## London Asthma Leadership and Implementation Group (LALIG) consensus statement on the use of peak expiratory flow

Asthma is a disease defined as including variable airflow obstruction which is measured through the assessment of lung function (ie peak expiratory flow (PEF) and spirometry).

As clinicians, we would encourage the use of objective measures and combine that information with the recording of symptoms to make clinical decisions. By the time a wheeze is heard, airflow may be reduced by 30%.[[1]](#footnote-1)[[2]](#footnote-2)[[3]](#footnote-3)[[4]](#footnote-4)[[5]](#footnote-5)

Reliance on symptom recording alone risks failing to identify reduced asthma control at an early stage, which may lead to increased risk of asthma exacerbation, overuse of short-acting beta agonists (SABA) inhalers and hospitalisation etc.

We would recommend that asthma services continue to recommend the use of peak flow measurements as part of their young patients’ asthma action plans, alongside assessment of inhaler technique, regular asthma reviews and awareness of individual asthma triggers such as air pollution.

## Background

Until 2021, the personalised asthma action plan (PAAP) produced by Asthma + Lung UK (A+LUK) included a measure of PEF as a means of assessing asthma control in children and young people. The PAAP was subsequently revised and this measure has since been removed.

The rationale for the change included encouraging a greater focus on symptoms rather than PEF monitoring, citing evidence from the British Thoracic Society: Personalised asthma action plans: ‘symptom-based plans are generally preferable for children’[[6]](#footnote-6) although it also states, ‘in older children plans based on peak flow may be as effective for other outcomes.’

A+LUK highlighted anecdotal evidence from nurses and schools relating to problems completing PAAPs (and not completing them because this section couldn’t be filled in if – for example – no peak flow meter was available).

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1. Noviski N, Cohen L, Springer C, Bar-Yishay E, Avital A, Godfrey S. Bronchial provocation determined by breath sounds compared with lung function. Arch Dis Child. 1991;66(8):952-5. [↑](#footnote-ref-1)
2. McFadden ER, Jr., Kiser R, DeGroot WJ. Acute bronchial asthma. Relations between clinical and physiologic manifestations. N Engl J Med. 1973;288(5):221-5. [↑](#footnote-ref-2)
3. Koh YY, Chae SA, Min KU. Cough variant asthma is associated with a higher wheezing threshold than classic asthma. Clinical & Experimental Allergy. 1993;23(8):696-701. [↑](#footnote-ref-3)
4. Sanchez I, Avital A, Wong I, Tal A, Pasterkamp H. Acoustic vs. spirometric assessment of bronchial responsiveness to methacholine in children. Pediatr Pulmonol. 1993;15(1):28-35. [↑](#footnote-ref-4)
5. Springer C, Godfrey S, Picard E, Uwyyed K, Rotschild M, Hananya S, et al. Efficacy and safety of methacholine bronchial challenge performed by auscultation in young asthmatic children. Am J Respir Crit Care Med. 2000;162(3 Pt 1):857-60. [↑](#footnote-ref-5)
6. [BTS/SIGN British Guideline on the Management of Asthma, 2019](https://britishlfuk-my.sharepoint.com/personal/ktaylor_auk-blf_org_uk/Documents/Desktop/BTS/SIGN%20British%20Guideline%20on%20the%20Management%20of%20Asthma%2C%202019%2C) p39, 5.2.2 [↑](#footnote-ref-6)