Reviewer's report

Title: On the validity of area-based income measures to proxy household income

Version: 1 Date: 9 January 2008

Reviewer: Hugh Gravelle

Reviewer's report:

Minor essential

1. The importance of the use of area proxy or actual income is demonstrated in the context of assessing income related inequity in drug costs by regressing individual drug cost on a measure of individual income (actual or area proxy). Unsurprisingly the effect of income is reduced when the area proxy is used since the area proxy equals the actual plus noise: errors in the measurement of an explanatory variable will always bias the coefficient on this variable towards zero. But it is still useful to know how large the bias is. It would be interesting to compare it with the results from a regression of mean area drug costs on mean area income.

2. It would also be informative to have a diagram showing the results from two simple non-parametric (lowess/loess smoothed) regressions of (i) individual drug cost on actual income and (ii) individual drug cost on proxy area income.

3. The regressions reported in Table 5 also included variables controlling for the presence of seniors and household size. The coefficients on these variables should also be included in the results tables to show the effect of the choice of income measure. It is of interest to know if the use proxy income measures also affects the estimated effects of household size or age.

4. Say whether reported R2 are adjusted.

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests