

## News

# Changing the way health surveys are conducted in Australia

17 October 2016

Quality is an important aspect of the conduct of sample surveys, but often the need for timely results, generated within finite resources, can become the overriding imperative. Margo Barr considered ongoing health surveys from a quality perspective in her recently completed PhD undertaken under the supervision of Professor David Steel in the National Institute for Applied Statistics Research Australia (NIASRA). Her research on important quality aspects in Australia considered: (i) diminishing coverage of landline phone frames because of mobile-only phone users; (ii) having consistent criteria and standards to enable comparisons between collections; (iii) how system approaches to ongoing collection and management improves timeliness, accessibility and usefulness of the data without compromising the quality and (iv) how well the current total survey error framework captures that. The research was applied mainly using the ongoing NSW Population Health Survey (NSWPHS) to ensure that the operational imperatives were also taken into consideration [1].

Margo found that the diminishing coverage of landline phone frames was affecting the accuracy of the estimates from land-line only phone surveys [2]. Using the NSWPHS she found that mobile phone numbers could be introduced into ongoing population health surveys in a cost effective way [3], a robust weighting strategy could be developed [4] and the impact on the resulting time series could be examined [2].

This mobile phone number augmentation research, which resulted in 4 journal publications [2,3,4,5] and has been cited in 12 peer-reviewed publications, has changed the landscape of how ongoing telephone surveys in Australia are being conducted. Specifically, citing this research, Dunlop et al. 2016 stated that 'previous studies have found that adding a mobile component to a landline population survey gives a more representative sample', Griffith et al. 2014 stated that 'it is now common to adopt dual-frame sampling approaches to use separate landline and mobile telephone number lists in order to reach a representative sample of households', and Dunlop et al. 2016 stated that 'adding a mobile component to a landline population survey has the potential to result in changes to population estimates that are a consequence of the design change, rather than a real change'[6,7].

Further research being considered by Margo, post PhD, in the field of mobile phone augmentation, include an exploration of: use of non-constant composite factors in estimation, impact of household weights, other post-stratification weighting, and application to small areas within Australia.

### References:

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