

Exploring weight status in Australia and the US: a cross-sectional analysis using a commercial geodemographic classification

Morris MA¹, Clarke GP², Hulme C³, Edwards KL⁴, Aggarwal A⁵, Drewnowski A⁵, Mishra GD⁶, Jackson CA⁶, Cade JE⁷

¹Leeds Institute for Data Analytics, School of Medicine, University of Leeds; ²Centre for Spatial Analysis and Policy, School of Geography, University of Leeds; ³Academic Unit for Health Economics, Leeds Institute of Health Sciences, University of Leeds; ⁴Academic Orthopaedics Trauma and Sports Medicine, School of Medicine, University of Nottingham; ⁵Department of Epidemiology, School of Public Health, University of Washington, Seattle; ⁶Centre for Research Excellence in Women's Health in the 21st Century, School of Public Health, The University of Queensland; ⁷Nutritional Epidemiology Group, School of Food Science and Nutrition, University of Leeds.

Background

- Obesity prevalence of epidemic proportions continues to be a global public health problem
- Better understanding of the spatial and social variation in obesity is essential
- Geodemographic classifications are widely used in social marketing and may be useful for health profiling. They go some way towards accounting for both demographic and spatial influences on behaviour

The **aim of this study** is to use a geodemographic classification - which combines demographic characteristics with a small area geographic unit - to profile weight status and estimate small-area obesity prevalence in Australia and the US.

Methods

Cross sectional analysis of two large studies;

- Australian Longitudinal Study on Women's Health
- Seattle Obesity Study 1

Descriptive statistics, chi² and Kruskal Wallis test for difference, linear and multinomial logistic regression were carried out using Stata 12 statistical software.

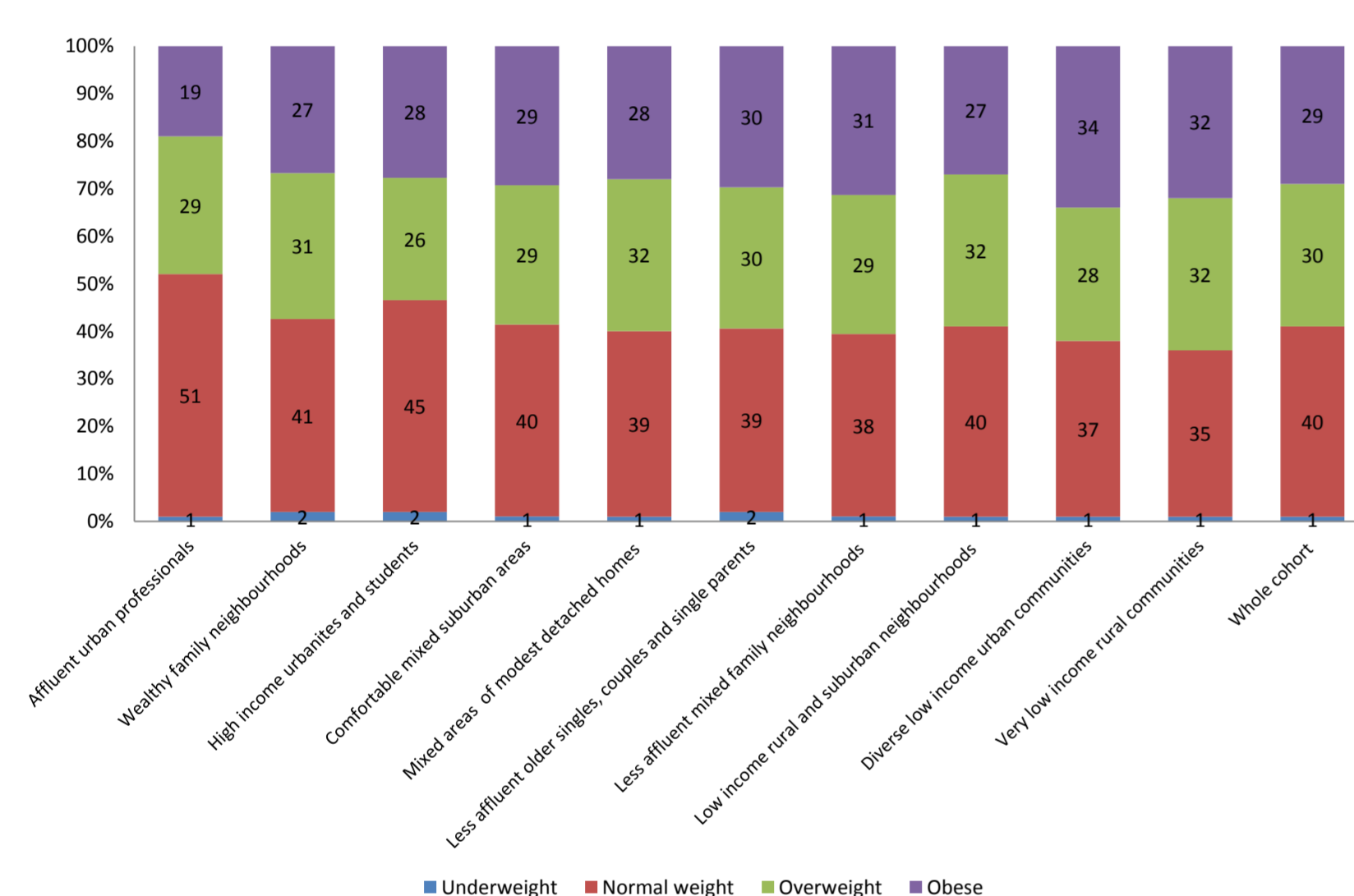
ArcMap10 was used to: (1) match the study participants to a CAMEO geodemographic identifier, using the longitude and latitude of their home address and (2) to visualise the obesity estimates for Newcastle (Australia) and Seattle (US). CAMEO is a commercially available geodemographic classification.

Results

Australia

The Diverse Low Income Urban Communities had twice the odds of being obese than the Affluent Urban Professionals (OR = 2.24 (95% CI 1.55 to 3.23))

Weight status by Cameo group in Australian Longitudinal Study of Women's Health

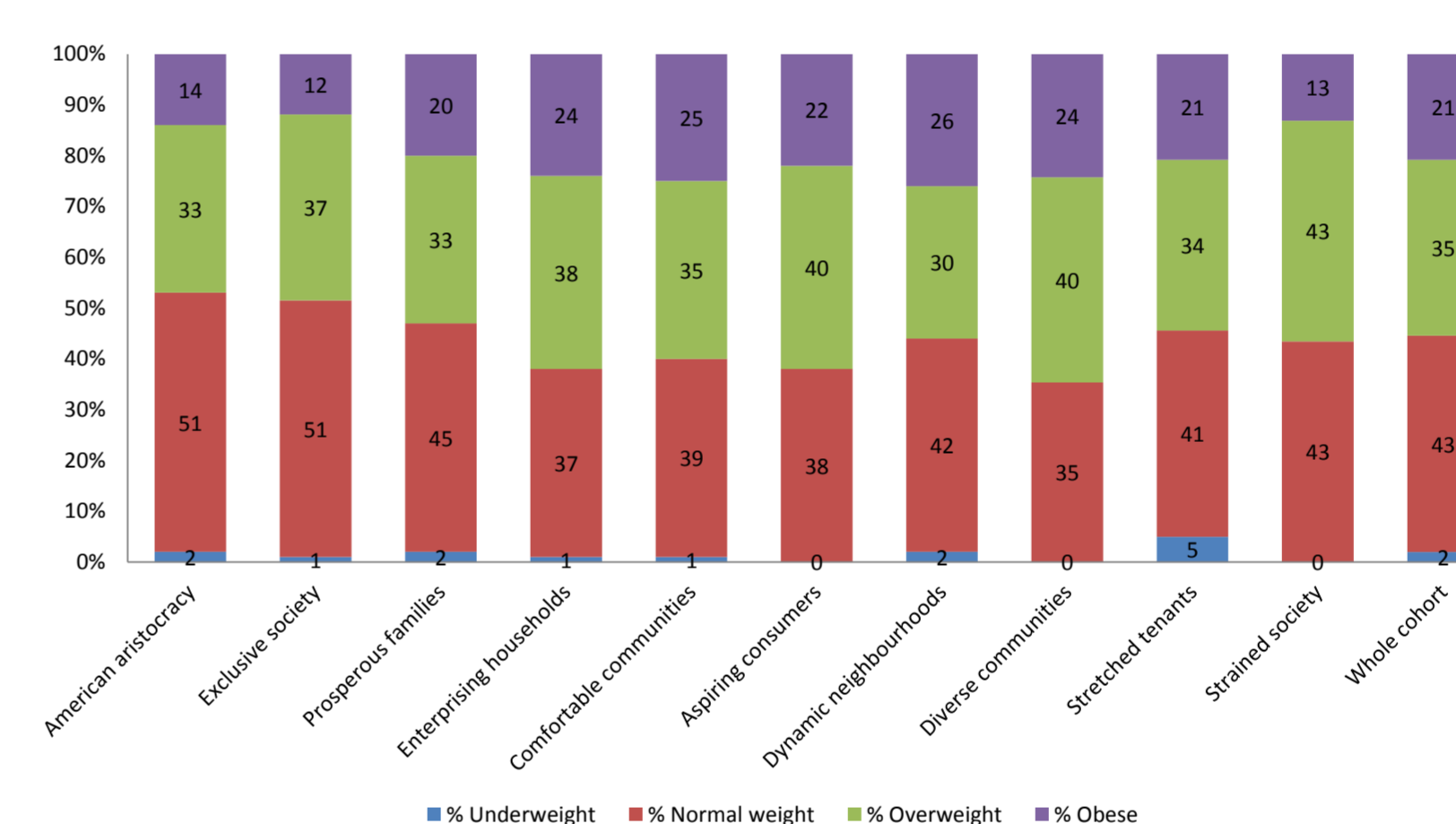


Significant differences in body mass index across Cameo groups exists (p<0.001)

US

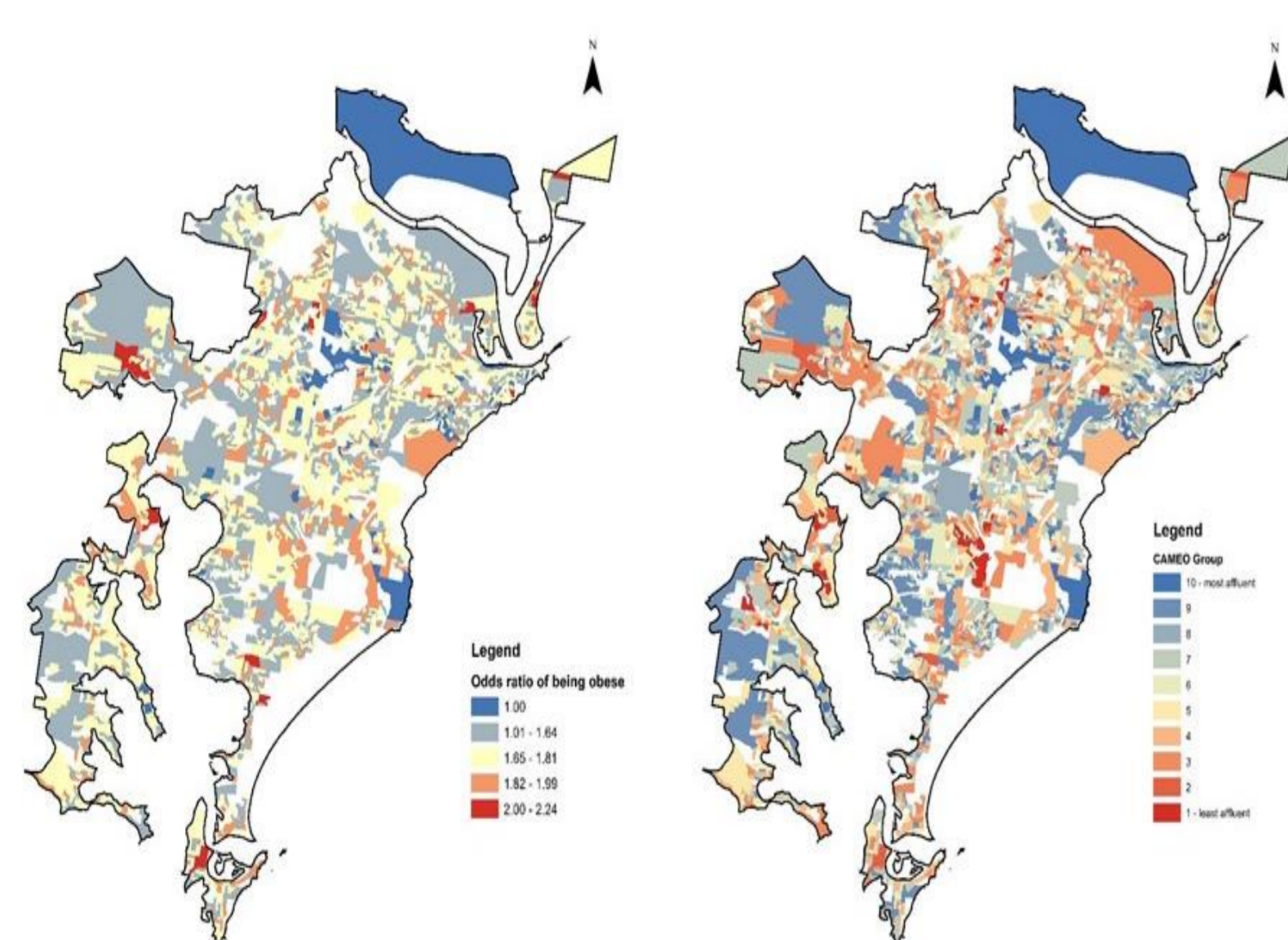
Compared to the American Aristocracy, the Enterprising Households (OR 1.97 (95% CI 1.25 to 3.09)), Comfortable Communities (OR 2.01 (95% CI 1.25 to 3.22)) and Dynamic Neighbourhoods (2.09 (1.30 to 3.36)) had twice the odds of being obese.

Weight status by Cameo group in the Seattle Obesity Study 1



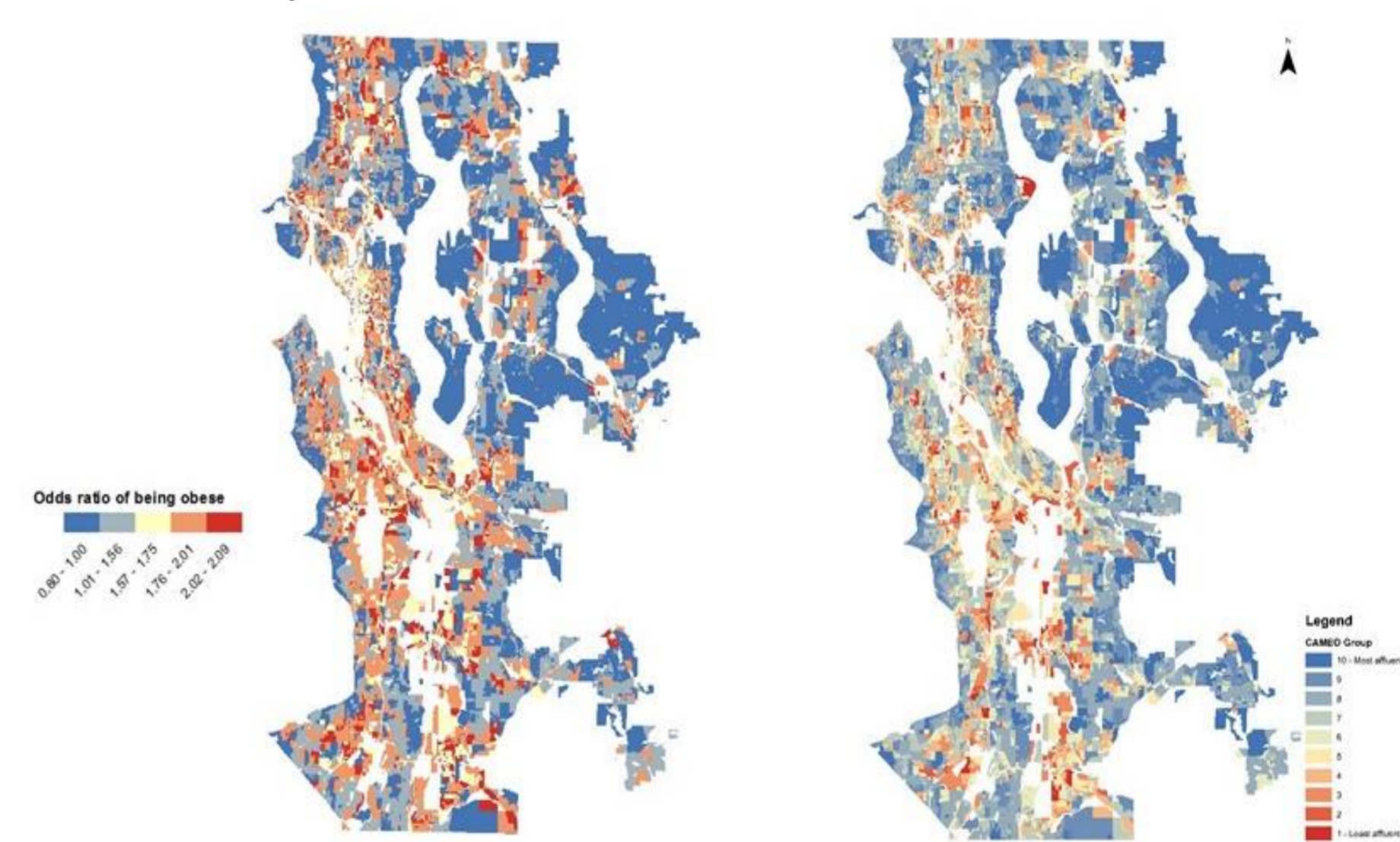
Significant differences in body mass index across Cameo groups exists (p<0.001)

Estimated odds of being obese and social geography by CAMEO group for Newcastle



NB. Areas of white are those with no residents or missing data

Estimated odds of being obese and social geography by CAMEO group for Seattle urban growth boundary.



Seattle urban growth boundary file: "Data provided by permission of King County"

Conclusion

Geodemographic classifications, such as CAMEO, combined with survey data offer promising solutions for profiling obesity outcomes worldwide which could facilitate effective targeting of public health interventions at a neighbourhood geography scale.

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