Could this "shocking" technology save 12 billion dollars a year?

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One of the biggest challenges in immobile patients is bedsores. Because patients usually end up laying in a bed or sitting in a wheelchair, a lot of pressure is exerted on the skin and tissue over bony areas of the body like the heel, ankle, hips, or buttocks. That unrelenting pressure can often result in bedsores, a difficult- to- treat condition. About 30 percent of people with spinal cord injuries develop bedsores, which kill about 60,000 Americans per year, according to Barry Goldstein, a spinal-injury expert at the Department of Veterans Affairs in Seattle, quoted in USA Today. [1]

Patients with bedsores have a high chance of developing sepsis, a blood infection that kills nearly half of those who develop it, and the sores develop very quickly.

In an effort to prevent bedsores, Sean Dukelow, University of Calgary in Alberta, Canada, and his colleagues, developed Smart-E-Pants. The pants, more like bicycle shorts, contain an electronic system that essentially shocks the wearer's muscles, causing them to contract. The shocks, which occur for 10 seconds every 10 minutes for 12 hours, simulate the normal muscle movement of a healthy person, which prevents the sores from developing.

When tested on 33 immobile volunteers over a two- month period, none of the participants developed bedsores and 85 percent said the undergarment was comfortable. Dukelow and his team are planning to test the shorts on a larger group of patients to test the effectiveness.

According to New Scientist [2], the shorts could save the US an estimated 12 billion annually.

http://www.ecnmag.com/news/2012/10/could-shocking-technology-save-12-billion-dollars-year?qt-video_of_the_day=0

Links:
[1] http://www.mhpmedical.com/content/Spinal%20cord%20injury%20patients%20often%20succumb%20to%20bed%20sores.pdf]
[2] http://www.newscientist.com/blogs/shortsharpscience/2012/10/bedsores-no-match-for-shocking.html?cmpid=RSS|NSNS|2012-GLOBAL|online-news