

Fractional exhaled Nitric Oxide (FeNO) – Models of Care

#3: Wallsend Respiratory Hub (NENC AHSN)

Organisations in England and Northern Ireland who have used, planned to use or commissioned FeNO for Asthma diagnosis and management have shared their real world experiences. A number of example care models and pathways were shared and one of them is described here.

Population	50,000 patients (6 practices in Wallsend locality)										
Staffing	GP, clinical pharmacist, experienced nurse with ARTP training and a nurse in training.										
Frequency	1 day per week.										
Setting	Suite of rooms in GP practice seeing patients from 6 practices.										
Service	Adult asthma and COPD diagnosis and inhaler review.										
Established	October 2018 – February 2020										
Investigations	Nurse review: respiratory history, ARTP level diagnostic spirometry and FeNO.										
Management	Pharmacist review: <ul style="list-style-type: none"> Inhaler choice, asthma medication, counselling on inhaler technique of their preferred device. Pharmacy next to the site so patient could collect prescription and be shown how to use it. Medication review with FeNO testing for patients on high dose ICS to assess symptom control, inhaler technique, adherence, exacerbation history and potential for dose reduction. Also those with significant SABS use and no ICS or 12+ SABA 										
Oversight	GP support as needed with ad hoc specialist support from a respiratory consultant at the local hospital.										
Follow-up	4-6 weeks (often changed inhalers at this point) including repeat FeNO with some.										
Funding	<ul style="list-style-type: none"> A NAPP Pharmaceuticals education grant funded a FeNO machine (Circassia) to run 500 tests to be used from October 2018 over a 1-year period Personal medical services (PMS) monies of £30k for 2 years via the Wallsend locality of North Tyneside CCG The North of England Commissioning Support Unit (NECS) provided the pharmacy time 										
Driver for change	<ul style="list-style-type: none"> Preventable asthma death that went to case review NAPP funded 40 days of pharmacist time for case note review of all diagnosed asthma patients in the locality. 1,000 people identified with poor inhaler technique. (October 2018) Most practices had 300+ patients on Seretide or equivalent high dose ICS/LABA combinations The project was driven by a GP champion 										
Outcomes	<ul style="list-style-type: none"> Increased compliance and understanding of need to take ICS every day from patients when high FeNO tests obtained Poor inhaler technique or unsuitable inhaler improved by use of incheck device, watching videos with patients around inhaler technique to choose if they have arthritis, false teeth etc Have 18 months of data that could be analysed if funding allowed. Data that we do have for the practices re the cohorts looked at for FeNO, those with >12 SABAs and those with regular SABA and no ICS <table border="1" data-bbox="295 1556 1114 1724"> <thead> <tr> <th></th> <th>2018</th> <th>2021</th> </tr> </thead> <tbody> <tr> <td>12+ saba</td> <td>610</td> <td>263</td> </tr> <tr> <td>reg SABA no ICS</td> <td>115</td> <td>59</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Significant portion of patients who had been on high dose steroid inhalers for years with no symptoms but were reluctant to change were successfully changed to lower dose. Achieved using FeNO, which reassured staff and patients when it remained low after 8 weeks (only one patient had increased FeNO) and they continued to have no symptoms Had planned to do repeat tests on all patients seen in the first year to assess whether the benefit had been maintained. But not able to so far due to Covid 			2018	2021	12+ saba	610	263	reg SABA no ICS	115	59
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