Empowering the Pharmacist with Telepharmacy

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Disclosures

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

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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.
Agenda

1. State of the industry and importance of innovation
2. Telepharmacy overview and history
3. The need for telepharmacy
4. Use cases and benefits of telepharmacy - pharmacists
5. Regulatory landscape and advocacy
1. State of the Industry & Importance of Innovation
Do you feel pressures facing the pharmacy industry today?
Are there opportunities ahead of the pharmacy industry today?
<table>
<thead>
<tr>
<th>Industry pressures</th>
<th>Industry opportunities</th>
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</thead>
<tbody>
<tr>
<td>Mail order pharmacies</td>
<td>Technological advancements</td>
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<tr>
<td>Physician dispensing</td>
<td>Patient-centered care</td>
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<tr>
<td>Reimbursement fees</td>
<td>Demand from MUA’s</td>
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<tr>
<td>Increased competition</td>
<td>Proven safety and efficiency of existing technologies</td>
</tr>
</tbody>
</table>
Innovation adoption lifecycle

- Innovators: 2.5%
- Early adopters: 13.5%
- Early majority: 34%
- Late majority: 34%
- Laggards: 16%
Advances increase safety & efficiency

- Automated dispensing
- Electronic billing
- Technicians in the pharmacy
- Automatic ordering

Advances increase safety & efficiency in the pharmacy with automated dispensing, electronic billing, technicians in the pharmacy, and automatic ordering.
Pharmacy’s history of slow adoption

- **Automated dispensing**: 15 years
- **Pharmacy computerization**: 25 years
- **Unit dose drug distribution**: 35 years
- **IV Admixture programs**: 35 years
- **Pharmacist on patient care team**: 40 years

Data from ASHP National Survey
Risk of not innovating
What problems do pharmacist encounter today?

- Struggling profitability
- Limited time for clinical activity
- Non-adherence rates
- Massive costs of non-adherence
Pharmacies struggle with profitability

Average Net Operating Income

- 2008: 3.3%
- 2010: 3.1%
- 2012: 3.1%
- 2014: 2.1%
- 2016: 1.7%

Source: https://www.ncpanet.org/home/ncpa-digest
How much of your time is spent on clinical activities?
Limited time for clinical activities

Value added tasks represent

Only 40.3%

of pharmacist’s time
(Clinical and patient interactions)

Medication non-adherence can account for:

- **50%** Treatment failures
- **25%** Hospitalizations

Adherence to chronic medications is about **50%**

Opportunity to improve non-adherence costs

$290 billion
Annually in mostly avoidable costs to treat adverse events from inappropriate medication use

$100 billion
Medication non-adherence alone results in each year in excess hospitalizations.

Pharmacies & Pharmacists are best positioned to address these problems
We should be finding ways to:

- Increase revenue by providing more value to more patients
- Allow pharmacists to practice at the top of their license
- Reduce or better optimize costs
- Implement innovative practices into our business
Current trends address industry opportunities

- Direct to consumer
- Medication therapy management
- Point of care testing
- Immunizations
- Telepharmacy
- Pharmacogenomic testing
Current trends address industry opportunities

Direct to consumer  
Medication therapy management  
Point of care testing  
Immunizations  
Telepharmacy  
Pharmacogenomic testing
2. Telepharmacy Overview and History
There are four types of telepharmacy:

**INPATIENT**
- Remote order entry review
- IV admixture

**OUTPATIENT**
- Retail telepharmacy
- Remote counseling
There are four types of telepharmacy

**INPATIENT**
- Remote order entry review
- IV admixture

**OUTPATIENT**
- Retail telepharmacy
- Remote counseling
Telepharmacy historical timeline

- **1942**: Australia’s Royal Flying Doctor Service
- **2001**: North Dakota: first US state to allow Community Health Assoc. in Spokane, WA
- **2002**: NDSU study
- **2006**: US Navy begins telepharmacy
In what year did the iPad first come out?

A. 2003  
B. 2006  
C. 2010
In what year did the iPad first come out?

A. 2003
B. 2006
C. 2010
North Dakota study proves safety

Study conducted from 2002 - 2008

81 telepharmacies

Medication dispensing error rate for telepharmacies

<1.3%

Compared to a national average of: ~1.7%

Result: Positive outcomes, mechanisms could be improved

North Dakota telepharmacy case study


Information of the North Dakota Telepharmacy Program provided by North Dakota State University School of Pharmacy
What does a retail telepharmacy look like?

A. A brick and mortar location staffed by one or more pharmacy technicians.
B. An online portal where patients pay for medications and have them shipped.
C. A pharmacist-shaped robot.
What does a retail telepharmacy look like?

A. A brick and mortar location staffed by one or more pharmacy technicians.
B. An online portal where patients pay for medications and have them shipped.
C. A pharmacist-shaped robot.
A telepharmacy is:

- A brick-and-mortar location, just like any other pharmacy
- A pharmacist is not on-site
- Pharmacists verify prescriptions for the telepharmacy through either a live video feed or images
- Pharmacists counsel patients via a live video call
Telepharmacy workflow

1. New prescription arrives at Pharmacy A
2. Technician A fills, taking images of the process
3. Pharmacist B reviews images to verify fill is accurate
4. Patient picks up Rx at Pharmacy A and Pharmacist B counsels
The Patient’s Perspective

The telepharmacy feels like a traditional pharmacy
The Patient’s Perspective

❖ Greeted by technician

❖ Pharmacist is always available
The prescriptions are filled and verified

1. Technician fills prescription, taking images of the process

2. Prescription is remotely verified by a pharmacist via HIPAA-compliant software
The Patient’s Perspective

Additional services while they wait

❖ OTC products
❖ Immunizations when pharmacist is on site
❖ Consult pharmacist with any questions
Consult with the pharmacist

- Visit with your pharmacist via secure two-way audio-visual software
- Your pharmacist is presented with your patient notes during the call
The Patient’s Perspective

Done!

Patient leaves with medications in hand and questions answered
3. The Need for Telepharmacy
In what setting do you think telepharmacy is most needed?

A. Rural areas
B. Urban areas
C. Both
In what setting do you think telepharmacy is most needed?

A. Rural areas
B. Urban areas
C. Both
Need for alternative delivery

Independent Rural Pharmacies 2003-2018

7,624

16.1% decrease

2007-2009

7.2% decrease

6,393

1,231 independent rural pharmacies closed

630 rural communities lost their only pharmacy

Source: Update: Independently Owned Pharmacy Closures in Rural America, 2003-2018; RUPRI Center for Rural Health Policy Analysis, Rural Policy Brief July 2018; Abiodun Salako, MPH; Fred Ullrich, BA; Keith J. Mueller, PhD
Rural access is declining

1,231

64+ million
People in the US living in rural areas

1.7+ million
Residents living in rural pharmacy deserts 10+ miles from the nearest pharmacy

Source: Update: Independently Owned Pharmacy Closures in Rural America, 2003-2018; RUPRI Center for Rural Health Policy Analysis, Rural Policy Brief July 2018; Abiodun Salako, MPH; Fred Ullrich, BA; Keith J. Mueller, PhD
How many pharmacy deserts does New Hampshire have?

A. 18
B. 32
C. 6
How many pharmacy deserts does New Hampshire have?

A. 18
B. 32
C. 6
New Hampshire Pharmacy Deserts

Map of pharmacy deserts in NH

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

- Rural: 15.3%
- Urban: 14.7%

Source: Lack of pharmacy access sends some patients back to the hospital; Oregon State University and Oregon Health & Science University, August 2016
Rural is becoming more rural

64 Million
(1 in 5)
People in the US live in rural areas

59%
Of Primary Care Health Provider Shortage Areas are located in rural settings

Source: One in Five Americans Live In Rural Areas; What is rural America? America Counts Staff; August 9, 2017. Available at: https://www.census.gov/library/stories/2017/08/rural-america.html
Need for improved access in urban areas

1+ miles
Distance to the nearest pharmacy in an urban pharmacy desert

32% or 1 million
People in Chicago’s 802 census tracts were in urban pharmacy deserts

Closure risk
Increased in urban pharmacies serving more low-income, uninsured, or publicly insured

"The Leaky Bucket" of Medication Adherence

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.

Source: IMS Health Data, March 2011
The “ultimate cost” of non-adherence

- Treatment failures: 50%
- Hospitalizations: 25%
- Deaths: 125k
- Avoidable Healthcare Costs: $290B
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>

Pharmacist important in patient care lifecycle

Better Education + Better Access = Better Outcomes
4. Use Cases and Benefits for Pharmacists
Pharmacist’s opportunity with telepharmacy

- Improve medication adherence rates
- Expand access to new patient populations
- Increase clinical interventions
Community telepharmacy increases patient access

- 4 years without a pharmacy
- 25 miles away from the nearest pharmacy
- Delivery to Olton was becoming expensive
- Telepharmacy location now in Olton
- Went from delivering 25-40 scripts per day to 60-70 scripts per day

Source: https://blog.telepharm.com/community-telepharmacy-in-texas-qa-with-micah-pratt-pharmacist
Retail telepharmacy in a community health center

- Partnership with clinic
- Allows on-site pharmacy at low volume locations
- Ability to utilize pharmacists more effectively in the clinic

Source: https://www.telepharm.com/success-stories/madison-wi-health-system-provides-better-pharmacy-access-for-chc-patients/
Rural telepharmacy next to a health clinic
Interior of a rural telepharmacy
In-clinic pharmacy providing 340B

- Physical drug inventory
- Certified technicians on site
- Small OTC
Telepharmacy in a FQHC
Rural telepharmacy revives Main Street
Economic benefits of telepharmacy

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

Source: North Dakota Telepharmacy Project https://www.ndsu.edu/telepharmacy/; Rural Economic Technical Assistance Center (RETAC) in Macomb, IL; Economic impacts of a pharmacy for Deiterich, Illinois, June 2015
Pharmacists practice at the top of their license

- Free up time from dispensing tasks
- Ability to perform more clinical activities
  - MTM
  - Immunizations
  - Flu clinics
  - Counseling sessions
Elevated role for technicians

- Training & certification
- Under direct pharmacist supervision
- Perform more duties
- Get to be the “face” of the pharmacy
- Organize and schedule on-site visits
Pros/Cons of Hardware or AMDS solutions

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

Disadvantages
• Cost-prohibitive
• Limited formulary
• Mechanical failure
• Complicated
Pros/Cons of Software solutions

Advantages

• Live pharmacist interaction
• Constant updates
• Low initial costs
• Better education
• More opportunities

Disadvantages

• Can be limited hours
• Live internet connection
New opportunities for pharmacy access

- Workload balancing
- Hospitals
- Pharmacy deserts
- Accessible specialists
5. Regulatory Landscape and Advocacy
Telepharmacy regulations, 2008

- Permitted, but practice may be restricted and/or requires Board approval
- In progress
- Not permitted

Source: Telepharmacy project expands across country; 9/12/2008; Dave Kolpack, Associated Press
How many states allow the practice of telepharmacy today?

A. 13
B. 51
C. 40
D. 24
How many states allow the practice of telepharmacy today?

A. 13  
B. 51  
C. 40  
D. 24  

Telepharmacy regulations, 2020

Permitted, but practice may be restricted and/or requires Board approval

In progress

Not permitted
Frequently asked questions

1. Fill accuracy
2. Safety
3. Diversion
4. Internet outages
Regulations vary widely by state depending on:

- Practice setting
- Verification site location
- Urban allowances
- Many other factors

States that have telepharmacy language can benefit from aligning their rules

**NABP created model telepharmacy language in 2017**
Typical telepharmacy regulations

- Pharmacy technician certification hours/experience
- Special rules around controls
- Limits on number of remote sites or technicians
- Security requirements
- Mileage restrictions
- Technology requirements
As you advocate for telepharmacy, remember

- **The need is increasing every year**
  - Pharmacy closures, underserved areas

- **Get ahead of the technology and legislators**
  - Make the rules for your industry, not outsiders

- **Successful programs already in place**
  - There are plenty of good examples to look at and use

- **Consider the future**
  - Think about the future, don’t be nearsighted (Blockbuster)
Steps to implementing regulations

1. Look for statutory authority
2. Board committee drafts rules
3. Board notices rules to public
4. Public comment period
5. Administrative rules review & approval

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

A.) Remote Order Entry  
B.) Remote Dispensing  
C.) Remote Consultation  
D.) Internet Pharmacy
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
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
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 #3

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B.) Primary Care Physician
C.) Dentist
D.) Veterinarian
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
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 #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
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?

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For updates and more information, visit telepharm.com/learn