Patient Care through Telepharmacy

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Agenda

- Origins of telepharmacy
- Why now?
- Telepharmacy process
- Regulatory environment
- Future applications

Telepharmacy

Prescription verification

Counseling & education

History

US Telepharmacy Timeline

2001 North Dakota first state to allow

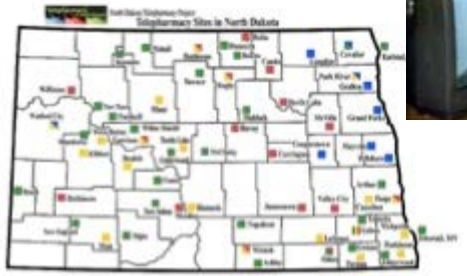
2001 Community Health Association in Spokane, WA launches program

2002 NDSU study begins

2003 Alaska Native Medical Center program

2006 U.S. Navy begins telepharmacy

2012 New generation begins in Iowa



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

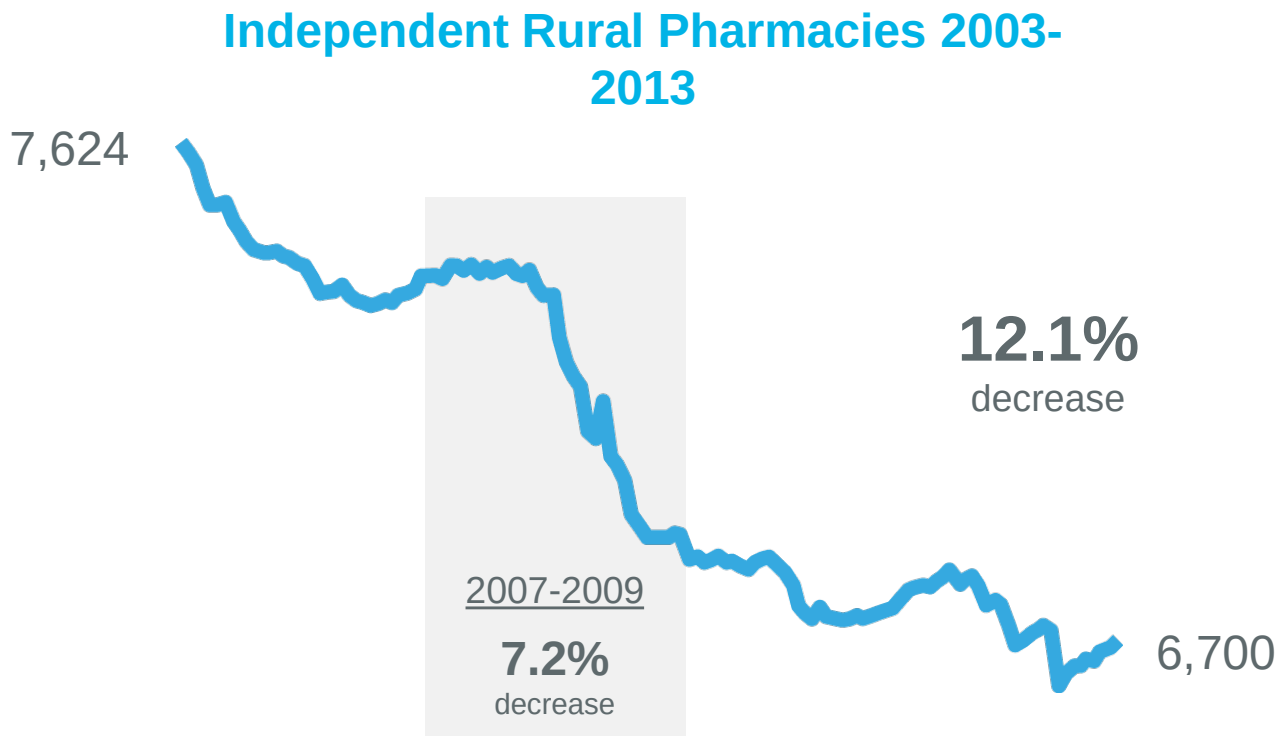
Source: The North Dakota Experience: Achieving High-Performance Health Care Through Rural Innovation And Cooperation. May 2008

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



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]

[1] Osterberg, L., Blaschke, T. (2005). Adherence to medication. N Engl J Med, 353(5), 487-497.

[2] Enhancing Prescription Medicine Adherence: A National Action Plan. National Council on Patient Information and Education (August 2007).

[3] Sokol, M.C., McGuigan, K.A., Verbrugge, R.R., et al. (2005). Impact of medication adherence on hospitalization risk and healthcare cost. Med Care, 43(6), 521-530.

[4] Primary Medication Non-Adherence: Analysis of 195,930 Electronic Prescriptions. Fischer MA, Stedman MR, Lii J, et al J Gen Intern Med. 2010; 25:284-290

[5] PriceWaterhouse Coopers' Health Research Institute. (2008). The Price of Excess: Identifying Waste in Healthcare, 2008.

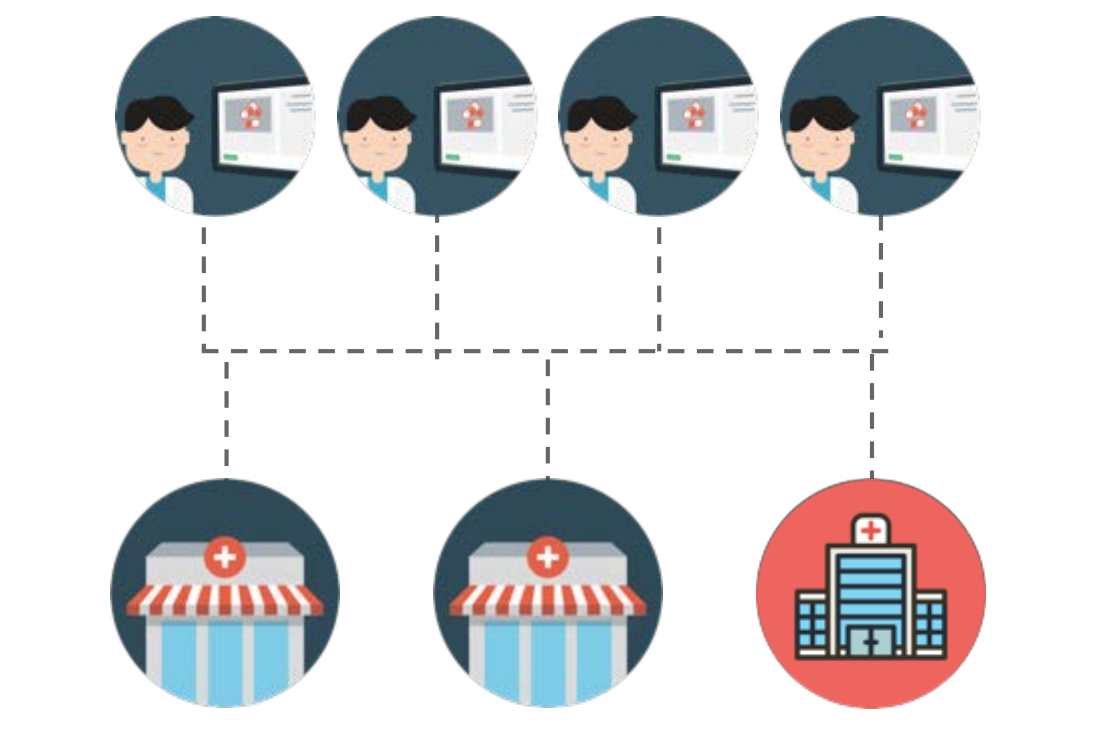
Present

Technology as a Disruptor

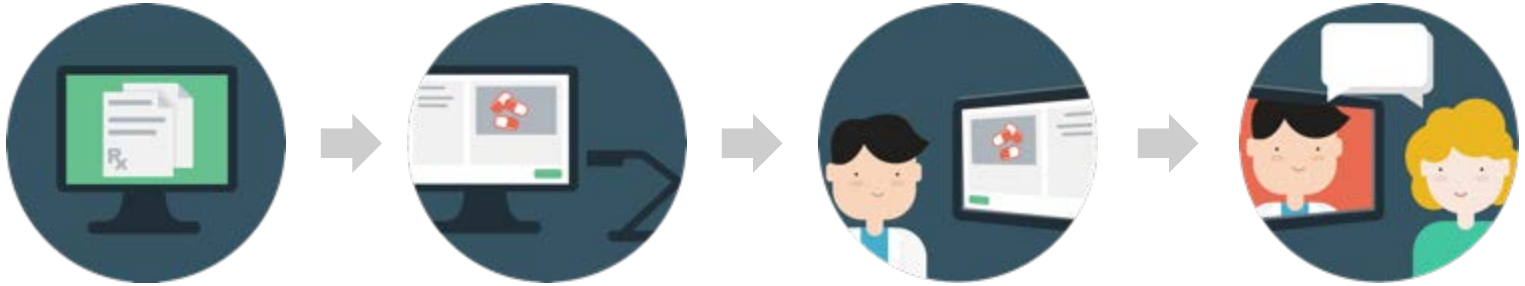
amazon

UBER

Technology Enables Advancement



Modern Pharmacy Workflow

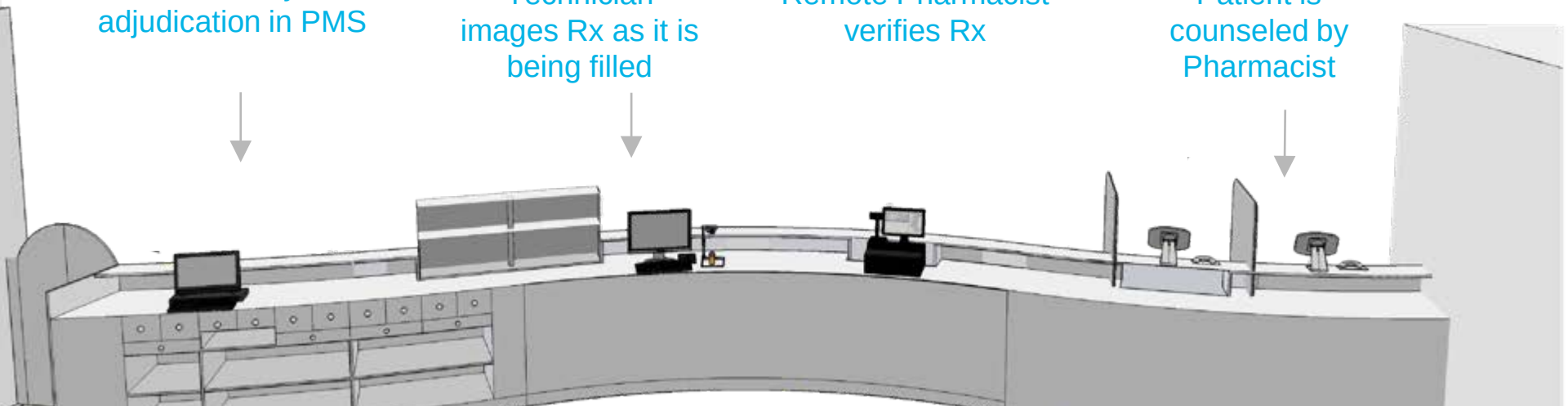


Data entry, adjudication in PMS

Technician images Rx as it is being filled

Remote Pharmacist verifies Rx

Patient is counseled by Pharmacist



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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

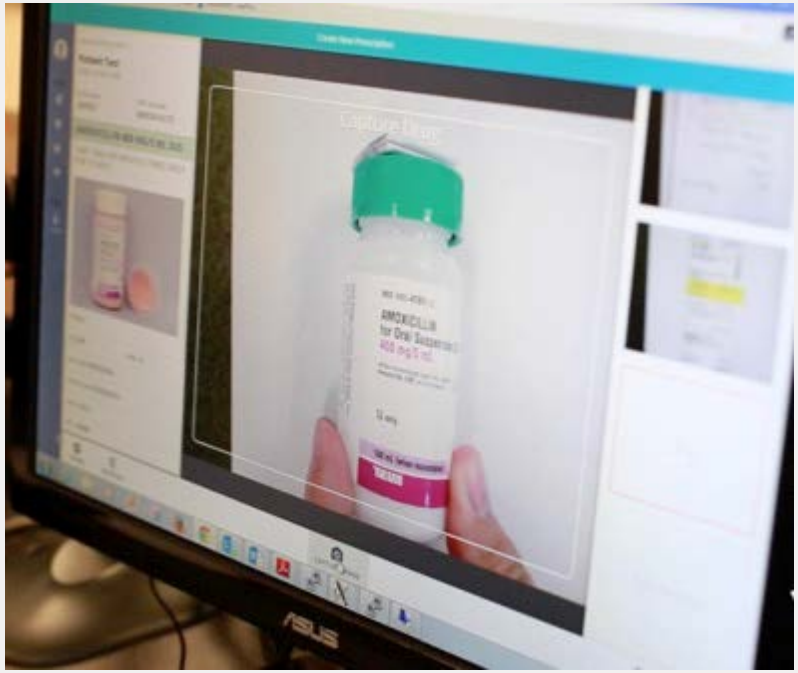
Only 5% did not fill their initial prescriptions

Better integration = better adherence

Source: New Prescription Medication Gaps: A Comprehensive Measure of Adherence to New Prescriptions. Andrew J. Karter, Melissa M. Parker, Howard H. Moffet, Ameena T. Ahmed, Julie A. Schmittdiel, Joe V. Selby (October 2009).

Common Questions

- Fill accuracy
- Staff & location safety
- Potential for diversion
- Internet outage protocol
- Retail, long term care, health systems

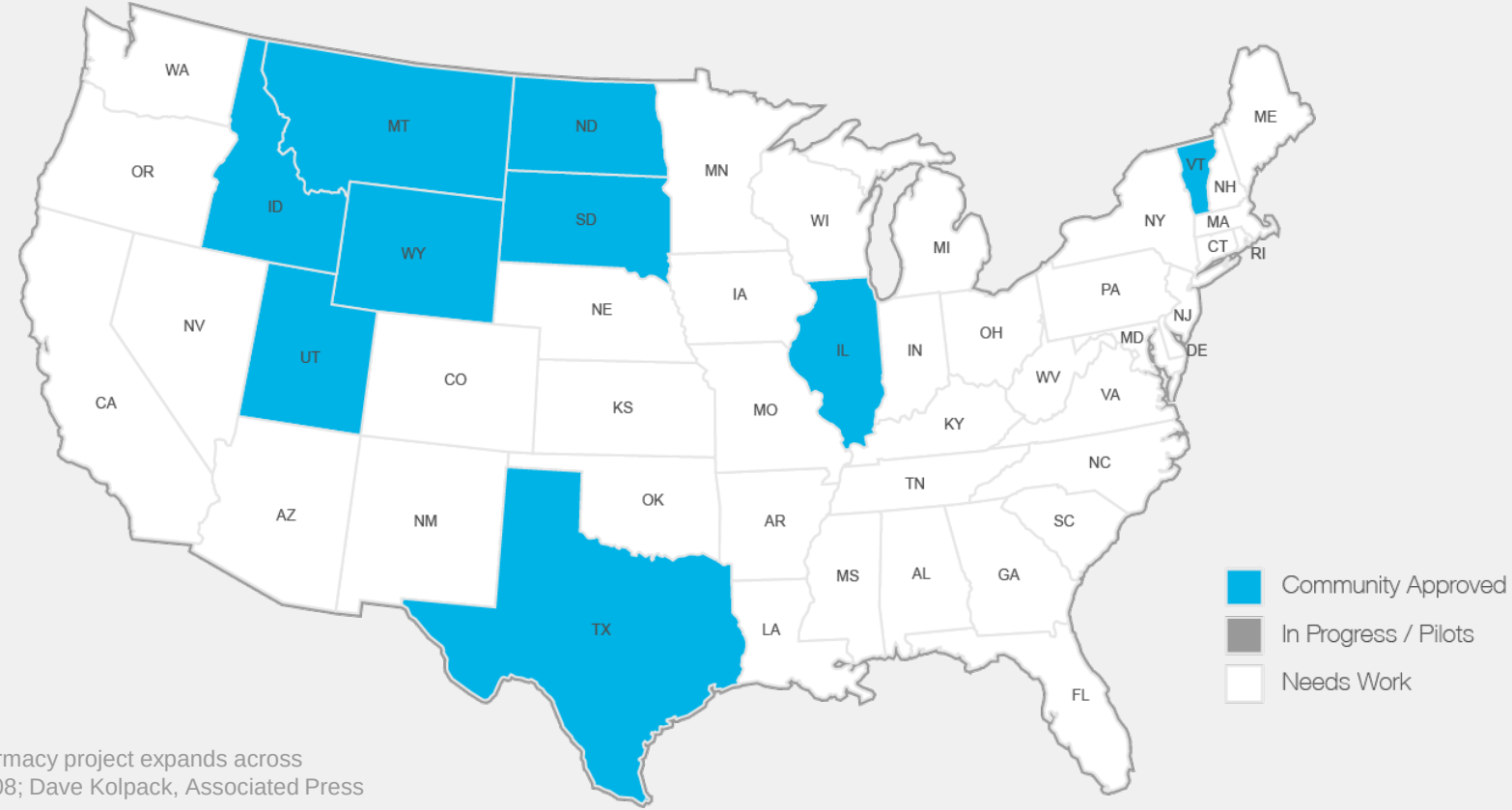


Future Applications

- “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

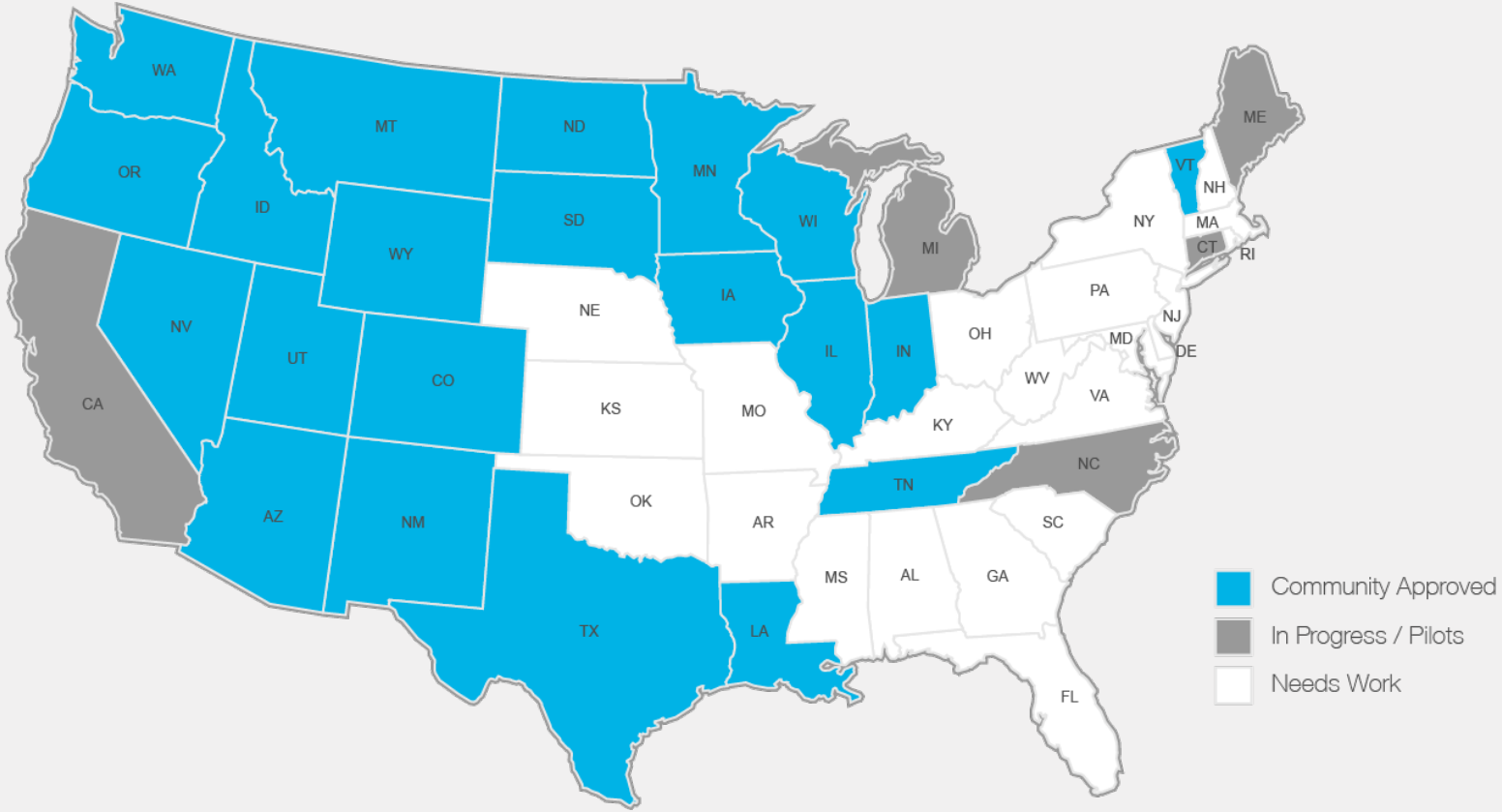
Regulatory

2008 Regulatory Environment



Source: Telepharmacy project expands across country; 9/12/2008; Dave Kolpack, Associated Press

Current Regulatory Environment



Utah Regulatory

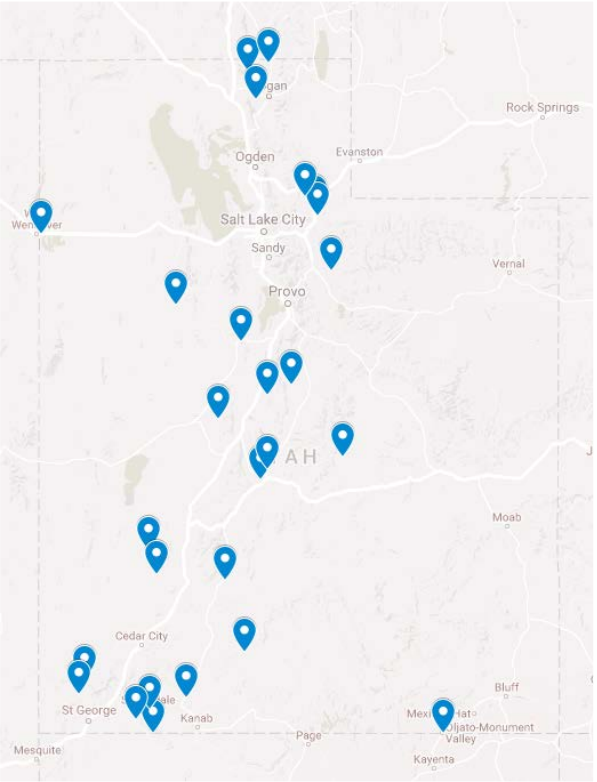
Needs Updating!

- Statute - Remote Rural Hospital
- Statute - Clinic w/ less than 20 people per square mile

A telepharmacy system in which a consulting pharmacist can oversee the delivery of pharmacy services by a supervised pharmacy technician or pharmacy intern when the remote rural hospital or clinic pharmacist is not available is essential to the viability of rural access to pharmacy services.

Utah Statistics

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



Start Now

- Need is **increasing every year**
  - Physician Dispensing
  - Mail-Order
- Successful programs already in place
- Get ahead of the technology and legislators

Questions?

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