



CASE STUDY

# Greater Oregon Behavioral Health Inc.

Laurence Colman helps the most vulnerable members of a community. As Chief Medical Officer at Greater Oregon Behavioral Health Inc. (GOBHI), he oversees “wraparound initiatives” which work with children who have experienced trauma — neglect and physical, sexual or substance abuse — in their homes.

“Unfortunately, there is a great deal of trauma in the world,” he said of his work as a child psychiatrist. “Wraparound care initiatives aren’t just a quick fix, but instead they look at children in their settings at school, home and social environments — the chaotic and disruptive structures around them — to provide high levels of care.”

At GOBHI, behavioral health specialists provide “high levels of care” with telecommunications technology. GOBHI is a nonprofit managed care organization serving roughly 100,000 people in 16 Oregon counties. The agency was established in 1995 to oversee behavioral health services for rural communities.

From his office in Portland, Colman uses videoconferencing to reach Oregon’s most isolated communities and at-risk children. With help

from the dense fiber-optic network of LS Networks, the organization was able to apply for and receive a federal grant which redefines how health services are used to strengthen communities.

***“GOBHI’s mission is critical and it’s one that saves lives. To do that, you need access, confidentiality and reliability, which LS Networks can offer.”***

**— Bryan Adams, Director of Sales and Marketing at LS Networks**

“One of the things that ties people to a community is good healthcare,” said Bryan Adams, Director of Sales and Marketing at LS Networks. “Because it’s engineered for high quality and reliability, LS Networks provides a stable platform for GOBHI to launch their game-changing application.”

# Telemedicine Grants and Networks

Technology and broadband capabilities are connecting rural communities across the Northwest. High-speed fiber-optic connectivity helps bridge the geographic gap between rural cities like St. Helens — where Colman treats 52 children in Columbia County — and healthcare centers in Portland.

GOBHI has created a bold new venture for telemedicine — the remote diagnosis and treatment of patients by means of telecommunications technology. The organization’s videoconferencing network now enables efficient collaborative care for rural patients separated from clinics, specialists and doctors.

“Telemedicine increases our access and reach in rural areas,” said Colman. “There are only about 80 psychiatrists in the whole state of Oregon. If you look at the recommended ratio of children to psychiatrists, even in the Portland metro area, the state is underserved. Videoconferencing offers specialized care to the people and communities that need it most.”

*“Our videoconferencing program is primarily concerned with behavioral health services, but we’re always expanding. Once completed, GOBHI will have the largest geographical videoconferencing network in Oregon.”*

— Ben Exstrom, GOBHI IT Director

LS Networks first partnered with GOBHI in 2011, and upgraded the agency’s network services in 2015 to enable videoconferencing. Thanks in part to the service capabilities offered by LS Networks, GOBHI received a \$436,506 Distance Learning and Telemedicine Grant in 2014 from the United States Department of Agriculture (USDA) Rural Development Program. The USDA grant helps rural residents tap into the enormous potential of modern telecommunications, supporting both education and healthcare initiatives. GOBHI was awarded the grant — which the organization must match by a minimum of 15 percent — in order to provide high-resolution videoconferencing for behavioral diagnostics.

“GOBHI’s mission is critical and it’s one that saves lives,” said Adams. “To do that, you need access, confidentiality and reliability, which LS Networks can offer.”

GOBHI IT Director Benjamin Exstrom said once the grant was approved, his team “hit the ground running” using allocations to

install 32 healthcare providers with videoconferencing equipment.

“The question became, how do we get qualified clinical doctors and providers out to where patients need them?” said Exstrom. “Rather than have someone drive three hours for a consultation in the city, it’s more cost effective to have that patient videoconference.”

Healthcare providers across Oregon are embracing similar technology, joining together to form nonprofit organizations like the Telehealth Alliance of Oregon — an agency which works to improve healthcare through telecommunications.

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All of Portland’s major hospitals have developed similar networks — like the Oregon Health & Science University Telemedicine Network — which give doctors in rural hospitals access to specialists clustered in the city.



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# Videoconferencing Technology

The LS Networks team also “hit the ground running” once the grant money was received.

“LS Networks has provided us with internet capability out in the boonies as it were,” Exstrom said. “They have been great to work with. Even when we don’t give them enough time, they are willing to bend over backwards for us and work their magic.”

At the wraparound care initiative in St. Helens where Colman treats children, LS Networks was able to provide a 30 megabits per second and higher connection less than a month after the clinic opened its doors. In St. Helens and throughout the state, GOBHI uses the videoconferencing technology in three ways: for patient consultations, business conferencing and continuing education courses for healthcare professionals.

“Our healthcare centers are using the video conferencing equipment as fast as we can get it up,” said Exstrom.

Healthcare centers are equipped with one of two options: a video cart or a room unit. The mobile video cart features a computer and a video camera with a 50-inch screen and built-in speakers. The versatile device is used to reach patients in a clinical setting. The room unit features dual 55- to 60-inch wall-mounted monitors, a camera and conference phone. Users with connections as low as 1.5 megabits per second will still receive a clear transmission from their healthcare provider.

LS Networks operates GOBHI’s distributed network of locations, ensuring each one experiences decreased transmission latency combined with first-class video streaming and resolution.

“LS Networks offers enormous reach and convenience, which allows GOBHI to connect each health center on a single network — the largest data network in Oregon,” said Leif Hansen, Director of Engineering and Operations at LS Networks. “What’s even more unique is that the traffic stays local and directly connected to the community.”

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What makes LS Networks different is two major factors: high bandwidth and the quality of service (or QoS). Symmetrical bandwidth gives GOBHI’s healthcare centers the same upload and download speeds, which is critical for creating the face-to-face video conference experience that feels like it’s in person.

The “smart network” and guaranteed QoS prioritizes videoconferencing and voice data so that those services are provided in the highest quality for GOBHI’s patients and providers, while internet browser traffic is prioritized second. Finally, GOBHI pays one price, with one service level agreement, to get four priority queues (or bandwidth profiles) for these for these services — something no other telecommunications provider offers.



# Superior Patient Care

Colman is still fine-tuning his treatment program in St. Helens. He said establishing a “human connection” over the screen is dependent on camera angles, the interview techniques he uses to read body language and the inevitable eye rolls of children under his care.

He said studies suggest that telepsychiatry — the application of telemedicine to the specialty field of psychiatry — is preferential for treating children, who find the experience less threatening and anxiety inducing than sitting in a room with a doctor. From the comforts of a couch, surrounded by a support system of caseworkers, foster parents and more, children are given a safe space to untangle their emotions.

“The idea is to wrap services around the kid where they are and maintain that community setting rather than cut them off from their families and natural support systems,” said Colman.

LS Networks is proud to provide the technical groundwork for that support system with its ubiquitous data network.

“GOBHI has a real heart for helping their local community,” said Adams. “We’re proud to partner with an organization that continues to advance medicine and technology in rural communities in order to provide better patient care.”



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— Laurence Colman, GOBHI Chief Medical Officer

Headquartered in Portland, OR, LS Networks is committed to the community and is owned by a collective of rural electric cooperatives and a Native American business enterprise, including over 60,000 citizens and communities. We’re not about the money. We’re about the service to and for our customers.

**LET’S DISCUSS YOUR NEEDS**  
LSNetworks.net • 503.294.5300  
sales@LSNetworks.net