Occasional Paper No. 07 - October 2004

Census 2001 - Health and the North East

Introduction

The 2001 Census[1] was conducted on 29th April 2001 to provide a count of all persons in households in the United Kingdom. The Census provides statistical information at various population levels which is used to support the planning of public services including health, education and transport and for research.

The 2001 Census provides information on a range of variables about the population of the United Kingdom, including variables on the health of the population.

The North East Public Health Observatory (PHO) holds data from the 2001 Census at a range of geographic levels including:

- Counties
- Districts;
- Wards; and
- Output Areas (see Technical Notes for definition).

This occasional paper provides a summary of health variables from the 2001 Census for Primary Care Organisations (PCOs) in the North East of England.

Data for PCOs has been derived from ward level data. Manipulation of 2001 Census data has been undertaken using SASPAC[2].

Health and the North East is the first in a series of reports published by the North East PHO, looking at information from the 2001 Census in relation to PCOs within the North East.

Further publications may focus on:

- Housing;
- Children;
- Older People; and
- Carers.

Contents

Summary

Data from the 2001 Census show that:

- The health of the North East population compares unfavourably with England as a whole, including higher than national rates of health perceived as "not good" and limiting long term illness.
- The North East also has higher than average rates of people who are economically inactive because of permanent illness or disability and people acting as unpaid carers.
- The North East is the English region with highest rates of health perceived as "not good", limiting long-term illness, economic inactivity due to permanent sickness or disability and unpaid carers.
- There is a negative impact of disadvantage in the community on the health of that community within the North East, where the more deprived areas consistently report poorer health.
- The North East region performs consistently poorly on measures of health in comparison to England; even the best performing PCTs in the North East are worse in terms of health than the England average.
- Census data for PCTs, wards and authorities in the North East area are available from the North East PHO website at www.nepho.org.uk/index.php?i=98

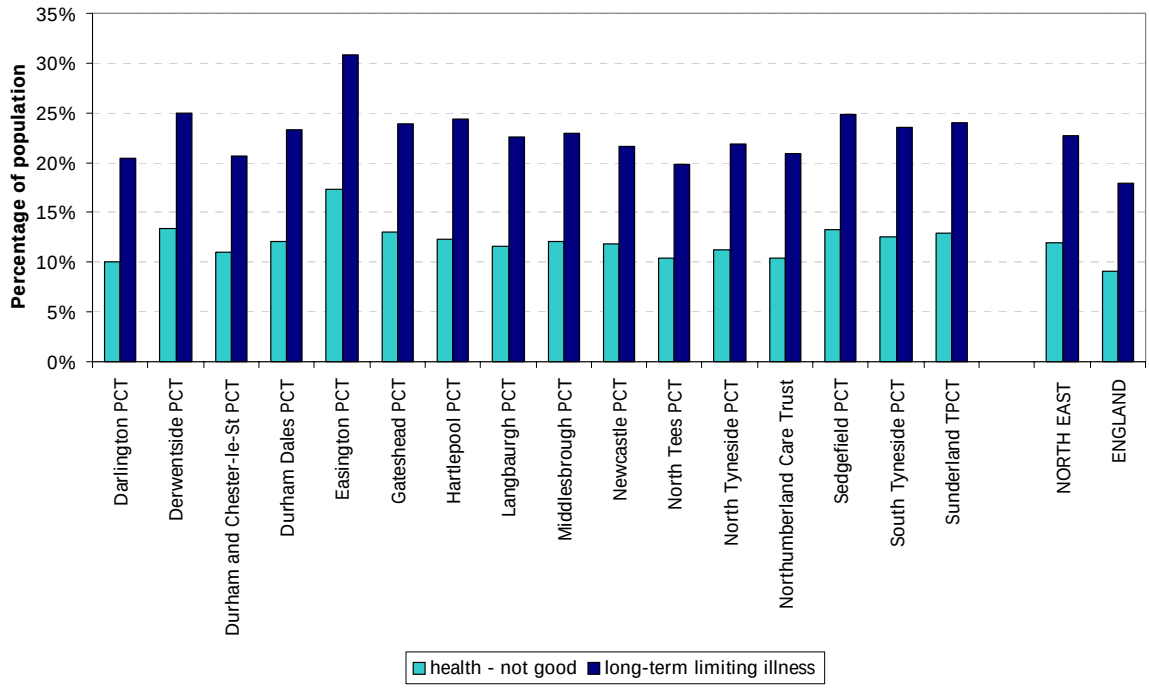
Measures of the general health of the population

Self-reported general health

The 2001 Census introduced a new question about general health. People were asked to assess their own health in the previous twelve months, as *good*, *fairly good* or *not good*:

- Across England, 69% of people rated their health as *good*, compared to 64% of people living in the North East.
- 12% of people in the North East rated their health as *not good*, compared to the England average of 9%. The North East is the English region with the highest proportion of people rating their health as *not good*.
- There was significant variation across the local PCTs, with 10% of Darlington PCT residents perceiving their health as *not good*, compared to over 17% of Easington PCT residents.
- Only 58% of people living in Easington PCT rated their health as *good*.
- Easington Local Authority has the highest proportion of people in England who rate their health as *not good* (17.3%).

Figure 1: Percentage of the population who reported their health as "*not good*" and percentage of the population with a limiting long-term illness for PCOs in the North East, 2001



Source: 2001 Census, Key Statistics Table KS0001

Limiting long-term illness or disability

The 1991 Census found that there were nearly 390,000 people in the North East who stated that they had a limiting long-term illness or disability: 15.5% of the population in the North East. By 2001, this figure had risen by 46% to over 570,000: 22.7% of the population in the North East, compared to 17.9% of the population of England.

Both nationally and regionally, the proportion of people who reported having a limiting long-term illness was around double the proportion of those who classified their health as *not good*; therefore at least half of those with limiting long-term illness felt that their health was either *fairly good* or *good*.

- Nearly half of those people in the North East with limiting long-term illness were of working age.
- 17.9% of the working age population in the North East have a long-term illness or disability, compared to 13.3% of England. The North East region has the highest proportion of people with a limiting long-term illness in England and Wales.
- There is considerable variation between PCTs, with 15% of North Tees PCT residents of working age having a limiting long term illness, compared to 27.5% of Easington PCT.
- There is clearly a relationship between deprivation of an area and limiting long-term illness.
- Easington Local Authority has a higher proportion of residents with limiting long-term illness than any other authority in England and Wales.

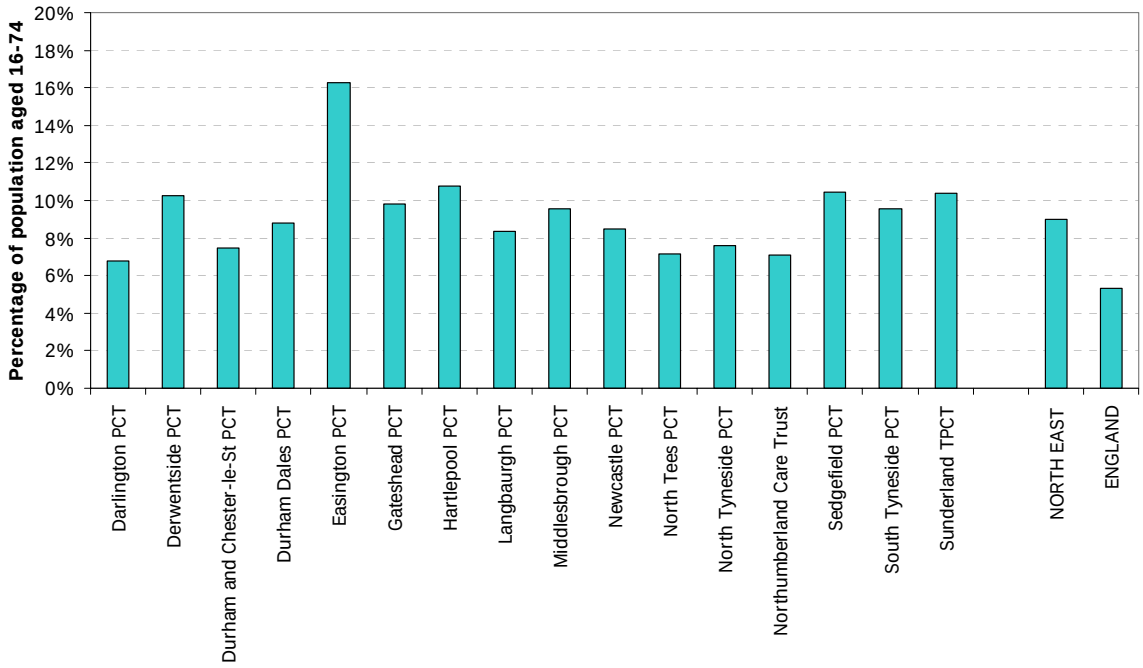
Economic costs of poor health

Economic inactivity due to permanent disability or sickness

Data from the 2001 Census include the number of people between the ages of 16 and 74 years who reported that they were economically inactive due to permanent disability or sickness:

- In the North East, 9% of people aged 16-74 classified themselves as economically inactive because of permanent sickness or disability, compared to 5.3% across England.
- The number of people who are economically inactive because of permanent sickness or disability varies widely between PCTs, from 6.8% of Darlington's population aged 16-74 years, to 16.3% of Easington's population (nearly one in six of the population).

Figure 2: Percentage of the population aged 16-74 who are economically inactive due to permanent disability or sickness for PCOs in the North East, 2001



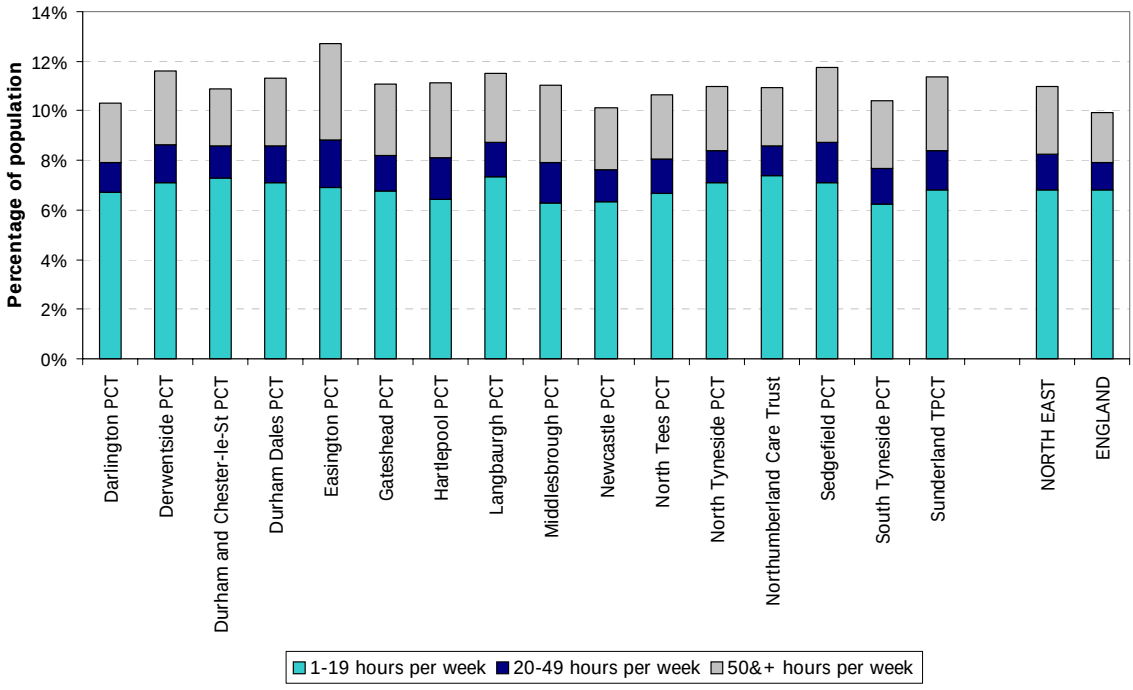
Source: 2001 Census Key Statistics Table KS0009

Unpaid carers

The 2001 Census, for the first time, asked a question about whether people provided unpaid care for a family member or friend and for how many hours:

- 11% of the population of the North East provide some level of unpaid care, compared to fewer than 10% across England. The North East region has the highest proportion of unpaid carers in England.
- The proportion of the population who act as unpaid carers varies from 10.1% of Newcastle PCT to 12.7% of Easington PCT.
- Of those who provide unpaid care in the North East, a quarter provide this care for 50 or more hours a week, compared to 20% across England; this ranges from 21% in Durham & Chester-le-Street PCT to 31% in Easington.

Figure 3: Percentage of the population providing unpaid care for PCOs in the North East, 2001



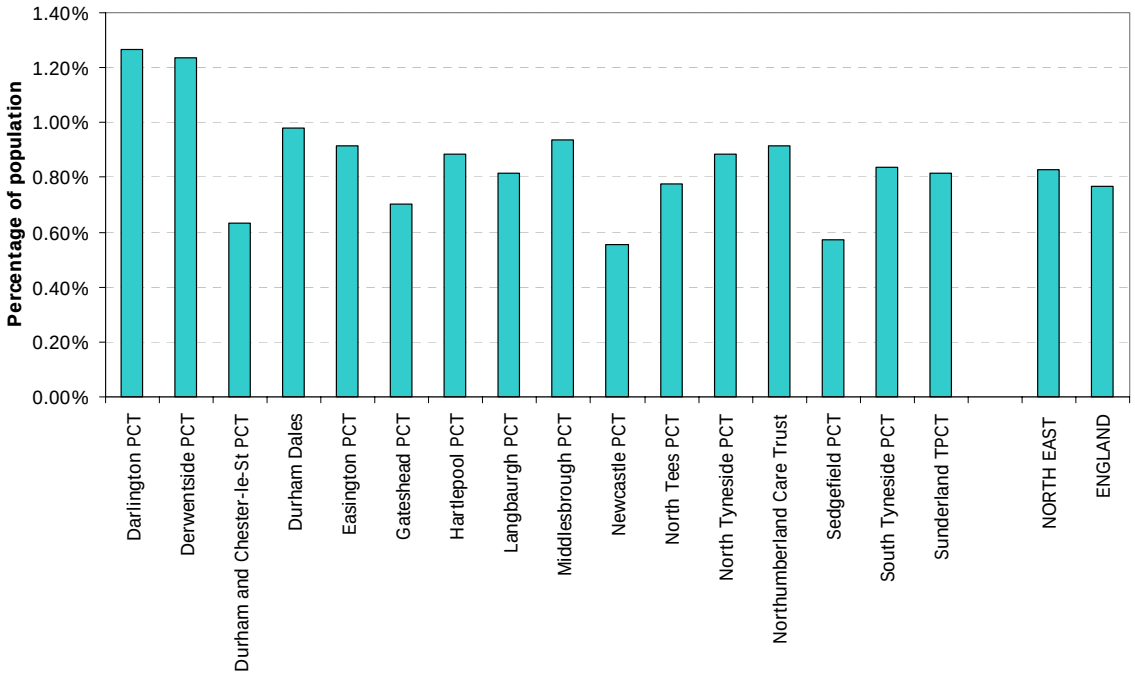
Source: 2001 Census Key Statistics Tables KS0001

Residents of medical and care establishments

The 2001 Census collected information about a range of communal establishments, including medical and care establishments. This shows:

- The proportion of residents in the North East who live in medical and care establishments is 0.8%, similar to the proportion across England.
- Proportions ranged across PCTs from 1.26% in Darlington to 0.56% in Newcastle. The majority of these residents (over three-quarters) live in nursing homes and residential homes.
- There is no clear relationship between the proportion of the population living in medical and care establishments and the proportion of people with limiting long-term illness, whose health is not good, who provide unpaid care or whose economic status is given as permanently sick or disabled.

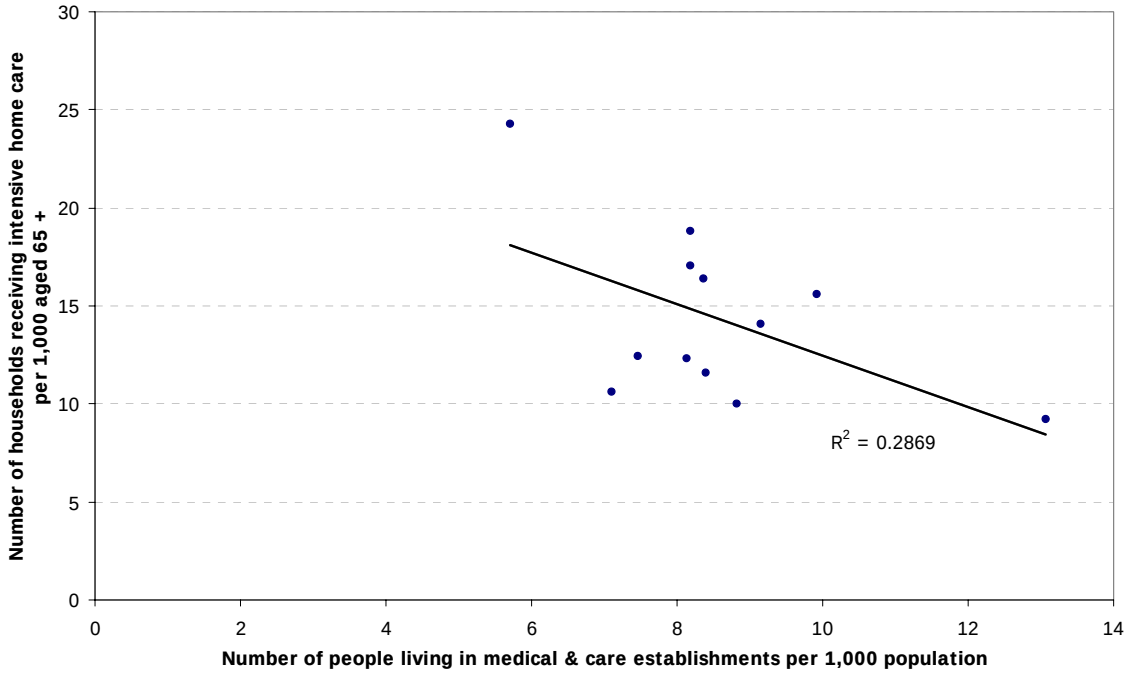
Figure 4: Percentage of the population living in medical and care establishments for PCOs in the North East, 2001



Source: 2001 Census Key Statistics Table KS0023

The Social Service Performance Assessment Framework[3] provides information on the proportion of households with residents aged 65 and over that receive intensive home care. Census 2001 provides some evidence of an inverse relationship between the proportion of the population who live in medical or care establishments and this measure (although at 0.2869, the R^2 is not statistically significant). This suggests that those Authorities who provide higher levels of intensive homecare to their older population have less people living in medical and care establishments, i.e. more people living within their own homes; however, it is likely that establishments are not distributed evenly in relationship to need.

Figure 5: Proportion of households receiving intensive homecare against those living in medical and care establishments, for top tier local authorities in the North East



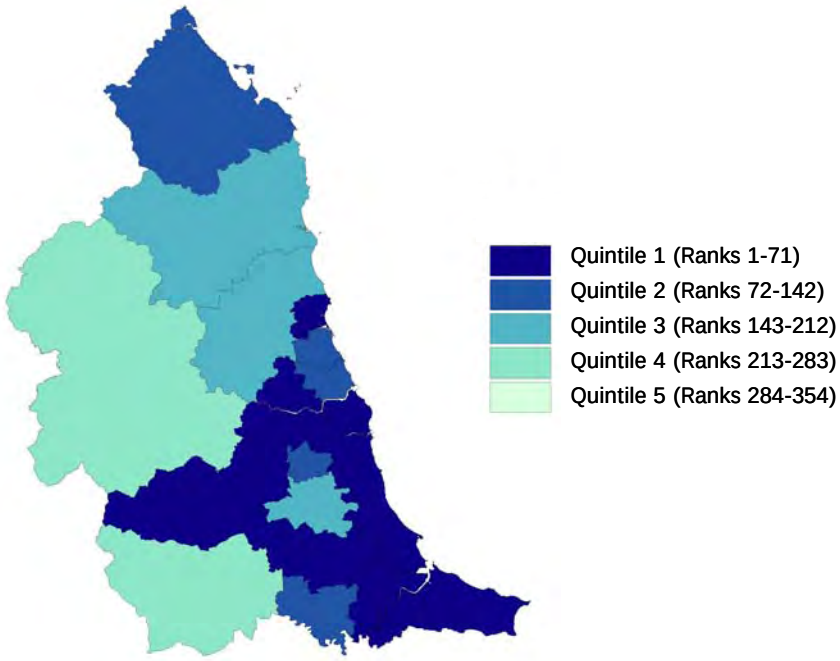
Source: 2001 Census and Social Service Performance Assessment Framework Indicators 2001-2002

Deprivation and health

The Office of the Deputy Prime Minister has recently published the Indices of Deprivation 2004[4]; these give measures of deprivation at Super Output Area (SOA) level – a new geographical level of around 1,500 people designed to improve the reporting of small area statistics. The North East Regional Information Sharing Partnership has produced a report of the key messages from the ID 2004 for the North East region; this includes a map of ID 2004 at SOA level[5]. ID 2004 has also been summarised at upper and lower tier local authority level, but not at PCT level. In this paper, the Average Local Authority Score - this is the population weighted average of the combined scores for all of the SOAs in the local authority - and its rank are used as summary measures. When using the ID 2004, high scores and low ranks represent the most deprived areas.

Figure 6 shows the pattern of deprivation for lower tier local authorities in the North East by rank, expressed as national quintiles; rank 1=most deprived and rank 354=least deprived. The North East has no local authorities in national quintile 5, the least deprived quintile.

Figure 6: ID 2004 Ranks of Average Local Authority Score (expressed as National Quintiles), for lower tier Local Authorities in the North East



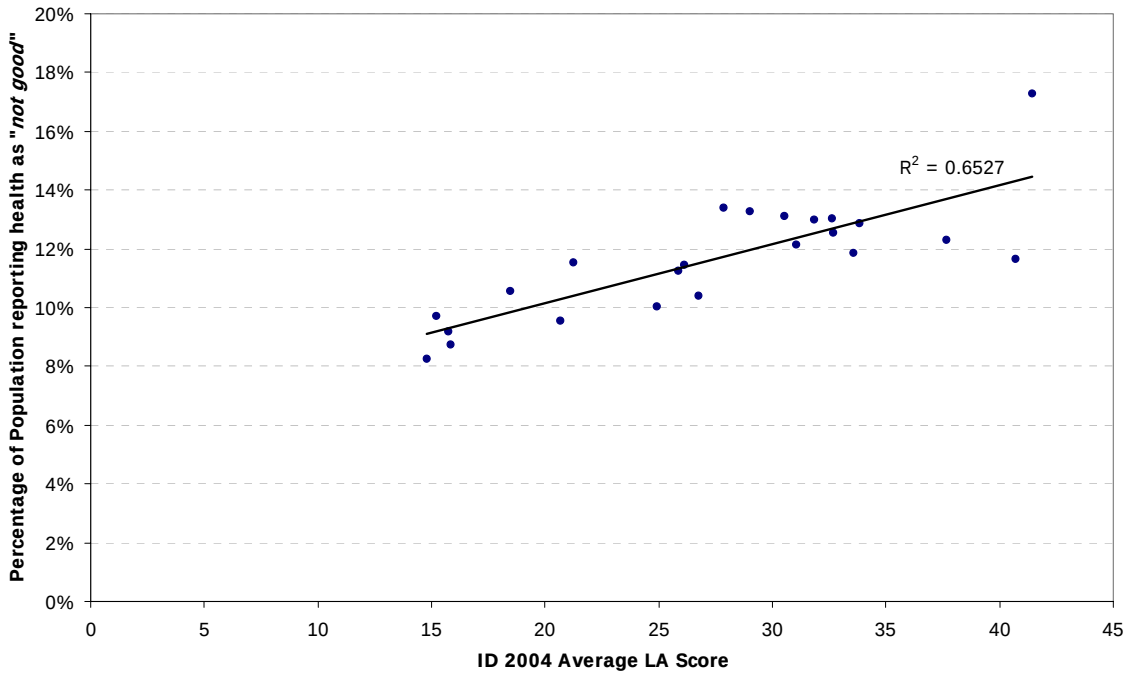
SOURCE: ID 2004; this map is based on data provided with the support of the ESRC and JISC and uses boundary material which is copyright of the Crown.

The relationship between deprivation and ill-health has long been recognised. Table 1 and Figures 7, 8 and 9 use correlation analysis to show the associations between ID 2004 Average Local Authority Score and health perceived as "not good", limiting long-term illness and economic inactivity due to permanent sickness or disability respectively. Table 1 shows correlation co-efficients (R) which test for linear association between the variables and quantify the strength of the association. Values of R^2 which give the proportion of variability in one variable that can be explained by the other variable are shown on figures 7, 8 and 9.

Table 1: Correlation Co-efficients (R) between ID 2004 Average Local Authority Score and Census health variables for lower tier Local Authorities in the North East

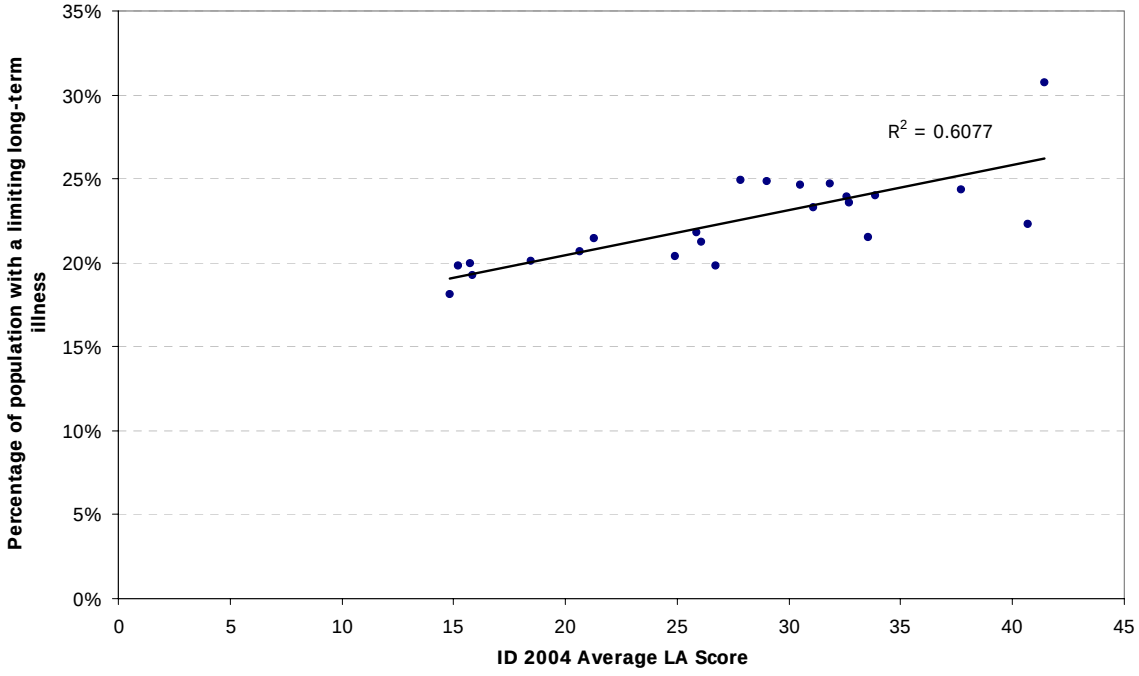
	% with LLTI	% health not good	% econ. inactive
Average LA Score	0.7795	0.8079	0.8393

Figure 7: Proportion of population reporting health as *not good* against ID 2004 Average Local Authority Score, for lower tier Local Authorities in the North East



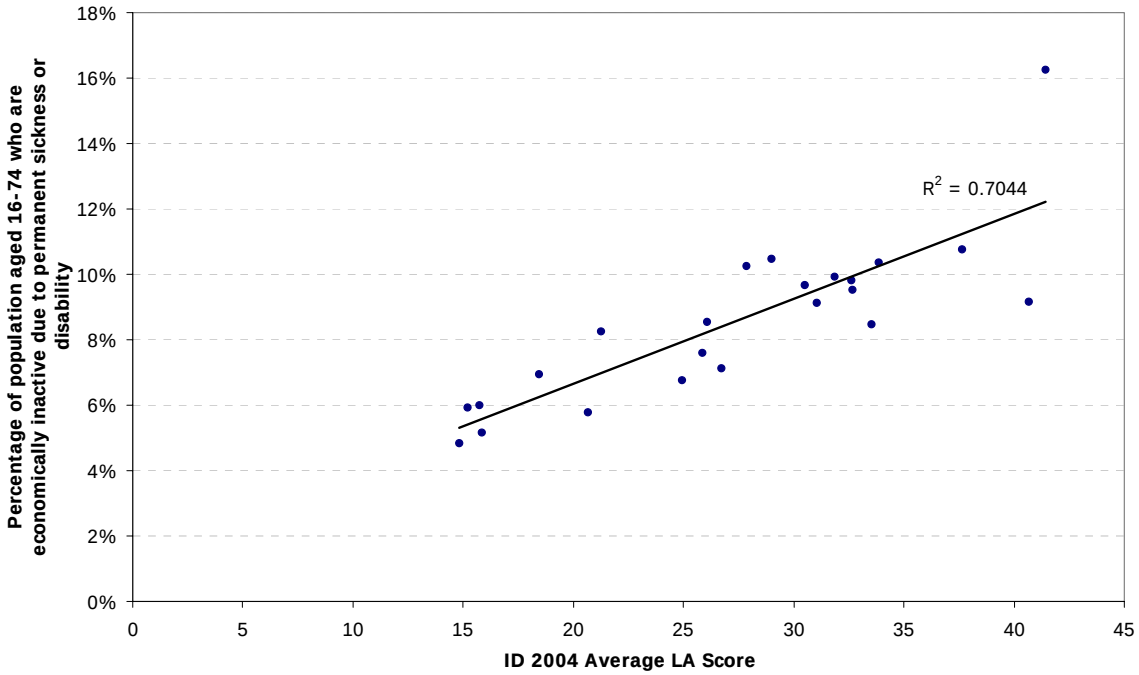
Source: 2001 Census, Indices of Deprivation 2004

Figure 8: Proportion of the population with a limiting long-term illness against ID 2004 Average Local Authority Score, for lower tier Local Authorities in the North East



Source: 2001 Census, Indices of Deprivation 2004

Figure 9: Percentage of the population aged 16-74 who are economically inactive due to permanent disability or sickness against ID 2004 Average Local Authority Score, for lower tier Local Authorities in the North East



Source: 2001 Census, Indices of Deprivation 2004

These correlations are statistically significant ($p < 0.0005$) at Local Authority level and also at Super Output Area level ($p < 0.0005$). Using 2001 Census data, it can be demonstrated that those local authority areas with higher levels of deprivation generally have:

- Higher proportions of their population reporting health as *not good*;
- Higher levels of limiting long-term illness; and
- Higher levels of economic inactivity because of long-term health problems.

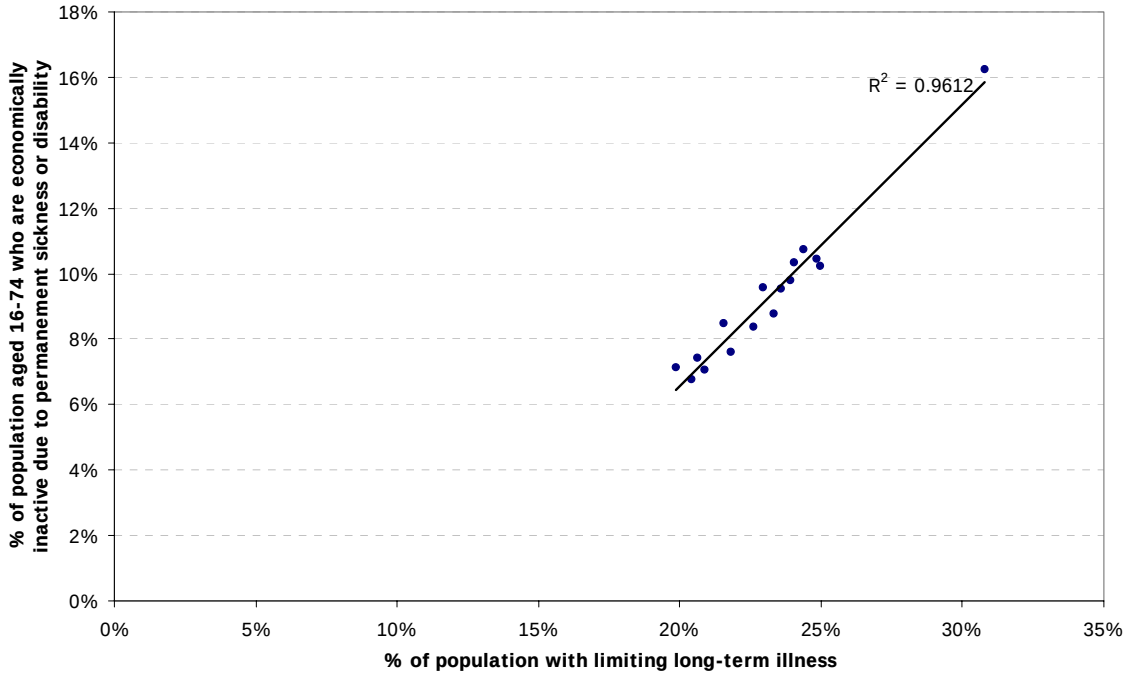
Relationship between health variables

Not surprisingly, there are strong correlations at PCO level between the percentage of the population with limiting long-term illness, the percentage of the population who refer to their health as "not good", the proportion of people aged 16-74 who are economically inactive because of permanent sickness or disability, and the percentage of the population who provide unpaid care for 50 or more hours a week (at $p<0.005$). Correlation co-efficients (R) are shown in Table 2 below and values of R^2 values are shown on figures 10 and 11.

Table 2: Correlation Co-efficients (R) between Census health variables for PCOs in the North East

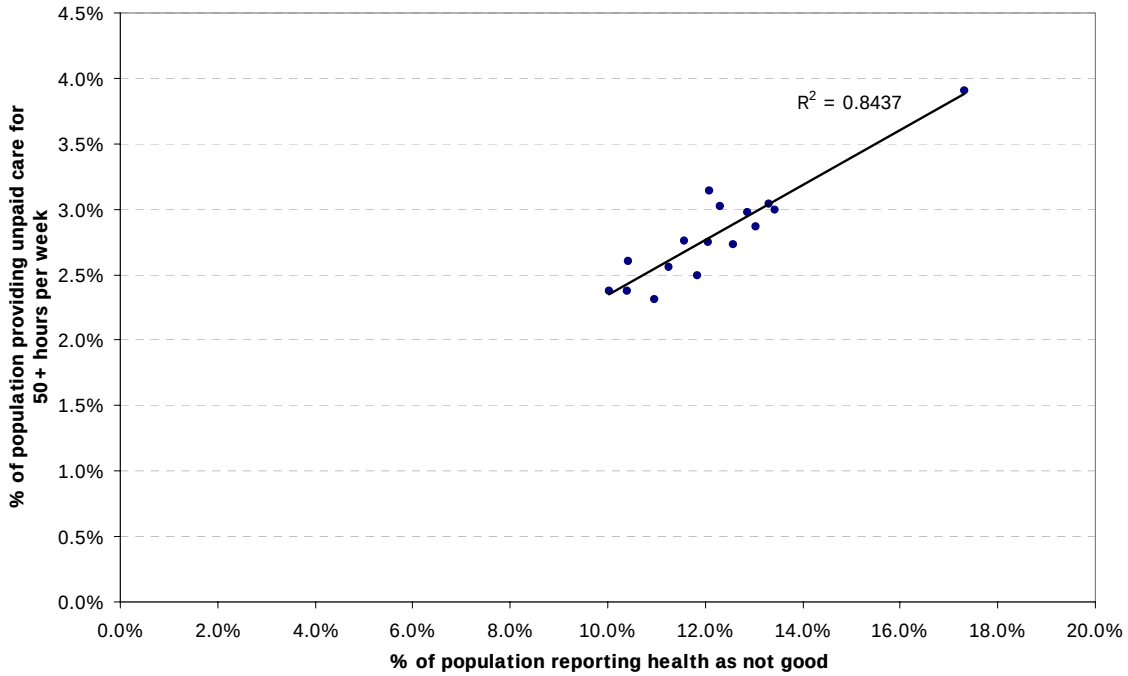
	% with LLTI	% health not good	% economically inactive	% unpaid carer 50+ hours per week
% with LLTI		0.9798	0.9804	0.9365
% health not good	0.9798		0.9771	0.9186
% economically inactive	0.9804	0.9771		0.9536
% unpaid carer 50+ hours per week	0.9365	0.9186	0.9536	

Figure 10: Correlation between limiting long-term illness and economic inactivity due to permanent sickness for PCOs in the North East



Source: 2001 Census

Figure 11: Correlation between limiting long-term illness and economic inactivity due to permanent sickness for PCOs in the North East



Source: 2001 Census

Conclusions

The 2001 Census[1] provides statistical information at various population levels which is used to support the planning of public services including health, education and transport and for research. This statistical information includes variables on the health of the population.

The North East Public Health Observatory (PHO) has used data from the 2001 Census and SASPAC[2] to provide information on the health of the PCO populations in the North East of England. This shows that:

- The health of the North East population compares unfavourably with England as a whole, including higher than national rates of limiting long term illness, and health perceived as not good
- The North East has higher than average rates of people who are economically inactive because of permanent illness or disability and people acting as unpaid carers.
- There is a clear demonstration of the negative impact of disadvantage in the communities of the North East, where the more deprived areas consistently report poorer health.
- The North East region performs consistently poorly on measures of health in comparison to England.

The key health message for the North East from the 2001 Census is that our region performs consistently poorly in comparison to England. There are no PCOs in the North East that perform as well as or better than the England average in terms of limiting long term illness, perception of general health, level of unpaid carers or amount of economic inactivity through permanent disability or illness. Easington PCT has the highest proportion of residents in each of these categories.

The North East shows higher than national rates of limiting long term illness, health perceived as *not good*, people acting as unpaid carers, and economic inactivity due of permanent illness or disability. Not surprisingly, there are strong correlations between these variables.

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Technical Notes

New geographies

Output Areas

A new level of geography built from postcode units and designed specifically for statistical purposes. Each Output Area contains around 125 households with populations which tend towards homogeneity.

Super Output Areas

A new geography built from Output Areas and designed for the collection and publication of small area statistics. There will be three layers of Super Output Areas, each nesting inside the layer above, with areas intermediate in size between Output Areas (OAs) and local authorities.

Super Output Areas will give an improved basis for comparison across the country because the units are more similar in size than, for example, electoral wards. They are also intended to be highly stable, enabling the improved comparison and monitoring of policy over time.

Disclosure control

The following measures are applied to 2001 Census output for England and Wales to prevent the inadvertent disclosure of information about identifiable individuals.

Small cell adjustment

- A small count appearing in a table cell is adjusted - information on what constitutes a small cell count cannot be provided as this may compromise confidentiality protection.
- Totals and subtotals in tables are calculated as the sum of the adjusted data so that all tables are internally additive; within tables, totals and subtotals are the sum of the adjusted constituent counts.
- Tables are independently adjusted; this means that counts of the same population in two different tables may not necessarily be the same.
- Tables for higher geographical levels are independently adjusted, and, therefore, will not necessarily be the sum of the lower geographical component units.
- Output is being produced from one database, adjusted for estimated undercount, the tables from this one database provide consistent pictures of this one population.

Record swapping

The individual records on the output database are slightly modified by record swapping in which a sample of records is 'swapped' with similar records in other geographical areas. The proportion of records swapped is confidential.

Thresholds

Two pairs of thresholds apply.

- For the release of Standard Tables an area must contain at least 1,000 residents and 400 resident households.
- For the release of Census Area Statistics (CAS), an area must contain at least 100 residents and 40 resident households.

Because of the disclosure control measures outlined above, this paper gives reference to the 2001 Census Table used as source for the data in this report.

Acknowledgements

Data reported here are from the 2001 Census. All Census output is Crown copyright.

Further Information

The North East Public Health Observatory (PHO) holds data from the 2001 Census at a range of geographic levels including counties, districts, wards and output areas; data are manipulated using SASPAC.

The PHO can provide support to PCTs for analysis of data from the 2001 Census. Please address queries and suggestions to Susan Walrond, Senior Information Manager (susan.walrond@nepho.org.uk).

Over time the PHO aims to develop a library of census data for PCTs, wards and local authorities in the North East on the PHO website at www.nepho.org.uk. The data and analyses from this report are already available.

References

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