Adoption support resource – insights from the NHS

Implementation support

Published: 22 February 2018

Last updated: 23 August 2021

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Contents

1   Introduction

This resource has been developed to provide practical information and advice on implementing the recommendations on diagnosis, in the NICE guideline on asthma: diagnosis, monitoring and chronic asthma management published in 2017. NICE suggested taking a phased approach to putting this guideline into practice.

Phased implementation for asthma diagnosis

NICE recommends objective testing with spirometry and FeNO for most people with suspected asthma. This is a significant enhancement to current practice, which will take the NHS some time to implement, with additional infrastructure and training needed in primary care. New models of care, being developed locally, could offer the opportunity to implement these recommendations. This may involve establishing diagnostic hubs to make testing efficient and affordable. They will be able to draw on the positive experience of NICE's primary care pilot sites, which trialled the use of FeNO.

The investment and training required to implement the new guidance will take time. In the meantime, primary care services should implement what they can of the new guidelines, using currently available approaches to diagnosis until the infrastructure for objective testing is in place.

(Statement taken from the guideline's section on putting this guideline into practice.)

Update August 2021

NICE has worked with the Accelerated Access Collaborative (AAC), on rolling out FeNO testing to help improve the diagnosis of asthma. A toolkit has been developed to help implement FeNO testing locally and is available on the Wessex AHSN website. This provides downloadable tools and resources to support NHS organisations with the adoption and implementation of FeNO testing to improve the outcome for people with suspected and confirmed asthma.

NICE's adoption team worked with:

- general practice staff with experience of implementing the guideline's diagnostic algorithms as part of a feasibility project (appendix Q, page 835) during guideline development

- commissioners and service managers with responsibility for primary care respiratory services also contributed to this resource.

Contributors are listed in the acknowledgements section.

The benefits of implementing the diagnosis recommendations in the guideline, reported by the sites taking part in the feasibility project, include:

- getting asthma diagnosis right first time by using a more structured and consistent approach

- increasing healthcare professionals' confidence in diagnosis

- improving patient experience by reducing the number of appointments for an accurate diagnosis

- reducing inappropriate prescribing of inhalers

- reducing the loss of patients to follow up.

2   Understand the guideline

To implement the guideline it will be important to be familiar with the NICE guideline on asthma. The guideline is available in a number of formats:

- Short version: all of the recommendations, including diagnostic algorithms that provide a detailed visual representation of the recommendations.

- Full version: the evidence underpinning the recommendations, which is useful to understand the rationale behind the recommendations.

- NICE Pathway: an interactive visual representation of the recommendations and how they link with other related NICE guidance.

NICE has also published a number of resources to help support implementation of the guideline. These can be used in conjunction with this adoption resource and include:

- A resource impact report and template, which help with assessing the resource impact at a local level in England, Wales or Northern Ireland.

- A baseline assessment tool for evaluating if practice is in line with the recommendations in the guideline. It can also help to plan activity to put the recommendations into practice.

- A quality standard that supports those wanting to improve the quality of health and care services for asthma.

- Three diagnosis algorithms in separate PDFs:

  — Algorithm A: Initial clinical assessment for adults, young people and children with suspected asthma.

  — Algorithm B: Objective tests for asthma in children and young people aged 5 to 16.

  — Algorithm C: Objective tests for asthma in adults aged 17 and over.

3 Assess the current context

Contributors to this resource shared their learning and experiences on approaches to assessing local readiness for implementation. They advised on how evidence and data can be used to help plan how the asthma diagnosis recommendations can be incorporated into practice.

Demand

It is important to understand the demand on the service from people presenting with suspected asthma. Extracting the number of patients previously coded as 'suspected asthma' would indicate demand. However, sites in the feasibility project found that historically this code had not been consistently used. They therefore struggled to identify accurately, how many people had presented with suspected asthma. Contributors to this resource suggested several methods to estimate this:

- scanning IT system for codes including suspected asthma and symptoms of asthma

- checking prescribing data for new prescriptions of inhaled corticosteroids and inhaled bronchodilators (short-acting beta-agonists)

- using the PRIMIS asthma tool

- using NHS RightCare Intelligence

- comparing the percentage of all practice patients diagnosed with asthma with national incidences (from the Asthma UK data portal) to give a national context to local diagnosis rates.

It was easier for sites to identify people diagnosed with asthma (incidences of asthma) because this was reported as a diagnosis on the GP system. Although lack of consistency in coding was also an issue.

To help map the data to the recommendations, the results can be grouped by the ages used in the recommendations (under 5, 5 to 16 years and 17 and over).

Map current pathway

To identify the changes needed, it is critical that services understand the current care pathway for diagnosis of people presenting with suspected asthma by mapping the care pathway. Discuss the current practice with all healthcare professionals involved in assessing people with suspected asthma. Feasibility project sites found variation both between practices and among healthcare professionals in the same practice.

Sites reported that supplementing this verbal information from colleagues with baseline quantitative data from recorded practice episodes helped gain a greater understanding of current practice. Consider using local IT systems to collect some or all of the following information about people presenting with suspected asthma:

- the amount of time and number of appointments (with all healthcare professionals) from first presentation to diagnosis of asthma or another condition

- whether any objective tests were used in the diagnostic process

- who did the assessment or tests

- who made the diagnosis.

Equipment needed

Review the equipment currently available for asthma diagnosis, including:

- current availability and location of spirometry, fractional exhaled nitric oxide (FeNO) and peak flow devices

- anything that may compromise the current availability of these devices, for example if any need replacing or are at the end of their warranty period

- the current demand for these devices for diagnosing asthma or other respiratory conditions.

Competency in objective testing

Spirometry (including bronchodilator reversibility)

Check who in the practice or locality is competent in the recognised standards (see the section on training in doing and interpreting spirometry).

FeNO

Check how many people within the practice or locality have received training to carry out FeNO testing and interpret results competently. Assess whether more people will need training (see the section on training).

4 Implementing the recommendations and learning for future service redesign

Data collection

Collect data during and after implementation to compare with the baseline care pathway data. This can be used to show the impact of implementing the asthma diagnosis recommendations, where the recommendations were not implemented, the change in practice and to identify lessons learnt.

Both individual patient and practice-level implementation data are needed for this.

Individual patient data

The following list describes the information collected for each patient during the feasibility project.

Consider if some or all of the following should be collected locally:

- Presentation: date, age, appointment duration.

- Testing: which tests were done and by whom, how long they took, the results, and who interpreted them. Also capture when people did not attend for tests.

- Peak flow variability: was peak flow variability monitored and, if so, the result, including if it was not completed.

- Direct bronchial challenge: was a direct bronchial challenge test needed and the result (if available).

- Referral: any onward referral to another specialist.

- Final diagnosis: date, type of diagnosis and diagnosing clinician.

- Appointments: number of appointments to reach diagnosis.

A spreadsheet was developed for collecting this data during the project, which can be

amended for local use.

Practice-level data

Contributors to this resource suggested collecting the following data:

- number of repeat prescriptions for short-acting beta-agonists inhalers

- new inhaled corticosteroid prescriptions.

Planning data collection

To assess the resources needed for data collection, consider:

- who will collect the individual patient data and practice-level data? Consider capacity and skills

- how long will data be collected for?

- when will practice-level data be collected and for how long?

- how will data be collated and recorded?

- will changes need to be made to IT systems, templates and the way healthcare professionals record suspected asthma episodes to ensure consistent coding and straightforward and complete data extraction?

All sites used the NICE asthma diagnosis implementation data collection spreadsheet for the 6 months of the feasibility project.

Some sites specifically created a template on the practice IT system containing a structured clinical history, objective testing results and diagnostic codes. Sites reported that using consistent coding for example the 'suspected asthma' code for patients entering the pathway helped data extraction. A Read code for FeNO (Exhaled Nitric Oxide Test - XaRCB) and a free text box were used by some sites to record results on their system. Note the code used will differ between IT systems.

Sites reported that linking the spirometry and FeNO devices with the practice IT system was helpful for reporting results and monitoring adherence to the care pathway. Spirometry was already linked to IT systems in most practices, allowing results to be

directly imported into the patient's notes. Linking FeNO was more challenging and some practices did not do it. Others achieved linking through the practice IT manager working with the FeNO representative.

Local care pathway development

Use a project management approach to adopt the recommendations into practice. NICE has produced the into practice guide, which includes a section on what organisations need to have in place to support the implementation of NICE guidance.

Consider the following:

- who will undertake objective testing? For example, all practice nurses, a group of trained nurses or trained healthcare assistants

- how will patients be referred for diagnostic tests?

- who will make the diagnosis of asthma and code this on the IT system?

- how many appointments will be needed for a patient to move through the care pathway?

- how will objective testing appointments be delivered and how long is needed to complete the tests?

At the sites, the tests were done by practice based nursing staff, band 6–8. Sites reported consistency and more efficient implementation when a small number (1 to 3) of trained nurses were responsible for testing. However this led to waiting lists when these nurses were on leave. Two contributors highlighted that a trained healthcare assistant could do this testing, however this was not done during the feasibility project. At all sites, patients presenting to the GP were referred to the nurse for testing.

Sites reported varying systems for who would diagnose asthma. These included the nurse:

- making and recording the asthma diagnosis

- referring patients to the lead respiratory GP to interpret test results and record diagnosis

- discussing every patient with the respiratory lead GP or referring GP and making a diagnosis together.

At all sites, initial testing (spirometry, FeNO and bronchodilator reversibility testing) and, if needed, education about peak flow diaries, were completed in 1 or 2 appointments, which the sites called 'objective test' appointments.

Sites that undertook spirometry, bronchodilator reversibility test (BDR) and FeNO in 1 appointment allowed between 30 and 70 minutes. Sites that offered 2 appointments (one for spirometry and FeNO and another for BDR) allocated between 15 and 30 minutes for each appointment.

Sites reported that a further appointment would be needed for diagnosis where the patient was returning with their peak flow variability result or where the nurse did not have responsibility for diagnosis. Where bronchial challenge testing was not required, the appointments which comprise the diagnosis algorithm spanned 4 to 6 weeks. Sites aimed to keep the wait time from initial presentation to objective testing to a minimum to capture symptomatic patients and to reassure referring GPs that these patients would be tested quickly.

Device procurement

Spirometry

Use current experience and knowledge within the practice to inform the procurement of any additional spirometry equipment needed to implement the recommendations.

FeNO

NICE produced diagnostics guidance on measuring fractional exhaled nitric oxide concentration in asthma: NIOX MINO, NIOX VERO and NObreath in April 2014. For more information about these devices see the company websites:

- NObreath Nitric Oxide Monitor

- NIOX Nitric Oxide Monitors.

When procuring new equipment request a trial of the different devices within the practice

before deciding which would be most suitable.

Consider the following factors when deciding which device to choose:

- Are there different procurement options for purchasing or leasing?

- Are there maintenance and service charges?

- What consumables are needed for the device?

- What is the life expectancy of the device?

- Do any parts of the device or consumables have a shelf-life and what is this?

- How easy is it to use the device (both for patients and healthcare professionals) and interpret the results?

- Does it take time to set up before each test and what is involved?

- Is training and ongoing support included?

Training

Develop a training plan for spirometry and FeNO once you have assessed the skills and competencies within your practice and identified any gaps.

Spirometry

The Improving the quality of diagnostic spirometry in adults: the National Register of certified professionals and operators document states that diagnostic spirometry should be quality assured and only performed and interpreted by professionals certified as competent against the recognised Association for Respiratory and Technology and Physiology (ARTP) standards. It also recommends participation in a national register of certified healthcare professionals and operators for spirometry. This document relates to the performance and interpretation of spirometry in adults and therefore applies to those healthcare professionals/operators testing individuals aged 16 years and over. For children under 12 years it is recommended in the document that practitioners achieve the ARTP certificate in paediatric spirometry. For older children aged 12–16 years, practitioners competent at testing adults would be deemed competent; however if there was a regular requirement to test children aged 12–16 years, contact with a specialist paediatric service

is recommended.

The ARTP with the British Thoracic Society (BTS) offer a programme of certification to these standards.

There are 3 levels of certification; foundation (level 1), interpretation (level 2) or full (level 3). Courses can be done by e-learning or at a 1- or 2-day taught course at accredited spirometry centres across the UK. This is followed by a portfolio, practical assessment (foundation and full only) and written assignment (full and interpretation only). Registration for certification must be made before or within 12 months of completing the accredited course. Once registered the portfolio and assignment (if needed) must be completed within 6 months of registration or the date of attending the accredited course (whichever is later). Foundation and full certificate holders are required to re-accredit every 3 years to remain registered as competent to practice. For more information about training, costs, certification and the ARTP experienced practitioners scheme see the ARTP website, spirometry section.

Some feasibility project sites reported limited availability of local training and that forward planning is needed to ensure staff can attend training. However, all sites that undertook further training and education in spirometry agreed it was valuable.

FeNO

The FeNO device manufacturers provide training on use of their products free of charge. Further information can be found on the company websites.

Feasibility project sites estimated this took between 30 minutes and 2.5 hours depending on the content and device chosen.

Guideline stakeholders identified subjectivity in performing FeNO and interpreting the results could be a barrier to implementation of the guidance. The Official ATS Clinical Practice Guideline may help with this.

Overcoming implementation challenges

Putting recommendations into practice can take time. How long will depend on how much change in practice or services is needed. Some areas of potential challenges are highlighted below, with solutions suggested by contributors to this resource.

Healthcare professional compliance

The clinician who initially sees the patient with suspected asthma needs to support implementation and follow the agreed care pathway.

Encourage healthcare professionals to follow the guideline by:

- Emphasising the importance of getting the diagnosis right first time.

- Using success data to highlight the benefits for the patients and for the practice (time and cost savings in particular).

- Reassuring them that other respiratory services will not be compromised.

- Supporting the case for adoption by using baseline data to highlight when current practice is inconsistent.

- Using practice meetings, peer-to-peer discussions, computer system alerts and email reminders to raise awareness of, and maintain use of, the new care pathway.

- Holding regular multidisciplinary team meetings discussing all the patients who have moved through the pathway and their outcomes.

- Developing a local simplified algorithm for the GPs focusing on their role in the pathway.

Training practice receptionists about the care pathway to ensure patient appointments are booked in a way that supports implementation of the recommendations (giving high priority to asthma diagnosis appointments, which should be booked as soon as possible), supported healthcare professionals in implementing the recommendations.

Reassuring healthcare professionals that other respiratory services will not be compromised, supported implementation. At one feasibility project site, the implementation team took responsibility for COPD spirometry and asthma review QOF points. Another practice noticed fluctuations in the number of scheduled annual QOF COPD spirometry checks each month, which affected capacity for asthma diagnosis appointments. By spreading the COPD checks more evenly across the year they ensured there was always availability for asthma diagnosis.

Patient engagement

Some sites reported patient motivation, culture and understanding as barriers to attendance and successful completion of objective tests. However, when more time was spent explaining the tests, the sites reported higher rates of completion.

At one site the receptionist contacted all patients who had been referred onto the pathway to explain the process and invite them for an appointment at a day and time of their choosing, if possible. This helped reduce non-attendance.

Sites found that school and working age people represent the main cohort of patients presenting with suspected asthma. Therefore, two sites reduced non-attendance by scheduling the asthma objective testing appointments at times before and after school and work.

5   New models of care

The NICE guideline on asthma suggests that 'new models of care, being developed locally, could offer the opportunity to implement these recommendations'. Contributors to this resource have suggested the following ways to ensure that the asthma diagnosis recommendations are a priority during the development of new models of care.

Implementation team

Consider including the following people into the wider implementation team to support asthma diagnosis:

- Clinical champions: healthcare professionals with the relevant knowledge and understanding to drive implementation, answer clinical queries and champion the project at a senior level. At the feasibility project sites this was a lead GP and lead nurse.

- Implementation manager: someone in a clinical or managerial role to be responsible for the day-to-day implementation plan, co-ordinating the team and ensuring progress is made. This may be a practice nurse, respiratory nurse or practice manager.

- Management sponsor: to help assess the financial viability of implementation, ensure the business case is produced and help to show the cost savings achieved. This may be the practice manager or a lead from the clinical commissioning group.

- Audit facilitator: to help set up systems to collect and analyse local data needed to measure performance and carry out audits. This may be an IT systems manager or practice nurse.

- Other stakeholders or staff, including:

  — local active respiratory forums or working groups

  — primary care pharmacists

  — medicines optimisation teams

  — GPs with a special interest in respiratory medicine

  — GP partners from their own and neighbouring practices

  — representatives from community respiratory services

  — practice receptionists

  — secondary care respiratory physicians with a special interest in asthma

  — commissioner with special interest in asthma

  — patient advisory group members.

Different working models

The NICE guideline suggests that developing new models of care to implement the recommendation 'may involve establishing diagnostic hubs to make testing efficient and affordable'. Contributors to this resource supported incorporating implementation of the asthma diagnosis recommendations into service redesign that was broader than just asthma diagnosis and encompassed asthma management and services for other relevant conditions such as COPD, lung cancer, heart failure and cardiac arrhythmias.

One contributor reported that when secondary care staff work in a primary care service to support respiratory diagnosis (perhaps 1 clinic per week) it provides additional expertise to primary care and an opportunity for sharing of skills and learning.

Consider what services are already established, if any service redesign is underway or planned, and how asthma diagnosis could be integrated within this.

6   Acknowledgements

NICE would like to acknowledge and thank the following people for their valuable contribution to this resource.

Rachel Dominey

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Dr Chrissy Dunne

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Jayne Longstaff

Lead Respiratory Quality Improvement and Innovation Nurse, Portsmouth Hospital NHS Trust

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Liz Wilson

Respiratory Nurse Specialist, Lordswood Medical Group

NICE would also like to acknowledge and thank all of the people detailed in the feasibility project report (appendix Q, page 835) at each of the sites, for their valuable contribution to the feasibility project.

7   About this resource

This resource accompanies the NICE guideline on asthma diagnosis, monitoring and chronic asthma management. It is an implementation tool that summarises the experiences reported by NHS sites that took part in the feasibility project and shares the learning that took place. For more information see the feasibility project report (appendix Q, page 835).

It is the responsibility of local commissioners and providers to implement the guidance at a local level, being mindful of their duty to advance equality of opportunity and foster good relations. Nothing in this document should be interpreted in a way that would be inconsistent with this.

More information about the adoption team.

ISBN: 978-1-4731-2124-9