

## Presymptom Health joins government pilot to get AI-driven infection test into the NHS faster, helping tackle Anti-Microbial Resistance

- Presymptom Health is just one of eight companies selected to join the pilot for this new pathway designed to support the rapid development of innovative technologies that can be introduced into the National Health Service (NHS)
- Presymptom Health's technology leverages AI and Machine Learning (ML) to diagnose infections at an earlier stage and with higher accuracy, helping save lives and reduce unnecessary antibiotic use. It is based on over a decade of science from UK defence labs.
- The World Health Organisation (WHO) has declared Anti-Microbial Resistance (AMR) as one of the top 10 global public health threats, and AMR is listed on the UK Government's National Risk Register.



**Presymptom Health, pioneer of a portfolio of AI-driven early diagnostic tests for infection and sepsis, has been selected to join the Innovative Devices Access Pathway (IDAP) pilot - a new pathway designed to ensure that technology is helping UK patients as quickly as possible.**

The ambition of IDAP is to support the rapid development of innovative technologies that can be introduced into the National Health Service (NHS) to address unmet clinical needs for patients and healthcare professionals at the earliest opportunity, without compromising on standards of safety, quality, and effectiveness.

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Presymptom Health will join just seven other companies for The IDAP pilot – a joint project between the Department of Health and Social Care, NHS England, NICE, the MHRA, Health Technology Wales (HTW) and the Scottish Health Technology Group (SHTG). During the pilot they will receive non-financial support from a team of experts that will help them develop their technology, and navigate regulatory and access barriers across product development.

Presymptom's participation in the IDAP program will be focused on its infection diagnostic test, which can be used at an early stage to rule out the presence of infection and enable clinicians to delay or eliminate antibiotic use.

Presymptom's technology was developed by application of machine learning and AI analytics to derive insights from a unique presymptomatic 72,000-sample biobank generated during a novel 10-year UK study. This new test uses a technique called RNA-based host response analysis, which can find infections in your body by looking at how your cells react, even before you start feeling sick – providing an early warning signal of infection, regardless of the specific germ causing it. This transformative host-response approach is different from traditional methods that focus on identifying the specific germ causing the infection. These traditional methods take a long time to give results, aren't always accurate, and are often unable to distinguish pathogens from harmless microbial species. Because of these limitations, doctors may not know if an infection is present and how severe it may become. As a result, they may wrongly prescribe antibiotics – an issue that compounds AMR.

Presymptom Health's technology helps solve this problem by providing early and reliable information about infection status in patients with non-specific symptoms, helping doctors make better treatment decisions. The test can be run on ubiquitous NHS PCR platforms, which were widely deployed during the COVID pandemic and are now often under-utilised.

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**Dr Iain Miller, CEO of Presymptom, said:**

*“We’re confident that our technology can not only save lives, but also help the NHS reduce costs and tackle AMR. The IDAP pilot will provide us with vital support and consultation that will enable us to work with stakeholders to design an optimal adoption path that increases our chances of success and ensures the technology gets into the hands of the NHS sooner. The support we receive will help us accelerate our development, not just in the UK, but eventually in the US and globally too.”*

The science behind Presymptom’s technology is based upon 10-years’ of work conducted at Defence Science and Technology Laboratory (Dstl) and originated from £16 million of sustained Ministry of Defence investment in a program of research designed to help service personnel survive infection from combat injuries. The success of the discovery research program enabled the commercialisation of Presymptom.

The company was created by scientists working at government laboratories, initially researching how to tackle biological threat infection, such as anthrax, plague and ebola, all of which can ultimately cause death from sepsis. Ploughshare – the company that finds new and inspiring uses for government inventions – identified the innovation as having potential societal impact and spun it out from the UK Ministry of Defence.

Since being established in 2019, Presymptom has received seed funding from Ploughshare and the UK Innovation & Science Seed Fund to help accelerate its development.

**Simon Earwicker, Dstl Head of Chemical, Biological, Radiological Sciences, said:**

*“Investment in critical Defence science often has wider applications that benefit the whole population. I’m immensely proud that Dstl’s research originally devised to protect service personnel will also save lives in hospitals throughout the UK and beyond.”*

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## About Presymptom Health

Ploughshare is a pioneering company, owned by the Ministry of Defence, that unlocks the potential of UK government inventions, transforming them into impactful solutions that deliver real prosperity to the economy, our society, people's lives, and our environment. By establishing spin-outs and licensing technology, Ploughshare ensures that UK government's scientific breakthroughs can move from the laboratories and the frontlines, to benefit the wider world.

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## About Dstl – The science inside UK defence and security

The Defence Science and Technology Laboratory (Dstl) delivers high-impact science and technology (S&T) for the UK's defence, security and prosperity. Dstl is an Executive Agency of the MOD with around 5000 staff working across three sites; Porton Down, near Salisbury, Portsmouth West, near Portsmouth, and Alverstoke, near Gosport.

### What we do:

- Research – original research and concepts, creating new capabilities for defence and security
- Requirements and Evaluation – Dstl S&T support to assess, evaluate and deliver current, next and generation after next capabilities
- Specialist Advice & Services – our knowledge and facilities are ready to meet priority needs
- Operational Support – rapid and deployed S&T to meet the urgency of operations
- Dstl gives the UK clear advantage across science, technology, cyber and information.

For more information contact the Dstl press office on 01980 950000 option 2.

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## About UKI2S

UKI2S is an early-stage investment fund that nurtures innovative businesses from great UK science to leverage private investment and grow jobs. The fund is backed by the Ministry of Defence and other public bodies.

UKI2S is independently managed by Future Planet Capital, an impact-led global venture capital firm built to invest in high growth potential companies from the world's top innovation ecosystems.

For further information and how to approach for investment funding visit:

[www.ukinnovationscienceseedfund.co.uk](http://www.ukinnovationscienceseedfund.co.uk)

