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Trends in admissions for allergy

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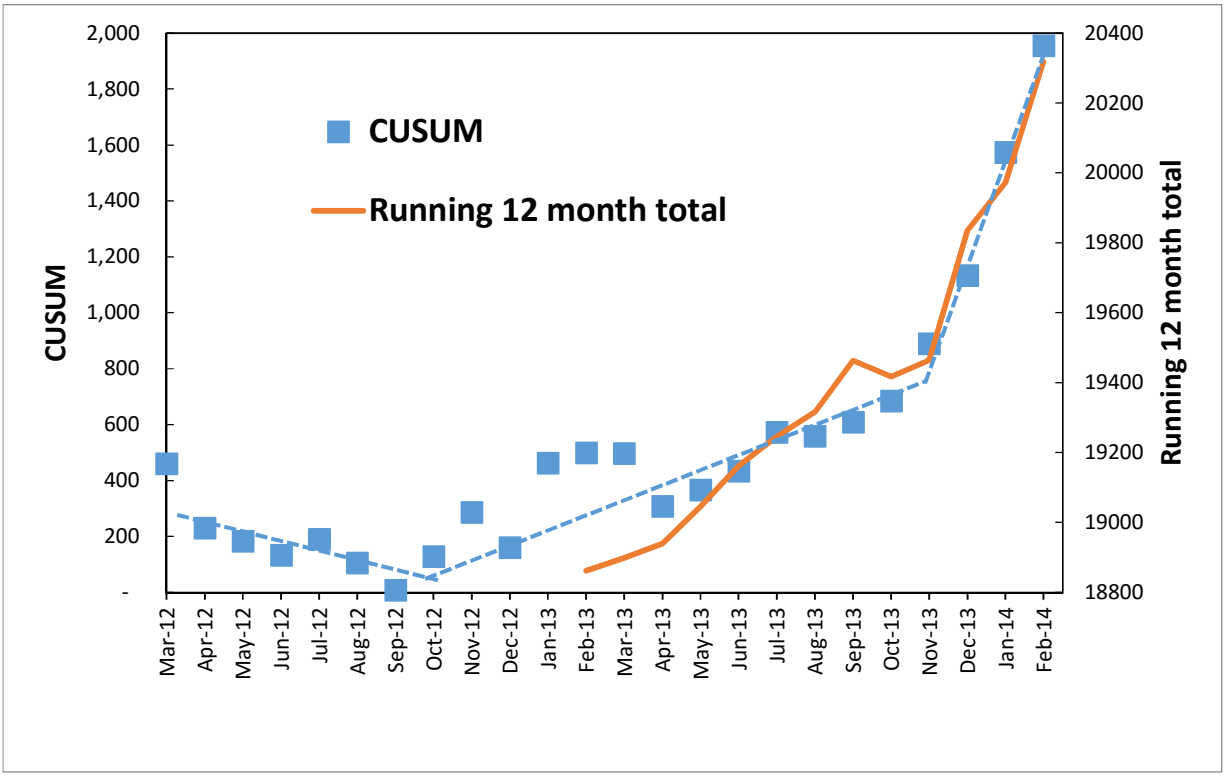
The NHS Health & Social Care Information Centre has recently released analysis of startling changes in the trends in admissions for allergy. Only limited data from March 2012 to February 2014 is available, however this is sufficient to conduct some illuminating analysis. Two methods have been used, namely, a CUSUM (the cumulative sum of differences to the mean) and a running 12 month total. The monthly average used in the CUSUM was derived from the period March 2012 to February 2013.

Figure 1: Trends in admissions for allergy in England



Footnote: Data is from the NHS Health & Social Care Information Centre http://www.hscic.gov.uk/article/2021/Website-Search?q=allergy&go=Go&area=both. ICD-10 diagnosis codes used in the study were as follows: J301-J304, J450, K522, L230-L239, L500, L561, T780-T782, T784, T805, T886.

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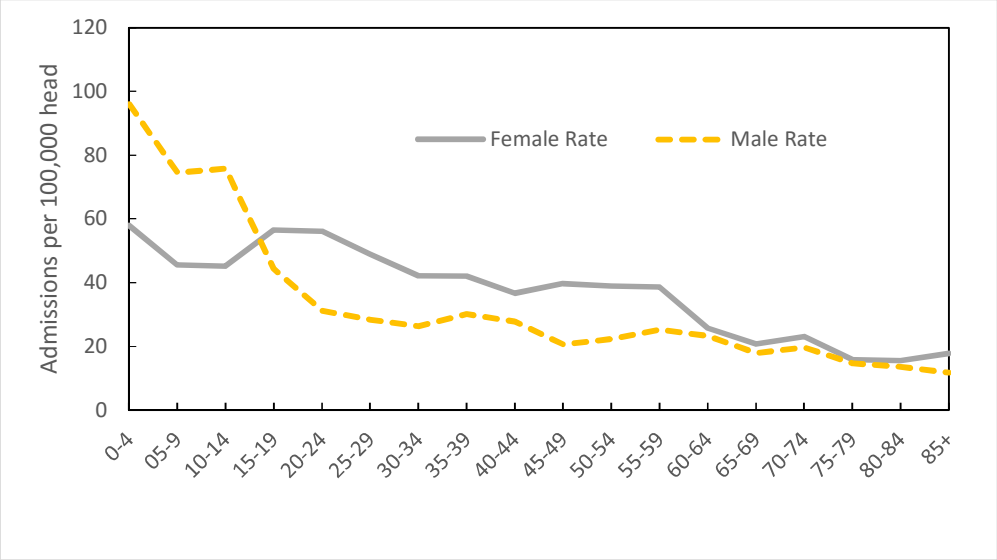
As can be seen, due to lack of a longer time series the running 12 month total misses the commencement of a fundamental shift in admission rates detected by the CUSUM at around October 2012, while both methods detect a further and larger shift around 12 months later.

Regular readers of BJHCM will know that this journal has been highlighting the existence of a regular series of infectious outbreaks, the latest of which occurred in early 2012 (Jones 2014f), and which appear to have profound effects against immune function (see Jones 2013a,b for reviews). Spread of this infectious agent is via a series of highly local mini-epidemics (Jones 2014c-d, Jones & Beauchant 2014) which appear to involve respiratory transmission (Jones 2014g). While death due to this infectious agent is restricted to those aged over 65 years (Jones & Goldeck 2014, Jones 2014a,e,g) the pattern of allergic admissions shown in Figure 2 is more prominent for the younger ages in males, but overall involves generally higher rates in females across multiple ages up to around 60 years.

Figure 2: Admission rates for all allergic conditions.



As can be seen in Table 1 the increase in admissions was condition and gender specific. An almost identical response for anaphylaxis and various allergies was documented immediately after one of the previous outbreaks, which occurred in early 1993 (Sheikh & Alves 2000).

Table 1: Gender-specific increases for different diagnoses

Diagnosis	Female	Male
Allergic Rhinitis	13.3%	10.9%
Anaphylactic Reactions	8.1%	12.3%
Allergic Asthma	2.7%	8.7%
Food Allergies	4.5%	8.0%
Other	6.7%	7.1%
Allergic Contact Dermatitis	4.5%	2.8%

Footnote: The percentage increase was calculated over the period March 2013 to February 2014 versus the same period a year earlier.

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While both the Department of Health and Public Health England appear content to remain silent regarding this huge infectious event, it is clear that a monumental event of profound public health significance has occurred. The biphasic response seen in Figure 1 appears part of a wider disease time – cascade which appears to emanate out of these outbreaks and which seems likely to be immune-based (Jones 2013c,d,f, 2014a,c-e,g). While the ubiquitous herpes virus, cytomegalovirus (CMV), has been circumstantially implicated urgent studies are needed to confirm if this is the ultimate causative agent. The effects against costs are likewise profoundly complex with unique patterns of spread, specific single year of age effects against particular conditions, and uniquely appear to affect the affluent more so than the deprived (Jones 2014c-e, Jones & Beauchant 2014). Almost every assumption in the NHS funding formula is invalidated as are large tracts of current health care policy.

Why are the very authorities tasked with protecting public health choosing to remain silent?

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