Implementation of Telepharmacy in Rural Hospitals: Potential for Improving Medication Safety

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Many small rural hospitals have limited hours of onsite pharmacist coverage.

Limited pharmacist hours adversely affect the contributions pharmacists can make to medication safety in rural hospitals.

Telepharmacy, the provision of pharmacist care through the use of telecommunications or other technologies, has potential to improve medication safety.

Research on telepharmacy implementation and outcomes has been limited.
Purpose and Methods

- To conduct an in-depth analysis of current telepharmacy activities in rural hospitals in several states and policy issues influencing the adoption of telepharmacy in rural hospitals.
- Review of literature on telepharmacy, policy positions of national organizations, Medicare Conditions of Participation, and state laws/regulations
- E-mail survey of State Offices of Rural Health regarding telepharmacy initiatives
Purpose and Methods

• Selected 10 geographically diverse states: AR, ID, MN, MT, ND, OK, SD, TX, UT, WA
  – Phone interviews with State Boards of Pharmacy about state policy environment, laws and regulations, and hospital telepharmacy initiatives
  – Phone interviews with rural hospitals and their partners about telepharmacy activities; relationships with telepharmacy partners; funding; and impact of telepharmacy activities on medication safety
Key Findings: Telepharmacy Models

- Several different telepharmacy models are being implemented in rural hospitals
  - Sharing of pharmacist services among hospitals in the same health care system
  - Network of hospitals that have joined together to share telepharmacy and other services
  - Contracting for telepharmacy services with a commercial telepharmacy company
  - Several small rural hospitals contracting with each other for telepharmacy services
- See case studies in final report for details about model implementation
Telepharmacy Funding and Evaluations

- Half of hospitals used grants (federal, state, private foundation) for initial telepharmacy set-up expenses, with additional expenses from operating budgets
- Other hospitals funded telepharmacy efforts entirely through operating budgets
- Three projects reported formal evaluations
- Vast majority of hospitals track medication error rates internally. Some hospitals track turnaround time and accuracy of order entry, number of and follow-up on after-hours orders, over-rides of automatic dispensing machines, productivity of pharmacy and nursing staff, and increases in billable revenues.
Regulatory Environment

- Federal regulations were not a barrier to telepharmacy implementation in rural hospitals.
- Joint Commission standards were a major motivation for accredited facilities to use telepharmacy for after-hours medication order review.
- As of 2006, NABP “Model Act” allows the provision of pharmacy services via remote pharmacies and remote dispensing sites when appropriate.
- Many of the hospital telepharmacy efforts that were underway at time of study were pilot projects or operating under temporary waivers of state regulations.
- Laws and regulations in study states: special licensure class for telepharmacies (ND); registration with State Board (MT); criteria in regulations (SD, TX, ID); variances or waivers from Board of Pharmacy on a case by case basis (AR, MN, OK); pilot projects (ID, TX, UT, WA)
### Table 1.
**Study States with Telepharmacy Regulations**

<table>
<thead>
<tr>
<th>State</th>
<th>Regulations</th>
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</thead>
<tbody>
<tr>
<td>North Dakota</td>
<td>North Dakota Administrative Code 61-02-08, Telepharmacy (61-02-08-08 specifically addresses telepharmacy in hospitals)</td>
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<tr>
<td>South Dakota</td>
<td>South Dakota Codified Laws 36-11-71 and 36-11-72 Administrative Rules 20:51:30, Telepharmacy</td>
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<tr>
<td>Idaho</td>
<td>Idaho Administrative Code IDAPA 27.01.01.252, Pharmacy practice in institutions 27.01.01.257, Outsourcing 27.01.01.292, Registration, drug outlet 27.01.01.294, Registration of pharmacists to engage in the practice of telepharmacy across state lines</td>
</tr>
<tr>
<td>Utah</td>
<td>Utah Code 58-17b-102, Definitions 58-17b-612, Supervision, pharmacist-in-charge</td>
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Policy Implications

• State regulations are needed that allow rural hospitals to make appropriate use of pharmacy technology
• Interest in implementing telepharmacy in rural hospitals is likely to grow in the future
  – Expansion of pharmacists’ medication management responsibilities and overall workloads
  – Growing competition for a limited supply of pharmacists interested in practicing in smaller rural communities
  – Pharmacy technology is becoming more widely available and affordable
  – Rural hospitals are increasingly motivated to improve medication safety
Implications for State Flex Programs

• Be aware of state laws and regulations governing pharmacy in your state and any laws or regulations governing telepharmacy

• If statutory or regulatory changes are needed to allow CAHs to use telepharmacy, work with State Board of Pharmacy, CAHs, other interested parties to implement them
  – Pilot projects or waivers are potential options to demonstrate feasibility of telepharmacy

• Share information about telepharmacy resources with CAHs to help them identify models that will work for them
Additional Information

  http://rhrc.umn.edu/2008/12/implementatio...2/

Additional Information


• North Dakota State University. Telepharmacy. [http://www.ndsu.edu/telepharmacy/](http://www.ndsu.edu/telepharmacy/)

• American Society of Health-System Pharmacists [http://www.ashp.org/menu/PracticePolicy/ResourceCenters/SmallandRuralHospital/ArticlesPresentations.aspx](http://www.ashp.org/menu/PracticePolicy/ResourceCenters/SmallandRuralHospital/ArticlesPresentations.aspx)