Telehealth in Rural Colorado

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Rural, Frontier, and Urban Counties

Map provided by: Colorado Rural Health Center
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Please note that counties are technically designated as metropolitan or non-metropolitan; here, "urban" and "rural" serve as proxies for these designations. Frontier counties are a subset of rural counties.
Rural Colorado’s Healthcare Shortage

• Only about 10% of physicians practice in rural America, despite the fact that nearly 25% of the population lives in these areas.

• 13% of rural Colorado is 65 and older, compared to 9% in urban areas

• 21-23% of rural residents are uninsured (versus 16-18% in urban)

• In Colorado, 16 rural counties have 3 or fewer practicing doctors; 2 counties have none

• It costs approximately $200,000 to recruit a physician, and rural areas have a tough time retaining them

Statistics from National Rural Health Association website www.ruralhealthweb.org;
Rural Patients

• On average, Rural residents…
  • Less likely to have employer sponsored health insurance
  • Twice as likely to die from unintentional injuries other than MVAs
  • Have higher rates of suicide
  • More likely to abuse drugs and alcohol
  • Have greater transportation difficulties to reach medical care; distances are limiting
  • Have less money

Data from Rural Healthy People 2010—"Healthy People 2010: A Companion Document for Rural Areas,"
Telehealth

• What is Telehealth?

“The use of communication technology to overcome barriers of time and place to deliver health care services”*

“Mr. Wilcox sent you a fax of his tongue. He wants to know if it’s coated. Mrs. Donahue sent a fax of her boil. She wants to know if it’s ready to lance. Mr. Twadel sent a fax of his hemorrhoids. He says they’re not any better...”
Telehealth

Hypothesis: Telehealth technology, wisely implemented, can efficiently increase the quality and range of health services provided to rural residents and strengthen the local health care system.

Goal: To determine what telehealth technology a particular rural Colorado community could benefit from, and help implement these programs.
THE PLAYERS

Marc Ringel, MD: Pioneer in telemedicine; experienced rural doctor

John Woods, Sr.: founder and principal of Community Banks of Colorado

Dan Briskey: Community Banks of Colorado local branch
THE SITE
Alamosa Profile

• Alamosa, located in the San Luis Valley, has a population of 7,960
• The San Luis Valley is the size of New Jersey
• The nearest metropolis is Pueblo, 121 miles away.
• Denver is located 219 mile north of Alamosa.
• The primary sources of employment in the area includes agriculture, retail, government, and education.
• In 2009, 30% of Alamosa County families had incomes below the Federal Poverty line
San Luis Valley Regional Medical Center
SLVRMC

CAN PROVIDE:

• Orthopedic surgery
• Oncology—doctor once a week
  • Med Surg
  • OBGYN
• Digital mammography
  • MRIs/CTs
• Airplane transport
• Level 4 trauma
• ICU (6 bed)
  • ENT
• Hospitalists
• Cardiologist—recent hire

CAN’T PROVIDE:

• Pulmonologist
  • Urologist
• Swing beds
• High Risk OB
Valley Wide Health Systems

• Non-profit community health centers made up of 13 primary care clinics in Southern Colorado

• Not hospital affiliated, often refer out
Methodology:

- **Data Collection: What services are needed:**
  - 1\(^{st}\) Step: Meeting in Alamosa in June with Hospital administrators, discussed potential telehealth services
  - 2\(^{nd}\) Step: Questionnaire to hospital medical and administrative staff
  - 3\(^{rd}\) Step: Questionnaire to general public regarding healthcare in the SLV (English/Spanish)
  - Past projects have failed—need a focus on need-driven programs
  - Data not just outcome driven, but narrative of the experience and interviews; the change in culture that the programs instigated
  - Working relationship with local hospital administrators and communications... don’t want an “outside” encroachment on their administration.
  - Outcomes measurement: include clinical improvements, satisfaction (staff, medical staff, and patients), amount of services provided, and cost saved.
Potential Services TO SLVRMC

• “Bad weather” clinics for regularly scheduled visiting physicians who can’t make it to the SLV because of weather or other circumstances
• Support for the newly hired cardiologist and other docs to prevent isolation, prevent burn out, and allow for more frequent patient coverage
• e-ICU to support the SLVRMC hospitalists and to extend the level of care available to more critical patients
• Post-acute support for surgical and other patients transferred from tertiary care facilities
• Bioethics consult
• Genetic counseling with pediatric subspecialists at Children’s Hospital in Denver
• Continuing education for provider, nursing staff and other professionals/ participation in grand rounds
• Services to patient centered medical homes, especially counseling
• Psychiatric consultant
• Institutional review board for research projects
Potential Services FROM SLVRMC

• Diabetes education and management, including for Spanish-speaking patients
• School based management of asthmatic students; automated peak flow measurement to be administered daily and/or as needed with telephone support to school personnel based on established protocols
• Automated home medication dispensing and adherence monitoring
• Anticoagulation clinic outreach services to outlying practices
Services TO and FROM VWHS

University of Colorado/
Other Metropolitan Hospitals

Outlying clinics, homes, etc.

TO

FROM

Valley Wide Health Systems
Potential Services TO VWHS

- High risk OB consultation/clinic
- Orthopedic consultation
- Cardiology consultation
- Oncology consultation/clinic
- Endocrinology consultation/clinic
- Pediatric consultation/clinic
- High-risk OB education for providers
Potential Services FROM VWHS

- Home care support
- Congestive heart failure clinic
- Diabetes management
- Automated medical dispensing and adherence monitoring
Significance

• Identifying gaps in health care in Alamosa was the first critical step in the implementation of a telehealth program.
• Telehealth programs will provide a cost effective and convenient means to serve quality care to this underserved area.
• This will help primary care physicians in the area as they will be provided with means to manage their patients more easily, and also to consult a larger hospital.
• It will provide residents in the area with an alternative to traveling long distances but receive quality care that wasn’t previously available in the valley.
What I’ve Learned & Future Plans

• Research takes a lot longer than expected. Especially with multiple parties involved
• Implementation part is still to come, but as I’ve learned, this is not the hardest part
• Need to be careful as “outsiders” to learn the community and hospital culture
• Plan to focus on 2 “TOs” and 2 “FROMs”, implementing 4 uses of telehealth technology
Thank you to Dr. Ringel, Community Banks of Colorado, and all the folks in Alamosa for making this possible!
Sources


National Rural Health Association website www.ruralhealthweb.org


