Are coronavirus antigen tests the key to finding a way out of the pandemic crisis?

PCR testing isn't perfect, but it's seen as the most accurate form of testing available for viruses. Unfortunately, it takes time, energy, and trained personnel to run these tests. That makes PCR testing too hard to scale up to the numbers we really need.

"There will never be the ability on a [PCR] test to do 300 million tests a day or to test everybody before they go to work or to school," Deborah Birx, head of the White House Coronavirus Task Force, said on April 17. "But there might be with the antigen test."

What's an antigen test? While PCR tests look for evidence of viral genetic material, and antibody testing detects human antibodies against the virus, antigen tests look for fragments of viral surface proteins as a marker for infection. (An antigen is the part of a pathogen that elicits an immune response.)

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Identifying their presence could mean a diagnosis of infection in just a matter of minutes, without expensive equipment, training, or power. In theory, a reliable antigen test could be pretty easy to scale up and could then be used in the home or at point-of-care locations. It could be the test we need to get America back on its feet again.

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