

Measuring inequalities 2016

Caveats regarding Office for National Statistics (ONS) population estimates

Caution is required when using the information presented in *Measuring inequalities 2016* due to an issue surrounding ONS estimates of the very elderly population. To aid interpretation, this brief paper provides further details of the impact of the issue on this publication.

Background

- Observatory analysts found a number of Lower Super Output Areas (LSOAs¹) in which the number of deaths in the 90+ age group is higher than the ONS population estimate for that age group. The worst-affected LSOA is W01000228 (situated in Rhyl, Denbighshire). In this LSOA, 47 deaths were registered in females aged 90+ in 2014, and the population resident in this area in mid-2014 is estimated by ONS to be one. Though the very elderly population appears to be underestimated in a number of LSOAs, the Rhyl example is by far the most extreme.
- One possible reason for the very elderly population being underestimated is that this group was undercounted by the 2011 Census, perhaps due to difficulties in enumerating people living in nursing homes. This is being investigated by ONS.
- The issue was discovered during the production of *Measuring inequalities 2016* and delayed its publication from March to July 2016.
- Having assessed the impact on *Measuring inequalities 2016*, it was decided that the majority of the analyses could still be published, with additional caveats provided to aid interpretation (see below).

General impact on *Measuring inequalities 2016*

- Analyses have been conducted at various levels of geography. At any level, an area that includes LSOA01000228 will be most affected compared with other areas at that level. The smaller the level the greater the effect.
- The impact on figures reported for Denbighshire as a whole is likely to be small, and the impact on figures reported for Betsi Cadwaladr UHB is likely to be very small. For Wales as a whole, the impact is likely to be negligible.
- The impact on areas outside Denbighshire is likely to be small.

Impact on specific indicators within *Measuring inequalities 2016*

- *Life expectancy and healthy life expectancy*
Some figures are likely to be underestimated due to the very elderly population being lower than it should be. However, it is unlikely that any figures are underestimated by

¹ LSOAs are a geographical unit designed by ONS for the purpose of statistical analysis. There are 1,909 LSOAs in Wales, with an average population size of 1,600.

more than six months. The greatest impact will be on the most deprived fifth of females in Denbighshire, which includes LSOA W01000228: our estimates from GP registrations data indicate that the reported life expectancy of 78.1 years for this group may be closer to 78.5.

- *Effect of reducing mortality from specific causes of death*

According to our estimates, the impact on this analysis is very small. The potential increases in life expectancy in the most deprived fifth may be slightly underestimated, but probably by no more than a few months.

- *All-cause mortality, age-standardised rates*

The impact on all-age mortality rates for deprivation fifths within local authorities is potentially large, and therefore these figures have been removed from *Measuring inequalities 2016*. The figures for health boards are included however; the largest impact is on the most deprived fifth of females in Betsi Cadwaladr UHB, in whom all-age mortality rates are likely to be overestimated by around 3%.

- *Preventable mortality, age-standardised rates*

The impact on these figures will be very small, since the analyses are only presented at a national level.

- *Supplementary analysis*

The only indicator that might be affected is the percentage of Census respondents reporting good health. The impact on this indicator is likely to be small, given that nursing home residents are not included in the underlying Census figures used to calculate the percentages.

Further information

If you have any concerns or further questions, please contact us via publichealthwalesobservatory@wales.nhs.uk

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