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Supplement

Primary Care Respiratory Update



Improving outcomes in asthma as an inflammatory disease: spotlight on monitoring ICS underuse and over-reliance on SABA

Sponsored supplement

A report of a multi-disciplinary consensus meeting held in December 2018. AstraZeneca organised and fully funded the meeting and the production of this supplement. All meeting participants reviewed and commented upon the content of this supplement. The views expressed are not necessarily those of AstraZeneca or PCRS.

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Improving outcomes in asthma as an inflammatory disease: spotlight on monitoring ICS underuse and over-reliance on SABA

04 December 2018, London

This document summarises the discussions of a roundtable consensus meeting, initiated and sponsored by AstraZeneca UK on 04 December 2018 in London.

This meeting was funded by AstraZeneca UK, as part of AstraZeneca's Asthma Zero programme, which aims to advance clinical practice and improve quality of care for people

with asthma, working in collaboration with experts to improve knowledge, understanding of the condition, and patient experience.

MHP Communications, whose services are commissioned by AstraZeneca UK, supported the administration and running of the meeting. Attendees received support with appropriate travel costs for attending the meeting.

Attendees

- **Darush Attar-Zadeh** – Respiratory Lead Pharmacist, Barnet CCG
- **Dr Noel Baxter** – GP, Chair of PCRS-UK and led the primary care workstream of the RCP national asthma and COPD audit from 2015-2018
- **Dr James Calvert** – Consultant Respiratory Physician, Associate Medical Director at North Bristol NHS Trust, BTS National Audit Lead
- **Joanne Hamilton** – Respiratory Lead Nurse, Dudley Group NHS Foundation Trust
- **Professor Tim Harrison** – Honorary Consultant, University of Nottingham, Professor of Asthma and Respiratory Medicine, NIHR Nottingham Biomedical Research Centre, Nottingham University Hospitals NHS Trust
- **Dr Mark Levy** – Portfolio GP London, Clinical Lead National Review of Asthma Deaths (NRAD) 2011 – 2014; and Executive board member of the Global Initiative for Asthma (GINA)
- **Dr Vincent Mak** – Consultant Respiratory Physician, Imperial College Healthcare NHS Trust
- **Dr Anna Murphy** – Consultant Respiratory Pharmacist, University Hospitals of Leicester NHS Trust
- **Wendy Preston** – Respiratory Nurse, Association of Respiratory Nurse Specialist's (ARNS) and Head of Nursing Practice, RCN
- **Dr Dermot Ryan** – Honorary Clinical Research Fellow, University of Edinburgh, Vice President of Respiratory Effectiveness Group, previous chair of PCRS and recently retired GP
- **Carol Stonham, MBE** – Senior Respiratory Nurse Practitioner, Vice-Chair of PCRS UK
- **Dr Samantha Walker** – Deputy Chief Executive and Director of Research and Policy, Asthma UK
- **Dr John White** – Consultant Respiratory Physician, Clinical Lead for Respiratory Medicine, York NHS Foundation Trust

1. Introduction

Asthma is the most common chronic condition to affect children¹, and in the UK approximately 5.4 million people (1.1 million children and 4.3 million adults) are currently receiving treatment for asthma². There were 1,320 deaths attributed to asthma in England and Wales in 2017, 27 per cent of which were among people under 75³, with Asthma UK estimating that around 185 people are admitted to hospital every day in the UK². Importantly, most asthma admissions and asthma deaths are preventable^{4,5}. Asthma is a chronic and inflammatory disease and it has been proposed that patient

outcomes can in part be improved through addressing the reported underuse of preventer medications, including inhaled corticosteroid (ICS) maintenance therapy, coupled with over-reliance on reliever medication (short acting beta agonists – SABA)^{6,7}. This roundtable meeting was convened with stakeholders from the clinical and patient representative community to consider a consensus view on the need to tackle SABA over-reliance and ICS underuse at a national policy level in the UK, and how policy interventions could best support changes in clinical practice and patient education to improve asthma care and outcomes.

2. 'Zero tolerance on preventable asthma attacks' – consensus rationale and ambition

Asthma can be a devastating disease. Far from being described as a respiratory condition that 'causes occasional breathing difficulties'⁸, which children can 'grow out of'⁹, although this is more likely in male children¹⁰, asthma confers a considerable personal, societal and healthcare burden^{11,12}. While the incidence of asthma was reported to have plateaued in the 1990s, the UK still has some of the highest reported rates in Europe². Every day the lives of three families are devastated by the death of a loved one due to an asthma attack, and tragically it is estimated that two of these deaths are preventable^{2,4}. The UK has been identified as having the highest childhood (young people aged 10 – 14) asthma death rate out of 14 European countries (0.27 deaths per 100,000 age-specific population), the second highest death rate for adolescents (aged 15 – 19) out of 19 countries worldwide (0.32 deaths per 100,000 age-specific population), and the fourth highest death rate for young people (aged 20 – 24) out of 19 countries worldwide (0.30 deaths per 100,000 age-specific

population)¹³. In recent years, there has been a drive to increase the evidence and awareness of the impact of asthma⁴ with clinical leadership addressing the need to improve asthma outcomes in the UK¹⁴. Following the National Review of Asthma Deaths (NRAD)⁴ there have been numerous examples of clinical audit in the UK, including the general practice review in Bedfordshire¹⁵, which have emerged looking at incentivising improved patient performance, standardising clinical decision making and better understanding the patient burden. There is a distinct need, as identified by the roundtable attendees, to develop and implement measurable and reportable national policy frameworks to improve care across the UK. By acknowledging asthma as a chronic, inflammatory disease, coupled with the advent of medical interventions and patient training to reduce the risk of attacks, the group agreed that we are now entering an era where there should be the ambition to strive for 'zero tolerance for preventable asthma attacks'. What is required now are the policy frameworks to sustainably support this ambition.

3. Understanding the patient journey and its effect on SABA overuse

The group discussed the steps within the patient journey which are most likely to be causally linked to the increased risk of SABA overuse and / or ICS underuse. It was considered that accurate and timely diagnosis of asthma should be the first step to be addressed, to avoid misdiagnosis and any inappropriate prescribing and ongoing use of SABA monotherapy. Other noted challenges included:

1. The lack of clinical consensus on the appropriate number of SABA repeat prescriptions over a year and / or the correct ratio of SABA / ICS prescriptions over the same time period beyond which should trigger a clinical review (acknowledging that some patients store multiple inhalers around their home or place of work in case of an emergency, which can impact overall figures dispensed in the year)
2. Lack of aligned communications between primary care, emergency care and pharmacy to alert clinical decision-makers to potential over-reliance of SABA in the absence of ICS prescriptions
3. Routine automated prescribing and dispensing of SABA without clinical oversight or scrutiny
4. Poor patient attendance to annual asthma reviews – even, as was reported, by patients who had recently been admitted into Accident and Emergency (A&E) departments with an asthma attack. The group also acknowledged that asthma reviews can be ‘tick box exercises’ which may sometimes fail to address all of the asthma control questions recommended by the Royal College of Physicians – and which may not always sufficiently identify patients at risk of going on to have a subsequent asthma attack
5. Variation in the use of personal asthma action plans, despite evidence to suggest that they aid patient self-awareness and confidence and may reduce subsequent hospital visits
6. Triggered, episodic asthma reviews are not routinely requested nor undertaken following a patient’s attendance at A&E or admission into hospital due to an asthma attack, which limits the opportunity for a ‘teachable moment’ and a review of asthma care
7. Hospital Episodic Statistics do not currently allow for coding of patient visits to A&E as a result of an asthma attack which does not lead to an admission. Therefore, the overall numbers of hospital burden and patient need are under-reported and the impact under-estimated

3a. Patient pathway: Group reflections and recommendations

The group considered that there needed to be more outcomes-driven incentives to displace the current ‘perverse’ Quality Outcomes Framework (QOF) incentive¹⁶ and re-set clinical practice to improve overall outcomes and reduce patient burden. There was also a desire among the group to halt the current automation of SABA monotherapy repeat prescribing and dispensing and consider GP

system and community pharmacy system electronic alerts to flag prescription over the desired maximum level / ratio. To do this however, the group agreed that there needed to be more concrete clinical recommendations within guidelines on a threshold number of SABA prescription per year and / or SABA / ICS ratio beyond which should trigger a clinical review.

4. Developing a compelling policy call to action to improve asthma outcomes as an inflammatory disease, tackling over-reliance on SABA and underuse of ICS

Attendees of the meeting were largely sceptical that healthcare policy makers, both parliamentarians and NHS policy, were keen to look at additional frameworks to improve asthma care. It was flagged that from the final recommendations of the NRAD publication in 2014⁴ only one of the 19 NRAD recommendations (annual audit) have been partially implemented and only focused on hospital practice. However, the group agreed that SABA over-reliance is a patient safety issue and that further advocacy is required to support distinct policy change to improve outcomes, primarily by tackling SABA over-reliance and underuse of ICS. The group considered the following policy intervention recommendations:

Patient safety alert

The discussion centred on the role of NHS Improvement as a mechanism for capturing evidence and attention on asthma deaths. There then followed a discussion that encouraging routine reporting of asthma deaths through the Coroners' Court might then compel NHS Improvement to review reported cases and make recommendations to reduce further preventable deaths. The group discussed qualitative examples of where known, preventable deaths have occurred in patients with exceptionally high previous SABA reliance, or recent asthma attacks, which did not prompt further clinical review of the patient.

Behaviour change campaign

The group also discussed the benefit of a national behaviour change campaign to break the relationship and reliance that patients have with their SABA inhalers. The group acknowledged that removal of SABA monotherapy completely from clinical practice could lead to confusion, especially among patients with COPD where its use is

still clinically relevant and could put asthma patients at increased short-term risk. However, structured education to help people a) understand the underlying inflammatory nature of their condition and therefore the need for anti-inflammatory maintenance therapy and b) better acknowledge the potential severity of their condition to improve concordance and compliance with their prescribed treatment, would be beneficial.

Pharmacists' reviews

The group discussed the important role of community and primary care pharmacists in providing structured patient education and challenging repeat prescriptions of SABA in the absence of a corresponding ICS prescription.

GP practice reviews

A review of current incentives to include proactive, episodic reviews following A&E visits or admissions were discussed, with corresponding personal asthma action plans recommended to prevent further preventable attacks. These reviews also offer a good forum for inhaler technique training and troubleshooting. The group considered that 'if it gets measured, it gets done' and the 2020 QOF indicator for asthma would be the appropriate platform to ensure quality review of prescribing and identify SABA overuse.

Asthma pathway data

Further data are required to understand the numbers of patients visiting A&E without subsequent admission, and how a patient's treatment or management plan is changed accordingly. There was an acknowledgement from the group that the data surrounding the asthma patient pathway is incomplete, and further research and audit to best identify opportunities in the patient pathway where change can be most effective, would be valuable.

4a. Policy action: group reflections and recommendations

At the centre of all recommendations was the need for consensus within the clinical guidelines on the threshold for review of SABAs to be prescribed over the course of the year, beyond which should trigger a clinical review, which it was proposed should be the remit of the British Thoracic Society (BTS) / Scottish Intercollegiate Guidelines Network (SIGN), within their current ongoing review of clinical guidelines¹⁷. The group acknowledged the challenges of recommending an integer in this case but advocated for the need for a distinct trigger point to prompt review and / or a ratio of SABA / ICS, and to ensure monotherapy is no longer an option.

The group recommended that SABA should not be routinely prescribed as an automatic repeat prescription and should not be routinely used without ICS.

The impending NICE QOF indicator review was seen as the appropriate forum to encourage the adoption of more quality asthma reviews and action plans, linked to minimising SABA use without follow-up review.

The group also considered that the use of programmed electronic GP system alerts would support a shift toward the SABA / ICS ratios recommended above.

5. Conclusions and next steps

The group agreed that there was an imperative to tackle the current entrenched habitual prescribing of SABA to support improved asthma care. The group remained committed to working together and collaboratively to advocate for national policy changes to achieve this goal, in line with the current clinical evidence and best practice.

In summary, the group concluded the following principles to underpin future policy activity:

- SABA over-reliance is a patient safety issue and NHS Improvement should play a role in identifying all cases where a child with asthma dies to ascertain (with expert input) whether asthma played a role in the death, and whether there were any preventable / modifiable factors. These cases should be referred for HM Coroner's consideration and, if appropriate, for inquests
- SABA should not be routinely used on repeat prescription in asthma, and there should be consideration given to electronic alert systems in GP practices and community pharmacies to reduce automatic prescription and dispensing without clinical review
- There should be clearer guidelines on the threshold of SABA prescriptions over a year and / or a recommended ratio of SABA / ICS agreed, above which a patient should be reviewed, and this should be led by BTS / SIGN
- Further data are required to establish the current hospital (admissions and A&E attendance) burden of asthma attacks and to better create a 'case for change' in ensuring quality, episodic reviews of patient treatment recommendations following a hospital visit / hospitalisation
- The 2020 QOF indicator review provides a timely opportunity to advocate for quality patient care and treatment reviews
- Reliance on frequent supplementary use of SABAs, or a sudden increase in dose, indicates poorly controlled or deteriorating asthma and should warrant a clinical review of the patient
- Consensus of this meeting to be shared with PCRS who have launched an Asthma Right Care (ARC) campaign¹⁴, with an initial focus on SABA over-reliance

References

1. World Health Organization (WHO). Asthma. 2019. <https://www.who.int/respiratory/asthma/en/> (Accessed January 2019).
2. Asthma UK. Asthma facts and statistics. 2019. <https://www.asthma.org.uk/about/media/facts-and-statistics/> (Accessed January 2019).
3. Office for National Statistics (ONS). Death Registrations summary tables – England and Wales. 2017. Online; 2018. Available from: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/deathregistrationssummarytablesenglandandwalesreferencetables>
4. Royal College of Physicians. Why asthma still kills: The National Review of Asthma Deaths (NRAD). Online: Royal College of Physicians; 2014. Available from: <https://www.rcplondon.ac.uk/projects/outputs/why-asthma-still-kills>
5. Asthma UK. The reality of asthma care in the UK, Annual Asthma Survey 2018 report. Online: Asthma UK; 2018. Available from: <https://www.asthma.org.uk/globalassets/get-involved/external-affairs-campaigns/publications/annual-asthma-care-survey/annual-asthma-survey-2018/asthmauk-annual-asthma-survey-2018-v7.pdf>
6. Pavord I et al. After Asthma: redefining airways diseases. *Lancet*. 2018;391:350-400. doi: 10.1016/S0140-6736(17)30879-6
7. O'Byrne P et al. The paradoxes of asthma management: time for a new approach? *Eur Respir J*. 2017;50:1701103. doi: 10.1183/13993003.01103-2017
8. National Health Service (NHS) UK. Overview: Asthma. 2018. <https://www.nhs.uk/conditions/asthma/> (Accessed January 2019).
9. NHS UK. Growing out of asthma. 2008. <https://www.nhs.uk/news/heart-and-lungs/growing-out-of-asthma/> (Accessed January 2019).
10. Tantsira K et al. Airway Responsiveness in Mild to Moderate Childhood Asthma. *Am J Respir Crit Care Med*. 2008;178:325-331 doi: 10.1164/rccm.200708-1174OC
11. Mukherjee M et al. The epidemiology, healthcare and societal burden and costs of asthma in the UK and its member nations: analyses of standalone and linked national databases. *BMC Med*. 2016;14:113 doi: 10.1186/s12916-016-0657-8
12. Asthma UK. Annual Asthma Survey 2016 report. Online: Asthma UK; 2016. Available from: <https://www.asthma.org.uk/share/?rid=6770>
13. Nuffield Trust. International comparisons of health and wellbeing in adolescence and early adulthood. Online: Nuffield Trust; 2019. Available from: <https://www.nuffieldtrust.org.uk/research/international-comparisons-of-health-and-wellbeing-in-adolescence-and-early-adulthood>
14. The Primary Care Respiratory Society. Asthma Right Care. 2018. <https://www.pcrs-uk.org/asthma-right-care> (Accessed January 2019).
15. Levy M et al. A review of asthma care in 50 general practices in Bedfordshire, United Kingdom. *npj Pri Resp Med*. 2018;28(29). doi: 10.1038/s41533-018-0093-7
16. NHS Digital. Quality and Outcomes Framework. 2019. <https://qof.digital.nhs.uk/> (Accessed January 2019).
17. British Thoracic Society (BTS). BTS/SIGN British guideline on the management of asthma. 2018. <https://www.brit-thoracic.org.uk/standards-of-care/guidelines/btssign-british-guideline-on-the-management-of-asthma/> (Accessed January 2019).

