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# Unusual trends in NHS staff sickness absence

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The history of medicine is littered with paradigm shifts in knowledge and practice. New concepts and practice are usually vehemently resisted. Dr Edward Jenner, the discoverer of small pox vaccination, was ridiculed mercilessly (Trueman 2015). The Australian doctor who discovered the link between *Helicobacter pylori* and stomach ulcers was likewise disregarded, eventually taking the drastic step of drinking a live culture of H. pylori to prove the link, and to establish how antibiotics could remove the symptoms arising from the infection (Explorable 2016).

In a similar vein the *Money Matters* series has been attempting to alert both government and the NHS to the unexplained behaviour demonstrated in the trends in deaths, medical admissions and other associated health care events. Parallel shifts in deaths, medical admissions and staff sickness absence have been highlighted, and links with NHS costs established (Jones 2015a-l,2016a-h).

It has been proposed that deaths, medical admissions, etc all show evidence for spatial spread during a series of infectious-like events. However, does NHS staff sickness absence obey the same rules? As before, running 12 month average of sickness absence has been used to establish the points of a step-like increase in sickness across England Jones 2015b-i). Data is from the Health and Social Care Information (HSCIC) website and covers the period April 2009 to September 2015. Sickness absence was analysed in 217 NHS organisations with a complete time series of data (78 months) over that period (mostly acute, mental health, community and ambulance organisations).

During the time period studies three infectious-like events are present and Figure 1 shows the month at which staff sickness showed the largest step-like increase in each organisation. The largest step-like increase has been chosen for simplicity, however all organisations show evidence for multiple events. For example, the East London NHS Trust which provides mental health and community services shows three step-like increases in staff sickness absence of

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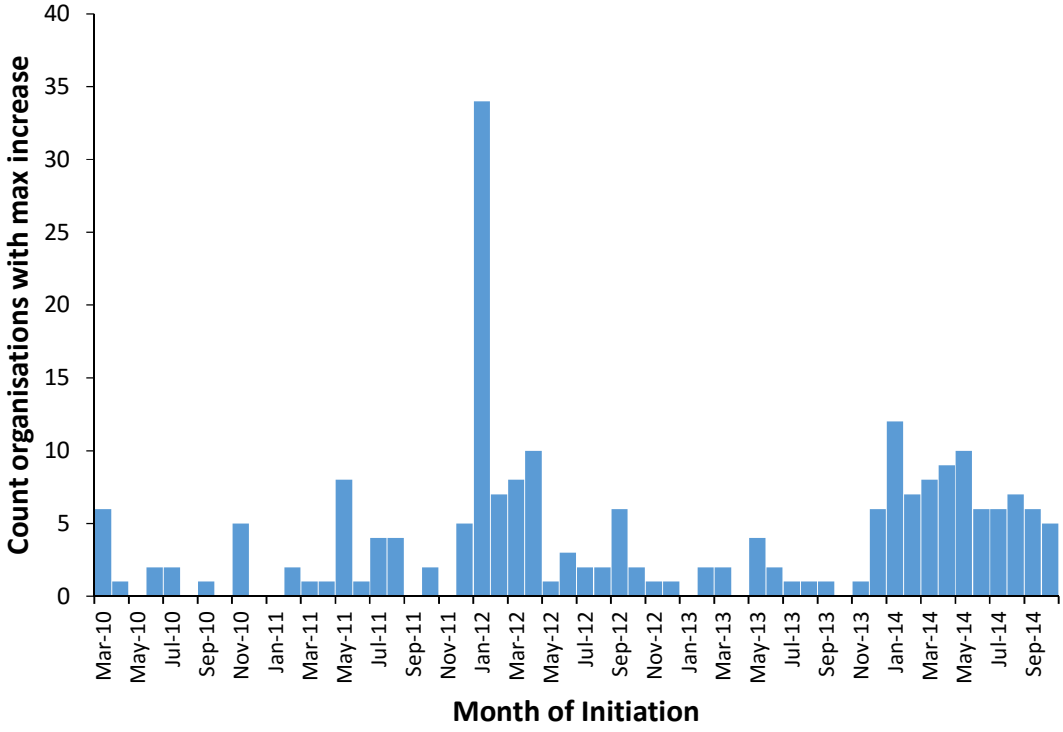
14.4% in May 2011, 14.0% in September 12 and 3.9% in October 2014. Median increase for the 2010, 2012 and 2014 events across all organisations was 7.1%, 9.3% and 9.0% respectively.

**Figure 1: Month of initiation for the largest step-like increase in staff sickness absence in 217 health care organisations across England (2009 to 2015)**




As can be seen from Figure 1 only a minority of organisations experience their largest increase during the 2010 event which commences around Mar-10 with continued spread between organisations through to Aug-11. This relatively slow spread for the 2010 event has been likewise confirmed to occur for medical admissions (Jones 2015c). Then follows the 2012 event in which 34 (16%) of organisations initiate their largest 12 month period of higher staff sickness absence in Jan-12, a further 25 initiate before May-12. The 2014 event witnesses 52 organisations initiating their largest period of 12 months of elevated illness in the period Dec-13 to May-14. It is somewhat difficult to actually see when one event finishes and the next initiates, since there is a background count of organisations initiating their largest step-change. Whatever the mechanism of spread, it appears characterised by mixed slow/fast pathways.

Figure 2 investigates the magnitude of the largest step-up (at initiation) and step-down (at cessation) for all organisations, and explores any relationship with the size (number of staff) of the organisation. As can be seen there is moderate relationship with size, with generally larger increases in sickness absence in smaller organisations where staff will live within a smaller geographic area. However, the largest factor appears to be the geographic heterogeneity associated with each event.

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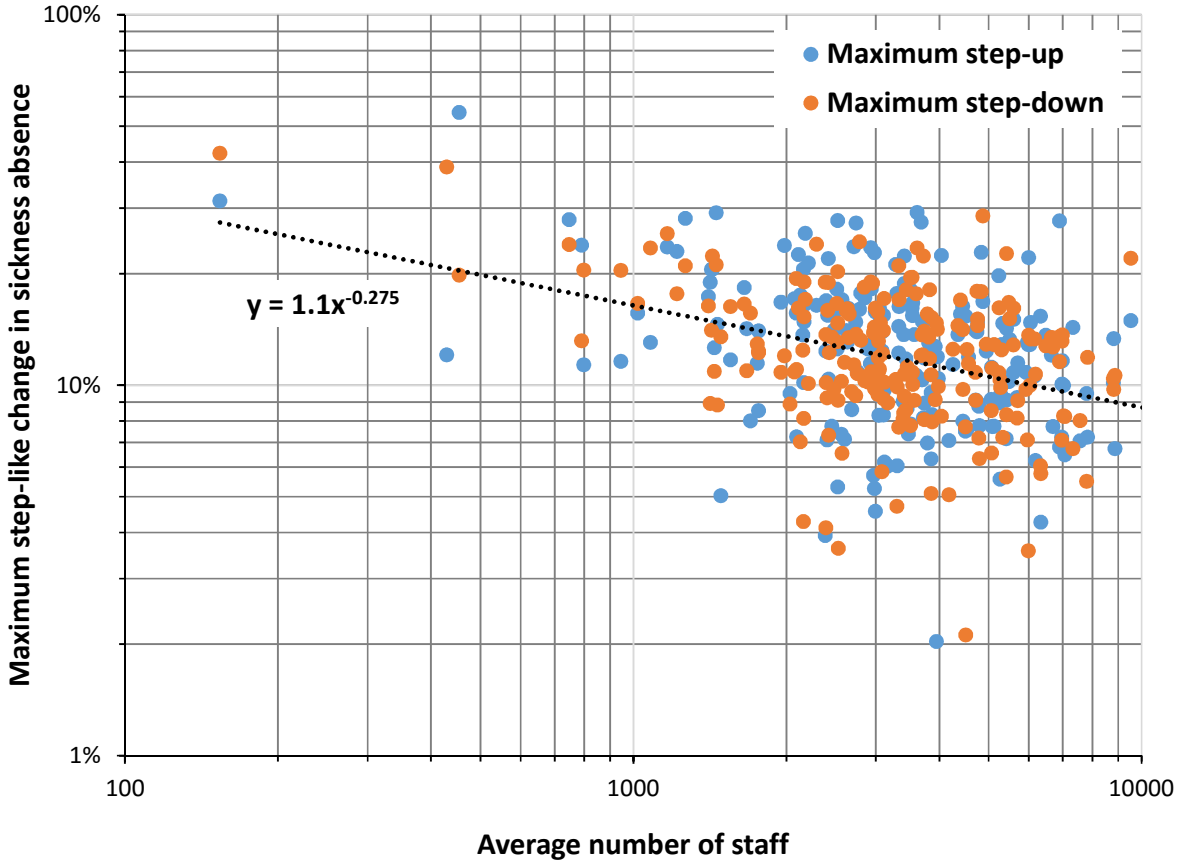
**Figure 2: Effect of organisation size (number of staff) on the maximum step-up or step-down in staff sickness absence associated with these events**




In conclusion, there is a recurring infectious-like event leading to a 12 month period of roughly 7% to 9% higher staff sickness absence (approximately 1.3 million extra days of sickness in England costing around £220 million across the entire NHS – approximately 1 extra day per person employed in the NHS). Each event appears to spread across England with some organisations affected earlier and others later. During each event the magnitude of the rise in sickness absence is likewise variable, i.e. organisations suffer unequal cost pressures.

No one has an alternative explanation, and up to the present government agencies appear to be doing their best to deny that anything out of the ordinary has happened. It would appear that when it comes to innovate discoveries, history does seem to repeat itself.

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