Evidenced-Based Allergy Statistics for Consistency across NAS Working Groups

ALLERGY IN THE UK

Rates of allergic diseases (such as asthma, hay fever, and food allergies) have been increasing. The UK has some of the highest rates of allergic conditions in the world, affecting **over one-quarter of the population**.

- In the UK, there has been a trebling in the prevalence of allergic rhinitis and eczema since the 1970s.[1]
- A 2004 analysis highlighted the scale of the "allergy epidemic" in the UK: 39% of children and 30% of adults were affected by allergies.[2]
- Around 6% of all visits to GPs are due to “allergies”, and medicines to treat allergic diseases account for 10% of the total GP prescribing budget.[3]
- The direct costs to the NHS for managing allergic diseases is over £1 billion per annum[2] – a figure which does not include indirect costs such as lost workdays.

More recently, prevalence appears to have stabilized and even decreasing a little.[1,4] However, these same datasets show an **increase in the *severity* and *complexity* of allergic disease**:

- Hospital admissions for anaphylaxis increased 3-fold between 1998 and 2018.[5]
- The number of people with multi-complex allergic diseases increased by 49% between 2001 and 2005,[6]
- and at least 1 in 20 people are now affected.[3]

ASTHMA / PRESCHOOL WHEEZE

- Around 1 in 10 children/young people experience asthma or preschool wheeze, of whom 25% have moderate-severe disease.[4] Although the number of new diagnoses fell between 2008 and 2018, the number of people having acute exacerbations has increased by 36%.[4]
- The lifetime prevalence rate for asthma in adults of around 25%, with an estimated 5.7 million people having been diagnosed with asthma in England.[7]
- In 2016, asthma resulted in at least 6.3 million GP consultations, 93,000 hospital admissions (equivalent to one hospitalisation every 6 minutes), 1800 admissions to intensive care, and 36,800 disability living allowance claims.[8]
- According to the Office for National Statistics, there were more than 1,400 asthma deaths in the UK in 2018, an increase of 8% compared with 2017. Deaths from asthma are much higher in the UK than in continental Europe.[9]

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[1]Gupta et al. Thorax 2007;62(1):91-6. doi: 10.1136/thx.2004.038844.
[2]Gupta et al. Clin Exp Allergy 2004;34(4):520-6. doi: 10.1111/j.1365-2222.2004.1935.x.
[3]Royal College of Physicians (2003) "Allergy-the unmet need: a blueprint for better patient care" ISBN 1 86016 183 9.
[4]Kallis et al. Thorax. 2023;78(12):1175-1180. doi: 10.1136/thorax-2022-219757.
[5]Baseggio Conrado et al. BMJ. 2021;372:n251. doi: 10.1136/bmj.n251.
[6]Simpson et al. J R Soc Med. 2008;101(11):558-63. doi: 10.1258/jrsm.2008.080196.
[7]Simpson & Sheikh. J R Soc Med. 2010;103(3):98-106. doi: 10.1258/jrsm.2009.090348.
[8]Mukherjee et al. BMC Med. 2016;14:113. doi: 10.1186/s12916-016-0657-8
[9]European Commission: Eurostat data for 2011-2018, standardised death rate by cause and region of residence.

ALLERGIC RHINITIS (including "hay fever")

- Allergic rhinitis affects between 10-15% of children[10] and 26% of adults in the UK.[11]
- Allergic rhinitis leads to daytime fatigue and decreased cognitive functioning.[12]
- School students with active hay fever sitting GCSE exams are 40% more likely to drop a grade between their "mocks" and final exams, and 70% more likely if taking sedating antihistamines.[13]

FOOD ALLERGY AND ANAPHYLAXIS

- Around 4% of preschool-aged children and 2.4% of school-aged children have food allergy.[14]
- Although prevalence has doubled since 2008, the number of new cases in younger children may be plateauing – perhaps due to new infant feeding advice for parents *not* to delay introducing potential food allergens (such as peanut) into their baby's diet.
- Around 1% of adults have a diagnosis of food allergy,[14] however the true rate is likely to be nearer 2% after including less severe presentations (such as pollen-food allergy syndrome).[15]
- Despite a three-fold increase in hospital admissions due to food-related anaphylaxis between 1998 and 2018, the death rate from food allergy has halved.[16] Since 1992:
- There are around 10 deaths due to food allergy per year; half are due to peanut/tree nuts.[16]
- Cow's milk causes over a quarter of deaths in children and is now the single-most common cause of fatal anaphylaxis in children/young people.[16]
- Almost 20% of food allergy deaths in school aged children happen in school.[17]
- National guidelines recommend food-allergic individuals at risk of anaphylaxis to be prescribed adrenaline auto-injectors for emergency treatment of reactions. However, under 50% of those with previous food-anaphylaxis are prescribed this on a regular basis – this is more common in areas of socioeconomic deprivation.[14]
- Less than 10% of children with a food allergy are seen in a specialist allergy clinic in hospital.[14]

ECZEMA

- One third of the UK population report having itchy skin consistent with eczema.[1]
- Around 25% of UK children have eczema. Children with eczema were over twice as likely to have asthma and hay fever, and almost 5 times more likely to have food allergy compared to children without eczema.[18]

[10] Asher et al. Lancet. 2006;368(9537):733-43. doi: 10.1016/S0140-6736(06)69283-0.
[11] Bauchau & Durham. Eur Respir J. 2004;24(5):758-64. doi: 10.1183/09031936.04.00013904.
[12] Léger et al. Arch Intern Med. 2006;166(16):1744-8. doi: 10.1001/archinte.166.16.1744.
[13] Walker et al. J Allergy Clin Immunol. 2007;120(2):381-7. doi: 10.1016/j.jaci.2007.03.034.
[14] Turner et al. Lancet Public Health. 2024;9(9):e664-e673. doi: 10.1016/S2468-2667(24)00163-4.
[15] Skypala et al. Clin Exp Allergy. 2013;43(8):928-40. doi: 10.1111/cea.12104.
[16] Baseggio Conrado Aet al. BMJ 2021;372:n251. doi: 10.1136/bmj.n251.
[17] Turner et al. J Allergy Clin Immunol. 2015;135(4):956-963.e1. doi: 10.1016/j.jaci.2014.10.021.
[18] Chiesa Fuxench et al. J Am Acad Dermatol. 2024;90(3):561-568. doi: 10.1016/j.jaad.2023.11.013.

DRUG ALLERGY
• Drug allergies and adverse drug reactions account for over 60,000 hospital admissions in England each year.[19] Between 1998 and 2012, admissions due to severe drug allergic reactions increased by 82%, with the greatest increase in older patients.[17] • Up to 15% of inpatients have their hospital stay prolonged as a result of an adverse drug reaction.[19] • An estimated 2.7 million people in the UK have a label of penicillin allergy, but about 95% of these penicillin allergy labels are incorrect, resulting in antibiotic resistance, longer hospital stays and increased healthcare costs of over £1000 per patient.[20,21] • The incidence of perioperative anaphylaxis is 1 per 10,000 anaesthetics; around half of these are due to antibiotics. Up to 4% of perioperative allergic reactions are fatal.[22]

[19] National Institute for Health and Care Excellence: Drug allergy - Clinical guideline 183, 2014.
[20] Savic et al. Clin Exp Allergy. 2022;52(10):1135-1141. doi: 10.1111/cea.14217.
[21] Mattingly et al. J Allergy Clin Immunol Pract. 2018;6(5):1649-1654.e4. doi: 10.1016/j.jaip.2017.12.033.
[22] Harper et al. Br J Anaesth. 2018;121(1):159-171. doi: 10.1016/j.bja.2018.04.014.