Chapter 4

Social determinants of health
Chapter 4 – Overview

The social determinants of health are the conditions of daily life and the fundamental drivers that give rise to them – often referred to as the ‘causes of the causes’ of ill health1. Inequalities in the social determinants lead to inequalities in health. Fair Society, Healthy Lives2, the report of the strategic review of health inequalities in England post 2010, led by Sir Michael Marmot, presented the latest evidence on inequalities in the social determinants and the relationship to health outcomes. The Public Health White Paper Healthy Lives, Healthy People3, published in November 2010, responded to the review and adopts its life course framework for tackling the social determinants of health.

The early years of a child’s life set the foundations for their experiences throughout the rest of their life. For example, a child’s development during the early years, including before birth, strongly influences their ability to sustain positive relationships, develop skills and build the capacity and resilience needed to have control over their lives. These in turn determine their educational attainment, employment and health. Giving every child the best possible start in life will reduce health inequalities and improve the population’s health right across the life course4.

This chapter examines trends and inequalities in the social determinants of health. It is divided into 14 sections reflecting five of the six areas of action highlighted in Fair Society, Healthy Lives5. The action areas considered are:

- Early years (child development)
- Cognitive skills (educational attainment)
- Employment and work (employment, work related ill health and health risks, working conditions)
- Healthy standard of living (income, poverty, fuel poverty, deprivation)
- Sustainable communities, places and vulnerability (green space and green infrastructure, housing conditions, homelessness, crime and fear of crime, social inclusion)

Data on the health behaviours that reflect the sixth area of action identified in Fair Society, Healthy Lives, to strengthen the role and impact of ill-health prevention, are presented elsewhere in this report. However, many of these health behaviours are strongly related to the social determinants of health. For example, data from the Integrated Household Survey (October 2010 to September 2011) show that smoking prevalence in England is 20% for all adults aged 18 and over, while for those in the routine and manual group it is 30%. Therefore, many of the actions to tackle the social determinants of health impact on health behaviours by creating the conditions for people to have greater control over their lives6.

The Public Health Outcomes Framework7 sets out the Government’s desired outcomes for public health between now and 2016 and how they will be measured. It includes indicators on the wider determinants of health. Where possible and where relevant, the indicators presented in this chapter align with those included in the Public Health Outcomes Framework. However, this has not been possible where inequalities outcomes framework indicator has not been defined or data are not available.

This chapter contains a number of maps illustrating geographic inequalities in the social determinants of health by upper tier local authority. The inequalities between areas, presented by these maps, often reflect the inequalities in health outcomes presented in other chapters. For example, the map ‘Proportion of the population living in the most deprived national quintile by upper tier local authority, England, 2010’ closely reflects the maps shown in the ‘Life expectancy’ pages of this report (see Chapter 2), particularly the map of male life expectancy. Generally, those local authorities with a high percentage of the population living in deprived areas have lower than average male life expectancy. The map ‘Proportion of children aged under 16 living in poverty that are in lone parent families by upper tier local authority, England, 2009’ closely reflects the maps of childhood obesity shown in the ‘Physical activity’ pages of this report (see Chapter 3). Generally, those local authorities with a large percentage of children living in poverty also have high childhood obesity levels.

Areas with the worst picture in terms of social determinants are often those with the worst health outcomes, however, this is not always the case as the relationship between health and the determinants is often more complex, and the determinants are often inter-related. For example, the map of excess winter deaths in this report (‘Excess Winter Deaths Index by upper tier local authority, England, 2007-10’, see Chapter 2), does not fully reflect the map ‘Proportion of the population living in the most deprived national quintile by upper tier local authority, England, 2010’ shown in the ‘Healthy standard of living – deprivation’ pages of this chapter, as other factors, such as the percentage of the population over 65 years, housing quality and home insulation will affect the level of excess winter deaths.

To reflect fully the social determinants of health this chapter also presents inequalities in the social and economic conditions of different population groups e.g. age groups, ethnic groups, people with a disability or different household types.

Many groups present a poor picture across a range of indicators as the determinants of health are often inter-related. For example:

- Among children who receive free school meals, a lower than average percentage are assessed as ready for school at age five and achieve the required educational attainment levels at each subsequent key stage. A higher percentage of persons who receive free school meals in year 11 are not in education, employment or training (NEET) at age 19.
- Single adults with children have lower than average income levels, and a large proportion of children living in poverty are also in lone parent families. In addition, a large percentage of young people under the age of 20 with their own children are NEET.
- Single pensioners have lower than average income levels and a high percentage live in fuel poverty. In addition, single person households are more likely to live in non-decent housing.

For those social determinants where it is possible to present inequalities on an ordered scale e.g. unemployment rates by deprivation deciles, a clear social gradient is apparent. That is to say, as the level of deprivation increases, the unemployment rate increases. Therefore, it is important to address the social determinants across the whole social gradient, as opposed to focusing on the worst off or most deprived areas.

The Government has an ambitious programme to improve public health through strengthening local action, supporting self-esteem and behavioural changes, promoting healthy choices and changing the environment to support healthier lives. As part of this programme local authorities will regain a much greater responsibility for improving public health. Local authorities already have direct responsibility for the environment in which people live, work and play including housing, green space, leisure and workplaces – all of which have a direct impact on health and wellbeing. Local authorities also have direct responsibility for key services that protect and improve health e.g. fire services, education services and road safety. For these reasons, local authorities are well placed to take on a broader remit for public health.

References

To reduce health inequalities across the life course, it is crucial that we work towards ‘giving every child the best start in life’. A child’s development during the early years has a lifelong effect on many aspects of health and wellbeing.

The percentage of children assessed as being ready for school has increased since 2007 but still varies considerably by local authority. Readiness is determined by observing children’s behaviour and understanding against a range of learning goals. Children of Travellers with Irish heritage and Gypsy/Roma ethnicities have the lowest levels of school readiness. Boys have a lower level of school readiness than girls. Receipt of free school meals is often used as an indicator of deprivation. Excepting the Gypsy/Roma ethnic group, children of all ethnicities who receive free school meals (FSM) have lower levels of school readiness than those who do not.

Early intervention covers a range of tried and tested policies for the first three years of children’s lives. These can make lasting improvements in their development, and, if focused on the most deprived, could reduce inequalities in child development.

Cognitive skills – educational attainment (part 1)

Educational attainment is strongly related to deprivation, socioeconomic factors, parental educational attainment, family support and the characteristics of individual schools. It is also associated with reduced smoking, improved diet and increased physical activity.

At Key Stage 1, children who receive free school meals are less likely to achieve the required level of attainment in reading, writing and mathematics than those who do not. Boys have a lower level of attainment than girls, and boys in the White ethnic group who claim free school meals have the lowest level of attainment. Children of Chinese origin have a higher level of attainment than other ethnic groups. Within the White ethnic group, children of Travellers of Irish Heritage and Gypsy/Roma ethnicities have the lowest level of attainment. The picture is similar at Key Stage 2.

Although GCSE achievement has increased since 2006/07, Key Stage 1 and 2 achievement has remained fairly constant. GCSE, A level and undergraduate study achievement varies considerably by local authority.

Local authorities should prioritise educational outcomes as a key area for action. To reduce health inequalities, strategic plans and action should consider all stages of educational development.
Cognitive skills – educational attainment (part 2)

A level achievement by pupils aged 16 to 18 years by upper tier local authority, England, 2010/11

Source: DfE.

Social determinants of health

First degree or other undergraduate qualification achievement rate in persons aged 18 to 29 years by upper tier local authority, England, 2010/11

Rate, per 1,000 population (aged 18-29 years)

Source: HESA Student Record 2010/11, Copyright Higher Education Statistics Agency Ltd 2013. HESA cannot accept responsibility for any inferences or conclusions derived from the data by third parties. 2010 population estimates, ONS. (Analysis by LHSO)
Unemployment is associated with a range of health risks and health inequalities caused both by the event of becoming unemployed as well as the reduced income, deprivation and poverty due to being out of work. The risk of ill health increases as the duration of unemployment increases. The unemployment rate, and rate of long term unemployment, are generally highest in the most deprived areas.

National deprivation deciles (ND) divide small areas into ten groups according to the level of deprivation in the area. Unemployment increased between July 2007 – June 2008 and July 2009 – June 2010 among both men and women, and in all areas regardless of the level of deprivation in the area. However, the trend since July 2009 - June 2010 varies by sex and the level of deprivation in the area.

About 6% of people aged 16-18 are not in employment, education or training (NEET). This varies by local authority and is highest in the north of England and selected towns in the south of England. Data from the Youth Cohort Study suggest that as many as 14% of 19 year olds are NEET. In addition, among 19 year olds, almost 70% of females and 36% of males who have their own children are NEET, as are 41% of those who were permanently excluded from school and 34% of those who received free school meals in year 11.
Proportion of young persons not in employment, education or training (NEET) by upper tier local authority, England, November 2010 - January 2011

Percentage of young people aged 16-18 years who are NEET

Source: DfE


Claimants (jobseekers allowance) of 12+ months duration, rate, per 1,000 population (aged 16-64 years)

Source: ONS. (Provided by 2012 Local Health Profiles)
Exposure to physical hazards at work, a stressful working environment, physically or emotionally demanding work and dangerous work can increase the risk of sickness absence and pose a risk to health. These conditions are more common among certain jobs and population groups, leading to health inequalities.

In England, in 2009-2011, 2.4% of employees had at least one day of sickness or injury absence in a given week. This percentage varied by local authority. There has been no consistent trend in absence by age and sex since 2006.

In 2010/11, the rate of self-reported illness caused or made worse by work was highest in the South West and lowest in the West Midlands. It was highest for musculoskeletal disorders, and for common mental health disorders such as stress, depression or anxiety.

For conditions such as cancer it is possible to estimate the number of cases and deaths that would not have occurred without occupational exposure to hazards. 97% of mesothelioma cases in men and 83% of cases in women, and 46% of sinonasal cancer cases in men and 20% in women, would not have occurred.

The newly formed Health and Wellbeing Boards need to be encouraged to work with local employers to reduce ill health associated with the workplace, including reducing stress.

---

**Estimated rate of self-reported illness caused or made worse by work, by region, 2010/11**

**Estimated rate of self-reported illness caused or made worse by work, by main reason, England, 2010/11**

---

**Proportion of employees absence due to sickness or injury by upper tier local authority, England, July 2009 – June 2011**

**Trend in sickness absence by age and sex, England, July 2006-June 2007 to July 2010-June 2011**
Employment and work – working conditions

Long or irregular working hours, shift work and other aspects of working life can adversely affect health. In 2010-2011, 24% of the working population worked 45 hours or more a week. This percentage was highest in areas in and around London. On average, men work more hours in paid employment per week than women. This difference is greatest among those living in couple households with dependent children and those over the age of 65 living alone. However, the unequal gender distribution, at the population level, of domestic and carer responsibilities should be taken into consideration.

Among men aged 16–64, those living in lone parent households work the shortest hours in paid employment. Among women aged 16–64, lone parents and those living in couple households with dependent children work the shortest hours. Lone parents and other households with children have to balance paid employment with childcare responsibilities.

People in managerial, professional and administrative occupations are most likely to be offered flexible working options along with those earning more than £20,800 per year.

In the last quarter of 2010, people took an average of 28 minutes to get to work. This rose to 55 minutes for those working in Central London.

Proportion of employed persons working 45 hours or more per week by upper tier local authority, England, July 2010 - June 2011

Social determinants of health

Proportion of employed persons working 45 hours or more per week by upper tier local authority, England, July 2010 - June 2011

Average weekly hours worked by age group, sex and household type, England, October - December 2010
Healthy standard of living – income

Sufficient income is required to lead a healthy life. Weekly household income, adjusted to take account of family size, is used here as a proxy for the living standards of individuals.

Weekly household income is highest in the South East, London and the East of England, both before and after adjusting for housing costs. However, this will not account for other differences in the cost of living between regions. Couples without children are the household type with the highest income and single adults with children and single pensioners are the household types with the lowest.

Although median household income has been rising within the UK/Great Britain since 1994/95, in recent years the increase has slowed. Deciles divide the UK population, when ranked by income, into ten equal-sized groups. The median income level of all deciles increased between 1994/95 and 2009/10, however, there has been no sustained reduction in inequalities in income levels.

Action to bring income in the lower deciles closer to those above will help to improve the health of the population, and reduce health inequalities.


Social determinants of health

Median and 60% of median weekly equivalised household income by age, United Kingdom, 2009/10

Median weekly household income after housing costs by region, England, 2007/08-2009/10

Median weekly household income before housing costs by region, England, 2007/08-2009/10

Trend in decile values of median weekly household income, Great Britain or United Kingdom, 1994/95 to 2009/10

Trend in decile values of median weekly household income, United Kingdom, 2001/02 to 2009/10

[Graphs and data visualizations]
People living in poverty have poorer health. Particular population groups, such as children and pensioners, are at higher risk of poverty, and also tend to be more vulnerable to the impact of poverty on health.

In 2009/10, 22% of people in the United Kingdom were living on low incomes (less than 60% of median income) after housing costs. Single adults with children have the highest percentage of people on low incomes. The Pakistani and Bangladeshi ethnic groups have the highest levels of people on low incomes out of all ethnic groups. The percentage of children and pensioners in households on low incomes has declined since 1994/95, although the decline has been marginal in recent years, and, once accounting for housing costs, this has halted.

Child poverty is measured by the percentage of children living in families in receipt of out of work benefits or tax credits, where their reported income is less than 60 per cent of median income. More than a fifth of children in England are living in poverty, two thirds of whom are also living in lone parent families. There is wide variation in these figures by local authority.

The nation’s future depends on our children yet too many are living in poverty and are not experiencing a good start in life.
There is a risk to health if an adequate level of warmth in the home is not maintained. Currently, a household is said to be in fuel poverty if it needs to spend more than 10% of its income on fuel to maintain an adequate level of warmth.

In 2009, 18% of households were living in fuel poverty, a three-fold increase since 2003. The percentage of households was particularly high among the unemployed (53%) and people living alone over the age of 60 (39%). Households classed as vulnerable, and those containing someone with a limiting long term illness or disability, are more likely to be fuel poor.

There are wide variations between local authorities in the percentage of households that are fuel poor, with the highest percentages in the north, midlands and south west of England.

There have been, on average, 20,400 excess winter deaths per year (see Chapter 2) over the last four years. Many of these are preventable and may be associated with fuel poverty. The ‘Warm Front’ scheme installs insulation and heating improvements to make homes warmer and more energy efficient and is available to households on income-related benefits living in properties that are poorly insulated or heated. Local authorities should actively promote the uptake of insulation.
Deprivation refers to a general lack of resources. The Index of Multiple Deprivation (IMD)\(^1\) 2010 combines 38 indicators, covering a range of economic, social and housing issues. The indicators are organised in seven domains which can be combined into a single deprivation score for each small area. Deprived areas are more likely to have social and environmental characteristics that present risks to health.

The percentage of the population within each local authority that is living in the 20% most deprived small areas of England is highest in north east London, and selected authorities in the north and midlands.

The percentage of the population in receipt of means tested benefits is a domain of the IMD. The Slope Index of Inequality (SII) used here, measures the level of inequality in means tested benefits within local authorities. A higher SII indicates greater inequality. An SII of 5, for example, indicates that, compared with the best-off in the authority, the percentage of benefit recipients among the worst-off is 5 percentage points higher. Inequality in means-tested benefits is highest in selected authorities in the north, midlands and London.

---

Sustainable communities, places and vulnerability – green space and infrastructure

Access to green space and people’s use of green infrastructure may promote physical activity and impact positively on wellbeing. Green infrastructure is also associated with lower carbon emissions and mitigation of the effects of climate change.

Access to green space is highest in rural areas. In 2009/10 it is estimated that 43% of the population visited green and open spaces in a given week. This percentage is lower among minority ethnic groups, disabled people and people aged 65 and over.

The percentage of service users with reasonable access to key services - such as employment, hospital, primary school or GP - varies by service and by mode of transport. The definition of reasonable access and service user depends on the service and mode of transport. Less than half of service users have reasonable access by public transport or on foot to hospitals, primary schools and town centres whereas more than half have access to other services on foot or by public transport.

The percentage of waste that is recycled has increased in every region of England, although London still recycles a lower percentage of waste than elsewhere.

Local authorities have an opportunity to maximise the 2012 Olympic and Paralympic legacy by promoting physical activity and the use of green space.
Social determinants of health

Sustainable communities, places and vulnerability – housing conditions

Poor quality housing, including poor physical living conditions, constitutes a health risk. The percentage of dwellings that are poor quality (“non-decent”) has declined in recent years, although private rented homes are still more likely to be non-decent than any other housing type. More than 30% of single person or ‘other’ households (other multi-person households) live in homes that are non-decent. Residents of ‘other’ households are most likely to live in damp homes (13.9%). Households in the lowest income group are two times more likely to live in damp housing than households in the highest income group, and are more likely to live in a home that is non-decent.

Social housing (rented from a local authority or housing association) is less likely to be non-decent than other housing types. However, living in social housing is associated with higher than average poverty rates and worse than average employment experiences which are also associated with poorer health outcomes. The percentage of households living in social housing is highest in urban areas. More than 40% of households with an income of less than £10K per year are in social housing, as compared to less than 4% of households with an income of more than £30K per year.
Homelessness, which includes both people living on the streets (“street homeless”) and people in hostels, shelters and other temporary accommodation, creates a risk to health and shortens life expectancy.

The number of new households accepted as homeless and in priority need (per 1,000 households) in 2010/11 varied considerably by local authority. The majority of authorities with the highest rates are urban areas, particularly in London or the West Midlands. The number of households living in temporary accommodation (per 1,000 households) also varies, a large proportion of all such households are in London. The number of households in temporary accommodation in England peaked in 2004/2005 and has since halved.

The age profile of people admitted to hospital with no fixed abode, a large proportion of whom are “street homeless”, is much younger than people with a fixed abode, particularly for women.

The average age of death of a homeless person is 47 years old and may be as low as 43 for homeless women.1

High rates of crime and fear of crime create a risk to health and can lead to social isolation as well as reduced physical activity.

Crime levels vary by local authority as illustrated by the rate of violent offences and are generally higher in urban areas. The percentage of adults or households who were victims of, or who worry about, particular types of crime has declined since the mid 1990s. However, inequalities in the percentage of adults who have been victims of crime remain. In 2010/11, people aged 16-24, people of mixed ethnic origin, unemployed people and students were the most likely to have been victims of both ‘personal’ and ‘all’ crime.

Offenders and ex-offenders are also a group of people at higher risk of certain health problems, particularly mental health and substance misuse problems. The rate of young people (aged 10-17) entering the criminal justice system increased between 2002/03 and 2006/07, but has since declined. The percentage of offenders who reoffend varies considerably by local authority, the majority of authorities with the highest percentages are in the north of England and in London.
Social determinants of health

Proportion of offenders who reoffend by upper tier local authority, England, 2009/10

Trend in worry about crime by crime category, England, 1992 to 2010/11

Trend in victims of crime by demographic and crime category, England and Wales, 1981 to 2010/11

Sustainable communities, places and vulnerability - crime and fear of crime (part 2)
Social networks and social support can provide a buffer against the risks of poor health brought about by living in deprived areas or from other social determinants. Approximately 85% of adults aged 16 and over think that some or many people in their neighbourhood can be trusted. This rises to approximately 90% in those aged over 65. Nationally, London has the lowest percentage (76%) of people who think that some or many people can be trusted. This is due to a lower proportion of people (31%) stating many people can be trusted. Compared with the national average, a similar percentage of people in London agree that people from different backgrounds in their neighbourhood get on well together, but the percentage who definitely agree is higher.

As deprivation decreases more people report that some or many people can be trusted in their neighbourhood and that people from different backgrounds in the neighbourhood get on well together.

In 2005, 47% of males and 34% of females aged 65 and over reported ‘some lack’ or ‘a severe lack’ of social support.

Organisations such as Southwark Circle (www.southwarkcircle.org.uk) are addressing social exclusion by providing practical help to people living in the local community.

Perceived social support, persons aged 65 and over, by region, 2005

![Perceived social support, persons aged 65 and over, by region, 2005 graph](chart.jpg)

Source: Health Survey for England 2005. Copyright © 2015, reused with the permission of the Health and Social Care Information Centre. All rights reserved.

Whether people in the neighbourhood from different backgrounds get on well together, by age and sex, region, and deprivation, England, 2009/10

![Whether people in the neighbourhood from different backgrounds get on well together, by age and sex, region, and deprivation, England, 2009/10 chart](chart2.jpg)


Whether people in the neighbourhood can be trusted, by age and sex, region, and deprivation, England, 2009/10

![Whether people in the neighbourhood can be trusted, by age and sex, region, and deprivation, England, 2009/10 chart](chart3.jpg)