## Algorithm C Objective tests for asthma in adults aged 17 and over

## **Order of tests**

- Measure FeNO first followed by spirometry in adults with symptoms of asthma
- Carry out BDR test if spirometry shows an obstruction

If diagnostic uncertainty remains after FeNO, spirometry and BDR, monitor peak flow variability for 2 to 4 weeks

If diagnostic uncertainty remains after measuring peak flow variability, refer for a histamine or methacholine direct bronchial challenge test

If histamine or methacholine direct bronchial challenge test is unavailable:

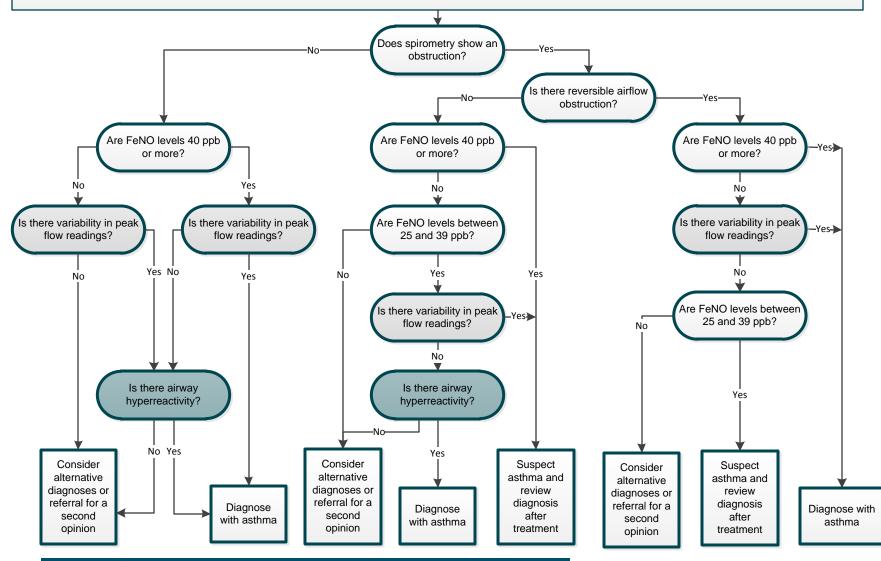
- suspect asthma and review diagnosis after treatment or
- refer to a centre with access to histamine or methacholine challenge testing

## 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)

## Interpretation of test results for adults aged 17 and over with symptoms suggestive of asthma



Positive test thresholds

**Obstructive spirometry:** FEV1/FVC ratio less than 70% (or below the lower limit of normal if available) **FeNO:** 40 ppb or more

**BDR:** improvement in FEV1 of 12% or more and increase in volume of 200 ml or more **Peak flow variability:** variability over 20%

Direct bronchial challenge test with histamine or methacholine: PC20 of 8 mg/ml or less



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