

CPD Exemplar Cycle: Primary Care/Practice Pharmacist

Cycle name: FeNO training

Scheduled

This learning activity is within my current scope of practice ✓

This learning activity is relevant to the safe and effective practice of pharmacy ✓

All criteria are essential and must be completed successfully for the cycle to meet the required standard.

Reflection

1. I identified the following specific learning need(s)... (500 word maximum)

FeNO testing is carried out in some practices as part of asthma clinics. I would like to start using FeNO testing in my asthma clinics to help confirm diagnosis. In order to do this, I need to learn more about FeNO testing.

Specifically, I need to learn:

- What is FeNO?
- When should I use FeNO?
- What are the contraindications for FeNO? The advice/special instructions to be given to patients?
- How to carry out a FeNO test?

2. I wanted to learn about this because (give context for learning activity / activities)... (500 word maximum)

I am a general practice pharmacist working in primary care. I am involved in asthma and COPD clinics in my practice. My practice has recently purchased a FeNO machine for use during clinics. I would like to know more about FeNO, how to use it and which patients are suitable to use it on, in order to become competent and confident in asthma diagnosis using FeNO.

Planning

3. I plan/planned to complete the following learning activity/activities to meet the identified learning need(s). (Please describe the learning activity/activities and the planned completion date(s)).

I plan to attend the FeNO training arranged by the supplier of the FeNO device, NIOX on 1st May 2024 in XXXX Medical Practice. I plan to read and make notes on FeNO to enhance my knowledge including:

NICE Diagnostic Guidance [DG12] (2014) Measuring fractional exhaled nitric oxide concentration in asthma: NIOX MINO, NIOX VERO and NObreath available from: www.nice.org.uk/guidance/dg12/resources/measuring-fractional-exhaled-nitric-oxide-concentration-in-asthma-niox-mino-niox-vero-and-nobreath-pdf-1053626430661. NHS England Fractional Exhaled Nitric Oxide (FeNO) - available from <https://www.england.nhs.uk/aac/what-we-do/innovation-for-healthcare-inequalities-programme/rapid-uptake-products/fractional-exhaled-nitric-oxide/>

Primary Care Respiratory Society Clinical pathways, guidelines and guidance for FeNO - <https://www.pcrs-uk.org/resource/current/clinical-pathways-guidelines-and-guidance-feno> NHS South West Cardiovascular, Respiratory and diabetes clinical Network guidance on Fractional Exhaled Nitric Oxide (FeNO) Guidance for Primary Care available from: [https://www.pcrs-uk.org/sites/default/files/resource/FeNO%20guidance SW Resp ClinNetw%27k%20FINAL April22.pdf](https://www.pcrs-uk.org/sites/default/files/resource/FeNO%20guidance%20SW%20Resp%20ClinNetw%27k%20FINAL%20April22.pdf) Primary Care Respiratory update, Getting the basics right, Fractional Exhaled Nitric Oxide testing available from: <https://www.pcrs-uk.org/sites/default/files/FENOTesting.pdf> The role of exhaled nitric oxide (FeNO) in the evaluation of lung parenchymal involvement in COVID-19 patients available from: <https://pubmed.ncbi.nlm.nih.gov/35809151/#:~:text=FeNO%20assessment%20is%20a%20practical,computed%20tomography%3B%20Exhaled%20nitric%20oxide.>

I plan to complete all of these activities before 20/5/2024.

Action

4. In meeting the identified learning need(s), I completed the following learning activity/activities

Activity: I attended FeNO training arranged by NIOX in XXXXX Medical Practice

Hours: 2

Start date: 01/05/2024

End date: 01/05/2024

Evidence type: Certificate

Evidence: Course/Workshop

Evidence upload (optional): Certificate of completion uploaded and notes made from the training saved in my CPD folder.

Activity: Reading and making notes on FeNO including guidance from NHS England, Primary Care Respiratory Society, paper on the role of exhaled nitric oxide (FeNO) in the evaluation of lung parenchymal involvement in COVID-19 patients; NICE Diagnostic guidance DG12.

Hours: 2

Start date: 01/05/2024

End date: 20/05/2024

Evidence type: Notes/Handouts

Evidence: Self Study

Evidence upload (optional): Copy of notes made uploaded as evidence and also stored in my CPD folder.

Summary of what has been learned in relation to the identified learning need(s) (500 word maximum)

I learnt that FeNO (fractional exhaled nitric oxide) is a test that measures the levels of nitric oxide (NO) in exhaled breath. A high level of NO on exhalation can be a sign of inflamed airways and could be a sign of asthma. A FeNO test is suitable for adults and most children over five.

FeNO can be used to help diagnose asthma. It is not usually used in routine appointments to monitor asthma. NICE recommends that all adults 17 years and over should be offered FeNO if a diagnosis of asthma is being considered and to children 5-16 years if there is diagnostic uncertainty after initial assessment and either normal spirometry or obstructive spirometry without reversibility. Contraindications for FeNO include: haemoptysis; unstable heart conditions; aneurysm; recent eye surgery; recent thoracic or abdominal surgery. FeNO is not recommended if there has been recent respiratory infection, as the result may be unreliable (if infection within the past 4 weeks leading to false-positive results). FeNO may not be reliable for children <5 years due to difficulty in performing the test correctly. Severe airflow obstruction, e.g. in advanced COPD, may impair ability to perform the test correctly. Before carrying out a FeNO test, ensure the patient had not smoked or had a hot drink 1 hr before the test as smoking, hot drinks, caffeine and alcohol can all affect the test result. Avoid leafy green vegetables 3 hours before the test because they are rich in nitrates.

A FeNO test is done by breathing into a mouthpiece attached to a hand-held monitor. The reading shows up on the monitor screen. Ask the patient to breathe in deeply, with their mouth open before breathing out slowly and steadily into the mouthpiece, until their lungs are empty. The patient may need to do the test a few times to get an accurate result.

Evaluation

5. Having met the specific learning need(s) identified, my practice has changed or will change as follows: (500 word maximum)

I have met my learning needs. I have had a patient in for an asthma review who had a normal spirometry test and was complaining of symptoms that sounded like he/she may have asthma.¹ I arranged for him/her to come into the surgery on a day when I had access to the FeNO device. I was able to talk the patient through the process on how FeNO is performed and how this will help to confirm his/her asthma diagnosis i.e. a high level of NO on exhalation could be a sign of inflamed airways and could be a sign of

¹ He/she and him/her has been used to help anonymise sex throughout this document.

asthma. In advance of the appointment, I advised him/her to ensure he/she did not smoke or have a hot drink 1 hr before the test as smoking, hot drinks, caffeine and alcohol can all affect the test result.

6. I confirm that the identified learning need(s) has/have been fully addressed in this CPD cycle:

Your selection of “direct” or “simulated/future” evaluation (tick boxes below) must reflect the application of your learning described in (5) above.

This CPD cycle has been directly evaluated within my current practice and environment (minimum of 75% of cycles submitted) ✓

Community

Pharmacy Prescriber

Primary Care / Practice ✓

Training

Hospital

Industry

Academia

Other

I have recently returned to practice (within the last 12 months): NO

I have changed my scope of practice within the last 12 months: NO