Health care service use by people diagnosed with invasive melanoma in Queensland: a benefit incidence analysis

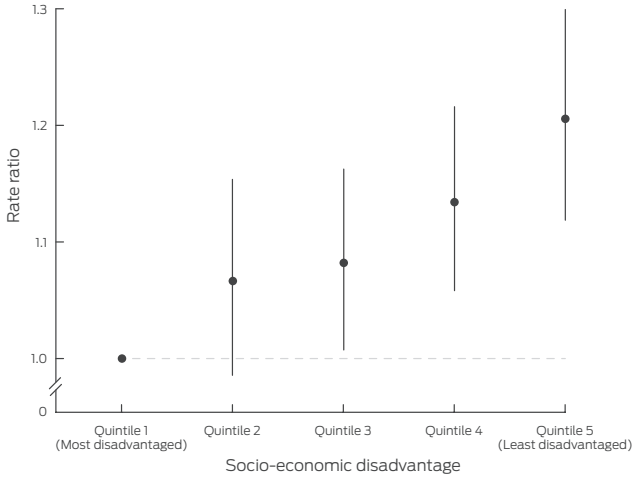
To the Editor: The recently published article by Lindsay and colleagues[1] stated that they "found few differences by socio-economic status or remoteness in health care service use by people with primary diagnoses of invasive melanoma" and drew the conclusion "that access to health care for people with melanoma is fairly equitable in Queensland". We are concerned that poor conceptualisation of access and equity, lack of reference to other Australian and international literature, and limitations in the study methods may have led to inappropriate conclusions being drawn.

First, the authors claim that their "findings regarding differences in health service use by people with melanoma mirror those of other studies examining health care services more broadly". However, we are concerned that they only cite a 2015 article[2] examining income-related inequalities and inequities in health care services use in selected Organisation for Economic Co-operation and Development countries and fail to acknowledge the differences in access to care by socio-economic status (SES) and rurality described in authoritative Australian reports[3-5] and international reviews.[6]

Second, the data presented in Box 2 of the article show that lower SES and rurality are associated with later diagnosis, which is likely a consequence of limited access to care. For diagnoses in the highest SES quintile, 65% were in stage IA, compared with 54% in the lowest SES quintile. Although the authors stated that this was not significant, this was nevertheless a 20% relative difference. Furthermore, use of the Bonferroni correction for statistical significance seems inappropriate, as there do not appear to have been multiple comparisons. Using this correction inappropriately masks this potentially clinically significant evidence of inequity.[7] We have performed a simple re-analysis of the data presented in the article using a Poisson generalised linear model of the counts of diagnoses in stage IA cancers, with an offset of total diagnoses in each SES quintile without this correction, which shows significant differences by SES (Box).

Third, the article conflates the concepts of equity and equality. Inequality of health service utilisation and diagnosis does not translate to inequity in access to care. The assessment of equity based on health services utilisation data is misleading and overlooks the complexities of inequities in access to care reflected in the literature.[6,8]

Rate ratios of invasive melanoma diagnosis in stage IA by quintile of socio-economic disadvantage in Queensland, 1 July 2011 –30 June 2015*



*Data were taken from Box 2 of Lindsay et al[1] and analysed using a Poisson generalised linear model of the counts of diagnoses in stage IA with an offset of total diagnoses in each SES quintile. The most disadvantaged quintile was used as the reference level. Vertical lines represent 95% confidence intervals. ◆

Finally, methodological limitations of the article, which likely mask differences by SES and remoteness, include:

- the use of the Australian Statistical Geography Standard – Remoteness Area (ASGS-RA) classification for assessing rurality, instead of the more sensitive Modified Monash Model categories (as used by the Australian Institute of Health and Welfare[3]);
- classification of SES based on postcode (a postcode may cover large areas in rural/remote Australia, with considerable diversity in SES within them); and
- exclusion of people who died before the three-year follow-up was complete, which could bias the findings as late diagnosis is associated with lower survival.

We believe the conclusions drawn in the article have potentially damaging implications for efforts to address the well documented inequities in access to care experienced by people of lower SES and those living in rural and remote areas.

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