Empowering the Pharmacist with Telepharmacy

Jessica Adams, PharmD

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Learning objectives

1. Explain why telepharmacy started and how it has evolved with technology.
2. List the different types of telepharmacy and how its use is improving patient care.
3. Describe the telepharmacy regulatory environment around the United States and what states are doing with rules.

Why telepharmacy?

1. Utilize technology to improve patient adherence
2. Enable access to a pharmacist in rural communities
3. Increase pharmacist outreach in urban areas

The four types of telepharmacy

**INPATIENT**

- Remote order entry review
- IV admixture

**OUTPATIENT**

- Retail telepharmacy
- Remote counseling

Disclosures

Telepharm, a Cardinal Health Company, has a commercial interest in telepharmacy, but does not reference any commercial products in this presentation.

The opinions and recommendations expressed by the presenter are their own, and are to be used for educational purposes only.

Need for alternative delivery

<table>
<thead>
<tr>
<th>Independent Rural Pharmacies 2003-2013</th>
<th>924 independent rural pharmacies closed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>490 rural communities lost their only pharmacy</td>
</tr>
</tbody>
</table>

Source: Update: Independently Owned Pharmacies in Rural America, 2003-2013
RUPRI Center for Rural Health Policy Analysis, Rural Policy Brief June 2014
Fred Ullrich, BA; Keith J. Mueller, PhD

7,624
7.2%
7.2%
12.1%
6,700
7.2% decrease
12.1% decrease
### Telepharmacy historical timeline

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1942</td>
<td>Australia’s Royal Flying Doctor Service</td>
</tr>
<tr>
<td>2001</td>
<td>North Dakota first state to allow telepharmacy</td>
</tr>
<tr>
<td>2001</td>
<td>Community Health Association in Spokane, WA launches program</td>
</tr>
<tr>
<td>2002</td>
<td>NDSU study begins</td>
</tr>
<tr>
<td>2003</td>
<td>Alaska Native Medical Center program</td>
</tr>
<tr>
<td>2006</td>
<td>U.S. Navy begins telepharmacy</td>
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### North Dakota telepharmacy case study

- **Study conducted from 2002 - 2008**
- **Medication dispensing error rate for telepharmacies**
  - **81 telepharmacies**
  - **<1%**
- **Compared to a national average of: ~1.7%**
- **Result: Positive outcomes, mechanisms could be improved**

Information of the North Dakota Telepharmacy Program provided by North Dakota State University School of Pharmacy

### North Dakota telepharmacy case study


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### Telepharmacy regulations, 2008

- **Why telepharmacy?**
  1. Utilize technology to improve patient adherence
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### Telepharmacy regulations, 2018

- **Why telepharmacy?**
  1. Utilize technology to improve patient adherence
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How big is the adherence problem?

187M Americans take 1+ prescriptions

13% $290 billion healthcare expenses directly related to non-adherence avoidable costs

“The Leaky Bucket”

According to IMS Health:

- Out of every 100 new prescriptions, 50-70 arrive at a pharmacy.
- 48-66 are picked up by the patient.
- 25-30 are taken properly.
- 15-20 are refilled as prescribed.

Frequent interactions with patients

Patients visit their pharmacist more than any other healthcare provider

<table>
<thead>
<tr>
<th>Provider</th>
<th># visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary care physician</td>
<td>4</td>
</tr>
<tr>
<td>Other healthcare providers</td>
<td>9</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>35</td>
</tr>
</tbody>
</table>

Patients desire convenience

95% patients filled initial prescriptions when offered at doctor’s office

Definition of rural

According to HRSA:

“Rural” encompasses all population, housing, and territory not included within an urban area.
### Rural is becoming more rural

<table>
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<th>64+ Million</th>
<th>77%</th>
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<td>People in the US live in rural areas</td>
<td>rural counties considered health professional shortage areas</td>
</tr>
</tbody>
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Source: The Crisis in Rural Primary Care; WWAMI Rural Health Research Center, Policy Brief April 2009, 2010 Census Urban and Rural Classification and Urban Area Criteria, https://www.census.gov/geo/reference/ua/urban-rural-2010.html

77% of rural counties considered health professional shortage areas.

People in the US live in rural areas.

### Creating patient relationships

“Telepharmacy helps create a new patient-pharmacist relationship that wasn’t possible before.”

- Angela Falk, Pharm.D.

### Rural telepharmacy next to a health clinic

![Image of rural telepharmacy next to a health clinic](image1)

### Interior of a rural telepharmacy

![Image of interior of a rural telepharmacy](image2)

### Rural community pharmacy grand opening

![Image of rural community pharmacy grand opening](image3)

### Rural telepharmacy revives Main Street

BEFORE: ![Image of rural telepharmacy before](image4)

AFTER: ![Image of rural telepharmacy after](image5)
NORTH DAKOTA
Results of the 6-year study with 81 locations:

$26.5 million in economic development
80-100 new jobs created

ILLINOIS
Estimate for one pharmacy based on financial data:

$640,000 annual economic impact

Economics of telepharmacy

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Access challenges in urban areas

University of Illinois Chicago did a study looking at “pharmacy deserts” in Chicago:

1+ miles to nearest pharmacy
Over one million residents live in these areas in Chicago

Readmission rates are high

A study in Oregon found that readmission rates were higher in rural areas than urban, but both are still high:

15.3% Rural
14.7% Urban

Better Education + Better Access = Better Outcomes

Telepharmacy in a community health center
In-clinic pharmacy providing 340B

Telepharmacy in a FQHC

Common Questions

Software solutions

Advantages
- Live pharmacist interaction
- Constant updates
- Low initial costs
- Better education

Disadvantages
- Can be limited hours
- Live internet connection

Hardware or AMDS solutions

Advantages
- Can be available 24 hours
- No on-site staff needed

Disadvantages
- Cost-prohibitive
- Limited formulary
- Mechanical failure
- Complicated

Telepharmacy workflow

New prescription arrives at Pharmacy A

Technician A fills, taking images of the process

Pharmacist B reviews images to verify fill is accurate

Patient picks up Rx at Pharmacy A and Pharmacist B counsels
Endless opportunities

Workload balancing
Hospitals
Pharmacy deserts
Accessible specialists

FAQ

Fill Accuracy
Safety (staff & location)
Diversion
Internet outage

Regulatory Considerations

Regulations are fragmented

- Different for each type of telepharmacy
- Vary widely by state
  - Practice setting
  - Verification site location
  - Urban allowances

States that have telepharmacy language can benefit from aligning their rules
NABP currently has a task force to create model language

Utah Statistics

- Over 25,799 residents in pharmacy deserts
- 27 rural pharmacy deserts
- 26 at-risk communities
- 62 primary care HPSA's
### Typical regulations

- Pharmacy technician certification
- Limits on number of remote sites or technicians
- Special rules around Controls
- Mileage restrictions
- Security requirements
- Technology requirements
- Signage in the telepharmacy location

### Telepharmacy regulation considerations

- Need is increasing every year
- Successful programs already in place
- Consider the present as well as the future
- Get ahead of the technology and legislators

### Steps to implementing regulations

1. Look for statutory authority
2. Have Board Rules Committee draft rules
3. Board notices rules to the public
4. Public comment period
5. Administrative rules review process & approval
6. Implementation

### Tips to drafting regulations

- Look into what other states have for regulation
- Visit a retail telepharmacy location which is in operation
- Understand the landscape in your state
- Ensure statutes leave room for administrative rules

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### CE Question #1

Which of these is not a type of “telepharmacy”?  

- A.) Remote Order Entry  
- B.) Remote Dispensing  
- C.) Remote Consultation  
- D.) Internet Pharmacy
CE Question #2
Telepharmacy is becoming less prevalent in America.
A.) True
B.) False
C.) Answering this question is a slippery slope
D.) I can neither confirm or deny this

CE Question #3
Which of the following healthcare providers has the most patient contact?
A.) Pharmacist
B.) Primary Care Physician
C.) Dentist
D.) Veterinarian

CE Question #4
Available data from the implementation of telepharmacy in North Dakota showed the creation of new jobs.
A.) Yes, it created over 80 new jobs
B.) Yes, but all the jobs went to China
C.) No, no new jobs were created
D.) No, it actually took away jobs

CE Question #5
Which group would be considered to have access issues?
A.) Seniors
B.) Low vehicle ownership
C.) Both
D.) Neither

CE Question #6
Which of the following are ways to increase pharmacist presence?
A.) Telepharmacy in warfarin clinics
B.) Telepharmacy to allow HIV medications at discharge
C.) Telepharmacy to allow overnight coverage at rural hospitals/clinics
D.) All of the above

Questions?
Jessica Adams, Pharm.D.
jessica.adams@telepharm.com
(512) 426-6868