



**INNOVATION AGENCY**  
Academic Health Science Network  
for the North West Coast



# PROACTIVE MANAGEMENT OF ASTHMA *in primary care*



Shauna Johnstone  
measuring FeNO levels to check  
lung inflammation

Case study | May 2022

# Proactive management of asthma in primary care

The number of asthma patients identified as high risk in an area of Merseyside was more than halved after a collaboration using the UCLPartners Proactive Care asthma framework.

It involved the creation of a high-risk asthma clinic with a specialist asthma nurse funded by the Innovation Agency; risk stratification of patients; and the use of FeNO testing devices.

## The challenge

Knowsley is the second most deprived borough in the country, with high levels of unemployment and health inequalities, while deaths from respiratory disease are 42 per cent higher than the national average.

Health data shows below average prevalence of asthma, yet above average mortality. There is also evidence of above average use of SABA inhalers which can mask the progression of the disease and increase hyper-responsiveness in the airways, leading to greater sensitivity to triggers. Conversely, there was under prescription of inhaled corticosteroid (ICS) inhalers, the bedrock of good asthma management.

## Actions taken

When the Innovation Agency presented UCLPartners' Proactive Care frameworks to local primary care systems in summer 2020, work had already begun in Knowsley to develop a high-risk asthma clinic via the Knowsley Integrated Asthma Service.

This model became untenable due to COVID-19 restrictions on spirometry and other aerosol generating procedures. The Innovation Agency worked with Dr Hassan Burhan, Asthma Lead for Liverpool University Hospitals Foundation Trust and the Knowsley team, who modified the UCLPartners' searches to make them more relevant to the local population.

These searches were first run across Primary Care Knowsley, comprising 11 practices across three primary care networks, covering 52,000 patients – a third of the population of Knowsley. Working across one GP federation with its shared systems was an important enabler.

Clinics were adapted to include virtual and face to face consultations, with a stratification process and incorporating FeNO testing to detect how well asthma was being managed.

This approach enabled the practices to cleanse the asthma registers and adjust medications as appropriate, also focussing on high-risk patients. The goal was to move high risk patients to lower groups to ensure they were stable and optimally managed.

## Impacts

Within ten months there was a reduction of nearly 60 per cent in high-risk groups; medium risk has increased by just over 10 per cent and lower risk groups have increased by around 15 per cent.

The number of patients on three or fewer SABA inhalers has almost doubled, from 63 to 117.

GP surgeries from all Knowsley Primary Care Networks have committed to use this model and are supporting a physician associate programme in partnership with Liverpool Heart and Chest Hospital NHS Foundation Trust, with trained physician associates leading the stratification process and running the clinics, supported by admin teams, health care assistants, nurses and clinical pharmacists.

## Testimonials

**"The patients really appreciated the time spent with them, we were able to get lots of information and carry out a FeNO test to measure the severity of their asthma. It felt as though we were really making a difference with people who were living with a condition that can be debilitating."**

**Shauna Johnston**  
Asthma Specialist Nurse

**"We are committed to reducing the risk of asthma attacks and thereby deaths through ongoing collaboration and risk stratification."**

**Dr Hassan Burhan**  
Respiratory Consultant and Liverpool Asthma Programme Clinical Lead

The work was shortlisted for two HSJ Patient Safety Awards 2021 and the main HSJ Awards 2021.

## Next steps

The UCLPartners Proactive Care @Home framework is being adopted in other parts of the North West Coast with the help of the Innovation Agency, to support the management of a range of long term conditions.

## For further information

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