

National Review of Asthma Deaths (NRAD) & Asthma prescribing – implications for the inhalation community

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Summary

The National Review of Asthma Deaths (NRAD), investigated deaths throughout the United Kingdom in the 12 months from February 2012. This was a confidential enquiry, conducted under Section 251 of the United Kingdom NHS Act 2006, which enabled access to the deceased's medical records without consent from relatives. 276 cases of all ages, classified under the WHO ICD-10 system as asthma deaths, were investigated in detail by health professionals from primary, secondary and tertiary care. 195/276 (71%) were classified by the enquiry panels as asthma deaths, and as in previous studies, major potentially preventable factors were identified in over 60% of cases. These included failure to perform adequate assessments, such as checking patient's inhaler technique. A surprise finding was that many of those who died were issued excess prescriptions for short acting beta-2-bronchodilators (SABAs), insufficient prescriptions of inhaled corticosteroids and unopposed long acting bronchodilators (LABAs).

Nearly half of those who died, failed to call for or get treatment in their final attack. This may have been explained by the fact that only 23% of those who died had evidence of having been provided with a self management plan detailing their medication, the rationale for using it, how to recognise risk and when to seek medical assistance. There was a failure to identify risk factors, to implement national guidelines in the management of chronic and acute asthma attacks. Sadly, 18 months after the report, there has been little official action taken by the UK Department of Health who commissioned this study.

Introduction

Asthma is a common condition affecting about 6% of adults and 15% of children in the United Kingdom. With modern drug formulations together with delivery devices for inhaling the medication asthma attacks are preventable in most cases; however asthma is responsible for considerable costs due to health care utilisation (mainly unscheduled), as well as to medication, and lost productivity. Asthma death studies over the last 50 years have consistently demonstrated potentially preventable factors.^{1 2 3 4 5 6 7 8 9 10} On this background, and based on evidence from the ongoing confidential enquiry into asthma deaths in the east of England,^{10 11} the UK Department of Health, through the Healthcare Quality Improvement Partnership (HQIP) commissioned The National Review of Asthma Deaths (NRAD). This was performed and published by the London Royal College of Physicians. The aim of the NRAD was to understand the circumstances surrounding asthma deaths in the UK, in order to identify avoidable factors and make recommendations for changes to improve asthma care as well as patient self-management. This was not a prevalence study.

Methods and results

NRAD was a confidential enquiry, conducted with approval under Section 251 of the NHS Act 2006, which enabled access to the deceased's medical records without the need for consent from relatives. The methodology was informed by a consortium of representatives from professional respiratory societies and Royal Colleges, asthma and allergy charities and representatives from the UK Departments of Health.

All deaths that occurred throughout the United Kingdom in the 12 months from February 2012 with the word asthma or anaphylaxis on death certificates (3544 cases) were considered for further investigation. 2130 (60%) cases were excluded because they were not classified under the WHO ICD-10 system as asthma deaths (ie J459), and a further 514 (15%) because they were over 75 and asthma was entered in part II of the death certificate. The doctors caring for the remaining 900 cases of all ages classified as asthma deaths, were sent requests by recorded delivery mail, for copies of medical records, correspondence, prescribing records, and completion of forms related to the final as well as previous attacks. On the basis of the medical records and correspondence, 352 cases (39% of these cases were excluded as not having died from asthma. Insufficient medical information was received for 272 cases (30%) and the 276 cases (31%) for whom sufficient information was available were considered in detail at panel discussions by health professionals from primary, secondary and tertiary care. Each case was studied in depth by two clinicians, and all cases were discussed by panellists during 37 one day meetings; their task was to decide whether the people had asthma, whether they died from asthma and what lessons could be learnt from these deaths.

The results were collated, and then published in a report entitled 'Why Asthma Still Kills', on World Asthma Day, 6th May, 2015.

Key Results:

As in previous asthma death studies, major potentially preventable factors were identified in over 60% of those who died. These included failure to recognise risk, failure to implement guidelines, lack of asthma expertise, failure by patients to adhere to medical advice, failure to assess and manage patients ongoing and exacerbations of asthma and failure to follow patients up after treatment for acute attacks. These findings were observed in cases irrespective of where they were managed (ie primary or secondary care).

Nearly half (45%) of those who died, failed to get treatment in their final attack, either because they didn't call for or receive help. This may have been explained by the fact that only 23% of those who died had evidence of having been provided with a self management plan detailing their medication, the rationale for using it, how to recognise risk and when to seek medical assistance.

58% of cases who died were classified by their doctors with 'mild or moderate' asthma, however less than 20% had evidence of a review of asthma control, and therefore classification of severity was not possible in the majority of cases.

Major factors related to prescription of medication were identified. These included failure to check inhaler technique in 96/195 (49%) and 14/83 (17%) cases treated in primary and secondary care respectively. The panels were surprised to note that extremely high numbers of prescriptions for short acting beta-2-bronchodilators (SABAs), and insufficient numbers of prescriptions for inhaled corticosteroids were issued in the 12 months before death. Furthermore five patients who died from asthma had been prescribed long acting bronchodilators (LABAs) without inhaled corticosteroids.

Conclusion

The findings of the NRAD, that high numbers of preventable asthma deaths persist despite modern medication and the existence of evidence based asthma guidelines is extremely depressing and very difficult to understand. These findings should be acted upon at the highest levels in order to reduce the ongoing, preventable suffering demonstrated in this confidential enquiry. The NRAD made 19 recommendations for change in the areas of Organisation of NHS services, Medical and professional care, Prescribing and medicines use and Patient factors and perception of risk, and to date only one of these has been implemented nationally; a National Audit has been commissioned. It is time for change, and this may involve a different approach to systems for providing asthma care.¹²

The full report entitled 'Why Asthma Still Kills' is available online.¹³

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