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The nature of health care costs and the HRG tariff

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In this month's BJHCM an article on the nature of health care costs explores the possibility that a group of medical and mental health diagnoses may show a three to eight year cycle in admissions (Jones 2010d). There will be additional knock-on effects against wider primary care and other costs.

For the last decade the Department of Health (DH) in England has implemented a centralised target driven performance culture favoured by the former government. As a result PCTs were caught in the horns of a dilemma. Performance management by the DH and SHA's expected affordable commissioning plans, hence, fixed numbers of the 'right' magnitude. The definition of 'right' became largely synonymous with growth in demand consistent with the ageing population; hence, the application of demographic projections (Jones 2010e).

PCT analysts would therefore conduct analysis of trends and the gap between reality and 'right' was bridged by partly ignoring the real trends and substituting demographic growth and then assigning any required reduction in demand to a variety of demand management schemes. In reality the total figure for the expected demand management benefit was a balancing figure between the already potentially biased forecast of activity-based cost and the available funds. This was the only option available from the DH/SHA annual planning process.

This somewhat flawed process appeared to work on occasions and no one asked fundamental questions for fear of being persecuted for questioning the accepted orthodoxy.

The whole orthodoxy of demographic growth pervades the assumptions behind the HRG tariff. In this process data collected three years ago is used to set the most recent tariff, i.e. 2007/08 data is used to set the 2010/11 tariff. This whole process becomes seriously flawed if growth follows anything other than the roughly linear trends implied by demography (Jones 2009a,b).

Figure 1 presents an analysis of length of stay (LOS) in the province of Alberta, Canada over a seven year time period for a cluster of diagnoses which appear to be linked with the cycle in emergency admissions seen in England (Jones 2010a,b). In this figure the data is split by both age band and sex. Several points emerge from the study of such a long time series:

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1. The response of average length of stay to a variety of environmental shocks (weather and viruses) is particular to each age group and gender.
2. For this specific cluster of diagnoses LOS is trending upward over time – note that the Canadian data is not subject to the confounding effect of the inclusion of large numbers of zero day stay medical assessment unit 'admissions' as seen in LOS data within England (Jones 2009c).
3. In the over 65 age group two step changes in female relative to male LOS can be seen in late 2002 and 2007 and these appear to co-incide with the proposed dates for step-changes in admissions seen across the whole UK (Jones 2010a-d)
4. So-called seasonal cycles are far less predictable than many would have us believe (Jones 2010e)

If we accept the fact that LOS has a role to play in health care costs then based on this evidence we could deduce that in some degree HRGs are a clumsy attempt to model costs since both age and gender are involved in complex time dependant interactions.

Hence the time lag in the tariff is in danger of triggering financial instability as the cycle repeats itself and costs and prices are no longer in synchrony.

The issues are probably wider than those diagnoses subject to cyclic behaviour. A recent study which compared actual emergency activity against assumed linear growth over time (an approximation to the PCT planning process) demonstrated that nearly 60% of emergency activity is subject to high environment-induced volatility (Jones 2009b), i.e. the hidden assumption within the tariff that fixed and variable costs are maintained in the same ratio is not valid.

So where does all this leave us? Commissioning is not a simple process and the HRG tariff is inadvertently adding to the confusion. PCT's are not the real villain and GP commissioners will have to face the same problems. Health care is orders of magnitude more complex that the simplistic tools we are currently attempting to use. It is about time the DH woke up to reality and started funding some decent long term research so that hopefully in future years things can be made better rather than everyone having to pretend that reality does not exist.

References

Jones R (2009a) Cycles in emergency admissions. ***BJHCM*** 15(5), 239-246.
Jones R (2009b) Emergency admissions and financial risk. ***BJHCM*** 15(7), 344-350.
Jones R (2009c) Length of stay efficiency. ***BJHCM*** 15(11), 563-564.
Jones R (2010a) Unexpected, periodic and permanent increase in medical inpatient care: man-made or new disease. **Medical Hypotheses** 74(6), 978-983
Jones R (2010b) Can time-related patterns in diagnosis for hospital admission help identify common root causes for disease expression. **Medical Hypotheses** 75(2): 148-154.

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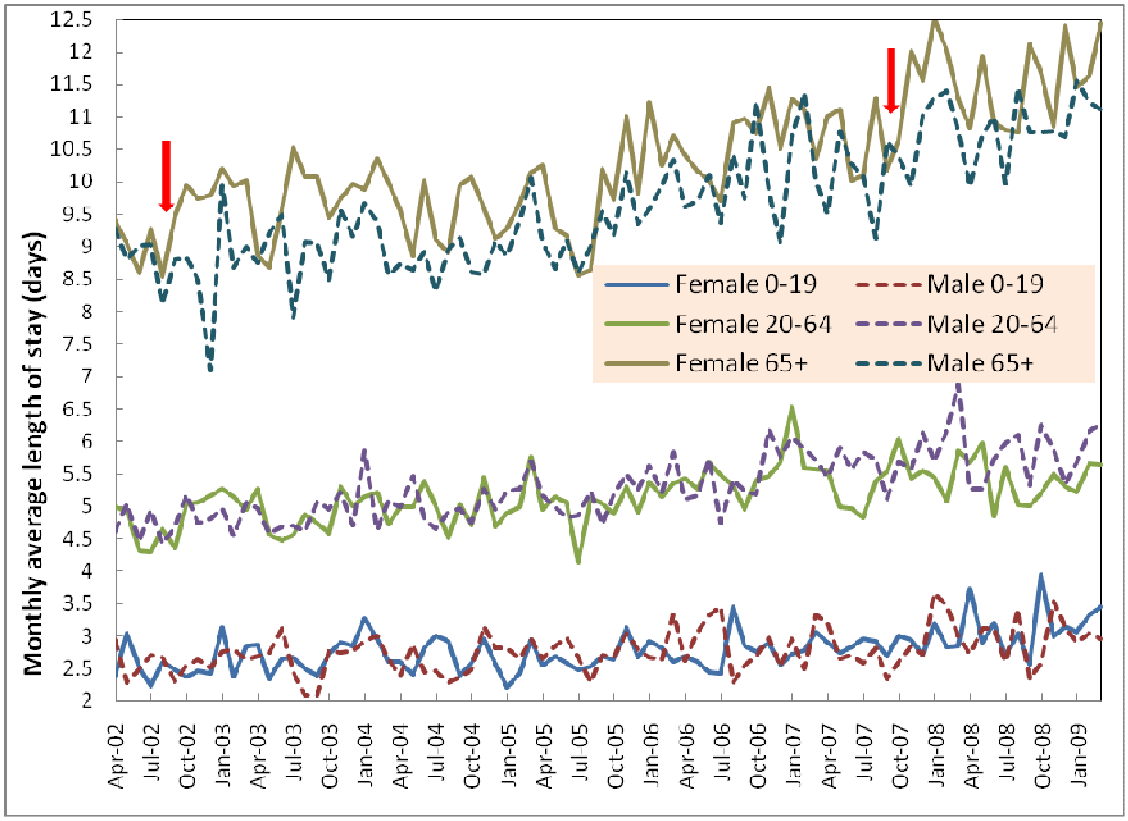
Jones R (2010c) The case for recurring outbreaks of a new type of infectious disease across all parts of the United Kingdom. **Medical Hypotheses** 75(in press). Available from: http://dx.doi.org/10.1016/j.mehy.2010.04.023
Jones R (2010d) Nature of health care costs and financial risk in commissioning. ***BJHCM*** 16(9), 424-430
Jones R (2010e) Myths of ideal hospital size. **Medical Journal of Australia** 193(5): 298-300.

Figure 1: Trends in average length of stay for emergency medical admissions in Alberta, Canada



Footnote: Data is for a cluster of 85 diagnoses associated with step chnages in admissions in England (Jones 2010a-c)