

Thermal Imaging Tool to Screen Chronic Wounds



Researchers at RMIT University and Bolton Clarke Research Institute have a new innovation – a thermal imaging tool to screen for chronic wounds.

In Australia, chronic wounds impact nearly half a million, affecting their quality of life and costing the healthcare system up to around \$3 billion annually.

While thermal imaging has been considered for the detection of chronic wounds, the team's methods enables much earlier detection than other approaches. Nurses are now able to use the contactless tool during regular visits to people's homes. This means they can identify hard-to-heal sores during the very first assessment and specialised treatment can begin up four weeks earlier than when it normally would.

The tool provides information on spatial heat distribution in a wound. With 78% accuracy it can predict whether the leg ulcer would heal within a time period without specialised treatment.

Higher temperatures indicate potential inflammation or infection, whilst low temperatures indicate a slower rate of healing, perhaps a result of decreased oxygen around the location.

The research was based on thermal images from 56 clients with venous leg ulcers. The most common approach to identifying wounds has been by taking tracings of the wound size after four weeks.

The non-contact method minimises physical contact, reducing risk of infection. As Senior Research Fellow Dr Rajna Ogrin highlighted, "This method provides a quick, objective, non-invasive way to determine the wound-healing potential of chronic leg wounds that can be used by healthcare providers, irrespective of the setting".

"This means specialised treatments, including advanced wound-cleaning techniques and therapies, can be implemented immediately for problematic leg wounds up to four weeks earlier than the current gold standard".

The method has been proven successful in controlled trials. The next stage will be to adapt it for a clinician so they may have this thermal imaging and assessment capability on their mobiles.

Source: [RMIT University](#)

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