

# **Briefing Paper 4:** **Ageing Populations and Age Related Health Inequalities:** Evidence, issues and implications for policy and practice

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**December 2013**



**NHS**

***National Institute for  
Health Research***

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## Introduction

For centuries, global population has been increasing as well as ageing, with the extent and patterns of demographic change varying across and within different regions and countries. In many countries there has been an increasingly fast-paced increase in the size and change of the age profile, with the 21st century seeing an unprecedented global demographic transition and population ageing at its heart<sup>1</sup>. By 2050 – less than 40 years away – the number of people over the age of 60 is set to soar from some 809 million today to more than two billion and make up more than one-fifth of the global population. Within the changes, the number of very elderly people in some regions has and will continue to grow disproportionately.

Whilst ageing is for many a cause for celebration, with longer lives representing a triumph of the development and impact of many social, economic, medical and environmental changes, and important progress being made by many countries in adopting new policies and laws on ageing and age discrimination, the United Nations Population Fund and HelpAge International<sup>2</sup> highlight the need for more to be done to fulfil the potential of older people: *how* countries care for and ensure the wellbeing of their senior citizens is an increasingly important issue.

But despite the ‘triumph’ and general support for the notion that ‘the test of a civilization is the way that it cares for its helpless members<sup>3</sup>, in the context of an enduring global economic downturn and challenges for the funding, organisation and delivery of health and social care, ageing populations are identified often as a problem, with older people portrayed often very differently to other ‘dependent’ age groups such as children. Older people are associated with terms such as burden and as being a drain on the ‘national purse’, as if they are responsible for the ‘crisis in care’ of cash-strapped authorities charged with organising and providing health and social care at national, local and individual levels (e.g. NHS England, Call to Action report<sup>4</sup>). And yet, the Global AgeWatch Index shows that limited resources are not necessarily barriers to good provision for older citizens and that good management of ageing and the achievement of healthy ageing is within the reach of all governments<sup>5</sup>.

Critically, governments, commissioners and providers of health and social care services at all levels need to recognise and accept that ageing is a malleable and lifelong process and that some of the risks to health as we age are “structural” and relate to the “social environment” and the way society is organised: individuals exert little if any control over these factors<sup>6</sup>. With ageing influenced by environmental and lifestyle issues and factors as well as genetics, the experiences and outcomes of ageing in turn reflect the impact of socio-cultural, political and economic inequalities throughout life<sup>7, 8</sup>. As such, unequal life opportunities and experiences, values and expectations shape the different levels and types of need for and use of health and social care services at all stages of life with substantial evidence of a widening health gap between older people. Whilst some older people are independent, assertive, affluent and demanding, many are deprived, poor, disempowered and voiceless.

However, because of the malleability and lifelong process of ageing, there is also the potential to reduce or remove the damaging influences, experiences and negative outcomes of socio-economically disadvantaged ageing at *all* stages of the life course to improve the quality of life and health of older people and proportion of life lived in good health. As such, age represents one of the ‘axes of inequality’ identified in the CLAHRC SY Health Inequalities briefing papers 1-3 and as such warrants particular and positive attention by commissioners and providers of health and social care services<sup>9, 10, 11</sup>.



The premise of this briefing paper is that instead of ageing being seen as both a problematic and apolitical process of functional loss and increasing dependency, with older people seen predominantly as a growing burden on scarce health and social care resources, ageing populations and older people themselves can and should be seen more positively as a mark of social and economic progress in which older generations have contributed although individuals have had different opportunities throughout their lives. Later life should be seen as a time for *all citizens* to have a *fair chance* to look forward to, with *equal opportunities* to experience healthy ageing, participate, contribute, be respected and enjoy until the end of life.

Also important is the need for governments, organisations and individuals to recognise that preventing, reducing or delaying functional loss in older people would not only improve the quality of life and sustain the many contributions of older people to society at all levels, but also could reduce dependency and have a considerable cost saving<sup>12</sup>.

To explore and consider these issues and developments, the content of the paper is presented in four sections:

1. **Ageing populations and inequalities:** socio-economic influences on health and wellbeing, disability and life expectancy
2. **Unequal ageing, age related health inequalities and issues affecting older populations:** the accumulation of unequal risks and opportunities; age discrimination, long term conditions and multiple comorbidity, polypharmacy, frailty, dementia, functional limitations, sensory impairments, social isolation and information and communication technologies
3. **Tackling unequal ageing and improving the health and wellbeing of older populations:** targeting, participation and involvement; examples of work around unequal ageing through the life course and work focusing on improving the health, care and quality of life of older people
4. **Implications for policy and practice.**

## 1. Ageing populations and inequalities

After centuries of slow growth, global population reached one billion in the 1820s and trebled to three billion over the next 150 years. By the end of the 20<sup>th</sup> century, the population had doubled to six billion and the global rate of growth is now one billion every 15 years; by 2025, global population is predicted to reach between eight and nine billion.

In some countries, population increase relates to increased life expectancy, with bigger increases in the number of people living into old age compared to increases in the birth rate, but this pattern varies significantly between less and more economically developed countries and also within regions. Generally, more economically developed countries have low population growth rates, with low death rates and low birth rates. Nonetheless, there are differences: in the UK, for example, population growth is slowing, with a growth rate at 0.1% as birth and death rates are very similar and in Bulgaria the population is reducing (-0.5%) as the birth rate is lower than the death rate. In Canada, the population growth rate is higher (0.4%) as there is a lower death than birth rate. In Japan, children and working-age populations are reducing, but the 65+ age group has been increasing significantly and expected to grow from 25 to 34 million from 2013 – 18: by 2050 it is expected that over 35% of the population will be 65 years plus<sup>13</sup>. Less economically developed countries generally have both high birth and death rates but with improving healthcare death rates are falling. However, birth rates remain high so they are experiencing high population growth.

By 2050, the number of people aged over 60 globally is set to soar from 809 million currently to more than two billion, constituting more than one-fifth of total global population. And within this growth, in more economically developed countries, the number of very elderly people is increasing disproportionately.

With greater life expectancy and varying trends in birth and death rates, the proportions of population who are 'contributing' to and those who are 'dependent' on national economies alters: in Japan, the 'overall dependency ratio' is expected to increase to 67% in 2022 from the current 47%, and reach 87% by 2050, but within the figures the old-age dependency ratio is considerably larger than the child dependency ratio and expected to increase from the current 26% (ie 3.9 working age 'contributors' supporting one 'dependent' older person) to over 50% in 2030 and up to 67% in 2050. In the UK the picture is similar but a little less skewed as the birth and death rates are more balanced.

### Global differences in elderly wellbeing

A ranking of the social and economic wellbeing of the elderly in 91 countries comparing data on older people's health, income, education, employment and environments shows that older people are generally faring best in Nordic, Western European, North America and some East Asian and Latin American countries, with Sweden identified as the best country in which to grow old, ranked highly for welfare and pensions, employment and education. The Global AgeWatch Index places Switzerland top in relation to health, with a high healthy life expectancy for those aged over 60, although overall it ranked sixth. Although nine European countries are in the top 15: including the UK and Ireland, several eastern European countries are in the lower rankings. Ireland is described as 'excelling in enabling older people to live independently through access to public transport and involvement in communities' whereas in the UK, the employment, educational status and opportunities of and for Britons aged over 60 lagged behind other top ranked countries.



Japan is the only Asian country in the top ten, with the emerging economy of China at 35, followed by Sri Lanka, the next best Asian countries. The lower half of the list comprises mainly, but not exclusively, countries in Africa and South Asia: at the bottom are Jordan, Pakistan, Tanzania and Afghanistan.

The report highlights that some of the top-ranking countries introduced successful policies to care for their elderly at a time when they were still emerging economies. For example, Sweden introduced its universal pension system a century ago, while Norway began theirs in 1937. Importantly, the Index shows that limited resources need not be a barrier to countries providing for their older citizens as several lower-income countries have policies in place that have improved the quality of life for their elderly significantly. For example, in Sri Lanka, long-term investments in education and health have had a lifetime benefit for many of their older population, and Bolivia (ranked 46), despite being one of the poorest countries, has had a progressive policy environment for older people for some time, with a National Plan on Ageing, free healthcare for older people and a non-contributory universal pension.

Despite significant attention to ageing populations in some countries, many are seen as ill-prepared, with older people in many African and East Asian countries generally faring badly, and with greater life expectancy, the development of increasingly large older populations with chronic disease and complex care needs is looming. But importantly, substantial differences in the coverage and quality of services and support and inequalities in life expectancy, healthy life expectancy and wellbeing of older people are found even in the overall 'best' countries.

### **European ageing and inequalities**

Having been 'linear for more than 150 years', increases in life expectancy across Europe currently average 12 months every 5 years<sup>14</sup> and although trends vary across member states, the total population is increasing. It is projected to peak at 526 million around 2040 before gradually reducing to 517 million in 2060<sup>15</sup>.

Between 2008 and 2030, the number of Europeans aged 65 and over is expected to increase by 45%, to reach over 30% of the population by 2060. This ratio of older to total population is higher than in other continents, and population ageing is set to continue well into the 21<sup>st</sup> century<sup>16</sup>. Within the changes, those aged 80 and over are the fastest growing group, from 5% to 12% over the same period, with a remarkable growth in the number of centenarians. Although the scale and patterns of growth in the number of centenarians varies across Europe, with larger states experiencing 'smooth and steady' growth, in contrast to smaller states where growth is fluctuating, projections indicate numbers could rise to 1.8 million by 2060, with women outnumbering men by 6:1<sup>17</sup>.

For some, longer life reflects ill health or disability developing at an advanced age (a 'compression' of morbidity), transforming experiences of mid-life and early old age: for a growing number of older Europeans, 70 is the new 50! But within and across countries, populations are ageing unequally<sup>18</sup> with the gap between rich and poor increasing and differences by gender not only in relation to life expectancy (LE) but also in healthy and disability-free life expectancies (HLE and DFLE)<sup>19</sup>. The differentiation between types of life expectancies exposes the differences in the

quality of life for different population groups, with greater longevity as unhealthy and or disabled described as an 'expansion' of morbidity.

In 2005, an 'average' European man aged 50 could expect to live free of activity limitation until the age of 67 and a woman until 68, but across Europe, substantial inequalities in LE, healthy life years (HLY) and DFLE at 50 years exist in relation to gender and socio-economic factors<sup>20</sup>. In France, female LE at age 50 was 22.9 years, with 9.9 years of healthy life, whereas for females in Latvia, it was 17.2 years, with only 4.3 years of healthy life. And for both sexes, HLY at 50 varies more between countries than LE, with male HLY ranging from just over 9 years in Estonia to over 23 in Denmark and for females from just over 10 years in Estonia to 24 in Denmark. Generally, older European women suffer from more illnesses, especially long term conditions, than men who tend to more often develop potentially life-threatening illnesses such as diabetes, heart and lung diseases. Reasons suggested for these differences include the tendency for males to adopt riskier health behaviours, such as smoking and drinking alcohol more, and to be employed in more hazardous occupations, although gendered lifestyle patterns have begun to change in recent decades, with, for example, the proportion of UK women in working class occupations who smoke increasing from 26% to 32% between 2011 and 2012<sup>21</sup>.

In general terms, people in southern Europe live longer but northern Europeans are healthier and richer<sup>22</sup>. But socio-economic disparities across all dimensions of health are evident within all European countries, with individuals with a lower socio-economic status having more health problems, facing more disability and living shorter lives than those with a more privileged socio-economic position<sup>23, 24, 25</sup>.

Multiple risk factors to healthy ageing combine and accumulate throughout different stages of life and the relationship between smoking behaviour and occupation represents a clear example of this: although smoking rates are decreasing across all age groups, unemployed people in the UK are twice as likely to smoke as employed people and amongst employed populations, rates are lowest in managerial and professional occupations and highest in those working in routine and manual occupations, but with differences by gender.

For most physical health problems, socio-economic disparities are of a similar size among men and women, and compared to more highly educated elders, individuals with a lower formal education are 70% more likely to be physically inactive and 50% more likely to be obese. Strong relationships also hold for mental health: for instance, cross-country differences in cognitive function correspond closely to cross-country differences in education, and depression is more frequent among persons with low income or low wealth, particularly in the northern countries of Europe. Lower educational level and income are also associated with a higher risk of reporting poorer self-perceived health and long-term problems, as well as activity limitations due to them<sup>26</sup>.

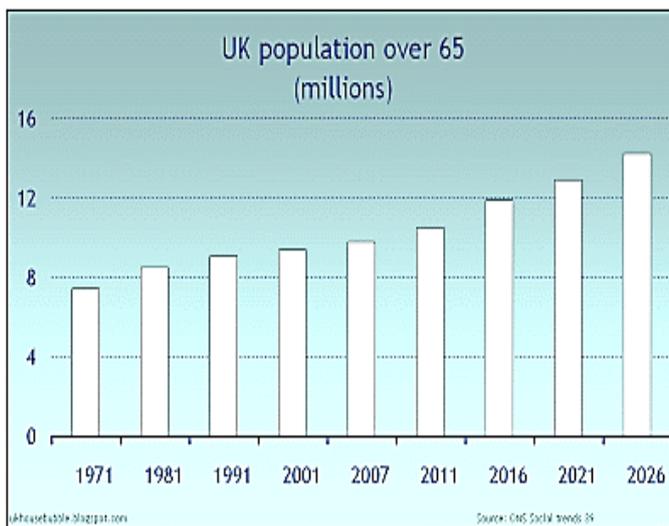
In 2005, the EU made a commitment to improving the health of its population. Recognising the importance of quality and not just length of life, it identified the measure of HLY as the best way to monitor improvements from modernising social protection systems and strengthening pensions and health care: the European Active and Healthy Ageing Partnership (EIPon-AHA) set itself a goal of increasing HLY at birth by 2 years by 2015<sup>27</sup>. Since then the UK-based inHALE study has been considering whether the overall target will be met and how individual Member States will do, reporting in 2012 that if current trends continue:



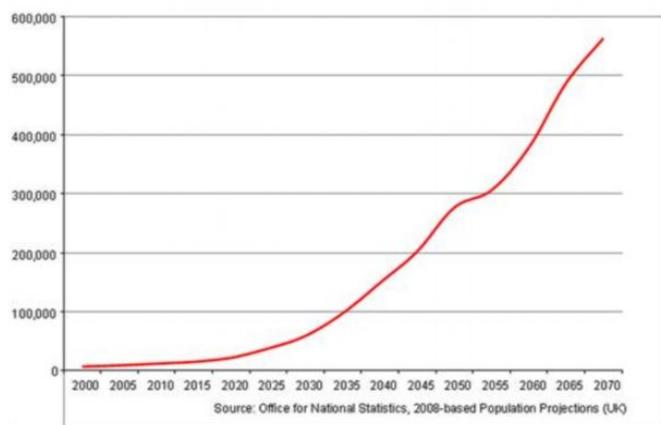
- Nine countries will reach the EIPon-AHA target of an increase in two HLY over the next decade but overall the EU27 will not reach the target
- Countries reaching the target will include Eastern European countries, but that Romania is unlikely to as HLY is decreasing
- Inequity between countries will increase and that action is needed on many fronts to address both the level and distribution of healthy life years of European people<sup>28</sup>.

### Ageing populations and inequalities in the UK

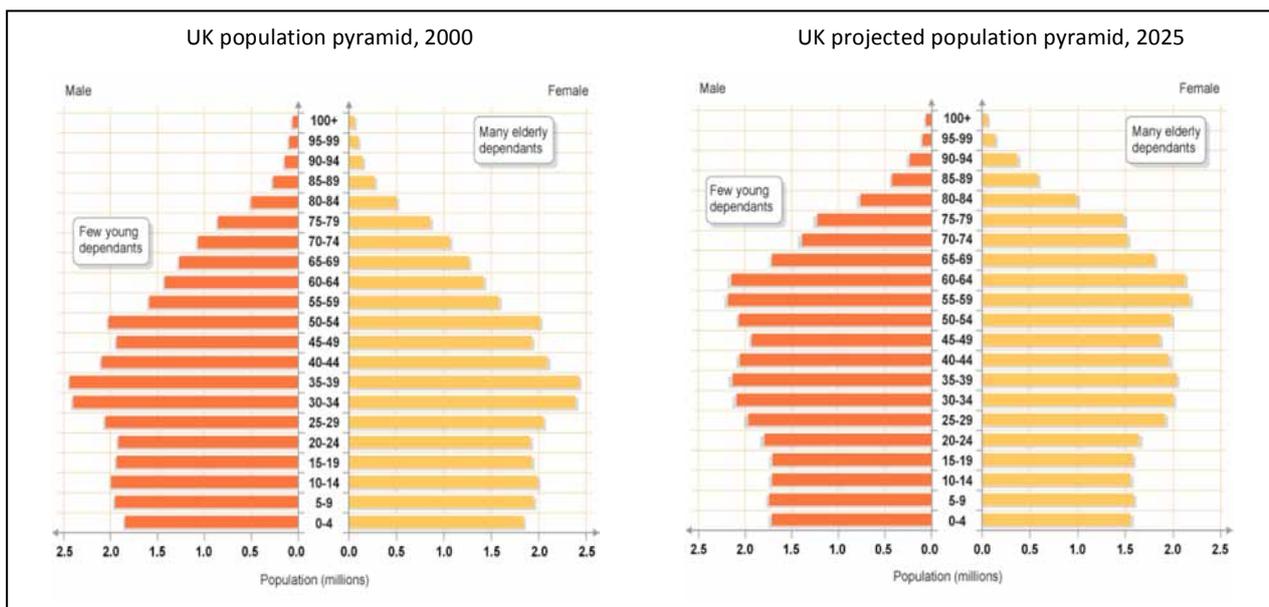
The total population of the UK is growing, with 56.1 million residents in England and Wales in 2011, an increase of 3.7 million (7%) since 2001<sup>29</sup>. Within the UK, the 65years plus age group is growing at a higher rate, and predicted to rise from 16% in 2001 to 21% by 2024, and death now mainly occurs at an advanced age, with 31% of deaths among people aged over 85. In 2000, there were approximately 5.2million males and 4.5 million females aged 65 and over; by 2025 this will have risen to around 5.7 million males and 7.2 million females, and the number of people aged 85+ is set to more than double to approximately two million by 2025<sup>30</sup>.



Since 2002, the number of people aged 90 and over has increased 33%, with around 465,500 in England and Wales, just below 1% of the total population, including an estimated 12,320 centenarians. UK projections are shown in the graph.



The increasing number of older people contrasts starkly with the decreasing number of (dependent) children and younger adults as shown in the UK population pyramids for 2000 and 2025 on the next page. In terms of gender, there are nearly twice as many females over 85 as males, 2.6 females per male aged 90 and over and 5.9 females per male aged 100 and over in 2012.

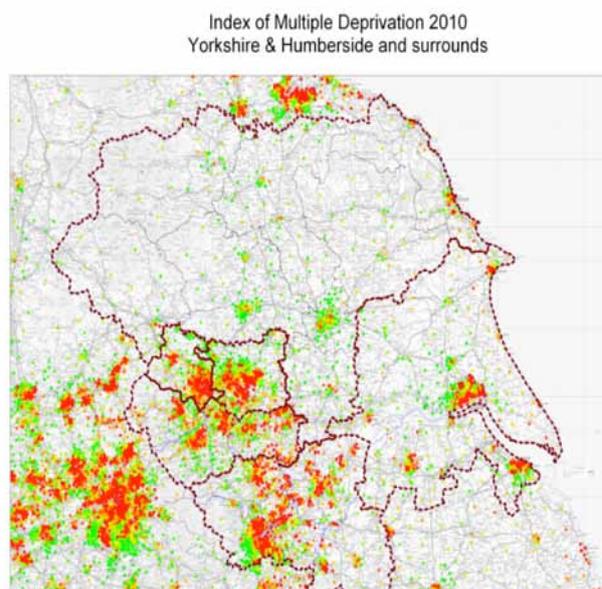


Within the UK, credited private pensions, pension credits and the government's determination to shield retired people from austerity measures have been credited with the number of pensioners living in poverty at its lowest level for more than 30 years<sup>31</sup>, and life expectancy at birth and at age 65 has increased. However, affluence and increases in longevity vary substantially by local area and by gender. For example, between 2004–06 and 2008–10, life expectancy was highest in Kensington and Chelsea and lowest in Glasgow City in both periods, and although, on average, life expectancy at birth improved for both sexes, the gap between areas with the highest and lowest life expectancies increased.

### Ageing populations and inequalities of older populations in the UK and in Yorkshire and the Humber<sup>32</sup>

Whilst life expectancy is increasing in the UK at the rate of two years every decade, this often involves people living for years with long term conditions and disability, as survivors of previously life threatening diseases. Alongside the increases in longevity there is growing inequality, with people from ethnic minorities generally having worse disability free life expectancy than the white British population, lowest at birth for Bangladeshi men & Pakistani women<sup>33</sup>.

In the Yorkshire and the Humber (Y & H) region, there were 5.3 million residents in 2011, an increase of 6% since 2001: the median age for the region was 39, the same as for England and Wales, but ranged from 34 in Bradford to 47 in Craven. Within the region, several areas have high levels of multiple deprivation as indicated by the red and orange areas on the map and, compared to other English regions, in the period 2007/08 to 2009/10, it has among the lowest house prices and average disposable weekly household income and the highest levels of drinking and smoking<sup>34</sup>.





Reflecting the impact of these various risks on health, in 2011 around 19% of Y&H residents experienced limitations to their day to day activities through long term health problems or disability, with older people the majority of that unhealthy population.

### Ageing populations and inequalities in South Yorkshire

South Yorkshire (SY) has been identified as one of the least prosperous areas in Western Europe, and targeted for funding from the European Regional Development Fund. But within the county there are substantial differences between the population sizes, growth rates and age and ethnic profiles of the main conurbations of Barnsley, Doncaster, Rotherham and Sheffield and differences in relation to their socio-economic and health profiles.

From 2001-11, the population of SY increased by 77,300 (6%) and, in 2011, was the 10<sup>th</sup> largest of the 48 counties of England with a population of 1.34 million<sup>35</sup>. In relation to its age profile, the county as a whole is ageing, with the proportion of population aged over 65 in the main conurbations varying from 13.2% in Sheffield to 17.4% in Rotherham.

Older populations in the main conurbations of South Yorkshire, 2011								
Aged 65 and over: number and percentage of total population (Data from national census, 2011)								
Age band	Sheffield		Doncaster		Rotherham		Barnsley	
65-74	44,688	8.1%	27,109	9.0%	24,783	9.6%	22,080	9.5%
75-84	29,237	5.3%	17,660	5.8%	14,560	5.7%	13,250	5.7%
85-89	7,600	1.4%	4,346	1.4%	3,684	1.4%	3,279	1.4%
90+	4,173	0.8%	2,026	0.7%	1,815	0.7%	1,401	0.6%
65 and over	85,698	13.2%	51,141	16.9%	44,842	17.4%	40,001	17.2%

### Sheffield

In 2011, the population of the Sheffield conurbation was 685,368, a 7% increase on the 2001 population: as such, Sheffield is the 8th largest conurbation in the UK and home to over half the SY population. The local authority area contributes just over two thirds of the population of the whole conurbation and has increased by 7.7% since 2001 to 552,698 in 2011, above the national average<sup>36</sup>.

The growth in Sheffield's population has resulted from increases in births, net inward migration and longer life expectancy. In 2010, Sheffield had the highest proportion of its population aged 65 years or over (15.4%) compared to the other English Core Cities and over the last ten years, there has been almost an 11% increase in the number of people over the age of 85 years. As a university city, there is a sizeable student population with many graduates choosing to remain and work in the area, however even if the retention of this young and middle aged population continues, an estimated 17% of its current population will reach the age of 100, producing a fundamental change in the nature of the city over the next few decades<sup>12</sup>.

Deprivation in Sheffield is above the national average with almost one quarter of households, approximately 58,500, living in poverty. Profiles of the city's wards show a detailed picture of inequality on a range of economic, social, health and environmental measures within the city, with several wards in the south and more rural west of the city such as Bradfield, Dore and Totley in the least deprived 20% of the country and others in the north, city centre and east such as Central, Southey, Shire Green and Brightside in the 20% most deprived.

The geographical patterns of inequality reflect the city's industrial legacy, with the rapid growth and predominance of the steel and coal industries in the 18<sup>th</sup> and 19<sup>th</sup> centuries. This was influenced by the fast-flowing rivers and raw materials such as coal, iron ore and millstone grit in and around Sheffield, and together with the prevailing wind, impacted significantly on the location of different types of housing, employment and health of the different populations across the city at the time and to this day following the decline of heavy industry and economic crises of the late 20<sup>th</sup> century.

Although different in size and population profile, the other main SY conurbations of Barnsley, Doncaster and Rotherham are also changing, but with inequalities again largely reflecting the shared legacy of employment dominated by heavy industries.

### *Doncaster*

In 2001<sup>37</sup>, the population of Doncaster was 286,866, with just under 37,000 people aged 65 and over (12.9%), including 4,632 aged 85 years plus. The population increased to 302,402 in 2011, with 17.4% aged 65 and over, including over 6000 people aged 85 plus, and the number of over 85s is expected to double to approximately 13,000 by 2016<sup>38</sup>.

With its historic association with the railways, Doncaster had a key role in transporting coal and associated materials around the country such that the demise of the coal industry affected local employment severely and with the subsequent general financial crisis, levels of unemployment remained higher than the national average for years in many areas of Doncaster.

Rates of employment are now beginning to improve and the types of work undertaken have changed substantially. Recent reports have highlighted how increasing investment in the town has increased confidence such that housing prices have now started to rise, and increasing more than in other areas in the region. But within Doncaster there are very different levels of deprivation that, even when in very close proximity, link to employment histories and geographical features. To the north of the town, the neighbouring areas of affluent Skellow and deprived Carcroft contrast significantly, and within Hatfield, the east side is affluent and the west deprived. In addition, the town centre and outskirts of Thorne, Stainforth and Mexborough are highly deprived areas.

### *Rotherham*

Rotherham forms part of the Sheffield conurbation, 6 miles to the east of Sheffield. Beyond the town centre and Don Valley, the district is largely rural, with a few small towns and several small villages. From 2001 to 2011, the overall population of Rotherham increased by 9,100 to 257,280<sup>39</sup>, with the working (16-64 years) and retirement age populations (65+) both increasing roughly 6,000, whereas the under 16s decreased by around 3,000. From 2001 to 2011, the percentage of those aged under 16 fell from 21 to 19% of the total, whereas for those aged 65 and over the percentage rose over 2% to almost 18%.

The changes for the different age groups contrast with national changes: although the 17.4% increase of over 65s is only slightly higher than the national average, the 5.7% decrease in under 16s in Rotherham is very different to the national increase of 1.2%, as is the 3.7% increase in working age population compared to 9.2% nationally. Linked to its decreasing younger population, the population of Rotherham overall is projected to increase less than half the national increase of 15.7% by 2030, with an increase of 7.3%. But the increase for the 65+ age group is 44%, closer to the national average of 50.7%, and increases for the 75+ and 85+ age groups at 63% and 94% are very similar to national levels.



In the 1980s, the borough experienced a huge crisis with the closure of many coal mines and associated decline of the long established steel industry of the Don Valley. More recently, the economic slump of 2007-9 severely affected the remaining steel industry and another traditional local industry of milling grain into flour also disappeared. Although, over the past 20 years, Rotherham has attracted new investment and industry such that the town has been identified as amongst the leaders in advanced manufacturing in the UK and when combined with the economy of Sheffield, is growing faster than Leeds and Manchester.

Despite these developments, Rotherham was ranked the 53<sup>rd</sup> most deprived local authority in England in 2010<sup>40</sup>, with one-third (44,170) of its residents living in the 10% most deprived areas. And within the borough there are substantial inequalities, with Wath on Dearne to the north, Maltby to the east and Rotherham East and West in the main town experiencing high unemployment and multiple deprivation in contrast to the affluent areas of Wales, Anston and Woodsetts to the south and Keppel to the north west of the borough.

### *Barnsley*

From 2004 to 2007, the overall population of Barnsley increased by 3,643 to 224,600, with the increase of over 65s higher than the UK average. By 2011, the overall population had risen to 231,221 with 40,010 people aged 65+, making up 17.3% of the total population, with older females the majority sex (56.2%)<sup>41</sup>.

Population trends are expected to change in Barnsley, with a 14.2% increase in total population predicted between 2010 and 2030, slightly below national projections. However, the largest increases are for those aged 65 and over, with a 54.2% increase by 2030, higher than the national average of 50.7%, and a 70.3% increase compared to the 66% national average for the 75+ population.

Although areas within Barnsley vary substantially, as a whole the borough is more deprived than Rotherham: it is the 43<sup>rd</sup> most deprived area in England and 17.7% of its residents live in wards amongst the 10% most deprived in England<sup>42</sup>. The area of Grimethorpe has been identified as the most enduringly poor in the country and amongst the poorest in Europe. For much of the 1990s, unemployment in the area was above 50% and a large proportion of the surviving older population are disabled, having suffered injuries or developed respiratory and stress-related conditions down the dirty and hazardous coal mines and psychological impact of unemployment and poverty after the pits were shut.

Like Rotherham, much of Barnsley has experienced enormous change and redevelopment following the decline and closure of many coal mines and associated employment in the area. New industrial estates and business parks have been established as well as newly established agricultural land, woodland, parks and nature reserves. Alongside these developments, many local people have been investing their time and energies on a number of social and environmental projects to transform and rebuild their communities. But some ex-mining villages such as Dodworth are also experiencing increasing inequalities within them as they have become popular places from which more affluent new residents commute to work in the nearby cities of Sheffield, Leeds and Manchester, with the effect of increasing house prices.

## Health inequalities in Yorkshire and Humber (Y&H)

National census data demonstrates clearly that the level of deprivation in Y&H has a significant influence on its population's life expectancy, healthy life expectancy and self-assessed functional health status and that, as a whole, the region is less healthy than England and Wales. The relationships between overall activity limitation, activity level limited a lot and area deprivation for both sexes are strong, with percentages of activity limitations rising as the rank order of the local authorities within the region on the deprivation index falls.

In the 2011 national census, 81.2% residents of England and Wales described themselves as being in good or very good health, whereas the percentage for Y&H was slightly lower at 80.0%. For life expectancy, female life expectancy at birth in the region was 80.2 years compared to 80.7 for England and Wales, and for males it was 75.4, also below the national average of 76. Within the region, Kingston upon Hull had the lowest life expectancy for both sexes (75.7 for males and 80.2 years for females), and the highest life expectancy was in both Craven and Hambleton (in North Yorkshire) at 81 for males and 82.4 years for females.

In relation to broader influences on health, Y&H has among the highest levels of drinking and smoking and in terms of economic factors the region had the second lowest average disposable weekly household income after housing costs in 2007/08 and lowest house prices in 2009-10<sup>43</sup>. There are more deprived households in the region than nationally, especially in South Yorkshire, and much of the region's housing stock is of a poor standard, especially private rented and social housing.

Comparing life expectancies, limited activity and household deprivation<sup>1</sup> across England and Wales, Yorkshire and Humber, and South Yorkshire conurbations (ONS, 2011 area statistics)

	England and Wales		Yorkshire and Humber		South Yorkshire conurbations							
	56,075,912		5,283,733		552,698		302,402		257,280		231,221	
Total population												
Life expectancy	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
at birth	76	80.7	75.4	80.2	75.4	80.3	74.9	79.6	75.2	79.6	74.4	79.1
at 65	16.1	19.2	15.7	19.0	15.7	19.0	15.3	18.5	15.2	18.5	14.8	17.9
Healthy LE	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
at birth	69.1	72.3	67.6	70.9	66.8	69.9	65.7	69.3	66.2	68.9	63.8	67.6
at 65	12.5	14.5	11.7	13.6	11.2	13.0	10.8	12.8	10.7	12.3	9.9	11.8
Disability free LE	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
at birth	61.7	64.2	60	62.8	59.3	61.7	56.8	60.4	57.6	60.1	54.9	58.7
at 65	8.1	9.1	7.2	8.3	6.9	7.7	6.1	7.2	5.9	6.7	5.4	6.6
Limited activity (% population)	17.9%		19%		18.7%		21.6%		22%		23.9%	
Household deprivation	All households 23,366,044		All households 2,224,059		All households 229,928		All households 126,487		All households 108,293		All households 100,734	
	Not deprived 9,893,773 (42%)		Not deprived 909,078 (41%)		Not deprived 91,862 (40%)		Not deprived 46,551 (37%)		Not deprived 40,466 (37%)		Not deprived 36,661 (36%)	
	Low deprivation 12,026,793 (51%)		Low deprivation 1,177,577 (53%)		Low deprivation 122,857 (53%)		Low deprivation 71,050 (56%)		Low deprivation 60,634 (56%)		Low deprivation 56,245 (56%)	
	High deprivation 1,339,254 (6%)		High deprivation 137,404 (6%)		High deprivation 15,209 (7%)		High deprivation 8,886 (7%)		High deprivation 7,193 (7%)		High deprivation 7,828 (8%)	

<sup>1</sup> A 'low deprivation' household is deprived in 1 or 2 dimensions; a 'high deprivation' household is deprived in 3 or 4 dimensions. The dimensions of deprivation are indicators based on selected household characteristics:

1. **Employment:** any member of a household not a full-time student is either unemployed or long-term sick
2. **Education:** no person in the household has at least level 2 education, and no person aged 16-18 is a full-time student
3. **Health and disability:** any person in the household has general health 'bad or very bad' or has a long term health problem
4. **Housing:** household's accommodation is either overcrowded, with an occupancy rating -1 or less, or is in a shared dwelling, or has no central heating.

19% of the region's population experienced limitations to their day to day activities through long term health problems or disability in 2011, compared to 17% across England and Wales, with around 10% of the region's population providing unpaid care to someone with an illness or disability.



## Health inequalities in South Yorkshire

There are stark differences in life expectancy, healthy and disability-free life expectancies in and across South Yorkshire compared to other areas across England and Wales and the broader region. For example, in Doncaster, life expectancy (LE) at birth is lower than the national average for both males and females by 1.1 years but for disability-free LE (DFLE) the deficit is 4.1 years for males and 3.8 years for females. For older females in Sheffield, healthy LE (HLE) at 65 is 1.5 years less than the national average of 14.5 years but 0.6 years less than the Y&H average of 13.6, and for older males in Barnsley, HLE for males aged 65 is 2.6 years less than the national average of 12.5 years and 1.8 years less than the average of 11.7 for the region. And for both sexes in Barnsley, DFLE at 65 years is not only below the national and regional figures but is also the lowest of the county's four main conurbations, with male DFLE 2.7 years less than for England and Wales, 1.3 years less than the region's average and 1.5, 0.7 and 0.5 years less than for Sheffield, Doncaster and Rotherham respectively.

### *Chronic Obstructive Pulmonary Disease, Cardio-Vascular Disease and Cancer in South Yorkshire*

Within South Yorkshire, the different relationships and impact of multiple deprivation and the specific risks of occupational factors to health on populations are demonstrated vividly in relation to the mortality rates and distribution of three common, life limiting diseases: chronic obstructive pulmonary disease (COPD), cardiovascular disease (CVD) and cancer.

In 2009, for all three diseases, the four main conurbations had higher mortality rates than England as a whole, but the different towns' populations varied in relation to each other for the different diseases<sup>30</sup>.

- For COPD, the mortality rate was 25 per 100,000 people for England overall, whereas in Doncaster the rate was 40, Barnsley was 36, Rotherham was 29, and Sheffield was 27
- For CVD, the mortality rate for under 75s for England overall was 67 per 100,000, whereas in Rotherham it was 79, Barnsley 77, Doncaster 76 and Sheffield 68
- For cancer, the mortality rate for under 75s for England overall was 111 per 100,000, whereas in Barnsley it was 145, Rotherham 125, Doncaster 124 and Sheffield 116.

In addition to the four towns having higher mortality rates than England, there are large inequalities within the towns, and these inequalities are greater than those for England as a whole. Using deprivation quintiles to produce a slope index of inequality, where a score closer to zero indicates equality, analysis of data from 2004-8 indicates that affluent areas of Sheffield have mortality rates for CVD significantly lower than national averages and, in Barnsley, the inequality is even more extreme:

For CVD, the score for England overall was -53, but for both Doncaster and Barnsley it was -113, for Rotherham -108, and -105 for Sheffield

For cancer, the picture is more varied with less of a difference between the national and local scores but the inequality is still more extreme in some areas of South Yorkshire: the score for England overall at -111 with Sheffield quite similar at -116, but for Barnsley it was -145, Rotherham -125 and Doncaster -124.

## Sheffield

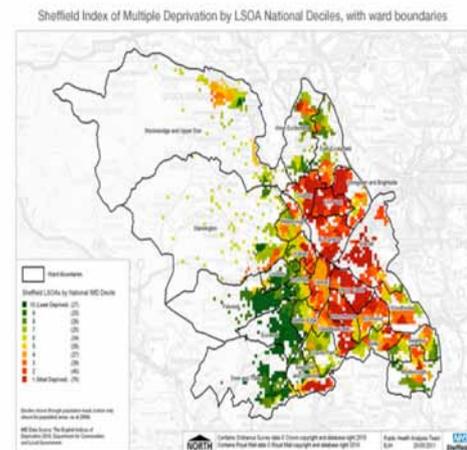
Despite overall improvements in health and differences by disease, and life expectancy at birth for Sheffield residents overall being only a few months lower than for England and Wales overall, health inequalities within the city have persisted and in some cases the gap between the most and least deprived citizens has widened<sup>44</sup>.

The distribution of deprivation and premature mortality across Sheffield and how little this has changed over time are illustrated above, with the areas experiencing the most deprivation coloured dark red and those with the least deprivation dark green, demonstrating vividly how significantly divided Sheffield is geographically.

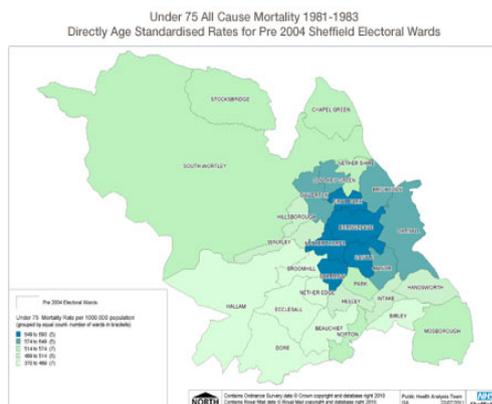
Life expectancy varies by nine years across different areas and within some neighbourhoods, the difference can be even greater: up to 16 years<sup>36</sup>. Rates of premature mortality for 1981-83 and 2008-10 are illustrated in the two maps below with the highest rates in dark blue and the lowest light green. The areas with high premature mortality correspond to the areas with high levels of deprivation, representing a health inequality and are the same areas experienced high levels of premature mortality in both time periods: the health inequality has not changed.

Using the deprivation quintiles of the different areas has shown that for males, the gap between the best and worst off widened from 8.7 years in 2001-2003 to 10.2 years in 2005-2007 and more recently it has narrowed to a gap of 8.6 years. This means health inequality in male life expectancy in Sheffield has remained largely unchanged over a 10 year period. But for females the trend is reversed: the life expectancy gap between the most and least deprived females

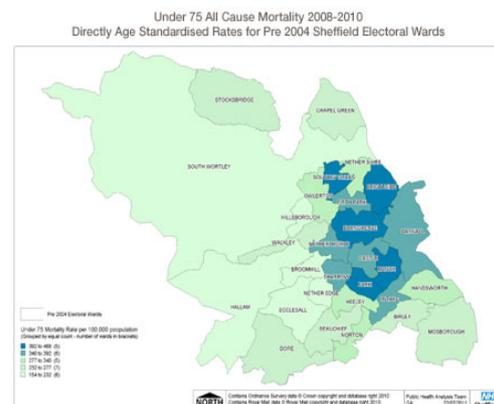
Pattern of Deprivation in Sheffield, 2010



Premature Mortality in Sheffield 1981-1983



Premature Mortality in Sheffield 2008-2010



narrowed from 7.1 years in 2001-2003 to 6.3 years in 2004-2006 but then widened to 8.2 years in 2008-2010, and despite recent widening, the life expectancy gap for females remains lower than that for males. These trends are continuing, with the gap narrowing for men but widening for women such that the widening inequality is currently being investigated to identify the causes and most effective ways to address it.

In contrast to life expectancy, the healthy and disability-free life expectancy of Sheffield residents at 65 years is significantly lower than national figures, with 1.3 and 1.5 years less healthy life expected for males and females respectively and 1.2 years and 1.4 years less disability-free years expected for males and females.



Living in cold homes is a potentially significant problem in relation to damaging people's physical and psychological health and increases risk of death: for winter 2010/11, national figures for 'excess winter deaths' were around 23,700, or 1,300 more people dying per week in the winter than the rest of the year<sup>45</sup>. In Sheffield in 2010, 18.3% of households (42,190) experienced fuel poverty, 1.9% above the national average and elderly people with long-term physical diseases such as diabetes and chronic obstructive pulmonary disease and mental health problems such as depression and dementia are recognised as especially vulnerable, particularly those with low income and poor quality housing.

### *Doncaster*

The population of Doncaster as a whole has comparatively poor health in comparison to other parts of the region, and to England as a whole, especially for people with long term limiting illness. In relation to HLE, for Doncaster males at birth it is 65.7 years, almost three and a half years less than for England and Wales overall, and at 65 the gap is 1.7 years at 12.5 years nationally and 10.8 years locally. Across Doncaster there are significant inequalities in life expectancy for both males and females although inequalities in mortality from causes considered amenable to healthcare are reducing overall<sup>46</sup>.

In census data from 2001, 64.5% of people in Doncaster indicated themselves as in good health compared to 66.9% for the region and 68.9% across England, and 12% indicated they were not in good health compared to 10% in the region and 9% across England. In relation to those with long term limiting illness, the figures are more extreme with 22.9% living in this situation in Doncaster, compared to 19.5% in the region and 17.9% across England. 2001 figures also indicate there were 3,885 'residents' living in communal establishments looked after by paid staff, and 31,944 unpaid carers, including more than 8000 providing 50 hours care or more per week, to people in their own, relative or friend's home.

In relation to specific conditions, the Doncaster JSNA reports that deaths from liver disease are higher than for England and Wales overall, and have been increasing for 10 years although inequalities within the borough have remained largely unchanged. In 2009-10, the prevalence of adults smoking was more than 5% higher than for England, and respiratory disease mortality in 2012 remained significantly higher than for England & Wales. Rates have largely unchanged over 10 years and with improvements elsewhere the gap is widening, although inequalities across the borough have not changed. Excess winter mortality rates have been varying widely from year to year in Doncaster, with the JSNA for 2012/13 indicating rates might be falling, but there has been increasing inequality within the borough, with more deprived areas showing increasing mortality and less deprived showing reductions.

### *Rotherham*

Like Sheffield, life expectancy at birth in Rotherham is similar to England and Wales, at 75.2 years for males and 79.6 years for females. But the figures for healthy and disability-free life expectancy and the percentage of the population with limited activity levels the situation are significantly different. The national percentage of population with limited activity levels is 17.9% whereas for Rotherham it is 22%; the HLE of males at birth is nearly three years less than national figures and DFLE for males aged 65 is over two years less in Rotherham than nationally. In 2006, over 22% of

Rotherham's population were reported to suffer from a long term limiting illness, and over 41% of households had one or more persons with a long term limiting illness. Over 15,000 people of working age were in receipt of Incapacity Benefit and the borough had one of the highest proportions of people in the country that provide care for family members or friends.

Although life expectancy in the most deprived areas in Rotherham is improving, not all groups are benefiting equally from improvements and the gap remains huge<sup>47</sup>. People in the least disadvantaged wards, such as Broom, live an average six years longer than those in the most disadvantaged wards, such as Herringthorpe, and older people, disabled people, black and ethnic minority groups, lone parents and those with no qualifications are still lagging behind their neighbours. The 2005 Rotherham Lifestyle Survey identified that 39% of men and 25% of women from deprived communities drink over the recommended units of alcohol compared to 29% of men and 20% of women in Rotherham as a whole, and between 1990-2010 there was an average of 144 excess winter deaths per year, mainly affecting deprived and frail elderly populations and those experiencing fuel poverty.

### *Barnsley*

Reflecting the poor statistics on disability-free life expectancy in Barnsley, in 2011, 23.9% of the borough's population indicated they had activity limitations and 25% defined themselves as disabled compared to the national average of 17.9% limited and 17% disabled. Relatedly, there are 26,100 carers in Barnsley, with over 25% providing over 50 hours care a week to people with physical disabilities and mental health issues. Figures from Public Health England rank Barnsley 119<sup>th</sup> out of the local authorities in England, with figures for 2009-2011 ranking the borough amongst the 20 worst local authorities in relation to preventing premature deaths from cancer, heart disease and stroke, lung disease, but slightly better in relation to liver disease.

Within the borough, health inequalities persist, with marked differences between the east and west<sup>48</sup>. In relation to mortality, those living in the more deprived areas are twice as likely to die prematurely as those living in the more affluent areas. Life expectancy in Penistone for females is 88 compared to 80.5 in the Dearne; and for males, life expectancy is 80.5 in Penistone compared to 74.4 in Wombwell.

Although targeted work on health inequalities for CVD over the past 10 years has reduced both the absolute and relative gaps between the most and least deprived areas of Barnsley, significant variation remains, with the Kingstone and Dearne North wards continuing to experience significantly higher mortality rates in the under 75s than the Barnsley average. There is also wide variation in cancer mortality at ward level, with people living in Dearne North having a statistically significant higher cancer mortality rate in the under 75s than the Barnsley average and Penistone West a significantly lower rate than the average.

Between 2008 and 2011 there was an average of 116 excess elderly winter deaths in Barnsley, and the borough had the second highest level of fuel poverty in the region, with over 18% of households classed as fuel poor. The Barnsley MBC private Sector House Condition Survey 2010 reported that approximately 23,000 dwellings (24.8% of houses) failed to meet the thermal comfort criterion of the Decent Homes standard in the private sector housing stock, most affecting vulnerable households living at the bottom end of the sector, as well as 13.4% of owner occupied households.



## 2. Unequal ageing, age related health inequalities and health issues of older populations

To avoid seeing individuals as recklessly choosing to take risks and live unhealthy lives, it is important to recognise that socio-economic differences in risk factors are consequences of structural differences between the rich and the poor, with risk factors for health largely the result of socio-economic disparities in adverse material circumstances<sup>49</sup>. Disease prevention strategies are therefore not enough to reduce disparities in health and structural social policy changes may be required to achieve health equality<sup>50</sup>. And yet traditional approaches to health and disease prevention have a distinctly timeless, non-contextual and apolitical emphasis, with individuals taught about 'healthy lifestyles' and urged to adopt them as a way to prevent the development of chronic diseases such as heart disease and diabetes.

With health status not just determined by genetics and individual effort but also by the social and economic circumstances within which lives are lived, and the unequal distribution of risks or health-damaging experiences throughout life that are not 'natural' phenomenon, health status can be understood as the result of a combination of poor social policies, unfair social and economic arrangements and bad politics. As such those born well-off and healthy become even richer and stay healthier for longer as they age, and those who are worse off and or marginalised who are already more likely to be ill become even poorer and disengaged and experience worse physical and mental health and quality of life for longer<sup>51, 52</sup>.

Although only considered in respect of health inequalities in old age relatively recently, life course approaches emphasize the accumulated effects of experiences across the life span to influence health and the onset of disease<sup>53, 54, 55</sup>. The complexity and dynamic nature of a life course approach to chronic disease epidemiology shows how socially patterned exposures across the lifespan influence disease risk and - together with socio-economic position in later life itself - account for inequalities in the morbidity and mortality of older adults<sup>56</sup>. The approach directs attention to how social determinants of health operate at every level, age and stage of life to both influence health and quality of life immediately and provide the basis for health or illness later in life, emphasising the continuing role of social determinants for health inequalities in old age and also changes in those determinants over time<sup>57</sup>.

Life course impacts and processes are generally considered in relation to the timing, the accumulation and or the chain of risks or opportunities an individual experiences throughout life and also, in relation to three types of effects on health:

1. Latent effects are biological or developmental early life experiences that influence health later in life. For example, low birth weight is a reliable predictor of cardiovascular disease and adult-onset diabetes in later life, with experiences of nutritional deprivation during childhood having lasting health effects.
2. Pathway effects are experiences that set individuals onto trajectories that influence health, wellbeing, and competence over the life course. For example, children who enter school with delayed vocabulary generally have lower educational expectations and attainment, worse employment prospects, and greater likelihood of illness and disease across the lifespan.

Deprivation associated with poverty, poor quality schools and housing sets children off on paths damaging to health and wellbeing.

3. Cumulative effects are those relating to the accumulation of advantage or disadvantage over time that manifests itself in relation to health status, involving the combination of latent and pathway effects. For example, childhood and adulthood antecedents show how adverse economic and social conditions at all stages of the life course predispose individuals to adult-onset diabetes, heart disease and stroke and arise earlier in life.

Although some suggest the relationship between socioeconomic circumstances and health or functioning weakens in later life, this view is challenged as an artefact that doesn't take account of selective mortality<sup>58, 59</sup>. Convergent analyses are generally criticised for failing to take adequate account of the worse health and lower life expectancy of disadvantaged populations such that there are fewer survivors from those backgrounds: including death in health outcomes steepens the health trajectories at older ages, especially for manual working classes, with evidence suggesting inequalities not only continue in old age but actually increase. The Survey of Health, Ageing and Retirement in Europe (SHARE), a multidisciplinary and cross-national panel database of micro data on health, socio-economic status and social and family networks of more than 85,000 individuals from 19 European countries (plus Israel) aged 50 or over, demonstrates vividly the cumulative effects of life risks and opportunities for health. Similarly, the English Longitudinal Survey of Ageing (ELSA) that focuses on later life studying the lives of people in England aged 50 and the West of Scotland Collaborative Study (with Norwegian and Finnish linked data) following people of all ages, show how people's experiences and approaches to ageing vary and how circumstances change over time, highlighting the relationship between health and wealth such that individuals who are 50–59 years old from the poorest fifth of the population are over 10 times more likely be unhealthy and to die at an early age than their peers from the richest fifth.

### **Age discrimination and stigmatisation of older people**

Although socio-demographic changes are recognised and discussed widely in governments, public and private sector organisations and the media, a 'structural lag' between societal institutions and attitudes to increasing longevity has been identified in the labour market, the media, health and social care and research<sup>60</sup>. Generally, ageing populations are portrayed in terms of crisis, ageing associated with decline, deficit and dependency, and the rising costs of care for the growing number of increasingly frail elderly people as a burden to society. For example, despite acknowledging that rising numbers attending accident and emergency departments in England have 'largely been driven by patients going to minor injury units and walk-in clinics', the growth in the number of older patients is described and focussed on by the BBC health correspondent as the 'straw that has broken the camel's back'<sup>61</sup>.

Also, whilst health inequalities matter at any age, it is essential to remember that older people are neither a single homogenous group nor a one off generation: to define or consider this population by chronological age is neither helpful nor appropriate as there are dramatic differences in the health status, participation and levels of independence of older people of the same age and, over time, the health and wellbeing of older people - as with other age groups - has changed.

In the context of ageing populations, those in employment are increasingly expected to work for longer. In the UK, in addition to raising the age for women to that of men, the age of retirement has been raised to 68 to extend the time workers pay income tax and national insurance with the change presented primarily in relation to meeting the rising health and social care costs of supporting the growing number of older people, especially those with substantial needs. Nonetheless, substantial and growing concerns about how the country will meet the rising costs



prevail in central and local government and predominate in media accounts of ageing populations and that workers are now required to continue working for longer has very largely been presented in the media as an economic necessity and hardship to those who grew up expecting to retire sooner. As such evidence that continuing to work can improve older people's social, mental and physical wellbeing - an approach that potentially would encourage those affected most by the change and enhance the image of older people as positive contributors rather than as a drain on society - has been ignored<sup>62</sup>. Also, without specifying who 'dependents' comprise, many commentators and politicians ignore the 'dependency' and 'costs' of supporting children and young people and focus attention unfairly on the rising proportion of older people. This portrayal of older people as dependents is a caricature that ignores the diverse, substantial and positive contributions of many older people to society, their communities and families as in both resource rich and poor European countries the overall direction of social and economic resources is generally downward until very late old age, with many older people looking after young grandchildren whilst their parents are at work and many providing financial support to their offspring (etc)<sup>63</sup>.

As well as concerns about funding services, concerns about inadequate incomes in retirement are highlighted by government and reported often in the British media, with many people seen to be 'not saving enough to pay for a decent standard of living over a much longer retirement'<sup>64</sup>. Despite recognising that the growing reliance on private pensions involves risks and uncertainties and that 'saving more is made less likely...for anyone who is not rich, or who moves in and out of work due to bad health or the need to care for others', the Select Committee on Public Service and Demographic Change stated in October 2013 that people need to be 'better informed about healthy life expectancies, pension projections, the likelihood of needing social care and its cost, and how best to use their own assets, so that individuals and families can analyse their own situations and make their own informed choices'.

Whilst not picking up on the significance of different income for unequal ageing and health in later life, Riley suggests such attitudes represent a 'relic of a previous socio-demographic era' and that the reality of old age in the 21<sup>st</sup> century must replace the outdated model of inevitable decline and disability<sup>60</sup>. Later life needs to be understood as one part of the life course such that older people, regardless of competence and capability, need to be seen and appreciated as full citizens, and opportunities for older people to continue to contribute and participate and feel valued should be available and extended.

Since the need for healthcare is growing, while the labour force is shrinking, the role of healthcare and long-term care and ensuring access to high quality social services is a main challenge. With regard to health care utilisation and the quality of health care for older people across Europe, SHARE data shows there is much room for improvement and from a preventive perspective, a serious lack of geriatric assessments and screening tests. In England, while frail older people are the largest group of patients in inpatient hospital care, their care is often suboptimal: the National Comprehensive Enquiry into Peri-operative Deaths, Health Ombudsman's report and, more recently, the Francis report have highlighted a pressing need for services which meet the needs of this patient group.

Although a 2013 NHS England report highlighted the ‘unwarranted variation in the quality of care across the country...’ and need for a ‘greater emphasis on keeping people healthy and well in order to lead longer, more illness-free lives: preventing rather than treating illness...’<sup>65</sup>, the focus of the report was on a funding gap of around £30bn by 2020/21, with the threat of a crisis linked primarily to the growing demands of ageing populations and concerns about the willingness of the public to fund the service. The foreword of the report highlights how:

“The ageing population is ageing and we are seeing a significant increase in the number of people with long-term conditions - for example, heart disease, diabetes and hypertension. The resulting increase in demand combined with rising costs threatens the financial stability and sustainability of the NHS”.

## Age discrimination in health and social care

### *Health care*

When the NHS was established, male life expectancy was 66 years and female was 70: today it is 78 and 82 respectively: with the number of over 65s increasing by 65% over the next 25 years and changes in perceptions and expectations of older people, healthcare services need to respond<sup>66</sup>. But despite the much publicised ageing population and association between older age and higher levels of morbidity especially amongst the very elderly, the ways in which services approach, fund, organise and deliver care for older people are not keeping pace and evaluations around the appropriateness and effectiveness of existing and new interventions largely ignore issues of equity in relation to and within older populations.

Reflecting the increasing levels of co-morbidity and complex needs of older people generally, it is perhaps unsurprising that 66% of NHS patients are aged 65 and over; people over 65 account for 70% of bed days and occupy more than 51,000 acute care beds at any one time, and hospital episode statistics show a 65% increase in secondary care episodes for people over 75 during the past 10 years compared with 31% for those aged 15–59<sup>67, 68</sup>. And yet, older populations receive only 40% of total NHS expenditure such that in relation to need, proportionately more is spent on younger populations and curative interventions.

With the funding of health and social care in institutional and community settings in the UK not meeting the needs of its ageing population provides a clear example of the inverse care law<sup>69</sup>, with older people, as a population, constituting a disadvantaged group<sup>70</sup>. Decision-making around resource allocation and the organisation and delivery of health care for older people should therefore take more account of equity as the government via the NHS, public health and local authorities all have a role to play in reducing health inequalities.

The availability, accessibility and quality of both health (and social) care needs to be fair and respond to the needs of ageing populations not only to continue improvements in public health, but also to address health inequalities within older populations as communities with the greatest need for health and social care services generally face the greatest barriers in accessing them. Although for some older people, accessing health care presents few challenges, for others it is like scaling a mountain: people from more deprived communities and environments generally struggle to navigate health care systems as well as people from more affluent communities and advantaged backgrounds and many put up with worse health as they have low health expectations. As a result, those from more deprived backgrounds and communities tend to not use or benefit fully from services such as screening, diagnosis and lifestyle interventions thereby adding further layers of risk to the many other damaging socio-economic influences on their health throughout life.



Problems with accessing services may relate to factors such as the geographical location of services, the lack of or cost of transport, or that GPs in the most deprived areas - where older people tend to have worse health - being busier due to there being fewer practising in those areas relative to the level of population need. Age UK report that in addition to 19% of people aged 75 and over finding it very difficult to get to their local hospital; 9% finding it very difficult to get to their doctor's surgery, and 16% experiencing some difficulty in making a GP appointment, the percentage of home-based consultations undertaken has fallen from 22% in 1971 to 4% in 2006.

The quality of care experiences can also significantly influence service use: Age UK report that although 31% of the general public say they are confident that older people are treated with dignity in hospital, 64% of older people said health and care staff do not always do so, suggesting a substantial mismatch in the perceptions of the general population about older people's experiences of health and social care<sup>71</sup>. Calnan et al see dignity as intrinsic to being human, and that the basic right to dignity can be threatened or lost due to the disadvantages of older age<sup>72</sup>. In a UK-based study of older people's experiences they identify that older people's discourse on dignity is dominated by identity and how it is or can be threatened, particularly when required to use health and social care services. The ways staff approach and communicate with older people, for example, the forms of address used were found to either enhance or jeopardize dignity, as although often well-intentioned, being called "love" or "dear" or by their first name causes many older people to feel patronized, with a casual manner often seen as disrespectful and intrusive, and more offensive for older people due to their upbringing. Recognising that many older people in these settings do not complain to staff and seem inherently passive, Calnan et al highlight how this relates to them being dependent on staff for vital personal care makes people feel vulnerable and not wanting to appear old-fashioned. These findings resonate with evidence from Twigg<sup>73,74</sup> Isaksen<sup>75</sup> and other work by Caplan<sup>76</sup>, together revealing how older people negotiate and maintain a sense of self in the face of the degeneration of the body, threats to their personal and private space, and the domination of health and social care practitioners.

The health and social care a patient receives may be influenced by his or her age alone, rather than clinical factors<sup>77</sup>. With the ban on age discrimination now in effect in the NHS, there is not only a moral and professional imperative to ensure that older people receive the most appropriate treatment for their individual needs but a legal requirement as well. Whilst change can be difficult to deliver and the factors leading to suboptimal care for older people are complex, the NHS needs to recalibrate how it approaches the treatment and care of people in later life, and chronological age should not be used as a proxy for clinical factors.

In relation to surgery, there are multiple factors that affect treatment decisions and there may be good reasons why nonsurgical treatment alternatives are recommended and also, for various reasons, some older people opt out of surgery. But the Royal College of Surgeons of England in 2012 reports on evidence showing that age discrimination does occur, such that by the time many older people are considered for surgery by a specialist, neither the patient nor the surgeon can be assured that the referral from the GP or other hospital consultant was timely. As such the decision about whether to treat will not necessarily be taken purely on clinical grounds, and post-operative care may not be tailored to the individual's needs.

Issues around age discrimination and equity in various other areas of clinical practice have been demonstrated. For example, older age patients and older end of life carers have lower rates of referral to specialist palliative care services<sup>78</sup>; older people with common mental disorders such as anxiety and depression are less likely than younger adults to receive evidence-based treatments such as talking therapies and more likely to receive benzodiazepines, after adjusting for CMD symptoms<sup>79</sup>, and socio-demographic features influence discharge destinations of older people following admission to hospital for a fall, with people who live in less deprived, predominantly white or rural areas more likely to be discharged to a different residence compared to those from areas classified as most deprived, urban and with an Asian population more than five percent who return home<sup>80</sup>. That being Asian is identified as an influence on being discharged home can possibly be attributed to inaccurate and discriminatory stereotypes about ethnic minority populations exchanging higher levels of informal instrumental support than the white majority population, therefore having less need for formal services<sup>81</sup>.

Concerns around discrimination have also been highlighted in relation to the implementation of the National Strategy for Dementia with respect to Black and Minority Ethnic and refugee communities who have historically been marginalised in strategic health initiatives<sup>82</sup>. Despite a statutory duty to promote equality, Mullay et al see understandings of the nature of cultural diversity as generally limited and that the importance of inter-generational cultural change is barely recognized, with both impacting on the quality and appropriateness of interactions between staff and service users from different cultural backgrounds<sup>83</sup>. They conclude that despite service user autonomy and choice now being central to community care legislation, policy and practice guidance, in reality choices are limited for both minority and majority older people and there is a gap between the high-level commitment to mainstreaming equality and people's lived experiences of it<sup>84</sup>.

### *Social care*

With most people wanting to stay living in their own home for as long as they can, and the increasing number of frail and disabled older people, there has been an increased demand on home based social care services. In 2011/12, over 86% of older people (65 years and over) in Sheffield were still at home, slightly higher than the national average of 82.7%. But with multi-morbidity in advanced old age increasingly the norm in the UK, with 69.1% of males and 74.1% females over 85 years having a disease count of four or more<sup>85</sup>, meeting the complex care needs of the growing population of often frail and increasingly dependent elderly people is a progressively more complex and costly service for commissioners and providers to manage and deliver, although from a financial perspective it is far more cost effective to provide care in an individual's own home than in residential care. For example, in 2012-13, care in a residential or nursing home costs £397.48 (gross) per person per week in Sheffield compared with £137.53 (gross) for someone in their own home: people must have the support to stay in their own home<sup>86</sup>.

Factors to consider in care assessments and planning include the individual's level of dependency, how often and which specific types of support are needed and the most suitable environment and people to provide the care. As such assessed individuals are sometimes categorised or described as:

- Critical-interval dependent: these people need 24-hour care; SMMSE<sup>87</sup> < 10, severe or profound urinary incontinence with inability to dress or undress without help and or unable without help to perform toileting/feeding/move from chair
  - Short-interval dependent: these people need help at regular times daily; unable without help to dress/undress, prepare a hot meal, take medication, wash face and hands
  - Long-interval dependent: these people need help less than daily; unable without help to wash all over, cut toenails, go shopping, do light/heavy housework, manage money
  - Independent
- (adapted from Isaacs and Neville, 1975).



In recent years, not only have the number of older people and complexity of their care needs increased but also the role and responsibility for residential and home-based health and social care has changed substantially, with organisational and funding changes in primary and community based health care, cuts in local authority social care budgets, increasing numbers of private care providers and the introduction of personal budgets.

In this increasingly demanding context, there is a broad consensus among service users, policy-makers, politicians and practitioners that existing social care policy, practice and funding is inadequate and untenable, particularly if it is to meet increasing needs related to changing community and family structures, roles and relationships, medical and technical innovations and ever-tightening economic constraints. However, whilst many are extremely concerned about how services can match the rapidly growing need, a user led Standards We Expect consortium, funded by the Joseph Rowntree Foundation considers that the unification of NHS and social care funding arrangements might help overcome arbitrary and unhelpful divisions between the two<sup>88</sup>.

Although funding problems are sometimes used as an excuse for not making changes, they do influence the quantity and quality of the workforce and the availability and accessibility of mainstream, advocacy, advice and information services, and have led to an increased reliance on unpaid carers and volunteers. In 2011, 10% or 5.8 million people living in England and Wales provided unpaid care for someone with an illness or disability (ONS, 2011), and over a third (37%, 2.1 million) of them were giving 20 or more hours care a week, an increase of five percentage points (473,000) on 2001 (32%, 1.7 million).

Local authority funding shortages also influence rationing, restricting access to and undermining equity in support, result in short-termism in policy and provision and the over-reliance on one-off projects and initiatives, limits spending on early and preventive interventions and restricts the range of support available. With more people having to pay for care and support restricts access and perpetuates inequities, and undermines service users' independence. Of particular concern, is a recent report from the Care and Support Alliance<sup>89</sup>: in October 2013 the alliance reported that at least 340,000 elderly and disabled individuals will not be given any financial support as the UK government plan to cap individual total care costs of care for people in care homes and receiving care in their own homes at £72,000 unless the need is assessed as critical or substantial, or the person is deemed as at 'risk of neglect' without it. Those with 'moderate requirements' will be offered no financial assistance. As such, the care elderly and disabled people get increasingly depends on them having an occupational pension or private savings, which in turn reflects the type of occupation and pattern of employment individuals have had earlier in their life.

### *Residential care*

In 2011, an estimated two per cent of people in England and Wales were living in communal establishments<sup>1</sup> (CEs) on the night of the national census. Although a similar percentage to 2001,

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<sup>1</sup> Communal establishments are places that provide managed residential accommodation; examples include sheltered accommodation units, student halls, care homes, hospitals and prisons.

the number was up from 858,000 to 1.0 million people and of these, 420,000 people were in medical and care establishments, with 383,000 in care homes, and older people the majority.

In 2013, Age UK reported that around 400,000 individuals aged over 65 currently live in care homes across the UK and that the British Geriatrics Society say their health needs are being poorly met. They see that services should be tailored better to suit the needs of this frail and vulnerable group of people, with commissioners and planners of health services involving the care home sector in the design of services and that the NHS should do its bit in supporting care home staff better to ensure older residents have a better quality of life, with reliable access to familiar health professionals, with one GP accountable for an individual's community based care<sup>90</sup>.

The user led Standards We Expect consortium highlights that for people who are long-term and residential service users, of whom the majority are older people, quality of life is the most important issue. It sees many of these service users' lives are restricted and disempowered by continuing institutionalisation and this undermines confidence, limits potential and prevents the acquisition of skills to maintain fuller, more equal lives. The consortium also suggest that the chronic inadequacy of social care funding and continued existence of a social care culture at odds with person centred care prevents it from becoming the norm for all users and that continuing institutionalisation, control, paternalism and inflexibility in services and the reliance on a 'deficit' model rather than a philosophy of independent living represents a problematic culture.

In a recent speech about abuse in care homes, the British health secretary Jeremy Hunt stated that entering old age "should not involve waving goodbye to one's dignity"<sup>91</sup>. Referring to the 112,000 cases of alleged abuse by English councils in 2012/13, with the majority involving people aged over 65, Hunt identified the need for rigorous, unflinching standards towards the regulation of care in both the private and public sector. Announcing that 'flying' elderly care visits are on the rise and hidden cameras being considered to monitor care homes, he also described a new Chief Inspector of Social Care as a champion of the 400,000 people who use the services, with care homes starting to be inspected from April 2014, and all 25,000 locations inspected within two years and given official ratings.

In South Yorkshire, 29% of the population live in care homes (7,837 people). Although there were contrasting percentages in the totals for care home residents in the different conurbations, possibly relating in part to the varying hospital services of the different towns and cities, it is interesting to find differences in the proportions in care homes with or without nursing, with Rotherham having a higher number of residents in care homes with nursing, possibly reflecting the different health and social needs of the local populations.

Residents in care homes in the main conurbations of South Yorkshire (all ages, national census, March 2011)					
Number	South Yorkshire	Sheffield	Doncaster	Rotherham	Barnsley
Total in some type of CE	22,464	13,634	5202	1946	1682
Total in care home	7,837	3008	1711	1629	1489
Care home with nursing	3,767	1,498	734	895	640
Care home without nursing	4,070	1,510	977	734	849

## Health and other issues for older populations

### *Long terms conditions and multiple comorbidity*

In England, over 15 million people live with a long term condition and three out of five of these are over 60 years of age and with 42% more people over the age of 65 expected by the year 2025, this figure is set to rise<sup>92</sup>. Although people's fitness is generally improving, including many older



people, many people with multiple long term health problems experience limited levels of activity. For many over 65 year olds with comorbidities, activity levels and independence become increasingly limited as they age and some also develop additional conditions that compound the extent of functional disability.

Year	Age	Limited <sup>2</sup>		Not limited	
		Number	Per cent	Number	Per cent
2001	Working age <sup>3</sup>	4,333	14	27,619	86
	All ages	9,485	18	42,557	82
2011	16 to 64	4,706	13	31,568	87
	All ages	10,048	18	46,027	82

From 2008-18, a 50+% increase in people with 3 or more long-term conditions is anticipated and from 2010-30, an 80% increase in the number of people aged 65 and over with dementia is expected<sup>93</sup>. In England and Wales, in 2012, around 670,000 people in England had dementia – equivalent to the combined populations of Bristol and Leicester, and one in three people over the age of 65 will develop the condition<sup>94</sup>.

Related to the complexities of managing multiple and chronic conditions, increasing support for self-management has been recognised as central to both the European and UK government's Long Term Conditions agenda<sup>95, 96</sup>.

Despite differences within older populations, there is some shared understanding of the characteristics of those older people with the greatest needs for health and or social support: longitudinal analyses by ELSA identify wealth inequalities in the onset of illness and impairment across age groups in relation to heart disease, circulatory-related mortality (in relation to heart disease), self-reported health, functional impairment, and all-cause mortality (in conjunction with self-reported health and disability). Those elderly populations with a wide array of health problems and who generally experience a larger burden of disability and a more detrimental impact of ageing on health overall, are more often those in lower socio-economic classes and those with lower levels of educational attainments. The prevalence of two or more chronic diseases is higher in lower educational level groups, with the largest disparities in chronic lung disease, ulcer, diabetes and arthritis among men, and among women, in diabetes, stroke, chronic lung disease and heart disease. A similar pattern is observed for income, probably reflecting that poorer groups generally smoke more, have a worse diet and a worse risk factor profile than those with a higher socio-economic position<sup>97</sup>.

Although cancer is more prevalent in more affluent groups, it is most incident among lower socio-economic classes, with disadvantaged individuals also surviving for shorter periods<sup>98</sup>. Survival differences relate to various factors including the timing of presentation of patients to primary care services and inequalities in the rates of referral to and or provision of specialist cancer care, treatment, rehabilitation and support in relation to clinical need<sup>99</sup>.

<sup>2</sup> 2011 estimates for 'limited a little' and 'limited a lot' aggregated to allow comparison with 2001 estimates.

<sup>3</sup> Working age defined as 16 to 64 years inclusive for males and 16 to 59 inclusive for females.

The prevalence of multiple symptoms is also higher among individuals with a lower socio-economic status. Individuals with a lower educational or income level report more symptoms such as pain, heart problems, breathing problems, coughing and fear of falling than their higher socioeconomic counterparts. Lower socio-economic groups have a consistently higher risk of unmanaged symptoms than those in a more privileged socio-economic position.

### *Polypharmacy*

With improvements in the treatment of many diseases and increasing numbers of people living for many years with multiple long term conditions, huge numbers of older people use a variety of prescribed and off the shelf drugs for chronic conditions such as diabetes, ischaemic heart disease, hypertension, arthritis and osteoporosis. Consequently, the issue of polypharmacy is a growing concern for patients, health care providers and the economy<sup>100</sup>.

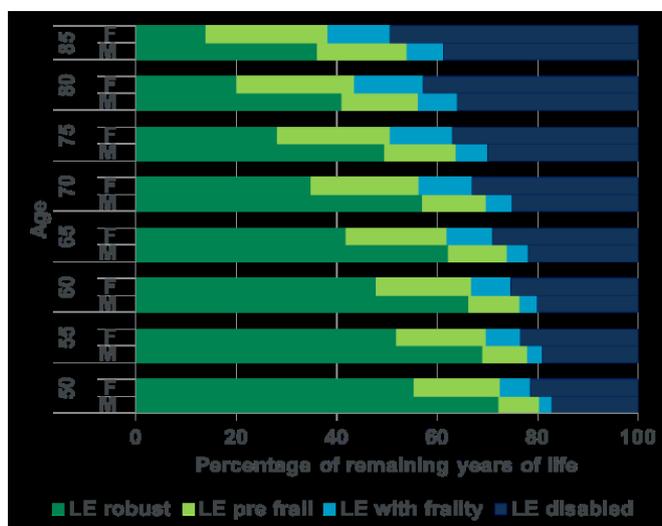
One of the problematic consequences of polypharmacy is adverse drug reactions, with 12% of hospital admissions in England and Wales being people aged over 70 a result of this problem. Also problematic are the frequent prescriptions of NSAIDS associated with gastro-intestinal (GI) bleeds and cardiovascular problems; benzodiazepines, with 30% of the over 85s on such agents, despite their shorter half-life and lower lipid solubility, and antipsychotics associated with falls and confusion<sup>101</sup>.

Although sometimes a drug is the only intervention available, prescribing can be harmful and patients can end up being prescribed further treatments for side effects or drug interactions. Also, some doctors tend to over-prescribe and or continue repeat prescriptions for too long without review, or prescribe because some patients simply expect to be given medication. Importantly, there are issues around the lack of an evidence base around the different effects of drugs and drug interactions in elderly populations through clinical trials often having upper age limits and excluding people with multiple morbidities thereby discriminating against frail and elderly populations and effectively putting them at risk of iatrogenic harm.

### *Frailty and frailty-free life expectancy*

Although the term frailty is understood and defined in different ways, it can be seen as a latent vulnerability and or syndrome generally associated with (mostly) older people with multiple, complex and heterogeneous health problems involving health and social care needs in medical, functional, cognitive and social domains.

With increasing life expectancy and multiple long term conditions, the number of pre-frail and frail vulnerable older people has risen, including many from disadvantaged backgrounds and living in impoverished environments. But as well as differences relating to socio-economic deprivation, there are gender differences, with wave 4 SHARE data indicating that females over 50 spend more years and a greater proportion of their remaining life pre-frail, frail and with severe disability than males. Importantly, the data also indicates the short window of opportunity pre-frail for prevention, but especially for men.





Despite definitional problems, what is generally recognised is that frail older people admitted for acute, inpatient hospital care are at high risk of adverse events, having long stays, high readmission rates, high rates of long term care use and high risk of death post admission. The modern general hospital, its structure, processes, staff skill mix and attitudes may all contribute to the incidence of adverse outcomes for frail older people<sup>102</sup>. For example, the rapid pace and technological focus of modern medicine, attitudes towards the elderly, inappropriate drug use and clinician skill mix may all conspire against the early recognition and the appropriate management of frailty factors such as delirium<sup>103</sup>.

A major and growing concern for the NHS is the number of emergency admissions of frail elderly people to hospital. Of the 15 million adults admitted to hospital in England in 2012, 7million (46%) were aged 65+, and the number of emergency readmissions for people aged 75+ is rising, with 188,138 in 2009/10, a rise of 88% since 1999/2000: based on observed rates for people aged over 85 discharged from hospital in 2008/9 in England, 63% of this patient group will experience an emergency hospital readmission or death within a year (HES data).

For many older people, admission to hospital is unwarranted and length of stay unnecessarily long: both are problems. In Sheffield, of a sample of people aged over 75 admitted to hospital in an emergency in 2010, 49% did not meet the criteria for admission and could have been managed through either home based care, sub-acute rehabilitation, a lower level of care or managed as an outpatient. Nonetheless, for those admitted, re-ablement and rehabilitation programmes have been shown as often extremely successful, with many still living in their own home 91 days after being discharged from hospital into re-ablement services<sup>104</sup>.

### *Dementia*

Of older people in hospital, up to 60% have mental health problems or develop them during their stay and of those admitted to an acute hospital aged over 70, around 27% have delirium, 27% have previously diagnosed dementia and 24% have possible major depression, including 8% with definite major depression.

Within England and Wales there is substantial variation in the quantity and quality of dementia care in the community and in hospitals both in terms of general recognition and formal diagnosis, and in respect of referrals, advice, treatment and support<sup>105</sup>. In South Yorkshire these varying standards of dementia care for people are considerable, as well as varied, as illustrated in the tables on the next page.

The 2013 Sheffield Joint Service Needs Assessment indicates that avoidable or inappropriate use of 'acute' services is leading to poorer outcomes for older people with dementia and those with higher levels of dependency, with them more likely to be living in a care home following a stay in hospital, than returning to their own homes. It also reports that carer support and counselling at diagnosis reduces care home placement by 28%, that early provision of support at home decreases institutionalisation by 22%, and active case management reduces admissions to care homes by 6%.

Importantly, early interventions for people with dementia are recognised as cost effective and improve the quality of life for the individual, their families and carers, through enabling people to access suitable support services, can delay or prevent premature and unnecessary admission to

care homes. Investing in preventative approaches is seen to not only help maintain independence and wellbeing but also contributes to efficiencies within the health and social care system, with improvements to the experience of hospital care for people with dementia also helping to take forward the reform agenda.

Dementia care in South Yorkshire hospitals (by CCG area/NHS Health and Social Care Trust) <sup>4</sup>				
	Sheffield	Doncaster	Rotherham*	Barnsley
Staff looking for dementia <sup>a</sup> (%)	99	91	R 68 S 99	76.8
Staff assessing dementia <sup>a</sup> (%)	100	No data	R 89 S 100	No data
Staff referring patients for further tests <sup>a</sup> (%)	100	No data	R 55 S 100	No data
Length of hospital stay <sup>106</sup> (as longer or shorter than national average)	Longer	Longer	R Longer+ S Longer	Longer
Re-admissions (as higher or lower than national average)	Same	Higher	R Higher S Same	Same
Dying in hospital (as more or less than national average)	More	More	R More S More	More

\*Some Rotherham residents are treated in Rotherham (R), others in Sheffield (S) or Doncaster (D) services

<sup>a</sup> Over 75s admitted for more than 72 hours: Dementia assessment and referral Q1 April-June 2013/4

Dementia care in the community - memory clinics <sup>107</sup> (by CCG area/NHS Health and Social Care Trust)				
	Sheffield	Doncaster	Rotherham*	Barnsley
Checking for dementia – formal diagnosis (%)	68	52	59	47
Waiting time to be tested (weeks)	21	2	R 7 D 2	5
Waiting time for test results (weeks)	9	18	R 4 D 18	6
Prescribed anti-psychotic drugs <sup>a</sup> (%)	9	No data	4	3

\* Some Rotherham residents are treated in the Rotherham memory service clinics (R), others in the Doncaster service (D)

<sup>a</sup> Anti-psychotics are considered the correct treatment for around 5% of people with dementia: they are often over prescribed<sup>108</sup>.

### Functional limitations

Physical functioning is an important dimension of health as it reflects the ability of individuals to perform 'normally' in a society and many studies demonstrate significant differences by socio-economic status<sup>109</sup>. Older individuals with a lower educational level are more likely to experience limitations with mobility, arm or fine motor functions. Similarly, the prevalence of eyesight, hearing and chewing problems is higher among those older adults with a lower educational level than among those with a higher level and a similar pattern is also observed for income.

Walking speed and grip strength have been found to be strong predictors of mortality and objective measurements of physical functioning<sup>110</sup> and those with a lower socio-economic position are more likely to be in the lowest quartile of grip strength, compared to those with a higher socio-economic position. Walking speed among those aged 76+ show large educational level disparities and are more marked among older women.

Similarly, men and women with lower socio-economic status are considerably more likely to experience limitations with activities of daily living such as dressing and bathing than those with higher socio-economic status. They are also more likely to face limitations with instrumental activities of daily living such as preparing hot meals and making telephone calls. This further reflects the higher burden of physical limitations among those with a lower socio-economic status.

<sup>4</sup> Green = better than national average; Orange = similar to national average; Red = worse than national average



Age UK reports recent estimates indicating that 1.3 million people over 65 suffer from malnutrition, with the vast majority (93%) living in the community and that in 2008, 32% of people aged 65+ who were admitted to hospital were found to be malnourished at the time of admission although, paradoxically, 18% of hospital in-patients who needed help to eat have been reported as saying they did not get enough support.

Hearing and sight disorders are very common amongst elderly populations, with conditions such as cataracts experienced five times more often by those aged 80 or over (the 'oldest old') than by those aged 50-59<sup>111</sup>. Sensory problems can have severe negative consequences for physical and emotional health, wellbeing and safety of older people with, for example, the risk of falls, social isolation and depression: through sight loss many older drivers have to stop, impacting on their quality of life, life roles and independence<sup>112</sup>.

Sensory impairments also often lead to significant formal and informal care costs. However, and although a significant proportion of problems with hearing and sight can be prevented, treated successfully or deterioration slowed, there is substantial under-diagnosis of people with such problems, low levels of referral to appropriate services and low uptake of relevant specialist screening and health promotion services, especially amongst more deprived populations.

### *Social isolation*

Although many elderly people live with spouses, other relatives, or in some form of supported housing or residential care, many live alone. UK statistics reveal that the number of older people living alone has increased by 8% over the last 10 years, with over one and a half million widows aged over 65 on their own, accounting for more than a fifth of the total 7.7 million who live alone (ONS, 2013).



For those who are generally healthy, functionally independent, financially secure and socially connected, living alone can be both a positive choice and life affirming and health maintaining experience, and for those with disabilities and ill health who are well supported this can also be a good choice. But for those living alone in poor health and functionally dependent to some extent on others, and or with limited resources and support networks, the situation can be physically and emotionally difficult and arising not out of choice but out of the person having limited alternative options: living alone in these circumstances represents an ongoing risk to the health and wellbeing of these frail older people.

The Campaign to End Loneliness 2011 survey about loneliness in the UK, and what people are doing to prevent or alleviate it, highlights how living in busy cities can create a particularly acute sense of isolation and with increasing numbers of older people living in such environments this is a significant and growing issue of concern<sup>113</sup>.

The characteristics of place and their relationship to emotional health and wellbeing have also been highlighted for the rising number of older people living in rural England with problems of rural isolation relating to scarce transport, poor internet connection and distance from loved ones leading to loneliness amongst some older populations more than others. 'Dimensions of rurality'

interlock with the process of ageing to produce a number of distinctive patterns such that the countryside promotes the health and wellbeing of the newly retired, fitter cohort who have access to financial and community resources, but carries a number of risks for elders who are frail, deprived or isolated<sup>114</sup>. Socio-economic and health inequalities combine to further undermine health and deepen exclusion and although some initiatives promote quality of life, the efficacy of policy in taking account of the needs of rural elders is uneven, incoherent and fragmented. Key deficits relate to resource allocation, limited recognition of rural disadvantage and minimal incorporation of the perspectives of rural elders. With the majority of policy 'rurally blind', a systemic shift is required in the mechanisms that steer its development, funding and implementation for rural elders to benefit from investment.

These issues not only have relevance for older people living alone in rural areas but also for those in urban and suburban areas with limited or no public transport services, especially for those with limited mobility, no access to a car, and without knowledge of, or access to, new communication technologies: predominantly older people with lower income and more disadvantaged lives. This is highlighted in the 2013 Sheffield JSNA where loneliness, isolation and exclusion are considered big issues for the city, but especially for older people. Those living on isolated housing estates, in deprived and or more rural areas are seen as at particular risk of being excluded from accessing social 'opportunities' as public transport services are often limited or absent, and some older people are unable to get to the bus stop or find getting on a bus without assistance impossible. In addition, feelings of safety about using public transport are seen as problematic, particularly in terms of fear of verbal or physical abuse on buses. For older people with low income these issues are even worse as the cost of a taxi is prohibitive.

For older people, meaningful, reciprocal and respectful relationships with family and friends (and carers) are generally more influential on assessments of quality of life, emotional health and wellbeing than the burden of disease experienced, and they also affect older people's cognitive functioning and performance: conversely, instrumental support does not buffer cognitive decline, and can contribute to faster deterioration<sup>115</sup>. And in terms of the severity of its impact on mortality, a lack of social interaction and feelings of loneliness can be considered as being as harmful as smoking, obesity, lack of physical activity or misuse of alcohol, with individuals who are socially isolated between two and five times more likely to die prematurely than those with strong social ties.

### *Information and communication technologies (ICT)*

ICT skills are increasingly important as 21<sup>st</sup> century society becomes ever more reliant on technology for shopping, finding information, accessing services and communicating, and research beginning to show many benefits from digital inclusion. In addition to telephone communication, the use of e-mail and other web based communication technologies are seen as a way for people to maintain relationships with friends and family, and to build social networks<sup>116</sup> such that the potential of ICT for older people's health and wellbeing has begun to spark considerable attention.

However, whilst the internet has become an increasingly significant conduit of social and work life, there are significant differences in use between young and old, men and women, those of different ethnicities and those of different socioeconomic status across the world and within countries and communities. Generally, use is still relatively low amongst older people, but it is increasing rapidly: in 2006, 82% of adults aged 65 and over in the UK had never used the Internet, by 2007 the figure had reduced to 71%, and by 2010 it had dropped to 60%<sup>117</sup>.



In addition to the important social-psychological and physical health benefits of regular personal communication in reducing social isolation, the potential for new 'smart' technologies and telehealth to facilitate improvements in the rehabilitation, self-management and monitoring of long term and disabling conditions common to older people such as heart failure, chronic obstructive pulmonary disease and stroke is also of increasing interest<sup>118, 119, 120</sup>. Research has identified the potential of telehealth for not only reducing the need for frequent arduous journeys for hospital based check-ups but also impacting positively on hospital admissions<sup>121</sup>.

### **3. Tackling unequal ageing, age-related health inequalities and improving the health and quality of life of older populations**

#### **Targeted interventions**

Generally, European healthcare systems rely on schemes aimed at providing access to good health for all. But despite decades of universal healthcare systems, large socio-economic disparities in physical and mental health and functioning remain. Whilst there are socio-economic differences in health care utilisation these play only a minor role in the origin of health disparities<sup>122</sup>. The impact on health and wellbeing from the accumulated impact of the myriad of social, environmental, occupational, economic and lifestyle risk factors throughout the lifecourse provides both the rationale for and enormous potential of risk factor prevention to moderate socio-economic disparities in health through tailored interventions targeted towards more disadvantaged and marginalised groups.

#### **Involvement and participation**

It is widely acknowledged that the participation and involvement of older people in volunteering, education, civic organisations and research (etc) not only provides a range of benefits to older people themselves including health, but it also benefits society<sup>123</sup>. Through older people's involvement, policy measures, products, services and research better meet the needs, priorities and concerns of older persons. And volunteering not only allows older people to engage in meaningful roles and stay active, it can also slow down the ageing process, with one study demonstrating reductions in a bio-marker that increases with ageing, by around 15% in compared to those that do not<sup>124</sup>. The promotion and inclusion of older people also raises awareness of the 'ageing phenomenon within society' and challenges the negative stereotypical perception of older people as a drain or burden to society.

Finding different ways of enabling older and or disabled people to be involved, provide expertise, experience-based insights and identify their needs and priorities maintains cognitive functioning, enhances quality of life and reduces loneliness or isolation. It also gives older people due recognition and respect for their contribution in society, which in turn strengthens their self-confidence and the capability to articulate and express their requests.

Genuine user involvement means adding value to research and practice, as well as to the policy design process and debate: the quality and applicability of research is improved and results are more comprehensive and relevant for older persons, which means policy makers can make better informed decisions. And importantly, the engagement of the most vulnerable citizens is a way to tackle discrimination and exclusion: fostering user involvement of older people, even those who are frail and very elderly, means increasing the opportunities to empower them.

Expressing one's own view and being heard increases an individual's sense of belonging and value to the community. And thanks to article 4.3 of the UN Convention on the rights of persons with disabilities, persons with disabilities, including older persons who face functional limitations, now have a legal right to be actively involved and consulted in all processes and decisions that affect them.

#### **CLAHRC**

The CLAHRC for South Yorkshire is one of nine national Collaborations for Leadership in Applied Health Research and Care funded by the National Institute for Health Research from 2008-2013. The vision has been to work with the NIHR, partner organisations and collaborators to '*support the transformation and integration of services within health and social care... through*



*applied research and knowledge mobilisation’.. to ‘support the reduction of health inequalities in our region’s population’ and improvements in ‘self-managed care for people with long-term conditions’<sup>125</sup>.*

The CLAHRC SY health inequalities theme has ‘hosted’ or collaborated in a range of projects seeking to understand and act against the differing and unequal health issues facing our region’s population: from evaluating a breastfeeding peer support service in Barnsley to researching the barriers to cardiac care for the South Asian community. Firstly are brief details about some of the local and regional projects focussing on factors contributing to unequal ageing that continue to impact on older people’s later life and health. Following this are examples of work with older people seeking to improve their quality of life, health and health care experience and outcomes.

### ***CLAHRC SY projects focussing on unequal ageing***

Targeted research projects and tailored interventions to influence both current and future health promoting opportunities, experiences and outcomes have been conducted to contribute to the reduction of health inequalities in later life, including those in advanced old age. Research projects have involved service users, general members of the public, and health and social care commissioners and providers in their development, design and delivery and or involved partnership working with health and social care organisations and service users in the implementation and or evaluation of local service development initiatives. Further details about these and other projects can be found on the CLAHRC SY website ([www.clahrc-sy.nihr.ac.uk](http://www.clahrc-sy.nihr.ac.uk)).

#### ***1. Breast screening uptake in minority ethnic populations***

Service data for Sheffield indicated significant variation in levels of breast screening uptake across the city with particularly low levels in some of the most ethnically diverse areas. Service providers and commissioners voiced concerns about whether the current service was adequately catering to the needs of minority ethnic women, and were interested in learning from evidence elsewhere on what types of interventions can be effective in tackling ethnic inequalities in breast screening uptake. Literature about interventions was examined and reviewed on the basis of relevance to the UK context, so that findings can be used to inform service development and improve uptake.

#### ***2. Booster project***

Based on the recognition that ‘lifestyle’ change and health promotion programmes can make inequalities worse, the Booster Project targeted 40-64 year olds living in more deprived areas of Sheffield with poorer health outcomes to identify the best ways to conduct health promotion / public health programmes as well as address inequalities. The project identified that targeting communities or individuals who could benefit most from public health interventions probably requires a “bottom up” community-based approach, that a brief intervention or one-to-one support may help some individuals but is unlikely to produce sustained population level changes, and that mass mail-outs of health promoting literature (etc) can cover large populations and (in principle) reach many people, but may have a limited impact.

#### ***3. Champions for Achieving Better Health in Sheffield (CABS)***

Recognising the impact on health of a combination of three key dimensions of unequal ageing: gender, ethnicity and occupation, the CABS project was set up to address the health risks and

needs of South Asian taxi drivers in Sheffield. Health checks and health advice were provided 142 taxi drivers, with over 50% identified as at risk of cardiovascular disease including 12.5% very high risk, 25% high risk, and 13% requiring treatment. 33 taxi drivers were trained as Health Champions with a focus on heart health. The impact of the project has continued with a 50+ club, sporting activities and outings set up and Asian takeaways offering healthier options.

#### **4. *Improving Stroke Unit Quality***

The Improving Stroke Unit Quality project involved patients and carers from across South Yorkshire being asked about their experiences of care after a stroke, and a diverse range of staff working on stroke units in the region about what they thought they did well and where they thought they could do better.

Whilst many staff were proud of the service they provided and many patients and carers praised the good quality care received, both groups recognised a number of areas needing improvement. Two priorities for improvement were identified by the patients and carers around inequalities of service uptake and access for all.

#### **5. *The Stroke Social Marketing – Knowledge Transfer project***

Although Sheffield achieved the national target for reduction in stroke mortality by 2008, inequalities in premature death from stroke across the city persist, with socio-economically deprived and minority ethnic communities identified as being less aware of the FAST public information campaign launched by the Public Health Agency in 2011.

Working with people from Pakistani, Somali and Yemeni communities across Sheffield, the '*Time Lost is Brain Lost*' campaign was developed by the Stroke Social Marketing – Knowledge Transfer Communication project. The campaign sought to raise awareness of stroke, its symptoms and what action to take if any of the symptoms are seen and key messages and resources were developed and designed to help promote conversations and action within homes, families and communities and disseminated widely around the region.

#### **6. *Nutritional Rehabilitation in Stable Chronic Obstructive Pulmonary Disease***

Collaborative research focussing on the under nutrition of patients with Chronic Obstructive Pulmonary Disease (COPD) has resulted in changes to the care pathway and care people with the condition receive. Significant increases have been achieved in referrals to and higher retention of patients in pulmonary rehabilitation and the referral and follow up of undernourished COPD patients to dietetic outpatient clinics. CLAHRC has also recently funded a project to explore a method for earlier detection of lung cancer in COPD, further strengthening links with Doncaster GPs for the direct benefit of patients.

#### **7. *Innovage***

With Body Mass Index (BMI) a strong predictor of mortality among adults, with even moderate obesity reducing life expectancy, the two Sheffield universities are working together on a European programme of work dedicated to developing, evaluating and implementing novel social innovations that will impact on improving the quality of life and wellbeing of older people and contribute to the EU goal of extending healthy life years. The Sheffield based work is exploring the potential of physical activity in relation to the prevention and management of obesity in old age bringing together people from across the generations to think about how ways to promote healthy life expectancy with the aim of co-design and produce a social innovation. Of specific relevance to this project is a recent report finding that although the availability of local area facilities and geographical factors explains very little of the variation in activity levels overall, these factors are more influential for older people<sup>126</sup>.



### *CLAHRC SY projects specific to older people*

In addition to projects around the problems of unequal ageing, many focus on health problems, issues and inequalities affecting older people specifically. Also, because of the prevalence of some health concerns and conditions amongst older people, many clinical research projects include mainly older people within their sample, although not exclusively. For example, studies about enhancing the quality of oral nutrition support, dysphagia management, and the prevention of veno-thromboembolism at Sheffield and Rotherham hospitals involved many older participants, but younger people as well. Several projects have been undertaken in 'partnership' with staff based in various health and social care settings and services around South Yorkshire, including:

1. An evaluation of the *WRVS 'on ward' volunteer initiative* which involved collaborative work with the WRVS and was based on a Sheffield Teaching Hospitals orthopaedic-geriatric ward.
2. A clinical microsystems nurse-led redesign project about achieving a high quality *integrated falls service* in Sheffield was undertaken in Sheffield teaching hospitals with an evaluation by the Translating Knowledge to Action (TK2A) theme.
3. A project with Sheffield teaching hospital community services looking at *medication re-enablement*.
4. The *Built Environment for Acute Care* project explored older patients, carers and staff views and experiences of the built environment in relation to stays in acute hospital, care home and intermediate care facilities at Barnsley and Sheffield, plus an architectural evaluation of the environments. The project led to the development of recommendations and a tool for the design of future facilities for older people.
5. The *Better Outpatient Services for Older People* project was a participatory, design-led, service improvement project about older people's use and experiences of medical outpatient services. It identified that the service extends beyond both the clinical encounter and physical extent of the building, influencing patient's use and experiences of the service before and after appointments. Service improvements recommended include the: re-design of appointment letters and the main reception, and way-finding policy changes at the host trust.
6. As part of the *Involving People with Dementia* in Service Improvement and Planning project hosted by the Translating Knowledge into Action theme, the *Voice of Dementia* film was made. The idea for the film was conceived through conversations with people with dementia, and the film includes people with dementia talking about their lives, their diagnosis and the importance of being listened to. The film was made to promote greater awareness of the need to involve and listen to people with dementia in making choices and decisions about their lives, and the support and services that they want and made for a range of audiences including people with dementia, family carers/friends, health and social care staff and voluntary/charitable organisations.
7. With an average 25,100 excess winter deaths in England every year, affecting mainly people aged 65+, a Rotherham based partnership of public and voluntary sector and charitable organisations collaborated with the Inequalities theme on the *Keeping Warm In Later Life* project to identify and understand the factors that influence older vulnerable people in keeping warm and well in winter. Findings indicated that knowledge and awareness of safe temperatures and how to use heating efficiently was low, with older people's experiences highlighting how values and beliefs interact with contextual factors and barriers in such a way

that they often end up being cold at home. The findings have been used and disseminated in various ways, through developing a series of 'pen portraits' to help health and social care staff understand, identify and assess the range of people at risk, and the development of a website to provide organisations with information, statistics and a range of communication resources to help ensure that vulnerable people stay safe, well and warm during the winter<sup>127, 128</sup>. Further work around fuel poverty and reducing excess winter deaths includes the *Winter Warmth project*, focussing on improving awareness and services related to keeping warm and well through winter for those over 75 years, through improving the pathways for those returning home after a hospital stay, to enable people to remain warm and well within their own homes throughout winter and reduce readmissions related to cold-related ill health.

8. Although older people from BME communities experience a disproportionate amount of ill health and disability and have a high need for health and social care services, a disproportionate number of the population do not attend appointments at hospitals, even when reminders are sent out. The *DNA study* has been carried out to explore the issues and findings indicate problems relate to: limited understanding of the consequences or cost associated of not attending; a lack of understanding of the automatic assignment of appointments, and concerns around them not being convenient, and language barriers.
9. Sheffield 50+<sup>129</sup> (an organisation of approximately 2500 Sheffield people aged 50 and over from all walks of life across the city) and Sheffield City Council are currently involved in a research and service development project, the *Frail and Housebound study*. The Comic Relief funded project involves outreach work with frail and housebound people aged 75 and over living in Sheffield: the local authority team have sought advice and support from CLAHRC SY colleagues around the substantial recruitment difficulties they have been experiencing related to the social isolation and 'invisibility' of the target population.
10. *Dementia Action Sheffield* has been chosen as an early adopter of the Dementia Challenge with its focus on 'creating dementia-friendly communities'. A local Dementia Action Alliance has been established to increase awareness and understanding of dementia and promote early diagnosis and intervention, with a project involving training shop keepers and bank staff (etc) to recognise signs of dementia in older people and adopt dementia-friendly behaviours.
11. *Partnership work in Doncaster*. Dementia has been identified as a significant health concern for older people in Doncaster such that the Dementia-Friendly Communities initiative is high on the list of the local authority's public health priorities. Much work is happening through the multi-organisational, interdisciplinary *Doncaster Dementia Strategic Alliance*, a group that involves users and carers living with dementia and statutory and voluntary health and social care organisations. The alliance, along with local hospitals and the Borough Council are working together with the aim of developing a network of exemplar project sites, which will then be used to influence future developments.
12. Social isolation has also been identified as a particular concern, especially for its older population. A new programme, the *Supporting and Maintaining Independence Programme*, is being undertaken to provide more accessible services to those who may not normally benefit from the opportunities available, with the focus on keeping people living well and independently in their home and community by empowering and supporting the most vulnerable residents, many of whom are older people, to have healthy, active and fulfilling lifestyles.



13. *The health needs and beliefs of Nepalese older people in the UK.* Since the success of the campaign for Ghurkhas retired before 1997 to be entitled to settle in the UK, there has been an increase in the number of Nepalis migrating to the UK, including substantial proportions who are older people<sup>130</sup>. Studies of Nepalis have identified a wide variety of issues particularly affecting the health and wellbeing of the older, new migrant population including their health beliefs, language barriers, eating patterns and housing issues, with many families living in cramped conditions in part because the older migrants have to live with their relatives because their non-contributory national insurance status prohibits access to mortgages or other loans<sup>131</sup>. A doctoral research student at the University of Sheffield hopes to be supported to examine these issues within the auspices of the new CLAHRC Yorkshire and Humber.

## 4. Implications for policy and practice

This briefing paper summarises some of the key issues in relation to ageing and health inequalities and also a few of the wide range of policy and practice interventions available to address these issues. Clearly, there are opportunities to learn from international evidence as well as from more local initiatives. There is a need for effective and evidence-based strategies at national, regional and local levels to support healthy ageing and tackle inequalities in older populations.

Another key message is that the accumulation of the effects of material and social disadvantage and the associated health risks throughout the life course means that a strategic approach to healthy ageing must consider the whole life course as well as focusing on the potential of specific policies and interventions targeting older people which may mitigate the impact of inequalities across the life course.

Ideally such strategies and the associated programme should be developed in partnership with older people themselves to ensure that they are acceptable and feasible as well as based on the best available evidence of “what works”.

There also clear evidence that age discrimination and stigmatization of older people as a burden to society is a public health issue which needs to be addressed alongside practical interventions to improve the quality of life of older people. Such approaches will ensure we can maximise the potential for older people to having fulfilling lives and make a real contribution to their communities.



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CLAHRC for South Yorkshire acknowledges funding from the National Institute for Health Research. The views and opinions expressed in this publication are those of the authors, and not necessarily those of the NHS, the NIHR or the Department of Health.

CLAHRC SY would also like to acknowledge the participation and resources of our partner organisations. Partner details can be found on our website.

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