

# The All Wales Asthma Diagnosis Guideline

## STEP 1 INFORMATION: ASSESSMENT

### Clinical Pathway

Also available in digital format

RHIG Publication date: 01/12/19

#### 1 Asthma likelihood checklist

Episodic cough, wheeze (particularly recorded observation of wheeze by a health care professional), breathlessness, chest tightness

Diurnal variation, symptoms often worse at night/morning

Triggers including allergens, exercise, occupation, cold air, viral infections

Associated rhinitis, atopy (hay fever, eczema)

Childhood asthma or family history asthma

#### 1 Consider differential diagnoses/co-morbidities

##### Consider conditions that may mimic asthma:

- Obesity or poor fitness
- Anxiety or hyperventilation
- Chronic obstructive pulmonary disease
- Gastro-oesophageal reflux disease
- Upper airway abnormalities
- Bronchiectasis
- Heart failure

## STEP 3 INFORMATION: DIAGNOSIS

#### 1 Asthma diagnosis confirmed

##### Document in notes:

- Start treatment step 1\*. Record objective measure of control pre treatment (e.g. ACQ, ACT, RCP 3 questions)
- Ensure patient is booked for review of symptoms/response to treatment (maximum 3 months)
- Give asthma education including inhaler technique and Personalised Asthma Action Plan (paper or electronic via NHS Wales Astmahub app)
- Advice on: 
  - Smoking cessation
  - Flu vaccination
  - Weight
  - Exercise

#### 1 Asthma diagnosis not confirmed

##### If asthma diagnosis not confirmed consider:

- Alternative diagnosis
- Repeating objective tests
- Referral to secondary care



## The All Wales Asthma Diagnosis Guideline

### CORE PRINCIPLES

The diagnosis of asthma is a clinical diagnosis supported by tests of airway obstruction, hyper-responsiveness and inflammation.

BTS and NICE guidelines both support the use of objective testing to improve the accuracy of asthma diagnosis.

### STEP 1: ASSESSMENT

Symptoms checked? <sup>1</sup>

### STEP 2: PERFORM INVESTIGATIONS

Demonstrate evidence of variable airflow obstruction (+/- airway inflammation) – check spirometry and peak flow diary

Ideally perform prior to starting treatment

If clinical urgency then treat accordingly (e.g. treat exacerbation +/- start step 1 therapies) and organise confirmatory investigations

Spirometry and bronchodilator reversibility <sup>1</sup>

Peak flow diary <sup>1</sup>

Exhaled nitric oxide (FeNO) (Where available) <sup>1</sup>

### STEP 3: DIAGNOSIS

Asthma diagnosis confirmed <sup>1</sup>

Asthma diagnosis not confirmed <sup>1</sup>

### STEP 4: REVIEW

- Ensure patient has had expected response to asthma therapy – if poor response re-consider diagnosis, concordance and inhaler technique
- Review annually if asthma well controlled
- Review after 3 months if any change to treatment or exacerbation/sub-optimally controlled symptoms
- Consider stepping down if well controlled

\* All Wales Adult Asthma Management Guidelines

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**ACT:** Asthma Control Test  
**ACQ:** Asthma Control Questionnaire  
**BTS:** British Thoracic Society  
**FeNO:** Fractional Expired Nitric Oxide  
**FEV1:** Forced Expiratory Volume in one second  
**FEV1/FVC ratio:** Forced Expiratory Volume in one second over Forced Vital Capacity represented as a ratio  
**ICS:** Inhaled Corticosteroid  
**LLN:** Lower Limit of Normal  
**NICE:** National Institute for Health and Care Excellence  
**Pre BD:** Pre bronchodilator  
**RCP:** Royal College of Physicians  
**RHIG:** Respiratory Health Implementation Group



More information at  
[icst.info/the-all-wales-asthma-diagnosis-guideline](http://icst.info/the-all-wales-asthma-diagnosis-guideline)

## STEP 2 INFORMATION: PERFORM INVESTIGATIONS

#### 1 Spirometry and bronchodilator reversibility

Perform baseline spirometry off inhaled therapy pre BD

Asthmatics may have normal spirometry when well

If pre BD spirometry shows obstruction (FEV1/FVC ratio below 0.7 OR LLN) perform reversibility

Reversibility is defined as:

**12% (and >200mls) increase in FEV1 in response to either:**

- short acting bronchodilator or
- steroid trial (6 weeks ICS or 2 weeks oral prednisolone 40mg)

May need to repeat on more than one occasion if initial test is negative and strong clinical suspicion of asthma

#### 1 Peak flow diary

Complete 2-4 week peak flow diary

A single peak flow is inadequate

Evidence of 20% peak flow variability supports asthma diagnosis. Once on treatment with ICS expect peak flow to increase and variability reduce

#### 1 Exhaled nitric oxide (FeNO)

FeNO >40 consistent with asthma (steroid naive)

Note: High FeNO is not diagnostic for asthma and has other causes e.g. rhinitis

A negative test does not exclude asthma

See RHIG FeNO consensus document & NICE NG80

Use flow charts for asthma diagnosis as per NICE NG80 where FeNO is available