Patient Care through Telepharmacy

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Objectives

1. Describe why telepharmacy started and how it has evolved with technology

2. Explain how telepharmacy is being used to provide better patient care, especially in rural areas

3. Understand the current regulatory environment around the US and what states are doing with regulation
Agenda

- Origins of Telepharmacy
- Why now?
- Telepharmacy process
- Regulatory environment
- Future Applications
Telepharmacy

- Prescription verification
- Counseling & Education
History
Origins of Telepharmacy

1942  Australia’s Royal Flying Doctor Service
2001  U.S. has first state pass telepharmacy regulation
2003  Canada begins first telepharmacy service
2010  Hong Kong sees first videoconferencing consulting services
US Telepharmacy Timeline

2001  North Dakota first state to allow

2001  Community Health Association in Spokane, WA launches program

2002  NDSU study begins

2003  Alaska Native Medical Center program

2006  U.S. Navy begins telepharmacy

2012  New generation begins in Iowa
Question #1

What was the first US state to allow Telepharmacy?

a) Alaska  
b) North Dakota  
c) South Dakota  
d) Hawaii
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NDSU Telepharmacy Study

Study from 2002-2008

- 81 pharmacies
  - 53 retail and 28 hospital

- Rate of dispensing errors <1%
  - Compared to national average of ~2%

- Positive outcomes, mechanisms could be improved

Additional Studies Needed

Adherence
Consultations
MTM
Leaky Bucket
Patient Satisfaction

STUDIES HAVE SHOWN THAT 100% OF PEOPLE WHO DRINK WATER HAVE DIED

I DIDN'T HAVE ANY ACCURATE NUMBERS SO I JUST MADE UP THIS ONE.

STUDIES HAVE SHOWN THAT ACCURATE NUMBERS AREN'T ANY MORE USEFUL THAN THE ONES YOU MAKE UP.

HOW MANY STUDIES SHOWED THAT?

EIGHTY-SEVEN.
Limitations of Early Technology

- Live video feed restrictions
  - Point-to-point
  - Expensive hardware
  - Heavy broadband need
  - Lack of documentation
  - Scalability
  - Workflow obstacles
All of the following have contributed to an increase in presence of telepharmacy EXCEPT

a) More access to broadband  
b) Better transmission of data  
c) Decreases in hardware costs  
d) More pharmacies opening than closing
Question #2

All of the following have contributed to an increase in presence of telepharmacy EXCEPT

a) More access to broadband
b) Better transmission of data
c) Decreases in hardware costs
d) More pharmacies opening than closing
Industry Changes
Pharmacy Closure Trend

Independent Rural Pharmacies
2003-2013

7,624

12.1% decrease

2007-2009

7.2% decrease

6,700

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

Mar 2003 - Dec 2013

924 independent rural pharmacies closed

490 rural communities lost their only pharmacy

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

- Gap in healthcare, fragmentation of care
- Dying Main Street
- Job loss
- Decreased medication adherence

Source: Knowledge, attitudes and beliefs of patients and carers regarding medication adherence: a review of qualitative literature; Dec 2014
Local Pharmacy Provides

- Full primary care
- Business on Main St
- Local jobs
- Increased medication adherence
- $640,000 economic impact

Source: Rural Economic Technical Assistance Center (RETAC) in Macomb, IL; Economic impacts of a pharmacy for Deiterich, Illinois, June 2015
Medication Adherence

- 187MM Americans take 1+ prescriptions\(^1\)
- 50% do not take as prescribed\(^2\)
- $100+ billion a year in excess hospitalizations\(^3\)
- 31% of new prescriptions go unfilled\(^4\)
- Readmission costs between $15-25 billion/year.\(^5\)

The “Leaky Bucket”

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

Source: IMS Health Data, March 2011
Present
Technology as a Disruptor

Amazon

Apple

Uber
Hardware-based solutions
Technology Enables Advancement
Modern Workflow

Data entry, adjudication in PMS

Technician images Rx as it is being filled

Remote Pharmacist verifies Rx

Patient is counseled by Pharmacist
Dynamic Workflow

Pharmacists can share the workload between sites

Prescriptions filled directly in rural hospitals

Specialists available in all locations including rural areas

Patient care is enhanced and pharmacists are more available
Serving Patients at Point-of-Care

Educate and serve patients with outpatient telepharmacy

31.3% prescriptions don’t make it to the pharmacy*

*The Incidence and Determinants of Primary Nonadherence With Prescribed Medication in Primary Care: A Cohort Study
Benefits of Telepharmacy

- Provides access to a healthcare provider
- Prevents traveling long distances
- Reduces dispensing errors
Integrated Health Care

- Retrieve medications easily at the same location
- Only 5% did not fill their initial prescriptions
- Better integration = better adherence

Common Questions

- Fill accuracy
- Staff & location safety
- Potential for diversion
- Internet outage protocol
- Retail, Long Term Care, Health Systems
Question #3

All of the following are benefits of telepharmacy on rural areas except

a) Increased adherence
b) More scripts being filled
c) Decreased revenue
d) More pharmacy jobs
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Regulatory
2008 Regulatory Environment

Source: Telepharmacy project expands across country; 9/12/2008; Dave Kolpack, Associated Press
Current Regulatory Environment
No Language!

- HB 2238 - Died in Committee
- Pilot Program
Kansas Statistics

- **Over 53,572** residents in pharmacy deserts
- **60** pharmacy deserts
- **86** at-risk communities
Question #4

True or False:

States are trending towards creating and implementing new updated telepharmacy laws
Question #4

**True** or False:

States are trending towards creating and implementing new updated telepharmacy laws
● Need is **increasing every year**
  ○ Physician Dispensing
  ○ Mail-Order
● Successful programs already in place
● Get ahead of the technology and legislators
Future Applications

- “Health Hub” for rural communities
- Access to pharmacists from anywhere
  - Direct connection to patient rooms
  - At hospital discharge
  - On your cell phone
- 24 hour pharmacist coverage
- Pharmacist relief
Questions?

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