

## A NEW DIAGNOSTIC TEST FOR ACUTE EXACERBATION OF COPD

### MOLOGIC



MOLOGIC LTD, has developed a urine-based test system 'HeadStart' which enables chronic obstructive pulmonary disease (COPD) patients to monitor their disease status at home for early indications of exacerbation. It will test the levels of key biomarkers in the urine, interpret them and identify imminent acute exacerbation and cause in 10 minutes.

Currently, individuals with COPD need to monitor their health at home and either access emergency services or call their GP when symptoms get worse. Exacerbation symptoms are often unclear and patients' ability to recognize these is highly variable. When exacerbations occur, many patients go directly to A&E while others notice changed symptoms for some days before taking action, increasing the likelihood of an eventual A&E visit. Early identification of exacerbations will enable clinicians to begin effective treatment in the community which may help reduce the number of A&E visits.

In collaboration with the NIHR Diagnostic Evidence Co-operative (DEC) Newcastle, MOLOGIC LTD was awarded a £100k Small Business Research Initiative (SBRI) contract to further develop the HeadStart test and to prepare an application for a Phase 2 contract to provide robust evidence on clinical utility and cost-effectiveness of the test.

The NIHR DEC Newcastle is leading on the care pathway modelling work. The pathway descriptions will be developed through interviews with clinical experts. Whilst it is known that there is variability in practice throughout the UK, this study will focus on understanding the management of COPD within the Newcastle and North East area.

The Phase 1 study will also seek to capture the patient perspective through discussion with the patients facilitated by the British Lung Foundation and the AHSN NENC.

The care pathway analysis will consider the impact of incorporating the new test into the pathway, especially in relation to management actions. Interviews with some of the main stakeholders, including GPs, will help to determine alternative management solutions to incorporate the new test into the pathway effectively.

Ultimately, it is the intention to use the HeadStart test to empower COPD patients to gain better understanding and control of their disease, thereby reducing the demand for urgent clinical care and the need for attendance at A&E.

'We are delighted to be working with the NIHR Diagnostic Evidence Co-operative (DEC) Newcastle on this exciting project. The benefits of this relationship have already become clear, right from the start of our collaboration when we wrote the proposal as a joint exercise and, later, when we jointly presented our case to the SBRI 'Dragons Den' selection panel. Whilst Mologic brings the background science and product development skills to the project, our AHSN NENC/DEC partners bring a great depth of knowledge and realistic insights in health economics, care pathways and patient attitudes and concerns. We recognise that it might be possible to get all of the science and technology right, while missing the point from the patient or healthcare provider aspects. That's why it's so helpful and reassuring to be partnering with AHSN NENC/DEC. On top of the hard facts of deriving maximum value and clinical relevance from the project, we find the team to be so bright, friendly and enthusiastic that it's a real pleasure to be working with them. This partnership has all the makings of a real winning team.'

**Paul Davis, Chief Scientific Officer and Co-Founder, MOLOGIC**