

A new detector for flu

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Scientists at the University of Washington have developed a fast and easy-to-use point-of-care diagnostic test that could one day help doctors and hospitals head off the rapid spread of the flu.

Existing rapid diagnostic tests can help with diagnoses, but these tests require multiple processing steps that still need to be performed with lab equipment in specialized facilities.

The researchers incorporated multiple steps of influenza detection -- viral lysis, target protein capture, labeling, rinsing and an enzyme-driven color change -- into one device. A user has to swab the inside of a patient's nose, then insert the swab into the device and twirl it for 10 seconds to release the virus. The device takes care of the rest. After about 35 minutes, it produces a visual readout that can be seen with the naked eye or captured with a smartphone camera. The researchers trained staff at a children's hospital to use the device, and they tested it on 25 patients during a flu outbreak. The device detected influenza A, one of the primary causes of moderate to severe flu epidemics, with 70 percent accuracy. The materials and reagents for one of these single-use devices cost less than \$6.