

The Laggards and the Disengaged - What can the ONS Longitudinal Study tell us about the quality of NHSCR addressing?

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Background

Data based on NHS General Practitioner registration activity is a key source feeding into the current and any potential new population statistics systems. Current uses include: estimating the migration of people within the UK; allocating international migrants to local authority level; and, producing population estimates for lower level geographies. The Beyond 2011 Programme has been established to carry out research on the options for a new population statistics system. One likely option is greater use of administrative data, and NHS registration data would play a key part in this.

The NHS data are based on administrative processes and have two known quality issues:

- There are more people registered with the NHS than are usually resident in the country, commonly referred to as 'list inflation'.
- The lag in time that often occurs between a person moving within the UK and registering their new address with the NHS.

Every ten years, the ONS Longitudinal Study (LS) provides an opportunity to study the home address given by LS members in the census and compare this with their location on NHS registration data. This enables comprehensive analysis of the inter-relationships between these data and the developing of an understanding of issues that need to be taken into consideration when using NHS registration data for population statistics purposes.

This work was carried out as part of a beta test on the new ONS LS link. It also allowed some exploration of the redevelopment of NHS administrative systems. The 2011 data for the LS has been taken from a system linked to the new Personal Demographics Service (PDS). The LS was previously linked to the Central Health Register Inquiry System (CHRIS). The data currently used for population statistics systems are also largely taken from 'old' systems, including CHRIS, and will all move over to PDS-based data at some point. It is therefore essential for ONS to understand how the system change impacts on the data received from the NHS.

The work is an extension of a previous study carried out by Smallwood and Lynch.¹

¹ Smallwood S. and Lynch K. (2010) 'An analysis of patient register data in the Longitudinal Study - what does it tell us about the quality of the data?', Population Trends, 141, 151-169

Results

Just over 4 per cent of people found on the 2001 Census and in the LS sample were either in a different 'old health authority' area, or not on the patient register. More detail of the results can be seen on the poster at the conference.

Key findings include:

- Of those who were in a different health authority area at 2001 in the NHSCR compared with the 2001 Census, just under half ended up in their 2001 Census area by 2011.
- Two thirds of those not found on the NHSCR but found in 2001 Census were still not found on the NHS systems by 2011.
- Those that are laggards or disengaged have a younger age distribution than the population as a whole.
- The laggards and disengaged are more likely to be male.
- For those that are moved to their correct area females moved more quickly over the decade than males (not shown on poster).
- For those who had a different address on NHSCR at census time in 2001, their 2001 Census address matched their 2011 Census address in just under one fifth of cases.
- Of those found on the NHSCR but not found in the 2001 Census, half are found in the 2011 Census.
- Provisional figures for 2011 suggest that at the 2011 link there were just over 5 per cent of people who at the 2011 Census day were in the wrong old health authority area on the NHS system.

Further Work

Further work needs to be carried out to:

- Write up the results findings from the updated analysis into a full paper
- Understand the information on the new NHS systems, in particular how the timing of changes, including in address, are recorded.
- Look at the characteristics of both the people and the properties they live in to help identify predictors of risk for addressing being incorrect.
- Follow the new cohorts, which can be done at a lower geographic level going forward as data is available at postcode sector level for the new link.