

Advancing Policy Through Research: Program Evaluation and Outcomes in Rural Telehealth

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Breaking News



- Wyoming Telehealth Network offering technical assistance grants (through the WY Office of Rural Health) – 18 awarded
- “ACOs Add Telehealth, Despite Regulatory, Reimbursement Barriers to Implementation”: 20% of ACOs surveyed by eHealth Initiative

Sources: National Organization of State Office of Rural Health.

<https://nosorh.org/promising-practice-wyoming-telehealth-network/> .

Accessed July 7, 2016 *Value-Based Care News*. 7(6): 1-5. June, 2016.

WHY?

- Why invest?
- Why integrate into care?
- Why pay for the service?
- Challenge to evaluation-community to answer



Building Strong Research-Based Arguments

- What are the questions?
- Where do we seek answers?
- How do we assess the answers?
- How do the answers inform policy choices?



A Taxonomy to Organize Questions

- Technology deployment: Synchronicity, network, connectivity
- Applications in care process: Specialty, Disease, Site, Treatment
- Functionality: consultation, diagnosis, mentoring, monitoring
- Next?

Source: R Bashshur, G Shannon, E Krupinski, and J Grigsby, "The Taxonomy of Telemedicine" *Telemedicine and e-Health* 17 (6): 484-494. July/August 2011.

Types of Questions

- Efficacy: Can care be delivered with high quality results?
- Care integration: How do services delivered through telehealth “fit”?
- Infrastructure: Can the technology be supported?
- Efficiency: Assessing both process improvement and expenditures



Simple but Powerful Questions

- Does it work?
- In what settings does it work best?
- What is necessary for effectiveness?
- Are the services more or less costly if delivered through telehealth?
- What are the benefits and costs?



Seeking the Answers

- Calls for well-designed research have persisted since early days of telehealth, including a 2009 conference convened by National Center for Research Resources and NIH
- Recent emphasis on methods used to evaluate the deployment of telehealth
- In part the answer is in use by health systems under global payment arrangements



Seeking The Answers: Data and Design

- Seeking data to match the questions, example of how to assess cost effectiveness in the absence of complete data
- Measurement during demonstrations and pilots, AHRQ recommendations
- Measures not necessarily unique to telehealth



AHRQ-NQMC Categorization Scheme for Measures

Health Care Delivery Measures
Measures of care delivered to individuals and populations defined by their relationship to clinicians, clinical delivery teams, delivery organizations, or health insurance plans. Denominators for these measures are defined by some form of affiliation with a clinical care delivery organization, e.g. recipients of health care, health plan enrollees, clinical episodes, clinicians, or clinical delivery organizations.

Clinical Quality Measures

- Process
- Access
- Outcome
- Structure
- Patient Experience

Related Health Care Delivery Measures

- User-Enrollee Health State
- Management
- Use of Services
- Cost

Clinical Efficiency Measures

- Efficiency

Sampling of Measures

- Changes in access to healthcare services
- Estimated provider travel time saved
- Quality: mortality rate
- Stroke treatment rates and time



Study Methodology

- Recommendations from 50 reviews of previous studies
- Larger and more rigorously designed controlled studies to assess impacts
- Standardization of interventions, measures, populations
- Combine qualitative and quantitative approaches

Source: A G Ekeland, A Bowes, S Flottorp (2012) "Methodologies for assessing telemedicine: A systematic review of reviews." *International Journal of Medical Informatics* 81: 1-11.

An Evaluation Tale

- Three-year evaluation of an e-health suite that included emergency room, pharmacy, and intensive care unit
- Mixed-method design, all within the implementation group
- Evaluation completed, with multiple findings/publications
- But some of the key questions remain ...

Challenges

- Evaluation not initiated coterminous with the demonstration – issues for data collection
- Shifts in sources of data during the evaluation
- Small numbers



But Lots to Learn

- Benefits beyond substitution value of telehealth (in tele-emergency)
 - Improvements in clinical quality
 - Expanded clinical care teams
 - Improved care coordination
 - Recruiting physicians
 - Stabilize rural hospital patient base



Source: KJ Mueller, AJ Potter, AC MacKinney, MM Ward (2014) "Lessons from Tele-Emergency: Improving Care Quality and Health Outcomes by Expanding Support for Rural Care Systems." *Health Affairs* 23 (2): 228-234.

But Lots to Learn

- Benefits of pharmacy services for hospitals with limited staffing
- Analysis of ED use shows use for clinical situations as expected
- Business case for tele-emergency exists when participating hospitals adjust processes of care to substitute for physician ED backup and staffing

Sources: MM Ward, F Ullrich, AC MacKinney, AL Bell, S Shipp, and KJ Mueller (2016) "Tele-emergency utilization: In what clinical situation is tele-emergency activated?" *Journal of Telemedicine and Telecare* 22(1): 25-31.

AC MacKinney, MM Ward, F Ullrich, P Ayyagari, AL Bell, and KJ Mueller (2015) "The Business Case for Tele-emergency." *Telemedicine and e-Health* 21 (12): 1-7.

Results Change When Incorporating Savings for Patients

- From study of Veterans Health Affairs use of telemedicine
- Average travel savings of 145 miles and 142 minutes per visit
- Meant up to \$63,804 for travel pay from VHA, 3.5% of total disbursement



Source: JE Russo, RR McCool, and L Davies (2016) "VA Telemedicine: An Analysis of Cost and Time Savings" *Telemedicine and e-Health* 22 (3) March: 209-215

Research Evidence Supports

- “Remote patient monitoring for patients with chronic conditions
- Communication and counseling for patients with chronic conditions
- Psychotherapy as part of behavioral health”

Source: A M Totten et al (2016) Telehealth: Mapping the Evidence for Patient Outcomes From Systematic Reviews. *Technical Brief* (26) Pacific Northwest Evidence-based Practice Center. Portland, OR. AHRQ Publication No. 16-EHC034-EF. June.

Shifting Research Focus

- Synthesizing studies in some topics such as consultation and maternal and child health
- Further primary evidence in some uses including triage for urgent care
- Use and impact of telehealth in new delivery and finance models



Same source as previous slide

Ongoing Difficult Policy Discussions

- Medicare policy makers still slow to expand, still concerned about unnecessary services
- Ironically, current Medicare reimbursement policies not used much: 69,000 patient encounters in 2014
- MedPAC Commissioners in Spring, 2106 meeting debated expanded eligibility for payment, with no conclusion

Policy Consideration: Network Adequacy

- As a substitution for providers with whom insurers cannot negotiate
- NAIC model law says can use telemedicine to meet network adequacy standard

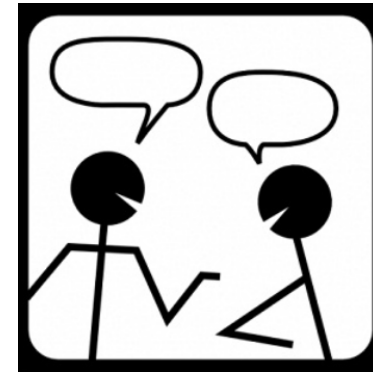


Source: S Ahn, S Corlette, and K Lucia (2016) "Can Telemedicine Help Address Concerns with Network Adequacy? Opportunities and Challenges in Six States." *ACA Implementation – Monitoring and Tracking* Robert Wood Johnson Foundation. Accessed July 7, 2016:

<http://www.rwjf.org/en/library/research/2016/04/can-telemedicine-help-address-concerns-with-network-adequacy-.html>

Discussion

- Policy developments
- Delivery system reform and what that means, e.g., Next Generation ACOs
- Role of research



For further information

The RUPRI Center for Rural Health Policy Analysis

<http://cph.uiowa.edu/rupri>

The RUPRI Health Panel

<http://www.rupri.org>

Rural Telehealth Research Center

<http://ruraltelehealth.org/>

The Rural Health Value Program

<http://www.ruralhealthvalue.org>



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