

# Local Authority Variations in Activity Limitations (disability) for Males and Females, England and Wales 2011

Coverage: **England and Wales**

Date: **21 November 2013**

Geographical Areas: **Country, Local Authority and County, Region**

Theme: **Health and Social Care**

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## Key Points

- Around a 5th of the population of England and Wales assessed their day-to-day activities as limited either 'a lot' or 'a little' because of a health problem or disability.
- The 2011 Census showed 12 per cent of residents of Wales reported their day-to-day activities were 'Limited a lot'; in England it was less than 9 per cent of residents.
- There is significant inequality across local authorities in England with almost three times as many people in Knowsley, Merseyside, reporting that their activities were 'Limited a lot' (almost 16 per cent) compared to Elmbridge, Surrey, (almost 5 per cent).
- Merthyr Tydfil, Wales, had the highest percentage of residents 'Limited a lot'; 17.0 percent of males and 16.6 of females.
- The 10 local authorities with the lowest percentages of residents 'Limited a lot' were clustered in an area to the south and west of London.
- In England and Wales, the largest inequality between authorities in the proportion of their residents 'Limited a lot' was at ages 65-74.
- The percentage of residents with day-to-day activities 'Limited a lot' was strongly related to the level of deprivation experienced by the authorities' residents ; in Liverpool: the most deprived local authority, it was 15.1 per cent, approximately three times higher than in Elmbridge, Surrey (4.9 per cent) and Hart, Hampshire, (4.9 per cent), the least deprived local authorities in England.

## Introduction

This report describes the variation between local authorities in the way their residents self-assess their day-to-day activities as limited by a health problem or disability for a year or more. Using 2011 Census data in England and Wales, this information can help in assessing social care needs and judging the proportion of the working age population who are likely to be fit for work.

Variations across local authorities inform care funding decisions and workplace adaptations that may be needed to improve the access to the labour market among people with activity restrictions. It can also provide insight into the proportions of the local working age population who are likely to need benefit support because of work limiting health problems or disabilities.

Most people will experience some sort of illness or impairment at some point in their lives, and can broadly be characterised in two groups. Those which do not have a long term effect on day-to-day activities, (for example socialising, going to work and living independently), possibly because of effective treatment of their health condition. And those with long-term health problems or impairments, that restrict their undertaking of day-to-day activities (such as employment, accessing services independently, and performing self-care tasks). Those reporting their activities are limited 'a lot' are likely to be in need of regular social care support from other family members, friends or public or voluntary sector services.

## Background

### How does the census measure activity limitation?

In the 2011 Census, residents were asked to assess whether their day-to-day activities were either 'Limited a lot' or 'Limited a little' because of a health problem or disability. These include any problem related to old age, which has lasted, or is expected to last, at least 12 months. An individual responding 'Yes, Limited a lot' or 'Yes, limited a little' is classified as having a disability in this short story.

**Figure 1: Activity limitation question included in the 2011 Census**

**23** Are your day-to-day activities limited because of a health problem or disability which has lasted, or is expected to last, at least 12 months?

➔ Include problems related to old age

Yes, limited a lot

Yes, limited a little

No

### Age standardisation

Age standardisation is a technique to produce comparable results across populations with different age structures. In England and Wales, local authority populations have different age structures,

with some having a markedly younger or older population to others and to the England and Wales average. As disabling health problems and impairments are generally more common at older ages than at younger ages, those populations with proportionately more residents at older ages are likely to have proportionally more disabled people simply on grounds of age, preventing other factors such as area deprivation being examined as a possible reason for differences.

Age standardisation adjusts for these age differences, enabling populations to be compared on an equal footing with regard to age. In this report we use it to give a percentage of self-assessed activity limitation for each local authority's resident population enabling them to be ranked fairly.

The [European Standard Population](#) (ESP 2013) has been used in this short story to age standardise percentages of activity limitation. Please see the background notes section for more detail.

### **Area based deprivation**

This report uses English local authorities' respective [Index of Multiple Deprivation 2010](#) summary score to illustrate the pattern in health status with relative area deprivation in England. This index measures deprivation across seven domains: income, employment, health, education, living environment, crime and access to services. For Wales this report uses the [Welsh Index of Multiple Deprivation \(WIMD\) 2011](#) to measure the relative deprivation of Welsh unitary authorities. The eight domains used in the WIMD are similar to those used in England: income, housing, employment, access to services, education, health, community, safety, physical environment.

The English index takes into account the characteristics of areas within each local authority such as employment and service access. This can be used to generate an average summary score across all neighbourhoods within the local authority, which enables local authorities to be ranked by the level of relative deprivation experienced.

Further details of how Welsh unitary authorities are ranked can be accessed on the [StatsWales](#) website.

The inclusion of these ranks in the tables shows how health status varies by level of deprivation that the authority's population is exposed to.

### **National focus**

Self-assessment of activity limitation is an important indicator of an individual's functional health status, having relevance for fitness for work and independent living, by indicating general physical and mental functioning. Figure 2 shows age-standardised rates of activity limitation broken down into three categories for males and females in England and Wales. These national figures provide a benchmark for local authorities to compare themselves against.

## Figure2: Activity limiting health problems or disability

Usual Residents, England and Wales, 2011



Source: Census - Office for National Statistics

### Notes:

1. European Standard Population (ESP 2013) is used to standardise self-assessed activity limitation responses to enable comparison allowing for differences in age structure.

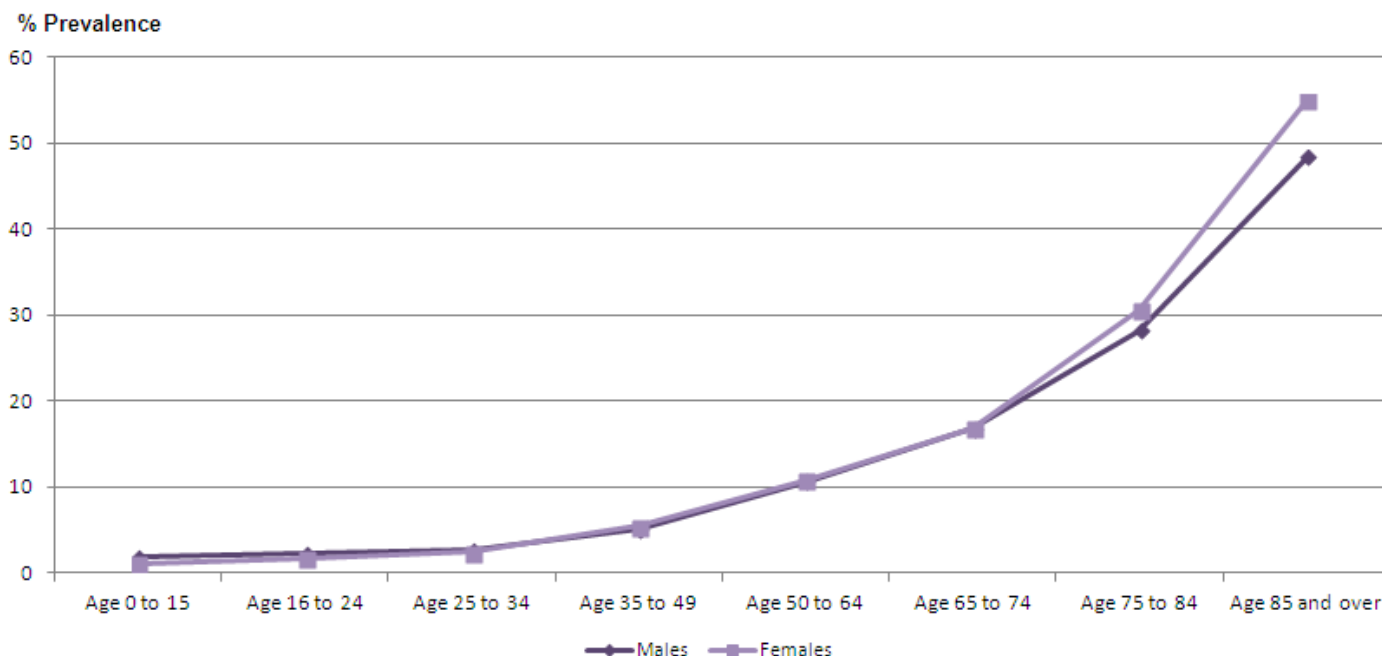
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In England and Wales, 9.6 million people reported their day-to-day activities were limited because of a health problem or disability; of these, 4.4 million (46 per cent) assessed their activities to be 'Limited a lot'. Approximately a fifth of the usual resident population of England and Wales were limited to some extent in their day-to-day activities due to a health problem or disability.

At the national level, females had a higher age-standardised rate of activity limitation than males; 9.1 per cent reported that they were 'Limited a lot' and 10.6 per cent were 'Limited a little'; while 8.9 percent of males reported their activities 'Limited a lot' and 9.9 percent 'Limited a little'. This means that around 9 per cent males and females have limitations in performing day-to-day activities which are likely to require some extent of government funded social care or unpaid care from family or friends or a combination of the two.

**Figure 3 Prevalence of self-assessed day-to-day activities ‘Limited a lot’ among males and females at different ages in England and Wales.**



Source: Census - Office for National Statistics

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Figure 3 shows the overall age distribution of the more severe form of activity limitation ('Limited a lot') among males and females across England and Wales. The age breakdown shows that the percentage of residents who are 'Limited a lot' increases in line with advancing age for males and females. Sharper increases occur in those aged 50-64 than at younger ages; but the most pronounced increases occur at ages 75 and above. Gender differences start to arise at ages 75 and above, with women having a higher prevalence than men. One possible reason for this is that women are more likely to suffer from osteoporosis and osteoarthritis which increases risks of falls and fractures and suffering pain causing mobility problems. Other disabling conditions known to be more prevalent among older women than men are back problems and depression.

The remaining analysis in this report has been calculated separately for England and for Wales. This is because different indices of multiple deprivation are used by these countries, which are not comparable. In addition, because health is a devolved policy area, administrations in England are interested in English rankings of local authorities for use in planning local services, while the Welsh government is primarily interested in Welsh unitary authority rankings for the same purposes.

## English local authority comparison

ONS published data on activity limitation prevalence based on the 2011 Census in January 2013, using crude rates for all persons to rank local authorities. This report presents data for the same time period, but for males and females using age standardised rates.

There are pronounced differences in local authority rankings on these two measures (crude versus age standardised), illustrating the impact and benefits of age standardisation in enabling a fairer comparison between local authorities to be made. The top and bottom 10 local authorities in the earlier release were ranked partly by their relatively younger or older population structures. For example, Wandsworth London Borough, with a younger population structure, was placed in the lowest 10 using crude rates, but moved out of the lowest 10 when using age standardised rates. Similarly, East Lindsey, Lincolnshire, with a much older age structure, had among the highest percentage of activity limitation using crude rates, but moved out of the highest 10 using age standardised rates. The earlier analysis showed only a weak relationship between crude rates of activity limitation and area deprivation for local authorities, showing that age-structure differences can obscure other important local factors linked to health.

By using age standardised rates this report places local authorities on an equal footing in terms of age-structure and enables a more valid ranking of local authorities to be made. It also re-examines the relationship between self-assessed activity limitation and local area deprivation.

This report includes the data of self-assessed activity limitation for all 326 local authorities in England; however, due to small population counts the City of London has been merged with the neighbouring London Borough of Hackney, while data for the Isles of Scilly has been merged with Cornwall UA. Therefore the analyses presented here are based on 324 local or unitary authorities.

Authorities were ranked for males and females separately, using their respective age-standardised percentage of self-assessed activity limitation which combines the 'Yes, Limited a little' and 'Yes, Limited a lot' categories. Tables 1 and 2 show the 10 local authorities with the highest and lowest age-standardised percentages of self-assessed activity limitations for males and females respectively.

**Table 1: Top and bottom 10 local authorities' age standardised total activity limitation and activities 'Limited a lot' with IMD ranks for males. [1][2][3]**

Local Authority	Total activity limitation	Rank	Activity 'Limited a lot' (rank) <sup>1</sup>	IMD Ranks 2010 <sup>2</sup>
<b>Top Ten</b>				
Knowsley	26.4	1	15.7 (1)	5
Liverpool	26.2	2	15.3 (2)	1
Blackpool	25.8	3	13.6 (6)	6
Bolsover	25.4	4	13.8 (4)	58
Manchester	25.4	5	14.0 (3)	4
Barnsley	25.3	6	13.7 (5)	47
Mansfield	25.1	7	13.1 (11)	38
Stoke-on-Trent	24.9	8	13.1 (9)	16
Sunderland	24.7	9	13.5 (7)	44
Barrow-in-Furness	24.4	10	12.9 (14)	32
<b>Bottom Ten</b>				
Richmond upon Thames	13.1	315	5.5 (301)	283
Mole Valley	13.1	316	5.1 (318)	308
Windsor and Maidenhead	12.9	317	5.2 (315)	301
South Bucks	12.9	318	5.2 (313)	296
Wokingham	12.6	319	4.8 (322)	323
Chiltern	12.6	320	4.8 (320)	311
Surrey Heath	12.6	321	4.8 (323)	322
Waverley	12.5	322	4.8 (321)	319
Hart	12.4	323	4.5 (324)	324
Elmbridge	12.1	324	4.9 (319)	318

**Table source:** Office for National Statistics

**Table notes:**

1. The European Standard Population (ESP 2013) has been used to calculate the age standardised percentages of activities 'Limited a lot'; which signify the percent of people who assessed their day-to-day activities as 'Limited a lot' by adjusting for the effect of age. Total activity limitation shows the percentages of the people who assessed their daily activities as 'limited a little' or 'Limited a lot'.

2. Authorities were ranked using age-standardised percentages of total activity limitation; which combines the response categories of 'limited a little' and 'Limited a lot' from the 2011 Census question.
3. The Index of Multiple Deprivation ranks 1 as the most deprived and 324 as least deprived; Indices of deprivation 2010 summary score rank is based on the average of LSOA ranks within the authority [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/6884/1871689.xls](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6884/1871689.xls).
4. Analysis refers to 324 local authorities as City of London has been merged with Hackney and Isles of Scilly has been merged with Cornwall due to small population counts

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**Table 2. Top and bottom 10 local authorities' age standardised total activity limitation and activities 'Limited a lot' with IMD ranks for females . 1,2,3**

Local Authority	Total activity limitation	Rank	Activity 'Limited 'a lot'(rank) <sup>1</sup>	IMD Ranks 2010 <sup>2</sup>
<b>Top Ten</b>				
Knowsley	27.0	1	15.5 (1)	5
Tower Hamlets	26.8	2	14.3 (4)	7
Manchester	26.7	3	14.5 (3)	4
Liverpool	26.4	4	14.9 (2)	1
Newham	25.7	5	13.9 (5)	3
Stoke-on-Trent	25.6	6	13.1 (6)	16
Blackpool UA	25.2	7	13.0 (7)	6
Sandwell	25.0	8	12.8 (11)	12
Barrow-in-Furness	25.0	9	12.8 (12)	32
Blackburn with Darwen	25.0	10	12.9 (10)	17
<b>Bottom Ten</b>				
Windsor and Maidenhead	13.9	315	5.7 (306)	301
South Bucks	13.8	316	5.6 (313)	296
Richmond upon Thames	13.7	317	5.6 (312)	283
Wokingham	13.7	318	5.3 (319)	323
Hart	13.6	319	5.2 (320)	324




Local Authority	Total activity limitation	Rank	Activity 'Limited a lot'(rank) <sup>1</sup>	IMD Ranks 2010 <sup>2</sup>
Surrey Heath	13.6	320	5.3 (318)	322
Mole Valley	13.6	321	5.1 (322)	308
Waverley	13.4	322	5.0 (323)	319
Chiltern	13.2	323	5.1 (321)	311
Elmbridge	12.9	324	4.9 (324)	318

**Table source:** Office for National Statistics

**Table notes:**

1. The European Standard Population (ESP 2013) has been used to calculate the age standardised percentages of activities 'Limited a lot'; which signify the percent of people who assessed their day-to-day activities as 'Limited a lot' by adjusting for the effect of age. Total activity limitation shows the percentages of the people who assessed their daily activities as 'limited a little' or 'Limited a lot'.
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3. The Index of Multiple Deprivation ranks 1 as the most deprived and 324 as least deprived; Indices of deprivation 2010 summary score rank is based on the average of LSOA ranks within the authority [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/6884/1871689.xls](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6884/1871689.xls).
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Tables 1 and 2 show a clear pattern of lower percentages of activity limitation in areas with lower levels of local deprivation and vice versa. Five out of the ten authorities with the highest age-standardised percentages for males were from the north west of England and six for females, where levels of deprivation are highest. The authorities of Knowsley, Liverpool and Manchester had the highest percentages of the more severe activity limitations category 'Limited a lot', suggesting these authorities have higher social care service needs. In Knowsley, around 16 per cent of residents were 'Limited a lot' in carrying out normal day-to-day activities. In contrast, those authorities with the lowest prevalence were largely clustered to the south and west of London and had approximately 5 per cent of residents reporting that their day-to-day activities were 'Limited a lot'.

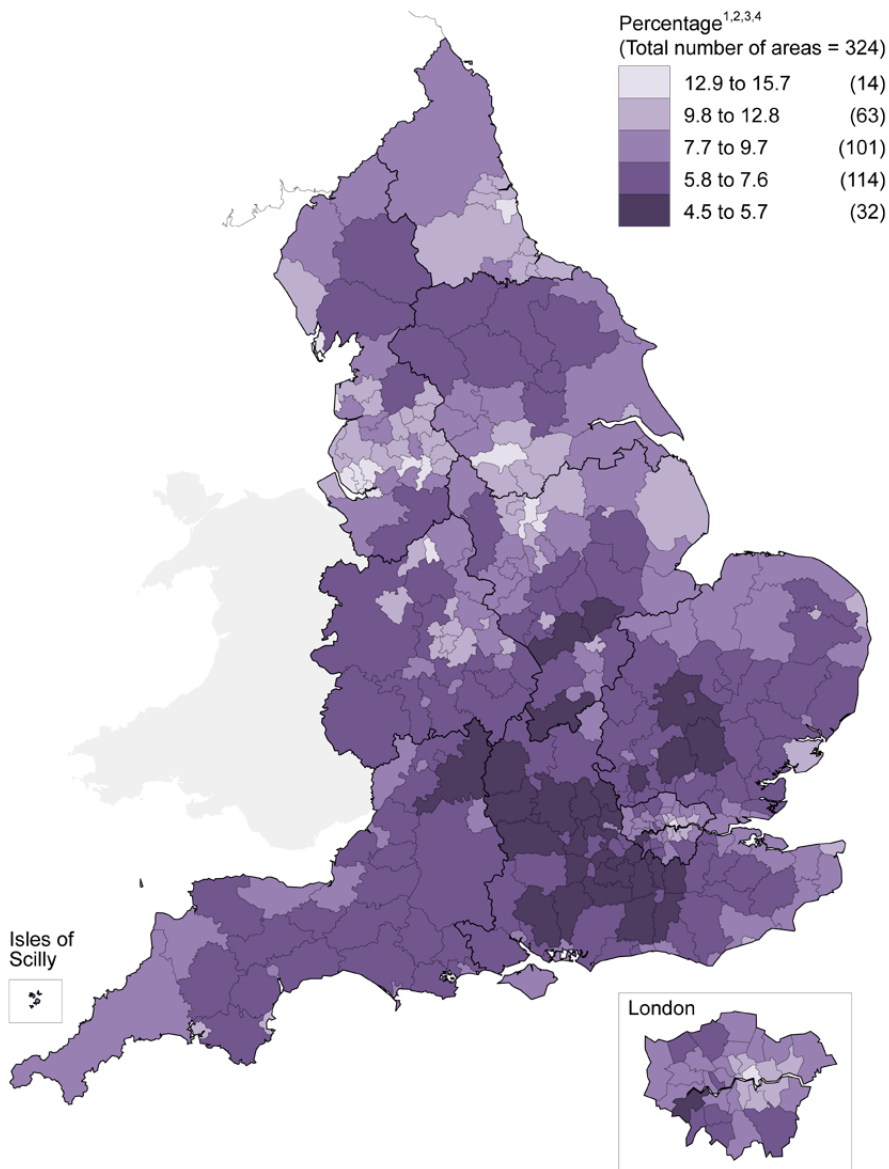
The 10 authorities with the lowest rates were the same authorities for males and females. These authorities were among the least deprived in England, located in the commuter belts of Buckinghamshire, Hampshire, Oxfordshire and Surrey and having extensive rural and semi-rural populations. In these authorities the male age standardised rate for 'limited a lot' ranged from 5.5 per cent in Richmond upon Thames to 4.5 per cent in Hart; for females the equivalent rates were 5.7 per cent in Windsor and Maidenhead to 4.9 per cent in Elmbridge.

The local authorities of City of London, Wandsworth, Oxford, Kensington and Chelsea and Kingston-upon-Thames appeared in the bottom 10 in the previous rankings released in January 2013, based on having the lowest percentages of crude rates of self-assessed activity limitation. However these have dropped out of the bottom 10 when using age standardised rates.

Conversely, East Lindsey, Tendring, Torbay, West Somerset, and Wyre which appeared in the top 10 in the rankings in January 2013, based on having the highest percentages of crude rates of self-assessed activity limitation, are no longer represented in the top 10 for this report's rankings. This is mainly because of the different age structures; those local authorities which dropped out of the top 10 had older population structures, and those which dropped out of the bottom 10 had younger population structures.

A comparison of the more severe form of activity limitation across local authorities for males and females in England in 2011 is shown in Maps 1 and 2 respectively. The darker colours indicate higher percentages of 'Limited a lot' and the lighter colours lower percentages of 'Limited a lot'. A clear north-south divide is present.

## Map 1: Age standardised percentages of males who reported their daily activities were 'Limited a lot', by local or unitary authority, England, 2011



1 Age Standardised percentages of 'limited a lot' are standardised to the 2013 European Standard Population (ESP).

2 'Limited a lot' was derived from those responding 'limited a lot' to the activity limitation question in the 2011 Census.

3 Data for Isles of Scilly have been merged with Cornwall because of small population counts.

4 Data for City of London have been merged with Hackney because of small population counts.

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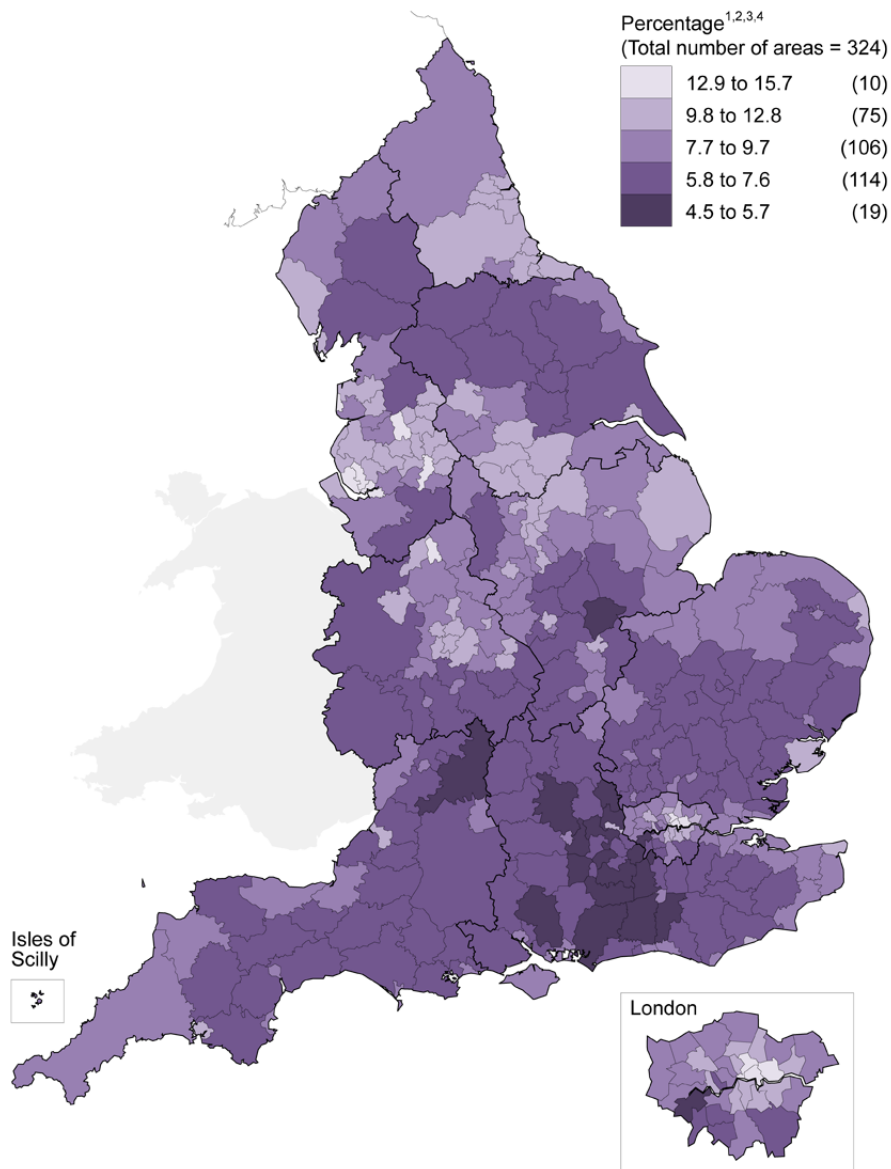
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## Map 2: Age standardised percentage of females who reported their daily activities were 'Limited a lot', by local or unitary authority, England, 2011



1 Age Standardised percentages of 'limited a lot' are standardised to the 2013 European Standard Population (ESP).

2 'Limited a lot' was derived from those responding 'limited a lot' to the activity limitation question in the 2011 Census.

3 Data for Isles of Scilly have been merged with Cornwall because of small population counts.

4 Data for City of London have been merged with Hackney because of small population counts.

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The relationship between activity limitation and area deprivation is strong using age standardised percentages of activity limitations rising as the rank order of the authority on the deprivation index falls, where rank order of 1 is most deprived and rank order of 324 is least deprived. Among males, the correlation coefficient for those with any level of day-to-day activity limitation and for those who were 'Limited a lot' was -0.90; for females the correlations were -0.92 and -0.91 respectively, and therefore a close to linear association. This means that even at the level of local authority, area deprivation has a significant influence on self-assessed functional health status.

In London, there were no boroughs in the top 10 authorities with the highest percentages of activity limitations for males; however, the boroughs of Newham and Tower Hamlets were in the top 10 for females. These boroughs have poorer health outcomes on a number of other health measures such as lower self-assessed general health and health and life expectancy, higher rates of death from heart disease, strokes and cancer and higher rates of people diagnosed with diabetes than the England average.

The London boroughs of Newham and Tower Hamlets are among the most ethnically diverse local authorities in England and Wales, with the 2011 Census showing 9.8 per cent reported Pakistani ethnicity and 12.2 per cent Bangladeshi ethnicity in Newham; while in Tower Hamlets 32 per cent reported their ethnicity as Bangladeshi. The 2011 Census also showed that Pakistani and Bangladeshi women reported rates of activity limitation 10 per cent higher than White British women ([Dynamic of diversity: evidence from the Census 2011](#)).

## Welsh unitary authorities

There were also differences in the ranking of the unitary authorities in Wales following age-standardisation, compared with the results published in January 2013 at local authority level; but less markedly than those for England.

There are 22 unitary authorities in Wales; Cardiff has the largest population and the youngest population structure.

Table 3 shows the age-standardised percentages of self-assessed total activity limitations and the proportions of those 'Limited a lot' for the five unitary authorities with the highest and lowest percentages, for males and females respectively. The unitary authority's rank on the Welsh Index of Multiple Deprivation (WIMD), 2011 is also shown.

**Table 3. Welsh unitary authorities with the highest and lowest percentages of total activity limitation and activities 'Limited a lot' with WIMD 1,2,3**

	<b>Local Authority</b>	<b>Total activity limitation</b>	<b>Rank</b>	<b>Activity 'Limited a lot' (rank)<sup>1</sup></b>	<b>WIMD Ranks 2011<sup>2</sup></b>	
<b>Males</b>	<b>Top 5</b>					
		Merthyr Tydfil	28.4	1	17.0 (1)	1
		Blaenau Gwent	28.1	2	16.4 (2)	2
		Neath Port Talbot	27.4	3	15.9 (3)	6
		Rhondda Cynon Taf	27.1	4	15.5 (4)	3
		Caerphilly	27.0	5	15.3 (5)	7
		<b>Bottom 5</b>				
		The Vale of Glamorgan	20.2	18	9.8 (18)	12
		Gwynedd	20.1	19	9.4 (20)	17
		Flintshire	19.8	20	9.6 (19)	15
		Powys	18.9	21	8.8 (21)	20
		Monmouthshire	18.4	22	8.5 (22)	21=
<b>Females</b>	<b>Top 5</b>					
		Merthyr Tydfil	28.8	1	16.6 (1)	1
		Neath Port Talbot	28.7	2	16.2 (2)	6
		Blaenau Gwent	28.4	3	16.2 (3)	2
		Rhondda Cynon Taf	27.7	4	15.1 (4)	3
		Caerphilly	27.6	5	14.9 (5)	7
		<b>Bottom 5</b>				
		Flintshire	20.8	18	10.1 (14)	15
		Ceredigion	20.6	19	9.5 (19)	21=
		Gwynedd	19.6	20	8.9 (21)	17
		Powys	19.5	21	8.8 (22)	20
		Monmouthshire	19.2	22	9.0 (20)	21=

**Table source:** Office for National Statistics

**Table notes:**

1. The European Standard Population (ESP 2013) has been used to calculate the age standardised percentages of activities 'Limited a lot'; which signify the percent of people who assessed their day-to-day activities as 'Limited a lot' by adjusting for the effect of age. Total activity limitation shows the percentages of the people who assessed their daily activities as 'limited a little' or 'Limited a lot'.
2. Authorities were ranked using age-standardised percentages of total activity limitation; which combines the response categories of 'limited a little' and 'Limited a lot' from the 2011 Census question.
3. The Welsh Index of Multiple Deprivation ranks 1 as the most deprived and 21 as least deprived; numbers followed by an "=" sign indicate that this unitary authority shares this rank with another unitary authority.

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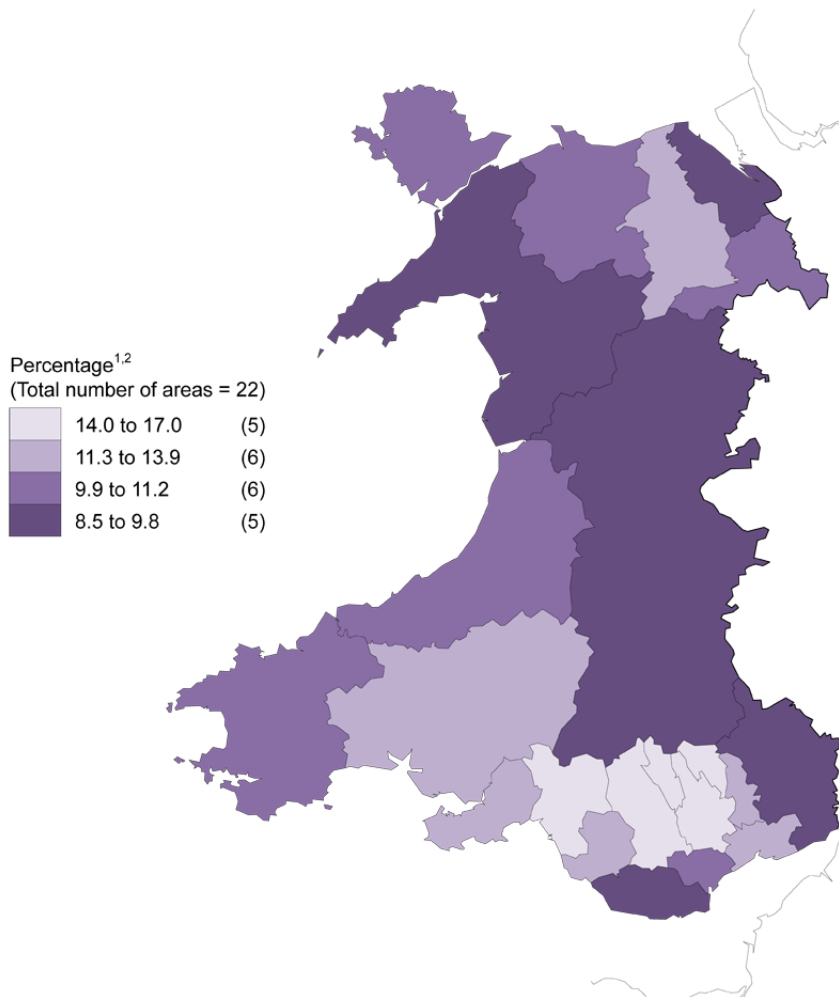
Overall a higher percentage of males than females in Wales assessed their day-to-day activities as 'Limited a lot'. Both genders had higher percentages of total activity limitation and also activities 'Limited a lot' than their counterparts in England. Monmouthshire had the lowest percentage of males assessing their activities as 'Limited a lot' (8.5 per cent), although this would have placed Monmouthshire only in the middle of the English local authorities rankings. The highest percentages of males self-assessed activity being 'Limited a lot' was in Merthyr Tydfil, this suggests that 17 per cent of the male population in this authority were living with a form of activity restricting health problem or disability; which is likely to need regular social care support from the family members, friends or other public or voluntary sector services

Merthyr Tydfil has less favourable health outcomes on other measures of health such as life expectancy, and mortality rates from circulatory diseases, respiratory diseases and cancer compared to the Welsh average in 2009-11. Merthyr Tydfil was also ranked the most deprived unitary authority in Wales, having the highest proportion of Welsh LSOAs in the most deprived national decile using the WIMD 2011. Conversely, those unitary authorities with the lowest percentages of activity limiting restrictions were among the least deprived, such as Monmouthshire, Gwynedd and Powys.

The lowest percentages of activity limitation for females were in Powys (8.8 percent) with Monmouthshire and Gwynedd also in the lowest five unitary authorities as for males. Again, the female rates in the bottom five authorities in Wales would have positioned these authorities only in the middle of the English local authority rankings.

The only effect age-standardisation had on the top and bottom five unitary authorities in Wales was to displace Cardiff as the authority with the lowest percentage of self-assessed activity limitations and to displace Carmarthenshire as the authority with the fifth highest percentage. Before age-standardisation Cardiff was ranked 22nd, but following age-standardisation it was ranked 12th lowest for males and 11th lowest for females; Carmarthenshire was 8th highest for males and 9th highest for females. Age structure was the reason for these changes.

**Map 3: Age standardised percentage of males who reported their daily activities were 'Limited a lot', by unitary authority, Wales, 2011**



1 Age Standardised percentages of 'limited a lot' are standardised to the 2013 European Standard Population (ESP).

2 'Limited a lot' was derived from those responding 'limited a lot' to the activity limitation question in the 2011 Census.

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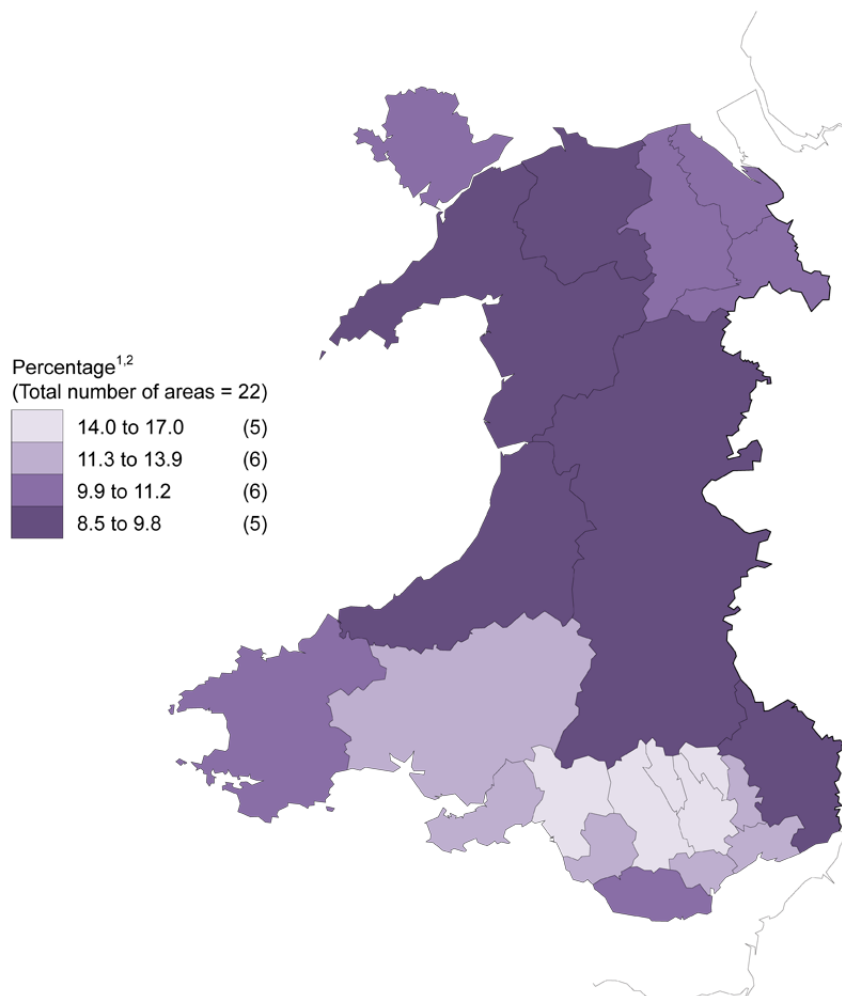
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## Map : Age standardised percentage of females who reported their daily activities were 'Limited a lot', by unitary authority, Wales, 2011



1 Age Standardised percentages of 'limited a lot' are standardised to the 2013 European Standard Population (ESP).

2 'Limited a lot' was derived from those responding 'limited a lot' to the activity limitation question in the 2011 Census.

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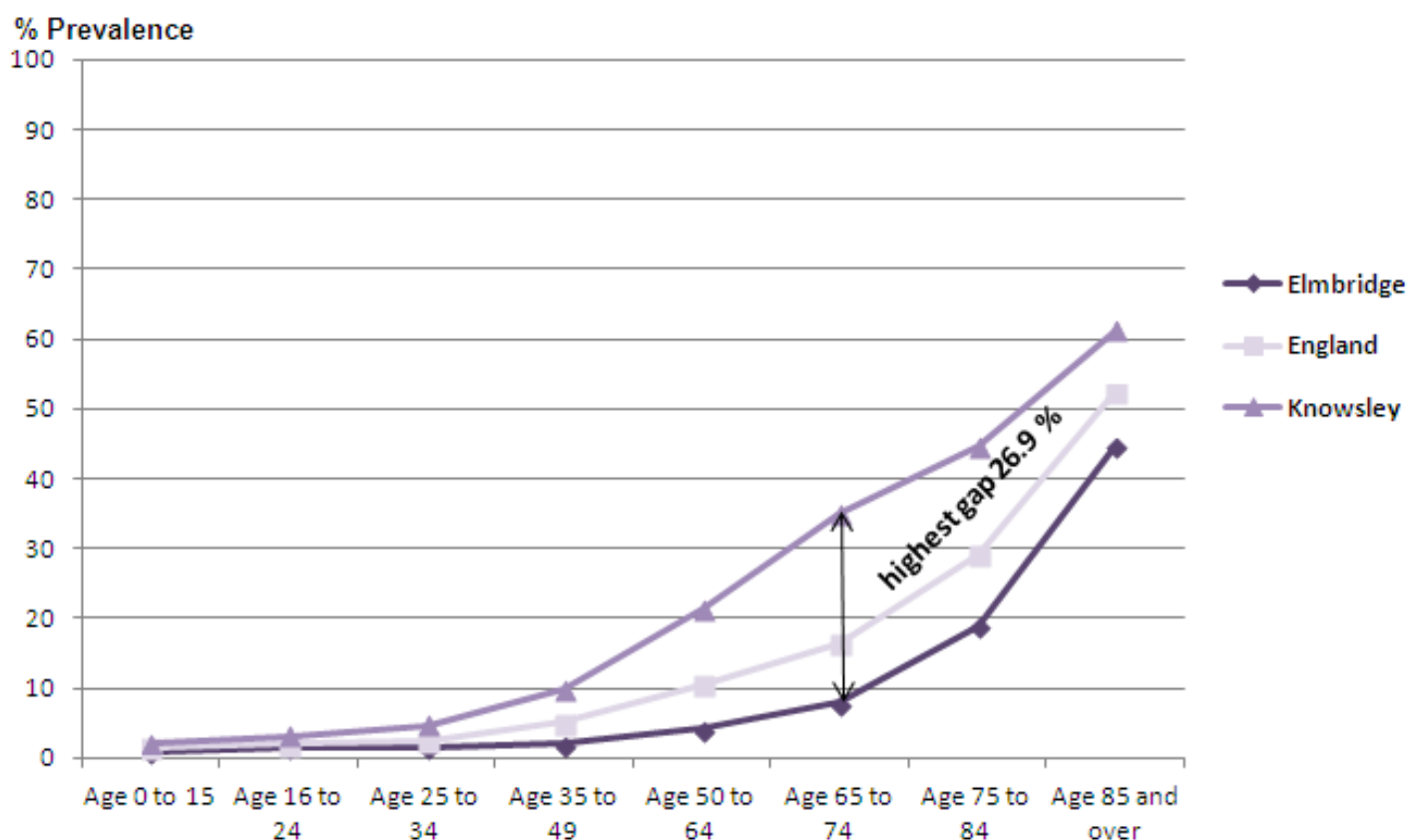
Again, there is a strong relationship between activity limitation and area deprivation in Wales, but it is not as strong as for English local authorities. Among males, the correlation coefficient for those with any level of daily activity limitation was -0.81 and for those whose daily activity were 'Limited a lot', it was -0.83; for females the correlations were -0.84 and -0.85 respectively, and therefore a close to linear association. This means that even at the local authority, area deprivation has a significant influence on self-assessed functional health status in Wales, as in England.

Generally there were lower concentrations of activity restricting health problems and disabilities in the North and Mid Wales, and higher concentrations in those authorities which were former bases of large traditional heavy industries such as coal mining communities, which are predominantly located in South East Wales.

## Age specific inequality in England

While health inequalities between authorities can be measured using age-standardised percentages, it is also interesting to assess at which ages health inequalities are wider or narrower. In England, Knowsley had the highest age-standardised percentage of residents 'Limited a lot' for males and females; while Elmbridge in Surrey, had the lowest percentage for females and among the 10 lowest for males. Figure 4 shows the prevalence among residents (males and females combined) of Knowsley, one of the most deprived authorities, and Elmbridge, one of the least deprived, whose day-to-day activities were 'Limited a lot' at different ages throughout the life course; the all England average is included for context.

**Figure 4: Prevalence of day-to-day activities 'Limited a lot' in Elmbridge and Knowsley**



Source: Census - Office for National Statistics

### Notes:

1. Elmbridge had the lowest age standardised rate of activity limited 'a lot' of any local authority in England.
2. Knowsley had the highest rate of age standardised rate of activity limitation 'a lot' of any local authority in England.

## Download chart

**XLS** [XLS format](#)

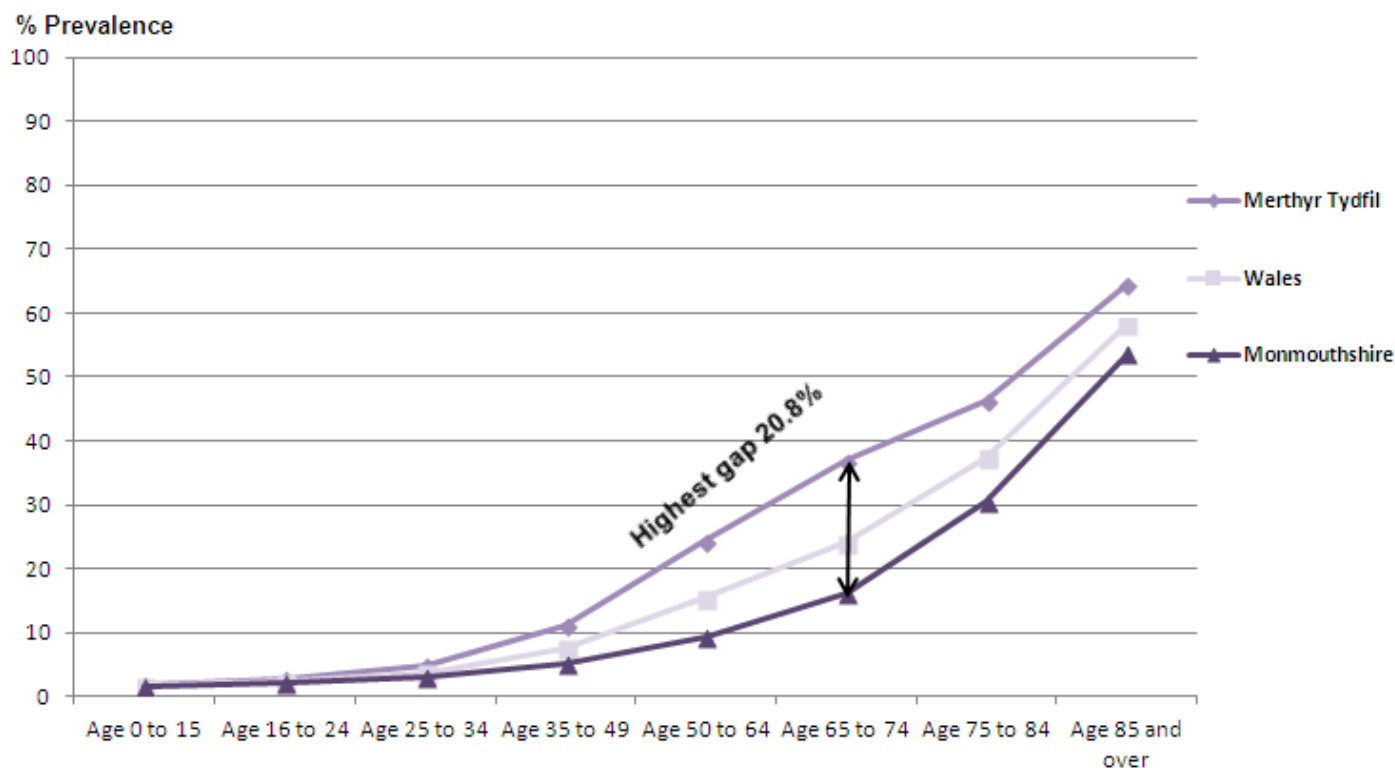
(32.5 Kb)

This figure shows the absolute difference between these local authorities is small at the younger ages (0-34). However the inequality starts to grow with increasing age to ages 65-74, with the rate in Knowsley 27 percentage points higher than in Elmbridge at ages 65-74.

At these key ages between 35 and 74, encompassing an important section of the working population and the 10 years post the state pension age, there is a wide difference in prevalence of activity limiting health problems between the residents of these authorities. In fact, Elmbridge residents aged 65-74 have a lower percentage of the more severe form of activity limitation than residents of Knowsley 15 to 35 years their younger. This has important implications for the social care need faced in these different locations in England, not only for government funded care services but also for the unpaid care burden faced by relatives and friends.

## Age specific inequality in Wales

Overall Wales had a higher percentage of activity limitation, both 'a lot' and 'a little' than England (Table 3). Among residents in Wales, the unitary authority of Monmouthshire had the lowest percentage of male residents with severe activity limitation, and the third lowest for females, while Merthyr Tydfil had the highest for each sex. Figure 5 shows a similar pattern to that observed in England for the age group 0-49; where the percentage prevalence in this age range varies within the limit of between 0 to 10 percent. However, after 49 age-specific variations in self-assessed activity limitation 'a lot' started to widen and at the age of 65-74 a gap of 20.8 percentage points difference existed between the residents of Monmouthshire and Merthyr Tydfil; however, inequality at this age between Welsh unitary authorities was narrower compared to those in England.

**Figure 5: Prevalence of activity limitation 'a lot' in Monmouthshire and Merthyr Tydfil**

Source: Census - Office for National Statistics

#### Notes:

1. Monmouthshire has the lowest age standardised rates for activity limitation 'a lot' of any unitary authority in Wales.
2. Merthyr Tydfil has the highest age standardised rates for activity limitation 'a lot' of any unitary authority in Wales.

#### Download chart

[XLS](#) [XLS format](#)  
(31.5 Kb)

#### Conclusion

This analysis shows that there are pronounced differences in activity limitation prevalence between local and unitary authorities in England and Wales. The differences are partly explainable in terms of differential levels of deprivation.

Among the more deprived local authorities, activity limitations are much more common among those aged 35-74 compared with the less deprived authorities. As these ages encompass a significant section of the normal working age, this suggests fitness for work and premature need for social care are polarised. As the disabling effects of health conditions and functional impairments can be lessened through effective access to health care and through personal, social and environmental adaptations, these figures could be pointing to differences in these factors across local administrations.

## Interactive content

Additional age-specific data is available on our website for all local and unitary authorities; [an interactive map](#) shows the percentage of those whose daily activities were limited either 'a lot' or 'a little', and those whose daily activities were 'Limited a lot' only in each age group. There is also an interactive chart with their individual change with increasing age compared to the England and Wales average.

## Background notes

1. Most people will experience some sort of illness or impairment at some point in their lives, which can broadly be characterised in two ways. Firstly, those which do not have a long term effect on day-to-day activities, for example socialising, going to work and living independently, possibly because of effective treatment management of their health condition or adequate adaptation to the barriers which restrict their participation. However, for some with long-term health problems or impairments, the effect is disabling in terms of restricting them from being able to undertake the day-to-day activities people usually do, such as participation in employment, accessing services independently, and performing self-care tasks. Those reporting their activities are limited 'a lot' are likely to be in need of regular social care support from other family members, friends or public or voluntary sector services
2. The rates of self-assessed total activity limitation and activities 'Limited a lot' reported in this short story have been age standardised to the European Standard Population 2013. This age standardised estimates are calculated to allow comparison of populations with differing age structures. Age standardisation is a process where the age specific rates of total activity limitation for a particular area or class are applied to a hypothetical European Standard Population (ESP) for the corresponding age group. The hypothetical number of people in the ESP with total activity limitation in each age group is totalled and then divided by the total ESP for all ages studied, to give age standardised rates. There were eight age groups in this particular census table: 0-15, 16-24, 25-34, 35-49, 50-64, 65-74, 75-84, 85+. The age specific groups in the census tables used in this analysis did not overlap perfectly with the ESP. The ESP has an age group started with 0 and 1-4 whereas in this analysis, first age group starts with 0-15. Therefore, in order to create a population total for the age group 0-15, a fifth of the total population in age group 15-19 was deducted. This was then added to the age group range from 0-14 to give an ESP for the age group 0-15 used in this analysis. Similarly for age group 85+ all age groups in the ESP above 85 were combined to give an ESP weight for those aged 85+.
3. The [European Standard Population 2013](#) was published by Eurostat, the statistical institute of the European Commission, on 11 July 2013. The publication of the ESP 2013 provides an up-to-date standard population which reflects the average age structure of European countries from 2010-2030; this is important because of population ageing since the original ESP in 1976. ONS held a public consultation on the [implementation of the ESP 2013](#) in UK official statistics which closed on 3 October 2013. Plans for future use of the ESP 2013 in UK official statistics will be published in the near future

4. A [spreadsheet \(64 Kb Excel sheet\)](#) detailing the calculation of age standardised rates to the European Standard Population can be found on the ONS website
5. Because of small population counts data for the City of London has been merged with the London Borough of Hackney, one of its neighbouring authorities, and data for the Isles of Scilly has been merged with Cornwall UA. Therefore the analyses presented are for 324 local or unitary authorities in England.
6. The correlation coefficient is a measure of the strength of a relationship between one measure and another, which can range in value from -1 to 1. A value of 1 represents a perfect linear relationship between two measures, where one measure increases in proportion to one another. A value of -1 also represents a perfect linear relationship, but here as one measure increases the other measure decreases. In this example a higher rank means less deprivation and therefore as favourable self-assessed 'Good' health increases so does the deprivation measure rank of the local authority.
7. The inequality that exists between populations is often explained in terms of area disadvantage. Measures of health status are shown to be more favourable in some geographical locations than others and to be strongly patterned with material factors such as income, environment, housing quality, unemployment, access to services and education. These factors have been brought together into an index (such as the [Index of Multiple Deprivation](#)) which can be applied to small areas such as LSOAs to give a measure of relative material disadvantage experienced by a specific area compared with other areas. In order to present a picture of general health and the scale of inequality that exists between populations, these small areas are amalgamated, on the basis of their relative level of disadvantage. The Index of Multiple Deprivation [2004](#) and [2010](#) in England, and the Welsh Index of Multiple Deprivation [2005](#) and [2011](#) in Wales, are used to group areas into tenths (deciles). Rates of 'Good' general health are then calculated for these deciles.
8. Some number and percentages throughout this report may not sum due to rounding.
9. Interactive data visualisation developed by ONS is also available to help interpretation of the results.
10. Some further reading on this subject can be found here: Murtagh, K. and Huber, H. (2004). Gender differences in physical disability among and elderly cohort. *American Journal of Public Health*, 94(8): 1406-1411
11. Data used in this short story can be accessed from [Nomis](#) website by searching table number [DC3302EW](#) (Long term health problem or disability by health by sex by age).
12. Census day was carried out on the 27 March 2011.
13. A person's place of usual residence is in most cases the address at which they stay the majority of the time. For many people this will be their permanent or family home. If a member of the services did not have a permanent or family address at which they are usually resident, they were recorded as usually resident at their base address.

14. Future releases from the 2011 Census will include cross tabulation by other census characteristics, and tabulations at other geographies. Further information on future releases is available online in the 2011 [Census Prospectus](#).
15. ONS is responsible for carrying out the census in England and Wales. Simultaneous but separate census took place in Scotland and Northern Ireland. These were run by the National Record of Scotland (NRS) and the Northern Ireland Statistics and Research Agency (NISRA) respectively.
16. All key terms and abbreviation used in this short story are explained in the 2011 [Census user Guide](#).
17. All census population estimates were extensively quality assured, using other national and local sources of information for comparison and review by a series of quality assurance panels. An extensive range of [quality assurance, evaluation and methodology](#) papers were published alongside the first release in July 2012 and have been updated in this release, including a [Quality and Methodology Information \(QMI\) document \(152.8 Kb Pdf\)](#).
18. The 2011 Census achieved its overall target response rate of 94 percent of the usually resident population of England and Wales, and over 80 percent in all local and unitary authorities. The population estimate for England and Wales of 56.1 million is estimated with 95 percent confidence to be accurate to within +/- 85,000 (0.15 percent).
19. Details of the policy governing the release of new data are available by visiting [www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html](http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html) or from the Media Relations Office email: [media.relations@ons.gsi.gov.uk](mailto:media.relations@ons.gsi.gov.uk)

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