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Final Copy of Case Study

Status:

Laureate

Year:

2013

Organization Name:

Ptolemy Data Systems

Organization URL:

<http://www.pdsforme.com/>

Project Name:

Telemedicine in Wyoming

Please select the category in which you are submitting your entry:

Health

Please provide an overview of the nominated project. Describe the problem it was intended to solve, the technology or approach used, how it was innovative and any technical or other challenges that had to be overcome for successful implementation and adoption. (In 300 words or less.)

The open spaces of rural western states present an ideal environment for the greatest benefit from telemedicine. With telemedicine, new technology in networking, information sharing, and video communications are employed to bring medical and psychiatric care to remote communities that would not otherwise have access to needed medical resources and services. Since 2010, Ptolemy Data Systems (PDS) has been leading an effort to deploy telemedicine throughout Wyoming. In Montana and Wyoming, in particular, there is a shortage of psychiatrists and other mental health providers, and PDS's innovation in telemedicine and telepsychiatry addresses this problem. Specific challenges that PDS addressed successfully were connectivity, equipment, and user confidence. Connectivity: Since the project entailed connecting rural healthcare sites with remote specialists, the broadband connectivity available at rural sites as well as at the head-end site needed to be improved and expanded. PDS worked with a telecommunications carrier to build out a fiber optic line to their facility to make sure the videoconferencing network was well supported with broadband throughput. In addition,


PDS worked with end users to evaluate broadband needs, develop broadband solutions, and coordinate expansion efforts. Equipment: PDS invested \$100,000 in a videoconferencing platform that met the project's objectives. As the project work expanded, PDS realized the need to find a solution for interoperability with other regional networks incorporating Polycom infrastructure. In order to effectively bridge networks, PDS doubled down on investment to migrate to an entirely new videoconferencing platform based on Polycom's architecture. User Confidence: The State of Wyoming had previously contracted with another state organization, WyHIO. Their RFP came about as a direct need to be able to increase user confidence in a telehealth network. The State of Wyoming awarded PDS this contract due to PDS's ability to demonstrate user confidence in the technology.

When was this project implemented or last updated? (Please specify month and year.) Has it incorporated new technologies and/or other innovations since its initial deployment? (In 300 words or less.)

The telemedicine project was initiated in August 2010 and continues to be updated and expanded today. The deployment includes statewide efforts to implement electronic health records. In December 2012, PDS received a contract from the State of Wyoming for services surrounding telemedicine for state-operated facilities. In addition, the foundation for telemedicine established by PDS set the stage for a \$7.7 million grant from The Center for Medicare and Medicaid Services (CMS) Innovation Awards program, a federal program seeking to fund promising new models of healthcare delivery, to HealthLink Now to provide online mental health services in Montana and Wyoming. PDS' ability to turn up and operate an effective telehealth network in a short period of time (less than three months) developed aggressive investment in telehealth expansion by multiple parties, including HealthLink Now. PDS is partnering with HealthLink Now and the Wyoming Integrated Care Network as a key objective of operating the State of Wyoming's telehealth network in an effort to expand the presence of telehealth and ensure both public and private healthcare providers are interoperable. New technologies that PDS plans to implement are tablet and smartphone displays for data mobility and state-of-the-art security to protect patient information.

Is implementation of the project complete? If no, please describe the project's phases and which phase the project is now in. (In 300 words or less.)

Implementation, deployment, and technology advancement is ongoing, and PDS is in mid-stream in its support of telemedicine for many specialties within the State of Wyoming. The next phase, with Intervention Technology, is administrative acceptance of technology by hospitals and increasing confidence by practitioners. PDS will continue its successful technology advocacy via the Department of Health to help establish broader use of new telemedicine capabilities. Pending healthcare initiatives will drive rural hospitals to explore and use new information technology and telemedicine systems for consistent, traceable, and cost-effective healthcare. Intervention Technology is the effective use of technology by health care and public health professionals to bring about patient- and public-centered health information and health intervention. By strategically combining health IT tools and effective health delivery systems, there is the potential to improve health care quality and safety, increase the efficiency of health care and public health service delivery, improve the public health information infrastructure, support care



in the community and at home, facilitate clinical and consumer decision-making, and expand health skills and knowledge.

Please provide at least one example of how the technology project has benefited a specific individual or organization. Feel free to include personal quotes from individuals who have directly benefited from the work. (In 300 words or less.)

The Sheridan County Detention Center has been utilizing telemedicine for psychiatric care for its inmates for about two and a half years. PDS implemented the system for Sheridan County as part of the Wyoming Telepsychiatry Pilot Project, which proved that technology could provide access to psychiatric care for inmates within the detention facility. Statement by Sheriff Dave W. Hofmeier, Sheridan County Sheriff's Office: "The Sheridan County Sheriff's Office in Wyoming has been actively involved in the use of Telemedicine within its detention center for approximately two and one half years. Ptolemy Data Systems provided the technology, support, and access to the system as part of Wyoming's Telepsychiatry Pilot Project. It has been a resounding success for us, and has granted the kind of access to psychiatric care those incarcerated here need. Access to Telemedicine has become a necessity for the Sheriff's Office. Using telemedicine allows us to adequately address the health and welfare needs of our inmates. It ensures treatment options are available while maintaining the security of our officers and facility. We are grateful for our access to Telemedicine and will continue to utilize it in support of our inmates' psychiatric needs. We appreciate Ptolemy Data System's efforts in expanding technology for the betterment of the State of Wyoming."

Would this project be considered an innovation, a best practice or other notable advancement that could be adopted by or tailored for other organizations and uses? If yes, please describe that here. (In 300 words or less.)

Yes. The pioneering use of both established and new technologies have created an advanced system for delivering high-quality medical and psychiatric care in underserved areas. PDS in conjunction with the State of Wyoming is establishing best practices for providing clinical healthcare at a distance. Telemedicine eliminates distance barriers and improves access to medical services that are not consistently available in distant rural communities. The new technologies used for telemedicine today permit communications between patient and medical staff with both convenience and fidelity, as well as the transmission of medical, imaging and health informatics data from one site to another.

If there are any other details that the judges should know about this project, please note them here. (In 300 words or less.)

In addition, PDS worked with end users to evaluate broadband needs, develop broadband solutions, and coordinate expansion efforts. As the direct result of PDS' advocacy and work with telecommunication companies to develop a business case for the new facilities, the city of Buffalo, Wyoming, now has state-of-the-art fiber optic facilities extended to local government agencies, emergency/safety management services, and the rural hospital.