Scientists Developing At-Home Viral Load Monitoring Device

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HIV-positive people may soon be able to monitor their viral load at home by using a finger prick blood-testing gadget, BBC News reports. U.K. researchers have received a $2.67 million grant to develop a hand-held device—similar to those used by diabetics—that would alert users of a heightened viral load and if they need to see a doctor.

Investigator Anna-Maria Goretti, MD, a National Health Service consultant and coinvestigator based at London's Royal Free Hospital, said, "If patients neglect to take their treatments or need prompting to see their [general practitioner], the device will provide a simple way of letting them know." Goretti continued: " It will really empower HIV patients to keep a close eye on their health and their treatments."

The device's sensors, called microcantilever arrays, are covered with a substance that allows them to adhere to HIV and other proteins associated with disease progression. These signs cause the sensors to bend; the resulting curve indicates the severity of the virus in the body, explained Rachel McKendry, MD, from the University College London and the London Center for Nanotechnology.

"This is certainly a very good idea," said Lisa Power of the Terrence Higgins Trust, a British AIDS charity. "If you have diabetes, you can check your blood sugar levels. Similarly, it would be very useful if HIV patients could check their own viral measures, say once a month." Power added, "It would not replace specialist advice, but it would be a way to reduce a patient's dependence on doctors."

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