology**

- Dispelling the impression of depersonalized pharmacy care versus personalized technology-enhanced pharmacy care
- Integrity behind the efforts: is this truly about improving patient care and access
- Connection to the rest of the health care team
- Requiring well developed pilot studies with outcomes data before rolling out full telepharmacy services (does what we have reflect the community it is intended to be used)

## Questions?



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Telepharmacy as a Telehealth Solution

24

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**Telepharmacy is more than just phoning it in.**

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### **Kmart Opens First Telepharmacy with Plans for More**

**The first test store in Des Plaines could be just the start.**

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