

An edited version of this article has been published as: Jones R (2015) Links between bed occupancy, deaths and costs. *British Journal of Healthcare Management* 21(11); 544-545. Please use this to cite.

# Links between bed occupancy, deaths and costs

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In a previous Money Matters article strange step-like behaviour in bed occupancy was demonstrated to occur in English hospitals. It has been claimed that periods of unexpected and unexplained higher deaths (Jones 2015a) are linked with periods of higher A&E attendance, medical admissions, changes in GP referral (Jones 2015c), bed occupancy (Jones 2015b), changes in the follow-up to first ratio in outpatient attendance (Jones 2015l), changes in staff sickness absence (Jones 2015d), far higher deaths for those with existing neurological conditions (Jones 2015e), a small but significant wobble in the gender ratio at birth (Jones 2013), and a degree of single-year-of-age specificity (Jones 2014a, Jones & Beauchant 2015). All of which are highly indicative of a biological rather than organisational aetiology.

To investigate further Fig. 1 shows a running 12 month average of acute bed occupancy in England along with two randomly chosen local authority areas, both in Staffordshire. As before an inverted “V” shaped feature in a running 12 month chart has a precise meaning, namely, that there has been a sudden step-like increase in either deaths or bed occupancy which endures for around 12 months before reverting back to the (expected/normal) baseline (Jones & Beauchant 2015).

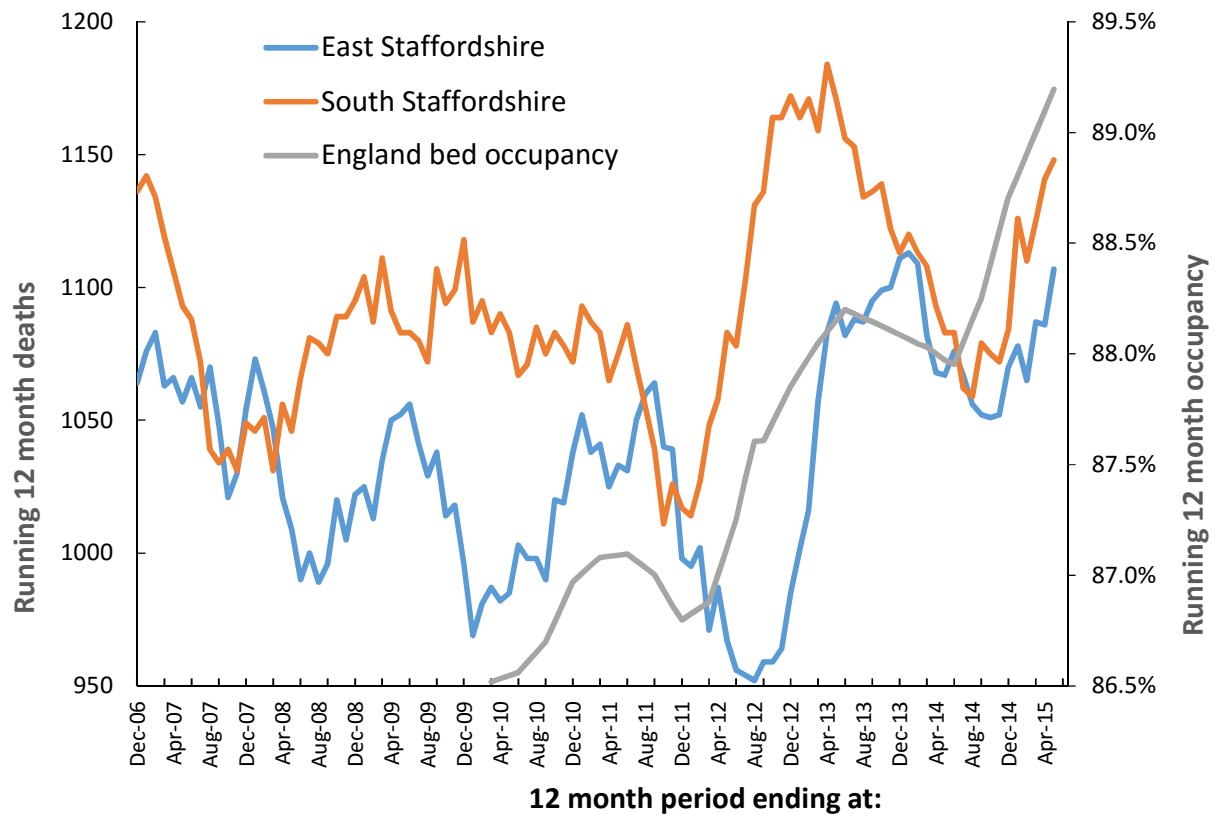
While charts have been previously presented showing step-like behaviour in deaths, A&E attendances and emergency admissions for the whole of England Fig. 1 shows running total deaths in two roughly adjacent local authorities in Staffordshire, chosen entirely at random. The point of choosing two adjacent local authorities is to demonstrate that whatever is causing the unexpected and unexplained increases in deaths shows spatial differences. So in the case of the 2012 event South Staffordshire initiates prior to East Staffordshire (Jan-12 versus Aug-12) and to a lesser degree for the 2014 event (Jul-14 versus Oct-14). The 2008 and 2010 events in East Staffordshire are clearly delineated while they appear to merge for South Staffordshire.

It must categorically be stated that the weather cannot cause these differences since the two locations are simply too close together, and it would take massive differentials in temperature over a full 12 month period to achieve such differences (Ekamper et al 2009). Research has consistently shown that the ‘apparent’ trends seen at local authority level are the aggregate result of the spatial spread of an as

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yet unidentified agent throughout all of the smaller constituent parts of the larger local authority area (Jones 2014b, Jones 2015g,k, Jones & Beauchant 2015).

**Figure 1: Running totals of deaths in Staffordshire and average acute bed occupancy in England**



Footnote: Monthly deaths are from Office for National Statistics (ONS).

On this basis the average hospital occupancy rate for the whole of England is a composite picture of spread across the whole of England (Jones 2015i), which in this instance is illustrated by the changes in death seen in the different parts of Staffordshire. The fairly sharp saw tooth pattern in bed occupancy observed in 2012 and 2014 is due to a high level of synchrony, i.e. many areas initiate at roughly the same time. The more rounded response for the 2010 event is due to a lower degree of spatial synchrony, as has been demonstrated for changes in emergency admissions in Wigan (Jones 2015g) and deaths in England (Jones 2015a). There is now emerging evidence that these events are even skewing the perceived levels of excess hospital mortality (Jones 2015j).

These mystery events are dominating financial performance of the health services both in the UK and in the US (Jones 2015a,c), and most probably across the entire Western world (Jones 2015f,h, 2016). On a more practical note all NHS organisations need to keep track of trends in death in those areas feeding patients to the hospital, since it is in the end of life that the majority of a person’s lifetime acute activity will occur. You may not understand why these unexplained events are happening, but take a pragmatic view that it is important to understand the behaviour in costs.

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One can only pose the question as to why then are agencies such as the Department of Health, NHS England and Public Health England acting as if nothing has happened? Could it be that no one is allowed to question that politically accepted dogma of policy based evidence (Oliver 2014), that cost pressures are solely the result of NHS inefficiency?

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