

Gaspard: The first e-health solution system for the prevention of bedsores

Preventing the risk of gluteal bedsores in wheelchair users

Do you sit for hours in your wheelchair? Do you forget to do your push-ups or reposition as needed? Constant pressure is then exerted on surfaces of your body, which can lead to bedsores. The Gaspard® Wheelchair Activity Monitor (WAM) sensor system, software and smart app are specifically designed to allow wheelchair users, their caretakers and their healthcare providers to track and assess the wheelchair user's seating activity to help prevent gluteal bedsores.

Placed on the seat of your wheelchair, underneath your existing cushion, the Gaspard pressure-mapping cushion is equipped with sensors and is connected to an application that helps you in the daily prevention of bedsores. Adapting to most chairs, it allows you to constantly detect poor positioning and provides customizable alerts and notifications for you and your caregivers or other medical professionals.

Gaspard WAM is the most economical, scientific, and user-friendly wheelchair seat pressure mapping and activity monitoring system available today. Surface pressure mapping is particularly beneficial for analysis of obese, geriatric, diabetic and low-mobility patients, especially quadriplegics and paraplegics, to identify potential for restricted blood flow due to inactivity and/or imbalanced pressure distribution which is

the primary cause of decubitus ulcers (also known as bedsores, pressure ulcers or pressure sores). Bedsores result from prolonged pressure on the skin which damages both the skin and underlying tissue and the primary way to safely prevent this is to change the chair user's seating activity by monitoring and pressure mapping the patient's movement activity to ensure they are not sitting in one position for too long a period of time.

Gaspard Technology: Gaspard WAM is a matrix-based tactile surface sensor. Essentially, it's an "electronic skin" that records and interprets pressure distribution and magnitude between the wheelchair user and their seat and assimilates that data collected into powerful Windows® based software and then transmits that data to the wheelchair user's cellphone app via Bluetooth.

Each Gaspard sensor is carefully assembled to exacting tolerances and individually calibrated and serialized. The Gaspard app then processes and analyzes the wheelchair user's movement activity (relative to preset, customizable goals) and then sends alerts and notifications to the user and their specified healthcare professional or caregiver to facilitate proper movement and activity to help reduce conditions that can create bedsores.



and enjoy up to seven days of battery life.





Movement Counter

Therapists can track the movements made by the wheelchair user, such as counting the number of pushups performed, as well as set movement goals.



Excess Pressure Detection

The Gaspard app identifies abnormal pressure points and improper positioning and sends an alert to the user's smartphone.



Time Tracking

This feature precisely tracks the amount of time spent sitting, provides daily analyses and allows you to see, in real time, the time spent in the chair.



Customizable Alerts

The user can set custom movement alerts that notify you as soon as an anomaly is detected, such as a lack of activity, a bad position or an unmet goal. The alert frequencies are adjustable and customizable, to match your needs.



Notifies Caregiver

Sends information and alerts to a caregiver or other medical professional via text message.



History and Statistics

It records, stores and analyzes positions, movement and time spent sitting then synthesizes your activity data to improve follow-up and care over time. It allows the user to share the information with a third party.

Sensor Specifications	
Technology	Piezoresistive
Pressure Range	568 - 2,133 PSI (40 - 150kg cm ²)
Matrix (front):	3 x 4
Matrix (back):	4 x 6
Sensing Points	36
Sensing Point Size	1 cm ²
Total Area	15.74 in. x 15.74 in. (40 cm x 40 cm)
Active Sensing Area	14.56 in. x 14.56 in. (37 cm x 37 cm)
Scan Speed	10 ms
Temperature	14 - 113°F (-10 - 45 C)
Thickness	5/16 in. (8 mm)
Transmission Range:	32.8' (10 m)
Transmission Mode:	Bluetooth low energy 4.0
User Weight:	88 lbs (40 kg) to 150 kg (330 lbs)
Battery Life:	Up to 7 days per charge