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Area level socioeconomic disadvantage and diabetes control in the SIMLR Study cohort: Implications for health service planning

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Abstract

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Disciplines

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Organisation

University of Wollongong, Illawarra - Shoalhaven Medicare Local, Illawarra Health and Medical Research Institute

Aims & rationale

Diabetes is a major population health problem which disproportionately affects those with greatest socioeconomic disadvantage. Australia lacks a systematic regional approach to identifying those at highest risk of diabetes complications. This paper reports analyses from the SIMLR Cohort Study quantifying diabetes control by area-level disadvantage and discusses health planning implications.

Methods

The SIMLR Cohort Study is a retrospective-prospective study of health risk indicators in the Illawarra-Shoalhaven region. A sample of diabetic residents' mean updated HbA1c during 2010-13 was extracted from the dataset and matched to socioeconomic data from the 2011 Census using geocoding. Relative risks for HbA1c categories based on the UKPDS were calculated by area-level socioeconomic disadvantage quintiles.

Findings

Data for 37,214 persons were analysed. Adjusted odds of poorer glycaemic control were significantly lower for females compared to males [Odds Ratio (OR): 0.85, 95% Confidence Interval (CI): 0.81-0.88]. By age category, odds for poorer control were highest for persons aged 50-54 years. The odds of poorer glycaemic control increased significantly with greater disadvantage: Q1 (most disadvantaged) vs Q5 (most advantaged) OR 1.62 (CI:1.52,1.73) and Q2 vs Q5 OR 1.39 (CI:1.30,1.49) and Q3 vs Q5 OR 1.32 (CI:1.23,1.41)

Relevance to policy, research and/or practice needs

Diabetes complication rates are associated with poorer control. Disadvantage-related complication risk (and costs) can be quantified and mapped when clinical data are linked to area-level socioeconomic indices. These data can inform the location and quantum of resource targeting by health-planners, facilitating cost-efficient improvements in outcomes in high risk patients, reduced hospitalisations and improved equity.

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