

State of Oklahoma

2009 NASCIO Recognition Awards Nomination

Oklahoma's Tele-Health Network

**Department of Mental Health
and Substance Abuse Services**

**Nominating Category:
Information Communications
Technology (ICT) Innovations**

Lead, Support, Serve



B. Executive Summary

The Oklahoma Department of Mental Health and Substance Abuse Services (ODMHSAS) has successfully implemented a statewide non-traditional treatment delivery system through the use of video-conferencing technology (Tele-Health). This technology allows ODMHSAS and community providers to deliver mental health and substance abuse services to consumers in rural communities who, without this technology, would continue to be at a significant disadvantage due to a lack of access to services. The tele-health technology has enabled ODMHSAS to provide previously underserved areas of Oklahoma with a significant increase in access to mental health and substance abuse information and services. This method of service delivery has also increased the overall quality of mental health and substance abuse care delivered to the community. Through the Oklahoma Tele-Health Network, Oklahoman's who were once unable to receive services due to geographical, economic and workforce barriers are now able to receive the care that they desire. This network has also facilitated new partnerships, strengthened existing ones and contributed to the goal of merging physical and mental healthcare by providing a mechanism for physician and behavioral health professionals to consult with each other in a more rapid fashion. As a result of this network, the landscape of the service delivery system in Oklahoma has been forever changed.

C. Description of the Business Problem and Solution

As one of seven initial recipients of the Substance Abuse and Mental Health Services Administration (SAMHSA) Transformation State Incentive Grant (TSIG), Oklahoma conducted a statewide needs assessment to determine the greatest needs for Oklahomans regarding the access to and delivery of mental health and substance abuse services. In addition, the assessment documents geographical, economic, workforce and other predominant barriers for those attempting to acquire or deliver services.

Geographically, Oklahoma is predominantly a rural/frontier state. As a result, many citizens in need of mental health and/or substance abuse treatment services are not located within close proximity to a Community Mental Health Center (CMHC) or substance abuse facility. Therefore, a large portion of those in need of treatment are unable to receive treatment without traveling long distances. This in turn presents its own hardship on those in need of treatment

Economically, Oklahoma's per capita income is \$24,787. As a result, many individuals cannot afford to drive long distances due to the cost (both direct and indirect) associated with traveling (cost of gas, childcare, lost wages, etc.). Many do not have cars and must depend on obtaining transportation from family or friends.

From a workforce standpoint, Oklahoma has a significant shortage of mental health professionals, in particular child psychiatrists. These practitioners have large caseloads where they work out of regionally located facilities that require them to travel extensively to provide services for consumers in multiple counties resulting in less access to treatment professionals because of the travel time to and from localities.

Utilizing the knowledge gained from the needs assessment, ODMHSAS, in partnership with the Governor's Transformation Advisory Board (GTAB), determined that technology (tele-health) was the most effective and efficient method to address these challenges. ODMHSAS set out to establish a statewide tele-health network that would address these challenges and ensure that every Oklahoman in need of mental health and/or substance abuse services would be within close proximity (no more than 30 minutes away) from a tele-health site.

In September of 2007, the tele-health transformation began. ODMHSAS conducted a 60-day tele-health Pilot program with one of its CMHCs, Mental Health Services of Southern Oklahoma (MHSSO) located in Ardmore, Oklahoma. During this pilot, MHSSO was able to serve an additional 180 consumers and improved the overall quality of services delivered. After the enormous success of this pilot, the decision was made to expand the network to include all 16 CMHC's and their satellite locations.

From November to March 2007, 38 sites were established at the CMHC's with the most immediate need for this technology. From May to September 2008, 41 additional sites were erected for a total of 79 sites throughout the state. During July 2008, ODMHSAS installed the Tandberg Management Suite (TMS) and a Multi-Point Control Unit (MCU) which together serve as the management and data collection backbone of the network and also provide additional feature sets to the network such as the ability to conduct massive video-conferencing sessions (up to 80 remote sites at once), record sessions, and stream conferences and trainings live via the internet.

ODMHSAS has also partnered with Oklahoma county court houses to develop an additional tele-court piece to this system. A pilot program to test the use of tele-health equipment for commitment hearings was conducted from August to November 2008. Carter County law enforcement officers, CMHC's and the Carter County Court officials utilized this equipment to conduct commitment hearings for consumers who would have needed to be transported from a treatment provider, while in handcuffs, to the courthouse for a 10-15 minute hearing. Then, this consumer would have to be returned to the treatment facility, again in handcuffs. This process is costly to all parties involved. It is costly to local law enforcement agencies because frequently two officers are required to transport a consumer from one facility to another. It adds stress to local law enforcement agencies because in many areas there are frequently only a few officers on duty. If an agency has four officers on-duty, transporting consumers reduces their staff by 50%. It is also costly to local law enforcement since many times consumers must be transported long distances that can take up to two and a half hours one way to drive; thus, the local law enforcement agency has lost 50% of its staff for a minimum of five hours. The process is also costly to consumers who are required to be handcuffed and driven in a police vehicle, many times for long distances, due to the emotional strain that this process puts them through. Once the pilot project was in place, all parties were extremely receptive to the tele-court model as travel time was eliminated, thus leaving local law enforcement agencies fully staffed and eliminating the cost of transportation, the emotional strain on consumers was also reduced. As a result of the response to this pilot program, ODMHSAS plans to fund an additional 13 tele-court sites in 2009.

Once all of Oklahoma's CMHC's were up and operational, ODMHSAS began to partner with other organizations to assist in their adoption of this technology. From November 2008 to February 2009 ODMHSAS conducted a pilot program with Indian Health Services' (IHS) Oklahoma City and Anadarko locations to utilize this technology to help expand IHS's wound care program. By partnering with IHS on this physical care initiative, ODMHSAS was able to begin bridging the gap between physical and mental health care. During the wound care sessions, if the nurse suspected signs of a mental

health and/or substance abuse need, they would be able to immediately consult with a behavioral health provider and proceed as needed. This pilot has been a success and plans are being made in 2009 to expand this initiative.

ODMHSAS is currently in the third phase of deployment. ODMHSAS is developing a request for proposals (RFP) to address the remaining 11 counties without a tele-health presence. This RFP is scheduled to be released in July of 2009. Through this RFP, ODMHSAS will identify organizations that have the ability to deliver services in these identified counties. ODMHSAS will then provide equipment, training and ongoing technical assistance to those organizations. ODMHSAS is also fine tuning its data collection efforts. Currently, ODMHSAS has the capability to track equipment usage, return on investment and travel time saved. By July 2009, data collection efforts will expand to include types of service delivered (medication clinics, individual therapy sessions, professional consultations, trainings and administrative meetings).

Some of the challenges encountered during the implementation of the tele-health initiative were network infrastructure, licensure requirements and Medicaid billing.

The network infrastructures at some of ODMHSAS' remote CMHC's were fragmented and did not possess enough bandwidth to properly conduct tele-health sessions. However, due to the flexibility of the tele-health units selected to be deployed, ODMHSAS was able to adjust various network and firewall settings to allow for proper communication and increase bandwidth where needed.

The Medical Licensure Board had questions regarding the validity of tele-health services and if they should be considered as "face-to-face" service delivery. After discussions between ODMHSAS, the Medical Licensure Board, and the Oklahoma Legislature, in May 2008 Governor Brad Henry signed a bill into law stating that tele-health services would be considered the same as face-to-face as it relates to mental health services.

There were some concerns expressed by the CMHC providers as to whether they could bill Medicaid for the services provided via tele-health. As a result, in April 2008, the State Medicaid Authority, the Oklahoma Healthcare Authority, responded positively by amending their rules, policies and procedures to allow for tele-health services to be properly billed to Medicaid.

Along with all of the state agencies that played an integral role in the implementation of this project, ODMHSAS-contracted vendors were an immense resource. SKC Communications along with Tandberg were instrumental in assisting in scoping out the technological requirements for this network. Together, they helped to identify the following technological architecture needed to develop and sustain this network:

Endpoints

- Tandberg 1700
- Polycom VSX3000

Network Backbone

- Codian MCU
- Tandberg Management System
- Tandberg Communication Server
- Tandberg Expressway

D. Significance of the Project

Beneficiaries/ stakeholder groups

This project has encouraged other service agencies to begin to develop ways of incorporating this technology into their service delivery system. This project has also assisted in bridging the gap between primary physical and mental healthcare. If a physician determines that a consumer exhibits signs of a mental health or substance abuse issue, the physician can quickly conduct a consultation with a mental health professional utilizing this technology.

This technology has also allowed for CMHC's to expand their service delivery locations. Before this technology was implemented, the CMHC's would have to find a psychiatrist willing to drive to the remote areas to deliver services. Now, they are able to setup additional satellite locations and have the psychiatrist deliver the services through the tele-health equipment.

Policy, Strategy and Goal Alignment

This project is in direct alignment with ODMHSAS' goal to increase access and quality of services to all Oklahomans. This project was also guided by the President's New Freedom Commission on Mental Health. Goal 6 of this Commission report is to "increase access to information and services via technology". This project also corresponds with the National Association of State Chief Information Officers' (NASCIO) 2009 State Chief Information Officer Priorities. This project promotes the "Shared Services" vision of NASCIO by partnering with existing tele-health operations at Oklahoma State University, University of Oklahoma - Health Science Center and Integris' Hospital Network. This project is also considered "Green IT" because of the efficient use of time, restriction of travel and the energy efficiency of the system. The units used at the tele-health sites are energy efficient and are configured to sustain an extended "sleep mode" to even further reduce energy costs. Lastly, NASCIO's priority of "Security" was integrated into this project development by ensuring that all HIPAA compliance measures were met and that the highest level of the Advanced Encryption Standard (AES) is used on all tele-health units to ensure both consumer confidentiality and the security of the data transmission.

E. Benefit of the Project

Impact of Project

This project has had a significant impact at both the state and local level. On a state level, this technology has encouraged new ways of thinking and conducting business. No longer hindered by the geographic, cost and travel barriers that once confined behavioral health service delivery, ODMHSAS is able to offer additional services,

communicate more rapidly, and conduct the state's business in a more expeditious and efficient manner. At the local level, communities are now able to access services and information that, at one time, was nonexistent. Since the citizens of the community are able to receive the care they desire, this results in an overall increase in the quality of life for the community as a whole.

Outcomes

Some of the outcomes realized during the duration of this project are:

- Increased access to treatment and information
- Decreased travel time for clinicians and consumers
- Increased quality of service
- Increased consumer satisfaction
- Increased number of consumers served
- Heightened operating efficiency
- Increased staff productivity
- Improved accessibility to experts

This network has provided Oklahoma with many other unexpected benefits. Through the development of this network, ODMHSAS has been able to forge new partnerships with agencies and organizations and strengthen existing relationships. Though housed at ODMHSAS, this is truly Oklahoma's Tele-Health Network, not only in words, but through creating a network of care for citizens across the state accessing behavioral health services.

Financial Return on Investment

Since the inception of data tracking in November 2008, the tele-health network has saved an estimated \$95,000. With an initial investment of \$535,000, ODMHSAS has recouped approximately 17.8% of the investment in a 6-month period. If this trend continues, and we fully expect that we may see increases, the initial investment will be paid for in less than 3 years.

Non-Financial Return on Investment

In an effort to conserve resources and become more "green", in November of 2008 ODMHSAS began tracking the amount of carbon dioxide emissions saved from travel. In a 6-month period we have saved approximately 1.2 million (kgs) of carbon dioxide.

Another non-financial return on investment (ROI) consideration is decision-making time. Through this technology, experts are able to consult with one another immediately in order to properly diagnose, treat and assist in the management of consumers care.

Measurements

Measurements of the outcomes previously mentioned are performed through data collected using the Tandberg Management System, the ODMHSAS Integrated Client Information System and consumer satisfaction surveys for tele-health.