Patient Care through Telepharmacy
May 2016

Greg Janes
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
North Dakota Telepharmacy

- First to pass regulation
- Rural community pharmacy closing
- NDSU College of Pharmacy 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

Limitations of Early Technology

● Live video feed restrictions
  ○ Point-to-point
  ○ Expensive hardware
  ○ Heavy broadband need
  ○ Lack of documentation
  ○ Scalability
  ○ Workflow obstacles
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
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.\(^5\)

Present
Technology as a Disruptor

Amazon
Apple
Uber
Hardware-based solutions
Software Solutions
Technology Enables Advancement
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
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
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
Regulatory
Source: Telepharmacy project expands across country; 9/12/2008; Dave Kolpack, Associated Press
Current Regulatory Environment
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Alaska Statistics

- 65,389 residents in pharmacy deserts
- 44 pharmacy deserts
- 32 at-risk communities
Idaho Statistics

- **24,148** residents in pharmacy deserts
- **28** pharmacy deserts
- **25** at-risk communities
Montana Statistics

- **33,969** residents in pharmacy deserts
- **35** pharmacy deserts
- **61** at-risk communities
Oregon Statistics

- 41,078 residents in pharmacy deserts
- 31 pharmacy deserts
- 44 at-risk communities
Utah Statistics

- **25,799** residents in pharmacy deserts
- **27** pharmacy deserts
- **26** at-risk communities
Washington Statistics

- **33,761** residents in pharmacy deserts
- **30** pharmacy deserts
- **62** at-risk communities
Wyoming Statistics

- 12,649 residents in pharmacy deserts
- 15 pharmacy deserts
- 14 at-risk communities
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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