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Do outbreaks of the World Health Organisation's 'Disease X' regulate NHS bed demand and costs?

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The World Health Organisation (WHO 2018) has recently released a list of Priority Diseases which contains an enigmatic Disease X. The WHO state that:

'Disease X represents the knowledge that a serious international epidemic could be caused by a pathogen currently unknown to cause human disease, and so the R&D Blueprint explicitly seeks to enable cross-cutting R&D preparedness that is also relevant for an unknown "Disease X" as far as possible.'

Do we need to look no further than England for evidence of major outbreaks of Disease X?

Figure 1 shows the trend in occupied acute beds since 1998/99. To arrive at a number for occupied daytime beds the following adjustments have been made.

- A figure of +4.5% has been added to midnight occupied bed days to account for the underestimation of average length of stay (LOS) arising from the use of whole number midnight stays, rather than days, hours and minutes, as the fundamental measure of LOS (Tierney and Conroy 2014).
- All same day stay admissions, including day case, have been imputed a 0.5 day stay
- A count of same-day-stay admissions (other than day case) are available since 2013/14 and these trends have been extrapolated back to 1998/99. In 1998/99 these are estimated to account for 1,512 daytime beds, hence their inclusion or exclusion is not going to fundamentally alter the time-trend – other than provide a better picture of true day time occupancy.

To encapsulate all aspects of health, both elective and emergency admission types are included in the analysis. The number of day case admissions has more than doubled over this time hence the need to impute a 0.5 day stay to both day case and other types of same day stay such as emergency same day admissions made via assessment units.

Hence Figure 1 is an accurate picture of the trend in daytime occupied beds in England since 1998/99. Key points to note are the following:

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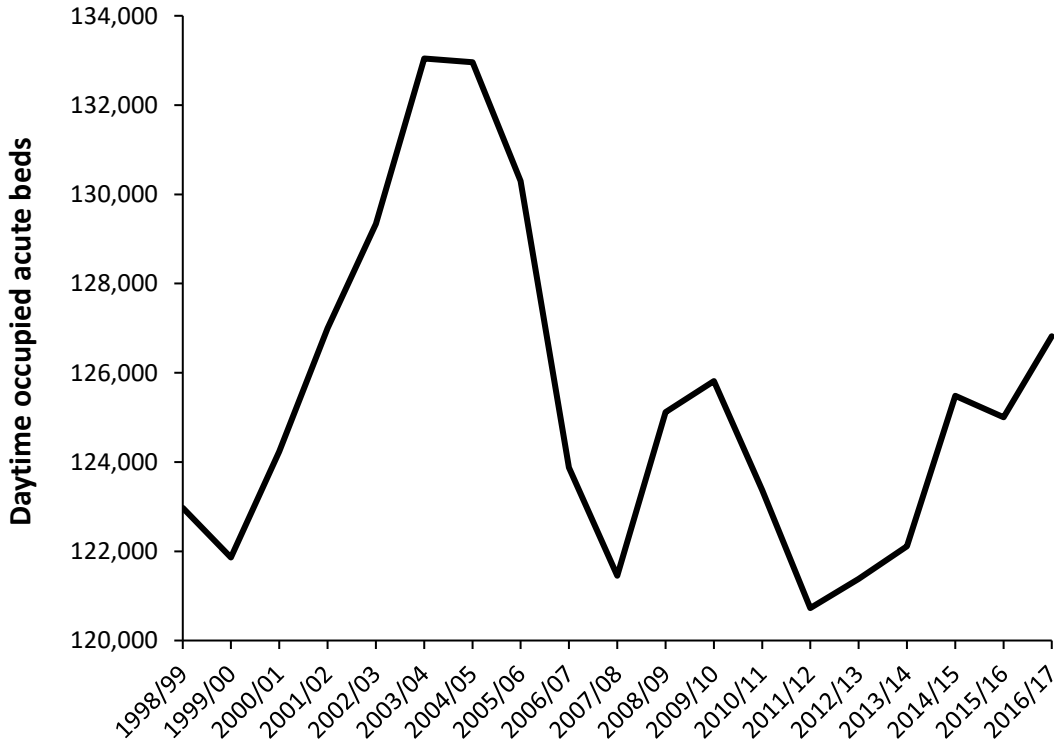
- There are three very large peaks in bed demand, for which there has never been any official explanation (Jones 2010a-e, 2017a,b, 2018a,b).
- The financial impact of the two earlier peaks were investigated in detail and concluded to add probably more than £100 million (in todays costs) into health service costs (Jones 2012). These periods of higher costs have never been funded but were always blamed on the NHS who were forced to bear the brunt of the extra costs. A manoeuvre of great political adroitness.
- An escalation in the size of the inpatient waiting list since 2012 (Campbell 2017) means that the size of the third peak has been underestimated. Such cyclic patterns in the number on the waiting list have occurred before (Jones 2011).
- On all occasions deaths have shown an unexplained increase, which has been either not been investigated or denied (Jones 2015, 2018a).
- Despite massive reductions in available beds, supported by so-called robust bed modelling, there is no evidence whatsoever that the baseline demand for beds has reduced since 1998/99. Bed forecasting has degenerated into a politically-correct fiasco (Beeknoo and Jones 2017a,b, Jones 2017b).

Figure 1: Trend in daytime occupied beds in England (elective + emergency)



Footnote: Hospital Episode Statics (HES) data was obtained from NHS Digital. https://digital.nhs.uk/data-services/hospital-episode-statistics

Everyone seems to have conveniently forgotten that 55% of a person's lifetime use of an acute bed occurs in the last year of life, and more specifically in the last six months (Hanlon et al 1998, Aaltonen et al 2017). Any agent capable of increasing deaths will automatically increase bed demand.

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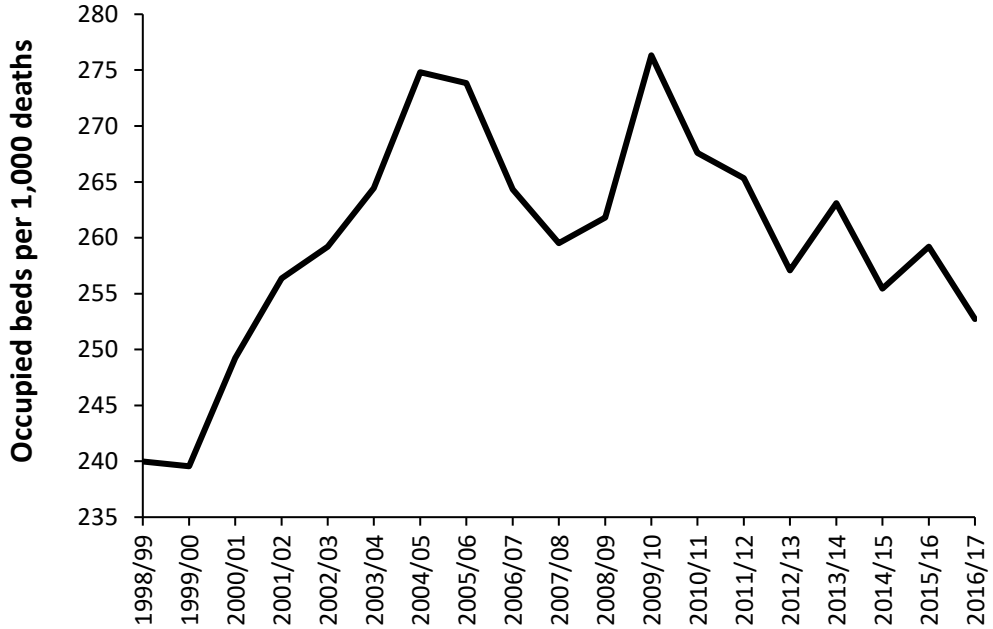
To this end Figure 2 takes the results of Figure 1 and converts them into a trend in occupied beds per death. As can be seen, despite huge changes in medical technology, a vast increase in the number of elderly people and shifts in disease incidence the number of occupied beds per 1,000 deaths has remained remarkably consistent since 2002/03. The impact of the peaks centred around 2003/04 and 2009/10 have been modified by the unexplained higher deaths occurring at these times. A general trend of -1.1 beds per 1,000 deaths per annum has occurred since 2003/04 which is more than offset by the 204,000 additional deaths per annum which the Office for National Statistics (2017) expects to occur in 2060, i.e. approximate growth of 5,100 extra deaths per annum. On what scientific basis are the STPs anticipating to close acute beds?

Figure 2: Daytime occupied beds per 1,000 deaths in England



Footnote: Monthly deaths by area of residence (England) were added to give financial year totals. Data is from the Office for National Statistics (ONS) https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/monthlyfiguresondeathsregisteredbyareaofusualresidence

Clearly bed modelling has fallen into complete disrepute and something keeps happening which the government appears to be in no rush to inform anyone regarding possible causes. Has the WHO, as it were, spilt the beans?

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