



## TV WHITE SPACES & RURAL HEALTHCARE

### Better Broadband Means Better Healthcare Outcomes For Rural Americans:

**“Many Of The Benefits Of Telemedicine Are Qualitative, Rather Than Quantitative.”** “Many of the benefits of telemedicine are qualitative, rather than quantitative. Simply put, it is not always possible to assign a dollar figure to a beneficial health care outcome.” (Rick Schadelbauer, “Anticipating Economic Returns Of Rural Telehealth, [The Rural Broadband Association](#), 3/17)

- **“By Offering Patients Access To A Wide Variety Of Medical Specialists, Oftentimes In Situations Where Time Is Of The Essence, Telemedicine Can Greatly Increase The Overall Quality Of Health Care.”** (Rick Schadelbauer, “Anticipating Economic Returns Of Rural Telehealth, [The Rural Broadband Association](#), 3/17)

**Patients Using Telemedicine Could Save Several Thousand Dollars Annually In Travel Costs.** “Patients who avail themselves of telemedicine services do not incur travel expenses that they otherwise would to visit a far-off treatment site. In quantifying this potential cost saving, [Brian E.] Whitacre [associate professor and extension economist in the department of Agricultural Economics at Oklahoma State University] looked at the average distance traveled, the average cost per mile, and the number of encounters per year – taking into account the percentage of encounters that required immediate attention, as opposed to those who could wait until a specialist was available locally. The estimated annual cost savings ranged from \$2,303 to \$109,080, with a mean of \$32,671 and a median of \$24,210.” (Rick Schadelbauer, “Anticipating Economic Returns Of Rural Telehealth, [The Rural Broadband Association](#), 3/17)

**Telemedicine Could Save Patients Thousands Of Dollars Annually In Lost Wages.** “In calculating the value of lost wages, Whitacre used a similar methodology to that for travel expenses, but replaced the average cost per mile and distance with the average hourly wage rate and time spent traveling. The estimated annual cost savings ranged from \$4,188 to \$68,269, with a mean of \$19,761 and a median of \$16,769.” (Rick Schadelbauer, “Anticipating Economic Returns Of Rural Telehealth, [The Rural Broadband Association](#), 3/17)

**Telemedicine Could Mean Tens Of Thousands In Savings For Rural Hospitals.** “In looking at hospital cost savings, Whitacre operated under the assumption that ‘a group of physicians specializing in a particular modality (such as radiology or oncology) in a more urban area can [through the use of telemedicine] then market themselves to several rural hospitals and serve a larger number of hospitals and serve a larger number of patients, which supports the idea that telemedicine increases efficiency.’ Whitacre looked at two examples involving converting radiology and psychology consultations to telemedicine. In one example, the hospital reduced its use of a full-time radiologist from five days a week to one. Using rural specialists’ salaries from the Physician Compensation and Production Survey, the estimated annual cost savings was \$101,600. In another example, a hospital using a part-time radiologist and psychiatrist eliminated the need for these specialists altogether. In this case, the estimated annual cost savings was \$61,600.” (Rick Schadelbauer, “Anticipating Economic Returns Of Rural Telehealth, [The Rural Broadband Association](#), 3/17)



**Tens Of Thousands In Savings On Pharmacy & Lab Work.** “Finally, in order to estimate the value of lab work and pharmacy revenues that would remain local as a result of telemedicine Whitacre spoke with medical professionals in the target facilities and gathered data on typical follow-up procedures and medications resulting from psychiatric and radiology visits. By using the number of yearly encounters along with the percentage of patients using each, the monthly cost per prescription or test costs, he was able to come up with his estimates. For telepsychiatry, the yearly cost of Adderall ranges from a low of \$10,710 annually to a high of \$44,100, and for Xanax, a low of \$3,024 annually to a high of \$15,120.28. For teleradiology lab work, bloodwork ranges from a low of \$24,000 to a high of \$288,000; MRIs, low of \$19,200 and high of \$192,000; CT scan, low of \$48,000 and high of \$240,000; and biopsy, low of \$14,400 and high of \$57,600. For pain medication, yearly costs ranged from a low of \$36,000 to a high of \$216,000. Again, these are expenditures that, in the absence of telemedicine, likely would go outside of the local community. When telemedicine is available locally, these expenditures tend to remain in the local economy.” (Rick Schadelbauer, “Anticipating Economic Returns Of Rural Telehealth,” [The Rural Broadband Association](#), 3/17)

**Broadband In Rural America Can Be As Much As Three Times More Expensive Than High-Speed Internet In Urban Areas, Leading Many Rural Healthcare Providers To Forgo Broadband Altogether.** “But DIA’s higher bandwidth and greater reliability comes with much higher prices in rural areas – as much as three times as expensive compared to urban areas – leading to a larger connectivity gap for more advanced medical services.” (Mohit Kaushal, Kavita Patel, Margaret Darling, Kate Samuels & Mark McClellan, “Closing The Rural Health Connectivity Gap: How Broadband Funding Can Better Improve Care,” [HealthAffairs Blog](#), 4/1/15)

### The Benefits Of Telehealth Technology Have Been Proven Both In The United States & Across The Globe:

**By Connecting Diabetes Patients With Nurse Practitioners Via Videoconferencing, The Delta Health Partnership Has Made Services Available That Would Have Formerly Required Four- To Six-Hour Round Trips.** “The Delta Health Partnership in collaboration between UTHSC and the University of Mississippi Medical Center provides comprehensive diabetes care for an underserved population of predominantly African American patients in rural areas of the Mississippi Delta region. Funded by the federal Office for the Advancement of Telehealth, the project uses videoconferencing to link local nurse practitioners, physician assistants, and pharmacists with a multidisciplinary diabetes team for patient consultations, patient and provider education, case management, and quality assurance. These specialty services would otherwise be available only through four- to six-hour round trips by patients or providers.” (“Utah Telehealth Study – Phase 1 Report,” [Utah Division Of Occupational And Professional Licensing](#), 3/21/14)

- **“Telehealth Communications Have Reduced Travel Expenses And Freed Up About 20% Of Faculty Specialists’ Travel Time.”** (“Utah Telehealth Study – Phase 1 Report,” [Utah Division Of Occupational And Professional Licensing](#), 3/21/14)

**A 2014 Study Highlighted That Telemedicine Availability Would Effectively Decrease Overcrowding In Local Hospitals.** “In a 2014 study by the State of Utah, it was found that telemedicine availability resulted in increased potential coverage of doctors and increased ability to remotely diagnose medical issues, thereby decreasing the overcrowding of local hospitals.” (“[A Rural Broadband Strategy](#),” 7/10/17)



**At Saint Vincent Health System In Erie, Pennsylvania, Telemedicine Reduced Readmission Rates & “Netted A 100 Percent Return On Investment” In Two Months, Mirroring The Results Of A Study That Found Telemonitoring Led To A 44 Percent Drop In Readmission Rates.** “Saint Vincent Health System in Erie, Pa., reports that using telemedicine technology has reduced readmissions in its 26 Pennsylvania facilities – and also netted a 100 percent return on investment in just two months. St. Vincent's success story echoes the findings of Geisinger Health Plan’s two-year study of home telemonitoring. That trial showed a 44 percent drop in readmissions among the monitored patients compared to a control group.” (“Telehealth Cuts Readmission Rates, Earns System A Speedy Return On Investment,” [FierceHealthcare](#), 5/23/12)

**Following Several Devastating Typhoons In The Philippines In 2013, TV White Spaces Effectively Provided Internet & Skype Calling To Affected Citizens.** “Microsoft responded to the devastating series of typhoons that hit the country in 2013 by developing a TV White Spaces solution that provided internet connections and Skype calling to affected citizens.” (“[A Rural Broadband Strategy](#),” 7/10/17)

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