International Journal of Population Data Science

Journal Website: www.ijpds.org

The use of Administrative Data to combat non-response

Moore, M^{1*}, Rutherford, A¹, Douglas, E¹, and Bell, D¹

¹University of Stirling

Background

The issues arising due to participant non-response are problematic for many surveys. An international trend of falling survey response rates has led to more researchers questioning the extent to which non-response can cause issues with analysis, and what can be done to combat this non-response. Non-response weighting is a common method used by surveys, however the construction of these weights can rely upon untested assumptions and low quality and quantity of data. Administrative data can provide new opportunities in survey design, including improved construction of non-response weights, allowing better survey-based estimates.

Main aim

In this paper we explore the potential of using administrative data from the sampling frame of a large social survey to model non-response. The data used for this paper is part of the Healthy Aging in Scotland (HAGIS) Survey.

Methods

The HAGIS pilot wave collected a sample of approximately 1000 individuals aged over 50 in the Scottish mainland. HAGIS utilised administrative data in the sampling with screening being provided to select households with at least one eligible respondent (over 50). Administrative data were also available for the full sample, and not just respondents to the HAGIS pilot wave. The administrative data consists of individual demographics, hospital admissions, and prescription data held by NHS Scotland.

Results

Survey response is modelled as a function of explanatory variables from the administrative data in order to examine whether there is systematic demographic and health-based non-response in the survey. We further examine whether this non-response is causing significant biases and then how health data might predict non-response.

Conclusion

Finally, we discuss how these models could be used in improving conventional weighting techniques to combat non-response in survey design.

*Corresponding Author:

Email Address: m.m.moore1@stir.ac.uk (M Moore)