[Downloaded free from http://www.thoracicmedicine.org on Thursday, February 28, 2019, IP: 155.198.12.56]

Editorial

Welcome new guidelines: Now the hard work starts!

Andrew Bush[1,2,3]

[1]Department of Pediatric, Imperial College, [2]Department of Pediatric, National Heart and Lung Institute, London, UK, [3]Royal Brompton Harefield NHS Foundation Trust, London, UK

Address for correspondence:
Prof. Andrew Bush, Department of Paediatric Respiratory Medicine, Royal Brompton Hospital, Sydney Street, London SW3 6NP, UK.
E-mail: a.bush@imperial.ac.uk

Submission: 24-11-2018
Accepted: 08-12-2018

Worldwide, asthma remains one of the major noncommunicable disorders contributing to morbidity and mortality. It is a hugely depressing fact that, despite the availability of effective treatments and evidence-based guidelines, outcomes have stalled, prompting the recent Lancet asthma commission.[1] The fact is that if the basics are done well by health-care professionals and patients and their families, asthma is a simple disease to manage. The recent update of the Saudi Initiative for Asthma (SINA): Guidelines for the diagnosis and management of asthma and children,[2] is a welcome step to try to achieve improvements and aligns closely with the recommendations of the commission.

The first step is putting the diagnosis of asthma on a firm basis, and this is stressed by SINA. There can be few if any diseases in which simple diagnostic tests can be performed, but in which patients are committed to long-term treatment without testing being performed. Cognizant that many children[3] and adults[4] are misdiagnosed with asthma, the guidelines stress the importance of documenting fixed and variable airflow obstruction, and where possible, airflow obstruction. Elsewhere, the need to abandon the notion that history and physical examination are sufficient to diagnose asthma has been stressed;[1,5] there can be few if any diseases in which simple diagnostic tests are available, but in which patients are committed to long-term treatment without these tests being performed.

Pharmacotherapy is an important part of asthma management, and we know that low-dose inhaled corticosteroids (ICS) are effective in reducing morbidity and mortality from asthma in a wide variety of settings.[6,7] However, as stressed by the guidelines, there is a lot more to optimal asthma management than pharmacotherapy. Rightly, it is stressed that failure to obtain control should mandate a complete reevaluation, rather than merely prescribing more treatment uncritically. Two important North American studies absolutely support this approach. In the Best Add-on Therapy Giving Effective Responses study, children symptomatic on fluticasone 100 mcg twice daily were given in random order with additional salmeterol and montelukast and had the ICS dose increased to 500 mcg/day.[8] One important lesson was that very few children gained any benefit from the increased ICS dose. The second study tried to determine if, in children symptomatic on moderate-dose ICS and long-acting β-2 agonist, it was better to add a leukotriene receptor antagonist or azithromycin.[9] The trial ended in futility because most of those recruited either did not have asthma or were not taking treatment. Furthermore, in a study to determine whether using exhaled nitric oxide to determine asthma treatment in inner-city children,[10] during the 3 weeks of protocolized therapy in the run-in period, the children became so well that there was no scope for any further improvement.

It is also important that asthma attacks are taken seriously. These are not mere "exacerbations," a feeble word implying a mild, reversible inconvenience.[11,12] They should be a "never event" like cutting off the

Access this article online
Quick Response Code:
Website: www.thoracicmedicine.org
DOI: 10.4103/atm.ATM_338_18

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

How to cite this article: Bush A. Welcome new guidelines: Now the hard work starts! Ann Thorac Med 2019;14:1-2.

[Downloaded free from http://www.thoracicmedicine.org on Thursday, February 28, 2019, IP: 155.198.12.56]

wrong leg in the operating theater. There is a welcome focus on trigger factors and their avoidance in the current guidelines and measures to reduce risk, such as influenza immunization.[13] The steps in treatment are clearly set out, and rightly, careful monitoring during an attack is stressed. Importantly, the single biggest risk factor for another asthma attack is a previous attack.[14] Hence, an asthma attack (or perhaps better, an asthma lung attack) needs to lead to a careful and focused reappraisal of all aspects of the child's management. In this regard, we have a lot to learn from the cardiologists, who in the patient who has had a heart attack (whoever heard a cardiologist talk about a "heart exacerbation"!) implement detailed follow-up and risk assessment protocols. As stressed by SINA, we need to stratify patients for the future risk of an attack and get professionals to understand that good control, desirable as it is, does not put the patient in a low-risk group for attacks.

Much asthma is treated by nonspecialists. The next challenge to SINA is implementation of the guidelines, getting them at the center of asthma care. The UK National Review of Asthma Deaths (NRAD)[15] makes depressing reading in this regard. Around 60% of those who died were not under specialist care and were not thought to have "severe" asthma! What was very clear was that there was easily avoidable mismanagement in most deaths. Basic measurements were not made during the attack. There was a failure to appreciate that the patient was not accessing ICS and accessing a huge number of canisters of short-acting β-2 agonists. In this regard, a recent manuscript[16] highlighted the depressing complacency of so many so-called asthma experts about the risks of excessive short-acting β-2 agonist prescribing. If conventional guidelines about the level of control are accepted, no patient should need more than one canister per year (200 doses, equivalent to utilization 2 days/week). Yet the prescription of a canister a month (equivalent to more than 6 puffs/day) was regarded as acceptable, despite clear-cut evidence to the contrary.

The NRAD is depressing because it is clear that, despite guidelines becoming more evidence-based, as in the case of SINA, outcomes have not improved. Hence, as a community, we must do better implementing the guidelines that we have. The Finnish Asthma Program[6] showed what can be done. Key to their success in driving down mortality and morbidity was education (stressed by SINA) and ensuring there were "asthma champions" in every area who took responsibility for ensuring asthma management was optimal, ultimately reducing costs as well as improving outcomes.

Hence, the SINA guidelines Group is to be congratulated on this update, which is thorough, scholarly, and wide ranging. However, the really hard work now starts. Unread guidelines never helped anyone. The group now needs to work on strategies to ensure that everyone treating asthma have this wisdom at their fingertips and are committed to implementation. It must be acknowledged that asthma is a killing disease and merits a focused approach to management. Too often, the diagnosis has not been taken seriously by patients and professionals across the world, with catastrophic results. This must change.

References

1. Pavord ID, Beasley R, Agusti A, Anderson GP, Bel E, Brusselle G, *et al.* After asthma: Redefining airways diseases. Lancet 2018;391:350-400.
2. Al-Moamary MS, Alhaider SA, Idrees MM, Al Ghobain MO, Zeitouni MO, Al-Harbi AS, *et al.* The Saudi initiative for asthma – 2016 update: Guidelines for the diagnosis and management of asthma in adults and children. Ann Thorac Med 2016;11:3-42.
3. Looijmans-van den Akker I, van Luijn K, Verheij T. Overdiagnosis of asthma in children in primary care: A retrospective analysis. Br J Gen Pract 2016;66:e152-7.
4. Aaron SD, Vandemheen KL, FitzGerald JM, Ainslie M, Gupta S, Lemière C, *et al.* Reevaluation of diagnosis in adults with physician-diagnosed asthma. JAMA 2017;317:269-79.
5. Bush A, Fleming L. Is asthma overdiagnosed? Arch Dis Child 2016;101:688-9.
6. Haahtela T, Tuomisto LE, Pietinalho A, Klaukka T, Erhola M, Kaila M, *et al.* A 10 year asthma programme in Finland: Major change for the better. Thorax 2006;61:663-70.
7. Soto-Martínez M, Avila L, Soto N, Chaves A, Celedón JC, Soto-Quiros ME, *et al.* Trends in hospitalizations and mortality from asthma in Costa Rica over a 12- to 15-year period. J Allergy Clin Immunol Pract 2014;2:85-90.
8. Lemanske RF Jr., Mauger DT, Sorkness CA, Jackson DJ, Boehmer SJ, Martinez FD, *et al.* Step-up therapy for children with uncontrolled asthma receiving inhaled corticosteroids. N Engl J Med 2010;362:975-85.
9. Strunk RC, Bacharier LB, Phillips BR, Szefler SJ, Zeiger RS, Chinchilli VM, *et al.* Azithromycin or montelukast as inhaled corticosteroid-sparing agents in moderate-to-severe childhood asthma study. J Allergy Clin Immunol 2008;122:1138-44.e4.
10. Szefler SJ, Mitchell H, Sorkness CA, Gergen PJ, O'Connor GT, Morgan WJ, *et al.* Management of asthma based on exhaled nitric oxide in addition to guideline-based treatment for inner-city adolescents and young adults: A randomised controlled trial. Lancet 2008;372:1065-72.
11. FitzGerald JM. Targeting lung attacks. Thorax 2011;66:365-6.
12. Bush A, Pavord I. Following Nero: Fiddle while Rome burns, or is there a better way? Thorax 2011;66:367.
13. Vasileiou E, Sheikh A, Butler C, El Ferkh K, von Wissmann B, McMenamin J, *et al.* Effectiveness of influenza vaccines in asthma: A systematic review and meta-analysis. Clin Infect Dis 2017;65:1388-95.
14. Buelo A, McLean S, Julious S, Flores-Kim J, Bush A, Henderson J, *et al.* At-risk children with asthma (ARC): A systematic review. Thorax 2018;73:813-24.
15. Available from: https://www.rcplondon.ac.uk/file/868/download?token=JQzyNWUs. [Last accessed on 2018 Nov 22].
16. McKibben S, Bush A, Thomas M, Griffiths C. "Tossing a coin:" defining the excessive use of short-acting beta2-agonists in asthma-the views of general practitioners and asthma experts in primary and secondary care. NPJ Prim Care Respir Med 2018;28:26.