Wound monitor 'sniffs out' infections

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The University of Manchester has received £1m to develop a new device able to 'sniff out' harmful infections. The funding will be used to create a non-invasive wound monitor to treat patients with severe burns, skin ulcers or gaping wounds.

The aim is to produce a device which is able to detect harmful bacteria in the air, which may signal the first signs of infection. When bacteria metabolises inside a wound molecules of that bacteria are emitted into the air.

Current methods rely on medical staff taking swabs from a wound and testing them in a lab, which can take several days.

Professor Krishna Persaud, of The University of Manchester's School of Chemical Engineering and Analytical Science, who will coordinate the European-wide project, said: "Current methods make it difficult to detect infections at an early stage and can be extremely invasive causing the patient a great deal of discomfort".

"Our aim is to produce a non-invasive system that can monitor the state of a patient's wounds simply by detecting bad bacteria in the air emitted from the wound. Using state of the sensors we will be able to detect and diagnose the presence of an infection almost instantaneously."

The device will use new hybrid sensor technology with a mobile laboratory-based multi-technology gas sensor array and pattern recognition system, enabling the rapid analyses of molecules in the air. It

is envisaged that the monitor will be take the form of a mobile unit which sits alongside other monitoring equipment next to the patient.

Key applications for the device will include monitoring trauma injuries, chronic ulcers and in military field hospitals.

Source: University of Manchester