Comparison between 2011 Census estimates and the GP NHS Patient Register

September 2012

This is one of a series of reports published to support the release of results from the 2011 Census. This series of methods and quality reports provides information on the different methods used to collect, process, clean, adjust and protect the census results. The series also reports on the quality assurance of the results and provides quality indicators.


Contents

Summary ........................................................................................................................................ 2
Key observations ....................................................................................................................... 3
Comparison between 2011 Census estimates and the GP NHS Patient Register

1. Summary

The GP NHS Patient Register (PR) was one of a number of administrative data sources used in the quality assurance of the census. Patient Register data were used to check the validity of age/sex estimates at local authority (LA), middle layer super output area (MSOA) and lower super output area (LSOA) level. In addition, these data were also used to assess the quality of census estimates of household size, occupied households and international migration.

The aim of this paper is to provide comparisons of census estimates and Patient Register counts by sex and broad age group (0 to 15, 16 to 64, and 65 and over) by local authority, by region and nationally.


There are several key reasons why we might expect census estimates to differ to Patient Register counts:

- The PR only includes those people who have registered with a GP. Examples of those groups not registered with an NHS GP include sole private care users, armed forces personnel, long-term prisoners and patients in long stay hospitals

- List inflation exists on the PR where individuals are no longer resident at the address at which they are on the register. The extent of list inflation varies across the country depending on the demographic profile of each area and on how well lists are maintained to remove individuals who have moved

- Individuals intending to stay in the United Kingdom for longer than three months can register with an NHS GP. The 2011 Census definition of usual residence includes individuals who intend to stay for twelve months or more

2. Key observations

- The 2011 Census estimate for England and Wales is 2.4 million (-4 per cent) below the Patient Register. The difference is larger in England than Wales (-4 per cent and -3 per cent respectively)
- Differences are larger for males than females. The census estimate for males in England and Wales is 5 per cent below the PR, compared with 3 per cent for females
- Census estimates for English regions range from -8 per cent (London) to -3 per cent for six regions below the PR.
- There are nine local authorities where census is 10 per cent or more below the Patient Register. The highest difference to the Patient Register is found in Southwark and Lambeth at -15 per cent
- There are two local authorities where census is 10 per cent or more above the Patient Register – Richmondshire (15 per cent) and Forest Heath (14 per cent)

All persons by age

- Forest Heath and Richmondshire are above the PR by 29 per cent and 12 per cent respectively, for all persons aged 0 to 15. Southwark, Wandsworth and City of London (although estimates are small), are the furthest below the PR at -9 per cent
- For all persons aged 16 to 64, Lambeth and Southwark have the largest differences to the PR at -17 per cent. Richmondshire and Forest Heath are furthest above the PR by 21 per cent and 14 per cent respectively
- Lambeth and Southwark are furthest below the PR by -10 per cent and -8 per cent respectively for all persons aged 65 and over. Although estimates are small for this age group for both City of London and Isles of Scilly, both LAs are 6 per cent above the PR together with Kensington and Chelsea (also 6 per cent) and Camden (7 per cent)

Males by age

- Local authorities with the largest differences between the census and the PR for males aged 0 to 15 can be found within Forest Heath and Richmondshire, where the census figure is higher by 29 and 13 per cent respectively. Those LAs where the census is furthest below the PR are the City of London (-12 per cent - although estimates are small), Southwark (-9 per cent) and Wandsworth (-9 per cent).
- In total census estimates for 67 local authorities are 10 per cent or more below the PR for males aged 16 to 64. The Isles of Scilly (-22 per cent - although estimates are small), Southwark (-22 per cent) and Lambeth (-20 per cent) are the local authorities furthest below the PR. The local authorities whose census estimates are the furthest above the PR in this age/sex group are in Richmondshire and Forest Heath, at 37 per cent and 15 per cent respectively.
Only two local authorities census estimates are more than 10 per cent below PR for males aged 65 and over. These are Lambeth and Manchester (-12 per cent and -10 per cent respectively). The two local authorities furthest above the PR are City of London (8 per cent) and Isles of Scilly (7 per cent) although estimates for both these areas are small. The census estimates for Camden, Kensington and Chelsea and Westminster are 6 per cent above the PR.

**Females by age**

- Census estimates are furthest above the PR in Forest Heath (30 per cent) and Richmondshire (11 per cent) and furthest below the PR in Merton and Wandsworth (-9 per cent) and Southwark (-8 per cent) for females aged 0 to 15.
- Females aged 16 to 64 are most below the PR in City of London (-15 per cent - although estimates are small), Lambeth (-15 per cent) and Hammersmith and Fulham (-13 per cent). Forest Heath’s census estimate is furthest above the PR by 13 per cent.
- Camden and Kensington and Chelsea have the largest difference (7 per cent) in females aged 65 and over where census is above the PR. Lambeth and Southwark are furthest below the PR by -8 per cent.

---

1. Six regions 3 per cent below the PR:

<table>
<thead>
<tr>
<th>Region</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>East of England</td>
<td></td>
</tr>
<tr>
<td>East Midlands</td>
<td></td>
</tr>
<tr>
<td>North East</td>
<td></td>
</tr>
<tr>
<td>South East</td>
<td></td>
</tr>
<tr>
<td>South West</td>
<td></td>
</tr>
<tr>
<td>Yorkshire and the Humber</td>
<td></td>
</tr>
</tbody>
</table>

2. Nine local authorities 10 per cent or more below the PR:

<table>
<thead>
<tr>
<th>Local authority</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lambeth</td>
<td>-15</td>
</tr>
<tr>
<td>Southwark</td>
<td>-15</td>
</tr>
<tr>
<td>Oxford</td>
<td>-13</td>
</tr>
<tr>
<td>Brent</td>
<td>-12</td>
</tr>
<tr>
<td>Newham</td>
<td>-12</td>
</tr>
<tr>
<td>Lewisham</td>
<td>-11</td>
</tr>
<tr>
<td>Wandsworth</td>
<td>-11</td>
</tr>
<tr>
<td>Ealing</td>
<td>-10</td>
</tr>
<tr>
<td>Merton</td>
<td>-10</td>
</tr>
</tbody>
</table>

Enquiries to Census Customer Services: census.customerservices@ons.gsi.gov.uk