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Office of Technology Management

DEVICE AND SYSTEM FOR PREVENTING THE DEVELOPMENT OF PRESSURE ULCERS

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Value Proposition: Novel pressure monitoring device that can be used to prevent the development of pressure ulcers.

Technology Description

Researchers at Washington University in St. Louis have developed an external pressure sensing patch and system that can continuously monitor bedside pressure for patients in hospital beds to prevent pressure ulcers. The current method of preventing pressure ulcers is to rotate patients every two hours. This process is time consuming for patients that don't need to be moved and for some patients this timeframe is too long – resulting in pressure ulcers.

This device is a single-use, thin, flexible, waterproof, array of pressure sensors, and is the first pressure sensing system that can be easily and safely placed on a patients' pressure point, and wirelessly alert providers when a patient needs to be rotated.

Stage of Research

Prototype and initial testing

Publications

Walia GS, Wong AL, Lo AY, Mackert GA, Carl HM, Pedreira RA, Bello R, Aquino CS, Padula WV, Sacks JM. Efficacy of Monitoring Devices in Support of Prevention of Pressure Injuries: Systematic Review and Meta-analysis. Adv Skin Wound Care. 2016 Dec;29(12):567-574. doi: 10.1097/01.ASW.0000504579.83707.f6. PMID: 27846030.

Applications

- Prevention of pressure ulcers

Key Advantages

- Provides continuous pressure monitoring
- Flexible, thin, and waterproof
- Novel single-use device

Patents

Patent application filed

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