

## Sugar: A Revolutionary Diabetes Application

In America, approximately 29 million people have diabetes. With diabetes, chronic foot ulcers can occur that need to be properly cared for to avoid further trauma. To help patient's treat foot ulcers, a smartphone-based application called "Sugar" has been developed to assess the status of the status of a chronic wound on the sole or toes of the patient's foot, and monitor of and goal setting for the patient's weight, glucose level and overall mood. Using the camera feature of a smartphone, patients take a picture of their chronic foot ulcer. Then, "Sugar" provides the patient with a diagnostic of the chronic foot ulcer in format easy for the diabetes patient to understand.



As shown in the picture above, "Sugar" provides a display a based on the patient's personal glucose meter and weight scale to ultimately help them improve their weight management and blood sugar levels. "Sugar" has the ability compare the current state of foot ulcers to previous states to provide an approximate healing status and can be forwarded to physicians. "Sugar" is a revolutionary application that will make life easier for diabetes patients.

### Benefits

- First time diabetes patients and their caregivers can play an "active" role in the care of foot ulcers
- Ability to determine the condition of the foot ulcers and treat before amputation is needed
- Provides patients will personal updates such as recommending exercise based on the condition of their foot ulcers
- Connects patients to physicians without a trip to the physician's office

### Inventors

Peder Pedersen  
Diane Strong  
Emmanuel Agu  
Bengisu Tulu  
Lei Wang  
Qian He

U.S. Patent Application

#14/528397

### Contact

Todd Keiller, Director  
Office of Intellectual Property  
and Innovation  
tkeiller@wpi.edu  
+1 508 831 4970



# WPI