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Expected trends in births and deaths to 2037

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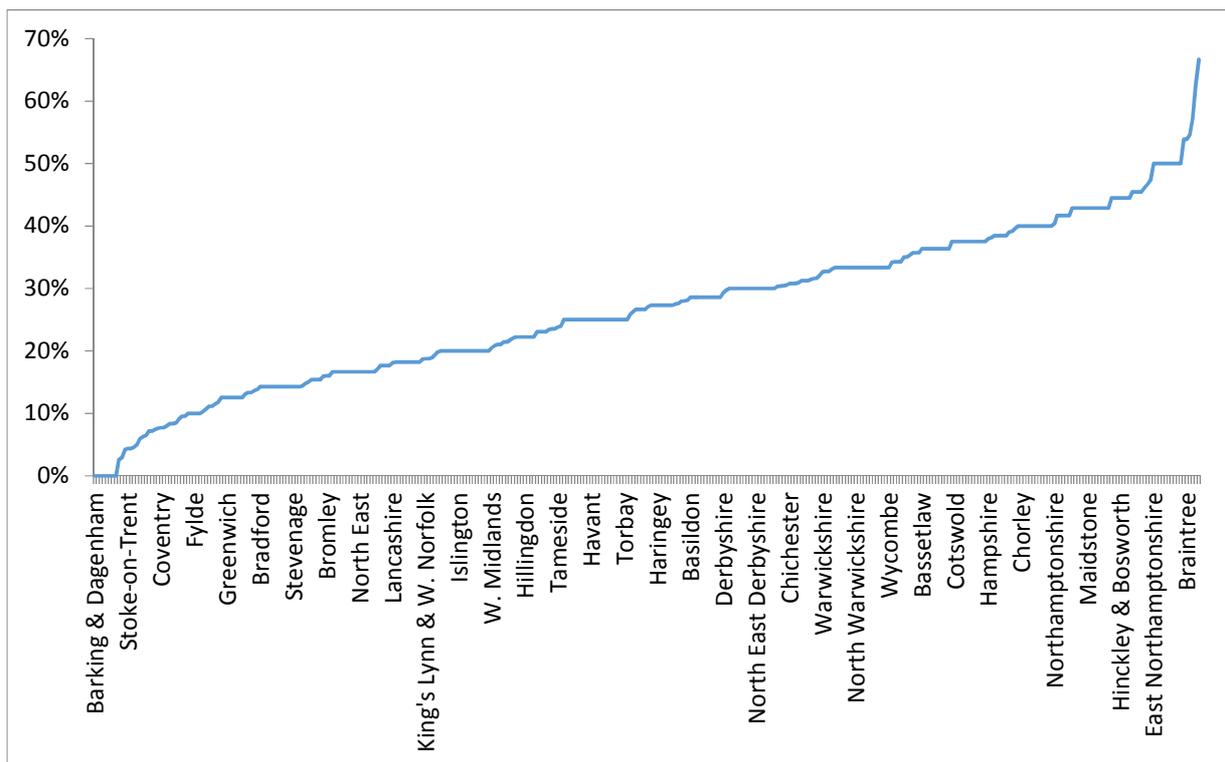
Healthcare Analysis & Forecasting

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The start and end of life are the most expensive periods relating to health care costs. To this end it may be of interest to look at developing trends in these areas. The Office for National Statistics produces a regular series of forecasts for each Local Authority using the components of change methodology, i.e. births, deaths and inward and outward migration.

Figure 1: Expected change in deaths between 2013 and 2037.



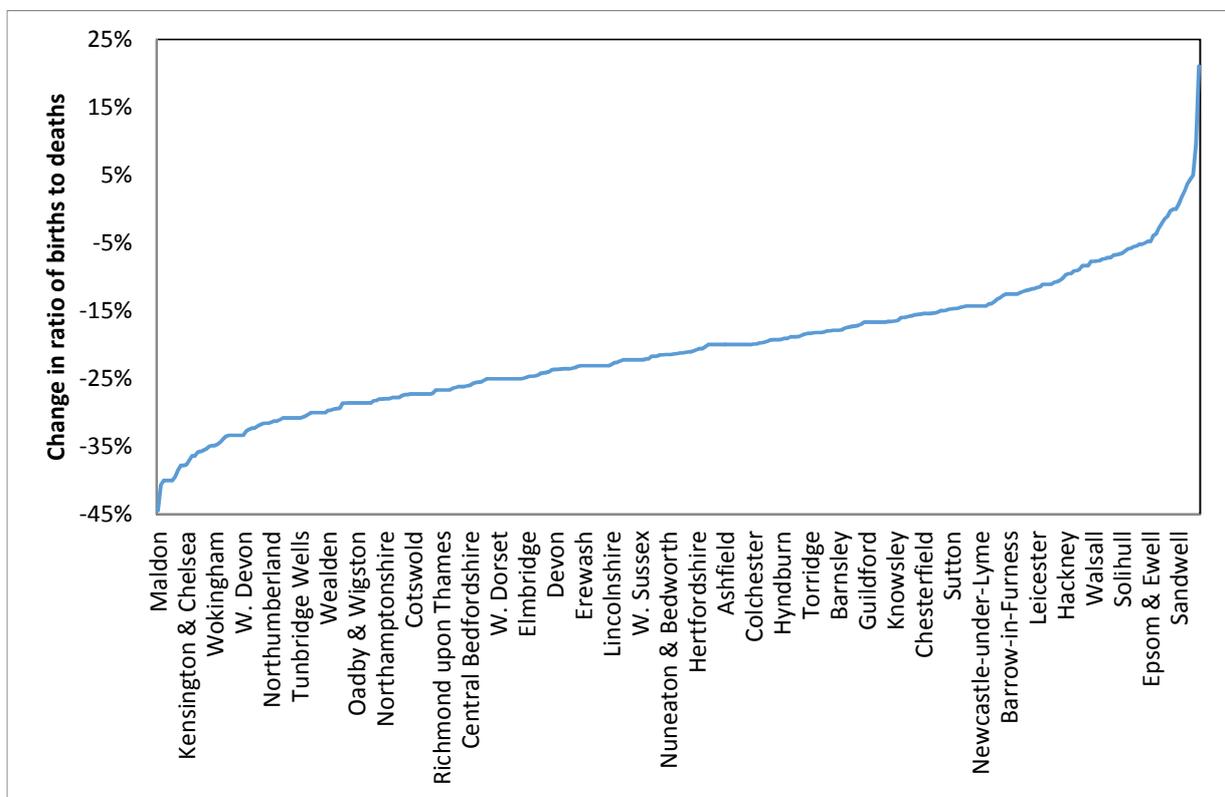
Most will be aware that deaths have been declining since the mid-1990's and that the end result of the World War II baby boom is about to lead to an extended period of increasing deaths commencing around 2014. A series of articles in this journal have argued that death rather than age per se is an important driver of health care costs and of the demand for

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hospital beds (Jones 2011a-d, 2012, 2014). Figure 1 therefore presents the expected increase in deaths per annum for each LA in England using the ONS 2012-based estimates over the interval 2013 to 2037. As can be seen everywhere is expected to show growth with end-of-life related costs likely to rise by over 50% in East Northamptonshire, South Derbyshire, Basingstoke & Deane, Hart, Lichfield, Maldon, South Bucks, South Kesteven, Test Valley, W. Devon, Aylesbury Vale, Braintree, East Hampshire, Harborough, Milton Keynes, Uttlesford.

I have previously expressed the opinion that the current funding formula will not be able to cope with such changes since it was developed at a time of falling deaths and therefore contains hidden assumptions regarding how costs behave.

Figure 2: Change in the ratio of births to deaths 2037 versus 2103



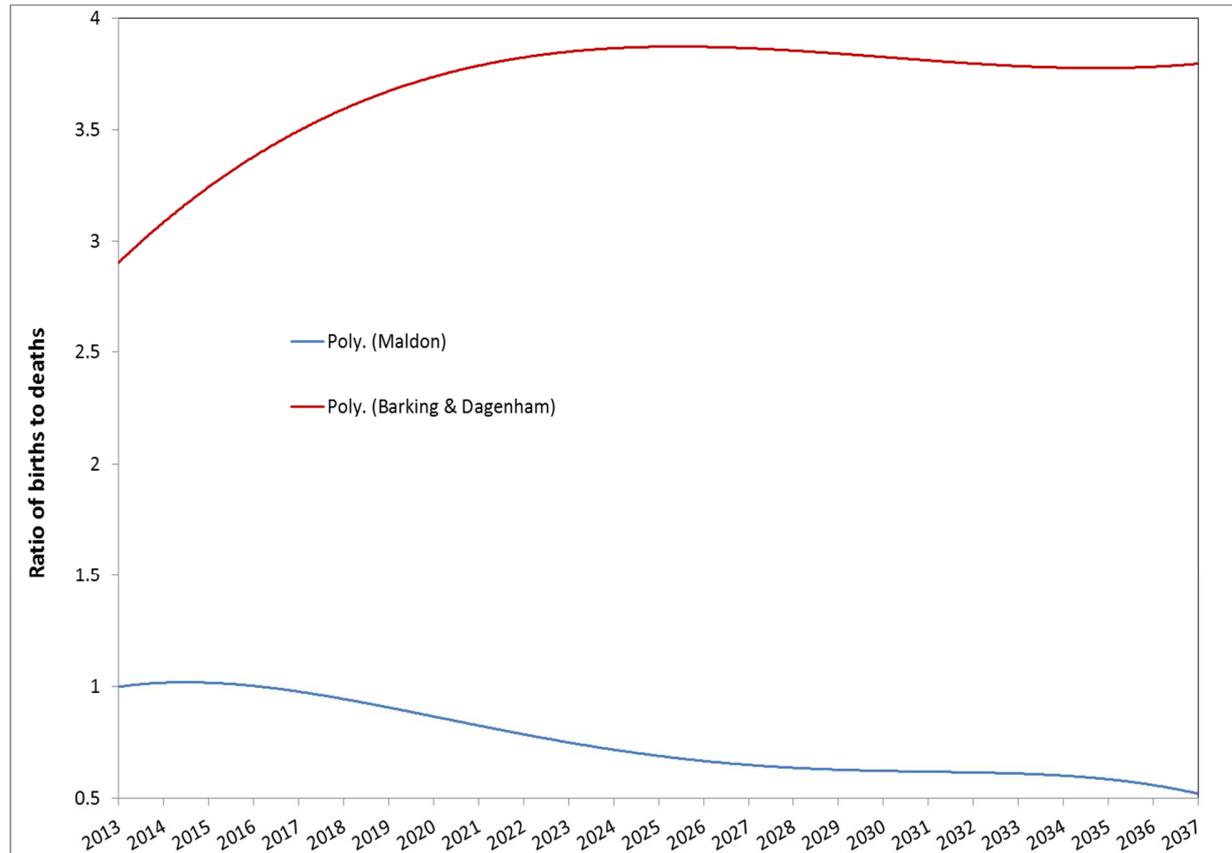
A balanced location is said to have an equal number of deaths and births and will likewise have a constant ratio of start-of-life and end-of-life costs. To this end Figure 2 looks at the change in the ratio of births to deaths which can be seen to range from -45% in Maldon (17% reduction in births and a 50% increase in deaths) to a 21% increase in Barking & Dagenham (no change in deaths but a massive 21% increase in expected births).

The actual trend over time is illustrated in Figure 3 where Barking & Dagenham is expected to nearly achieve 4 births for every death by around 2025 while Maldon drops to 2 deaths for every birth by 2037. At these extremes the whole balance of society and commerce is affected

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from undertakers, bereavement and chaplaincy services, flower shops, children's toys and clothes, schools and the size of maternity units, neonatal units and mortuaries.

Figure 3: Trend in the ratio of births to deaths



As they say a lot happens in the NHS in just 25 days to be worrying about 25 years into the future, however, even a five to ten year view based on the components of change is a worthwhile exercise since some locations experience greater change earlier than others. Barking & Dagenham is a good example and one hopes there are already plans in place to substantially expand maternity and neonatal services to cope with the huge changes in the near term.

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