

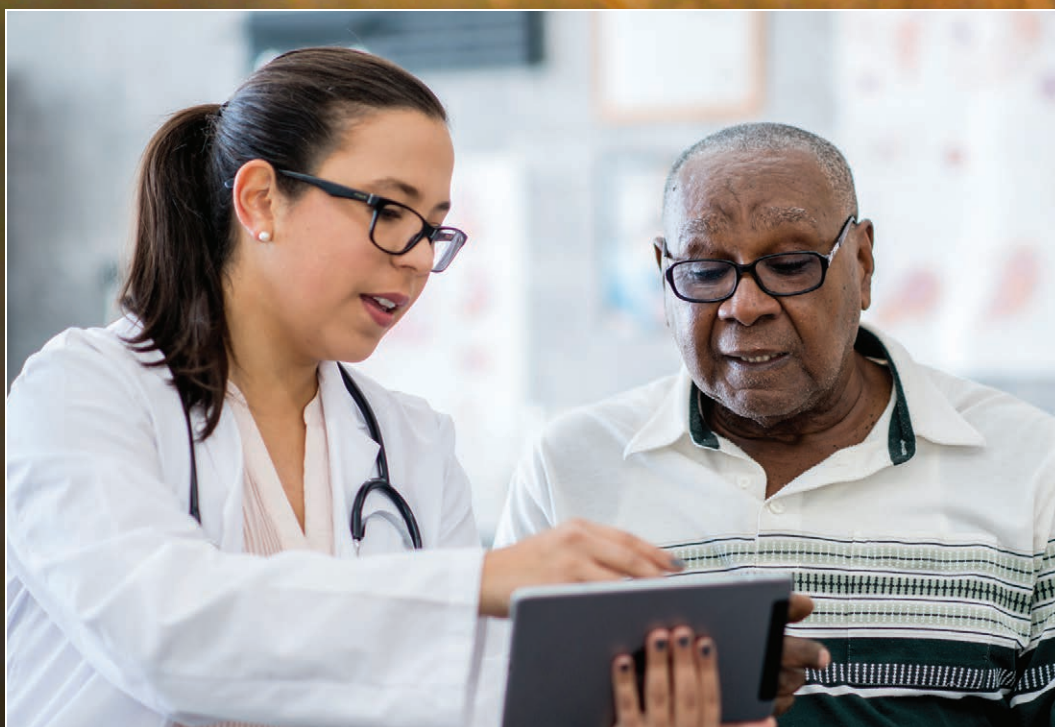


The Value of Broadband:

Increasing the Quality of Healthcare in Rural Communities

Access to healthcare and broadband are both critical to keeping rural communities viable. Telehealth – or virtual healthcare – sits at the crossroads of these two essential services, offering the potential to increase the quality of healthcare in rural communities while reducing costs for both the healthcare system and rural residents. Adopting technology that enables virtual care improves the interaction between healthcare providers and patients and increases patient engagement in managing controllable diseases such as Type 2 Diabetes.

To facilitate the adoption of such technology in rural communities, CoBank sponsored a pilot program in January 2018 that focused on rural, low-income patients in Southwest Georgia, many of whom utilize Medicare and Medicaid services. The program's goal was to encourage the adoption of telehealth by these patients and to quantify the cost savings delivered by the intersection between broadband and healthcare.



“Having someone watching over me and being connected keeps me on Ps and Qs for my diabetes.”

This rural telehealth pilot program delivered significant positive results in both patient health improvement and financial performance, and CoBank is now funding a Rural Telehealth Initiative to replicate the model to address the healthcare needs of other rural communities.

Georgia Pilot Program

The Georgia pilot program focused on Type 2 Diabetes, which accounts for 90 - 95% of the diabetes population. The prevalence of the disease creates a significant cost burden, totaling \$327 billion in the U.S. in 2018. The American Diabetes Association estimates that people with diabetes incur medical expenses approximately 2.3 times higher than those who do not. Georgia has one of the highest rates of diabetes in the nation, and the state incurred an estimated \$7.5 billion in 2012 in direct medical expenses associated with the disease. Fortunately, Type 2 Diabetes patients can address their condition proactively with clinical support, medication adherence, and improved diet and exercise.

For this pilot program, Perry Health, a healthcare software provider, and Navicent Health, a healthcare provider in Macon,

Georgia, recruited 100 rural, low-income patients with uncontrolled Type 2 Diabetes. Many patients had or were on the path to kidney failure, amputation and vision loss with a high risk of expensive emergency room visits and hospitalizations. More than half of the patients were over the age of 55 and many had little technical literacy.

Each patient was provided with an internet-enabled tablet loaded with Perry Health software that linked them virtually to their health care teams to receive clinical support and guidance, and included a daily interactive care plan structured by the Navicent healthcare team. The patients received training on how to use the tablet and navigate the software. The patients were responsible for following their daily care plan and logging key health metrics such as blood sugar, diet, medication adherence and daily exercise. If needed, the patients could text their Navicent healthcare provider with questions or concerns between in-person visits. The patient's local care team would then receive this data in real-time and the application would alert them to any patients in need.



“This program has been a lifesaver for me – I’m telling all my friends about it!”

After just the first six months of the pilot program, Navicent Health recognized the benefit of the program to deliver equitable care to their rural patient population and began the process to expand the program to cover hundreds of additional patients.

■ Clinical Outcomes

The pilot program delivered extremely successful clinical results.

Clinical impact of this program is measured in terms of A1c improvement, the gold-standard lab test conducted periodically which represents how well a patient is controlling their diabetes. For reference, a patient is diabetic if they have an A1c level of 6.5% or higher. In this pilot, the average baseline A1c at the beginning of the program was 11.3%, which is reflective of the focus of the pilot on high-risk patients with uncontrolled Type 2 Diabetes.

As of March 2019, 80 of the pilot patients have completed their participation in the pilot and had A1c test results delivered, and 60 (75%) of those have experienced an improvement. The average reduction among participants of 2.5% indicates significantly improved control of their diabetes. When analyzing all 80 patients, including those who improved and those who did not, the overall improvement in A1c averaged 1.6%.

“I am happy if I can bring a patient's A1c down by 0.5-1% in a year. Perry's results have been amazing for my patients,” said one physician participant.

■ Financial Outcomes

The program also delivered significant financial benefits.

Scientific literature estimates that for every percentage point that A1c is improved among Medicare patients, there is a

resulting healthcare cost savings of \$99-158 per patient per month, translating to approximately \$1,542 per patient per year; for patients covered by commercial insurance, the savings is \$67-105 per patient per month.


Using the average Medicare savings, the average decrease of 2.5% for 60 pilot patients, this pilot program is estimated to have reduced healthcare costs by \$231,000 per year, or approximately \$3,855 per patient per year.

These cost savings are conservative estimates based on benchmarks in the scientific literature. Other reports predict a much larger potential cost savings resulting from improved A1c levels. For example, a study in Pennsylvania reported an average cost savings of \$8,000 per patient for every 1% improvement in A1c. Applying this benchmark to the Georgia pilot program translates to as much as \$1.2 million in cost savings.

Importance of Rural Broadband to Decreasing Healthcare Costs

The key challenge of deploying affordable, universal broadband throughout the United States is the high cost of building and maintaining the necessary infrastructure in rural areas. If companies could make a return on investment building out broadband to all Americans, they would already have done so and there would be no digital divide. The public policy of providing a cost-recovery mechanism to connect all Americans is not a new concept and its results serve the greater good.

The first pilot of the Rural Telehealth Initiative concludes that rural patients with Type 2 Diabetes can reduce federal healthcare costs by up to \$3,855 per patient, per year using telehealth. This healthcare savings provides another policy rational to support universal broadband to all Americans.



The savings above refer to healthcare system costs. In addition, individual patients realized financial benefits, including reduced lost work time, and associated income, by reducing travel time for health provider visits.

■ Rural Quality of Life Outcomes

The cost savings realized by the healthcare system through the pilot program is an important indicator of its success, but the increased quality of life for the rural, low-income patients who participated and benefited from the program is priceless.

Expanding Virtual Healthcare through the Rural Telehealth Initiative

The Georgia pilot program demonstrated that using telehealth to provide a model of continuous care connecting rural patients to their local providers benefits the community by decreasing healthcare costs, improves the

quality of life of rural patients, and improves engagement between healthcare providers and their patients.

To expand these benefits, CoBank is sponsoring the Rural Telehealth Initiative (RTI) that will deliver additional pilot programs in other rural communities. RTI is an alliance between CoBank, Perry Health and the WTA Foundation, an affiliate of WTA – Advocates for Rural Broadband, which leverages the relationships with rural broadband providers and their local communities. The goal of the RTI is to increase the connectivity of rural communities to rural broadband to increase the quality of care to rural citizens. The additional pilot programs will focus on critical health issues including Type 2 Diabetes, Gestational Diabetes, opioid misuse, Congestive Heart Failure (CHF), Chronic Obstructive Pulmonary Disease (COPD) and rheumatoid arthritis (RA).

For more information about participating in the RTI, please contact Sarah Tyree, Vice President, Policy and Public Affairs, CoBank, at styree@cobank.com or 202-650-5864.



*"I always felt
alone in my
diabetes care,
but this program
has made me
feel loved!"*





CoBank is a cooperative bank serving vital industries across rural America. With more than \$135 billion in assets, the bank provides financing to farmer-owned cooperatives and other agribusinesses and rural power, water and communications providers in all 50 states.

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