

Dubai Standards of Care - 2018

(Asthma)

Diagnosis, monitoring and chronic asthma management



Preface

Asthma is one of the most common problem dealt with in daily practice. In Dubai, the management of chronic asthma is done through various different strategies. The following guidelines was adopted from the *National Institute for Health and Care Excellence (NICE)* in order to create a unified approach to the management of asthma. In addition to that, these guidelines were developed to act as a guide for clinical practice, based on the best available evidence at the time of development. Adherence to these guidelines may not necessarily guarantee the best outcome in every case. Every health care provider is responsible for the management of his or her unique patient based on the clinical picture presented by the patient and the management options available locally.

Mr Ahmed Al Neaimi

Acting Chief Executive Office of the Dubai Health Insurance Corporation-

Dubai Health Authority (DHA)



Acknowledgment

“Dubai standards of care – Asthma”

These guidelines were established in order to achieve effective management of asthma as well as increase awareness and prevention. In addition to that, these guidelines aim to improve evidence based approaches especially appropriate medication prescribing.

These guidelines were prepared and approved by the Dubai Standard of Care Taskforce.

Members of the committee as follow:

Dr. Mohammad Farghaly- Senior Specialist and head of Insurance Medical Regulation

Dr. Bassam Mahboub – Consultant of pulmonology, DHA

Dr. Sara Al Dallal- Health Service Specialist, DHA

Dr. Mohammad Farghaly

Head of Insurance Medical Regulation
Program Director



Dubai Standards of Care- Asthma

Table of Contents

Initial clinical assessment.....	6
Clinical history.....	7
Physical examination.....	7
Initial treatment and objective tests for acute symptoms at presentation tests for acute symptoms at presentation.....	7
Testing for asthma.....	8
Occupational asthma.....	8
Diagnosing asthma in young children.....	8
Objective tests for diagnosing asthma in adults, young people and children aged 5 and over	10
Airway inflammation measures	10
Fractional exhaled nitric oxide (FeNO).....	10
Lung function tests	11
Spirometry.....	11
Bronchodilator reversibility (BDR)	11
Peak flow variability.....	11
Airway hyperreactivity measures.....	12
Direct bronchial challenge test with histamine or methacholine	12
Diagnosis in children and young people aged 5 to 16.....	13
Diagnosis in adults aged 17 and over	15
Diagnosis in people who are unable to perform an objective test.....	17
Diagnostic summary	17
Table 1 - Positive test thresholds for objective test thresholds for adults, young people and young people and children (aged 5 over)	18
Principles of pharmacological treatment	18



1.6 Pharmacological treatment pathway for adults (aged 17and over).....	19
Pharmacological treatment pathway for children and young people aged 5to16	21
Pharmacological treatment pathway for children under 5	22
Self-management.....	23
1.12 Decreasing maintenance therapy.....	24
Risk stratification.....	24
Monitoring asthma control.....	25
Terms used in this guideline	26
Expiratory polyphonic wheeze	26
ICS doses ICS doses.....	26
MART	27
Objective test to diagnose asthma.....	27
Risk stratification.....	27
Suspected asthma	27

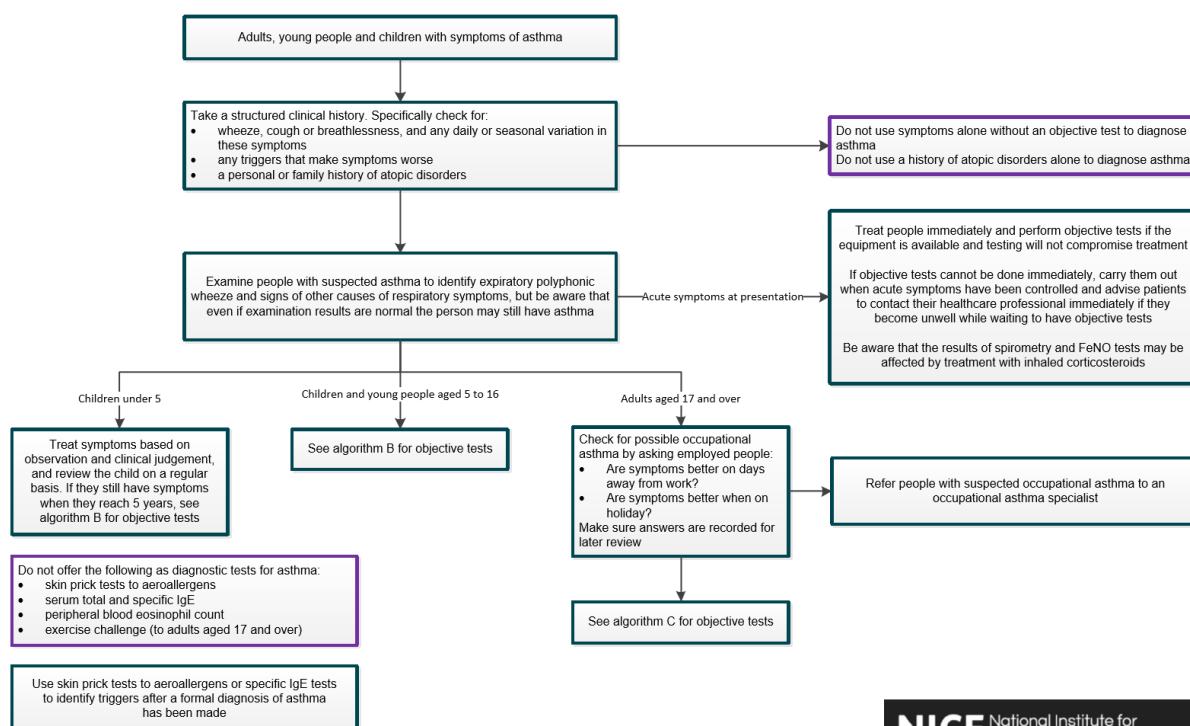


Dubai Standards of Care- Asthma

Initial clinical assessment

See also algorithm A below for initial clinical assessment in adults, young people and children with suspected asthma.

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



This algorithm is based on recommendations from NICE's guideline on [asthma: diagnosis, monitoring and chronic asthma management](#) (2017)

NICE National Institute for Health and Care Excellence

© NICE 2017. All rights reserved. Subject to [Notice of rights](#)



Clinical history

1.1.1 Take a structured clinical history in people with suspected asthma.

Specifically, check for:

- wheeze, cough or breathlessness, and any daily or seasonal variation in these symptoms
- any triggers that make symptoms worse
- a personal or family history of atopic disorders.

1.1.2 Do not use symptoms alone without an objective test to diagnose asthma.

1.1.3 Do not use a history of atopic disorders alone to diagnose asthma.

Physical examination

1.1.4 Examine people with suspected asthma to identify expiratory polyphonic wheeze and signs of other causes of respiratory symptoms, but be aware that even if examination results are normal the person may still have asthma.

Initial treatment and objective tests for acute symptoms at presentation tests for acute symptoms at presentation

1.1.5 Treat people immediately if they are acutely unwell at presentation, and perform objective tests for asthma (for example, fractional exhaled nitric oxide [FeNO], spirometry and peak flow variability) if the equipment is available and testing will not compromise treatment of the acute episode.

1.1.6 If objective tests for asthma cannot be done immediately for people who are acutely unwell at presentation, carry them out when acute symptoms have been controlled



1.1.7 Be aware that the results of spirometry and FeNO tests may be affected in people who have been treated empirically with inhaled corticosteroids.

Testing for asthma

1.1.8 Do not offer the following as diagnostic tests for asthma:

- skin prick tests to aeroallergens
- serum total and specific IgE
- peripheral blood eosinophil count
- exercise challenge (to adults aged 17 and over).

1.1.9 Use skin prick tests to aeroallergens or specific IgE tests to identify triggers after a formal diagnosis of asthma has been made.

Occupational asthma

1.1.10 Check for possible occupational asthma by asking employed people with suspected new-onset asthma, or established asthma that is poorly controlled:

- Are symptoms better on days away from work?
- Are symptoms better when on holiday?

1.1.11 Refer people with suspected occupational asthma to an occupational asthma specialist.

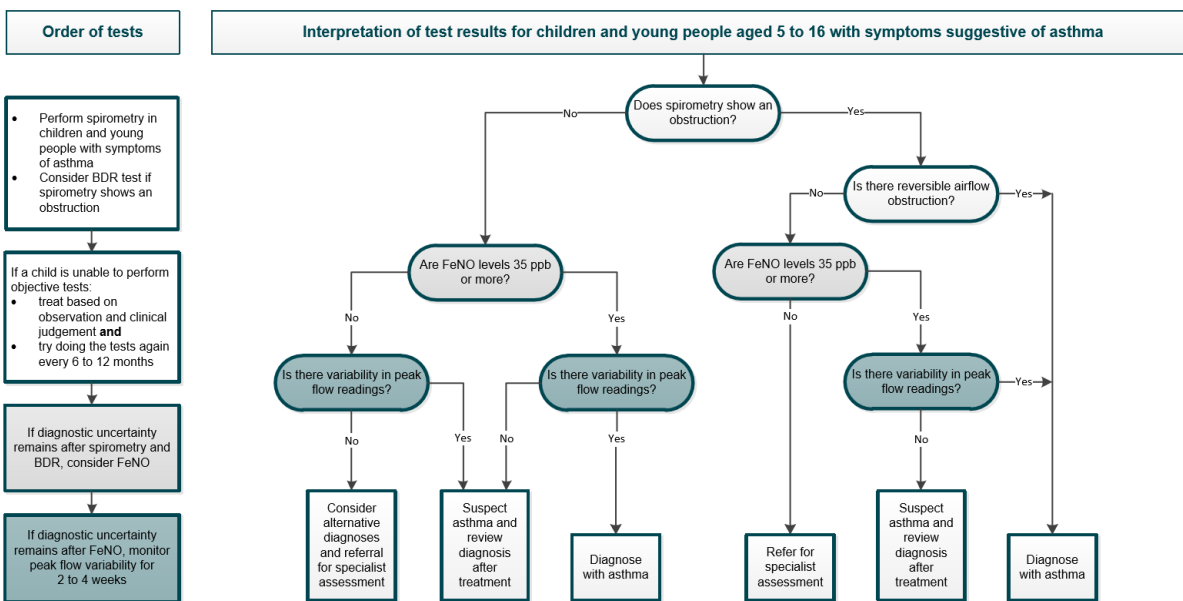
Diagnosing asthma in young children

1.2.1 For children under 5 with suspected asthma, treat symptoms based on observation and clinical judgment, and review the child on a regular basis (see section 1.8).



If they still have symptoms when they reach 5 years, carry out objective tests (see section 1.3 and algorithm B below).

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



Abbreviations:
FeNO, fractional exhaled nitric oxide
BDR, bronchodilator reversibility

This algorithm is based on recommendations from NICE's guideline on [asthma diagnosis, monitoring and chronic asthma management](#) (2017)

Positive test thresholds
Obstructive spirometry: FEV1/FVC ratio less than 70% (or below the lower limit of normal if available)
FeNO: 35 ppb or more
BDR: improvement in FEV1 of 12% or more
Peak flow variability: variability over 20%

NICE National Institute for Health and Care Excellence

© NICE 2017. All rights reserved. Subject to [Notice of rights](#).

1.2.2 If a child is unable to perform objective tests when they are aged 5:

- continue to treat based on observation and clinical judgment
- try doing the tests again every 6 to 12 months until satisfactory results are obtained
- Consider referral for specialist assessment if the child repeatedly cannot perform objective tests and is not responding to treatment.



Objective tests for diagnosing asthma in adults, young people and children aged 5 and over

Airway inflammation measures

Fractional exhaled nitric oxide (FeNO)

Licensed Pulmonology consultants are the only medical professionals who are privileged to request and/or perform the FeNO test.

1.3 FeNO Test is not considered as a first step in the diagnosis of asthma in adults, young people and children aged 5 or over

1.3.1 FeNO test is used to monitor patients' improvement

1.3.2 Offer a FeNO test to adults (aged 17 and over) if a diagnosis of asthma is being considered. Regard a FeNO level of 40 parts per billion (ppb) or more as a positive test.

1.3.3 Consider a FeNO test in children and young people (aged 5 to 16)[2] if there is diagnostic uncertainty after initial assessment and they have either:

- normal spirometry or
- obstructive spirometry with a negative bronchodilator reversibility (BDR) test.

Regard a FeNO level of 35 ppb or more as a positive test.

1.3.4 Be aware that a person's current smoking status can lower FeNO levels both acutely and cumulatively. However, a high level remains useful in supporting a diagnosis of asthma



Lung function tests

Spirometry

1.3.5 Offer spirometry to adults, young people and children aged 5 and over if a diagnosis of asthma is being considered. Regard a forced expiratory volume in 1 second/forced vital capacity (FEV1/FVC) ratio of less than 70% (or below the lower limit of normal if this value is available) as a positive test for obstructive airway disease (obstructive spirometry).

Bronchodilator reversibility (BDR)

1.3.6 Offer a BDR test to adults (aged 17 and over) with obstructive spirometry (FEV1/FVC ratio less than 70%). Regard an improvement in FEV1 of 12% or more, together with an increase in volume of 200ml or more, as a positive test.

1.3.7 Consider a BDR test in children and young people (aged 5 to 16) with obstructive spirometry (FEV1/FVC ratio less than 70%). Regard an improvement in FEV1 of 12% or more as a positive test.

Peak flow variability

1.3.8 Monitor peak flow variability for 2 to 4 weeks in adults (aged 17 and over) if there is diagnostic uncertainty after initial assessment and a FeNO test and they have either:

- normal spirometry or
- obstructive spirometry,
- reversible airways obstruction (positive BDR) but a FeNO level of 39ppb or less.

Regard a value of more than 20% variability as a positive test.



1.3.9 Consider monitoring peak flow variability for 2 to 4 weeks in adults (aged 17 and over) if there is diagnostic uncertainty after initial assessment and they have:

- obstructive spirometry and
- irreversible airways obstruction (negative BDR) and
- a FeNO level between 25 and 39 ppb.

Regard a value of more than 20% variability as a positive test.

1.3.10 Monitor peak flow variability for 2 to 4 weeks in children and young people (aged 5 to 16) if there is diagnostic uncertainty after initial assessment and a FeNO test and they have either:

- normal spirometry or
- obstructive spirometry, irreversible airways obstruction (negative BDR) and a FeNO level of 35 ppb or more.

Regard a value of more than 20% variability as a positive test.

Airway hyperreactivity measures

Direct bronchial challenge test with histamine or methacholine

1.3.11 Offer a direct bronchial challenge test with histamine or methacholine [3] to adults (aged 17 and over) if there is diagnostic uncertainty after a normal spirometry and either a:

- FeNO level of 40 ppb or more and no variability in peak flow readings or
- FeNO level of 39 ppb or less with variability in peak flow readings.

Regard a PC20 value of 8 mg/ml or less as a positive test.

1.3.12 Consider a direct bronchial challenge test with histamine or methacholine [3] in adults (aged 17 and over) with:



- obstructive spirometry without bronchodilator reversibility and
- a FeNO level between 25 and 39 ppb and
- no variability in peak flow readings (less than 20% variability over 2 to 4 weeks).

Regard a PC20 value of 8 mg/ml or less as a positive test.

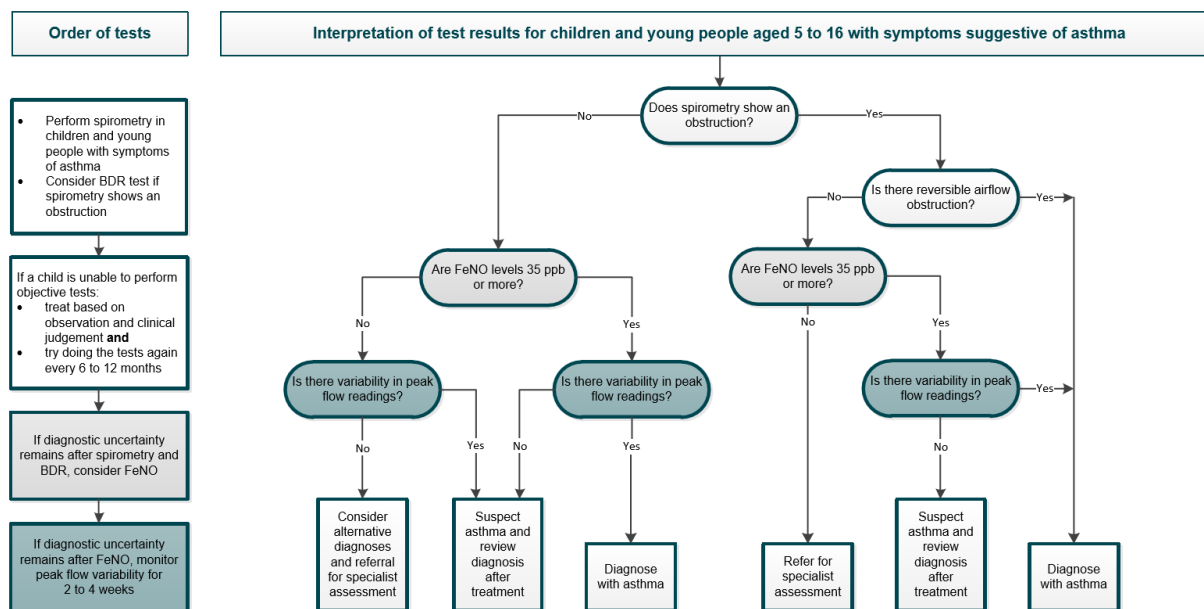
1.3.13 If a direct bronchial challenge test with histamine or methacholine is unavailable, suspect asthma and review the diagnosis after treatment, or refer to a centre with access to a histamine or methacholine challenge test.

Diagnosis in children and young people aged 5 to 16

See also algorithm B below for objective tests in young people and children aged 5 to 16.



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



Abbreviations:
FeNO, fractional exhaled nitric oxide
BDR, bronchodilator reversibility

This algorithm is based on recommendations from NICE's guideline on [asthma: diagnosis, monitoring and chronic asthma management](#) (2017)

Positive test thresholds
Obstructive spirometry: FEV1/FVC ratio less than 70% (or below the lower limit of normal if available)
FeNO: 35 ppb or more
BDR: improvement in FEV1 of 12% or more
Peak flow variability: variability over 20%

NICE National Institute for Health and Care Excellence

© NICE 2017. All rights reserved. Subject to [Notice of rights](#).

1.3.14 Diagnose asthma in children and young people (aged 5 to 16) if they have symptoms suggestive of asthma and:

- a FeNO level of 35ppb or more and positive peak flow variability or
- obstructive spirometry and positive bronchodilator reversibility.

1.3.15 Suspect asthma in children and young people (aged 5 to 16) if they have symptoms suggestive of asthma and:

- a FeNO level of 35ppb or more with normal spirometry and negative peak flow variability, or
- a FeNO level of 35ppb or more with obstructive spirometry but negative bronchodilator reversibility and no variability in peak flow readings, or
- normal spirometry, a FeNO level of 34ppb or less and positive peak flow variability.



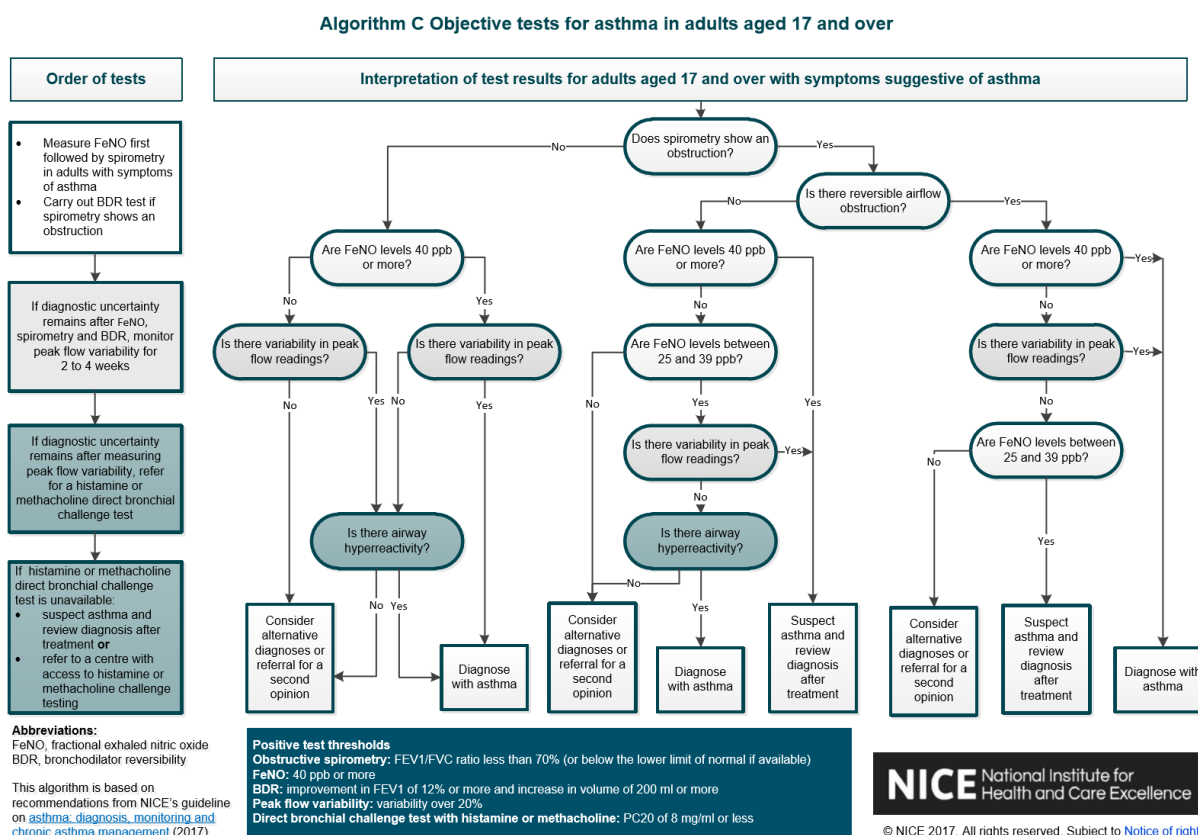
Do not rule out other diagnoses if symptom control continues to remain poor after treatment. Review the diagnosis after 6 weeks by repeating any abnormal tests and reviewing symptoms.

1.3.16 Refer children and young people (aged 5 to 16) for specialist assessment if they have obstructive spirometry, negative bronchodilator reversibility and a FeNO level of 34ppb or less.

1.3.17 Consider alternative diagnoses and referral for specialist assessment in children and young people (aged 5 to 16) if they have symptoms suggestive of asthma but normal spirometry, a FeNO level of 34ppb or less and negative peak flow variability.

Diagnosis in adults aged 17 and over

See also algorithm C below for objective tests in adults aged 17 and over.





1.3.18 Diagnose asthma in adults (aged 17 and over) if they have symptoms suggestive of asthma and:

- a FeNO level of 40ppb or more with either positive bronchodilator reversibility or positive peak flow variability or bronchial hyperreactivity, or or
- a FeNO level between 25 and 39ppb and a positive bronchial challenge test, or or
- positive bronchodilator reversibility and positive peak flow variability irrespective of FeNO level.

1.3.19 Suspect asthma in adults (aged 17 and over) with symptoms suggestive of asthma, obstructive spirometry and:

- negative bronchodilator reversibility, and either a
 - FeNO level of 40ppb or more, or
 - a FeNO level between 25 and 39ppb and positive peak flow variability, or
- positive bronchodilator reversibility, a FeNO level between 25 and 39ppb and negative peak flow variability.

Do not rule out other diagnoses if symptom control continues to remain poor after treatment. Review the diagnosis after 6 to 10 weeks by repeating spirometry and objective measures of asthma control and reviewing symptoms.

1.3.20 Consider alternative diagnoses, or referral for a second opinion, in adults (aged 17 and over) with symptoms suggestive of asthma and:

- a FeNO level below 40ppb, normal spirometry and positive peak flow variability, or or
- a FeNO level of 40ppb or more but normal spirometry, negative peak flow variability, and negative bronchial challenge test, or
- obstructive spirometry with bronchodilator reversibility, but a FeNO level below 25ppb, and negative peak flow variability, or or



- positive peak flow variability but normal spirometry, a FeNO level below 40ppb, and a negative bronchial challenge test, or or
- obstructive spirometry with negative bronchodilator reversibility, a FeNO level below 25ppb, and negative peak flow variability (if measured).
-

Diagnosis in people who are unable to perform an objective test

For young children who cannot perform objective tests, see section 1.2.

1.3.21 If an adult, young person or child with symptoms suggestive of asthma cannot perform a particular test, try to perform at least 2 other objective tests. Diagnose suspected asthma based on symptoms and any positive objective test results.

Diagnostic summary

The following algorithms have been produced that summarize clinical assessment and objective testing for asthma. Table 1 summarizes the objective test threshold levels.



Table 1 - Positive test thresholds for objective test thresholds for adults, young people and young people and children (aged 5 over)

Test	Population	Positive result
FeNO	Adults	40 ppb or more
	Children and young people	35 ppb or more
Obstructive spirometry	Adults, young people and children	FEV1/FVC ratio less than 70% (or below the lower limit of normal if this value is available)
Bronchodilator reversibility (BDR) test	Adults	Improvement in FEV1 of 12% or more and increase in volume of 200 ml or more
	Children and young people	Improvement in FEV1 of 12% or more
Peak flow variability	Adults, young people and children	Variability over 20%
Direct bronchial challenge test with histamine or methacholine	Adults	PC20 of 8 mg/ml or less
	Children and young people	n/a
Abbreviations: FeNO, fractional exhaled nitric oxide; FEV1, forced expiratory volume in 1 second; FVC, forced vital capacity; PC20, provocative concentration of methacholine causing a 20% fall in FEV1.		

Principles of pharmacological treatment

1.5.1 Take into account the possible reasons for uncontrolled asthma, before starting or adjusting medicines for asthma in adults, young people and children. These may include:

- alternative diagnoses
- lack of adherence
- suboptimal inhaler technique



- smoking (active or passive)
- occupational exposures
- psychosocial factors
- seasonal or environmental factors.

1.5.2 After starting or adjusting medicines for asthma, review the response to treatment in 4 to 8 weeks (see section 1.14 on monitoring asthma control).

1.5.3 If inhaled corticosteroid (ICS) maintenance therapy is needed, offer regular daily ICS rather than intermittent or 'when required' ICS therapy.

1.5.4 Adjust the dose of ICS maintenance therapy over time, aiming for the lowest dose required for effective asthma control.

1.5.5 Ensure that a person with asthma can use their inhaler device:

- at any asthma review, either routine or unscheduled
- whenever a new type of device is supplied.

1.6 Pharmacological treatment pathway for adults (aged 17 and over)

This section is for people with newly diagnosed asthma or asthma that is uncontrolled on their current treatment. Where the recommendations represent a change from traditional clinical practice, people whose asthma is well controlled on their current treatment should not have their treatment changed purely to follow this guidance.

1.6.1 Offer a short-acting beta₂ agonist (SABA) as reliever therapy to adults (aged 17 and over) with newly diagnosed asthma.

1.6.2 For adults (aged 17 and over) with asthma who have infrequent, short-lived wheeze and normal lung function, consider treatment with SABA reliever therapy alone.

1.6.3 Offer a low dose of an ICS as the first-line maintenance therapy to adults (aged 17 and over) with:



- symptoms at presentation that clearly indicate the need for maintenance therapy (for example, asthma-related symptoms 3 times a week or more, or causing waking at night) or or
- asthma that is uncontrolled with a SABA alone.

1.6.4 If asthma is uncontrolled in adults (aged 17 and over) on a low dose of ICS as maintenance therapy, offer a leukotriene receptor antagonist (LTRA) in addition to the ICS and review the response to treatment in 4 to 8 weeks.

1.6.5 If asthma is uncontrolled in adults (aged 17 and over) on a low dose of ICS and an LTRA as maintenance therapy, offer a long-acting beta2 agonist (LABA) in combination with the ICS, and review LTRA treatment as follows:

- discuss with the person whether or not to continue LTRA treatment
- take into account the degree of response to LTRA treatment.

1.6.6 If asthma is uncontrolled in adults (aged 17 and over) on a low dose of ICS and a LABA, with or without an LTRA, as maintenance therapy, offer to change the person's ICS and LABA maintenance therapy to a MART regimen with a low maintenance ICS dose.

1.6.7 If asthma is uncontrolled in adults (aged 17 and over) on a MART regimen with a low maintenance ICS dose, with or without an LTRA, consider increasing the ICS to a moderate maintenance dose (either continuing on a MART regimen or changing to a fixed-dose of an ICS and a LABA, with a SABA as a reliever therapy).

1.6.8 If asthma is uncontrolled in adults (aged 17 and over) on a moderate maintenance ICS dose with a LABA (either as MART or a fixed-dose regimen), with or without an LTRA, consider:

- increasing the ICS to a high maintenance dose (this should only be offered as part of a fixed-dose regimen, with a SABA used as a reliever therapy) or or
- a trial of an additional drug (for example, a long-acting muscarinic receptor antagonist or theophylline) or or



- seeking advice from a healthcare professional with expertise in asthma

Pharmacological treatment pathway for children and young people aged 5to16

1.7.1 Offer a SABA as reliever therapy to children and young people (aged 5to16) with newly diagnosed asthma.

1.7.2 For children and young people (aged 5to16) with asthma who have infrequent, short-lived wheeze and normal lung function, consider treatment with SABA reliever therapy alone.

1.7.3 Offer a paediatric low dose of an ICS as the first-line maintenance therapy to children and young people (aged 5to16) with:

- symptoms at presentation that clearly indicate the need for maintenance therapy (for example, asthma-related symptoms 3times a week or more, or causing waking at night)or
- asthma that is uncontrolled with a SABA alone.

1.7.4 If asthma is uncontrolled in children and young people (aged 5to16) on a paediatric low dose of ICS as maintenance therapy, consider an LTRA in addition to the ICS and review the response to treatment in 4to8weeks.

1.7.5 If asthma is uncontrolled in children and young people (aged 5to16) on a paediatric low dose of ICS and an LTRA as maintenance therapy, consider stopping the LTRA and starting a LABA in combination with the ICS.

1.7.6 If asthma is uncontrolled in children and young people (aged 5to16) on a paediatric low dose of ICS and a LABA as maintenance therapy, consider changing their ICS and LABA maintenance therapy to a MART regimen with a paediatric low maintenance ICS dose. Ensure that the child or young person is able to understand and comply with the MART regimen.

1.7.7 If asthma is uncontrolled in children and young people (aged 5to16) on a MART regimen with a paediatric low maintenance ICS dose, consider increasing the ICS to a paediatric moderate maintenance dose (either continuing on a MART regimen or changing to a fixed-dose of an ICS and a LABA, with a SABA as a reliever therapy).



1.7.8 If asthma is uncontrolled in children and young people (aged 5 to 16) on a paediatric moderate maintenance ICS dose with LABA (either as MART or a fixed-dose regimen), consider seeking advice from a healthcare professional with expertise in asthma and consider either:

- increasing the ICS dose to paediatric high maintenance dose (only as part of a fixed dose regimen, with a SABA used as a reliever therapy) or
- a trial of an additional drug (for example, theophylline).

Pharmacological treatment pathway for children under 5

It can be difficult to confirm asthma diagnosis in young children, therefore these recommendations apply to children with suspected or confirmed asthma. Asthma diagnosis should be confirmed when the child is able to undergo objective tests (see section 1.2).

This section is for children under 5 with newly suspected or confirmed asthma, or with asthma symptoms that are uncontrolled on their current treatment. Where the recommendations represent a change from traditional clinical practice, children whose asthma is well controlled on their current treatment should not have their treatment changed purely to follow this guidance.

1.8.1 Offer a SABA as reliever therapy to children under 5 with suspected asthma. This should be used for symptom relief alongside all maintenance therapy.

1.8.2 Consider an 8-week trial of a paediatric moderate dose of an ICS in children under 5 with:

- symptoms at presentation that clearly indicate the need for maintenance therapy (for example, asthma-related symptoms 3 times a week or more, or causing waking at night) or
- suspected asthma that is uncontrolled with a SABA alone.

1.8.3 After 8 weeks, stop ICS treatment and continue to monitor the child's symptoms:



- if symptoms did not resolve during the trial period, review whether an alternative diagnosis is likely
- if symptoms resolved then reoccurred within 4weeks of stopping ICS treatment, restart the ICS at a paediatric low dose as first-line maintenance therapy
- if symptoms resolved but reoccurred beyond 4weeks after stopping ICS treatment, repeat the 8-week trial of a paediatric moderate dose of ICS.

1.8.4 If suspected asthma is uncontrolled in children under5 on a paediatric low dose of ICS as maintenance therapy, consider an LTRA in addition to the ICS.

1.8.5 If suspected asthma is uncontrolled in children under5 on a paediatric low dose of ICS and an LTRA as maintenance therapy, stop the LTRA and refer the child to a healthcare professional with expertise in asthma for further investigation and management.

Self-management

1.10.1 Offer an asthma self-management programme, comprising a written personalised action plan and education, to adults, young people and children aged 5 and over with a diagnosis of asthma (and their families or carers if appropriate).

1.10.2 Consider an asthma self-management programme, comprising a written personalised action plan and education, for the families or carers of children under5 with suspected or confirmed asthma.

1.11 Increasing ICS treatment within a self-management programme

1.11.1 Within a self-management programme, offer an increased dose of ICS for 7days to adults (aged 17and over) who are using an ICS in a single inhaler, when asthma control deteriorates. Clearly outline in the person's asthma action plan how and when to do this, and what to do if symptoms do not improve. When increasing ICS treatment:



- consider quadrupling the regular ICS dose
- do not exceed the maximum licensed daily dose.

1.11.2 Within a self-management programme, consider an increased dose of ICS for 7 days for children and young people (aged 5 to 16) who are using an ICS in a single inhaler, when asthma control deteriorates. Clearly outline in the person's asthma action plan how and when to do this, and what to do if symptoms do not improve. When increasing ICS treatment:

- consider quadrupling the regular ICS dose
- do not exceed the maximum licensed daily dose.

1.12 Decreasing maintenance therapy

1.12.1 Consider decreasing maintenance therapy when a person's asthma has been controlled with their current maintenance therapy for at least 3 months.

1.12.2 Discuss with the person (or their family or carer if appropriate) the potential risks and benefits of decreasing maintenance therapy.

1.12.3 When reducing maintenance therapy:

- Stop or reduce dose of medicines in an order that takes into account the clinical effectiveness when introduced, side effects and the person's preference.
- Only consider stopping ICS treatment completely for people who are using low dose ICS alone as maintenance therapy and are symptom free.

1.12.4 Agree with the person (or their family or carer if appropriate) how the effects of decreasing maintenance therapy will be monitored and reviewed, including self monitoring and a follow-up with a healthcare professional.

1.12.5 Review and update the person's asthma action plan when decreasing maintenance therapy.

Risk stratification



1.13.1 Consider using risk stratification to identify people with asthma who are at increased risk of poor outcomes, and use this information to optimise their care.

Base risk stratification on factors such as non-adherence to asthma medicines, psychosocial problems and repeated episodes of unscheduled care for asthma.

Monitoring asthma control

1.14.1 Monitor asthma control at every review. If control is suboptimal:

- confirm the person's adherence to prescribed treatment in line with the recommendations on assessing adherence in the NICE guideline on medicines adherence
- review the person's inhaler technique
- review if treatment needs to be changed
- ask about occupational asthma (see recommendation 1.1.10) and/or other triggers, if relevant.

1.14.2 Consider using a validated questionnaire (for example, the Asthma Control Questionnaire or Asthma Control Test) to monitor asthma control in adults (aged 17 and over).

1.14.3 Monitor asthma control at each review in adults, young people and children aged 5 and over using either spirometry or peak flow variability testing.

1.14.4 Do not routinely use FeNO to monitor asthma control.

1.14.5 Consider FeNO measurement as an option to support asthma management in people who are symptomatic despite using inhaled corticosteroids.

1.14.6 Do not use challenge testing to monitor asthma control.

1.14.7 Observe and give advice on the person's inhaler technique:

- at every consultation relating to an asthma attack, in all care settings
- when there is deterioration in asthma control
- when the inhaler device is changed
- at every annual review



- if the person asks for it to be checked.

Terms used in this guideline

Expiratory polyphonic wheeze

A wheeze is a continuous, whistling sound produced in the airways during breathing. It is caused by narrowing or obstruction in the airways. An expiratory polyphonic wheeze has multiple pitches and tones heard over different areas of the lung when the person breathes out.

ICS doses ICS doses

ICS doses and their pharmacological strengths vary across different formulations. In general, people with asthma should use the smallest doses of ICS that provide optimal control for their asthma, in order to reduce the risk of side effects.

For adults aged 17 and over:

- less than or equal to 400micrograms budesonide or equivalent would be considered a low dose
- more than 400micrograms to 800micrograms budesonide or equivalent would be considered a moderate dose
- more than 800micrograms budesonide or equivalent would be considered a high dose.

For children and young people aged 16 and under:

- less than or equal to 200micrograms budesonide or equivalent would be considered a paediatric low dose
- more than 200micrograms to 400 micrograms budesonide or equivalent would be considered a paediatric moderate dose
- more than 400micrograms budesonide or equivalent would be considered a paediatric high dose.



MART

Maintenance and reliever therapy (MART) is a form of combined ICS and LABA treatment in which a single inhaler, containing both ICS and a fast-acting LABA, is used for both daily maintenance therapy and the relief of symptoms as required. MART is only available for ICS and LABA combinations in which the LABA has a fast-acting component (for example, formoterol).

Objective test to diagnose asthma

Tests carried out to help determine whether a person has asthma, the results of which are not based on the person's symptoms, for example, tests to measure lung function or evidence of inflammation. There is no single objective test to diagnose asthma.

Risk stratification

Risk stratification is a process of categorising a population by their relative likelihood of experiencing certain outcomes. In the context of this guideline, risk stratification involves categorising people with asthma by their relative likelihood of experiencing negative clinical outcomes (for example, severe exacerbations or hospitalisations). Factors including non-adherence to asthma medicines, psychosocial problems and repeated episodes of unscheduled care can be used to guide risk stratification. Once the population is stratified, the delivery of care for the population can be targeted with the aim of improving the care of the strata with the highest risk.

Suspected asthma



Suspected asthma describes a potential diagnosis of asthma based on symptoms and response to treatment that has not yet been confirmed with objective tests.

Uncontrolled asthma Uncontrolled asthma

Uncontrolled asthma describes asthma that has an impact on a person's lifestyle or restricts their normal activities. Symptoms such as coughing, wheezing, shortness of breath and chest tightness associated with uncontrolled asthma can significantly decrease a person's quality of life and may lead to a medical emergency. Questionnaires are available that can be quantify this.

This guideline uses the following pragmatic thresholds to define uncontrolled asthma:

- or more days a week with symptoms or
- or more days a week with required use of a SABA for symptomatic relief or
- 1 or more nights a week with awakening due to asthma.