RESEARCH

W21C

UNIVERSITY OF CALGARY

Alberta Health Services

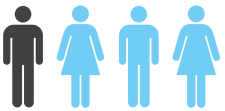
Continuous Pressure Imaging for Safer and Better Care

Using technology to prevent pressure ulcer development

Pressure Ulcers (PUs) or 'bedsores' are a burden on the health care system. W21C worked with XSENSOR to develop the ForeSite PT™ system to improve patient care.

A review of databases in Canada estimated that one in four patients in acute care and one in three patients in long-term care facilities has had a pressure ulcer[1].

1 in 3 patients in acute care



1 in 4 patients in long-term care

Example of Pressure Imaging Technology

The ForeSite PT™ System is a thin sensing overlay that goes between the sheet and mattress on a patient's bed.

The system continuously monitors persistent body pressures and highlights the information on a display, providing crucial information needed for health care providers to strategically shift patients.

Current Research

With funding from Alberta Innovates – Health Solutions, W21C is currently conducting an independent Randomized Controlled Trial of nearly 700 patients to see if access to pressure imaging technology – such as the ForeSite PT™ system – is effective in reducing continuous pressure and the incidence of pressure ulcers in patients.

Funding for this research is provided by:

Alberta Innovates Health Solutions

Pressure ulcers can cause pain, decrease quality of life, and lead to significant complications and prolonged hospital stays.

Past Work

From initial concept to prototype creation and commercialization, W21C conducted focus groups, heuristic evaluations, usability and clinical testing, to provide XSENSOR with meaningful feedback from potential end-users on the different device prototypes.

> "You don't realize how long you stay in one position. I liked to look at the [display], it reminded me to change positions."
>
> Patient

[1] Reference: Woodbury *et al.* 2004. Ostomy/Wound Management

[2] Reference: Hurd *et al.* 2009. Int Wound J.

$1 MILLION

Pressure ulcers and surgical wound infections alone have been estimated to cost individual Canadian hospitals more than $1 million each year[2].

PILOT STUDY 1

The study was conducted between February and May 2010 on nine patients with limited mobility, to determine if access to the pressure imaging technology influenced the rate of patient turns/shifts by nursing staff.

PILOT STUDY 2

The second pilot study was conducted from January to March 2011 with four patients, to see how nurses responded to data provided from the pressure imaging system and its influence on patient care.

Effect of continuous pressure monitoring on strategic shifting of medical inpatients at risk for PUs: ncbi.nlm.nih.gov/pubmed/23413490

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