



 **ACT** | The App Association

Podimetrics: Rural Broadband Helps Keep a Foot in the Game for Diabetes Treatment





Fast Facts

- Roughly 1.5 million Americans are diagnosed with diabetes every year, adding to the 30.3 million adults and children living with diabetes in the United States.
- Each year, roughly 1.7 million Americans suffer from one or more diabetic foot ulcers (DFU), costing doctors, hospitals, and patients more than \$17 billion annually.
- All diabetics are at risk of developing DFU. Sadly, patients who have already experienced a DFU episode are 40 percent more likely to experience a recurrence within the first year after the ulcer closure.
- Together, diabetes and diabetic foot ulcers are the leading cause of non-traumatic lower extremity amputations in the United States.

The Story

Established at the Massachusetts Institute of Technology in 2011, Podimetrics is a medical technology services company that develops next-generation, hardware-enabled, thermal-imaging solutions to predict and prevent diabetic foot ulcers. The Podimetrics SmartMat™ is the only remote temperature monitoring technology to receive FDA approval, and it has been used by patients in more than 650 homes across America.

Podimetrics' SmartMat™ monitors the temperature of diabetes patients' feet to identify temperature asymmetries that signal the development of a foot ulcer. Coupled with a monitoring service, the Podimetrics Remote Temperature Monitoring System™ uses the wireless SmartMat™ to notify patients and clinicians of temperature asymmetry and inflammation, the first signs of foot ulcers.



Here's How It Works

- The solution is as simple as kicking up your heels. Treatment for DFUs is often as easy as staying off your feet for a certain period of time, and in some cases, buying new shoes. The important part is detecting a hot spot before it becomes a complete DFU. Podimetrics technology makes ulcer detection and prevention easy through the following steps. To monitor baseline foot temperatures, diabetes patients stand on the SmartMat™ for 20 seconds per day within the comfort of their home.
- The patient data is sent instantly to the cloud, where the Podimetrics Remote Temperature Monitoring System™ measures and stores each foot's temperature to identify possible persistent asymmetries or "hotspots" before they turn into ulcers.
- If a hotspot is detected, the SmartMat™ will use its custom protocol to notify healthcare providers. The patient's physician will then plan an intervention to ensure patients stay off their feet until they heal. If the readout is more concerning, the patient can visit his or her doctor for more aggressive preventative treatment.
- Podimetrics provides a real-time solution to help diabetes patients monitor and address potential diabetic foot ulcers. However, patients depend on strong, reliable broadband connections to benefit from these preventative treatments.

Here's the Benefit

The Podimetrics SmartMat™ detected 97 percent of developing non-traumatic plantar foot ulcers five weeks before they were visible, according to data published in the July issue of Diabetics Care. Studies have also found that 86 percent of patients use the SmartMat™ at least three times per week, and 88 percent of respondents reported the mat as easy-to-use. Diabetes patients not only accept this practical monitoring technology, but it is also preventing debilitating amputations and high-cost treatments for diabetic patients.



Why Connectivity Matters

It's simple. None of the benefits of Podimetrics' SmartMat™ and Remote Temperature Monitoring System™ – the accessible, at-home use, expedited diagnoses, prevented ulcers and amputations, and reduced healthcare costs – would be possible without broadband connectivity. Podimetrics' solutions clearly illustrate the need for broadband and the merits of real-time health data to implement effective preventative care. Unfortunately, more than 23.4 million rural Americans do not have access to the internet. These Americans are forced to drive to a library or community center to access the internet, travel long distances to visit a healthcare facility, or pay high medical bills for sporadic visits to a doctor or healthcare specialist. While some federal broadband programs address broadband connectivity challenges in rural areas – where diabetes and DFU rates are higher – significant barriers remain.

We urge policymakers to ensure the efficacy of the Federal Communications Commission's High Cost Fund, which supports rural broadband, and consider creative, lower-cost solutions like television white spaces (TVWS) to deliver affordable broadband to individuals' homes. To ensure the success of Podimetrics, and programs like it across the United States, reliable access to broadband is imperative.



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