

Texas Tech Brings Teledermatology to the Panhandle

How likely are you or someone you love to be diagnosed with skin cancer?

The answer: more likely than you think. With one in five Americans diagnosed in their lifetime, skin cancer is the most common cancer in the United States. Nearly 20 Americans die from melanoma every day¹ – and diagnoses in the United States have more than doubled over the past 30 years.²

You might think those numbers would qualify as a five-alarm health crisis. Yet many people are still unaware of the risk – and many can't find even basic dermatological care, particularly in rural areas where skin cancer risk is highest. Alarmed by the lack of treatment options in rural Texas, Pamela Irvin and Charli Grinie of Texas Tech University Health Sciences Center (TTUHSC) created a groundbreaking telemedicine program that partnered medical innovation with skin cancer education. With one mobile outreach initiative, they ushered in a new era of skin cancer prevention and treatment for small Texas towns.

Prevention in the Panhandle

The Texas Panhandle has some of the highest melanoma rates in the state. Ranchers and farmers spend long hours in the sun, while the local pageant culture means many young girls begin tanning as early as 10 years old.

Visiting the nearest dermatologist in Lubbock can take three or four hours: and appointments must be booked far in advance. "Getting an appointment in Lubbock can mean a year's wait time," said Grinie, a senior outreach worker at TTUHSC. "And nobody wants to leave their community – so they just don't get that suspicious mole or freckle checked."

Client

Texas Tech University Health Sciences Center (TTUHSC) provides patient care, conducts biomedical and clinical research, and educates students and medical professionals. Nationally recognized for innovative programs in a variety of disciplines, TTUHSC serves more than 2.75 million people in its immediate area and has trained more than 28,000 health care professionals.

Challenge

The Texas Panhandle has some of the highest melanoma rates in the state – but many small ranch and farming communities are hours away from the nearest dermatology clinics in Lubbock. TTUHSC was alarmed by the lack of local skin cancer screening and prevention options.

Outcomes

The TTUHSC team used GlobalMed virtual solutions in a groundbreaking teledermatology program that partnered medical innovation with skin cancer treatment and education for small Texas towns.

¹American Cancer Society. Cancer Facts & Figures 2019. Atlanta: American Cancer Society; 2019.

²AIM Melanoma Foundation. Melanoma Stats, Facts and Figures; 2019

Based in Lubbock, Texas, TTUHSC offers clinical and research settings in a variety of disciplines. Its University Medical Center offers the only Level 1 Trauma Center and Burn Center in the region. A large part of TTUHSC's mission focuses on treating underserved communities through innovation – which gave the team the idea of taking telemedicine equipment to rural areas for dermatology screenings. “We’re always trying to find a new way to help our patients and communities,” said Irvin. “We want to be on the forefront and telemedicine is the way of the future. If you want to advance your practice, this is the way to go.” After the surgery division won a grant funding the melanoma outreach program, the team reached out to GlobalMed. TTUHSC had been using GlobalMed virtual health solutions for their successful correctional telemedicine program for years, in part because the platform can handle every type of visit, including direct-to-consumer, ambulatory, specialty, inpatient, and acute care. The platform is also HIPAA compliant, with HITRUST-certified video and audio, making it ideal for mobile outreach. Grinie’s team wanted to continue the relationship to ensure they offered the best virtual care possible. They knew their program could save lives. The five-year survival rate for people whose melanoma is detected and treated early is 99 percent.³ One screening can literally be a matter of life or death.

Outreach to Outer Communities

Today the team takes GlobalMed’s Transportable Exam Station (TES) unit, TotalExam® 3 camera and Variable Polarizing Hood (VPH) to rural communities. After partnering with community clinics and small health systems to set up a telederm practice for the day, they use the solution to connect to specialists and dermatologists back in Lubbock. Other patients visit TTUHSC offices in Amarillo and connect to dermatologists in Lubbock. Over video conference, the patient can share any concerns

or symptoms with the dermatologist. The dermatologist consults with the onsite provider, then recommends a diagnosis and further treatment. The versatile TotalExam® 3 camera, which Grinie described as “incredible,” sends precise HD-quality images of lesions, rashes, moles or other skin conditions. “The cameras are better than the ones we have in the clinic,” Grinie said. “You can run a whole practice with it.” The program has transformed healthcare outcomes for rural communities such as Memphis, Dalhart, Childress, and Paducah – some of which are hours from a dermatology clinic. “We’re talking about little towns where if they have an emergency, they can bleed out. And there may be five or six little communities that go to that small town,” Grinie explained. “We’re giving access to great providers and emergency and urgent care to all patients everywhere. People know that just within a dial, they’ve got a physician.”

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– Pamela Irvin

A Legacy of Education

The program has transformed not just individual lives, but generations of families. The TTUHSC team has “changed the way people think about dermatology,” according to Grinie. “People were dying of melanoma just from lack of education,” she said. “These communities were losing family members because a small spot wasn’t wasn’t checked for years. When we first started the program, no one said ‘You have a lot of freckles and moles – you should have them checked.’ Well, now they’re having them removed and that’s because of this program.”

³Siegel RL, Miller KD, Jemal A. Cancer statistics, 2019. CA Cancer J Clin. 2019; doi: 10.3322/caac.21551.

The majority of melanoma cases are attributable to UV exposure. Even one blistering sunburn during childhood or adolescence can nearly double a person's chance of developing melanoma;⁴ researchers estimate that indoor tanning may cause more than 400,000 cases of skin cancer in the U.S. each year.⁵

This inspired the team to partner with local school districts to install sunscreen dispensers and teach preventive care. “We find a lot of kids are tanning for pageants as young as 10,” Grinie said. “So we focus on going to rural communities and screening kids age 10 to 18 and doing health fairs. That’s the thing about GlobalMed – we can foster a new mindset on how important prevention is.”

From Screening to Emergency Care

The program has helped the team increase detection rates of skin cancer, alopecia, and other conditions. Inevitably, some of the screenings have saved lives. “With one young girl, we did a direct admit after working with the dermatology department in Lubbock. She had a history of eczema and now her skin was peeling off,” said Grinie. “But the camera let us see clearly it wasn’t just eczema. She had spots in her eyes from what turned out to be eczema herpeticum. So we got her admitted for a two-week hospital stay, where she was treated with IV antibiotics for 11 days. It wound up saving her life.” A key element in the program’s clinical sophistication is the team’s use of GlobalMed’s eNcounter® Cloud. Store and forward capabilities allow the team to securely store images and diagnostic data and then send that information to eNcounter®, which is hosted in the HITRUST-certified Azure cloud. Doctors who can’t join a consult on video can review high definition images later, studying suspicious moles or watching their changes over time –and intervening before cancer progresses.

Patient Enthusiasm, Provider Confidence

The team reports that patients of all ages have enthusiastically adopted teledermatology. “Getting something new started is easier if it comes from within the community,” Grinie explained. “We educate them with posters ahead of time and when I walk them back to their exam, I explain how it works. The kids are real receptive. They think it’s cool when they can see themselves.” The program is also popular because it saves patients significant time. Unlike the one-year wait for appointments in Lubbock, the TTUHSC team can get someone scheduled for a telederm appointment in a mere week. The appointments themselves move quickly too. “It’s a 15 or 20 minute checkup and then they get back to their day. Patients always say, ‘That was fast, that was convenient.’” In addition to the initial screening, the program can connect families to follow-up care with surgeons, dermatologists, and pediatricians. “Before, some people would drive four hours, see the doctor for a few minutes, then drive four hours home. But we can virtually work with the doctor’s office so the patients don’t have to drive all the way in for a short follow-up visit.”

Irvin reported that some clinicians were initially “skeptical about telemedicine’s efficacy. But their attitudes changed after seeing GlobalMed solutions in action. “Some of the more seasoned providers were not receptive because they predicted they couldn’t get an accurate picture and it would be a disservice to the patient,” Irvin said. “They weren’t familiar with how good the technology was. But once they used it, they were astonished by the GlobalMed HD camera and its clarity and simplicity – and that’s when we got them on board with the project.”

⁴Dennis, Leslie K. et al. “Sunburns and Risk of Cutaneous Melanoma, Does Age Matter: A Comprehensive MetaAnalysis.” *Annals of epidemiology* 18.8 (2008): 614–627.

⁵Wehner M, Chren M-M, Nameth D, et al. International prevalence of indoor tanning: a systematic review and meta-analysis. *JAMA Dermatol* 2014; 150(4):390-400. Doi: 10.1001/jamadermatol.2013.6896.

Today the TTUHSC team finds that providers are confident in telemedicine's effectiveness. "In fact, our doctors are seeing that patients will do better in their healing process when they stay in their communities," Grinie said. "When you travel, you're stressed about the treatment."

Continuing a Mission of Medical Innovation

Grinie and Irvin's enthusiasm for telemedicine and the success of their program has inspired other community hospitals to purchase the same equipment and setup. "We're all about teaching others to help themselves," Irvin said. "When we looked at other hospitals, some contracting with Lubbock, we convinced them they could do this themselves."

Describing themselves as "beyond pleased with our GlobalMed relationship and the service," the team has now expanded their range of telemedicine programs. "We have nine providers now of various specialties," Grinie said. "And we have another grant for teletrauma in smaller communities. The patient will come in and use an iPad to connect to our trauma surgeons, who will assess if the patient needs to come in and advise them on the best course of treatment – helping some of them stay in their community and save them money."

Another plan is to use telemedicine for complex hernia treatment and their bariatric practice. "Patients in Dallas and Wichita Falls want to see our bariatric provider because he's the only fellowship-trained one in the area," Grinie said. "With telemedicine, they'll be able to see him for pre-op visits and stay on the path to surgery, which is six to nine months."

As the TTUHSC team continues to reinvent care delivery for rural Texas, they encourage other

providers to explore virtual care. "We really believe it's the way of the future," Grinie said. "It's changed entire towns. They know we've got this innovative new technology, it can save their life and it's coming to their community."



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