Death and future healthcare expenditure

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A recent series of articles in BJHCM has been seeking to raise awareness to the importance of the approach of death rather than age or demography as the fundamental driver of healthcare resource consumption (Jones 2011a-c). Obstetric, Neonatal and Paediatric costs are an obvious exception. Hence, for the adult population the fundamental assumption within the capitation formula of cost and age may be open to question.

During the 1980's annual deaths in England & Wales had reached a maximum of around 578,000 ± 8,000 deaths per annum and since then have been steadily declining with around 5,100 fewer deaths per year between 1993 and 2007, i.e. roughly a 1% p.a. reduction. Deaths are expected to reach a minimum at some point after 2012. Hence in the absence of healthcare cost and technology inflation costs in recent years should have shown a slight decline since the fundamental driver of costs, namely deaths, had been reducing. The commitment of the former Labour government to increase healthcare spending by an average of 8% p.a. from 2003/04 to 2010/11 will have overwhelmed any small reduction due to falling deaths as costs expanded to match allocated funding.

However Figures 1 and 2 give an interesting view of the next 15 years of potential health care costs as dictated by deaths per annum. Actual future costs will also have an element of healthcare price and technology inflation although the period of financial austerity may act to contain these to the point where deaths per se emerge as the overriding driving force.

Figure 1 shows us that by 2033 most areas within England (with the exception of a few inner city areas) will be experiencing an increase in the total number of deaths relative to 2009. Figure 2 gives the time trajectory for a sample of local authorities and this shows that the point of minimum deaths is anticipated to occur at some point between 2010 (Suffolk, Milton Keynes, etc) through to 2026 (Leeds, West Midlands, Manchester) and that after that point deaths then begin to rise. Areas which have experienced the highest net inward migration over the past 30 to 40 years, such as Milton Keynes (established as a 'New Town' in 1967), show the highest overall increase. Also evident is the fact that the trajectories are non-linear.

Figure 1: Expected change in number of deaths relative to 2009
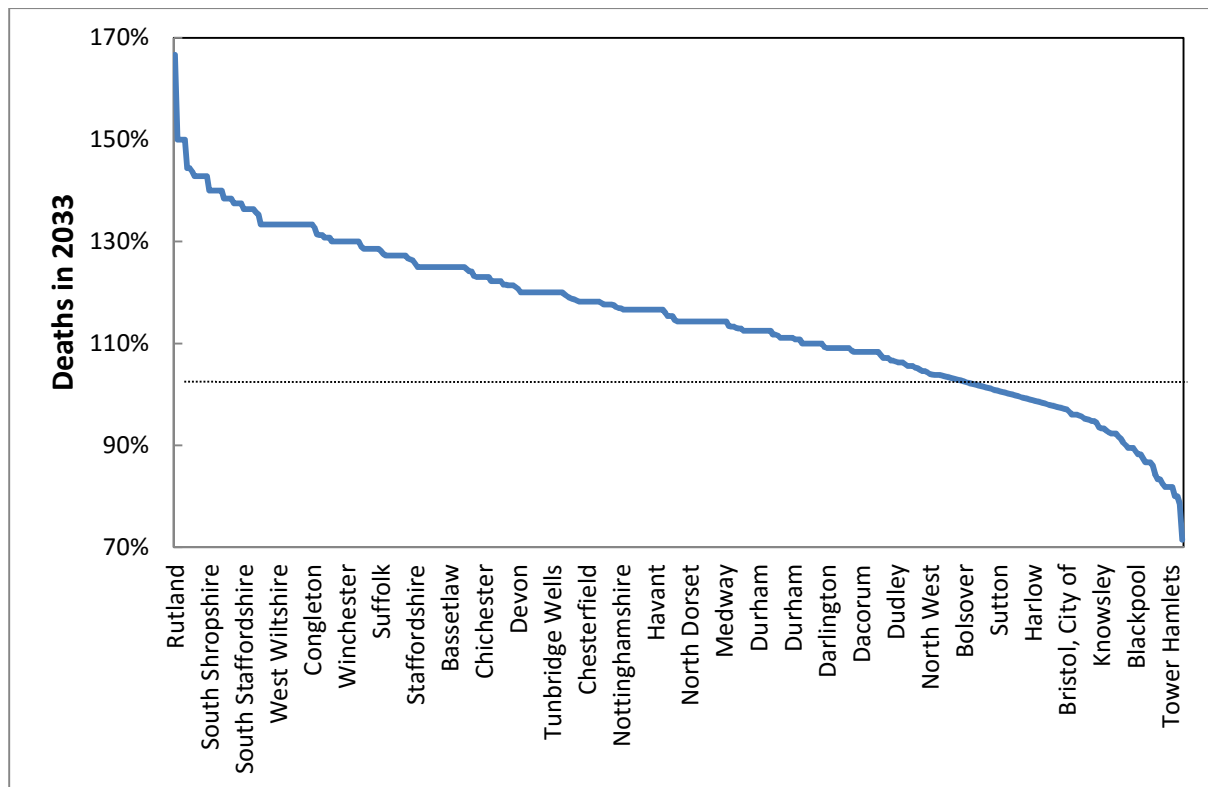
Data is from ONS http://www.statistics.gov.uk/downloads/theme_population/snpp-2008/InteractivePDF_2008-basedSNPP.pdf and is based on mid-2008 population estimates.

Figure 2: Time trajectory for selected local authorities
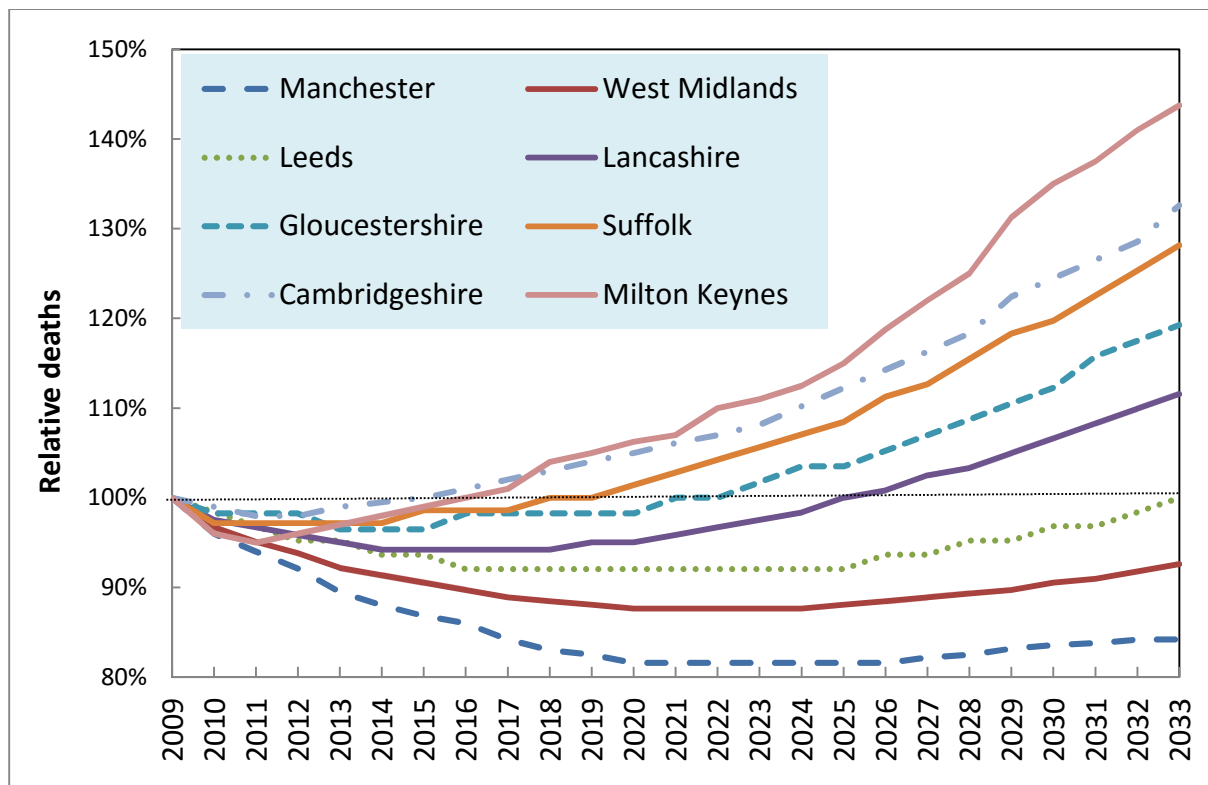
Since the approach of death has a unique time-based profile of costs relative to the different component of overall costs (drugs, social care, nursing home, acute admissions) the assumptions within the current and future versions of the resource allocation formula will come under increasing pressure as the death-based differentials between various locations begin to widen(McGrail et al 2000, Mayhew 2001, Busse et al 2002, Seshamani & Gray 2003, Round et al 2004, Dixon et al 2004, Karamanidis et al 2007, Pot et al 2009, Bardsley et al 2010, Layte 2011, Wong et al 2011).

Hence the very clear message is that any PCT or CCG which is not giving the uttermost attention to implementing a variety of end of life care schemes and to integrating health and social care is heading down a road to ruin. Although some, like Suffolk, Cambridgeshire and Milton Keynes need to pay far more attention to such strategies than others. Indeed some re-thinking of the need weighted formula is also a priority. Indeed a re-evaluation of mortuary capacity may also be a sensible option for some locations (Jones 2002).

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