

key points

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Asthma deaths in the UK remain among the highest in Europe. The 2014 National Review of Asthma Deaths looked at detailed data over a 12-month period assessing 195 patients who died from asthma and highlighted the avoidable factors in patient deaths. Although faults were found in secondary care, many of the problems related to poor management of patients in the community, both in terms of regular surveillance and assessment and treatment at the onset of attacks.

Features which indicate a high risk of severe attacks include: previous admission to intensive care, particularly if requiring mechanical ventilation; previous admission with asthma especially in the past year or repeated emergency admissions; history of worsening asthma in January or February; use of three or more classes of asthma medication; heavy use of beta-2 agonists; anxiety traits; and marital stress.

More than 80% of patients in one case control study reported worsening symptoms in the previous 48 hours and had felt unwell at least seven days prior to hospital admission. This suggests that there is a window of opportunity to assess and treat patients adequately before a near fatal or fatal attack develops.

Peak expiratory flow improves the recognition of severity when compared with examination alone. Oxygen should be used to maintain oxygen saturation of 94-98% and it is recommended that GP surgeries have oxygen and an oximeter available. For anything other than life-threatening asthma, a standard metered dose inhaler administered with repeated actuations via a large volume spacer is as effective as a nebuliser. If a nebuliser is used it should ideally be driven with oxygen but nebulisers should not be withheld if oxygen is not available.

Oral steroids are required for all patients experiencing attacks of moderate severity or worse as they improve symptoms and reduce mortality, hospital admissions and the need for beta-2 agonists. The earlier steroids are administered the better the outcome. Admission is critical for patients with features of life-threatening asthma. If infection is present in asthma attacks it is usually caused by a virus and antibiotics are not appropriate. Good antibiotic stewardship is vital and antibiotics should be reserved for the minority of cases with a likely bacterial cause.