

Roll-out of 2 new rapid coronavirus tests ahead of winter

- Both tests will be able to detect COVID-19 and other winter viruses in just 90 minutes
- New tests will hugely increase testing capacity ahead of winter, delivering fast results that will help to break chains of transmission quickly

Millions of ground-breaking rapid coronavirus tests will be rolled out to hospitals, care homes and labs across the UK to increase testing capacity ahead of winter. The tests will enable clinicians and NHS Test and Trace to quickly advise on the best course of action to stop the spread of the virus.

Two new tests – both able to detect the virus in just 90 minutes – will be made available to NHS hospitals, care homes and labs. The 2 tests will be able to detect both COVID-19 and other winter viruses such as flu and respiratory syncytial virus (RSV). The tests do not require a trained health professional to operate them, meaning they can be rolled out in more non-clinical settings.

This will help to further strengthen the coronavirus response this winter, arming both clinicians and NHS Test and Trace with the ability to distinguish between COVID-19 cases, which have specific self-isolation requirements, and other winter viruses.

Health Secretary Matt Hancock said:

We're using the most innovative technologies available to tackle coronavirus. Millions of new rapid coronavirus tests will provide on-the-spot results in under 90 minutes, helping us to break chains of transmission quickly.

The fact these tests can detect flu as well as COVID-19 will be hugely beneficial as we head into winter, so patients can follow the right advice to protect themselves and others.

I am hugely grateful for the excellent work done by DnaNudge and Oxford Nanopore to push forward these life-saving innovations in coronavirus testing.

A new test that uses DNA to detect the virus will be rolled out across NHS hospitals from September, with 5,000 DNA machines, supplied by DnaNudge, to provide 5.8 million tests in the coming months.

Separately, 450,000 90-minute LampORE swab tests will also be available across adult care setting and laboratories from next week, supplied by Oxford Nanopore.

DNA testing for coronavirus

5,000 DNA 'Nudgebox' machines, supplied by DnaNudge, will be rolled out across NHS hospitals in the UK to analyse DNA in nose swabs, providing a positive or negative result for COVID-19 in 90 minutes, at the point of care. The machines will process up to 15 tests on the spot each day without the need for a laboratory.

The DNA COVID-19 test machines are currently operating in 8 London hospitals:

- St Mary's Hospital in Paddington
- Charing Cross Hospital
- West Middlesex University Hospital
- Chelsea and Westminster Hospital
- Royal Hospital Chelsea
- Queen Charlotte's and Chelsea Maternity Hospital
- the Renal Transplant Centre at Hammersmith Hospital
- the Tower Hamlets Centre for Mental Health at Mile End Hospital

The machines are located in cancer wards, A&E and maternity wards to protect those most at risk.

The government is signing contracts with more companies to produce machines for DNA coronavirus testing.

Rapid LamPORE tests

The new rapid LamPORE test will be able to process swab and saliva samples to detect the presence of COVID-19 in 60 to 90 minutes.

The new test has the same sensitivity as the widely used PCR swab test, but can be used to process swabs in labs, as well as on-location through 'pop up' labs. The desktop GridION machine can process up to 15,000 tests a day, or the palm-sized MinION can process up to 2,000 tests a day for deployment in a near-community 'pop-up' lab.

450,000 of the new LamPORE tests will be available from next week across adult care settings, NHS laboratories and lighthouse laboratories, with millions more tests to be rolled out later in the year.

Details of positive test results will be shared with NHS Test and Trace, so close contacts can self-isolate in line with guidance.

Regius Professor Chris Toumazou FRS, CEO and co-founder of DnaNudge and founder of the Institute of Biomedical Engineering at Imperial College London, commented:

The DnaNudge team worked with incredible speed and skill during the peak of the pandemic to deliver this highly accurate, rapid COVID-19 test, which requires absolutely no laboratory or pipettes and can be deployed anywhere with a direct sample-to-result in

around just over an hour.

We have been able to successfully adapt our in-store consumer DNA testing technology – which identifies genetic risks for chronic conditions related to obesity and type 2 diabetes – and validate it for detecting COVID-19 with gold-standard accuracy.

We are extremely proud to be playing such a pivotal role in supporting the national effort on testing, as this major contract award signifies. With the ability to test not only for COVID-19 but also FluA, FluB and RSV on the same single COVID-19 Nudge cartridge, our multiplex test offers a vital solution to protect the NHS as we head into the flu season.

Gordon Sanghera, CEO of Oxford Nanopore, said:

We are honoured to be playing a part in fighting COVID-19 in the UK, and preparing the country for the winter virus season. Ever since we founded Oxford Nanopore, our mission has been to create disruptive, high performance technology that has a profound, positive impact on society.

LamPORE has the potential to deliver a highly effective and, crucially, accessible global testing solution, not only for COVID-19 but for a range of other pathogens. We are delighted to be working with the UK government to support and empower our communities to effectively manage testing at a national and localised level.

Background information

About DnaNudge

DnaNudge, based in London, is a retail based, on-the-spot genetic testing service that provides product recommendations suited to your DNA to promote a healthy lifestyle.

DnaNudge's new RNA COVID-19 tests are based on DnaNudge DNA testing innovation delivering processing outside of a laboratory environment, using DnaNudge's patented and miniaturised 'NudgeBox' analyser, which can be used anywhere.

About Oxford Nanopore

Oxford Nanopore, which last year built a factory in Oxfordshire, is a rapidly growing business that is scaling its operations to be able to provide substantial volumes of tests to the UK – critical to support expanded testing at a time when global supply chains are squeezed for traditional tests.

About LamPORE

LamPORE uses a method called RT-LAMP to identify and amplify the SARS-CoV-2 virus in an original sample, and Oxford Nanopore's sequencing technology to precisely identify the amplified virus. It tests for active infection, providing a complementary testing solution to antibody detection, currently only able to indicate a previous infection.

LamPORE includes a control mechanism that detects and invalidates samples where there has been an error in sample collection.