

Project Review Report

The Innovation for Healthcare Inequalities programme Wave 2 Project

Mid and South Essex ICS

Improving FeNO testing adoption in CYP asthma diagnosis and management

BYLINE / AUTHOR



Contents

This project enabled the introduction of fractional exhaled nitric oxide (FeNO) testing to objectively confirm asthma diagnosis in children and young people presenting in primary care from core 20 plus 5 populations practices in highest need across Mid and South Essex. Clinicians were supported with a community of practice to enable holistic adoption of the new technology to ensure consistent roll out. The results showed that of the 213 children tested, 51 did not have asthma and 48 received a clear diagnosis – supporting prescribing and patient care practice of clinicians. Clinical coding of patients was also improved and a technical issue with the machines highlighted to the industry partner leading to a change in their practice. Overall the pilot was successful and will have a longer term benefit for patients in Mid and South Essex moving forward.

Background to InHIP Wave 1 and Wave 2 programmes

The Innovation for Healthcare Inequalities programme (InHIP) was a national collaboration between the [Accelerated Access Collaborative \(AAC\)](#), the [National Healthcare Inequalities Improvement Programme](#) and the [Health Innovation Network](#) delivered in partnership with Integrated Care Systems (ICS). The aim was to enable systems to generate evidence, and pilot new approaches to accelerate access to NICE approved innovations.

The focus for the programme was the five clinical areas of maternity, mental health, respiratory, early cancer diagnosis and cardiovascular disease contained within the [Core20PLUS5](#) approach to reducing healthcare inequalities. Health inequalities are differences in health across the population that are systematic, unfair and avoidable. They are caused by the conditions in which we are born, live, work and grow. Reducing health inequalities is key to our strategy and underpins Health Innovation East's purpose – helping the best innovations in health and care reach the people, places and problems where they bring most benefit.

To deliver InHIP Health Innovation East (HIE) worked with system partners and key stakeholders across the East of England in two distinct phases: October 2023 to March 2024, Wave 1, and April 2024 to March 2026, Wave 2. The Wave 2 projects covered three clinical areas including *cancer screening* (breast, bowel and cervical), *cardio-vascular disease* (heart failure with preserved ejection fraction and blood pressure optimisation with atrial fibrillation detection) and *respiratory disease* (interstitial lung disease and diagnosis and treatment of asthma).

The specific innovations, technologies and medicines supported across the second wave included:

- [KardiaMobile](#) for detecting atrial fibrillation in Hertfordshire and West Essex and Cambridge and Peterborough.
- [FIT Testing](#) for detecting bowel cancer in Norfolk and Waveney.
- [FeNO](#) for the diagnosis and management of asthma in Mid and South Essex and Suffolk and North Essex.
- [Dapagliflozin](#) to support heart failure with preserved ejection fraction in Milton Keynes.
- [Nintedanib](#) for treating progressive fibrosing ILD across the East of England.

By the 31 December 2025, the Wave 2 programme in the East of England had directly supported 2,707 people in underserved populations to enter health and care pathways with 981 directly starting treatments and / or accessing a NICE recommended innovation as a result. We have used the learnings from the Wave 1 to further adapt and scale our approach for Wave 1. We increased the number of projects from four to seven across a wider range of clinical and geographical areas while reducing the total investment but retaining the same level of impact. This is based on our approach of building on local assets and partnerships, and through scaling activities we understand to be effective. Six projects are now complete with one project to be finalised by summer 2026.

Our approach to evaluation has also developed over the programme. The four initial projects included formal impact evaluations, available from the ICS project teams with the Health Innovation Network publishing a national [Impact Report](#) in December 2024. Wave 2 has taken a proportionate approach to reviewing project learnings, outcomes and impact, scaled to reflect the budget distributed and partner capacity. Each Project Review Report is drafted with delivery partners to focus on real world examples of how targeted interventions and innovations are improving healthcare access, experience and outcomes for communities facing the greatest health inequalities.

Commented [MF1]: SH I have just refreshed this based on the latest approved version - just in case you wonder where it came from.

Commented [DE2]: This is a great intro/overview of the programme!

This project was delivered under wave 2 of the Innovation for Healthcare Inequalities Program (InHIP), a national collaboration to supporting ICSs to accelerate access to NICE approved innovations. A partnership between Health Innovation East and Mid and South Essex ICB was developed to enable the funding of 16 FeNO machines into practices in areas of deprivation. NICE recommended, under Diagnostic Guidance DG12 2014, that those aged 5 to 16 should be offered fractional exhaled nitric oxide (FeNO) testing if there is diagnostic uncertainty after an initial assessment and they have either normal spirometry or obstructive spirometry with a negative bronchodilator reversibility test¹. The NICE guidelines were updated in November 2024 (NG245) with a recommendation for a stepwise objective testing approach young people 5–16 years, with the initial test being FeNO. The QOF for 2025/26 was updated to encourage use of objective tests to confirm Asthma diagnosis. The QOF supports the NICE and British Thoracic Society (BTS) guidance of utilising FeNO for those aged 5 to 16. In light of the new asthma NICE guidelines, MSE needs to consider how they can provide access to objective testing.

In 2022/23 there were over 1,300 asthma admissions among children and young people from mid and south Essex, of which ~190 admissions were from practices in the 20% most deprived communities nationally (IMD). There were over 7,137 children and young people that were prescribed salbutamol without an asthma diagnosis over the last 6 months of which 799 were from our most deprived areas. The project therefore focused the delivery of the FeNO machine to practices in areas of highest deprivation, asthma related hospital admissions or under diagnosis of asthma.

FeNO Testing was selected as the preferred NICE intervention for the Health Inequalities investment funding as it is:

- Evidence-Based: Supported by NICE guidance (NG80) as part of the asthma diagnostic pathway.
- Child-Friendly and Scalable: Portable, non-invasive, and suitable for primary care, community clinics, and schools.
- Cost-Effective: Potential long-term savings by improving prescribing, reducing A&E attendances, and minimising steroid overuse.

The project aims to deliver on the following strategic aims:

- Reduce health inequalities by targeting early intervention in deprived and high-risk populations.
- Improve diagnostic accuracy to avoid over/under asthma treatment
- Enable personalised care asthma management plans
- Optimise resource use by reducing avoidable hospital admissions and unplanned care.

Delivery and key findings

The project was a true partnership between HIE and the ICB team, with each organisation bringing its strengths to enable the project to be delivered in a timely way. HIE took lead responsibility for convening the project team and ensuring there was sufficient project management support, enabling oversight and review of the project in timely ways. This included supporting the convening of a community of practice and enabling data collection to show impact. HIE were also able to bring the connection to both the InHIP programme and the supplier, Intermedical UK Ltd. The ICB brought the local knowledge and the ability to deliver a public health management approach. They enabled the practices to be able to engage with the pilot, receive a FeNO machine and administrated liaison with the practices around communities of practice and data collection. The ICB were able to liaise effectively with primary care through their alliance structure, in order to ensure the right practices were approached and engaged with.

Practices were approached after a public health management assessment was undertaken of the data looking at prevalence, hospital admissions, prescribing risk factors and annual review completion. This approach identified where the need is greatest relative to both deprivation, potential under diagnosis and asthma-related hospital admissions, to ensure we were targeting the practices of greatest need. Once initial practices had been approached and responded, the ICB then approached those not within the original highest 16 to ensure that all the machines purchased were distributed for patient benefit.

¹ <https://www.nice.org.uk/guidance/dg12>

Training was given to clinicians by the supplier both in cohorts and on an individual practice level as needed.

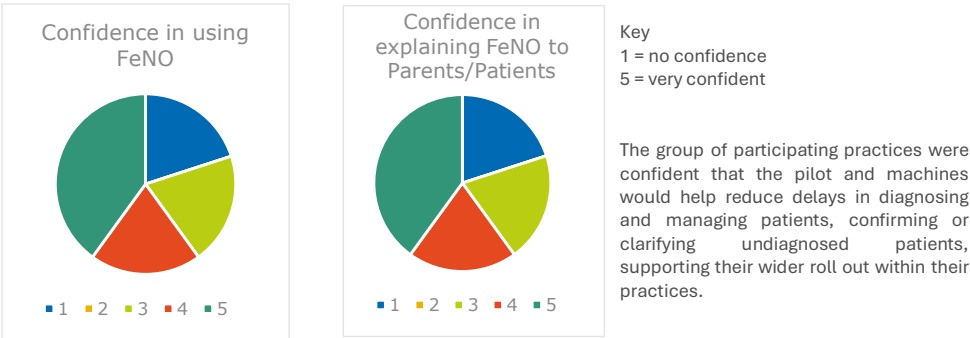
A clinical champion from amongst the participating practices was recruited to lead a community of practice that supported the practices with the adoption of the FeNO machine into routine clinical appointments. At the start of this pilot an initial survey was conducted which identified the biggest challenges to diagnosing CYP asthma in practice as

- Lack of effective testing approaches
- Long delays with spirometry
- Challenge of the age group
- Compliance with attendance at testing
- Practically not skilled in undertaking FeNO
- Maintenance therapy often given after suspected diagnosis, however objective test has not been done.

Clinicians were concerned that the following factors may impact the embedding of the new FeNO machines into their practices:

- Learning how to use the new machine in the practice
- Access to the machine (2 site practice)
- Culture in the practice around diagnosis and testing
- Enabling others to be sufficiently trained
- Teaching practice with many rotational GP's so hard to ensure all staff are aware of the tool.
- Challenging assumed diagnosis which were not made with objective tests previously or when a child was very young and unable to be appropriately tested often meets parental anxiety around challenging assumed diagnosis and reservation in reviewing treatment.

However, despite those fears their confidence levels with the actual machines were as follows:



To support the roll out of the FeNo Machines a community of practice was established, it was administrated by the ICB and facilitated by the Clinical Lead and Clinical Champion with support from the machine supplier and the HIE Senior Advisor. The purpose of these facilitated spaces was to enable clinicians to be supported as they utilised this new tool in practice, how to enable the whole practice with this new approach to diagnosis and management as well as data collection.

Attendance at the communities of practice (CoP) was consistent, ensuring 12-14 practices were represented and engaged in the development opportunity. Discussions focused on supporting wider practice staff to utilise the new technology, understanding technical challenges with the machines, we were able to use the CoP to discuss good battery care with wider colleagues to support usage. Sharing of guidelines from Asthma and Lung UK or NICE were

another positive benefit of the CoP, enabling many clinicians to have the tools at their fingertips to support their care of patients.

The Clinical Champion was well versed in both asthma and the collection of data, this strengthened the support offered to the practices around data collection. We were able to inform practices of how to utilise the recoding template for FeNo on clinical systems, which supported ensuring information was captured well in patient records. We were also able to work with the local business intelligence provider to ensure that we were capturing the right data to understand the usage of these machines, which eased the burden on practices.

Impact and benefits

As the pilot concludes, the question must be asked about what return there was on the investment. In many ways FeNO is a simple yet exceptionally helpful device that improves the diagnostic clarity for patients with suspected asthma. Given the well recognised under and over diagnosis of asthma and associated poor prescribing practice, having an easily accessible diagnostic tool holds obvious benefit for both clinicians and patients alike. The project’s primary aim was to increase access to FeNO testing for Children and Young People in areas of greatest deprivation.

Number	Baseline	Patient Type	Oct to Dec 2025 Totals	Jan to March 2026 Totals	Pilot total
1	Number of FeNO tests performed (by practice, adult/ CYP)	CYP	28	104	132
2		Adult	53	183	236
3	Number of patients who have received an asthma diagnosis as a result of the activity (by practice, adult/ CYP)	CYP	15	33	48
4		Adult	15	32	47
5	Number of patients who have had a FeNO test in a monitoring capacity (by practice adult/ CYP)	CYP	10	23	33
6		Adult	23	69	92
7	Number of staff who attend PRACTICE or ICB organised training for FeNO and the Community of Practice		48	55	103

The data shows that during the pilot phase there were 368 test performed in total, just over a third (36% or 132 of 368 tests) were performed on children and young people. Of those children, 33 were for monitoring and 48 led to diagnosis, leaving 51 children who had clarity that they did not have asthma. This is particularly important for children where undiagnosed or poorly managed asthma can be life threatening.

Having more machines available in primary care meant that there were more tests amongst adults who were exhibiting signs of respiratory distress. Whilst adults were not the primary focus of this project, data shows they received a greater proportion of the tests (64% or 236 of 368 tests). Of those, 47 patients received an asthma diagnosis, and 92 tests were used in supporting their ongoing monitoring rather than new diagnosis. This benefits patients by giving them clarity around their respiratory condition, reducing anxiety and delays in receiving treatment.

Clinical coding is an important feature of good patient care. During the community of practice we undertook to support practices to see how they could accurately record patient activity in order to improve monitoring and documentation of patients conditions. This was done by demonstrating system functionality and developing a

guidance document to support clinicians embed this approach in their practice. This not only improved accuracy of the patient record, but also improved knowledge of population health for strategic decision makers.

Reflection and learnings

Overall the project was very successful, supporting practices through a community of practice alongside the pilot provided wrap around support to enable best practice. The community of practice gave clinicians a safe space to ask questions around clinical practice, or the technology and receive support from colleagues and industry alike. There was commitment from the group to continue to meet, all be it less frequently as part of the wider knowledge mobilisation project to enable ongoing learning and development around clinical practice. For clinicians communities of practice can be (when facilitated thoughtfully) effective spaces to share and learn in order to continue to develop or refresh clinical skills.

During the pilot period, it emerged there were some technical difficulties with machines that had not been plugged in on receipt. The community of practice gave the opportunity for all participating practices to engage with learning about the mechanical care the devices needed and for us to feedback to the company the importance of making this explicit when shipping the machines. The learning from discovering this challenge was discussed with our industry partner to enable future purchasers were made aware of the charging needs of the device and passed onto a neighbouring system that were also seeking to role out FeNO devices. As a result, Intermedical have made it clear on machines that they need to be plugged in.

If the project were to run again, it would be good to seek to shorten the time lag between approval (early July) and purchase of machines (late September). This would have enabled earlier deployment which would have increased the amount of data collected and the impact achieved. However for a project that had a standing start, it completed in a timely way.

Conclusion

In conclusion, this project achieved its aims by increasing access to FeNO testing in areas of highest need. This in turn improved diagnostic accuracy and treatment plans to support children with respiratory symptoms. Holistically supporting practices to develop their practice can lead to meaningful change for clinicians. Collaboration between the NHS, Industry and Health Innovation Networks can lead to impactful outcomes for patients. In terms of longer sustainability, there is a follow-on asthma project being undertaken in the system to increase an understanding of children and young people with asthma. These practices will all form part of the early stages of that project, and it is hoped that the community of practice developed for this project will be able to continue, all be it on a quarterly basis once the new project is established.