

# SENSIMAT

A NEW HEALTHCARE TECHNOLOGY TO IMPROVE IMPROVING HOW NURSES DEAL WITH PRESSURE ULCERS

PROTOTYPE ASSESSMENT

## PROJECT ESSENTIALS

### Principal Investigator:

Jamie McIntyre/  
Lorraine Betts

**Years Active:** 2012-14

**Campus:** Casa Loma/  
Waterfront

### Support from:

NSERC

### Industry Partners:

SensimAT Systems

## BY MELISSA DI COSTANZO

At Toronto's George Brown College, soon-to-be RNs are using simulated labs to test technology that developers hope will one day improve patients' experiences with the system. Jaslyn Chouhan is a fourth-year student at the school. She and three other nursing students studied Sensimat, a piece of technology that aims to reduce pressure ulcers.

Here's how it works: A mat, which can be discreetly placed underneath (or on top of) a wheelchair cushion, contains six sensors connected to a smart phone app. The sensors indicate the amount of pressure placed on them. Then a patient sits on the mat, the sensors are activated (on the app, six green circles appear). Patients and practitioners can set the timer to 15, 20 or 30 minutes, after which the circles change to red and an alarm sounds, indicating pressure needs to be released immediately. In other words, the patient needs to be moved.

Chouhan and her peers used mannequins to test the product. To replicate the average weight of a human thigh, they placed rice bags on wooden

boards. They used 30 minutes as a guideline to stipulate the maximum amount of time a patient should be in one position.

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Over the summer, the students acted as nurses working in the community or a long-term care facility. Their objective was to ensure the mannequins were moved every 30 minutes.

Their findings? That Sensimat assists health-care providers in reducing pressure ulcers. "If we did

lose track of time, the alarms on our phones reminded us," says Chouhan. The data they collected was sent to the creators of the product, who are now promoting it at conferences with a focus on technology and innovation.

Chouhan says she was thrilled to have the opportunity to see how technology can help community nurses in their everyday practice.

"(I've learned) the importance of...reducing the chances of getting pressure ulcers, because... (they're) costly and painful," she says. "It's so much easier to prevent them than to treat them."