



# Health and Lifestyles in the North West

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## 1. Executive Summary

### 1.1 Background

The North West Lifestyle Survey 2007 was designed to collect essential information on the lifestyles of people living in the North West, to provide baseline measures of prevalence against which the effectiveness of regional initiatives over the coming years can be monitored. The survey also provides health professionals with detailed intelligence to help support a range of actions aimed at the improvement of the health of the North West population. These actions include effective targeting of resources, priority setting and the development and implementation of strategies and policies. In addition to the regional survey presented here, local areas were offered the opportunity to buy local survey boosts with consistent methodology, so that local measurements could be compared against a standardised regional baseline.

Lifestyles are now the main causes of death globally, resulting in mortality from causes such as heart disease, stroke, cancer and lung disease.<sup>i</sup> Lifestyle-related ill health is a central aspect of the UK Government action to tackle health inequalities and a particular challenge for health services across the North West. At the population level it is therefore imperative to measure the prevalence of lifestyle characteristics at a particular geography – in this case the North West region of England – in order to understand lifestyle impacts on public health and to monitor changes over time.

The *Choosing Health* White Paper makes explicit how the choices people make as consumers – including those related to lifestyle – impact on health. Local area agreements also make clear the role that both local health services and local government have in supporting people to make healthier lifestyle choices. In analysis of the new local area agreements undertaken by the Improvement and Development Agency (IDeA) for local government, health has emerged as one of the top ten issues.<sup>ii</sup> Three of the top twenty

indicators selected by local authorities make specific reference to lifestyle. These include reducing the under 18 conception rate, halting the rise in obesity among primary age school children and stopping smoking.

It is acknowledged that in achieving the outcomes set out in local area agreements, local authorities will have a significant role to play and this could potentially have an even bigger impact on health than purely health-related interventions. The importance of influencing lifestyle in achieving health outcomes is likely to lead to pressure to shift resources across public services. An understanding of lifestyles and how they can be influenced to encourage people to choose health will become increasingly important in ensuring these resources are allocated to best effect.

### 1.2 A potted history of lifestyle surveys

Lifestyle surveys are a cost-effective way of measuring behaviours at a local level, and on the whole they provide high quality intelligence on population behaviour to support decision-making within public health. The Domesday Book (1086) is probably the first ever population survey, which led to the UK census that now provides essential population intelligence every ten years. Social surveys began much later, possibly by the social research organisation 'Mass Observation'<sup>iii</sup> in 1937, which aimed to study the everyday lives of the British public.

A timeline of social surveys is illustrated in Figure 1 of the main report and shows how these early observational studies have evolved into general surveys such as the *Integrated Household* and *Places* surveys or studies of specific topics such as the *Smoking, Drinking and Drug Use Among Young People*<sup>iv</sup> or *National Diet and Nutrition* surveys.<sup>v</sup> As well as the measurement of behaviours, understanding behavioural motivations through surveys forms an important part of generating new intelligence and insight, which can be used for the application of social marketing to

<sup>i</sup> [www.who.int/whosis/whostat/2008](http://www.who.int/whosis/whostat/2008)

<sup>ii</sup> [www.idea.gov.uk/idk/core/page.do?pageId=8761815](http://www.idea.gov.uk/idk/core/page.do?pageId=8761815)

<sup>iii</sup> [www.massobs.org.uk](http://www.massobs.org.uk)

<sup>iv</sup> [www.data-archive.ac.uk/findingData/smdduTitles.asp](http://www.data-archive.ac.uk/findingData/smdduTitles.asp)

<sup>v</sup> [www.statistics.gov.uk](http://www.statistics.gov.uk)

address inequalities and health improvement.

### **1.3 The North West survey**

This regional survey – designed to be representative of the North West population – took place between June and December 2007. It was conducted over the telephone by specialist social research consultants<sup>vi</sup> to a specified sample framework representative at local authority, age, sex and deprivation quintile across the region. The final weighted sample was 5,448 respondents and questions covered seven lifestyle areas:

- general health;
- obesity;
- diet and nutrition;
- physical activity;
- alcohol;
- smoking;
- caring responsibilities.

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<sup>vi</sup> Vision Twentyone: [www.visiontwentyone.co.uk](http://www.visiontwentyone.co.uk)

**Table 1: Overview of results from North West 2007 survey, showing overall prevalence, measures in the most deprived and most affluent areas and the inequality gradient between these.**

Domain	Group	Measure	North West value	Most deprived fifth	Most affluent fifth	Inequality gradient
General Health	Self-assessed 'not good' health	Adults with self-assessed 'not good' health	8.2%	11.6%	5.2%	2.2
	Heart attack and stroke	Adults who had been told by a health professional that they had suffered a heart attack	3.7%	4.6%	2.3%	2.0
		Adults who had been told by a health professional that they had suffered a stroke	2.7%	3.2%	2.8%	1.1
	Chronic conditions	Adults who had suffered from at least one chronic condition in the last 12 months	48.7%	50.8%	45.9%	1.1
		Adults who had suffered from asthma in the last 12 months	9.1%	9.7%	7.8%	1.2
		Adults who had suffered from angina in the last 12 months	3.5%	4.9%	2.3%	2.1
		Adults who had suffered from arthritis in the last 12 months	17.8%	18.9%	15.7%	1.2
		Adults who had suffered from back problems in the last 12 months	16.7%	18.5%	13.9%	1.3
		Adults who had suffered from depression in the last 12 months	9.8%	12.3%	7.4%	1.7
		Adults who had suffered from diabetes in the last 12 months	5.0%	5.5%	4.0%	1.4
Adults who had suffered from hypertension in the last 12 months		17.6%	19.0%	16.3%	1.2	
Obesity	Obese and overweight	Adults who are obese	15.0%	18.0%	10.6%	1.7
		Adults who are obese or overweight	49.1%	51.1%	45.8%	1.1
Diet and Nutrition	Bread consumption	Adults who eat white bread	35.7%	43.6%	25.8%	1.7
		Adults who eat brown bread	21.1%	18.9%	22.7%	0.8
		Adults who eat wholemeal bread	28.0%	22.6%	37.1%	0.6
	Use of milk for drinks in tea or coffee or on cereals	Adults who use whole milk	14.9%	20.2%	8.4%	2.4
		Adults who use semi-skimmed milk	65.7%	60.8%	70.5%	0.9
		Adults who use skimmed milk	17.3%	16.2%	19.7%	0.8
	Type of oil or fat usually used for cooking or frying food	Adults who have no usual type	2.2%	2.8%	1.4%	2.0
		Adults who use butter, ghee, lard, suet, solid cooking fat, coconut oil or palm oil	4.0%	5.3%	2.4%	2.2
		Adults who use hard or soft margarine, half fat butter or ghee	0.8%	0.8%	0.3%	2.7
	Type of butter, margarine or spread usually used	Adults who use vegetable oil	95.2%	93.9%	97.3%	1.0
		Adults who use butter, full fat ghee or hard margarine	57.6%	58.9%	56.4%	1.0
		Adults who use low fat spread or half fat ghee	31.0%	30.8%	30.6%	1.0
		Adults who use cholesterol lowering spread	7.7%	7.6%	9.7%	0.8
	Salt consumption	Adults who use another spread	3.7%	3.2%	3.3%	1.0
Adults that generally DO NOT have salt added to food during cooking		51.5%	47.7%	52.1%	0.9	
Fruit and vegetable consumption	Adults that rarely or never add salt at the table	59.8%	57.1%	60.7%	0.9	
	Adults who eat five portions of fruit and vegetables a day	41.9%	37.1%	47.8%	0.8	
Physical Activity	Level of physical activity	Adults who eat no portions of fruit and vegetables a day	4.8%	6.8%	3.8%	1.8
		Adults undertaking high levels of physical activity	39.0%	39.6%	38.1%	1.0
		Adults undertaking moderate levels of physical activity	26.3%	25.6%	26.6%	1.0
	Sedentary behaviour	Adults undertaking low levels of physical activity	34.8%	34.8%	35.3%	1.0
		Adults who are sedentary for 8 hours or more a day	11.7%	13.6%	11.2%	1.2
		Adults who are sedentary for >4 hours ≤ 8 hours a day	31.6%	29.6%	33.0%	0.9
		Adults who are sedentary for >2 hours ≤ 4 hours a day	34.7%	34.6%	33.0%	1.0
Adults who are sedentary for less than 2 hours a day	22.0%	22.2%	22.8%	1.0		
Alcohol	Levels of alcohol consumption	Adults who consume hazardous levels of alcohol	13.0%	10.9%	14.1%	0.8
		Adults who consume harmful levels of alcohol	3.4%	4.6%	3.4%	1.4
		Adults who binge drink	18.3%	18.9%	14.7%	1.3
Smoking	Smoking behaviour	Adults who currently smoke	22.5%	29.3%	15.2%	1.9
Caring	Carers	Adults caring for someone with long-term ill health or problems related to old age	9.6%	11.5%	7.8%	1.5
		Adults who care for someone 1-19 hours per week	52.7%	52.6%	58.6%	0.9
		Adults who care for someone 20-49 hours per week	15.1%	17.7%	12.1%	1.5
		Adults who care for someone 50+ hours per week	32.2%	29.7%	29.3%	1.0

Negative gradient  
 No evidence of gradient  
 Shallow positive gradient  
 Strong positive gradient

Each section in the main report details the policy and background to the topic area, existing available comparators at England and North West levels, and the findings of the regional survey broken down by sex, age, deprivation and ethnic grouping.

## 1.4 Survey findings

Some lifestyle factors are highly prevalent within the North West and show little variation across population groups (Table 1); for example, the use of vegetable oil for cooking. Other factors – such as general health, chronic conditions, alcohol consumption and smoking – show large differences across population groups. Survey results for each topic will enable practitioners in the North West to target those populations with the greatest level of need.

## 1.5 General health and chronic conditions

**Measures of health status and chronic disease at a population level provide indicators of general health that can be used to determine the demand for health care and the need for service provision.**

Chronic conditions are longstanding or recurrent conditions, which can be managed or controlled with effective lifestyle changes and/or medication. The rising age of the population in recent years has brought with it an increase in the number of people who are suffering from one or more chronic conditions, with associated increased burden on GP provision, increased lengths of hospital stay and lost working days impacting on the economy.

Measurement of self-assessed health and 'not good' health is the only harmonised survey question relating to health across the EU.

Survey participants were asked a single self-reported health question to see how they viewed their general health. This was followed by questions relating to their experience of heart attack or stroke and whether they suffered from any of a number of chronic conditions: asthma, angina, arthritis, back problems, nervous trouble or depression, diabetes or high blood pressure.

Such conditions contribute to the general wellbeing of individuals, to an increasing cost to the NHS and can prevent people from fully participating in the economy and society.

Famous people who have suffered from depression include Abraham Lincoln, Theodore Roosevelt, Ludwig von Beethoven, Edgar Allen Poe, Mark Twain and Vincent van Gogh.

Overall, 8.2% of adults in the North West consider themselves to be in 'not good' health. This is greater in women compared with men and increases with age rising to approximately one-fifth of adults aged 75+ years (significantly higher than all other age groups). Deprivation is also a key factor in self-reported 'not good' health, with twice as many adults from the most deprived areas (11.6%) reporting 'not good' health compared with those in the least deprived areas (5.2%). This difference is more pronounced in men than in women. Significant differences are found across ethnic groupings, with White adults being twice as likely to be in 'not good' health as their non-White counterparts. Interestingly, there was no difference when comparing men in each group. However, women in the White ethnic grouping were nine times more likely to be in 'not good' health than non-White women.

The average adult human heart weighs approximately 10 ounces and will beat approximately 100,000 times in one day, 35 million times in a year and 2.5 billion times in an average lifetime.

In the North West, 3.7% of adults reported that they had been told by a physician they had suffered a heart attack, and 2.7% a stroke. Men are significantly more likely to have suffered a heart attack than women, and this difference was approximately three times higher in the 55-64 years and 65-74 years age groups. Both conditions are more common with increasing age, particularly after the age of 55 years.

Hippocrates first recognised stroke over 2,400 years ago when it was known as apoplexy meaning 'struck down by violence' in Greek (due to the fact that a person develops sudden paralysis and change in wellbeing).

The survey reveals an inequalities gap in diagnosis with a heart attack, with adults



living in the most deprived areas twice as likely (4.6%) to suffer a heart attack as those living in the most affluent areas (2.3%). This is more marked in women where the difference is nearly four-fold. There is no evidence of an inequalities gap by deprivation for adults who suffered a stroke.

The first recorded measurement of blood pressure was in 1733 by the Reverend Stephen Hales, a British veterinarian. In 1847 human blood pressure was recorded for the first time using Carl Ludvig's kymograph.

Nearly half of all adults in the North West suffered from at least one of the chronic conditions (as previously listed) in the last 12 months, with arthritis, back problems and hypertension being the most common. The prevalence of most of these conditions is similar in men and women for all ages above 16 years. However, females are 1.7 times more likely to have suffered from arthritis and 1.5 times more likely to have suffered from depression compared to men.

Asthma is a condition originating from the time of the Egyptians. Found in Egypt in the 1870s, The Georg Ebers Papyrus contains a prescription for an asthma remedy consisting of a mixture of herbs heated on a brick creating fumes that the sufferer would inhale.

While most chronic conditions show only a slight gradient with deprivation, angina, back problems, diabetes and depression are more common among adults resident in the most deprived communities compared with those living in the most affluent areas (2.1 times more adults have angina, 1.3 times more have back problems, 1.4 times more have diabetes and 1.7 times more have depression).

The first known traces of human arthritis were found in skeletal remains of Native Americans dating back to 4500BC. Evidence of arthritis was also found in Egyptian mummies from around 2590BC.

Asthma is most prevalent among the young (16-24 years: 10.8%) and those over 65 years (65-74 years: 11.6%; 75+ years: 9.6%), while depression is highest among the 35-64 year old population (35-44 years: 11.6%; 45-64 years: 12.3%; 55-64 years: 12.8%). Angina, arthritis, diabetes and hypertension increase with age, and rapidly so over the age of 45 years. Arthritis is more

prevalent among older women (55-64 years: 39.7%; 65-74 years: 48.9%; 75+ years: 56.4%) than older men (55-64 years: 25.7%; 65-74 years: 37.1%; 75+ years: 33.7%).

Up until the 11th century, diabetes was diagnosed by 'water tasters' who would drink the urine of those suspected of having the condition - the urine of diabetes sufferers was thought to be sweet-tasting.

## 1.6 Obesity and overweight

**Being overweight or obese increases the risk of a range of illnesses/diseases that can have a significant health impact on individuals including asthma, cancer, coronary heart disease, Type 2 diabetes, high blood pressure, complications in pregnancy, impaired fertility and other conditions.<sup>1</sup>**

The Government's stated ambition is to be the first major nation to reverse the rising tide of obesity and overweight in the population. Obesity places a significant burden on the NHS with direct costs estimated at approximately £4.2 billion and is forecasted to more than double by 2050.

To assess the prevalence of obesity in the North West, questions were asked about height and weight in order to calculate body mass index (BMI). It is important to note that overall 15% of adults in the North West were classified as obese (they had a BMI over 30). This is lower than might be expected given other published survey results. Self-report surveys have the potential to underestimate weight and also to inaccurately record height and this may mean that levels of obesity are greater than suggested here.<sup>vii</sup>

The ancient Greeks were the first to recognise the dangers of obesity and its association with disease.

No significant differences were observed in the prevalence of obesity between men and women. However, obesity increased with age, up to and including the ages 55-64 years, for both sexes: approximately one in twenty people aged 16-24 years are obese

<sup>vii</sup> Studies have shown that individuals have a tendency to over-report body height and under-report body weight. See Chapter 5: Obesity.

compared to around one in five people aged 55-64 years.

In this North West survey, significantly more (1.7 times) adults living in the most deprived areas are obese (18.0%) than those living in more affluent areas (10.6%).

When considering the proportion of the population who are of 'unhealthy weight' (obese or overweight) – nearly half (49.1%) of adults in the North West fall into these categories. Prevalence increases with age with nearly three times more adults aged 55-64 years being obese or overweight (60.1%) compared with those aged 16-24 years (20.0%). However, the gradient of obesity and overweight with deprivation is far less pronounced than for obesity alone and is not statistically significant. Of the adults living in the most deprived areas, 51.1% are overweight or obese compared with 45.8% in more affluent areas. This means that there is a slightly higher prevalence of overweight in more affluent areas compared with more deprived areas.

## 1.7 Diet and nutrition

**A healthy and balanced diet involves getting the right amount of vitamins and nutrients, such as carbohydrates, fruit and vegetables, protein, dairy, fat and sugar, and is vital to maintaining a healthy lifestyle and a healthy weight.<sup>2</sup>**

A healthy and balanced diet not only impacts upon present health conditions, but can have positive effects in the long term, such as reducing the prevalence of mortality and morbidity in the population. Increasing fruit and vegetable consumption by one portion a day reduces the risk of coronary heart disease by 4%. It is estimated that 26 million people in the UK consume too much salt. A high salt or sodium intake is a major contributor to hypertension (high blood pressure), which can lead to a number of diseases including chronic heart disease, stroke, kidney disease and aortic aneurysm. Evidence suggests that diet varies across socio-economic groups with poor dietary behaviour seen to cluster in areas of deprivation.

Survey participants were asked a series of questions about their dietary habits,

including bread consumption, salt usage, milk, fruit and vegetable consumption and types of fat used in cooking.

Moses is thought to be the original writer on diet, recommending that the Jews ate "bread, wine, milk, honey; quadrupeds that divide the hoof, and chew the cud; all the feathered kind, a few only excepted; and fishes that have fins and scales".

In the North West, more white bread is consumed than any other type (e.g. wholemeal or brown bread). Men are significantly more likely (41.8%) to eat white bread than women (30.0%), while women are significantly more likely (32.6%) to eat wholemeal bread than men (23.2%). The consumption of different types of bread varies with age, with those aged 16-24 years significantly more likely to eat white bread (47.9%) than any other age group. Consumption of wholemeal bread significantly decreases as the level of deprivation increases, from 37.1% in the most affluent areas to 22.6% in the most deprived areas. The reverse is true for white bread consumption, with people living in the most deprived areas significantly more likely to eat white bread (43.6%) than those living in the most affluent areas (25.8%).

The first baked leavened (raised) bread was believed to have been made by the Ancient Egyptians around 3000BC, and early Egyptian writings recommended that mothers send their children to school with plenty of bread and beer for their lunch.

Semi-skimmed milk is the milk of choice for most of the North West population, used by nearly two-thirds of adults. However, those over the age of 75 years are more likely (21.0%) to drink whole milk than any other age group and those aged 16-24 years are most likely (71.7%) to drink semi-skimmed milk, the consumption of which decreases with age. Men are more likely than women to use whole milk, while the reverse is true of skimmed milk.

The ancient Greeks and Romans referred to barbarians as 'milk drinkers'; because milk and butter would have spoiled quickly in their climates. Wealthy Roman women did, however, take milk baths in the belief that it helped their skin.

Whole milk is 2.4 times more likely (20.2%) to be consumed by those living in the most deprived communities compared with those

living in the most affluent areas (8.4%), but this difference is not statistically significant. On the whole, the North West adult population uses vegetable oil for cooking. However, significantly fewer people living in the most deprived areas use vegetable oil (93.9%) and significantly more (5.3%) use butter, ghee or hard fats than people living in the most affluent areas (97.3% and 2.4% respectively).

Hundreds of years ago, salt was considered to be so valuable that Roman soldiers were sometimes paid in salt. The word soldier is thought to come from the Latin phrase 'sal dare', meaning to give salt and the word 'salary' comes from the Latin 'salarium' which means payment in salt.

Around half of all adults (51.5%) in the region generally do not add salt to food during cooking and around three in five (59.8%) rarely or never add salt to their food at the table. Those aged 55 years and older are significantly more likely (55-64 years: 46.3%; 65-74 years: 41.6%; 75+ years: 38.0%) to add salt during cooking than those under the age of 35 years, while those aged 16-24 years are least likely (59.4%) to add salt during cooking. There is also a significant difference seen between White and non-White ethnic groupings, with White adults being 2.3 times more likely (52.6%) to not have salt added to food during cooking compared with non-White adults (22.7%). This difference is more pronounced for women, with White women being three times more likely not to have salt added to food during cooking compared to non-White women (the difference for men is 1.8 times). In addition, significantly more women than men rarely or never add salt at the table. However, these findings do not enlighten us as to how much salt is consumed through processed foods (it has been estimated that it may be as much as 75% of all salt intake<sup>3</sup>). There is no apparent difference with deprivation on salt usage either in cooking or at the table.

In ancient Greece, tossing an apple to a girl was a traditional proposal of marriage; catching it was acceptance!

Four out of ten adults in the North West eat the daily recommended intake of five or more portions of fruit and vegetables a day - almost half of women and over a third of men. Those aged 75+ years are least likely

(36.8%) to reach the recommended daily intake, with consumption being highest in those aged 16-24 years and 55-74 years. Consumption of fruit and vegetables decreases with increased deprivation, with those living in the most affluent areas being significantly (1.3 times) more likely (47.8%) to meet the daily recommended intake than those living in the most deprived communities (37.1%).

Conversely, significantly (1.8 times) more adults living in the most deprived areas eat no fruit and vegetables a day (6.8%) compared with people living in the most affluent areas (3.8%).

## 1.8 Physical activity

**It has been suggested that a 10% rise in physical activity in adults would save an estimated 6,000 lives and have an economic benefit of £2 billion.**

A lack of physical activity is estimated to contribute to 22-33% of coronary heart disease, 15% of diabetes, 12-13% of stroke, 16-17% of colon cancer and 11% of breast cancer in developed countries. Sedentary behaviour is considered more prevalent in those who, for example, are obese and who currently smoke, though the exact impact of sedentary behaviour upon health is unclear.<sup>4</sup> More time is being spent sitting at work and undertaking sedentary leisure activities and the focus of methods of travel are changing.<sup>5; 6</sup> Regular physical activity can help relieve stress and mild forms of depression and has a major impact on the prevalence of obesity.

The first Olympic Games were held in 776BC and were originally confined to only running, but over time new events were added. For example, the long run (720BC), when the loincloth was abandoned and athletes began competing naked; and the pentathlon, which combined running, the long jump, wrestling, and discus and spear throwing (708BC).

In the regional survey, participants were asked a series of questions about their activity at work, travel to and from places and recreational activities, as well as a single question on sedentary behaviour relating to how long individuals spent sitting or reclining on a typical day.

86% of women and 78% of men in care homes are sedentary and for people aged 65+ years, sedentary behaviour in care homes is double that in private households.

In the North West over a third of adults typically have a low level of physical activity. The percentage of adults that partake in a high level of physical activity decreases with increasing age, while low activity increases with age. Overall, men are 1.4 times more likely to partake in a high level of physical activity (46.1%) than women (32.4%).

Significantly more men (14.5%) than women (8.9%) were sedentary for more than eight hours a day as well as for more than four but less than eight hours. Significantly more 25-64 year olds (25-34 years: 15.0%; 35-44 years: 14.0%; 45-54 years: 13.0%; 55-64 years: 10.7%) were sedentary for over eight hours a day compared with 16-24 year olds (7.7%), possibly reflecting higher levels of employment in these age groups, particularly in sedentary jobs. There was little variation in sedentary hours by deprivation. The majority of adults living in both the most deprived (34.6%) and most affluent (33.0%) areas have between two and four sedentary hours in a typical day. Around 1.2 times more people in the most deprived areas (13.6%) had eight or more sedentary hours a day than those in the most affluent areas (11.2%) but this difference was not significant.

## 1.9 Alcohol

**Alcohol misuse is related to a wide range of negative health conditions, both physical and mental, and can affect nearly every part of the body.<sup>7</sup>**

There are large differences in health consequences due to alcohol use between richer and poorer communities and also between genders. For example, the poorest local authorities in England have the highest recorded levels of ill health (mortality and morbidity) and social harms (crime, anti-social behaviour, unauthorised absence from school and Incapacity Benefit claimant rates) related to alcohol use. The risk of alcohol dependency is also greatly increased in less advantaged social groups.<sup>8</sup> The UK ranks third across 25 EU member states for the highest number of

drinks consumed in one sitting, with approximately 25% of residents drinking five or more alcoholic drinks per day when they drink.

Alcohol was originally seen as an elixir that provided good health, pain relief and enhanced mood. Egyptian doctors prescribed it for thousands of years, and on such a scale that by 1500BC 15% of all prescriptions were for alcohol.

Drinking alcohol at levels that might be hazardous or harmful to health is classified according to quantity drunk over an entire week, while binge drinking is classified according to how much is drunk on the heaviest drinking day. It is therefore possible for some individuals (albeit a small number) to appear not to be a harmful or hazardous drinker but to be classified as a binge drinker.

In the North West 13.0% of adults drink at hazardous levels and men are 1.3 times more likely (15.6%) than women (10.3%) to drink at hazardous levels. Hazardous drinking is most common in men aged 25-34 years (20.1%) and women aged 45-54 years (14.8%). Women living in the most affluent areas are twice as likely (14.6%) to engage in hazardous drinking compared with those in the most deprived areas (7.4%). There are also significantly more (3.2 times) White (13.2%) than non-White (4.1%) individuals drinking at hazardous levels, and this difference is even more pronounced in women (3.7 times) compared to men (2.9 times).

Men are significantly more likely (4.2%) to drink harmful levels of alcohol than women (2.6%). Those aged 16-24 years are the most likely to drink harmful levels (5.8%).

Numerous accounts of the Egyptian period stressed the importance of drinking in moderation and while Egyptians did not generally appear to define inebriety as a problem, they warned against taverns (which were often houses of prostitution) and excessive drinking.

There is a tendency for adults living in the most deprived areas to have higher levels (4.6%) of harmful alcohol consumption than those in the most affluent areas (3.4%) but this was not statistically different. There was variation between ethnic groupings, with White adults being seven times more likely

(3.5%) to engage in harmful levels of drinking than non-White adults (0.5%). This difference is significant.

Almost a fifth of adults (18.3%) in the North West binge drink, a behaviour seen in significantly more men (22.8%) than women (14.0%). Binge drinking decreases with increasing age: over a third of 16-34 year olds binge drink, compared to less than one in ten 65+ year olds.

In general, binge drinking increases as deprivation increases, with 19% of people living in the most deprived areas binge drinking compared with 15% in the most affluent areas (this difference was not significant). People classifying themselves as White are 4.6 times more likely (18.9%) to binge drink than non-White individuals (4.1%). This difference is even more pronounced in women, with binge drinking being 7.6 times higher in White women compared with non-White women.

### 1.10 Smoking

**Smoking is related to a number of long-term conditions including respiratory disease (bronchitis, emphysema), asthma, hypertension, heart and circulatory disease, cancer of the bladder, throat and mouth, with a cost to the NHS of approximately £1.5 billion per year.**

Over ten million people in Great Britain smoke, around one-sixth of the population. Approximately one out of every five deaths in the UK may be attributed to smoking. Smoking is a major cause of health inequalities, and the single most preventable cause of premature mortality and morbidity.<sup>9</sup> If targets to reduce the overall prevalence of smoking were achieved, it is estimated that there would be a cost benefit/saving of £524 million due to the reduction in the number of heart attacks and strokes.

Participants were asked a number of questions about their smoking habits, so that individuals could be categorised as current smokers, ex smokers or never having smoked.

In the 1930s-50s Hollywood actors and actresses were paid to promote smoking. For example, in 1937/8 Clark Gable was paid \$10,000 (2008 equivalent of \$146,583) to promote Lucky Strike cigarettes.

Over a fifth (22.5%) of adults in the North West smoke, with men significantly more likely to smoke (24.1%) than women (21.0%). Smoking is most common in the 25-34 year old age group (27.4%) after which there is a decline with age. Significantly more (twice as many) adults living in the most deprived areas smoke (29.3%) compared to adults living in the most affluent areas (15.2%). Also, the White ethnic grouping is 1.5 times more likely to smoke (22.8%) than the non-White ethnic grouping (14.9%).

### 1.11 Caring responsibilities

**The role of carers is invaluable in terms of their contribution to the health and social care system as it is estimated that the economic contribution of carers in the UK amounts to a massive £87 billion per year.**

A carer provides help and support, without payment, to a partner, child, relative, friend or neighbour who could not manage without their care. Carers are twice as likely to suffer from poor health compared to someone with no caring responsibilities. Those people who care for someone for 50 hours per week are known to indicate the pressure they are under; they report disturbed sleep (47%), have a feeling of strain (24%) and feel depressed (34%).

In the North West survey, individuals were asked if they care for someone with a long-term illness.

Around 9.6% of the population care for someone with a long-term health condition or problems related to old age. Significantly more women (11.2%) than men (7.9%) are carers.

National Carers Week takes place every year, and will next take place on June 8<sup>th</sup>-14<sup>th</sup> 2009. Further details about National Carers Week can be found at [www.carersweek.org](http://www.carersweek.org)

Proportionately more 45-54 year olds (13.8%) care for someone than any other

age group. However, examining the results by age group, those aged over 65 are most likely (65-74 years: 11.1%; 75+ years: 9.4%) to care for someone for 50 or more hours per week. Significantly more people living in the most deprived areas (11.5%) care for someone with long-term ill health or age-related problems than people living in the most affluent areas (7.8%). There was little variation in the number of hours of care provided across areas, with just under half (47.4%) of people providing more than 20 hours a week of care.

### 1.12 Future survey developments in the North West

This survey highlights the extent to which people in the North West rate their own health and describes aspects of their lifestyles that may affect their health. It provides an indication of the scale of lifestyle changes that are needed to address health inequalities in the region, in relation to diet, physical activity, smoking and alcohol consumption. It highlights demographic groups which may be in need of greater support to address lifestyle-related ill health and which are worthy of deeper understanding.

A series of thematic reports are in production, which will utilise the combined regional and local (boost area) surveys. This dataset allows much more detailed analysis of behaviours across population subgroups and will provide detailed insight of people's behaviours that local agencies will be able to use for enhance targeting of interventions. The planned topics and production schedule are:

- alcohol: spring 2009
- smoking: summer 2009
- eating, physical activity and obesity: autumn 2009
- general health: winter 2009/10

The North West Public Health Observatory (NWPHO) continue to support region-wide population surveys annually. These surveys cover not only lifestyle and behaviours, but also general wellbeing and attitudes to health and behaviour. Thus, a wide range of information is being collated across population subgroups to help inform different strategies for behavioural change.

- 2008: Our Life<sup>viii</sup> commissioned NWPHO to run the Big Drink Debate, which surveyed 30,000 people to determine beliefs and attitudes to alcohol.
- 2009 will see the North West Wellbeing Survey. Face-to-face interviews will examine mental health and wellbeing. The North West Care Services Improvement Partnership provided the initial funding to set up the project and NHS North West and 20 primary care trusts have bought local boosts.
- In 2010 NWPHO will undertake the regional lifestyle survey again and will offer support to both primary care trusts and local authorities to run local boosts. It is hoped that this survey will provide the greatest coverage across the whole region and enable very detailed localised comparisons of how different population groups behave.

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<sup>viii</sup> [www.nwph.net/ourlife/default.aspx](http://www.nwph.net/ourlife/default.aspx)

**Sources of information for facts presented in boxes**

- [www.aafa-ca.org/asthma\\_history.php](http://www.aafa-ca.org/asthma_history.php)
- [www.health24.com/medical/Condition\\_centres/777-792-1078.asp](http://www.health24.com/medical/Condition_centres/777-792-1078.asp)
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- [www2.potsdam.edu/hansondj/controversies/1114796842.html](http://www2.potsdam.edu/hansondj/controversies/1114796842.html)
- <http://tobaccocontrol.bmj.com/cgi/content/full/17/5/313>
- [www.statistics.gov.uk/about/data/harmonisation/downloads/S8.pdf](http://www.statistics.gov.uk/about/data/harmonisation/downloads/S8.pdf)

## 2. Introduction

The North West Lifestyle Survey 2007 was commissioned from the North West Public Health Observatory (NWPHO) on behalf of the Regional Director of Public Health. Its aim was to provide baseline measures of prevalence against which the effectiveness of regional initiatives over the coming years can be monitored. The North West survey provides health professionals with detailed intelligence to help support the improvement of the health of the North West population. In addition, local areas were offered the opportunity to buy local survey boosts, so that local measurements could be compared against a standardised regional baseline. The results of this survey are therefore aimed at helping the effective targeting of resources, priority setting and the development and implementation of strategies and policies at both the regional and local levels.

### 2.1 Lifestyle

The term 'lifestyle' was originally used as a specific term by Alfred Adler in the 1930s to denote a person's basic character as established in early childhood, which governs his reactions and behaviour.<sup>ix</sup> From the early 1960s, this became a broader term, which encompassed the way in which individuals actively adapt to their social environment – including aspects such as diet, exercise and substance use, for example.<sup>x</sup>

The lifestyle that a person or group of people adopt reflects or is dependent upon their experiences; personality, which incorporates their attitudes (to health and wellbeing); values and beliefs (desire to change behaviours, motivations for change); as well as factors such as age (including life stage), gender, ethnicity, deprivation and social exclusion.

Lifestyle is one of the wider determinants of individual health that can affect the likelihood of a person developing a disease or dying prematurely. The World Health Organization has also cited lifestyle as one of the biggest burdens upon health worldwide.<sup>10</sup>

This has been a dominant focus of national health policies in recent years, including *Choosing Health*<sup>11</sup>, which highlighted the need for more information about non-communicable disease; and subsequent reports such as *Choosing a Better Diet*<sup>2</sup>, *Choosing Activity*<sup>12</sup> and *Healthy Weight, Healthy Lives*.<sup>5</sup> Lifestyle factors include diet, physical activity, smoking, alcohol and drug use and general behaviour, as well as attitudes to behaviour.

Lifestyle-related ill health is a central aspect of government action to tackle health inequalities and a particular challenge for health services across the North West. Lifestyle is one of the biggest contributions to health inequalities<sup>11</sup> for which a key objective of the Government is to: "by 2010, increase the average life expectancy at birth in England to 78.6 years for men and to 82.5 years for women monitored using mortality rates as a proxy".<sup>13</sup> Life expectancy at birth from the period 2005-2007 for males in the North West is 76.0 years compared with the England average of 77.5 years, while for females it is 80.4 years compared with 81.7 years in England.<sup>14</sup>

Lifestyle is a contributory factor to the gap in health outcomes between the North West and England as a whole. Understanding more about the lifestyles of people in the North West therefore forms an important part of our intelligence in addressing inequality. It is also imperative to measure the prevalence of lifestyle characteristics at a particular geography – in the case of this report, the North West region of England – in order to understand lifestyle impacts on public health and to monitor changes over time.

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<sup>ix</sup> [http://dictionary.oed.com/cgi/entry/50133001?single=1&query\\_type=word&queryword=lifestyle&first=1&max\\_to\\_show=10](http://dictionary.oed.com/cgi/entry/50133001?single=1&query_type=word&queryword=lifestyle&first=1&max_to_show=10)  
<sup>x</sup> [www.etymonline.com/index.php?search=lifestyle](http://www.etymonline.com/index.php?search=lifestyle)



## 2.2 Lifestyle surveys

Lifestyle surveys are a popular, appropriate and cost-effective way of measuring behaviours at a local level and addressing risk factors associated with lifestyle that may link to health. On the whole, they provide high quality intelligence on population behaviour to support decision-making within public health and other areas of local and regional government and are an effective way of targeting service provision or intervention.

When lifestyle information is aggregated to provide detailed sub-analyses, time series trends and population segmentation to support social marketing, it becomes an even more powerful tool to help with prioritisation of key topics and localised targeting. Some of the earliest market research was done via readership surveys of newspapers and periodicals. Gaining insight into behavioural motivations, as well as measurement of behaviours, by population surveys also forms an important part of the intelligence for addressing inequality in the North West.<sup>15</sup>

### 2.2.1 A potted history

Monitoring lifestyle, behaviour and attitudes through surveys is not a new concept. The Domesday Book (1086) is probably the first ever population survey, which ultimately led to the decennial population census that we have today. Social surveys began much later and have evolved through time (Figure 1).

In 1937, Tom Harrison, Humphrey Jennings and Charles Madge founded the social research organisation, Mass Observation. Mass Observation aimed to study the everyday lives of the British public and called on people to suggest initial topics for investigation. Suggestions ranged from behaviour of people at war memorials through to requests for studies of bathroom behaviour and female taboos about eating.<sup>16</sup>

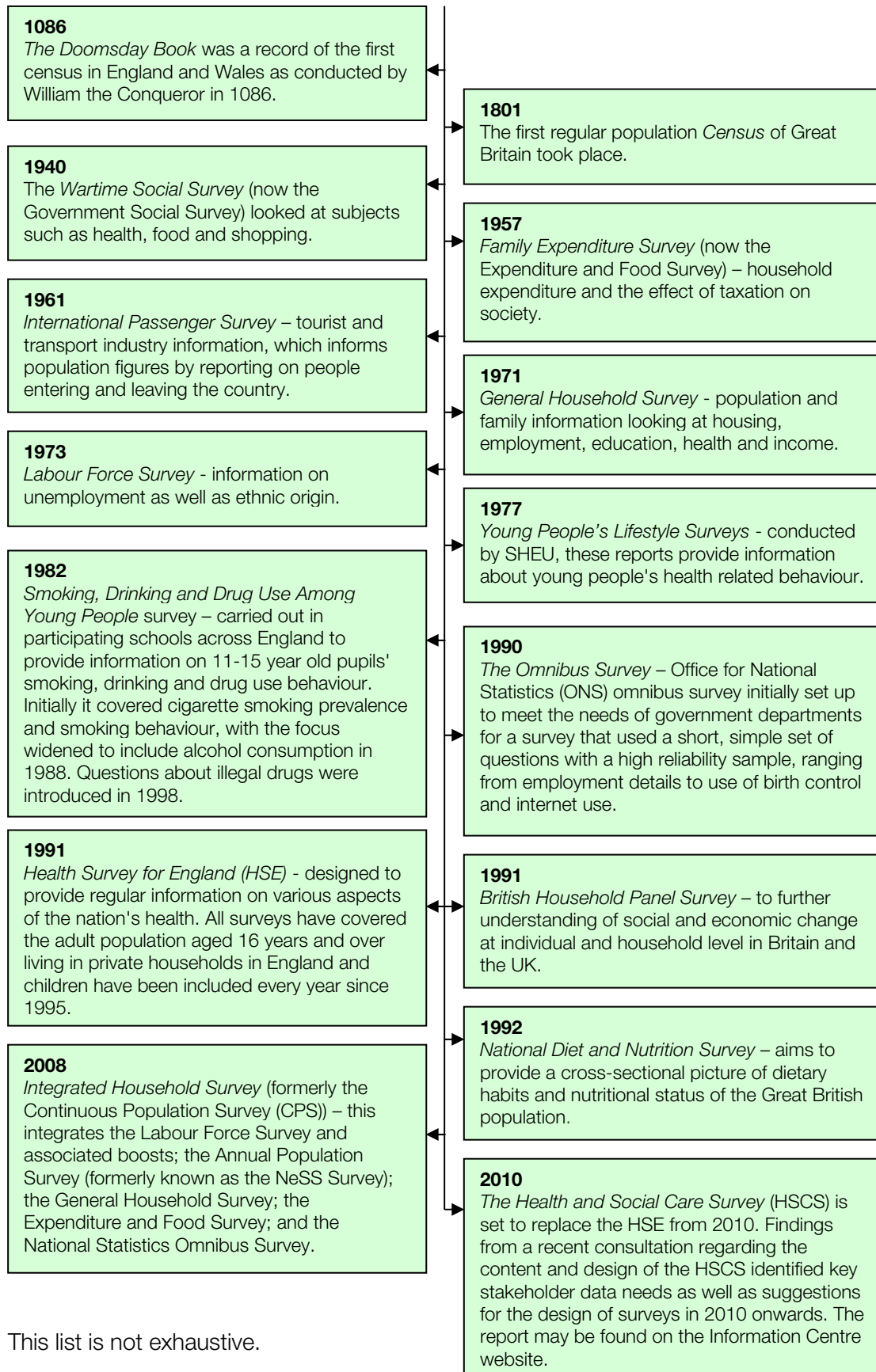
The first observations of life in Britain were from surveys such as:

- the **Worktown Project** in Bolton, in which a team of investigators anonymously recorded people's behaviour and conversations in a number of public situations such as at religious occasions, in the workplace and at sporting activities. This project also included 'Holiday Town', when observations took place in Blackpool during the summer months to gain an understanding of how people spent their holiday. They observed, for example, the type of accommodation people stayed in and how and where they spent their money.
- **a collection of observers' diaries** of the everyday lives of a panel of some 500 volunteers (recruited through newspaper and magazine advertisements), written on the 12<sup>th</sup> day of each month. Some volunteers also responded to occasional questions on a variety of topics (known as directives), such as smoking habits, religious beliefs and sexual behaviour.<sup>17</sup>

The process produced endless text on many different subjects, from the contents of sweet shop windows to the way smokers held their cigarettes, far more than could be analysed.<sup>17</sup> It continued throughout the Second World War into the 1950s, with numerous books and reports on its findings.<sup>18</sup> As time passed, the emphasis of Mass Observation moved from social issues to focus more on consumer behaviour and in the 1950s and 1960s it functioned as a more conventional market research organisation.<sup>16; 17</sup>

In 1970 the Mass Observation Archive moved to the University of Sussex as a public resource. It holds Mass Observation material produced from 1937 to 1949, with some additions made in the 1950s and 1960s. In 1981 the national panel was reintroduced, with volunteers being asked for contributions three times a year, usually on a specific theme, although occasionally the volunteer can choose their subject matter.<sup>19</sup> Since 1981 over 2,800 people have written contributions, with around 400-500 people currently on the active mailing list.<sup>20</sup> The material contained within the archive is, however, not statistically representative of the population.<sup>21</sup> Whereas Mass Observation took a qualitative approach, more quantitative social surveys have been carried out over the last 70 years, starting with the introduction of the 1940 Wartime Social Survey (Figure 1).

**Figure 1: Health and Social Surveys in England - a timeline.**



This list is not exhaustive.

### 2.3 The North West Lifestyle Survey

NWPHO led the North West Lifestyle Survey in 2007, which collected essential information on health, wellbeing and lifestyles following a set of core recommended questions developed by stakeholders across the region.<sup>22</sup>

This regional survey – one of the largest ever of its kind – took place between June and December 2007 and was designed to collect information on the lifestyles of a representative sample of the North West population.<sup>xi</sup> In total, 5,469 people completed the questionnaire. Respondents were asked about their general health; height and weight; smoking and drinking habits; what they eat; the physical activity they do; and about their caring responsibilities. The survey results highlight how people in the North West rate their own general health and wellbeing and describe aspects of their lifestyles that may affect their health. It provides an indication of the scale of lifestyle changes that are needed to address health inequalities – by gender, age group and deprivation, thus pinpointing particular areas which may be in need of greater support to address lifestyle-related ill health.

The survey was conducted over the telephone by specialist social research consultants<sup>xii</sup> to a specified sample framework that was representative of the region. The *Health and Lifestyles in the North West* results are aimed at health professionals and policy makers in the North West. It is envisaged that they will support a range of actions including effective targeting of resources and priority setting, development and implementation of policies, as well as providing baseline measures of prevalence to monitor regional health improvement over the coming years.

Each section in the main report details the policy and background to the topic area, existing available comparators at England and North West levels, and the findings of the regional survey broken down by gender, age group, deprivation and ethnic grouping.

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<sup>xi</sup> Some primary care trusts (PCTs) bought additional 'boosts' to enable representative local level information for more effective local targeting of interventions, with standard regional comparisons from the regional survey

<sup>xii</sup> Vision Twentyone [www.visiontwentyone.co.uk](http://www.visiontwentyone.co.uk)

### **3. Methodology**

#### **3.1 Survey and data collection**

The regional survey was administered and managed by NWPHO on behalf of the North West region and primary care trusts (PCTs). Responses were collected through a telephone questionnaire delivered by an independent market research company. Each survey lasted approximately ten minutes.

The survey questions were mainly based upon existing, standard and well tested measures used in other health and lifestyle surveys nationally and internationally. For example, a number of questions were taken from the Health Survey for England (HSE).

NWPHO produced the publication *Lifestyle Surveys Core Questions and Methods*<sup>22</sup>, which contained a common set of questions and methods that could be used as the starting point for lifestyle surveys being conducted in the North West. This built on the recommendations of the *Lifestyle Surveys*<sup>15</sup> synthesis report and the views of others in the region for the need for consistency and comparability within lifestyle data. Topics were derived from *Choosing Health*<sup>11</sup>, Director of Public Health annual reports and within local area agreements (LAAs).

The questions centred around seven key themes: general health, obesity, diet and nutrition, physical activity, alcohol, smoking and caring responsibilities. Such issues are strongly linked to a host of current government policy. The format for the questions used for each theme in the study is detailed in the relevant section of this report.

Survey questions and details of analysis are covered within each section of the main report.

#### **3.2 Analysis process**

Responses were entered into SPSS by the survey company and anonymised data were returned to NWPHO for analysis.

A number of different calculations and transformations were then performed on the data. For example, all height and weight measurements given were converted into metric measures which are required to calculate body mass index (BMI). BMI was subsequently grouped into categories to identify overweight and obese. Responses to questions relating to alcohol consumption went through a more complex process to derive measures for hazardous, harmful and binge drinking, which is described in detail in Section 8.

Additional information was also added to the dataset to identify area based classifications relating to place of residence.

#### **3.3 Sample size and weighting**

The initial survey sample was assessed to see if it was representative of the North West population following which appropriate adjustments were made through 'weighting' the data. Although the sampling frame had been specified and agreed by NWPHO and the social research consultants, for various reasons certain subgroups of the population were more difficult to survey than others. Therefore, a three dimensional (gender, age group, IMD 2007 quintile of residence) cross-tabulation of the survey sample was compared with 2005 mid-year estimates<sup>xiii</sup> of the whole population aged 16 years and over. Where a subset (e.g. females, aged 16-24 years, living in the most deprived quintile) of the population was under-represented in the survey compared with the actual proportion of this subset in the total adult population, the particular cohort in question was given a weighting variable of over 1 (how far above the value of 1 was dependent on the degree of under-representation). Conversely, if a subset (e.g.

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<sup>xiii</sup> Single year of age population figures by LSOA were required for this process. 2005 mid-year estimates were the most recent year of population data of this nature available to NWPHO at the time of the weighting process.

males, aged 65-74 years, living in the least deprived areas) was over-represented in the survey compared with the actual proportion of the subset in the adult population, they were given a weighting variable of below 1.

The weighting was then applied to the dataset as analysis was undertaken. Put simply, this means that responses from groups that are under-represented count more than groups that are over-represented, thus ensuring that the overall response represents the North West population. In order to weight the survey in this way, all three variables (gender, age group and deprivation quintile) must be present in the dataset. Due to missing variables, 21 survey responses (0.4%) had to be excluded from the dataset. The final dataset contained 5,448 respondents.

After results were produced from the dataset, 95% confidence intervals were applied to the data. In this case, the confidence intervals indicate the reliability of the survey results. Sample surveys are always subject to some error, but it is possible to be 95% confident that the true result for the particular population segment in question is within the confidence limits calculated. Confidence intervals also allow comparison to be made within a measure, such as by gender, age group and deprivation quintile. In other words, where one measure is 'significantly' better or worse than another, we are 95% confident that this is not due to random error or chance.

### **3.4 Presentation of results**

Each of the seven chapters within the report includes background information and policy about each of the core themes in the survey to explain their relevance and importance. Existing information from sources such as the Health Survey for England and the General Household Survey is also referred to for context. The content of the survey questions is then explained.

The analyses focus upon those responses or behaviours that most closely reflect recommendations, guidance or policies for change at the national level. For example, in terms of fruit and vegetables, the report explores the proportion of adults who say that they consume the recommended five or more portions a day or consume no portions.

A series of bar charts are then included for each indicator across the themes, with a descriptive analysis of the results. All themes include charts by gender, age group, IMD 2007 quintile and ethnic grouping.

## 4. General Health

### 4.1 Self-assessed 'not good' health

#### 4.1.1 Background

General health measures are used within health surveys for a number of reasons, such as to measure the impact of disease and the outcomes of intervention and to evaluate health care policy. Importantly, at a population level, they provide a method by which an indicator of population general health can be measured and demand for health care and services assessed.<sup>23</sup> The use of a single question to assess an individual's general health can be a simple and cost-effective way to estimate the burden of ill health<sup>24</sup> and compare different social and health status groups, while covering several dimensions of health. For example, self-assessed health questions are considered to be a good predictor of mortality in adults as well as health care utilisation: a pattern that can be observed across all socio-economic groups.<sup>25</sup>

As with any measure of health and wellbeing, there are acknowledged issues with the use of self-assessed general health questions. The measure is subjective and so the way in which an individual responds may be influenced by cultural and historical contexts. For example, older people may have lower expectations of personal health as they associate poor health with ageing and therefore are more likely to make a positive assessment of their health than someone of a younger age with similar illness(es) and/or symptoms. This may also be true of someone with a disability.

At this time, however, self-assessed health is the best available measure to assess the general health of the population and it is the only harmonised survey question relating to health across the EU.<sup>xiv</sup>

#### 4.1.2 Existing information

The Health Survey for England 2006 asked respondents how their health was in general, with a five point response scale (very good, good, fair, bad, very bad). Nationally, 6.6% of adults aged 16+ said they were in very bad or bad health. There was a trend for a slight increase, from 6.3% in 2003 (from 6.5% to 6.6% for men and 6.1% to 6.5% for women).<sup>xv</sup>

The General Household Survey 2007 asked respondents how their health had, on the whole, been over the last 12 months (good, fairly good, or not good). Across Great Britain, 12% of adults aged 16+ stated that their health had been 'not good'. This was a decrease from 14% in 1998.<sup>xvi</sup>

The 2001 Census also included a single question on general health over the previous 12 months, identical to that used in the General Household Survey.<sup>xvii</sup> Results showed that 8.0% of adults aged 16+ living in England said their health was 'not good'. Responses differed depending upon a number of factors including age (the proportion of respondents stating that they were in good health decreased with age); and occupation (rates of 'not good' health were higher for those in routine occupations than those in higher managerial and professional occupations and higher still in those who had never worked or were long-term unemployed). A clear north-south divide was also evident.<sup>26</sup> In the North West region, 9.6% of people rated their health as 'not good', the second highest region in England after the North East.<sup>xviii</sup>

The 2006 report *Where Wealth Means Health*<sup>27</sup> examined the geographical differences in 'not good' health (based on standardised data from the 2001 Census) across the North West and found higher levels in urban conurbations, while lower levels were seen in some rural and rural

<sup>xiv</sup> [www.statistics.gov.uk/about/data/harmonisation/downloads/S8.pdf](http://www.statistics.gov.uk/about/data/harmonisation/downloads/S8.pdf)

<sup>xv</sup> [www.ic.nhs.uk/webfiles/publications/HSE06/ADULT%20TREND%20TABLES%202006.xls](http://www.ic.nhs.uk/webfiles/publications/HSE06/ADULT%20TREND%20TABLES%202006.xls)

<sup>xvi</sup> [www.statistics.gov.uk/downloads/theme\\_compendia/GHS07/GeneralHouseholdSurvey2007.pdf](http://www.statistics.gov.uk/downloads/theme_compendia/GHS07/GeneralHouseholdSurvey2007.pdf)

<sup>xvii</sup> [www.statistics.gov.uk/census2001/topics.asp](http://www.statistics.gov.uk/census2001/topics.asp)

<sup>xviii</sup> [www.statistics.gov.uk/cci/nugget\\_print.asp?ID=1325](http://www.statistics.gov.uk/cci/nugget_print.asp?ID=1325)

fringe localities. The report also identified higher levels of ‘not good’ health in the most deprived areas.

### 4.1.3 Survey and analysis methodology

Survey participants were asked a single self-assessed health question:

How is your health in general? Would you say it was:

1. very good
2. good
3. fair
4. bad
5. very bad.

The latter two categories (bad and very bad) were combined to give ‘not good’ health.

The question appears in the ONS *Harmonised Concepts and Questions for Government Social Surveys*.<sup>28</sup> It is identical to that used in the Health Survey for England and is recommended by the World Health Organization (WHO) Regional Office for Europe so that internationally comparable data may be collected.<sup>23</sup>

### 4.1.4 North West survey results: ‘Not good’ health

Overall, 8.2% of adults consider themselves to be in ‘not good’ health (Figure 2, Table 2). More women (8.7%) than men (7.8%) are in ‘not good’ health. This could be due to the fact that the female population has an older age structure than the male population. However, the difference between genders is not significant.

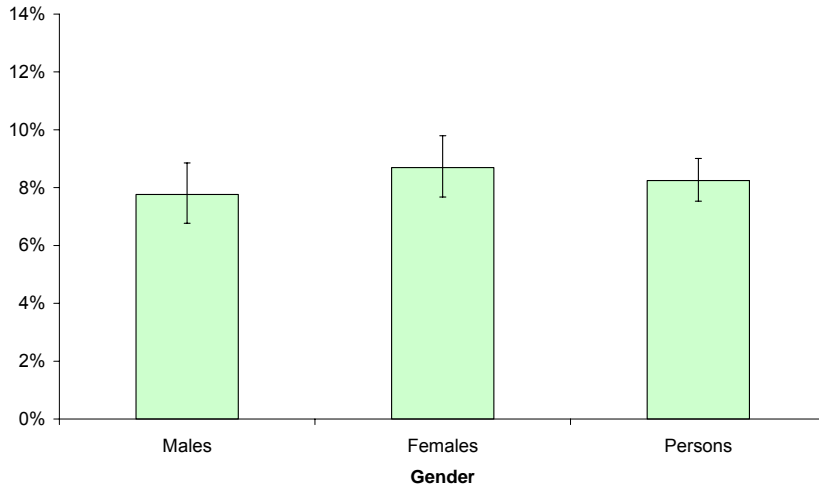
The percentage of adults describing themselves as in ‘not good’ health generally increases with age, rising to around one in five (20.2%) adults aged 75+ (Figure 3). There are some significant differences between age groups. The proportion of all age groups over 35 years in ‘not good’ health is significantly higher than the proportions aged under 35; similarly, the proportion of all age groups over 45 years in ‘not good’ health is significantly higher than all age groups under 45 years, and the proportion of adults aged 75+ in ‘not good’ health is significantly higher than all younger age groups.

The percentage of adults in ‘not good’ health also increases as deprivation increases (Figure 4, Table 3). Over twice as many adults from the most deprived areas (11.6%) are in ‘not good’ health than in the least deprived areas (5.2%). This inequality is even more pronounced for men: over three times as many men from the most deprived areas (11.8%) are in ‘not good’ health than men from the least deprived areas (3.9%).

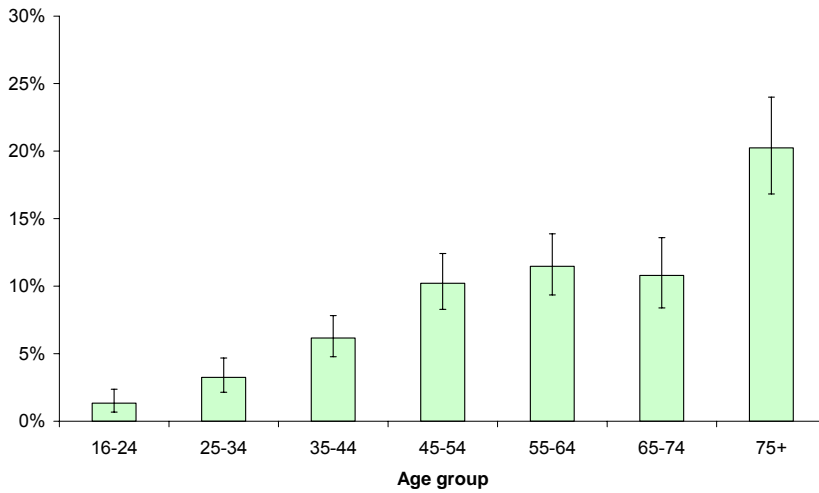
Throughout the results across the whole survey, there are few items where a significant difference by ethnic grouping can be found, often due to the associated large confidence intervals. However, a significant difference exists between ethnic groupings in terms of ‘not good’ health. The proportion of White women in ‘not good’ health (9.0%) is significantly higher than the proportion of non-White women (1.0%) (Figure 5, Table 4). Across England and in the North West the non-White population has a younger age structure than the White population (44% of the 16+ White population are aged 50+ compared with 19% of the non-White population<sup>xix</sup>), so this factor may account for some of the difference.

<sup>xix</sup> Annual Population Survey October 2006–September 2007, National Statistics. From Nomis website: [www.nomisweb.co.uk](http://www.nomisweb.co.uk)

**Figure 2: Percentage of adults in 'not good' health, by gender.**



**Figure 3: Percentage of adults in 'not good' health, by age group.**

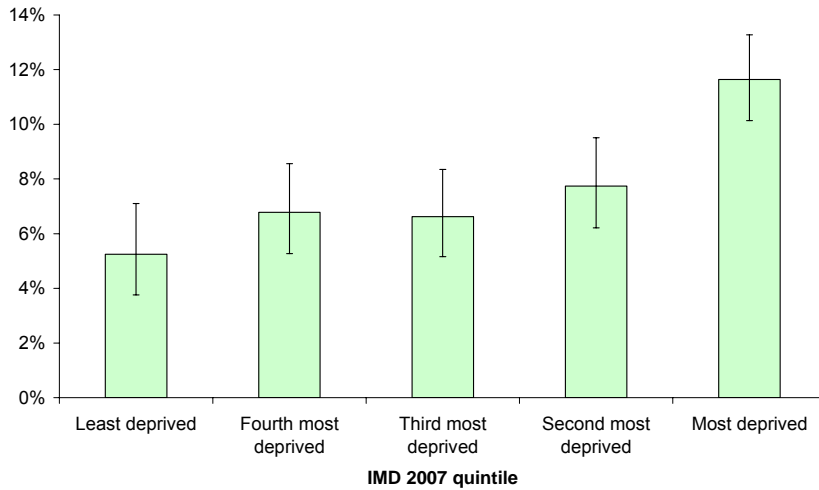


**Table 2: Percentage of adults in 'not good' health, by gender and age group.**

Age group	Males	Females	Persons
All ages	7.8%	8.7%	8.2%
16-24	0.7%	2.0%	1.3%
25-34	2.9%	3.7%	3.2%
35-44	5.0%	7.9%	6.2%
45-54	10.2%	11.4%	10.2%
55-64	12.6%	11.5%	11.5%
65-74	13.1%	9.6%	10.8%
75+	17.4%	28.1%	20.2%



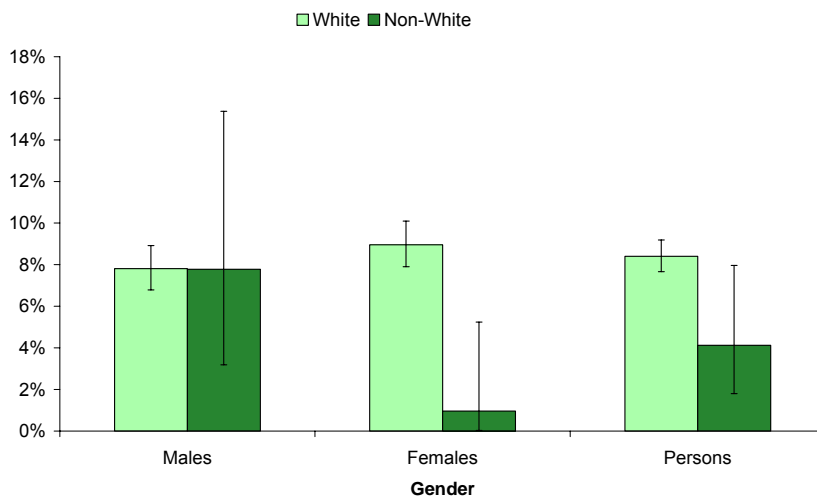
**Figure 4: Percentage of adults in ‘not good’ health, by Index of Multiple Deprivation 2007 quintile.**



**Table 3: Percentage of adults in ‘not good’ health, by gender and Index of Multiple Deprivation 2007 quintile.**

IMD quintile	Males	Females	Persons
All quintiles	7.8%	8.7%	8.2%
Least deprived	3.9%	6.8%	5.2%
Fourth most deprived	6.5%	7.1%	6.8%
Third most deprived	6.6%	6.6%	6.7%
Second most deprived	6.4%	9.2%	7.7%
Most deprived	11.8%	11.5%	11.6%

**Figure 5: Percentage of adults in ‘not good’ health, by gender and White and non-White ethnic groupings.**



**Table 4: Percentage of adults in ‘not good’ health, by gender and White and non-White ethnic groupings.**

Ethnic grouping	Males	Females	Persons
White	7.8%	9.0%	8.4%
Non-White	7.8%	1.0%	4.1%

## 4.2 Heart attack and stroke

### 4.2.1 Background

A heart attack is a clinical condition caused by the formation of a clot in the coronary artery. This results in a loss of blood supply to parts of the heart muscle and consequently the death of the muscle. Approximately 275,000 to 300,000 people have a heart attack each year<sup>xx</sup> and they most commonly occur due to coronary heart disease (CHD). Coronary heart disease, including heart attacks, is the biggest killer in England, claiming over 111,000 lives per year and accounting for one in five male and one in six female deaths in England and Wales.<sup>29</sup>

A stroke occurs when the blood supply to part of the brain is cut off. Without this supply, brain cells can be damaged or destroyed and the way in which the body functions can be affected. Stroke is the third biggest killer in England and a leading cause of severe disability. One person in England has a stroke every five minutes<sup>30</sup> and in 2006/07 there were 96,312 hospital admissions<sup>xxi</sup> for stroke. At any one time, 20% of acute and 25% of long term hospital beds are occupied by stroke patients.<sup>30</sup> There are more than 900,000 people who have had a stroke living in England.<sup>30</sup> Approximately 25% of people who recover from their first stroke will have another stroke within five years.<sup>xxii</sup>

There are similar risk factors that can impact upon the likelihood of an individual having a heart attack or stroke.

- Age: stroke mainly affects individuals over the age of 65 years, although it can occur at any point in an individual's life, including childhood.
- Gender: more men suffer from stroke and heart attack than women.<sup>31</sup>
- Diet: a diet high in fat can lead to the build up of cholesterol, which in turn results in the narrowing of arteries; while a diet that is rich in salt can lead to increased blood pressure.
- Lack of exercise.
- Smoking: which damages the lining of the arteries and leads to the build up of fatty material. The carbon monoxide produced by cigarettes reduces the amount of oxygen that the blood can carry to the heart and around the body, while nicotine encourages the body to produce adrenaline, making the heart beat faster and raising blood pressure, which in turn makes the heart work harder.<sup>xxiii</sup>
- Heavy drinking: which may lead to heart attack or stroke as it is associated with high blood pressure and a fast, irregular heart beat.
- Obesity - a body mass index of between 30 and 40.
- Medical conditions such as high blood pressure and high cholesterol.
- Ethnic background: for example, British South Asians and British African Caribbeans have increased risk of stroke compared with the White British population.<sup>xxiv</sup>
- Genetic inheritance: for example, individuals may be hereditarily susceptible to factors such as high blood pressure and high cholesterol that impact upon the risk of stroke and heart attack as well the cumulative effect of a number of genes that predispose families to coronary heart disease.<sup>xxv</sup>

These risk factors are not distributed evenly across society, with a divide between social classes being present.<sup>32</sup>

In 1999, *Saving Lives: Our Healthier Nation*<sup>32</sup> highlighted England as having one of the worst rates of coronary heart disease in the European Union, and set the target to "reduce mortality from heart attack and stroke and other related circulatory diseases by 40% for people under 75

<sup>xx</sup> [www.bhf.org.uk](http://www.bhf.org.uk)

<sup>xxi</sup> Ungrossed data: [www.hesonline.org.uk/Ease/servlet/ContentServer?siteID=1937&categoryID=202](http://www.hesonline.org.uk/Ease/servlet/ContentServer?siteID=1937&categoryID=202)

<sup>xxii</sup> [www.dwp.gov.uk/medical/med\\_conditions/major/stroke/prevalence\\_stroke.asp](http://www.dwp.gov.uk/medical/med_conditions/major/stroke/prevalence_stroke.asp)

<sup>xxiii</sup> [www.bhf.org.uk/keeping\\_your\\_heart\\_healthy/preventing\\_heart\\_disease/smoking.aspx](http://www.bhf.org.uk/keeping_your_heart_healthy/preventing_heart_disease/smoking.aspx)

<sup>xxiv</sup> [www.wellcome.ac.uk/News/2005/Features/WTX023815.htm](http://www.wellcome.ac.uk/News/2005/Features/WTX023815.htm)

<sup>xxv</sup> [www.bhf.org.uk/research\\_health\\_professionals/research\\_successes/family\\_heart\\_study.aspx](http://www.bhf.org.uk/research_health_professionals/research_successes/family_heart_study.aspx)

years by 2010”.<sup>xxvi</sup> More recently, this target has also been developed to include making “a 40% reduction in the inequalities gap between the fifth of areas with the worst health and deprivation indicators and the population as a whole”.<sup>33</sup> These targets are to be achieved by primary care trusts in partnership with local authorities, wider NHS bodies and other local organisations. More detailed guidance provided by the NHS also looks at data requirements for performance and monitoring in this area including the examination of GP registered patients’ absolute risk of CHD events and blood pressure and cholesterol readings.

The *National Service Framework (NSF) for Coronary Heart Disease*<sup>34</sup> sets out 12 standards to modernise and improve treatment, diagnosis and prevention of coronary heart disease and to improve access and quality of services. The *Coronary Heart Disease National Service Framework: Building for the future - Progress report for 2007*<sup>35</sup> stated that the target to reduce mortality had been met five years earlier than anticipated, resulting in 22,000 fewer premature deaths from cardiovascular disease. This has in part been attributed to decreased waiting times for heart surgery, increased prescriptions for cholesterol-reducing statins, and the reduction in adult smoking prevalence. The percentage of heart attacks treated with thrombolysis<sup>xxvii</sup> within 60 minutes of a call for help has nearly trebled (from 24% in 2001 to 68% in 2007). In addition, the absolute gap between the England average and the fifth worst deprived areas has decreased by 32% (1995-97 baseline to 2007).

The *National Service Framework for Older People*<sup>36</sup> sets out a ten year programme to link health and social care services. Standard 5 of this framework, *Stroke*, aims to “reduce the incidence of stroke in the population and ensure that those who have had a stroke have prompt access to integrated stroke care services”.<sup>36 (p.15)</sup> This was in response to evidence that those who have a stroke are “more likely to survive and to recover more function if admitted promptly to a hospital based stroke unit and care provided by a specialist coordinated stroke team within an integrated stroke service”.<sup>36 (p.15)</sup>

More recently, the *National Stroke Strategy*<sup>37</sup> provided a ten point plan for action: awareness; preventing stroke; involvement; acting on the warnings; stroke as a medical emergency; stroke unit quality; rehabilitation and community support; participation; workforce; and service improvement. The strategy aims to ensure that individuals who have suffered from a stroke, are at risk of having a stroke, and carers of people who have had a stroke, have access to the best possible services.

#### 4.2.2 Existing information

The Health Survey for England 2006 showed that nationally 4.1% of men and 1.7% of women aged 16+ had ‘ever had a heart attack’ (doctor diagnosed). The survey also showed that 0.3% of men and 0.2% of women had suffered a heart attack within the previous 12 months.

National Statistics data for 2004-06 show that the directly standardised mortality rate (all ages) for acute myocardial infarction (heart attack) was 42.66 per 100,000 population in England and significantly higher at 53.09 per 100,000 population in the North West. Across the North West region, the highest mortality rates were in Barrow-in-Furness, Salford, Knowsley, Manchester and Wigan and the lowest rates in Eden, Macclesfield, Congleton, Ribble Valley and Allerdale.

Nationally, the Health Survey for England 2006 revealed that 2.4% of men and 2.2% of women aged 16+ had suffered a stroke.<sup>xxviii; 31</sup> The prevalence for stroke in the North West was 4% for both men and women.<sup>xxix; 31</sup>

<sup>xxvi</sup> Based upon 1995-97 baseline data.

<sup>xxvii</sup> Thrombolysis is a minimally invasive treatment that dissolves abnormal blood clots in blood vessels to help improve blood flow and prevent damage to tissues and organs.

<sup>xxviii</sup> These figures are based on weighted data.

<sup>xxix</sup> These figures are based on unweighted data.

Trend data from 1994 to 2003 based on unweighted data showed that the prevalence of stroke increased in both men (from 1.8% to 2.7%) and women (from 1.6% to 2.3%). The majority of this change is attributed to those aged 75 and over. From 2003 to 2006 (when data has been weighted for non-response) prevalence has remained static at 2.4% for men and 2.2% for women.<sup>38</sup> However, the mortality rate from stroke has declined over recent years, from 83.54 per 100,000 population (all ages, directly standardised rate) in 1993 to 46.74 in 2007.<sup>xxx</sup>

The national Quality and Outcomes Framework (QOF) data from April 2006 to March 2007 showed the unadjusted prevalence<sup>xxxii</sup> of stroke and transient ischaemic attack was 1.6% in England and 0.2% higher in the North West. The highest unadjusted prevalence was seen in North Lancashire, Wirral and Cumbria PCTs (all 2.2%), with the lowest unadjusted prevalence in Manchester (1.4%), Bolton (1.5%) and Oldham PCTs (1.6%).<sup>xxxiii</sup>

*Where Wealth Means Health*<sup>27</sup> looked at the geographical variation in emergency hospital admission for stroke in the North West region. The incidence of stroke that resulted in an emergency admission varied across the region, with the highest ratio occurring in Merseyside and Greater Manchester. The incidence ratio for stroke was nearly double in the most deprived areas than in the least deprived areas; individuals living in largely non-White (except Chinese) areas had a significantly higher incidence rate for stroke; and rates were slightly higher in urban conurbations. Salford, Wigan and Knowsley had the highest emergency hospitalised incidence ratio, while Fylde, Macclesfield and Warrington had the lowest.

The directly standardised mortality rate for stroke (all ages) in 2004-06 was 53.55 per 100,000 population across England and significantly higher, 60.12 per 100,000, in the North West. Within the North West, the Greater Manchester districts of Salford, Rochdale, Oldham, Bolton and Manchester have the highest mortality rates for stroke, while Ellesmere Port and Neston, Barrow-in-Furness, Fylde, Congleton and Sefton have the lowest.

### 4.2.3 Survey and analysis methodology

In order to determine the prevalence of heart attack and stroke, participants were asked if a health professional had ever told them that they have had a

- heart attack; and/or
- stroke.

This question is identical to that in the Health Survey for England.

### 4.2.4 North West survey results: Heart attack and stroke

In total, 3.7% of adults said that they had been told by a health professional that they had suffered a heart attack and 2.7% had been told they had suffered a stroke (Figure 6, Table 5). Significantly more men (4.9%) than women (2.5%) had suffered a heart attack, but there was no significant difference by gender in the proportions that had suffered a stroke.

Both heart attack and stroke are more common as age increases, particularly after the age of 55 (Figure 7). Overall, 14.5% of adults aged 75+ had suffered a heart attack, including one in five men, and 10.4% of all adults aged 75+ had suffered a stroke.

There are significant differences between age groups. The proportion of adults aged 55+ that had suffered a heart attack is significantly higher than in all younger age groups; the proportion aged 65+ who had suffered a heart attack is higher than in all age groups under 55; and the proportion aged 75+ is significantly higher than in all age groups under 65. The prevalence of

<sup>xxx</sup> [www.nchod.nhs.uk/NCHOD/compendium.nsf/\(\\$All\)/F155251E05A0D038802575270021AB20/\\$File/10A\\_158DRT00++\\_07\\_V1\\_D.xls?OpenElement](http://www.nchod.nhs.uk/NCHOD/compendium.nsf/($All)/F155251E05A0D038802575270021AB20/$File/10A_158DRT00++_07_V1_D.xls?OpenElement)

<sup>xxxii</sup> Unadjusted prevalence rates show these registers as a percentage of the total practice list size (all ages).

<sup>xxxiii</sup> [www.ic.nhs.uk/statistics-and-data-collections/supporting-information/audits-and-performance/the-quality-and-outcomes-framework/qof-2006/07/qof-2006-07-data-tables](http://www.ic.nhs.uk/statistics-and-data-collections/supporting-information/audits-and-performance/the-quality-and-outcomes-framework/qof-2006/07/qof-2006-07-data-tables)

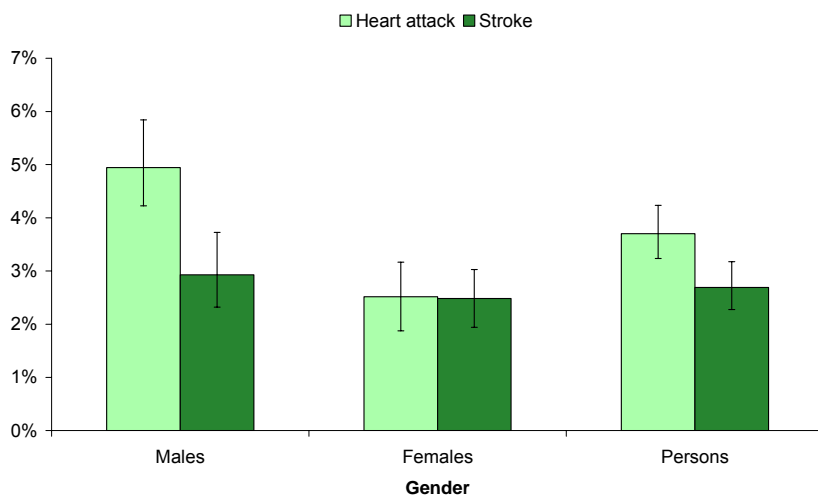
stroke is significantly higher in those aged 65+ than among the under 55s, and significantly higher in those aged 75+ than in every age group under 65 years.

Across the age spectrum, men were more (or at least equally) likely than women to have had a heart attack, but there were particularly marked differences between genders in the 55-64 years and 65-74 years age groups. Over three times more men than women in these age groups had suffered a heart attack.

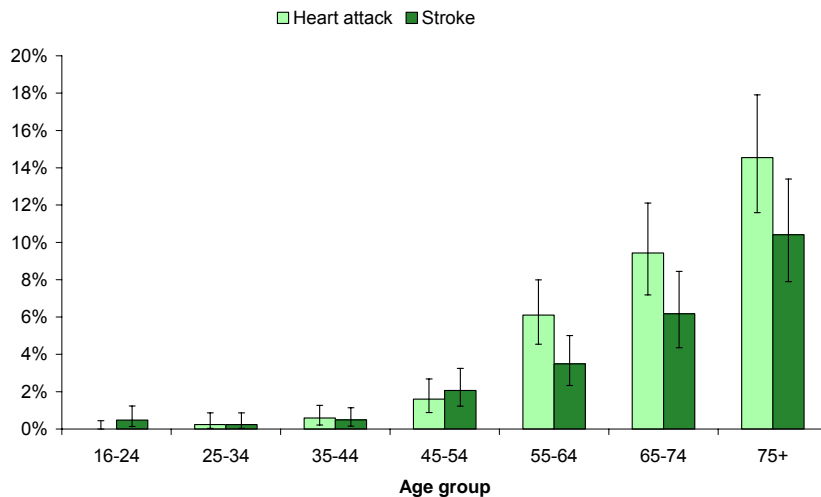
The prevalence of heart attack increases as deprivation increases, and adults from the most deprived areas are twice as likely to have suffered from a heart attack as adults from the least deprived areas (Figure 8, Table 6). However, this deprivation-related inequality is less pronounced for men than for women where the difference is nearly four-fold.

There is little difference between deprivation quintiles in terms of the percentage of adults who had suffered from a stroke.

**Figure 6: Percentage of adults that had ever had a heart attack or stroke, by gender.**



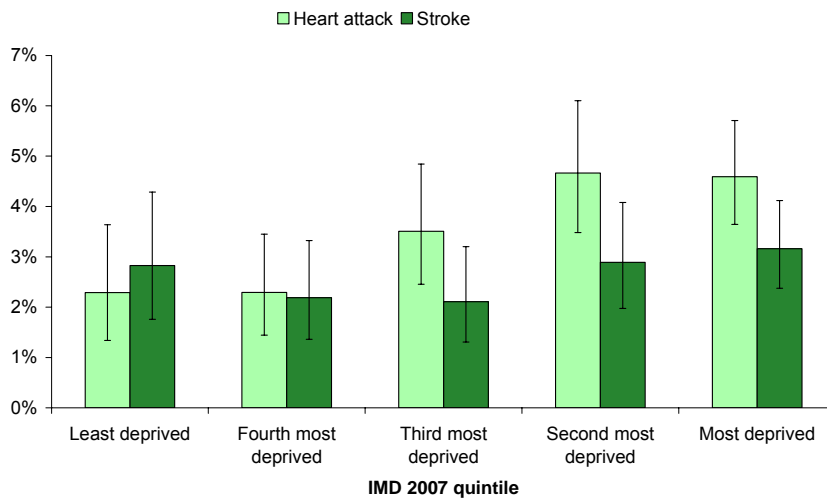
**Figure 7: Percentage of adults that had ever had a heart attack or stroke, by age group.**



**Table 5: Percentage of adults that had ever had a heart attack or stroke, by gender and age group.**

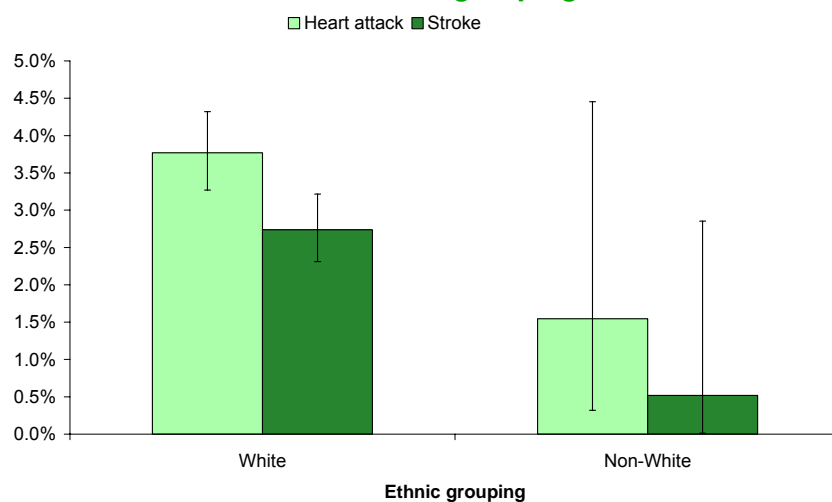
	Age group	Heart attack	Stroke
<b>Males</b>	All ages	4.9%	2.9%
	16-24	0.0%	0.7%
	25-34	0.5%	0.5%
	35-44	0.6%	0.0%
	45-54	2.1%	2.3%
	55-64	9.1%	4.0%
	65-74	14.9%	7.3%
	75+	20.1%	13.7%
<b>Females</b>	All ages	2.5%	2.5%
	16-24	0.0%	0.2%
	25-34	0.0%	0.0%
	35-44	0.6%	1.0%
	45-54	1.1%	1.8%
	55-64	3.0%	3.0%
	65-74	4.5%	5.2%
	75+	11.0%	8.5%
<b>Persons</b>	All ages	3.7%	2.7%
	16-24	0.0%	0.5%
	25-34	0.2%	0.2%
	35-44	0.6%	0.5%
	45-54	1.6%	2.1%
	55-64	6.1%	3.5%
	65-74	9.4%	6.2%
	75+	14.5%	10.4%

**Figure 8: Percentage of adults that had ever had a heart attack or stroke, by Index of Multiple Deprivation 2007 quintile.**



**Table 6: Percentage of adults that had ever had a heart attack or stroke, by gender and Index of Multiple Deprivation 2007 quintile.**

	IMD quintile	Heart attack	Stroke
<b>Males</b>	All quintiles	4.9%	2.9%
	Least deprived	3.9%	3.9%
	Fourth most deprived	3.7%	1.9%
	Third most deprived	4.3%	1.7%
	Second most deprived	5.4%	2.5%
	Most deprived	6.2%	4.0%
<b>Females</b>	All quintiles	2.5%	2.4%
	Least deprived	0.8%	1.8%
	Fourth most deprived	0.8%	2.2%
	Third most deprived	2.7%	2.5%
	Second most deprived	4.1%	3.2%
	Most deprived	3.0%	2.3%
<b>Persons</b>	All quintiles	3.7%	2.7%
	Least deprived	2.3%	2.8%
	Fourth most deprived	2.3%	2.2%
	Third most deprived	3.5%	2.1%
	Second most deprived	4.7%	2.9%
	Most deprived	4.6%	3.2%

**Figure 9: Percentage of adults that had ever had a heart attack or stroke, by gender and White and non-White ethnic groupings.****Table 7: Percentage of adults that had ever had a heart attack or stroke, by White and non-White ethnic groupings.**

	Ethnic grouping	Heart attack	Stroke
<b>M</b>	White	5.0%	2.9%
	Non-White	3.3%	1.1%
<b>F</b>	White	2.6%	2.6%
	Non-White	0.0%	0.0%
<b>P</b>	White	3.8%	2.7%
	Non-White	1.5%	0.5%

## 4.3 Chronic conditions

### 4.3.1 Background

A chronic condition<sup>xxxiii</sup> is a longstanding or recurrent condition, which cannot be cured but can be managed or controlled with effective lifestyle changes and/or medication.<sup>39; 40</sup> It is anticipated that approximately 15.4 million people in England suffer from a long-term condition, and 85% of mortality may be attributed to chronic diseases.<sup>xxxiv</sup> Chronic illness impacts not only upon quality of life of the individual with the chronic disease(s), but also relatives and carers<sup>40</sup> and is the leading cause of disability in England.

The likelihood of having a chronic condition increases with age, as does the likelihood of having more than one chronic condition.<sup>40</sup> The rising age of the population in recent years has brought with it an increase in the number of people who are suffering from one or more chronic conditions<sup>41</sup> and this is predicted to cause a further rise of 25% over the next 25 years. An estimated three out of every five people over the age of 60 years suffer from at least one long-term condition.

This overall increase in chronic conditions poses both medical and social challenges to the individual as well as to the NHS and the UK economy. Approximately 80% of GP consultations relate to chronic disease and increased prevalence of inpatient admissions as well as increased lengths of hospital stay in this population are apparent.<sup>40</sup> The cost of lost working days also impacts on the economy. The World Health Organization projected that by 2020, chronic conditions will be the main cause of disability in the world, placing new, long-term demands on health care systems<sup>42</sup>. They also have the potential to become the most expensive problem faced by health care systems in the future if they are not prevented or managed adequately.

The National Institute for Health and Clinical Excellence (NICE) Collaborating Centre for Chronic Conditions is currently looking at providing further guidance on a number of conditions: osteoarthritis, Type 2 diabetes, stroke, chronic kidney disease and rheumatoid arthritis in adults. It has also been identified that there are gaps in service provision and management and/or advice given to individuals who have more than one chronic condition. “Good chronic disease management can make a real difference, helping to prevent crises and deterioration, and enabling people living with chronic conditions to attain the best possible quality of life.”<sup>40 (p.2)</sup>

The *National Service Framework for Long-term Conditions*<sup>43</sup> is a ten year strategy, considered to be a key tool for delivering government strategy to support people with long-term conditions as outlined in *NHS Improvement Plan: Putting people at the heart of public services*.<sup>44</sup> It looks to provide a “structured and systematic” way of delivering health and social care services, treatment and care for people with long-term conditions. This also includes the involvement of transport, housing, employment, education, benefits and pensions providers. Public Service Agreement (PSA) targets set out in the framework aimed to:

- improve health outcomes for people with long-term conditions by offering a personalised care plan for vulnerable people most at risk;
- reduce emergency bed days by 5% by 2008 through improved care in primary care and community settings for people with long-term conditions; and
- improve access to services, ensuring that by 2008 no one waits more than 18 weeks from GP referral to hospital treatment, including all diagnostic procedures and tests.

It is suggested that the NSF is used in conjunction with *National Standards, Local Action: Health and Social Care Standards and Planning Framework 2005/06 – 2007/08*<sup>45</sup> and *Supporting People with Long-term Conditions – An NHS and Social Care Model*<sup>46</sup>, which look at providing consistent standards in health and social care across the country as well as

<sup>xxxiii</sup> The terms chronic disease, chronic condition, lifelong disease/condition, long-term disease/condition are commonly used interchangeably in literature.

<sup>xxxiv</sup> [www.dh.gov.uk/en/Healthcare/Longtermconditions/DH\\_084294](http://www.dh.gov.uk/en/Healthcare/Longtermconditions/DH_084294)



focussing upon and supporting local modernisation and/or improvements. In addition, the Green Paper *Independence, Well-being and Choice: Our vision for the future of social care for adults in England*<sup>47</sup> illustrates the future direction of social care for all adults of all age groups in England, by providing joined-up, responsive social care services which enable individuals to be supported while living independently.<sup>47</sup>

### 4.3.2 Existing information

The Health Survey for England 2006 showed that nationally 43% of adults over the age of 16 years reported having at least one longstanding illness - a decrease from 45% in 2003<sup>xxxv</sup>. More women (44%) than men (41%) reported having at least one longstanding illness, but there had been a decrease from 2003 for both genders (from 46% for women and from 44% for men).

The General Household Survey 2007 highlighted that 32% of respondents across England (32% for both men and women) stated they had a longstanding illness, over half of which (18%) said that it limited their activities.<sup>xxxvi</sup> Figures for the North West were similar to England, with 32% of all respondents stating they had a longstanding illness (31% of men and 34% of women), of whom over half (19%) said that it limited their activities.

The 2001 Census highlighted that approximately 16%<sup>xxxvii</sup> of individuals in the UK had a limiting long-term illness (LLTI). This included 10.3 million people living in private households and a further 530,000 people who were living in communal establishments. Overall, 48.1% of those aged 60 and over had a LLTI. More women than men (5.5 million and 4.8 million respectively) in private households had a LLTI. This difference may be due to women having longer life expectancy than men.

Differences between age groups were also highlighted for both men and women, with a trend that increased with age. For example, just over half a million individuals aged 0-15 years reported having a LLTI, which equated to 4.4% of all people living in private households. Of those aged 60 and over, 46.4% of those living in private households reported having an LLTI.

Those with a LLTI did not necessarily correlate their situation with self-perceptions of poor health. Forty-one per cent of those in private households reporting to have a LLTI stated that they were in 'fairly good' health. Sixteen per cent stated they were in 'good' health, while 43% stated that they were in 'not good' health.

The 2001 Census also highlighted that there were a number of factors that lead individuals to be more likely to have a LLTI: having no or low levels of educational qualifications; being economically inactive; being a lone parent; and living in social housing.

### 4.3.3 Asthma

#### Background

Asthma is the most common chronic disease in the UK<sup>40</sup>, caused by inflammation of the airways resulting in swelling and constriction. Although there is no cure for asthma, the condition is manageable with effective treatment and by maintaining a healthy lifestyle, including healthy weight, a good diet, exercise and avoiding smoking.

An estimated 5.2 million people in the UK are currently receiving treatment for asthma, of which 1.1 million are children. There is a person with asthma in one in five households in the UK.<sup>xxxviii</sup> Hospital data for England showed that approximately 65,300 individuals of all ages were admitted to hospital suffering from an asthma attack (29,852 males and 35,448 females).<sup>xxxix</sup>

<sup>xxxv</sup> [www.ic.nhs.uk/webfiles/publications/HSE06/ADULT%20TREND%20TABLES%202006.xls](http://www.ic.nhs.uk/webfiles/publications/HSE06/ADULT%20TREND%20TABLES%202006.xls)

<sup>xxxvi</sup> [www.statistics.gov.uk/downloads/theme\\_compendia/GHS07/GeneralHouseholdSurvey2007.pdf](http://www.statistics.gov.uk/downloads/theme_compendia/GHS07/GeneralHouseholdSurvey2007.pdf)

<sup>xxxvii</sup> The figure of 16% is after age standardisation. Prior to age standardisation, the figure is 18%.

<sup>xxxviii</sup> [www.asthma.org.uk/all\\_about\\_asthma/asthma\\_basics/index.html](http://www.asthma.org.uk/all_about_asthma/asthma_basics/index.html)

<sup>xxxix</sup> [www.laia.ac.uk/kf\\_asthma\\_03.htm#1](http://www.laia.ac.uk/kf_asthma_03.htm#1)

The rate of emergency admissions in 2006 was higher for women (14 per 10,000) than men (12 per 10,000).

### Existing information

The national Quality and Outcomes Framework (QOF) data from April 2006 to March 2007 showed the unadjusted prevalence<sup>xi</sup> for asthma to be 5.8% in England and 6.0% in the North West Strategic Health Authority. Within the North West, the highest prevalence of asthma was in Blackburn with Darwen PCT (6.8%) and the lowest in Knowsley PCT (5.2%).<sup>xii</sup>

Within the North West the prevalence rate for hospitalised asthma in the most deprived areas is double that in the least deprived areas.<sup>27</sup>

In 2004-06, the directly standardised mortality rate from asthma was 1.50 per 100,000 across England and 1.52 in the North West.<sup>xiii</sup>

## 4.3.4 Angina

### Background

Angina is chest pain or discomfort that occurs when the heart is not getting enough oxygen because of reduced blood flow. It is usually a symptom of coronary heart disease. Angina affects about 1 in 50 people, an estimated 1.4 million people in the UK.<sup>xiiii</sup>

There are a number of factors that make angina more likely, including being male, being middle-aged or older, smoking, having a high cholesterol level, having high blood pressure, being overweight or obese, doing little or no physical activity, having a family history of heart attacks and having diabetes. It has also been found to be more common among those in the manual social classes.<sup>34</sup> Angina may be prevented by adopting a healthy lifestyle and removing as many risk factors for CHD as possible (see section 4.2 for further details).

The *National Service Framework for Coronary Heart Disease*<sup>34</sup> includes angina in two standards: Standard 8 – Stable Angina: People with symptoms of angina or suspected angina should receive appropriate investigation and treatment to relieve their pain and reduce their risk of coronary events; and Standard 9 – Revascularisation: People with angina that is increasing in frequency or severity should be referred to a cardiologist urgently or, for those at greatest risk, as an emergency. For further details of the *National Service Framework for Coronary Heart Disease*<sup>34</sup> see section 4.2.

### Existing information

The Health Survey for England 2006 showed that overall prevalence of self-reported doctor diagnosed angina was higher in men than women: 4.8% of men and 3.3% of women said they 'ever had angina' and 2.3% of men and 1.7% of women said they had angina in the last 12 months.

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<sup>xi</sup> Unadjusted prevalence rates show these registers as a percentage of the total practice list size (all ages).

<sup>xii</sup> [www.ic.nhs.uk/statistics-and-data-collections/supporting-information/audits-and-performance/the-quality-and-outcomes-framework/qof-2006/07/qof-2006-07-data-tables](http://www.ic.nhs.uk/statistics-and-data-collections/supporting-information/audits-and-performance/the-quality-and-outcomes-framework/qof-2006/07/qof-2006-07-data-tables)

<sup>xiii</sup> [www.nchod.nhs.uk](http://www.nchod.nhs.uk)

<sup>xiiii</sup> [www.nhsdirect.nhs.uk/articles/article.aspx?articleId=23#](http://www.nhsdirect.nhs.uk/articles/article.aspx?articleId=23#)

### 4.3.5 Arthritis

#### Background

The word 'arthritis' means inflammation of a joint; any and all joints in the body can be affected. There are different types of arthritis, including rheumatoid arthritis, osteoarthritis and psoriatic arthritis.

Arthritis is the single main cause of physical disability in the UK and is suffered by approx eight to ten million people, of whom one million are under 45 years and 15,000 are children. The estimated cost of medical care for arthritis in the UK is between £240 and £600 million, with an additional £650 million cost due to time lost from work.<sup>40</sup>

Risk factors associated with, for example, rheumatoid arthritis, are an increased risk of mortality due to an increased risk of cardiovascular disease if the condition is not treated correctly.<sup>xliv</sup>

#### Existing information

Arthritis increases as age increases for both men and women, but the rate of arthritis and rheumatism is higher among women than men.<sup>48</sup> For example, The General Household Survey 2007 showed that the rate of arthritis (and rheumatism) among women in Great Britain was 1.6 times that of the male rate (87 per 1,000 population compared with 53 per 1,000 population)<sup>xlv</sup>.

### 4.3.6 Back problems

#### Background

Lower back pain is said to affect approximately 70% of people at some time in their lives.<sup>xlvi</sup> It can be triggered by everyday activities at home or work and poor posture. Back pain problems include torn discs, a pinched sciatic nerve, osteoporosis and inflammatory diseases.

Back pain is the largest single cause of sickness absence in the UK and has an economic impact both upon back pain sufferers (as they have to take time off work/are unable to work) and the economy (due to days lost per year due to sickness).

NICE have a number of documents looking at interventional procedures for spinal disorders.<sup>xlvii</sup> Guidance on the acute management of patients with chronic (longer than six weeks) non-specific low back pain is due to be released in May 2009.<sup>xlviii</sup>

#### Existing information

An Omnibus Survey conducted in 1998 investigated the prevalence of back pain (in the previous 12 months) in Great Britain.<sup>49</sup> This revealed that the rate of back pain was rising, with 40% of adults stating that they had suffered back pain lasting for more than one day in the previous 12 months, and 15% of these people experiencing pain throughout the year.<sup>xlix</sup> It also showed a gender split with men having consistently higher rates than women, and an increase with age. Of the working age adults surveyed, 5% said they had taken time off during the previous month citing backache as the cause.<sup>49</sup>

The General Household Survey 2007 found the prevalence of long standing back problems were similar in both males and females (37 per 1,000 population and 34 per 1,000 population respectively) and increased with age up to 45-64 years for both men and women (for example,

<sup>xliv</sup> [www.rheumatoid.org.uk/article.php?article\\_id=224](http://www.rheumatoid.org.uk/article.php?article_id=224)

<sup>xlv</sup> [www.statistics.gov.uk/downloads/theme\\_compendia/GHS07/GeneralHouseholdSurvey2007.pdf](http://www.statistics.gov.uk/downloads/theme_compendia/GHS07/GeneralHouseholdSurvey2007.pdf)

<sup>xlvi</sup> [www.nhsdirect.nhs.uk/articles/article.aspx?articleId=234](http://www.nhsdirect.nhs.uk/articles/article.aspx?articleId=234)

<sup>xlvii</sup> [www.nice.org.uk/guidance/index.jsp?action=byTopic&o=7305](http://www.nice.org.uk/guidance/index.jsp?action=byTopic&o=7305)

<sup>xlviii</sup> [www.nice.org.uk/guidance/index.jsp?action=byID&o=11645](http://www.nice.org.uk/guidance/index.jsp?action=byID&o=11645)

<sup>xlix</sup> Pain lasting longer than three months may be considered chronic.

56 per 1,000 population for males aged 45-64 compared with 25 per 1,000 population for males aged 16-44), but then subsequently decreasing.<sup>i</sup>

In the North West region, a linear relationship between deprivation and back pain has been identified, with those living in the most deprived areas being more likely to be recorded with back pain problems.<sup>27</sup>

### 4.3.7 Nervous trouble or depression

#### Background

Approximately one in six people suffer from mental health problems at some point in their lives, with as many as nine million people being affected nationally in any one year.<sup>50; 51; 52</sup> These problems can vary in both severity and level of incapacity<sup>53</sup> and pose a significant cost to the economy in terms of the impact upon health care and services and economic inactivity (specifically, inability to work). Health inequalities among people with severe or enduring mental illness are complex.<sup>50; 52</sup> People with severe or enduring mental illness are 1.5 times more likely to die prematurely than those without.<sup>50</sup> Factors that are likely to impact upon this include poverty, lifestyle (smoking, diet, exercise), access to health assessments and treatments and side effects of anti-psychotic and mood stabiliser medication.<sup>50; 54</sup>

There appears to be a gender split with more females than males suffering from some form of mental illness, including those under the age of 16 years.<sup>50; 55</sup> Mental and behavioural health problems (such as anxiety and depression) are the main cause for people in England to claim Incapacity Benefit: nationally a third of new claimants cite mental health conditions as the primary cause of their incapacity compared with one fifth in the mid 1990s.<sup>56</sup>

People with depression are also at a greater risk of committing suicide.<sup>ii</sup> In 2006, there were 5,554 suicides in adults aged 15 and over in the UK, three-quarters of which were among men.

The *National Service Framework for Mental Health: Modern Standards and Service Models*<sup>51</sup> addresses the mental health needs of working age adults up to 65 years. It looks at national standards for mental health, what they aim to achieve, how they should be developed and delivered and how to measure performance in every part of the country. The NSF contains six standards: mental health promotion (Standard 1); primary care and access to services (Standards 2 and 3); preventing suicide (Standards 4 and 5); and caring about carers (Standard 6). This was followed by *The National Service Framework for Mental Health - Five Years On*.<sup>52</sup>

A PSA target also exists to “substantially reduce mortality rates by 2010 from suicide and undetermined injury by at least 20%”.<sup>iii</sup>

In *Choosing Health: Making healthy choices easier*<sup>11</sup>, Chapter 6: a Health-promoting NHS identified mental health as a priority area for health improvement in England. It aims to promote healthy choices early in life and to provide a supportive environment for children and young people themselves, as well as their parents, families and carers (including maternity services). It also identifies gaps in service provision particularly for those aged 16 to 17 years. Chapter 7: Health and Work identified the importance of good mental health in the workplace and the impact of stress upon creating a healthy workplace environment.

Following on from this, *Choosing Health: Supporting the physical health needs of people with severe mental illness: Commissioning framework*<sup>57</sup> provided a best practice document to help primary care trusts plan, design, commission and monitor services that will deliver improved physical health and wellbeing for people living with severe or enduring mental illness.

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<sup>i</sup> [www.statistics.gov.uk/downloads/theme\\_compendia/GHS07/GeneralHouseholdSurvey2007.pdf](http://www.statistics.gov.uk/downloads/theme_compendia/GHS07/GeneralHouseholdSurvey2007.pdf)

<sup>ii</sup> [www.mentalhealth.org.uk/information/mental-health-a-z/depression-and-suicide-in-later-life](http://www.mentalhealth.org.uk/information/mental-health-a-z/depression-and-suicide-in-later-life)

<sup>iii</sup> [www.hm-treasury.gov.uk/d/sr04\\_psa\\_ch3.pdf](http://www.hm-treasury.gov.uk/d/sr04_psa_ch3.pdf)

The *National Service Framework for Coronary Heart Disease*<sup>34</sup> also singles out mentally ill people as part of a vulnerable group that requires special attention.

### Existing information

The Psychiatric Morbidity Survey carried out in 2000 highlighted that one in six adults in Britain had a neurotic disorder, such as anxiety and depression. The survey found that overall 9.2% of adults suffered from mixed anxiety and depressive disorder and that the prevalence was higher in women (11.2%) compared with men (7.2%). The prevalence of depressive episodes was lower for both men (2.6%) and women (3.0%).<sup>58</sup>

The Health Profiles 2008 show that across England 27.5 per 1,000 working age population claim Incapacity Benefit or Severe Disablement Allowance because of mental or behavioural disorders, while the rate in the North West was 40.5, significantly worse than the England average.

## 4.3.8 Diabetes

### Background

The number of individuals with diabetes is increasing year on year. Currently 2.3 million people in the UK have diabetes, a figure which is predicted to grow to more than 2.5 million by 2010 (9% of which will be due to an increase in obesity).<sup>59</sup> There are also an estimated 750,000 people who do not know that they have the condition. More recently, there has also been an increase in the number of children being diagnosed with the condition.<sup>60</sup>

Diabetes is the biggest cause of kidney failure and limb amputation, and the leading cause of blindness (in adults of working age). Diabetes also increases the risk of CHD and stroke<sup>35</sup>. There are two types of diabetes: Type 1 (insulin dependent diabetes) and Type 2 (non-insulin dependent diabetes), both of which can significantly reduce life expectancy by 15 and 10 years respectively. It is estimated that 90% of diabetics have Type 2 diabetes, which is preventable in two-thirds of the people who have it.

Risk factors for diabetes include:

- deprivation;
- being overweight;
- being over the age of 40;
- ethnicity (people from minority ethnic communities have up to a six times higher than average risk of developing diabetes);
- having a close family member who has Type 2 diabetes;
- having high blood pressure; and
- having recently suffered from a heart attack or stroke.

In treating Type 1 and Type 2 diabetes the aim is to reduce blood glucose and blood pressure levels to as near normal as possible. When combined with a healthy lifestyle, treatment helps improve wellbeing and protects against progressive damage to the eyes, kidneys, nerves, heart and major arteries. It is suggested that around 5% of total NHS spend<sup>61</sup> is used for the care of people with diabetes.

The *National Service Framework for Diabetes*<sup>59</sup> was the first document to produce a set of national standards for the treatment of diabetes and covers all aspects of care and prevention as well as the associated *National Service Framework for Diabetes Delivery Strategy*<sup>62</sup> that aims to tackle, over ten years, change and improvement of the quality of services and standardise across the country.

The document *Improving Diabetes Services - The NSF Two Years On*<sup>63</sup> looks at the 12 standards that are to be reached by 2013 including: the NHS will develop, implement and

monitor strategies to identify people who do not know they have diabetes (Standard 2); all young people and adults with diabetes will receive regular surveillance for the long-term complications of diabetes (Standard 10); and all people with diabetes requiring multi-agency support will receive integrated health and social care (Standard 12).

### Existing information

The Health Survey for England 2006 showed the prevalence of doctor diagnosed diabetes was slightly higher in men (5.6%) than women (4.2%). Trend data from 1994 to 2003 showed the prevalence of diabetes to have almost doubled for both sexes. More recent trend data from 2003 to 2006 showed a further increase from 4.3% to 5.6% in men and 3.4% to 4.2% in women.<sup>31</sup>

National QOF data provides information on the unadjusted prevalence<sup>liii</sup> of diabetes in England. The unadjusted prevalence was 3.7% across England and 3.8% in the North West Strategic Health Authority. Within the North West, the highest unadjusted prevalence for diabetes was in Blackburn with Darwen and Halton and St Helens PCTs (4.3%) and the lowest was in Western Cheshire PCT (3.5%).<sup>liv</sup>

## 4.3.9 Hypertension

### Background

Hypertension, or high blood pressure, affects over 16 million people in the UK<sup>lv</sup> and is a major cause of stroke, CHD and other illnesses including kidney disease, aortic aneurysm and heart failure.<sup>45</sup> There are a number of lifestyle factors that can help to reduce high blood pressure: increasing intake of fresh fruit and vegetables; drinking alcohol in moderation; stopping smoking; increasing levels of activity; weight loss if overweight; and reducing salt intake, as this is a major contributor to high blood pressure.

Hypertension is included in one of the key targets within the *NHS National Standards, Local Action: Health and Social Care Standards and Planning Framework*<sup>45</sup> and NICE has published the guidelines *Hypertension: Management of hypertension in primary care*.<sup>64</sup>

Effective management of hypertension may contribute towards the target to reduce the number of deaths from heart disease and stroke by 2010 as detailed in the *National Service Framework for Coronary Heart Disease*<sup>35</sup> and briefly outlined in section 4.2.

### Existing information

The Health Survey for England 2006<sup>lvi</sup> defined hypertension as “at least 140mmHg systolic and/or at least 90mmHg diastolic blood pressure or anyone receiving treatment for hypertension”. The survey found the prevalence for hypertension was higher in men than women (31% and 28% respectively). North West figures were similar: 31% for men and 27% for women.<sup>31</sup>

The national QOF data for hypertension showed the unadjusted prevalence<sup>lvii</sup> to be 12.5% in England and slightly higher in the North West at 12.8%. Sefton PCT (14.5%) had the highest unadjusted prevalence for hypertension and Manchester PCT (10.2%) the lowest.<sup>lviii</sup>

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<sup>liii</sup> Unadjusted prevalence rates show these registers as a percentage of the total practice list size (all ages).

<sup>liv</sup> [www.ic.nhs.uk/statistics-and-data-collections/supporting-information/audits-and-performance/the-quality-and-outcomes-framework/qof-2006/07/qof-2006-07-data-tables](http://www.ic.nhs.uk/statistics-and-data-collections/supporting-information/audits-and-performance/the-quality-and-outcomes-framework/qof-2006/07/qof-2006-07-data-tables)

<sup>lv</sup> [www.bpassoc.org.uk](http://www.bpassoc.org.uk)

<sup>lvi</sup> In order to determine the prevalence of hypertension in the population the Health Survey for England record participants' blood pressure using the Omron hem-907 blood pressure monitor. Individuals who were not eligible for blood pressure measurement were children under the age of five and participants who were pregnant. As blood pressure can be higher after smoking, eating, drinking alcohol or partaking in vigorous physical activity participants were asked to refrain from these activities 30 minutes before they arrived.<sup>137</sup>

<sup>lvii</sup> Unadjusted prevalence rates show these registers as a percentage of the total practice list size (all ages).

#### 4.3.10 Survey and analysis methodology

Participants were asked, through separate questions, if they had suffered from any of the following illnesses over the last 12 months:

- asthma;
- angina;
- arthritis;
- nervous trouble or depression;
- sciatica, lumbago or recurring backache;
- diabetes; and/or
- high blood pressure.

These questions appear in the Health Survey for England questionnaire and are commonly used in other health and lifestyle surveys.

Responses for each individual question were analysed. Individual responses were also aggregated to derive an additional variable in the dataset which indicated whether the respondent had stated that they suffered from any (but at least one) of the listed conditions within the last twelve months.

#### 4.3.11 North West survey results: Chronic conditions

Nearly half (48.7%) of all adults had suffered from at least one chronic condition listed (asthma, angina, arthritis, back problems, nervous trouble or depression, diabetes, hypertension) in the last twelve months (Figure 10, Table 8). Arthritis (suffered by 17.8% of adults), hypertension (17.6%) and back problems (16.7%) were the most commonly reported chronic conditions.

Significantly more women (51.7%) than men (45.4%) had suffered from at least one chronic condition. The largest differences between genders were seen for arthritis (women were 1.7 times more likely to suffer with this than men), nervous trouble or depression and back problems -these differences were significant.

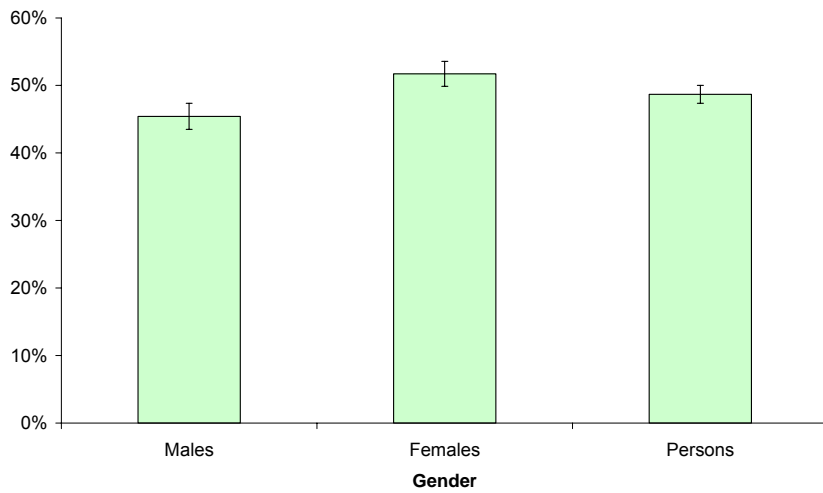
The percentage of adults suffering from at least one chronic condition increases with age: around one in five (21.1%) people aged 16-24 years had suffered from at least one condition compared with over four out of five (82.9%) people aged 75+ years (Figure 11). However, there are variations by condition and age group. The prevalence of some conditions – such as angina, arthritis and hypertension – grows rapidly after the age of 45, while nervous trouble or depression is more common among the middle age groups than the youngest and oldest age groups. Asthma is more prevalent among people aged 65-74 years and 16-24 years than other age groups.

There was little difference by deprivation in terms of the percentage of adults suffering from at least one chronic condition in the last 12 months (Figure 12, Table 9). However, angina, back problems, diabetes and nervous trouble or depression were more common in the most deprived areas than the least deprived.

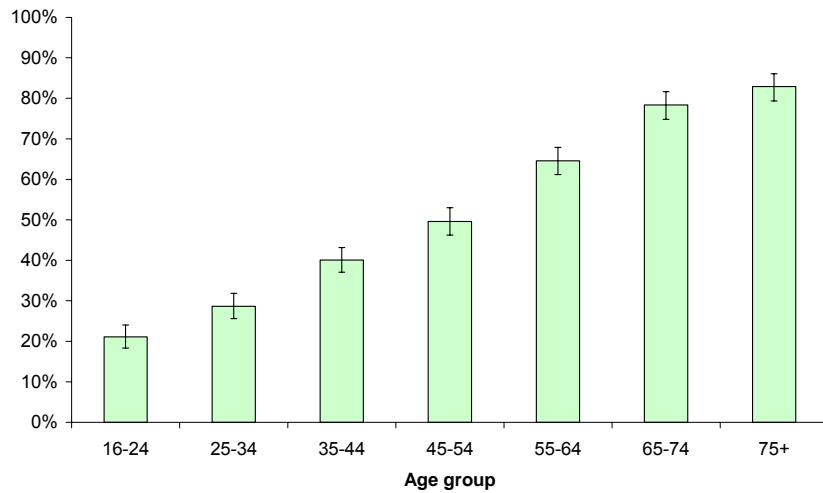
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<sup>viii</sup> [www.ic.nhs.uk/statistics-and-data-collections/supporting-information/audits-and-performance/the-quality-and-outcomes-framework/qof-2006/07/qof-2006-07-data-tables](http://www.ic.nhs.uk/statistics-and-data-collections/supporting-information/audits-and-performance/the-quality-and-outcomes-framework/qof-2006/07/qof-2006-07-data-tables)

**Figure 10: Percentage of adults suffering from at least one chronic condition in the last twelve months, by gender.**



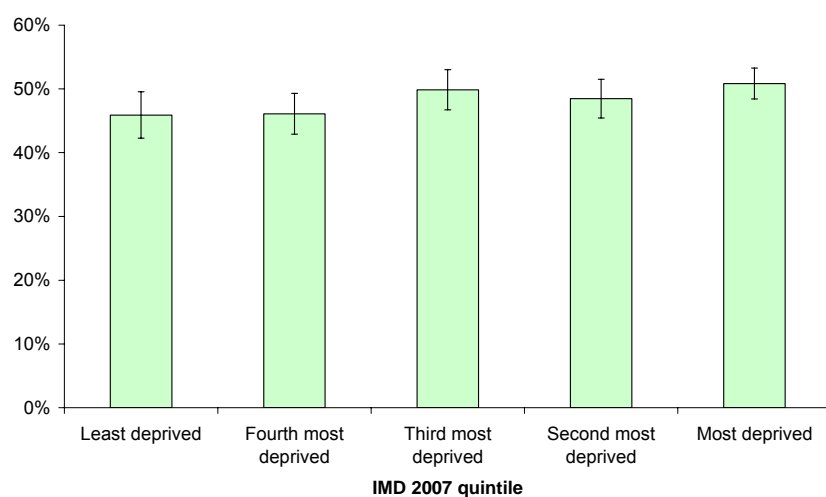
**Figure 11: Percentage of adults suffering from at least one chronic condition in the last twelve months, by age group.**





**Table 8: Percentage of adults suffering from chronic conditions in the last twelve months, by gender and age group.**

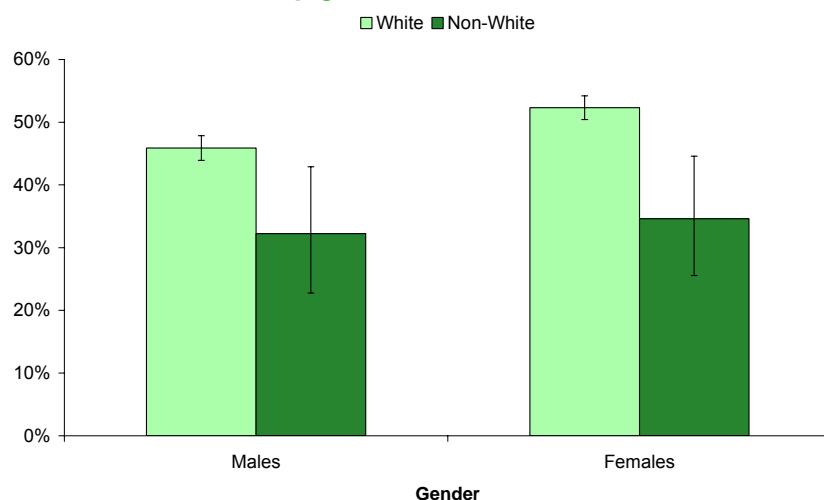
	Age group	Asthma	Angina	Arthritis	Back problems	Nervous trouble or depression	Diabetes	Hyper-tension	At least one of previous
<b>Males</b>	All ages	8.7%	3.4%	13.1%	14.5%	7.8%	5.2%	17.3%	45.4%
	16-24	10.0%	0.0%	0.7%	4.1%	2.2%	0.2%	0.7%	17.0%
	25-34	7.7%	0.2%	1.5%	10.1%	7.5%	1.2%	5.6%	26.4%
	35-44	9.1%	0.8%	4.8%	16.5%	7.7%	2.2%	7.7%	38.7%
	45-54	6.7%	1.6%	10.2%	20.4%	10.2%	4.2%	15.7%	46.4%
	55-64	8.6%	4.5%	25.7%	15.9%	12.8%	9.3%	33.8%	65.0%
	65-74	9.9%	10.9%	37.1%	19.0%	7.3%	14.6%	44.0%	78.9%
	75+	10.0%	15.8%	33.7%	19.6%	5.8%	12.6%	34.7%	76.2%
<b>Females</b>	All ages	9.5%	3.6%	22.2%	18.6%	11.7%	4.8%	18.0%	51.7%
	16-24	11.5%	0.0%	1.5%	7.1%	7.6%	0.2%	2.7%	25.2%
	25-34	7.4%	0.2%	2.1%	15.5%	9.5%	1.2%	3.1%	30.8%
	35-44	9.7%	0.6%	7.7%	15.5%	15.6%	3.1%	6.8%	41.5%
	45-54	7.3%	2.3%	17.7%	22.8%	14.4%	3.6%	15.3%	52.7%
	55-64	8.9%	4.7%	39.7%	22.2%	12.8%	5.9%	29.8%	64.3%
	65-74	13.3%	6.8%	48.9%	24.6%	10.1%	9.7%	39.5%	77.9%
	75+	9.4%	14.4%	56.4%	26.3%	10.0%	13.8%	43.4%	86.9%
<b>Persons</b>	All ages	9.1%	3.5%	17.8%	16.7%	9.8%	5.0%	17.6%	48.7%
	16-24	10.8%	0.0%	1.1%	5.7%	4.8%	0.2%	1.6%	21.1%
	25-34	7.6%	0.2%	1.8%	12.7%	8.5%	1.1%	4.4%	28.7%
	35-44	9.4%	0.7%	6.3%	16.0%	11.6%	2.6%	7.2%	40.1%
	45-54	7.1%	2.0%	14.0%	21.6%	12.3%	4.0%	15.5%	49.6%
	55-64	8.8%	4.6%	32.8%	19.1%	12.8%	7.6%	31.7%	64.6%
	65-74	11.6%	8.9%	43.3%	22.0%	8.9%	12.0%	41.7%	78.4%
	75+	9.6%	14.9%	47.9%	23.9%	8.4%	13.2%	40.3%	82.9%

**Figure 12: Percentage of adults suffering from at least one chronic condition in the last twelve months, by Index of Multiple Deprivation 2007.**

**Table 9: Percentage of adults suffering from chronic conditions in the last twelve months, by gender and Index of Multiple Deprivation 2007 quintile.**

	IMD quintile	Asthma	Angina	Arthritis	Back problems	Nervous trouble or depression	Diabetes	Hyper-tension	At least one of previous
<b>Males</b>	All quintiles	8.7%	3.4%	13.1%	14.6%	7.8%	5.2%	17.3%	45.4%
	Least deprived	6.4%	2.5%	11.1%	10.3%	5.8%	5.3%	17.2%	42.1%
	Fourth most deprived	8.2%	3.4%	14.4%	15.0%	4.9%	5.4%	15.7%	44.3%
	Third most deprived	10.1%	2.1%	13.3%	15.3%	8.3%	4.3%	17.8%	47.1%
	Second most deprived	9.1%	2.3%	12.2%	14.9%	7.0%	4.3%	16.3%	44.3%
	Most deprived	9.0%	5.2%	13.8%	15.6%	10.5%	6.1%	18.6%	47.3%
<b>Females</b>	All quintiles	9.5%	3.6%	22.1%	18.6%	11.7%	4.8%	18.0%	51.7%
	Least deprived	9.1%	2.3%	19.9%	17.3%	8.9%	2.9%	15.4%	49.6%
	Fourth most deprived	6.3%	2.2%	20.4%	16.4%	9.5%	4.5%	17.0%	47.8%
	Third most deprived	9.6%	3.1%	22.8%	18.3%	10.7%	5.3%	17.2%	52.4%
	Second most deprived	11.0%	4.9%	22.3%	17.8%	13.1%	5.8%	19.1%	52.3%
	Most deprived	10.4%	4.5%	23.6%	21.1%	14.0%	4.9%	19.5%	54.1%
<b>Persons</b>	All quintiles	9.1%	3.5%	17.8%	16.6%	9.8%	5.0%	17.7%	48.7%
	Least deprived	7.8%	2.3%	15.7%	13.9%	7.4%	4.0%	16.3%	45.9%
	Fourth most deprived	7.2%	2.8%	17.5%	15.7%	7.3%	4.9%	16.4%	46.1%
	Third most deprived	9.8%	2.6%	18.3%	16.9%	9.5%	4.8%	17.5%	49.8%
	Second most deprived	10.1%	3.6%	17.4%	16.4%	10.2%	5.1%	17.7%	48.5%
	Most deprived	9.7%	4.9%	18.9%	18.5%	12.3%	5.5%	19.0%	50.8%

**Figure 13: Percentage of adults suffering from at least one chronic condition in the last twelve months, by gender and White and non-White ethnic groupings.**



**Table 10: Percentage of adults suffering from chronic conditions in the last twelve months, by gender and White and non-White ethnic groupings.**

	Ethnic grouping	Asthma	Angina	Arthritis	Back problems	Nervous trouble or depression	Diabetes	Hyper-tension	At least one of previous
<b>M</b>	White	8.8%	3.4%	13.4%	14.5%	7.8%	5.2%	17.6%	45.9%
	Non-White	7.8%	2.2%	5.6%	16.5%	8.9%	4.4%	9.9%	32.2%
<b>F</b>	White	9.5%	3.7%	22.8%	18.7%	11.9%	5.0%	18.5%	52.3%
	Non-White	7.8%	0.0%	4.9%	17.5%	6.8%	1.0%	6.8%	34.6%
<b>P</b>	White	9.2%	3.6%	18.3%	16.7%	9.9%	5.1%	18.0%	49.2%
	Non-White	7.7%	1.0%	5.2%	17.1%	7.7%	2.6%	8.2%	33.7%

## 5. Obesity

### 5.1 Background

Obesity is defined as “a condition in which weight gain has reached the point of seriously endangering health”.<sup>65(p.7)</sup> Currently, obesity has breached the 15% critical threshold set by the World Health Organization for epidemics needing intervention<sup>66</sup>, with an estimated one billion people in the world now overweight, including 300 million obese individuals.<sup>67</sup> In England, the level of obesity has almost trebled over the last 20 years.

NWPHO recently produced the *Healthy Weight in the North West Population*<sup>1</sup> synthesis report, which aimed to bring together policy, evidence and intelligence on the topic of ‘unhealthy weight’ (overweight or obese) among the North West region's adults and children, and summarise a set of actions that are needed to tackle this problem. The report highlights that obesity results from a complex interaction between genes, behaviour and the environment, with diet, physical activity and family history being three major factors which contribute to obesity. It also highlights a number of other risk factors associated with excess weight, including ethnicity and socioeconomic status/deprivation.

Being overweight or obese increases the risk of a range of physical, reproductive and physiological illnesses and diseases that can have a significant health impact on individuals including asthma<sup>68</sup> (as obesity has the capacity to impact upon lung function); cancer (approximately 10% of all cancer deaths among non-smokers are related to obesity)<sup>69</sup>; coronary heart disease (the risk of coronary artery disease increases 3.6 times for each unit increase in BMI)<sup>69</sup>; Type 2 diabetes (the risk of this is estimated to be 20 times greater with people who have a BMI over 35, compared with those with a BMI between 18 and 25)<sup>70</sup>; high blood pressure (hypertension) (85% of people with high blood pressure have a BMI greater than 25)<sup>69</sup>; complications in pregnancy; impaired fertility and other conditions.

Obese adults who were overweight as adolescents have greater levels of weight-related ill health and are at a higher risk of early mortality than adults who become obese in adulthood.<sup>68</sup>

Obesity places a significant burden on the NHS with direct costs estimated at approximately £4.2 billion and the *Foresight* report<sup>71</sup> forecasts this will more than double by 2050. It also has an impact on society and the wider economy through sickness absence and reduced productivity, and these indirect costs are estimated to be around £16 billion. The wider costs of overweight and obesity to society and business are expected to reach approximately £50 billion per year by 2050 if the current trend continues.<sup>71</sup>

The Government's stated ambition is to be the first major nation to reverse the rising tide of obesity and overweight in the population.<sup>5</sup> In January 2008, *Healthy Weight, Healthy Lives: a Cross-Government Strategy for England*<sup>5</sup> was published to set out how this may be achieved. It also responds to the findings of the *Foresight* report<sup>71</sup> and builds on previous public health policy to tackle obesity, as outlined in *Saving Lives: Our Healthier Nation*<sup>32</sup> and *Choosing Health: Making healthy choices easier*.<sup>11</sup>

The importance of tackling obesity has also been given a high profile in the *Comprehensive Spending Review 2007*<sup>72</sup> with the PSA target to “reduce the proportion of overweight and obese children to 2000 levels by 2020 in the context of tackling obesity across the population”.<sup>72</sup> This target links to various other government work such as *Every Child Matters* and *Opportunity for All* Indicator 14.<sup>73</sup>

A number of National Service Frameworks have also outlined future plans by the Government to implement policies to reduce overweight and obesity in the population.<sup>34; 74; 36</sup>

A number of guidance documents have been produced by NICE, surrounding the management of weight issues<sup>75</sup>, maternal and child nutrition<sup>76</sup>, and physical activity.<sup>76</sup>

For further policy, literature and intelligence relating to weight issues in England and the North West, please refer to the NWPHE *Synthesis Report: Healthy Weight in the North West Population*.<sup>1</sup>

## 5.2 Existing information

The Health Survey for England 2006<sup>lx</sup> showed that nationally 24% of men and 24% of women were obese and in the North West 23% of men and 22% of women were obese.<sup>31</sup>

These national results also show that obesity increases with age up to 55-64 years (33%) and 65-74 years (31%) for men, but then sharply decreases among men aged 75+ years (18%). The prevalence of obesity in women increases with age up to 65-74 years (35%) and then decreases to 27% among women aged 75+ years. The survey also showed obesity to be linked to income. Men in the second lowest income quintile had the highest prevalence of obesity (27%), while the lowest prevalence was found in the highest income quintile (21%). Women in the lowest income quintile had highest prevalence of obesity (32%), while the lowest prevalence was also seen in the highest income quintile (19%).

National QOF data shows that the unadjusted prevalence<sup>lx</sup> of obesity was 7.4% in England and 7.8% in the North West.<sup>lxii</sup> Within the North West, Blackpool and Knowsley PCTs had the highest unadjusted prevalence of obesity (9.9%), while Trafford PCT had the lowest (6.4%).<sup>lxii</sup>

Model based estimates for 2003-05 show the prevalence of adult obesity in England to be 23.6% and 24.5% in the North West.<sup>lxiii</sup> Within the North West, Copeland (29.4%), Wigan (28.5%), Allerdale (28.3%), Eden (28.3%) and Salford (27.9%) had the highest proportions of obesity, while Macclesfield (20.1%), Chester (21.1%), Trafford (21.7%), Wirral (21.7%) and Liverpool (21.9%) had the lowest.

Future estimations suggest that in the UK, 60% of adult men, 50% of women and 25% of children will be obese by the year 2050.<sup>71</sup>

## 5.3 Survey and analysis methodology

Respondents were asked for both their height and weight, in either an imperial or metric format. If the respondent gave their height or weight in an imperial measure, it was subsequently converted to a metric measure in the dataset. These measures were then used to calculate body mass index (BMI). BMI is a simple measurement of body weight in relation to height and is currently the most effective and reliable methodology available to determine obesity. It is calculated by taking the individual's weight in kilograms and dividing it by the square of their height in metres.

$BMI = \text{weight (kg)} / \text{height (m)}^2$

Once respondents' BMIs were calculated, they were grouped into the following categories, using the most widely used definitions<sup>5; 77</sup>:

<sup>lx</sup> In order to determine an individual's BMI the Health Survey for England measure participants' height and weight. Height measurements were taken using a portable stadiometer and recorded in centimetres and millimetres and weight measurements were taken in metric units using calibrated electronic bathroom scales.

<sup>lx</sup> Unadjusted prevalence rates show these registers as a percentage of the total practice list size (all ages).

<sup>lxii</sup> Particular care may be taken when looking at the QOF obesity data. This indicator is based upon BMI measurement, yet many people registered with a GP may not have had their BMI measured within the last 15 months. Therefore it may not provide an accurate picture of their actual obesity status, possibly underestimating the prevalence of obesity.

<sup>lxiii</sup> [www.ic.nhs.uk/statistics-and-data-collections/supporting-information/audits-and-performance/the-quality-and-outcomes-framework/qof-2006/07/qof-2006-07-data-tables](http://www.ic.nhs.uk/statistics-and-data-collections/supporting-information/audits-and-performance/the-quality-and-outcomes-framework/qof-2006/07/qof-2006-07-data-tables)

<sup>lxiii</sup> Data published by The Information Centre for Health and Social Care (IC) 2007

[www.ic.nhs.uk/statistics-and-data-collections/population-and-geography/neighbourhood-statistics/neighbourhood-statistics:-model-based-estimates-of-healthy-lifestyles-behaviours-at-la-level-2003-05](http://www.ic.nhs.uk/statistics-and-data-collections/population-and-geography/neighbourhood-statistics/neighbourhood-statistics:-model-based-estimates-of-healthy-lifestyles-behaviours-at-la-level-2003-05)

<b>BMI</b>	<b>Category</b>
Less than 18.5	Underweight
18.5-24.9	Normal weight
25-29.9	Overweight
30+	Obese

This method is routinely used in surveys such as the Health Survey for England (HSE) and the General Household Survey (GHS).

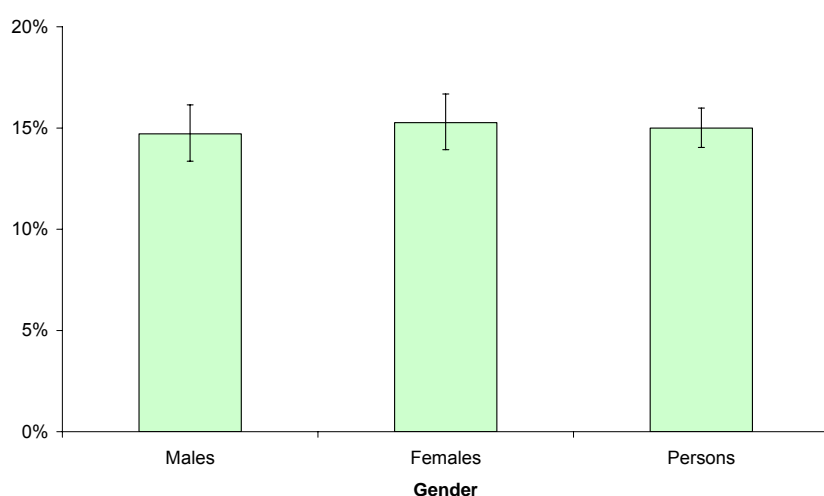
#### 5.4 North West survey results: Obesity

Overall, 15.0% of adults had an obese BMI (Figure 14, Table 11). This proportion is lower than may be expected, given other published information such as the Health Survey for England where respondents' height and weight is actually measured. The response rates were lower for these questions than other questions in the survey and it is possible that heavier people declined to answer. In addition, with self-report it is also possible that respondents either unintentionally or intentionally misrepresented their height and weight. Self-report surveys have the potential to underestimate weight and also to inaccurately record height and this may mean that levels of obesity are greater than suggested here, since studies have shown that individuals have a tendency to over-report body height and under-report body weight.<sup>78; 79</sup> However, this survey can still identify the similarities and differences in obesity levels between various subgroups of the North West population.

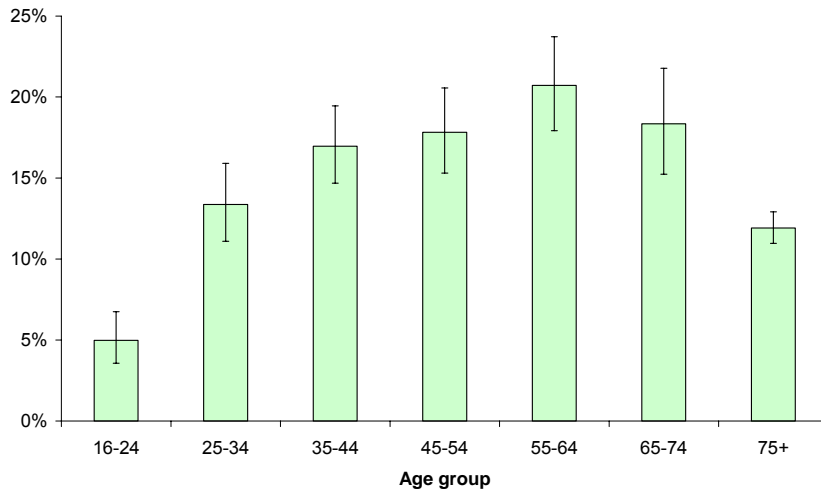
The survey showed that there was no significant difference between the percentage of men (14.7%) and women (15.3%) who were obese. However, obesity increases as age increases up to and including the 55-64 years age group (Figure 15). Around one in twenty people aged 16-24 years are obese compared with around one in five people aged 55-64 years. After 65 years, obesity decreases and the percentage of adults aged 75+ years who are obese is lower than the percentage aged 25-34 years.

There is also a relationship between obesity and deprivation (Figure 16, Table 12). Adults in the most deprived areas are 1.7 times more likely to be obese than adults in the least deprived areas. Even adults from the middle areas of deprivation are significantly more likely to be obese than adults from the least and second least deprived areas.

**Figure 14: Percentage of adults who are obese, by gender.**



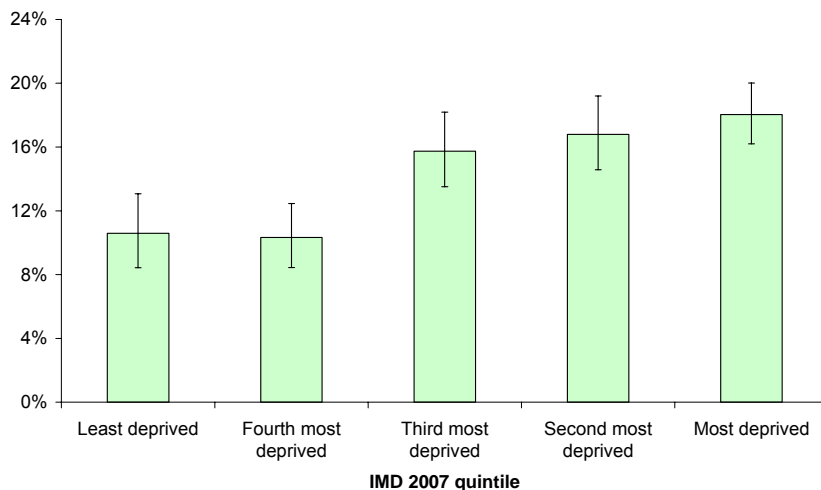
**Figure 15: Percentage of adults who are obese, by age group.**



**Table 11: Percentage of adults who are obese, by gender and age group.**

Age group	Males	Females	Persons
All ages	14.7%	15.3%	15.0%
16-24	4.4%	5.3%	5.0%
25-34	14.6%	12.1%	13.4%
35-44	16.3%	17.5%	17.0%
45-54	18.3%	17.3%	17.8%
55-64	19.9%	21.3%	20.7%
65-74	17.5%	19.1%	18.3%
75+	9.0%	13.7%	11.9%

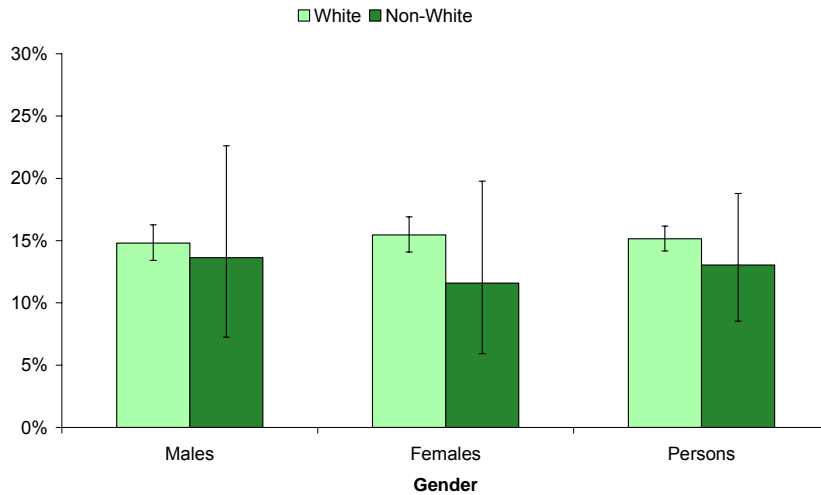
**Figure 16: Percentage of adults who are obese, by Index of Multiple Deprivation 2007 quintile.**



**Table 12: Percentage of adults who are obese, by gender and Index of Multiple Deprivation 2007 quintile.**

IMD quintile	Males	Females	Persons
All quintiles	14.7%	15.3%	15.0%
Least deprived	9.7%	11.4%	10.6%
Fourth most deprived	10.6%	10.1%	10.3%
Third most deprived	17.4%	14.2%	15.7%
Second most deprived	15.3%	18.2%	16.8%
Most deprived	17.3%	18.7%	18.0%

**Figure 17: Percentage of adults who are obese, by gender and White and non-White ethnic groupings.**



**Table 13: Percentage of adults who are obese, by White and non-White ethnic groupings.**

<b>Ethnic grouping</b>	<b>Males</b>	<b>Females</b>	<b>Persons</b>
White	14.8%	15.5%	15.1%
Non-White	13.6%	11.6%	13.0%

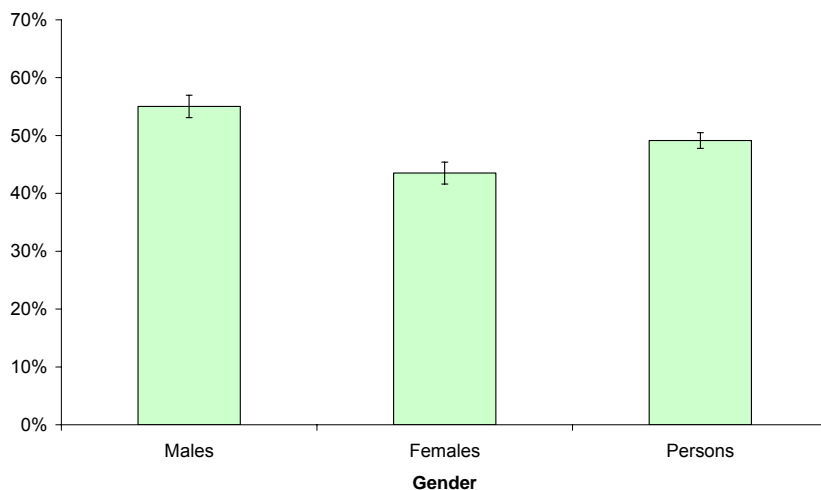
### 5.5 North West survey results: Obese or overweight

Overall, 49.1% of adults are obese or overweight, significantly more men (55.0%) than women (43.5%) (Figure 18, Table 14).

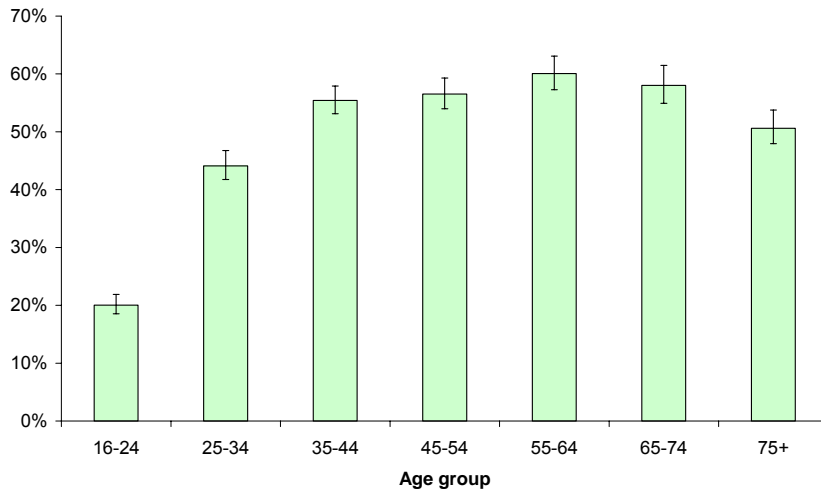
Obesity and overweight increases with age up to and including the 55-64 years age group, of whom 60.1% are obese or overweight, nearly three times higher than the levels among people aged 16-24 years (19.9%) (Figure 19). Significantly fewer people aged 16-24 years and 25-34 years are obese or overweight compared with all other age groups.

Obesity and overweight is far less influenced by deprivation than obesity alone (Figure 20, Table 15). While there is a slight increase in obese and overweight as deprivation increases, no single quintile is significantly different to any other.

**Figure 18: Percentage of adults who are obese or overweight, by gender.**



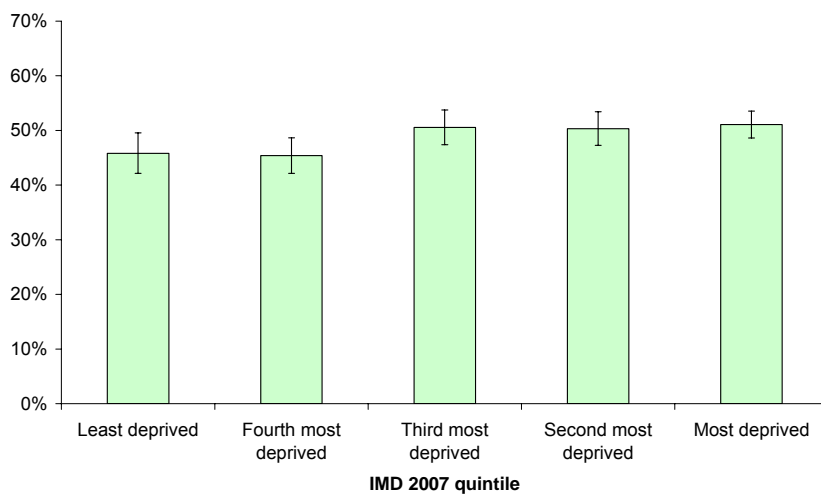
**Figure 19: Percentage of adults who are obese or overweight, by age group.**



**Table 14: Percentage of adults who are obese or overweight, by gender and age group.**

Age group	Males	Females	Persons
All ages	55.0%	43.5%	49.1%
16-24	23.6%	16.1%	20.0%
25-34	51.7%	36.4%	44.1%
35-44	66.6%	44.4%	55.4%
45-54	63.1%	49.9%	56.5%
55-64	64.2%	55.9%	60.1%
65-74	59.9%	56.2%	58.0%
75+	55.3%	47.7%	50.6%

**Figure 20: Percentage of adults who are obese or overweight, by Index of Multiple Deprivation 2007 quintile.**

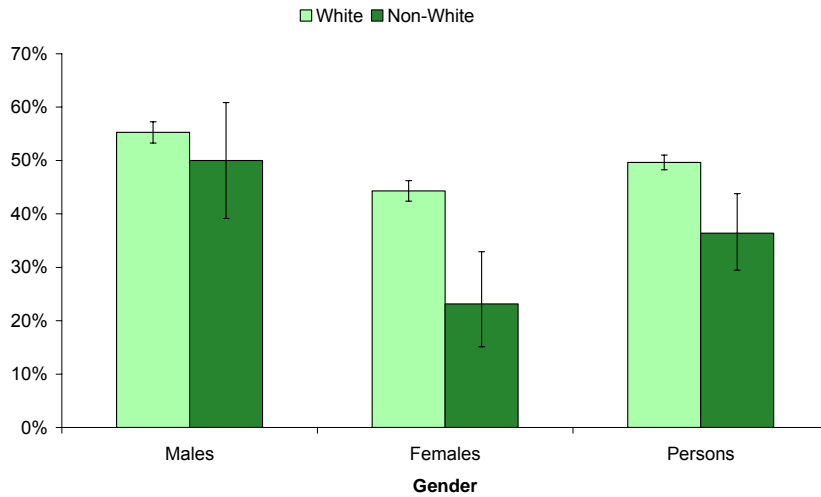


**Table 15: Percentage of adults who are obese or overweight, by gender and Index of Multiple Deprivation 2007 quintile.**

IMD quintile	Males	Females	Persons
All quintiles	55.0%	43.5%	49.1%
Least deprived	50.6%	41.3%	45.8%
Fourth most deprived	56.4%	34.9%	45.4%
Third most deprived	58.9%	42.8%	50.6%
Second most deprived	52.5%	48.3%	50.3%
Most deprived	55.5%	46.9%	51.1%



**Figure 21: Percentage of adults who are obese or overweight, by gender and White and non-White ethnic groupings.**



**Table 16: Percentage of adults who are obese or overweight, by White and non-White ethnic groupings.**

<b>Ethnic grouping</b>	<b>Males</b>	<b>Females</b>	<b>Persons</b>
White	55.3%	44.3%	49.6%
Non-White	50.0%	23.2%	36.4%

## 6. Diet and Nutrition

### 6.1 Background

A healthy and balanced diet is vital to maintaining a healthy lifestyle and a healthy weight<sup>2</sup> and involves getting the right amount of vitamins and nutrients. It not only impacts upon present health conditions, but can have positive effects in the long term. For example, it can reduce the prevalence of mortality and morbidity in the population<sup>2; 80</sup> from such conditions as coronary heart disease, stroke, some cancers (approximately one-third of cancers can be attributed to poor diet and nutrition), Type 2 diabetes, obesity and high blood pressure.<sup>lxiv; 2; 11; 32</sup> It is currently estimated that treating ill health related to diet costs the NHS £2 billion each year.<sup>11</sup> Poor diet and nutritional imbalance account for over a hundred times more preventable deaths than food borne infections.<sup>81</sup>

A recent report highlighted a number of influencing factors that may be addressed when encouraging individuals to adopt more healthy eating behaviour, which include a lack of knowledge of what makes up a healthy diet; a lack of time to shop and read food labels adequately as to their content; and perceived higher costs of healthy options.<sup>82</sup>

Inequalities in diet are present across the country and between socio-economic groups<sup>2; 31</sup>, with poor dietary behaviours seen to cluster in areas of deprivation.<sup>11; 83</sup> In turn, nutrition may contribute to inequalities in health.<sup>11; 83</sup>

The *Family Spending 2007 edition*<sup>84</sup> survey highlighted that approximately £828 million is spent per week on food and non-alcoholic drinks in large supermarkets and a further £334 million in other outlets: this produces an average weekly spend (for all households) of £33.40 per week and £13.50 per week respectively.<sup>lxv</sup> From this data, it is also evident that the total average weekly household expenditure on food and non-alcoholic drinks differs by income group: from £24.50 (the lowest 10%) to £71.90 (the highest 10%), almost three times higher.

The Government highlighted diet and nutrition as a key action area in *The NHS Cancer Plan*<sup>74</sup> and the *National Service Frameworks for Coronary Heart Disease*<sup>34</sup>, *Diabetes*<sup>59</sup> and *Older People*.<sup>36</sup>

*Choosing a Better Diet: a food and health action plan*<sup>2</sup> brings together the commitments to food and nutrition that were highlighted in *Choosing Health: Making healthy choices easier*.<sup>11</sup> It highlights the coordinated action of a range of organisations at national, regional and local levels necessary to improve the health of the population. The commitment to this food and health action plan was made in the *Government Strategy for Sustainable Farming and Food (SSFF)*.<sup>85</sup>

There are a number of objectives to improve diet included in *Choosing a Better Diet: a food and health action plan*<sup>2</sup> which include aims to increase the average consumption of a variety of fruit and vegetables to at least five portions per day and also the intake of dietary fibre to 18 grams per day as well as reducing the average intake of salt to 6 grams per day. These objectives are to be met in various ways, such as through the 5 A DAY campaign; social marketing strategies; personal health guidance; simplified food labelling; school food; encouraged uptake of breastfeeding; workplace healthy eating; and policies on advertising and promotion of food to children (from 1 January 2009, all foods high in fat, salt or sugar advertisements to children have been removed<sup>lxvi</sup>).

The WHO Europe *First Action Plan for Food and Nutrition Policy: 2000-2005*<sup>86</sup> stated that “By the year 2015, people across society should have adopted healthier patterns of living”. This policy has recently been updated to cover the period 2007 to 2012.<sup>87</sup>

<sup>lxiv</sup> It is also important to take into account other factors affecting the risk of these diseases/illnesses, such as smoking, alcohol and exercise.<sup>83</sup>

<sup>lxv</sup> These averages are based upon the recorded households in the survey sample.

<sup>lxvi</sup> [www.ofcom.org.uk/research/tv/reports/update](http://www.ofcom.org.uk/research/tv/reports/update)

Further information may also be found in the *Healthy Weight in the North West* synthesis report.<sup>1</sup>

## 6.2 Bread

### 6.2.1 Background

The current average consumption of bread is less than four medium slices a day and medical experts recommend that consumption should be increased by 50%. It has been suggested that "if everyone reduced fat and sugar intake as recommended, and compensated by eating an additional two large slices of bread a day, it would have a dramatic impact on the nation's health".<sup>88</sup>

A report by the Federation of Bakers highlighted the positive contribution that bread makes to the UK diet<sup>89</sup> in that bread provides 20% of the UK adult total dietary fibre intake, half of which (10%) is contributed to by white bread. Bread is an important source of carbohydrates, dietary fibre<sup>lxvii</sup>, calcium, thiamine<sup>89</sup> and folate.<sup>lxviii</sup>

Wholegrain, wholemeal or brown bread may be considered a healthy choice as it contains a number of vitamins: B vitamins, vitamin E, fibre and a wide range of minerals. White bread has less fibre and higher levels of sodium, but still contains a range of vitamins and minerals.<sup>lxix</sup> Wholegrain, wholemeal, brown and white bread also have varying amounts of calories, fat and carbohydrate per slice.

The Department of Health and Food Standards Agency recommend that one-third of total calories consumed should come from starch food such as bread and pasta. Foods rich in fibre can reduce the risk of bowel cancer. Foods which fall into this group include wholemeal and wholegrain bread. The *North West Food and Health Action Plan (2007)* outlines aims "to increase the average intake of dietary fibre to 18g per day".<sup>90(p.5)</sup>

Approximately £56 million is spent on bread per week in the UK.<sup>84</sup>

### 6.2.2 Existing information

The Federation of Bakers and Flour Advisory Bureau commissioned research to assess bread consumption in Britain. The survey found the majority of adults (74%) ate bread at least once a day. More men (44%) than women (25%) eat bread on two occasions per day. White sliced bread was most frequently eaten by respondents and was also eaten on more occasions.<sup>89</sup>

The Expenditure and Food Survey highlighted an overall decrease of 5.0% in the consumption of bread from 728g to 692g per person per week from 2003-04 to 2006<sup>lxx</sup>. This includes a decrease in the consumption of white bread (from 410g to 310g per person per week, a fall of 24.3%); and increases in the consumption of brown and wholemeal bread (from 139g to 188g per person per week, a rise of 34.4%) and other bread (from 179g to 194g per person per week, an increase of 8.5%).<sup>91</sup>

### 6.2.3 Survey and analysis methodology

Participants were asked if they ever eat bread, rolls or hard dough bread. If they answered "yes", they were asked what type they usually ate:

1. white
2. brown

<sup>lxvii</sup> Six slices of wholemeal bread would provide more than 70% of the average fibre requirement for adults; brown bread would provide around 50% and white bread 20%.

<sup>lxviii</sup> Folate is essential for the formation of red and white blood cells in bone marrow. On average, a slice of granary bread will provide 35 micrograms of folic acid, wholemeal bread 15 micrograms and white bread about 11 micrograms of folic acid per slice.

[www.bakersfederation.org.uk/folic\\_acid.aspx](http://www.bakersfederation.org.uk/folic_acid.aspx)

<sup>lxx</sup> [www.eatwell.gov.uk/asksam/healthydiet/sfq/?lang=en](http://www.eatwell.gov.uk/asksam/healthydiet/sfq/?lang=en)

<sup>lxx</sup> The numbers given are approximate and therefore may not add up to the percentage given if calculated manually.

3. wholemeal
4. (spontaneous) other.

This question has been used in various local lifestyle surveys.

Overall, 96.5% of adults said that they ate bread, rolls or hard dough bread. The analyses below of the type adults ate were based on the responses from these people that do eat bread, rolls or hard dough bread.

#### **6.2.4 North West survey results: Bread consumption**

The most common type of bread usually eaten in the North West was white (usually eaten by 35.7% of adults) followed by wholemeal (28.0%) and then brown (21.1%) (Figure 22, Table 17).

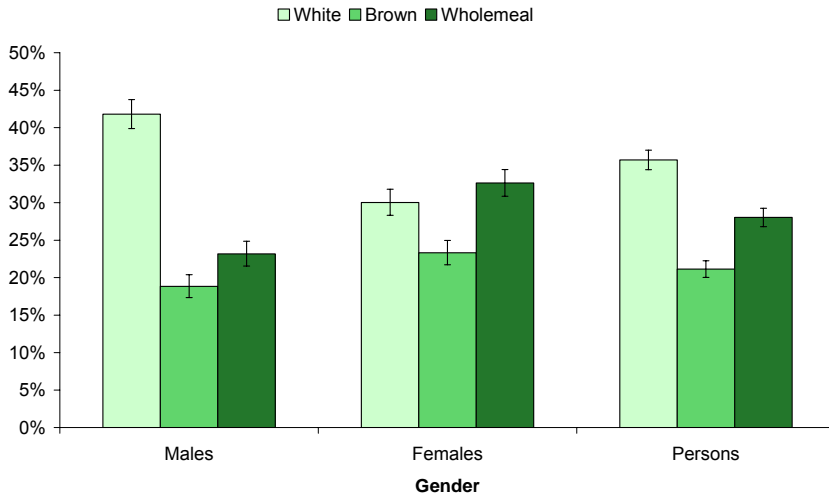
However, the type of bread usually consumed varied by gender. White bread was the most common choice among men (usually eaten by 41.8% of men, significantly higher than the 30% of women who usually ate it), but wholemeal was the most common choice among women (usually eaten by 32.6% of women, significantly higher than the 23.2% of men who usually ate it).

There was some variation by age in the type of bread usually eaten (Figure 23). White bread was usually eaten by significantly more people aged 16-24 years (47.9%) than any other age group and by significantly more people aged 75+ years than 45-64 years. Brown bread was usually eaten by significantly more people aged 45-74 years than 25-34 years, and by significantly more people aged 65-74 years than those aged 35-44 years. Wholemeal bread was usually eaten by significantly fewer people aged 16-24 years (18.7%) than all other age groups apart from those aged 65-74 years. Noticeably, wholemeal bread was also usually eaten by significantly fewer people aged 65-74 years than surrounding age groups: 45-64 years and 75+ years.

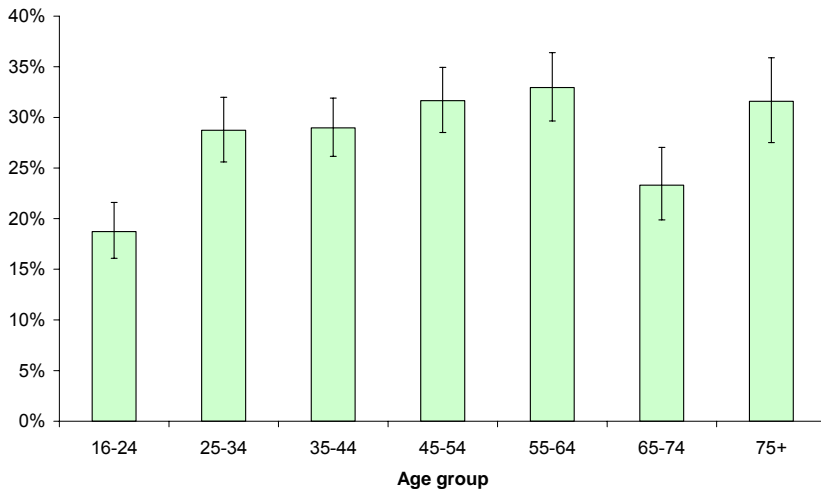
Adult consumption of wholemeal bread decreases as deprivation increases: 37.1% of adults from the least deprived areas usually eat wholemeal bread, compared with 22.6% from the most deprived areas (Figure 24, Table 18). Conversely, the percentage of adults who usually eat white bread increases as deprivation increases. Significantly more adults in the most deprived (43.6%) and fourth (35.1%) and third (35.1%) most deprived areas usually eat white bread than adults in the least deprived areas (25.8%).

Across ethnic groupings, consumption of wholemeal bread was higher in White adults (28.3%), in particular White females (33.1%), than non-White adults and non-White females (19.3% and 21.0% respectively) (Figure 25, Table 19).

**Figure 22: Type of bread usually eaten, by gender.**



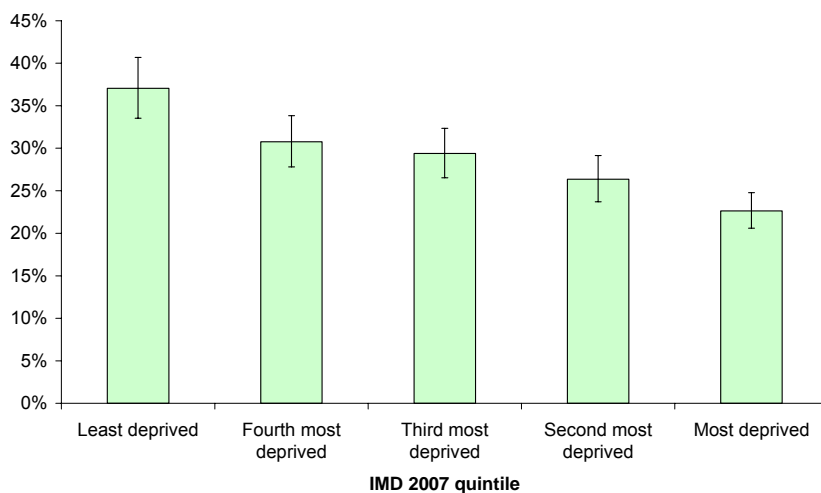
**Figure 23: Percentage of adults who usually eat wholemeal bread, by age group.**



**Table 17: Type of bread, rolls or hard dough bread usually eaten, by gender and age group.**

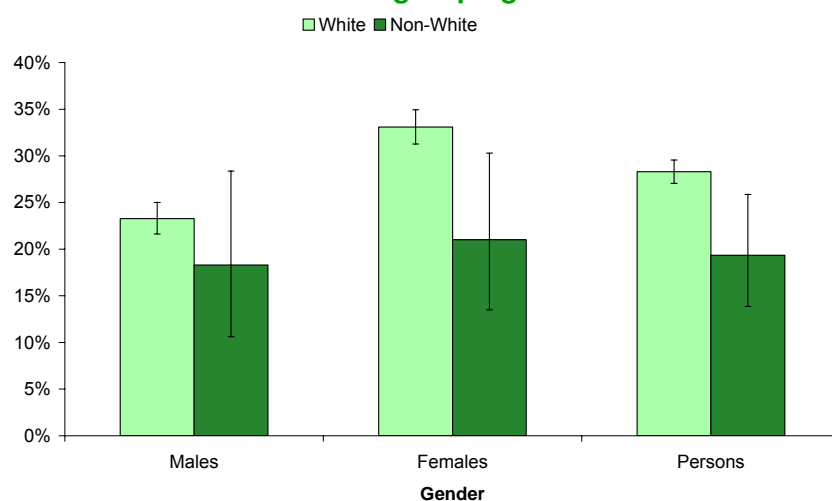
	Age group	White	Brown	Wholemeal	Other
<b>Males</b>	All ages	41.8%	18.8%	23.2%	16.2%
	16-24	53.2%	16.1%	15.9%	14.9%
	25-34	45.3%	17.2%	21.4%	16.2%
	35-44	38.2%	18.0%	21.6%	22.2%
	45-54	35.9%	22.6%	26.6%	15.0%
	55-64	33.2%	21.0%	30.6%	15.1%
	65-74	44.9%	21.1%	20.4%	13.6%
	75+	45.9%	14.2%	27.9%	12.0%
<b>Females</b>	All ages	30.0%	23.3%	32.6%	14.1%
	16-24	42.7%	23.9%	21.6%	11.8%
	25-34	26.3%	17.3%	36.0%	20.5%
	35-44	27.0%	20.2%	36.3%	16.5%
	45-54	26.6%	24.7%	36.8%	11.9%
	55-64	23.2%	27.1%	35.1%	14.7%
	65-74	32.0%	29.6%	25.9%	12.5%
	75+	35.0%	22.5%	33.8%	8.7%
<b>Persons</b>	All ages	35.7%	21.1%	28.0%	15.1%
	16-24	47.9%	19.9%	18.7%	13.5%
	25-34	35.7%	17.4%	28.7%	18.2%
	35-44	32.6%	19.1%	29.0%	19.4%
	45-54	31.3%	23.6%	31.7%	13.4%
	55-64	28.1%	24.1%	32.9%	14.8%
	65-74	38.1%	25.6%	23.3%	13.0%
	75+	39.1%	19.4%	31.6%	9.9%

**Figure 24: Percentage of adults who usually eat wholemeal bread, by Index of Multiple Deprivation 2007 quintile.**



**Table 18: Type of bread usually eaten, by gender and Index of Multiple Deprivation 2007 quintile.**

	IMD quintile	White	Brown	Wholemeal	Other
<b>Males</b>	All quintiles	41.8%	18.8%	23.2%	16.2%
	Least deprived	30.7%	21.7%	30.7%	16.9%
	Fourth most deprived	38.0%	22.3%	22.1%	17.7%
	Third most deprived	43.8%	15.7%	23.5%	17.0%
	Second most deprived	39.4%	21.5%	23.1%	15.9%
	Most deprived	49.4%	15.6%	20.2%	14.8%
<b>Females</b>	All quintiles	30.0%	23.3%	32.6%	14.1%
	Least deprived	21.0%	23.9%	43.0%	12.1%
	Fourth most deprived	24.9%	22.2%	39.1%	13.7%
	Third most deprived	26.5%	24.2%	35.0%	14.3%
	Second most deprived	31.1%	25.3%	29.2%	14.4%
	Most deprived	38.3%	21.8%	25.0%	14.9%
<b>Persons</b>	All quintiles	35.7%	21.1%	28.0%	15.1%
	Least deprived	25.8%	22.7%	37.1%	14.5%
	Fourth most deprived	31.4%	22.3%	30.8%	15.6%
	Third most deprived	35.1%	20.0%	29.4%	15.6%
	Second most deprived	35.1%	23.5%	26.4%	15.1%
	Most deprived	43.6%	18.9%	22.6%	14.9%

**Figure 25: Percentage of adults who usually eat wholemeal bread, by gender and White and non-White ethnic groupings.****Table 19: Type of bread usually eaten, by gender White and non-White ethnic groupings.**

	Ethnic grouping	White	Brown	Wholemeal	Other
<b>M</b>	White	41.8%	18.7%	23.3%	16.2%
	Non-White	42.7%	23.2%	18.3%	15.9%
<b>F</b>	White	29.7%	23.4%	33.1%	13.9%
	Non-White	38.0%	22.0%	21.0%	19.0%
<b>P</b>	White	35.6%	21.1%	28.3%	15.0%
	Non-White	40.3%	22.7%	19.3%	17.7%

## 6.3 Milk

### 6.3.1 Background

Milk is an important component of a healthy diet. It has many nutritional properties including calcium, magnesium, zinc and vitamin C. The healthy properties in milk help prevent certain health conditions and strengthen bone density and teeth strength.<sup>lxxi</sup>

Milk is not a high fat product. Whole milk contains 4% fat, semi-skimmed milk contains 1.7% fat and skimmed milk contains 0.3% fat.

Approximately £56 million is spent on milk per week in the UK, including £15 million on whole milk and £37 million on low fat milk.<sup>84</sup> From April 2007 to April 2008, 1,006.0 million litres of whole milk (24.6% of milk sales), 2,640.3 million litres of semi-skimmed milk (64.6%), and 473.7 million litres of skimmed milk (10.7%) were sold, with an annual cost of £2,515.2 million.<sup>lxxii</sup>

The amount of semi-skimmed and skimmed milk consumed has increased from 56.7 to 60.7 litres per head, an increase of 7.1%, from 2001/02 to 2005/06, while consumption of whole milk has decreased from 31.1 to 23.9 litres per head, a decrease of 23.2%.<sup>lxxiii</sup> Overall milk consumption has decreased 3.6% from 87.8 (2001/02) to 84.6 (2005/06) litres per head.

### 6.3.2 Existing information

The *National Diet and Nutrition Survey 2002*<sup>92</sup> surveyed a sample of adults aged 19-64 years to look at their dietary habits and nutritional status.

A number of questions were asked which related to milk consumption, some details of which are provided below.

Semi-skimmed cow's milk was the most popular type of milk drunk, with consumption higher among men (35%) than women (27%). For men and women, the percentage that did not have milk as a drink increased with age. For example, 25% of men aged 19-24 years did not have milk as a drink compared with 59% of men aged 50-64 years; and 34% of women aged 19-24 years did not have milk as a drink compared with 66% of women aged 50-64 years.

Semi-skimmed cow's milk was also the most commonly used milk on breakfast cereal and in puddings, with similar percentages of men and women using this (55% and 53% respectively). In men, those aged 35-49 years were more likely to use semi-skimmed cow's milk than other age groups and more women aged 19-24 years used semi-skimmed than other age groups. The percentage of respondents who did not have any milk on their breakfast cereal or in puddings decreased with age in both men and women, but with a larger decrease for men – from 23% of men aged 19-24 years to 16% of men aged 50-64 years; and from 16% of women aged 19-24 years to 12% of women aged 50-64 years.

An increase with age in both men and women was also apparent for usage of skimmed cow's milk: from 2% of men aged 19-24 years to 10% of men aged 50-64 years; and from 7% of women aged 19-24 years to 19% of women aged 50-64 years.

Over the last seven days, nearly three-quarters of men (74%) and women (73%) consumed semi-skimmed milk, compared with just over a third who consumed whole milk (36% of men and 35% of women). More women (22%) than men (15%), however, consumed skimmed milk.

For whole milk, there was also a difference by age, with those aged 25-34 years more likely to have consumed whole milk in the last seven days than other age groups. For both men and

<sup>lxxi</sup> [www.milk.co.uk/page.aspx?intPageID=73](http://www.milk.co.uk/page.aspx?intPageID=73)

<sup>lxxii</sup> [www.mdcdatum.org.uk/RetailerDataPrices/tnsliquidmilkpasteurised.html](http://www.mdcdatum.org.uk/RetailerDataPrices/tnsliquidmilkpasteurised.html)

<sup>lxxiii</sup> [www.mdcdatum.org.uk/backdata/DFP2005/estimatedconsumptionofproducts.xls](http://www.mdcdatum.org.uk/backdata/DFP2005/estimatedconsumptionofproducts.xls)



women, skimmed milk was also least likely to have been consumed among those aged 19-24 years.

Women who were living in benefit households were more likely to consume whole milk (49%) than those who were not (32%). In addition, a lower proportion of women in households in receipt of benefits consumed skimmed milk than those in non-benefit households.

Overall, 5% of individuals interviewed who said they were vegetarian or vegan also said that they avoided milk.

### 6.3.3 Survey and analysis methodology

Survey participants were asked if they use milk for drinks, in tea or coffee, or on cereals. If they did, they were asked what type of milk they usually used:

1. whole milk
2. semi-skimmed milk including dried semi-skimmed
3. skimmed milk including dried skimmed-milk
4. no usual type.

This question was taken from the Health Survey for England.

Overall, 93.7% of adults said that they used milk for drinks, in tea or coffee, or on cereals. The analyses below of the type of milk used were based on the responses from these people that do use milk for drinks, in tea or coffee, or on cereals.

### 6.3.4 North West survey results: Milk consumption

The most common type of milk used in the North West is semi-skimmed (65.7%) followed by skimmed (17.3%), whole (14.9%) and then no usual type of milk (2.2%) (Figure 26, Table 20).

A similar proportion of men and women use semi-skimmed milk (Figure 27). However, significantly more men (18.3%) than women (11.7%) use whole milk and conversely, significantly more women (21.2%) than men (13.2%) use skimmed milk.

Whole milk is used by more residents over the age of 75 years (21.0%), particularly men (24.5%), than any other age group and the proportion of all adult residents of this age using whole milk is significantly higher than those aged 35 to 74 years. In addition, the proportion of people aged 16-24 years who use whole milk (17.6%) is significantly higher than the proportion aged 55-64 years.

Usage of semi-skimmed milk generally declines as age increases (Figure 28). Significantly more people aged 16-24 years (71.7%) use semi-skimmed milk than adults aged 45-54 years and 65+ years. However, usage of skimmed milk generally increases as age increases (although usage falls after the age of 75 years).

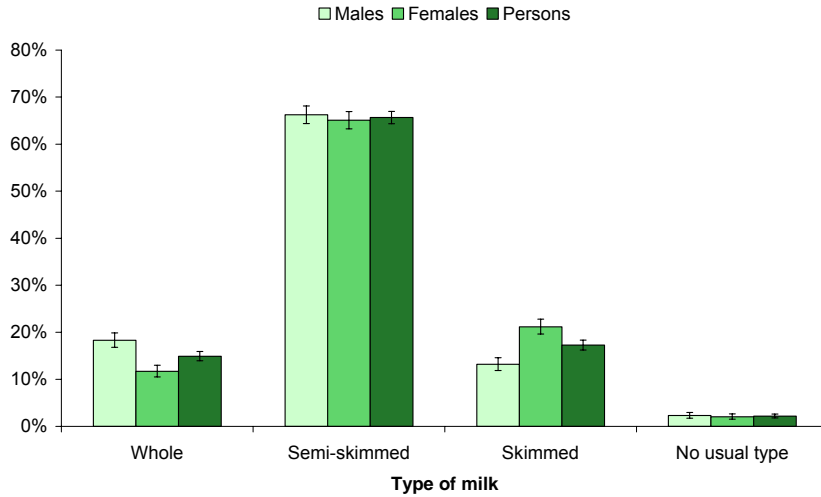
Skimmed milk is used by 2.7 times more people aged 65-74 years (23.7%) than 16-24 years (8.9%). The proportion of people aged 65-74 years using skimmed milk is significantly higher than all those aged 16-44 years and the proportion of people aged 16-24 years using skimmed milk is significantly lower than all those aged 25-74 years.

Whole milk is significantly less likely to be used by adults living in the least deprived areas (8.4%) and significantly more likely to be used by adults living in the most deprived areas (20.2%) than those living in the other deprivation quintiles, where usage is relatively similar (around 13-14%) (Table 21). There is also little difference between the three middle deprivation areas in the proportions of adults using semi-skimmed milk (around 67-68%) and skimmed milk (17-18%) (Figure 29). However, residents in the least deprived areas are significantly more likely to use semi-skimmed milk (used by 70.5% of adults) than those in the most deprived areas (60.8%).

Skimmed milk is also used by more residents in the least deprived areas (19.7%) than those in the most deprived (16.2%), although the difference is not significant.

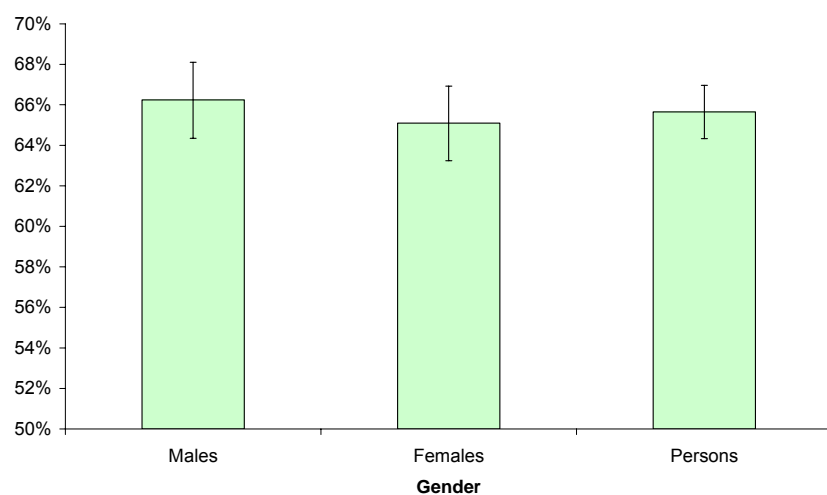
There are also significant differences in the type of milk used by ethnic grouping (Figure 30, Table 22). Significantly more White adults use semi-skimmed (66.5%) and skimmed (17.6%) milk than non-White adults (46.1% and 9.0% respectively), while significantly more non-White adults (40.4%) use whole milk than White adults (13.8%).

**Figure 26: Type of milk usually used for drinks in tea or coffee or on cereal, by gender.**

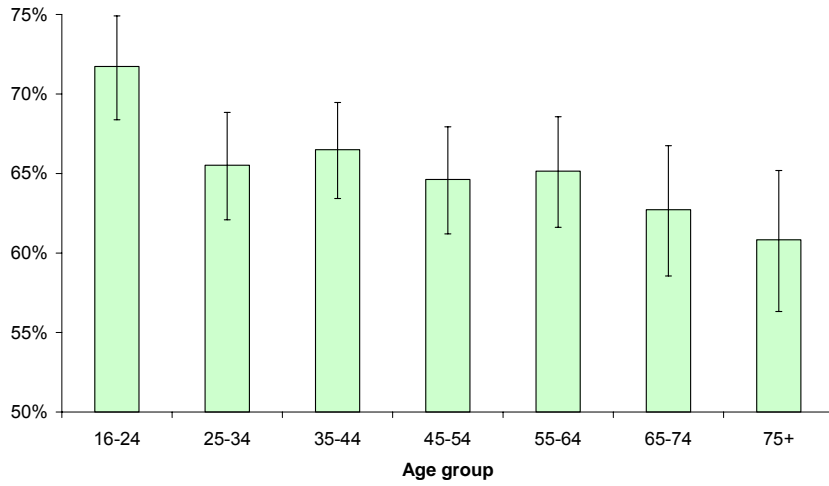


**Table 20: Type of milk usually used for drinks in tea or coffee or on cereals, by gender and age group.**

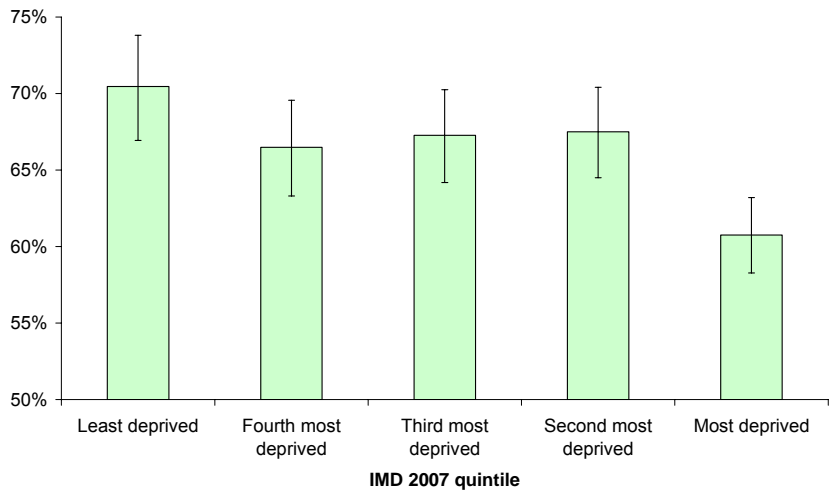
	Age group	Whole	Semi-skimmed	Skimmed	No usual type
<b>Males</b>	All ages	18.3%	66.2%	13.2%	2.3%
	16-24	19.0%	73.6%	4.8%	2.5%
	25-34	19.5%	65.5%	12.5%	2.5%
	35-44	18.4%	67.3%	11.8%	2.5%
	45-54	18.0%	65.8%	14.5%	1.8%
	55-64	14.6%	66.6%	17.5%	1.3%
	65-74	16.2%	60.0%	22.6%	1.1%
	75+	24.5%	58.7%	10.9%	6.0%
<b>Females</b>	All ages	11.7%	65.1%	21.2%	2.0%
	16-24	15.9%	69.5%	13.2%	1.4%
	25-34	10.9%	65.6%	21.7%	1.8%
	35-44	10.6%	65.7%	21.5%	2.2%
	45-54	10.5%	63.5%	24.5%	1.5%
	55-64	7.8%	63.7%	26.1%	2.4%
	65-74	8.8%	65.0%	24.8%	1.4%
	75+	19.1%	62.0%	15.2%	3.6%
<b>Persons</b>	All ages	14.9%	65.7%	17.3%	2.2%
	16-24	17.6%	71.7%	8.9%	1.8%
	25-34	15.2%	65.5%	17.1%	2.2%
	35-44	14.4%	66.5%	16.8%	2.4%
	45-54	14.3%	64.6%	19.5%	1.6%
	55-64	11.2%	65.2%	21.8%	1.9%
	65-74	12.4%	62.7%	23.7%	1.3%
	75+	21.0%	60.8%	13.6%	4.5%

**Figure 27: Percentage of adults who usually use semi-skimmed milk, by gender.**

**Figure 28: Percentage of adults who usually use semi-skimmed milk, by age group.**

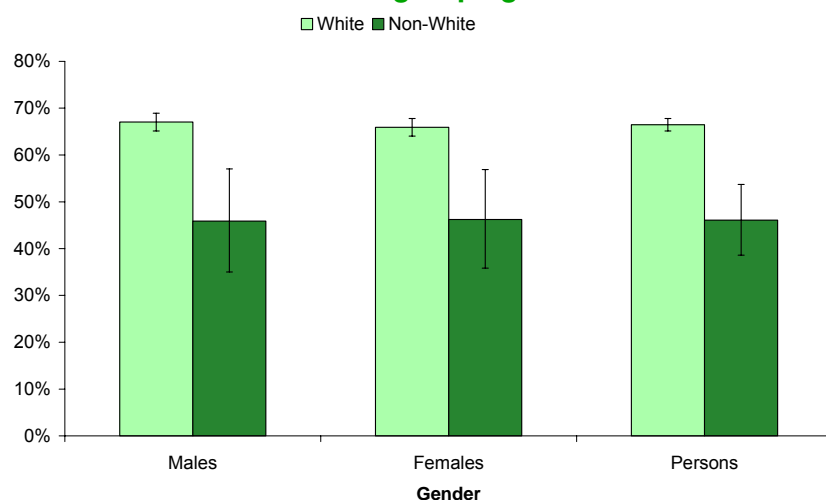


**Figure 29: Percentage of adults who usually use semi-skimmed milk, by Index of Multiple Deprivation 2007 quintile.**



**Table 21: Type of milk usually used for drinks in tea or coffee or on cereals, by gender and Index of Multiple Deprivation 2007 quintile.**

IMD quintile		Whole	Semi-skimmed	Skimmed	No usual type
<b>Males</b>	All quintiles	18.3%	66.3%	13.2%	2.3%
	Least deprived	9.8%	71.7%	17.3%	1.2%
	Fourth most deprived	17.5%	66.8%	13.2%	2.5%
	Third most deprived	16.1%	69.9%	11.8%	2.2%
	Second most deprived	18.7%	66.6%	12.8%	1.8%
	Most deprived	23.7%	60.9%	12.3%	3.1%
<b>Females</b>	All quintiles	11.7%	65.1%	21.2%	2.0%
	Least deprived	7.0%	69.5%	21.8%	1.7%
	Fourth most deprived	10.0%	66.0%	22.2%	1.7%
	Third most deprived	10.5%	64.7%	22.5%	2.3%
	Second most deprived	9.3%	68.4%	20.5%	1.8%
	Most deprived	17.0%	60.7%	19.9%	2.4%
<b>Persons</b>	All quintiles	14.9%	65.6%	17.3%	2.2%
	Least deprived	8.4%	70.5%	19.7%	1.4%
	Fourth most deprived	13.7%	66.5%	17.7%	2.1%
	Third most deprived	13.3%	67.3%	17.3%	2.2%
	Second most deprived	13.9%	67.5%	16.8%	1.8%
	Most deprived	20.2%	60.8%	16.2%	2.8%

**Figure 30: Percentage of adults who usually use semi-skimmed milk, by gender and White and non-White ethnic groupings.****Table 22: Type of milk usually used for drinks in tea or coffee or on cereals, by gender and White and non-White ethnic groupings.**

Ethnic grouping		Whole	Semi-skimmed	Skimmed	No usual type
<b>M</b>	White	17.4%	67.0%	13.4%	2.2%
	Non-White	37.6%	45.9%	10.6%	5.9%
<b>F</b>	White	10.4%	65.9%	21.7%	2.0%
	Non-White	43.0%	46.2%	7.5%	3.2%
<b>P</b>	White	13.8%	66.5%	17.6%	2.1%
	Non-White	40.4%	46.1%	9.0%	4.5%

## 6.4 Oil or fat used for cooking

### 6.4.1 Background

Fat in the diet helps the body absorb some vitamins and it is a good source of energy and essential fatty acids that the body cannot make itself. However, too much can cause weight gain and leave individuals more susceptible to certain illnesses and diseases such as high levels of total and bad cholesterol, high blood pressure, heart disease, stroke, obesity and Type 2 diabetes. It is important to try to replace the saturated fat eaten (such as that from meat products, hard cheese, pastry, butter/lard, cakes and biscuits, cream) with unsaturated fat (from, for example, oily fish, nuts and seeds, olive oil and spreads and avocados).

Within food products, a total fat content of more than 20g of fat per 100g is considered high, while a total fat content of 3g or less per 100g is considered low. A saturated fat content of more than 5g per 100g is considered high, while a saturated fat content of 1.5g or less is low.<sup>lxxiv</sup>

Approximately £6 million is spent per week on cooking oils and fats in the UK.<sup>84</sup>

### 6.4.2 Existing information

The Expenditure and Food Survey 2006 provides information on UK household purchased quantities of food and drink averages per person. It showed that approximately four grams of lard and cooking fat were consumed per person per week. Trend information shows data from adjusted National Food Survey figures for 1974 to 2000 and the Expenditure and Food Survey from 2001-02 onwards (note: this only shows percentage changes from 2003-04 to date due to changes in, and different methods of, data collection/coding).<sup>lxxv</sup>

The National Diet and Nutrition Survey 2002 assessed the consumption of butter, block margarine, soft margarine (not polyunsaturated), polyunsaturated margarine, polyunsaturated oils, polyunsaturated low fat spread, other low fat spread, polyunsaturated reduced fat spread, other reduced fat spread and then other oils and cooking fats not polyunsaturated.

Overall, 15% of men aged 19 to 64 years stated that they had consumed other oils and cooking fats (not polyunsaturated) in the previous seven days. Across the male age range, the highest consumption was among those aged 50-64 years (19%) and the lowest among those aged 25-34 years (11%).

A similar percentage of women aged 19-64 years (14%) stated that they had consumed other oils and cooking fats (not polyunsaturated). However, the highest percentage of consumption was among women aged 25-34 years (18%) and the lowest in women aged 19-24 years (8%). It was also highlighted that women living in households where someone was receiving benefits were less likely to consume other oils and cooking fats (not polyunsaturated) (7%) than those who were not (15%).

### 6.4.3 Survey and analysis methodology

Survey participants were asked if they use oil or fat for cooking or frying food. If they did, they were asked what type of oil or fat they usually used for doing so:

1. butter, ghee, lard, suet, solid cooking fat, coconut oil or palm oil
2. hard or soft margarine, half fat butter or ghee
3. vegetable oil (for example, sunflower, olive, rapeseed, mustard, peanut or corn).

This question was taken from the Health Survey for England.

<sup>lxxiv</sup> [www.eatwell.gov.uk/healthydiet/nutritionessentials/fatssugarssalt/fats/](http://www.eatwell.gov.uk/healthydiet/nutritionessentials/fatssugarssalt/fats/)

<sup>lxxv</sup> <https://statistics.defra.gov.uk/esg/publications/efs/datasets/UKHHcons.xls>

Overall, 81.1% of adults said that they used oil or fat for cooking or frying food. The analyses below of the type of oil or fat used for cooking or frying were based on the responses from those people that do use oil or fat.

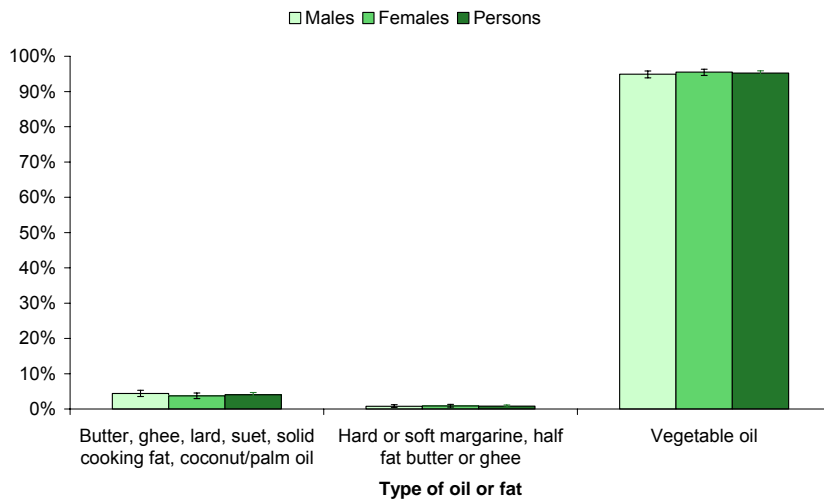
### 6.4.4 North West survey results: Oil and fat consumption

The majority of adults (95.2%) in the North West said that they usually use vegetable oil when cooking or frying food (Figure 31, Table 23). Butter, ghee, lard, suet, solid cooking fat, coconut or palm oil is used by 4.0% and hard or soft margarine, half fat butter or ghee is used by 0.8%.

There is no significant difference by gender in the usage of any type of oil or fat, but there are some differences in oil and fat consumption by age (Figure 32). Vegetable oil is used by significantly less people aged 75+ years (85.0%) than all other age groups, and significantly more people aged 25-34 years than those aged 65+ years. The use of butter, ghee, lard, suet, solid cooking fat, coconut or palm oil generally increases with age, particularly after the age of 65. Around 4.4 times more people aged 75+ years (12.1%) use butter or other similar fats for cooking than people aged 16-24 years (2.8%) and hard or soft margarine, half fat butter or ghee is used by 3 times as many people aged 75+ years (3.0%) than those aged 16-24 years (1.0%).

There is a general decline between the least deprived areas and the most deprived areas in the usage of vegetable oil (Figure 33, Table 24). The proportion of adults from the most deprived areas using vegetable oil (93.9%) is significantly lower than the proportions in the least deprived (97.3%) and fourth most deprived (96.8%) areas. Conversely, as deprivation increases, so does the use of butter, ghee, lard, suet, solid cooking fat, coconut or palm oil. The proportion of adults in the most deprived areas who use these oils and fats (5.3%) is over twice that in the least deprived and fourth most deprived areas (both 2.4%), a significant difference.

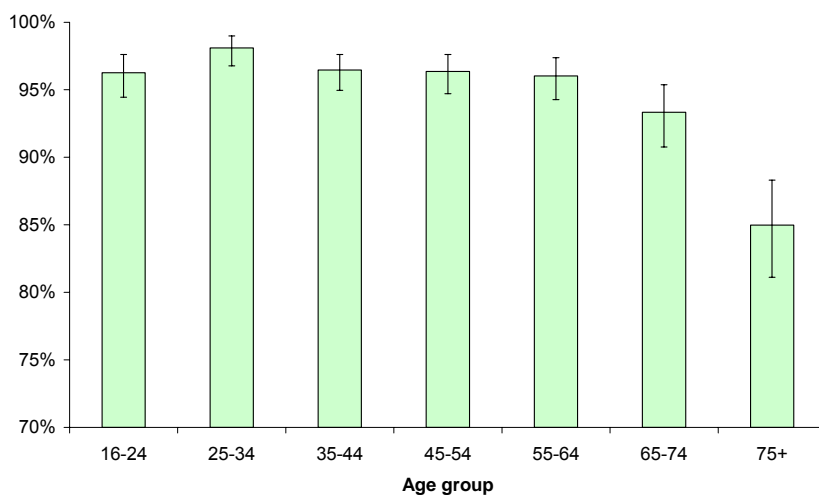
**Figure 31: Type of oil or fat usually used for cooking or frying food, by gender.**



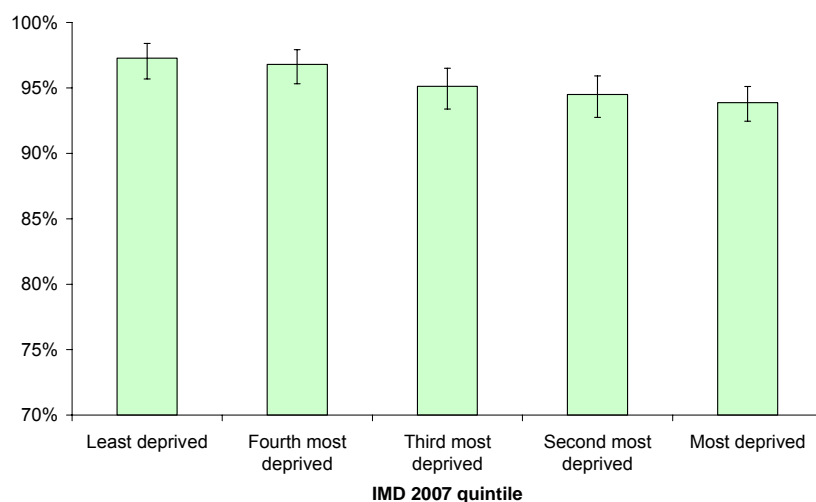
**Table 23: Type of oil or fat usually used for cooking or frying food, by gender and age group.**

	Age group	Butter, ghee, lard, suet, solid cooking fat, coconut oil or palm oil	Hard or soft margarine, half fat butter or ghee	Vegetable oil
<b>Males</b>	All ages	4.4%	0.8%	94.9%
	16-24	2.8%	1.3%	95.9%
	25-34	3.2%	0.0%	96.8%
	35-44	2.7%	1.7%	95.6%
	45-54	4.4%	0.3%	95.3%
	55-64	4.0%	0.3%	95.7%
	65-74	5.2%	0.4%	94.3%
	75+	14.5%	1.3%	84.2%
<b>Females</b>	All ages	3.6%	0.8%	95.5%
	16-24	2.4%	0.7%	97.0%
	25-34	0.6%	0.0%	99.4%
	35-44	2.4%	0.2%	97.3%
	45-54	2.2%	0.5%	97.3%
	55-64	3.1%	0.6%	96.3%
	65-74	6.8%	0.8%	92.5%
	75+	10.6%	3.9%	85.4%
<b>Persons</b>	All ages	4.0%	0.8%	95.2%
	16-24	2.8%	1.0%	96.3%
	25-34	1.9%	0.0%	98.1%
	35-44	2.6%	1.0%	96.5%
	45-54	3.2%	0.4%	96.4%
	55-64	3.5%	0.4%	96.0%
	65-74	6.1%	0.6%	93.3%
	75+	12.1%	3.0%	85.0%

**Figure 32: Percentage of adults who usually use vegetable oil for cooking or frying food, by age group.**

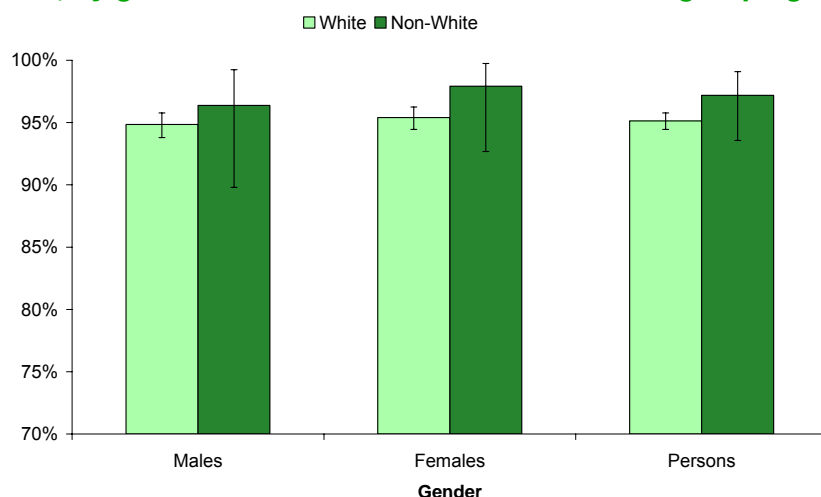




**Figure 33: Percentage of adults who usually use vegetable oil for cooking or frying food, by Index of Multiple Deprivation 2007 quintile.****Table 24: Type of oil or fat usually used for cooking or frying food, by gender and Index of Multiple Deprivation 2007 quintile.**

		Butter, ghee, lard, suet, solid cooking fat, coconut oil or palm oil	Hard or soft margarine, half fat butter or ghee	Vegetable oil
		IMD quintile		
<b>Males</b>	All quintiles	4.4%	0.8%	94.9%
	Least deprived	2.6%	0.7%	96.7%
	Fourth most deprived	2.9%	1.1%	96.1%
	Third most deprived	3.4%	0.3%	96.3%
	Second most deprived	5.2%	1.2%	93.6%
	Most deprived	6.0%	0.6%	93.4%
<b>Females</b>	All quintiles	3.7%	0.8%	95.5%
	Least deprived	2.2%	0.0%	97.8%
	Fourth most deprived	2.0%	0.5%	97.5%
	Third most deprived	4.3%	1.7%	94.0%
	Second most deprived	4.0%	0.7%	95.3%
	Most deprived	4.6%	1.0%	94.4%
<b>Persons</b>	All quintiles	4.0%	0.8%	95.2%
	Least deprived	2.4%	0.3%	97.3%
	Fourth most deprived	2.4%	0.8%	96.8%
	Third most deprived	3.9%	1.0%	95.1%
	Second most deprived	4.6%	0.9%	94.5%
	Most deprived	5.3%	0.8%	93.9%

**Figure 34: Percentage of adults who usually use vegetable oil for cooking or frying food, by gender and White and non-White ethnic groupings.**



**Table 25: Type of oil or fat usually used for cooking or frying food, by gender and White and non-White ethnic groupings.**

	Ethnic grouping	Butter, ghee, lard, suet, solid cooking fat, coconut oil or palm oil	Hard or soft margarine, half fat butter or ghee	Vegetable oil
<b>M</b>	White	4.5%	0.7%	94.8%
	Non-White	1.2%	2.4%	96.4%
<b>F</b>	White	3.7%	0.9%	95.4%
	Non-White	2.1%	0.0%	97.9%
<b>P</b>	White	4.1%	0.8%	95.1%
	Non-White	1.7%	1.1%	97.2%

## 6.5 Spreading fats

### 6.5.1 Background

Spreading fats such as margarine, butter and low fat spreads make up approximately 20% of the fats that are eaten each day.

Butter contains both saturated fats and cholesterol, which can raise levels of bad cholesterol in the blood as well as total cholesterol levels. Butter has higher levels of total fats, saturated fats and cholesterol than soft tub margarine.<sup>lxxvi</sup>

Originally, margarine contained high levels of trans-fats which turn liquid oil into spread. As trans-fats increase the levels of bad cholesterol in the blood, while lowering the levels of good cholesterol, on the whole they have been replaced by non-hydrogenated margarine.

Cholesterol lowering spreads contain plant sterols or plant stanol ester, which are naturally occurring substances found in many grains such as wheat, rye and maize. They work to lower cholesterol as they have the ability to inhibit the absorption of cholesterol in the gut. However, cholesterol lowering foods should not be considered an alternative to a healthy balanced diet or a healthy lifestyle.<sup>lxxvii</sup> High cholesterol levels may be attributed to genetics and metabolism (as some inherited conditions give cause for high cholesterol); lack of physical activity (as physical activity tends to increase levels of 'good' cholesterol); age (cholesterol levels increase with age); and drinking alcohol to excess (relating to the metabolism of alcohol and how this may impact upon the metabolism of fat in the body).<sup>lxxviii</sup> People who are affected by high cholesterol are at a high risk of coronary heart disease including heart attack and stroke (see section 4.2).

Average sales of butter and margarine, other vegetable fats and peanut butter are approximately £7 million per week and £10 million per week respectively.<sup>84</sup>

The *Family Food Survey 2006*<sup>91</sup> shows that from 2003-04 to 2006 there was an overall 1.1% decrease in the consumption of fats. It also highlighted that purchases of butter and margarine had increased by 15.2% (from 35g to 40g per person per week) and 42.9% (12g to 18g per person per week) respectively. However, sales of reduced and low fat spreads have decreased by 18.6% (71g to 57g per person per week).

### 6.5.2 Existing information

The *National Diet and Nutrition Survey 2002*<sup>92</sup> showed the most common type of fat usually used for spreading was butter, used by 40% of men and 42% of women. This was followed by 'other type', which consisted of non-polyunsaturated reduced fat spreads, used by 37% of men and 33% of women, and non-polyunsaturated soft margarine which was used by 32% of men and 23% of women.

### 6.5.3 Survey and analysis methodology

Participants were asked if they ever use butter, margarine or spread. If they did, they were asked what kind of butter, margarine or spread they usually used:

1. butter, full fat ghee or hard margarine
2. low fat spread or half fat ghee
3. cholesterol lowering spread (for example, Benecol or Pro-active)
4. another spread.

This question was taken from the Health Survey for England.

<sup>lxxvi</sup> [www.bbc.co.uk/dna/h2g2/A617393](http://www.bbc.co.uk/dna/h2g2/A617393)

<sup>lxxvii</sup> [www.nutrition.org.uk/upload/Cholesterol%20lowering%20spreads.pdf](http://www.nutrition.org.uk/upload/Cholesterol%20lowering%20spreads.pdf)

<sup>lxxviii</sup> [www.scotpho.org.uk/home/ClinicalRiskfactors/HighCholesterol/highcholesterol\\_riskfactors.asp](http://www.scotpho.org.uk/home/ClinicalRiskfactors/HighCholesterol/highcholesterol_riskfactors.asp)

Overall, 93.1% of adults said that they use butter, margarine or spread. The analyses below of the type adults use were based on the responses from these people that do use butter, margarine or spread.

### 6.5.4 North West survey results: Spreading fat consumption

Overall, 57.6% of adults that used butter, margarine or spread said that they usually use butter, full fat ghee or hard margarine (Figure 35, Table 26). Slightly more men (59.3%) than women (56.1%) use butter, full fat ghee or hard margarine, but the difference was not significant.

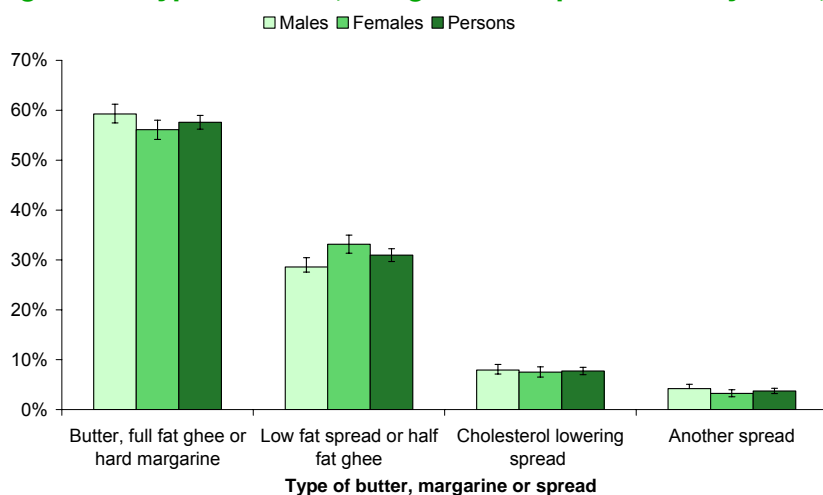
The percentage of adults who usually use butter, margarine or spread generally decreases as age increases (Figure 36). More people aged 16-24 years (66.4%) than any other age group usually use butter, margarine or spread, significantly higher than all age groups over 35 years. Usage of butter, margarine or spread is even higher among men aged 16-24 years (72.4%).

There is no significant difference, or noticeable trend, in the usage of butter, full fat ghee or hard margarine between deprivation quintiles (Figure 37, Table 27).

Low fat spread or half fat ghee is usually used by 31.0% of adults, significantly more women (33.2%) than men (28.6%). Usage of low fat spread or half fat ghee is higher among people aged 35 to 64 years than other age groups. Low fat spread or half fat ghee usage is higher still among women aged 45-54 years (37.2%). Again, there is no significant difference, or noticeable trend, in the usage of low fat spread or half fat ghee between the different areas of deprivation.

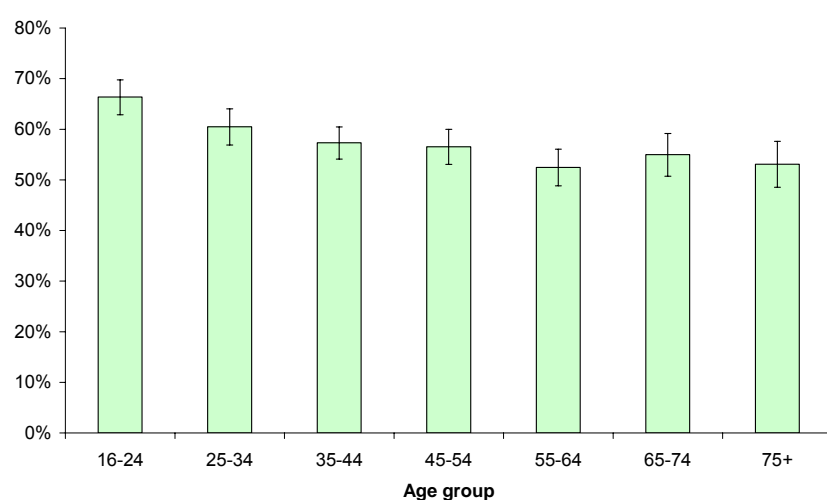
Cholesterol lowering spread is usually used by 7.7% of adults. There is no significant difference in usage by gender, but there is an obvious difference by age, with a steep increase in usage after the age of 55. Overall, usage is highest among men aged 55-64 years (13.0%).

**Figure 35: Type of butter, margarine or spread usually used, by gender.**

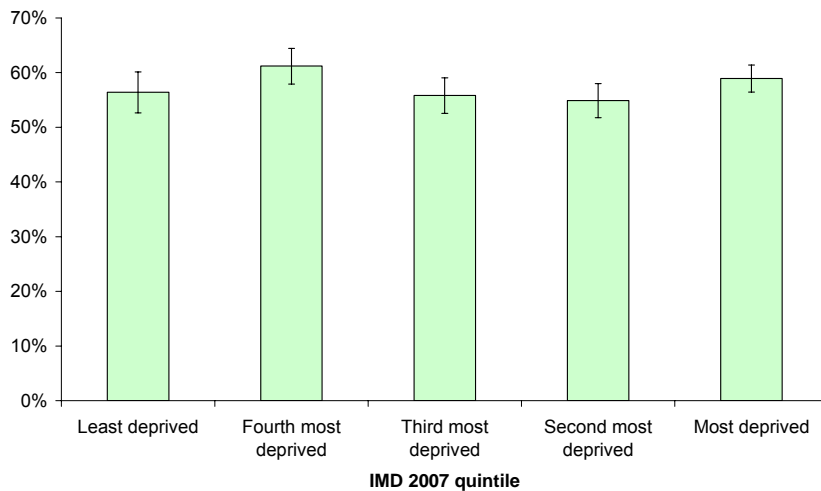


**Table 26: Type of butter, margarine or spread usually used, by gender and age group.**

	Age group	Butter, full fat ghee or hard margarine	Low fat spread or half fat ghee	Cholesterol lowering spread	Another spread
<b>Males</b>	All ages	59.3%	28.6%	7.9%	4.2%
	16-24	72.4%	23.2%	3.2%	1.3%
	25-34	61.5%	29.1%	6.5%	3.0%
	35-44	56.0%	31.8%	7.2%	5.1%
	45-54	60.0%	28.1%	7.4%	4.4%
	55-64	53.7%	27.9%	13.0%	5.4%
	65-74	55.8%	26.0%	12.0%	6.2%
	75+	50.3%	36.5%	8.3%	5.0%
<b>Females</b>	All ages	56.1%	33.2%	7.5%	3.2%
	16-24	60.3%	32.6%	4.7%	2.5%
	25-34	59.4%	32.4%	5.8%	2.4%
	35-44	58.6%	32.2%	6.2%	3.1%
	45-54	53.3%	37.2%	7.1%	2.4%
	55-64	51.2%	36.0%	9.3%	3.6%
	65-74	54.2%	30.2%	9.8%	5.8%
	75+	54.8%	30.0%	11.2%	4.0%
<b>Persons</b>	All ages	57.6%	31.0%	7.7%	3.7%
	16-24	66.4%	27.7%	4.0%	1.9%
	25-34	60.5%	30.8%	6.1%	2.5%
	35-44	57.3%	32.0%	6.7%	4.1%
	45-54	56.5%	32.7%	7.2%	3.5%
	55-64	52.4%	32.1%	11.0%	4.5%
	65-74	55.0%	28.2%	10.8%	6.0%
	75+	53.1%	32.4%	10.1%	4.3%

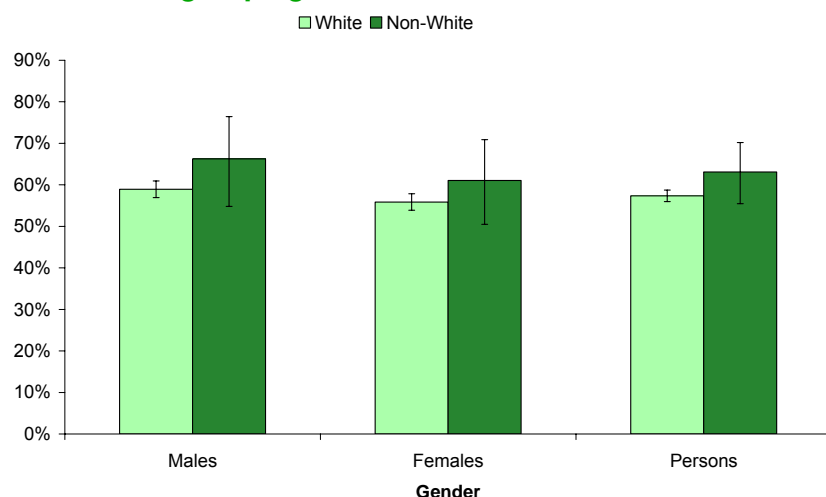
**Figure 36: Percentage of adults who usually use butter, full fat ghee or hard margarine, by age group.**

**Figure 37: Percentage of adults who usually use butter, full fat ghee or hard margarine, by Index of Multiple Deprivation 2007 quintile.**



**Table 27: Type of butter, margarine or spread usually used, by gender and Index of Multiple Deprivation 2007 quintile.**

		IMD quintile	Butter, full fat ghee or hard margarine	Low fat spread or half fat ghee	Cholesterol lowering spread	Another spread
<b>Males</b>	All quintiles		59.3%	28.6%	7.9%	4.2%
	Least deprived		57.7%	28.7%	10.9%	3.0%
	Fourth most deprived		61.8%	25.7%	8.2%	4.6%
	Third most deprived		57.6%	31.8%	5.7%	4.2%
	Second most deprived		56.0%	28.9%	9.5%	5.6%
	Most deprived		61.6%	28.1%	7.0%	3.7%
<b>Females</b>	All quintiles		56.1%	33.2%	7.6%	3.3%
	Least deprived		55.2%	32.3%	8.4%	3.6%
	Fourth most deprived		60.7%	28.8%	8.3%	3.5%
	Third most deprived		54.2%	35.1%	6.6%	3.3%
	Second most deprived		53.7%	35.3%	7.0%	3.6%
	Most deprived		56.5%	33.3%	8.1%	2.7%
<b>Persons</b>	All quintiles		57.6%	31.0%	7.8%	3.7%
	Least deprived		56.4%	30.6%	9.7%	3.3%
	Fourth most deprived		61.2%	27.2%	8.2%	4.0%
	Third most deprived		55.8%	33.5%	6.1%	3.8%
	Second most deprived		54.9%	32.3%	8.2%	4.6%
	Most deprived		58.9%	30.8%	7.6%	3.2%

**Figure 38: Percentage of adults who usually use butter, by gender and White and non-White ethnic groupings.****Table 28: Type of butter, margarine or spread usually used, by gender and White and non-White ethnic groupings.**

	<b>Ethnic grouping</b>	<b>Butter, full fat ghee or hard margarine</b>	<b>Low fat spread or half fat ghee</b>	<b>Cholesterol lowering spread</b>	<b>Another spread</b>
<b>M</b>	White	58.9%	28.9%	7.9%	4.3%
	Non-White	66.3%	23.8%	7.5%	2.5%
<b>F</b>	White	55.9%	33.2%	7.6%	3.3%
	Non-White	61.1%	30.5%	5.3%	3.2%
<b>P</b>	White	57.4%	31.1%	7.8%	3.7%
	Non-White	63.1%	27.8%	6.3%	2.8%

## 6.6 Salt

### 6.6.1 Background

Sodium is one of a number of nutrients essential to the preservation of a healthy body. However, a high salt or sodium intake<sup>lxxxix</sup> is a major contributor to hypertension (high blood pressure) which can lead to a number of chronic diseases including chronic heart disease, stroke, kidney disease and aortic aneurysm.

It is estimated that 26 million people in the UK consume too much salt.<sup>93</sup> At present, the average consumption of salt in the UK is 10 grams per day, far higher than the maximum of 6 grams per day recommended in *Salt and Health*.<sup>88</sup> As a result, the Food Standards Agency and the Department of Health set a target to bring down salt intake to 6 grams per day by 2010. A large proportion of salt intake comes from processed foods therefore this target can only be achieved by reducing the content of salt in processed food and appropriate labelling of foodstuffs through a multi agency approach. Therefore, the Department of Health and the Food Standards Agency are working together with the food industry to lower the levels of salt in food. To help guide the food industry as to the type of foods in which reductions would be most beneficial and the level of reductions that are needed to help reduce consumers' intakes, the FSA developed voluntary targets for reducing salt levels in a wide range of processed foods.<sup>lxxx</sup> A consultation on proposals to revise these targets took place during 2008.<sup>lxxxi</sup>

A survey carried out in 2000 showed that salt sprinkled on food and added during cooking has drastically declined since the 1960s.<sup>94</sup> In contrast, however, the *National Diet and Nutrition Survey 2002*<sup>92</sup> showed that salt consumption has increased in the UK over the past 15 years. This is largely due to the increase in consumption of processed foodstuffs which generally contain high levels of salt (75% of salt intake comes from processed food).<sup>93</sup>

### 6.6.2 Existing information

The Health Survey for England 2005 showed that 53% of the population (62% of women and 58% of men) added salt to their food while cooking. Nationally, 26% of men and 15% of women said they added salt to their food, without tasting it first, while at the table. The survey also showed that more women (61%) than men (49%) rarely or never added salt to their food.<sup>95</sup>

Individuals in the higher age groups were more likely to add salt to their food while cooking than younger age groups, as were individuals in the more deprived areas compared with the less deprived.<sup>95</sup>

### 6.6.3 Survey and analysis methodology

Survey participants were asked if salt, including sea salt, had been generally added to their food during cooking, with a choice of three responses:

1. yes
2. no, you do not use salt in cooking
3. you use a 'lo salt' or light alternative.

Respondents were also asked at the table did they:

1. generally add salt without tasting it first
2. taste the food, but then generally add salt
3. taste the food, but then occasionally add salt; or
4. rarely, or never add salt at the table.

These questions were taken from the Health Survey for England.

<sup>lxxxix</sup> The approximate amount of salt per 100 grams is calculated by multiplying the sodium content by 2.5 ([www.saltsense.co.uk/salt-nutrition02.htm](http://www.saltsense.co.uk/salt-nutrition02.htm))

<sup>lxxx</sup> [www.food.gov.uk/multimedia/pdfs/salttargetsapril06.pdf](http://www.food.gov.uk/multimedia/pdfs/salttargetsapril06.pdf)

<sup>lxxxi</sup> [www.food.gov.uk/consultations/ukwideconsults/2008/saltreductiontargets](http://www.food.gov.uk/consultations/ukwideconsults/2008/saltreductiontargets)



Within the survey it is only possible to ascertain whether people add salt to food while cooking or at the table rather than to measure or quantify overall salt consumption.

#### 6.6.4 North West survey results: Salt consumption

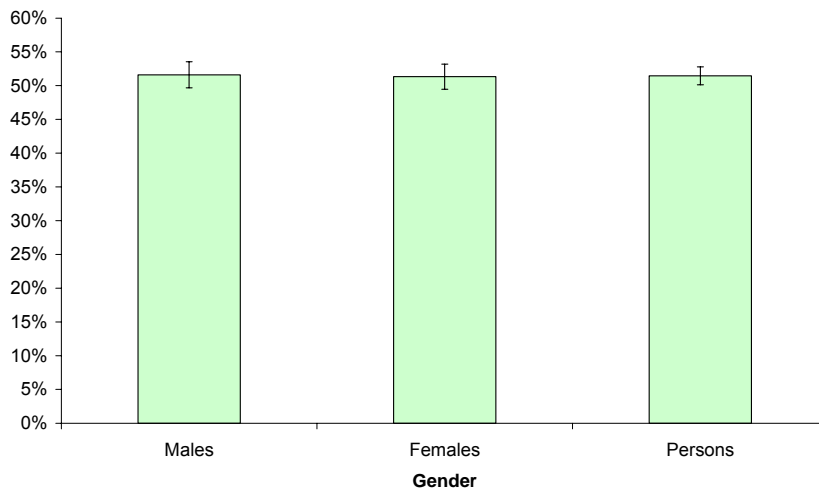
Just over half (51.5%) of all adults generally do not have salt added to food during cooking. There was no significant difference by gender (Figure 39, Table 29).

The percentage of adults that generally do not have salt added to food during cooking decreases with age (Figure 40). Adult residents under the age of 35 years are significantly less likely to have salt added to food during cooking than people aged 55+ years.

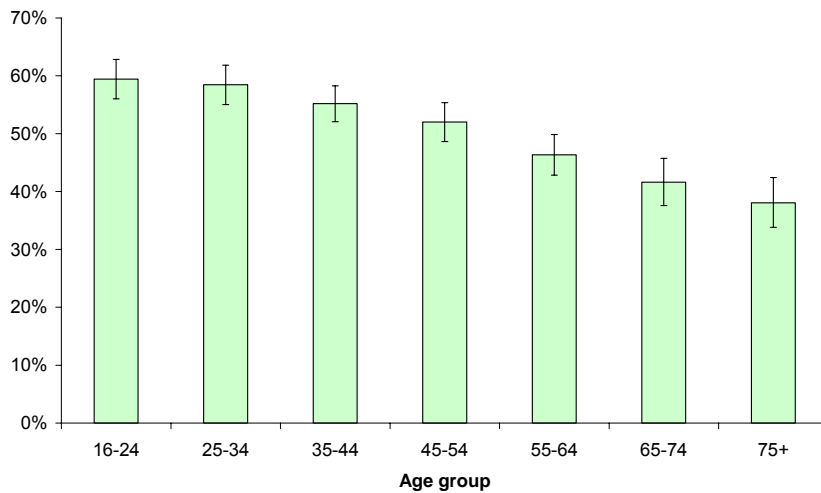
There is little variation by deprivation level (Figure 41, Table 30), but there is a significant difference by ethnicity: significantly more White adults (52.6%) generally do not have salt added to food during cooking than non-White adults (22.7%) (Figure 42, Table 31).

Around six out of ten adults rarely or never add salt at the table (Figure 43, Table 32). Significantly more women (61.8%) than men (57.6%) rarely or never add salt at the table. However, there is little variation by age (Figure 44). The percentage of adults who rarely or never add salt at the table is slightly higher in the least deprived areas than the most deprived areas, but the difference is not significant (Figure 45, Table 33).

**Figure 39: Percentage of adults that generally do not have salt added to food during cooking, by gender.**



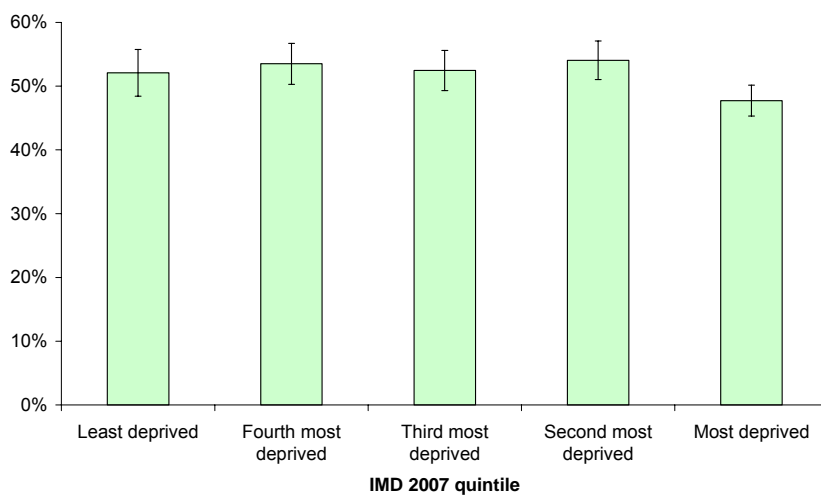
**Figure 40: Percentage of adults that generally do not have salt added to food during cooking, by age group.**



**Table 29: Percentage of adults that generally do not have salt added to food during cooking, by gender and age group.**

Age group	Males	Females	Persons
All ages	51.6%	51.3%	51.5%
16-24	59.8%	58.8%	59.4%
25-34	53.4%	63.4%	58.5%
35-44	53.7%	56.7%	55.2%
45-54	52.5%	51.5%	52.0%
55-64	50.4%	42.4%	46.3%
65-74	43.1%	40.1%	41.6%
75+	36.5%	38.8%	38.0%

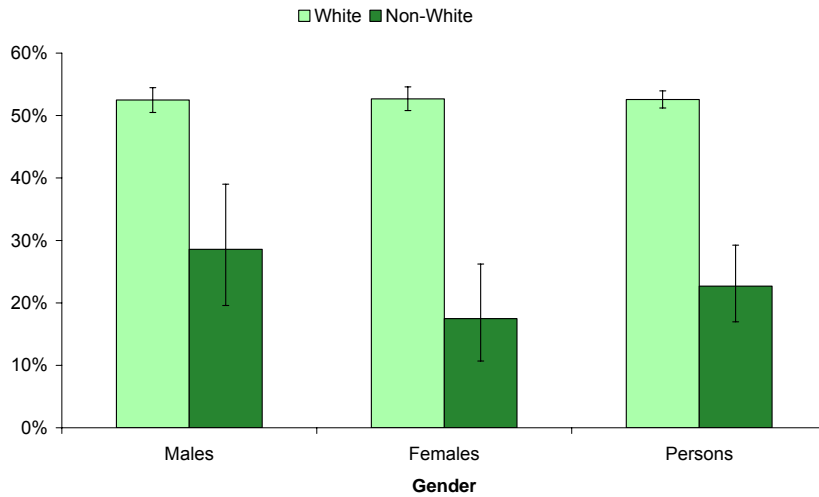
**Figure 41: Percentage of adults that generally do not have salt added to food during cooking, by Index of Multiple Deprivation 2007 quintile.**



**Table 30: Percentage of adults that generally do not have salt added to food during cooking, by gender and Index of Multiple Deprivation 2007 quintile.**

IMD quintile	Males	Females	Persons
All quintiles	51.6%	51.3%	51.5%
Least deprived	51.8%	52.4%	52.1%
Fourth most deprived	50.9%	56.0%	53.5%
Third most deprived	52.8%	52.2%	52.5%
Second most deprived	55.2%	52.9%	54.1%
Most deprived	48.9%	46.7%	47.7%

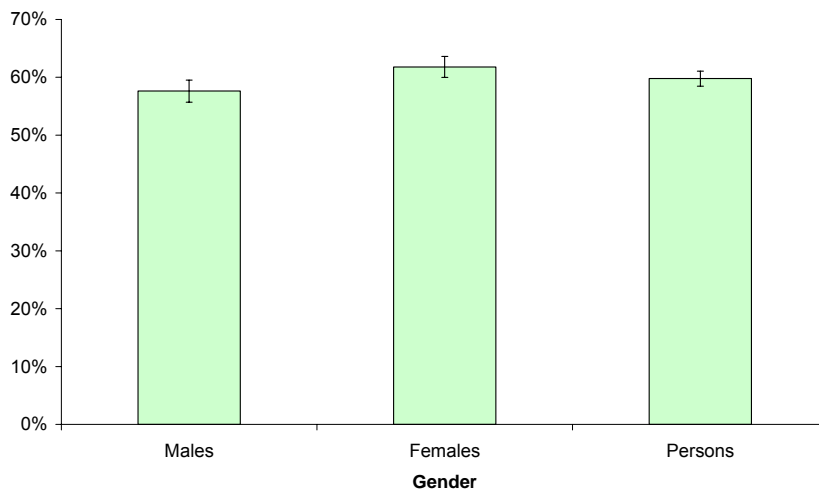
**Figure 42: Percentage of adults that generally do not have salt added to food during cooking, by White and non-White ethnic groupings.**



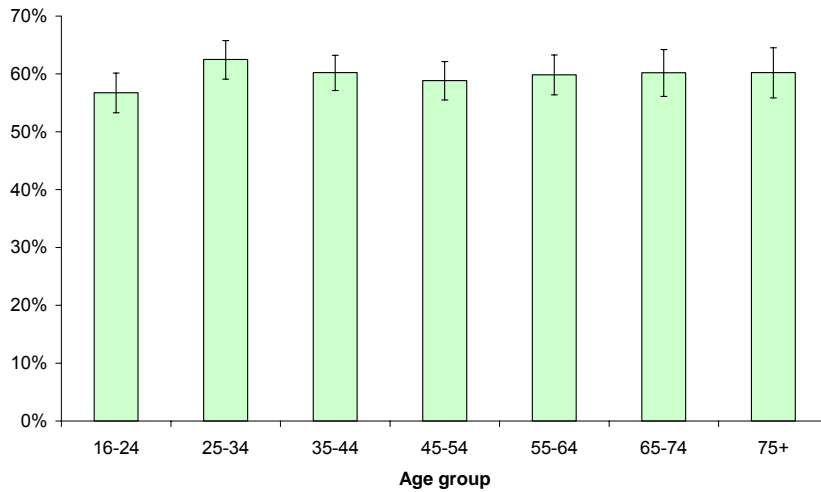
**Table 31: Percentage of adults that generally do not have salt added to food during cooking, by gender and White and non-White ethnic groupings.**

IMD quintile	Males	Females	Persons
White	52.5%	52.7%	52.6%
Non-White	28.6%	17.5%	22.7%

**Figure 43: Percentage of adults that rarely or never add salt at the table, by gender.**



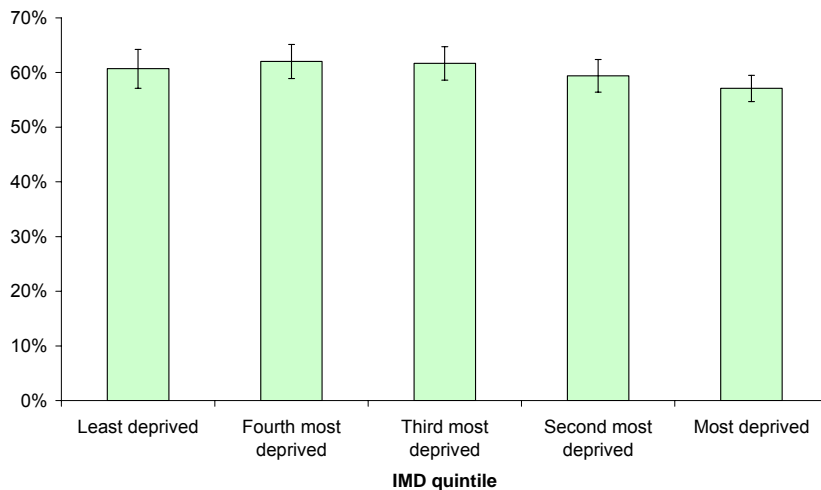
**Figure 44: Percentage of adults that rarely or never add salt at the table, by age group.**



**Table 32: Percentage of adults that rarely or never add salt at the table, by gender and age group.**

Age group	Males	Females	Persons
All ages	57.6%	61.8%	59.8%
16-24	53.8%	60.0%	56.7%
25-34	62.2%	62.9%	62.5%
35-44	59.1%	61.4%	60.2%
45-54	58.8%	59.1%	58.8%
55-64	57.4%	62.1%	59.9%
65-74	56.7%	63.1%	60.2%
75+	50.8%	65.8%	60.2%

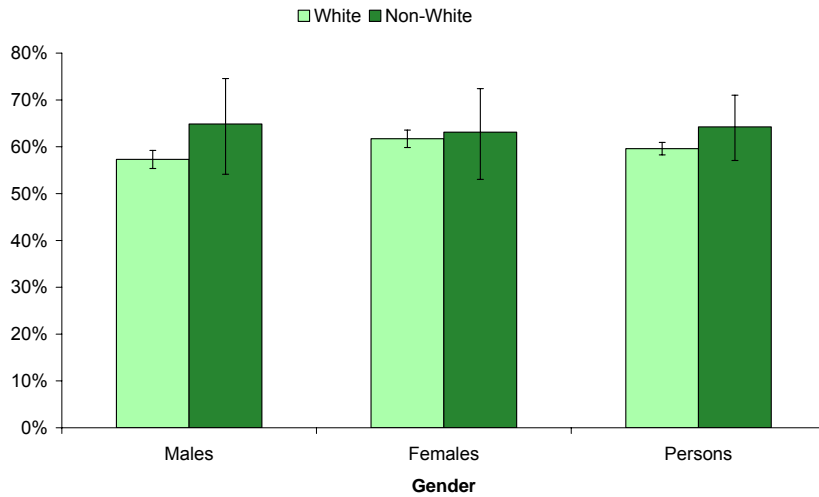
**Figure 45: Percentage of adults that rarely or never add salt at the table, by Index of Multiple Deprivation 2007 quintile.**



**Table 33: Percentage of adults that rarely or never add salt at the table, by gender and Index of Multiple Deprivation 2007 quintile.**

IMD quintile	Males	Females	Persons
All quintiles	57.6%	61.8%	59.8%
Least deprived	57.5%	63.7%	60.7%
Fourth most deprived	60.9%	63.0%	62.0%
Third most deprived	60.7%	62.6%	61.7%
Second most deprived	56.2%	62.4%	59.4%
Most deprived	54.7%	59.3%	57.1%

**Figure 46: Percentage of adults that rarely or never add salt at the table, by gender and White and non-White ethnic groupings.**



**Table 34: Percentage of adults that rarely or never add salt at the table, by gender and White and non-White ethnic groupings.**

Ethnic grouping	Males	Females	Persons
White	57.3%	61.7%	59.6%
Non-White	64.8%	63.1%	64.2%

## 6.7 Fruit and vegetables

### 6.7.1 Background

There are many acknowledged protective benefits of consuming fruit and vegetables. Individuals who have a good daily intake of fruit and vegetables have lower rates of mortality and morbidity for coronary heart disease, stroke and some cancers (including lung and stomach).<sup>11; 81; 96</sup> It has been suggested that by increasing fruit and vegetable consumption by one portion a day, the risk of coronary heart disease is reduced by 4%.<sup>97</sup>

The daily recommended intake of fruit and vegetables is more than 400g per day, which is the equivalent of five or more portions (80g) of fruit and vegetables.<sup>2; 81</sup> One portion of fruit could be one medium apple, one medium banana, one heaped tablespoon of sultanas or one heaped tablespoon of dried cherries. One portion of vegetables includes: two spears of broccoli, three heaped tablespoons of canned or sliced fresh carrots or three sticks of celery.<sup>5</sup>

In 2001, the Government launched the 5 A DAY programme with an aim to increase fruit and vegetable consumption by raising the awareness of the health benefits associated with fruit and vegetables and to improve their availability.<sup>5</sup>

### 6.7.2 Existing information

Although £72 million is spent on fresh fruit and £88 million on fresh vegetables per week<sup>84</sup> across Great Britain, most individuals are consuming less than the recommended five portions of fruit and vegetables per day.<sup>98</sup>

In 2006, only 28% of men and 32% of women were consuming five or more portions of fruit and vegetables a day.<sup>31</sup> Trend data shows that there had been no significant change in the percentage of adults consuming five or more portions of fruit and vegetables a day between 2001 and 2004, but the proportion increased by around a fifth between 2004 and 2006.

Individuals in the least deprived areas were more likely to eat five portions of fruit and vegetables per day (36% of men and 38% of women) than in the most deprived areas (20% of men in the second lowest income quintile and 23% of women in the lowest income quintile). Consumption also differed by socio-economic status: 27% of men and 33% of women in managerial and professional groups consume the recommended five or more portions of fruit and vegetables per day, compared with 16% and 17% of men and women respectively in routine and semi-routine occupations.

The survey showed that the average fruit consumption was the lowest among people aged 16-24 years for both sexes. And across all ages, 7% of men and 5% of women consumed no fruit or vegetables per day.

In the North West, 25% of men and 28% of women said they eat five portions of fruit and vegetables per day, slightly lower than the national figures. The survey also found that 8% of men and 6% of women said they did not eat any fruit and vegetables.<sup>31</sup>

### 6.7.3 Survey and analysis methodology

Survey participants were asked two questions about their fruit and vegetable intake:

1. How many portions of fruit did they eat a day (examples of a portion include a handful of grapes, an orange, a glass of fruit juice, a handful of dried fruits).
2. How many portions of vegetables did they eat a day (examples of a portion include three heaped tablespoons of carrots, a side salad, two spears of broccoli).

These questions were taken from the short form (SF) diet questionnaire. The questions were open response and examples of what constituted a portion were given as above.

For the purpose of analysis the portions of fruit and vegetables consumed per day were added together and subsequently grouped into the following categories:

- no portions of fruit and vegetables per day;
- one to two portions of fruit and vegetables per day;
- three to four portions of fruit and vegetables per day; or
- five or more portions of fruit and vegetables per day.

The analyses in this section focus on those adults who ate the recommended five or more portions of fruit and vegetables per day and those who ate no portions.

The Health Survey for England (HSE) asks a longer series of questions about fruit and vegetable consumption, including greater details on the type and quantity of the fruit and vegetables (salad, pulses, fresh, frozen, tinned and fruit juice). Within the HSE, the proportion of adults in the North West who said that they ate five or more portions of fruit and vegetables a day is far lower than the proportion who said they did so within this North West lifestyle survey. The difference in results may be due to methodology: because of questioning time available, the number of questions within this survey was limited to two. It is possible that a longer and more detailed series of questions, with more detailed examples of portion sizes may elicit a more considered and accurate response.

Nevertheless, the North West lifestyle survey can provide a useful self-reported indication of any differences in fruit and vegetable consumption between sub groups of the region's population.

#### **6.7.4 North West survey results: Fruit and vegetable consumption**

Around four out of ten adults (41.9%) said that they eat five or more portions of fruit and vegetables a day (Figure 47, Table 35). Significantly fewer men (37.8%) than women (45.6%) eat five or more portions a day.

In terms of the proportion of adults who eat five or more portions of fruit and vegetables a day, there are no obvious patterns by age (Figure 48). Fewer residents over the age of 75 (36.8%) said that they eat five or more portions than younger age groups, but the differences are not significant. Otherwise, consumption of five or more portions tend to be highest among people aged 16-24 years and 55-74 years (all around 44-45%), but again, these proportions are not significantly higher than in other age groups. However, the proportion of women aged 55-64 who eat five or more portions of fruit and vegetables a day (51.0%) is significantly higher than the proportion of women aged 75+ years (38.6%).

Consumption of five or more portions of fruit and vegetables a day generally decreases as deprivation increases (Figure 49, Table 36). Adults living in the most deprived areas are significantly less likely to eat five portions a day (37.1%) than adults living in the least deprived (47.8%) and fourth most deprived (48.7%) areas.

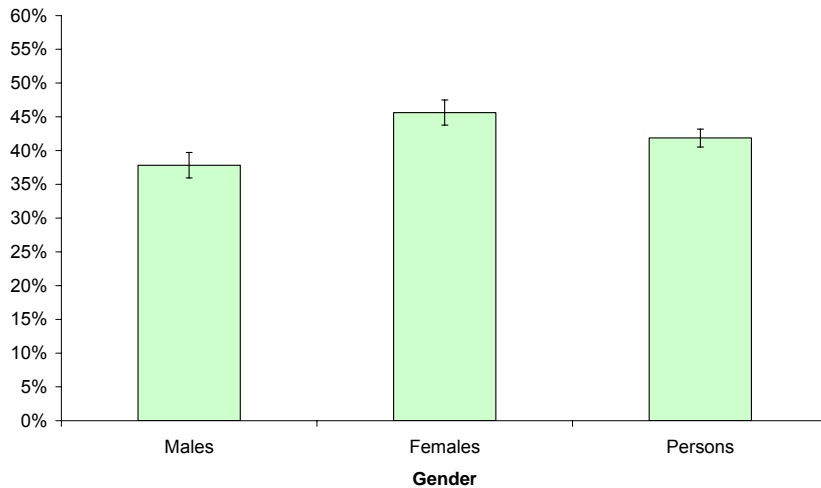
There is little difference in the proportions of White men and non-White men who eat five or more portions of fruit and vegetables a day (Figure 50, Table 37). However, the proportion of White women who eat five or more portions (46.1%) is significantly higher than the proportion of non-White women (33.7%).

Around one in twenty adults (4.8%) said that they do not eat any portions of fruit and vegetables each day (Figure 51, Table 38). More women (5.5%) than men (4.0%) said that they eat no portions of fruit and vegetables, but the difference is not significant.

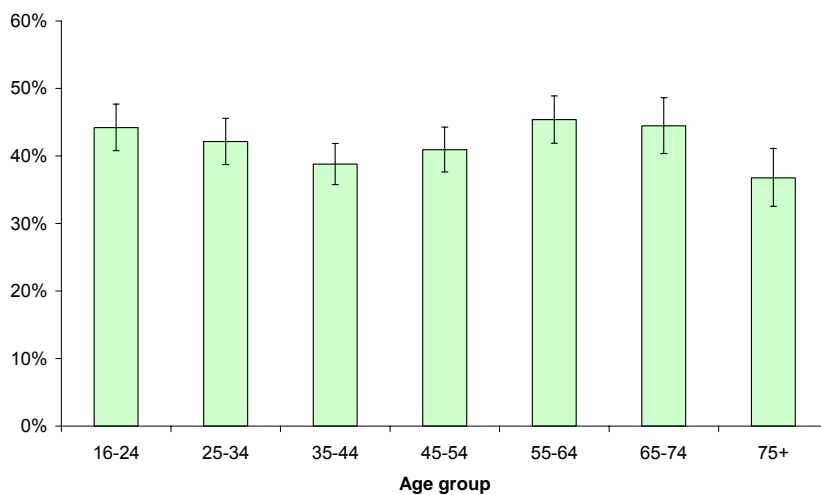
The percentage of adults who eat no portions of fruit and vegetables increases with age up to 45-54 years, but then decreases (Figure 52). Fewer younger adults (16-24 years) and older adults (55+ years) eat no portions of fruit and vegetables (around 4% in these groups) than other age groups, but there are no significant differences by age group.

The proportion of adults who eat no portions of fruit and vegetables a day is similar across the four least deprived areas (around 4%), but is higher in the most deprived areas (6.8%) (Figure 53, Table 39). Significantly more adults from the most deprived areas eat no portions of fruit and vegetables a day than adults from the least deprived areas.

**Figure 47: Percentage of adults who eat five portions of fruit and vegetables a day, by gender.**



**Figure 48: Percentage of adults who eat five portions of fruit and vegetables a day, by age group.**

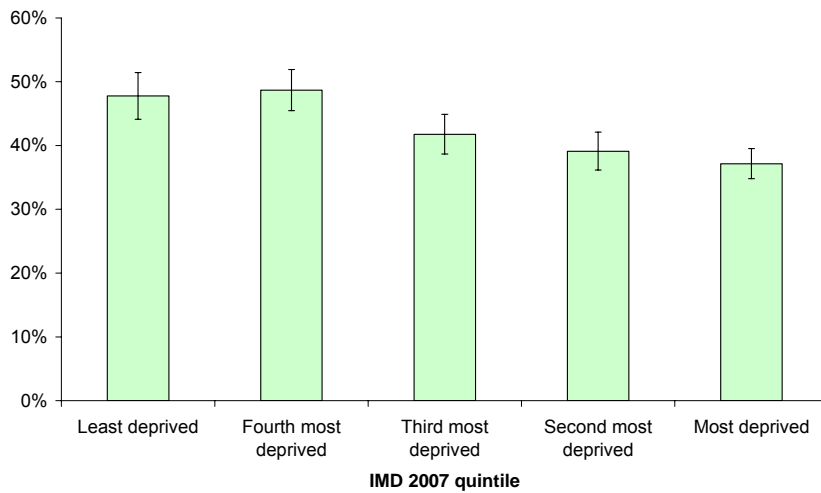


**Table 35: Percentage of adults who eat five portions of fruit and vegetables a day, by gender and age group.**

Age group	Males	Females	Persons
All ages	37.8%	45.6%	41.9%
16-24	42.2%	46.3%	44.2%
25-34	39.3%	45.0%	42.1%
35-44	33.7%	43.6%	38.8%
45-54	33.8%	48.1%	40.9%
55-64	39.6%	51.0%	45.4%
65-74	42.9%	45.9%	44.5%
75+	33.5%	38.6%	36.8%



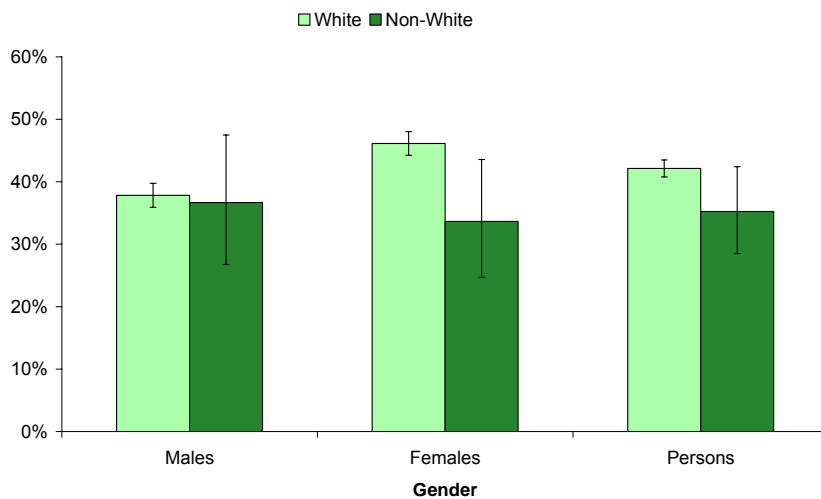
**Figure 49: Percentage of adults who eat five portions of fruit and vegetables a day, by Index of Multiple Deprivation 2007 quintile.**



**Table 36: Percentage of adults who eat five portions of fruit and vegetables a day, by gender and Index of Multiple Deprivation 2007 quintile.**

IMD quintile	Males	Females	Persons
All quintiles	37.8%	45.6%	41.9%
Least deprived	44.6%	50.8%	47.8%
Fourth most deprived	43.0%	54.0%	48.7%
Third most deprived	35.9%	47.3%	41.8%
Second most deprived	35.4%	42.6%	39.1%
Most deprived	34.5%	39.5%	37.1%

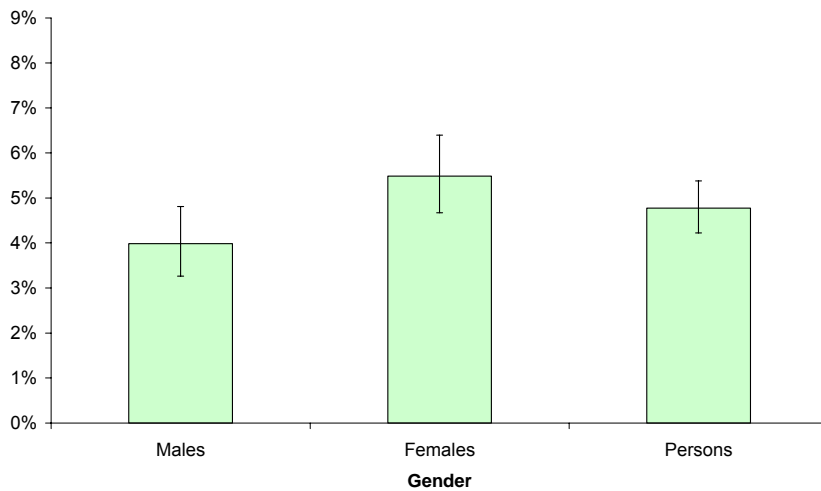
**Figure 50: Percentage of adults who eat five portions of fruit and vegetables a day, by gender and White and non-White ethnic groupings.**



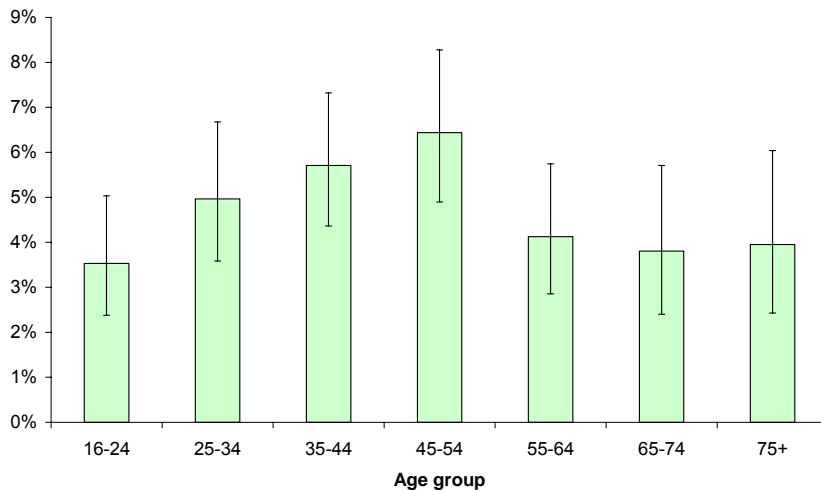
**Table 37: Percentage of adults who eat five portions of fruit and vegetables a day, by gender and White and non-White ethnic groupings.**

Ethnic grouping	Males	Females	Persons
White	37.8%	46.1%	42.1%
Non-White	36.7%	33.7%	35.2%

**Figure 51: Percentage of adults who eat no portions of fruit and vegetables a day, by gender.**



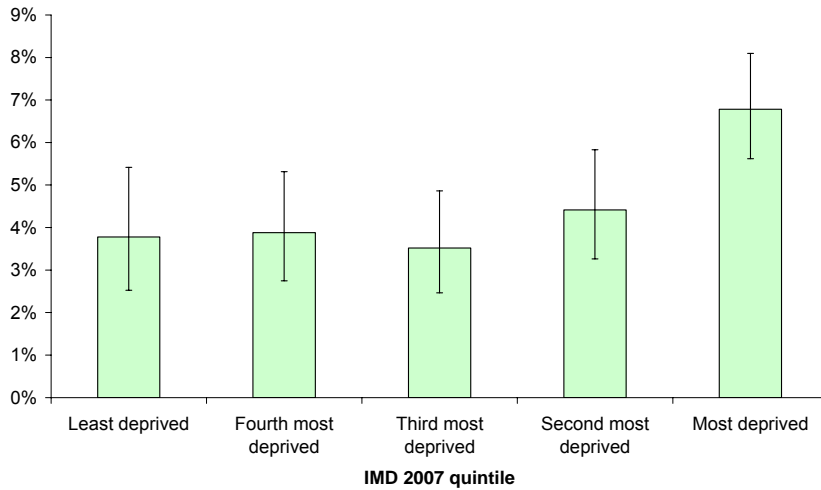
**Figure 52: Percentage of adults who eat no portions of fruit and vegetables a day, by age group.**



**Table 38: Percentage of adults who eat no portions of fruit and vegetables a day, by gender and age group.**

Age group	Males	Females	Persons
All ages	4.0%	5.5%	4.8%
16-24	3.6%	3.4%	3.5%
25-34	2.9%	6.9%	5.0%
35-44	5.8%	5.6%	5.7%
45-54	5.8%	7.1%	6.4%
55-64	2.3%	5.9%	4.1%
65-74	2.9%	4.3%	3.8%
75+	3.7%	4.4%	4.0%

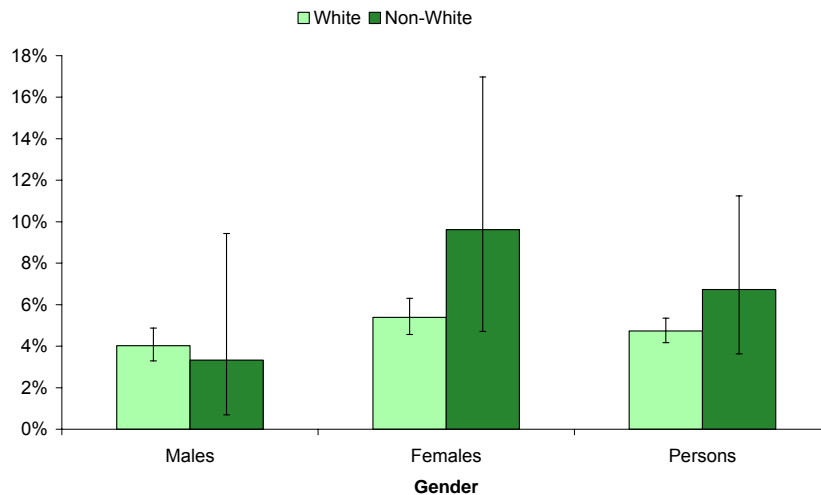
**Figure 53: Percentage of adults who eat no portions of fruit and vegetables a day, by Index of Multiple Deprivation 2007 quintile.**



**Table 39: Percentage of adults who eat no portions of fruit and vegetables a day, by gender and Index of Multiple Deprivation 2007 quintile.**

IMD quintile	Males	Females	Persons
All quintiles	4.0%	5.5%	4.8%
Least deprived	2.5%	5.0%	3.8%
Fourth most deprived	3.7%	4.1%	3.9%
Third most deprived	2.7%	4.3%	3.5%
Second most deprived	3.1%	5.4%	4.4%
Most deprived	6.2%	7.2%	6.8%

**Figure 54: Percentage of adults who eat no portions of fruit and vegetables a day, by gender and White and non-White ethnic groupings.**



**Table 40: Percentage of adults who eat no portions of fruit and vegetables a day, by gender and White and non-White ethnic groupings.**

Ethnic grouping	Males	Females	Persons
White	4.0%	5.4%	4.7%
Non-White	3.3%	9.6%	6.7%

## 7. Physical Activity

### 7.1 Level of physical activity

#### 7.1.1 Background

It is widely recognised that taking part in some level of physical activity regularly can help prevent many major illnesses. Currently, a lack of physical activity is estimated to contribute to 22-33% of coronary heart disease, 15% of diabetes, 12-13% of stroke, 16-17% of colon cancer and 11% of breast cancer in developed countries.<sup>99</sup>

In England, physical inactivity costs an estimated £8.2 billion annually through costs to the NHS and economy, such as through absence from work. It has been suggested that a 10% rise in physical activity in adults would save an estimated 6,000 lives and have an economic benefit of £2 billion.<sup>100</sup> Adults who are physically active reduce the risk of premature death by 20% to 30% and reduce the risk of developing major chronic diseases (such as those highlighted above) by up to 50%.<sup>101</sup> Regular physical activity can also help relieve stress and mild forms of depression and has a major impact on the prevalence of obesity.

The Chief Medical Officer's recommended level of physical activity for adults is 30 minutes of moderate<sup>lxxxii</sup> activity on at least five days a week<sup>lxxxiii</sup>, and for children and young people it is one hour of moderate activity every day<sup>12</sup> in order to gain general health benefits. The Government has also set a target for 70% of the population to be 'reasonably active' by 2020, with an interim target of 50% by 2011.<sup>100</sup>

A significant proportion of the UK population are not meeting these recommended levels. Results from the 2006 Health Survey for England revealed that only 40% of men and 28% of women met the recommended weekly physical activity target.<sup>31</sup> However, both of these figures have increased over time from 2003 (by 11.1% in men and 16.7% in women). The level of physical activity also varies by socio-economic classification. For example, rates of walking are two-thirds higher in professional classes than in unskilled manual groups.<sup>101</sup>

*Choosing Activity: a physical activity action plan*<sup>12</sup> looks to deliver the physical activity commitments outlined in *Choosing Health: Making healthy choices easier*<sup>11</sup> as well as other cross-government action. This includes assessing school PE and sport; local action to encourage activity through sport; transport plans; and the use of green spaces.

The '*Healthy Living*' *Social Marketing Initiative: a review of the evidence*<sup>102</sup> report provided a focused and informative approach to tackling obesity through changing behaviours such as improving diet and increasing physical activity. In 2007, the Government also introduced a new Obesity Prevention Social Marketing programme. Over the ten years that this programme of activity is planned, there will be three different themes<sup>31</sup>; <sup>103</sup> of which the period 2010 to 2013 will focus upon using the 2012 Olympics to inspire a fitter Britain.

*Healthy Weight, Healthy Lives: a Cross-Government Strategy for England*<sup>5</sup> included: investing in a 'Walking into Health' campaign, which aims to get a third of England walking at least 1,000 more steps daily (an extra 15 billion steps a day) by 2012; investing £30 million in 'Healthy Towns', working with selected towns and cities to build on the successful EPODE<sup>lxxxiv</sup> model used in Europe; setting up a working group with the entertainment technology industry to ensure that they continue to develop tools to allow parents to manage the time that their children spend playing sedentary games online; reviewing the overall approach to physical

<sup>lxxxii</sup> Moderate level physical activity is defined as any form of aerobic activity which causes an individual's heart rate to increase slightly. This level of physical activity should not cause any discomfort or harm. Examples of moderate level physical activity include brisk walking, swimming, dancing and cycling.

<sup>lxxxiii</sup> 'High' activity: 30 minutes of moderate activity on at least five days a week; 'medium' activity: 30 minutes of moderate intensity activity on one to four days a week; 'low' activity: levels of activity below that classed as 'medium' activity.

<sup>lxxxiv</sup> Ensemble Prevenons L'obésité Des Enfants (together let's prevent childhood obesity).

activity, including the role of Sport England, to develop a fresh set of programmes ensuring that there is a clear legacy of increased physical activity leading up to and after the 2012 Olympics.

Physical activity is also identified as a key priority for health improvement in *NHS LifeCheck*.<sup>lxv</sup> This aims to encourage those at the highest risk of ill health caused by lifestyle choices to do a personal LifeCheck and act on results and modify their behaviour where applicable. This will be used in conjunction with health trainers where available and was rolled out in summer 2008.

### 7.1.2 Existing information

At this time, the UK has no national surveillance system for monitoring trends on overall physical activity. Questions in large scale surveys such as the Health Survey for England (HSE) have altered over time thus limiting the opportunity to monitor trends. We are reliant on the HSE, the Annual Survey of Participation in Sport and Culture and the National Travel Survey announced in *Choosing Activity: a physical activity action plan*.<sup>12</sup>

The Health Survey for England 2006 asked individuals questions relating to overall participation, frequency and type of activity lasting at least 30 minutes four weeks prior to the interview. Trend data from the survey showed that the proportion of both men and women achieving the Government's recommended levels of physical activity increased from 32% for men and 21% for women in 1997 to 40% for men and 28% for women in 2006. Overall, the percentage of adults meeting the recommended levels decreased with increasing age. The survey showed that the level of activity that individuals partake in was related to income. In the three highest income quintiles between 42% and 45% of men met the recommended level of physical activity. Of women in the second highest and third income quintile only 31% were likely to meet the recommended target compared with 26% in the lowest income quintile.<sup>31</sup>

Data from the Sport England Active People Survey show that 11.6% of adults in England meet the Government's recommended levels of weekly physical activity. This compares to only 11.1% of adults in the North West, significantly worse than the England average. Within the North West, Liverpool, Manchester and Salford all have significantly lower percentages of adults who are physically active than the England average.

### 7.1.3 Survey and analysis methodology

Individuals were asked a series of questions about their activity at work, travel to and from places and recreational activities in order to derive an overall category of their physical activity. The questions were taken from the Global Physical Activity Questionnaire v2<sup>lxvii</sup> (GPAQ) which assesses the frequency, duration and intensity of physical activity. The GPAQ questionnaire allows data to be aggregated into three categorical indicators: high, moderate and low. The 15 individual physical activity questions were aggregated into a single variable based on the GPAQ definition of these categories. These may vary from how other physical activity information is presented in other reports or has been presented in the past. They are defined as follows:

#### High

A person reaching any of the following criteria is classified as having a high level of physical activity:

- vigorous intensity activity on at least 3 days achieving a minimum of at least 1,500 MET<sup>lxviii</sup> minutes per week; OR
- 7 or more days of any combination of walking, moderate or vigorous intensity activities achieving at least 3,000 MET minutes per week.

<sup>lxv</sup> [www.dh.gov.uk/en/Publichealth/Healthimprovement/NHSLifeCheck/DH\\_082707](http://www.dh.gov.uk/en/Publichealth/Healthimprovement/NHSLifeCheck/DH_082707)

<sup>lxvii</sup> [www.who.int/chp/steps/GPAQ/en/](http://www.who.int/chp/steps/GPAQ/en/)

<sup>lxviii</sup> Metabolic Equivalents (METs) are commonly used to express the intensity of physical activities, and are also used for the analysis of GPAQ data. When calculating a person's overall energy expenditure using GPAQ data, 4 METs get assigned to the time spent in moderate activities and 8 METs to the time spent in vigorous activities.

### Moderate

A person is classified as having a moderate level of physical activity if they do not meet the criteria for 'high', but do meet any of the following:

- 3 or more days of vigorous intensity activity for at least 20 minutes per day; OR
- 5 or more days of moderate intensity activity or walking for at least 30 minutes per day; OR
- 5 or more days of any combination of walking, moderate intensity, or vigorous intensity activities achieving a minimum of at least 600 MET minutes per week.

### Low

A person is classified as having a low physical activity level if they do not meet the criteria for moderate or high.

## 7.1.4 North West survey results: Physical activity

Overall 39.0% of adults have a high level of physical activity, 26.3% have a moderate level and 34.8% have a low level (Figure 55, Table 41).

Men are 1.4 times more likely to partake in a high level of physical activity than women: significantly more men (46.1%) than women (32.4%) have a high level of physical activity. Conversely, significantly more women than men have moderate and low levels of physical activity (29.4% and 38.2% of women respectively, compared with 22.9% and 31.1% of men).

There are clear variations in physical activity level by age (Figure 56). The percentage of adults who have a high level of physical activity consistently decreases as age increases, while the percentage of adults who have a low level of physical activity consistently increases with age. The percentage of people aged 16-24 years who undertake a high level of physical activity (57.0%) is 4.5 times higher than the percentage of those aged 75+ years (12.8%).

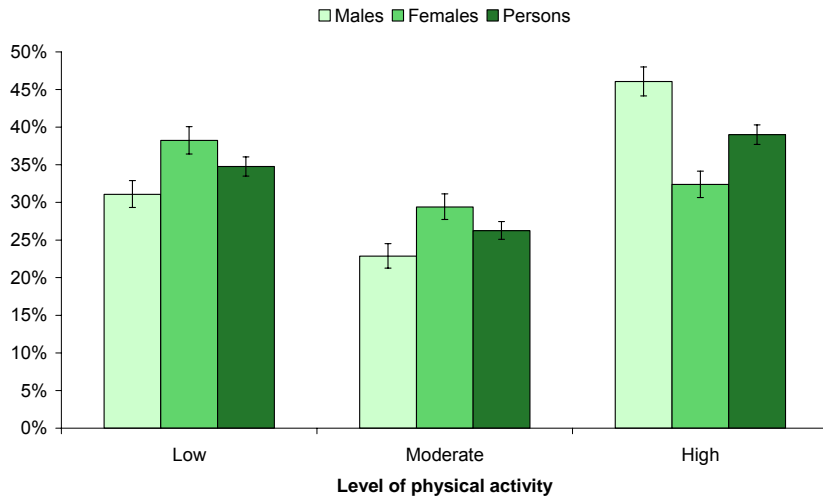
There is also a significant difference between the proportion of people aged 16-24 years who have a high level of physical activity and all other age groups. The oldest residents (75+ years) have a significantly lower proportion engaging in a high level of physical activity than all younger age groups. The reverse is true for low levels of physical activity: the proportion of people aged 16-24 years who have a low level of physical activity is significantly lower than all other age groups, and so on.

Moderate level activity remains relatively consistent across age groups, apart from a decrease among the over 75s. However, there is no significant difference between any age group in the proportion of adults undertaking a moderate level of physical activity.

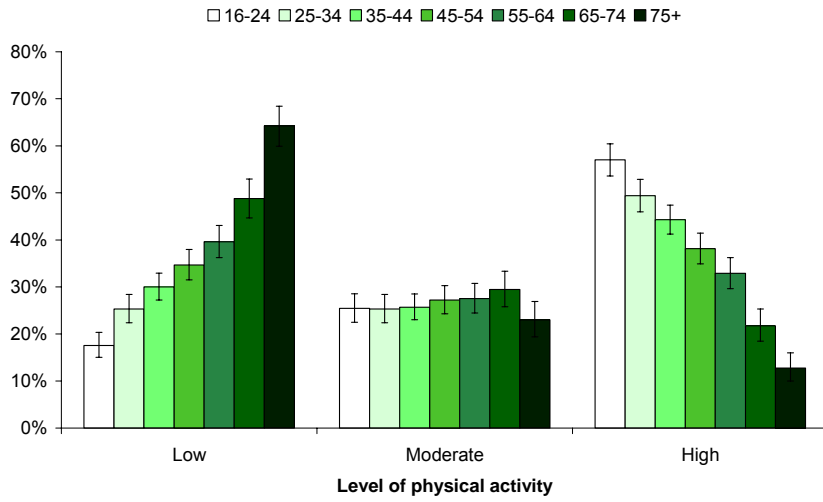
Overall, young men are far more likely than any other age and gender group to have a high level of physical activity. Seven out of ten (69.1%) men aged 16-24 years have a high level of physical activity. The lowest proportion of adults having a high level of physical activity is women aged 75+ years (11.9%).

There is little variation in all levels of physical activity (high, moderate and low) by level of deprivation: there is no apparent trend and no significant differences (Figure 57, Table 42).

**Figure 55: Level of physical activity, by gender.**



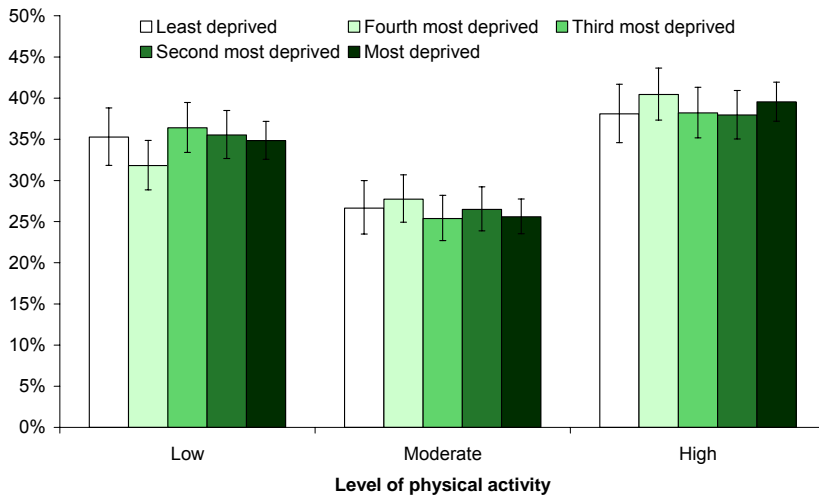
**Figure 56: Level of physical activity, by age group.**



**Table 41: Level of physical activity, by gender and age group.**

	Age group	Low	Moderate	High
<b>Males</b>	All ages	31.1%	22.9%	46.1%
	16-24	11.3%	19.7%	69.1%
	25-34	19.8%	19.6%	60.6%
	35-44	29.3%	20.4%	50.3%
	45-54	32.4%	25.7%	41.9%
	55-64	37.4%	25.3%	37.4%
	65-74	52.2%	25.5%	22.3%
	75+	56.8%	28.9%	14.2%
<b>Females</b>	All ages	38.2%	29.4%	32.4%
	16-24	23.8%	31.4%	44.9%
	25-34	30.7%	31.0%	38.3%
	35-44	30.7%	30.9%	38.4%
	45-54	36.9%	28.7%	34.4%
	55-64	41.6%	29.8%	28.6%
	65-74	46.1%	32.8%	21.1%
	75+	68.7%	19.4%	11.9%
<b>Persons</b>	All ages	34.8%	26.3%	39.0%
	16-24	17.6%	25.4%	57.0%
	25-34	25.3%	25.3%	49.4%
	35-44	30.0%	25.7%	44.3%
	45-54	34.7%	27.2%	38.1%
	55-64	39.6%	27.5%	32.9%
	65-74	48.8%	29.5%	21.7%
	75+	64.2%	23.0%	12.8%

**Figure 57: Level of physical activity, by Index of Multiple Deprivation 2007 quintile.**

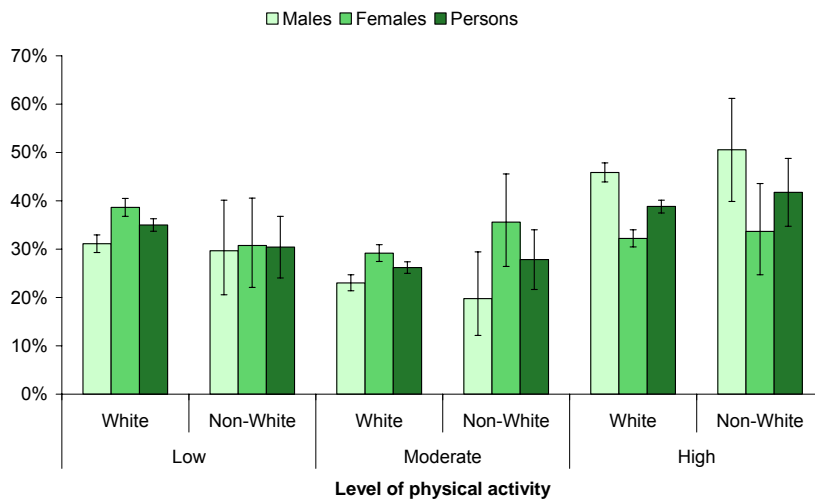




**Table 42: Level of physical activity, by gender and Index of Multiple Deprivation 2007 quintile.**

IMD quintile		Low	Moderate	High
<b>Males</b>	All quintiles	31.1%	22.9%	46.1%
	Least deprived	31.9%	25.5%	42.7%
	Fourth most deprived	28.6%	24.3%	47.1%
	Third most deprived	32.9%	23.2%	43.9%
	Second most deprived	29.4%	21.7%	48.9%
	Most deprived	32.0%	21.5%	46.5%
<b>Females</b>	All quintiles	38.2%	29.4%	32.4%
	Least deprived	38.4%	27.9%	33.7%
	Fourth most deprived	34.8%	31.0%	34.2%
	Third most deprived	39.6%	27.5%	32.9%
	Second most deprived	41.2%	30.9%	27.9%
	Most deprived	37.5%	29.3%	33.2%
<b>Persons</b>	All quintiles	34.8%	26.3%	39.0%
	Least deprived	35.3%	26.6%	38.1%
	Fourth most deprived	31.8%	27.7%	40.5%
	Third most deprived	36.4%	25.4%	38.2%
	Second most deprived	35.5%	26.5%	38.0%
	Most deprived	34.8%	25.6%	39.6%

**Figure 58: Level of physical activity by White and non-White ethnic groupings.**



**Table 43: Level of physical activity, by gender and White and non-White ethnic groupings.**

Ethnic grouping		Low	Moderate	High
<b>M</b>	White	31.1%	23.0%	45.9%
	Non-White	29.7%	19.8%	50.5%
<b>F</b>	White	38.6%	29.2%	32.2%
	Non-White	30.8%	35.6%	33.7%
<b>P</b>	White	35.0%	26.2%	38.8%
	Non-White	30.4%	27.8%	41.8%

## 7.2 Sedentary behaviour

### 7.2.1 Background

Sedentary behaviour has become an increasing problem in the developed world and has been named as one of the ten leading causes of death and disability.<sup>66</sup> Physical inactivity has been linked to all-cause mortality and poorer quality of life and puts individuals at increased risk of a number of conditions such as obesity, coronary heart disease, certain cancers, osteoporosis, Type 2 diabetes and some psychiatric conditions.<sup>4</sup> Research has also suggested that a sedentary lifestyle is more prevalent in those who are obese, less educated and current smokers.<sup>4</sup> It has been highlighted, however, that while the impact of physical activity upon health and health outcomes are very apparent the influence of sedentary behaviour upon health is less clear.<sup>4; 6</sup> This may be attributed to a shortage of research on sedentary lifestyles<sup>4</sup> and also a lack of a standard definition of what is classed as sedentary behaviour.<sup>6</sup>

A recent report by the Royal Commission on Environmental Pollution<sup>104</sup> highlighted the impact of new technology upon lifestyles and that modern urban systems do not encourage individuals to take up physical activity. Methods of travel are changing, with an increasing focus upon using cars and decreasing use of public transport, bicycles and walking.<sup>5; 6</sup> There is a high value placed on labour saving gadgets, with people leading busier lives and having less time and energy to spend on exercise/activity.<sup>6</sup> Children also do not spend as much time playing outside as they once did<sup>6; 105</sup>, instead choosing more sedentary indoor activities such as watching TV, playing computer games, using the internet and mobile phones. In addition, there is less physical education and sport at school.<sup>6; 65</sup> Being sedentary in itself can also lead to individuals making poor dietary choices.<sup>6</sup> Sedentary behaviour may be seen as a "...proxy for both inactivity and low levels of energy expenditure"<sup>6(p.1)</sup> and not meeting the recommended levels of moderate activity each week.

For policy and targets relating to physical activity, please see section 7.1.

### 7.2.2 Existing information

Please see section 7.1.

### 7.2.3 Survey and analysis methodology

As well as the series of questions relating to physical activity, one question on sedentary behaviour was asked: how much time do you usually spend sitting or reclining on a typical day? This was an open response question. For analysis purposes, responses were grouped into four categories: two hours or less; more than two hours and up to four hours; more than four hours and up to eight hours; and more than eight hours.

### 7.2.4 North West survey results: Sedentary behaviour

Overall, 11.7% of adults are sedentary for at least eight hours a day, 43.2% are sedentary for over four hours, and 78.0% are sedentary for over two hours (Figure 59, Table 44).

Significantly more men (14.5%) than women (8.9%) are sedentary for more than eight hours a day. Men are also significantly more likely to be sedentary for more than four hours but less than eight hours than women (34.6% of men compared with 28.8% of women). Conversely, women are significantly more likely than men to be sedentary for less than two hours a day (25.8% of women compared with 18.0% of men).

There are some interesting results by age group (Figure 60). Significantly more people aged 25 to 64 years are sedentary for more than eight hours a day than people aged 16-24 years. In addition, significantly more people aged 25-54 years are sedentary for more than eight hours a day than people aged 65-74 years. This may reflect higher employment rates in these middle

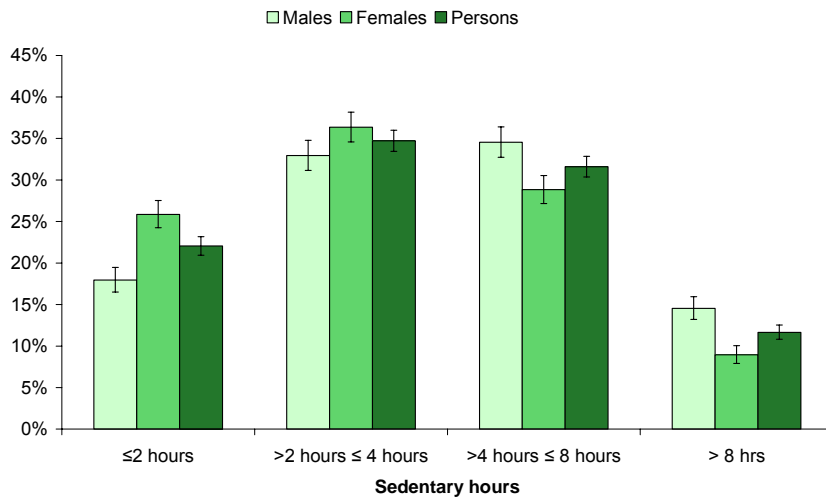
age groups, particularly employment in sedentary jobs. The proportion of adults who are sedentary for at least eight hours a day then increases among those aged 75+ years. The proportion of adults who are sedentary for more than four hours but less than eight hours decreases between the 16-24 years and 35-44 years age groups, but then steadily increases as age increases. Significantly fewer people aged 35-44 years (24.3%) are sedentary for this amount of time per day than those aged 55+ years and significantly more people aged 75+ years (46.8%) are sedentary for this time than all age groups between 16 and 64 years.

The proportion of adults who are sedentary for more than two hours but less than four hours a day also decreases between the 16-24 years and 35-44 years age groups, but subsequently rises up to those aged 65-74 years before decreasing in the over 75s. This trend means that significantly more people aged 16-24 years, 55-64 years and 65-74 years are sedentary for more than two hours but less than four hours a day than those aged 35-44 years and 75+ years. In addition, significantly more people aged 65-74 years are sedentary for this time per day than those aged 25-34 years.

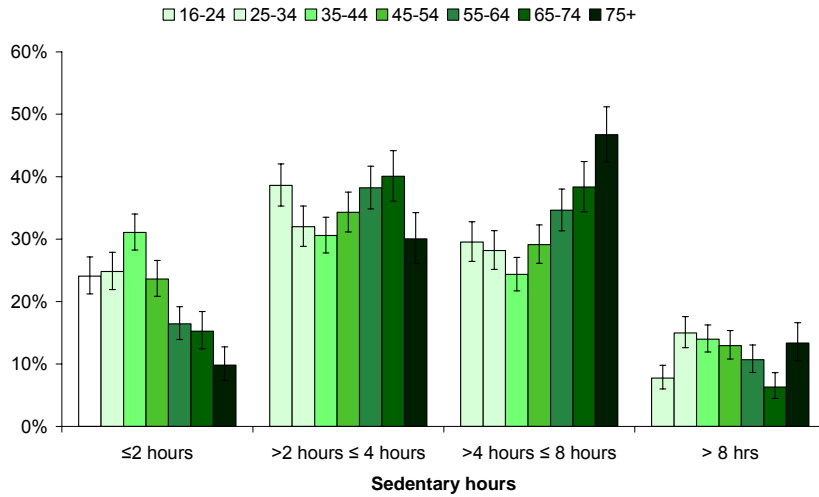
The proportion of adults who are sedentary for up to two hours a day increases up to the ages of 35-44 years, but then decreases as age increases. Significantly more people aged 35-44 years are sedentary for less than two hours a day than any other age group. In addition, significantly more people aged 16-24 years, 25-34 years and 45-54 years are sedentary for less than two hours a day than all age groups over 55 years. Significantly fewer people aged 75+ years are sedentary for this time than all age groups under 65 years.

There is little variation in the number of sedentary hours (by any grouping) that adults spent per day by level of deprivation: there are no obvious patterns and no significant differences (Figure 61, Table 45).

**Figure 59: Average number of sedentary hours in a typical day, by gender.**

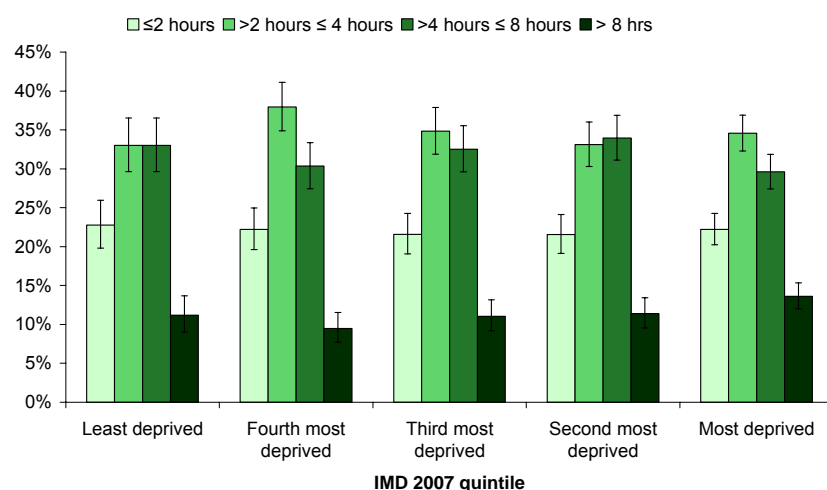


**Figure 60: Average number of sedentary hours in a typical day, by age group.**



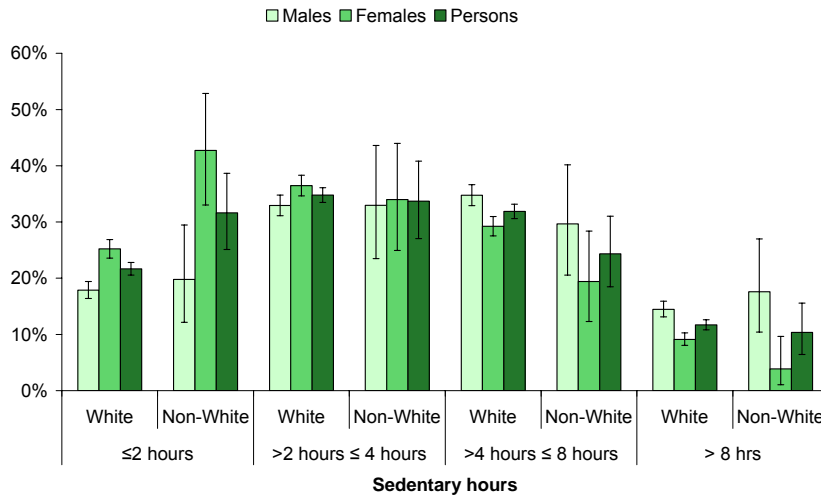
**Table 44: Average number of sedentary hours in a typical day, by gender and age group.**

	Age group	Sedentary hours			
		≤2 hours	>2 hours ≤4 hours	>4 hours ≤8 hours	> 8 hours
<b>Males</b>	All ages	18.0%	33.0%	34.6%	14.5%
	16-24	24.0%	40.3%	29.3%	6.5%
	25-34	18.1%	32.1%	31.6%	18.1%
	35-44	22.6%	29.0%	28.0%	20.4%
	45-54	18.8%	29.2%	35.0%	17.1%
	55-64	12.6%	34.8%	38.0%	14.6%
	65-74	12.7%	33.8%	45.5%	8.0%
	75+	9.5%	32.6%	45.3%	12.6%
<b>Females</b>	All ages	25.9%	36.4%	28.8%	8.9%
	16-24	24.3%	37.0%	29.7%	9.1%
	25-34	31.4%	31.9%	24.8%	11.9%
	35-44	39.4%	32.2%	20.7%	7.7%
	45-54	28.5%	39.4%	23.2%	8.9%
	55-64	20.2%	41.7%	31.4%	6.7%
	65-74	17.5%	45.6%	32.0%	4.9%
	75+	10.0%	28.5%	47.6%	13.8%
<b>Persons</b>	All ages	22.0%	34.7%	31.6%	11.7%
	16-24	24.1%	38.6%	29.5%	7.7%
	25-34	24.8%	32.0%	28.2%	15.0%
	35-44	31.1%	30.6%	24.3%	14.0%
	45-54	23.6%	34.3%	29.1%	13.0%
	55-64	16.4%	38.2%	34.6%	10.7%
	65-74	15.2%	40.1%	38.4%	6.3%
	75+	9.8%	30.1%	46.8%	13.4%

**Figure 61: Average number of sedentary hours in a typical day, by Index of Multiple Deprivation 2007 quintile.****Table 45: Average number of sedentary hours in a typical day, by Index of Multiple Deprivation 2007 quintile.**

IMD quintile		≤2 hours	>2 hours ≤4 hours	>4 hours ≤8 hours	> 8 hours
<b>Males</b>	All quintiles	18.0%	33.0%	34.6%	14.5%
	Least deprived	16.6%	30.2%	37.7%	15.5%
	Fourth most deprived	18.3%	33.3%	34.8%	13.5%
	Third most deprived	18.0%	33.3%	35.7%	13.0%
	Second most deprived	18.2%	33.5%	35.7%	12.6%
	Most deprived	18.2%	33.5%	31.5%	16.8%
<b>Females</b>	All quintiles	25.9%	36.4%	28.8%	8.9%
	Least deprived	28.5%	35.9%	28.5%	7.1%
	Fourth most deprived	25.9%	42.3%	26.1%	5.7%
	Third most deprived	24.9%	36.4%	29.6%	9.1%
	Second most deprived	24.5%	32.7%	32.6%	10.3%
	Most deprived	26.0%	35.5%	27.8%	10.7%
<b>Persons</b>	All quintiles	22.0%	34.7%	31.6%	11.7%
	Least deprived	22.8%	33.0%	33.0%	11.2%
	Fourth most deprived	22.2%	38.0%	30.3%	9.5%
	Third most deprived	21.6%	34.8%	32.5%	11.0%
	Second most deprived	21.5%	33.1%	34.0%	11.4%
	Most deprived	22.2%	34.6%	29.6%	13.6%

**Figure 62: Average number of sedentary hours, by gender and White and non-White ethnic groupings.**



**Table 46: Average number of sedentary hours in a typical day, by gender and White and non-White ethnic groupings.**

Ethnic grouping		≤2 hours	>2 hours ≤4 hours	>4 hours ≤8 hours	> 8 hours
<b>M</b>	White	17.9%	32.9%	34.7%	14.5%
	Non-White	19.8%	33.0%	29.7%	17.6%
<b>F</b>	White	25.2%	36.5%	29.2%	9.1%
	Non-White	42.7%	34.0%	19.4%	3.9%
<b>P</b>	White	21.7%	34.8%	31.9%	11.7%
	Non-White	31.6%	33.7%	24.4%	10.4%

## 8. Alcohol

### 8.1 Background

While moderate alcohol consumption can have health benefits, such as reducing the risk of heart disease and ischemic stroke and promoting stress relief<sup>106</sup>, these benefits do not supersede the detrimental role alcohol misuse can play on an individual's health. Alcohol misuse is related to a wide range of negative health conditions, both physical and mental, and affects every part of the body. Alcohol impacts upon life expectancy and morbidity such as hypertension, stroke and alcoholic cardiomyopathy<sup>107</sup>, alcohol-induced pancreatitis, chronic liver disease, stomach cancer, sexually transmitted infections, teenage pregnancy and foetal alcohol syndrome, to name but a few.<sup>8</sup> Alcohol also has a major role in violence and crime as well as accidents.<sup>8</sup>

Alcohol misuse places a massive burden on the NHS in terms of hospital admissions and treatment and also on the whole economy from, for example, claimants of incapacity benefits due to alcoholism and sickness absence from work.

Currently, the Government recommends that adult women should not regularly drink more than 2-3 units of alcohol per day, while adult men should not regularly drink more than 3-4 units of alcohol per day. Pregnant women or women trying to conceive should avoid drinking alcohol. If they do choose to drink, they should not drink more than 1-2 units of alcohol once or twice a week and should not get drunk.<sup>108</sup> It appears that many people are not actually aware of how many units they are drinking<sup>xc</sup>, and conversely, that those who know they are drinking potentially detrimental amounts choose to keep drinking.

The UK is the third highest country across 25 EU member states for the number of drinks consumed in one sitting, with approximately 25% of residents drinking five or more alcoholic drinks per day when they drink.<sup>108</sup> The UK also has the highest percentage of 15-16 year olds across the EU countries who are hospitalised or admitted to an emergency room due to alcohol.<sup>109</sup> Across England, around one in five adults are drinking enough to put their health at significant risk and one in twenty enough to make disease related to alcohol consumption practically inevitable.

There is also a massive difference in healthy consequences of alcohol use between richer and poorer communities and also between genders. For example, the poorest local authorities in England have the highest recorded levels of health and social outcomes related to alcohol use such as crime, anti-social behaviour, unauthorised absence from school and Incapacity Benefit claimant rates. The risk of alcohol dependency is also greatly increased in less advantaged social groups.<sup>110</sup>

The impact of alcohol is outlined in a number of Public Service Agreements (PSAs), which aim to tackle alcohol-related issues.<sup>72</sup> These PSAs include:

- PSA 1: to raise the productivity of the UK economy
- PSA 8: to maximise employment opportunity for all
- PSA 12: to improve health and wellbeing of children and young people
- PSA 17: to tackle poverty and promote greater independence and wellbeing in later life
- PSA 18 a and b: to promote better health and wellbeing for all
- PSA 19: to ensure better care for all
- PSA 23: to make communities safer
- PSA 25a, b and c: to reduce the harm caused by alcohol and drugs.

<sup>107</sup> Cardiomyopathy refers to an enlarged and weakened heart.

<sup>108</sup> <http://units.nhs.uk/index.php>

<sup>xc</sup> [www.thesite.org/drinkanddrugs/drinking/problems/bingedrinking](http://www.thesite.org/drinkanddrugs/drinking/problems/bingedrinking)

There have been a number of policy drivers that encourage and support sensible drinking such as:

- *Sensible Drinking: The Report of an Inter-Departmental Working Group*<sup>111</sup>: saw the introduction of a change in guidelines for sensible drinking from a weekly to a daily measure, as weekly measures masked issues surrounding short-term drinking episodes and the harm (both medical and social) that this can do.
- *National Service Framework for Mental Health*<sup>51</sup>: details the acknowledged link between mental health and alcohol consumption and dependency/misuse. For example, those with anxiety symptoms are systematically seen (among other factors) to be drinking alcohol to excess.
- *NHS Cancer Plan*<sup>74</sup>: linking cancer to alcohol misuse.
- *National Service Framework for Coronary Heart Disease*<sup>34</sup>: interventions for those at high risk of CHD or those already diagnosed with CHD, including information about modifiable risk factors such as alcohol and personalised advice about how consumption may be reduced.
- *National Service Framework for Diabetes*<sup>59</sup>: highlights the risk of alcohol consumption related to hypoglycaemia.
- *National Service Framework for Older People*<sup>36</sup>: addresses behaviours that may dispose an individual to stroke including lifestyle issues such as reducing alcohol consumption. It also highlights the impact of alcohol upon mental health and conditions such as osteoporosis.
- *Every Child Matters*<sup>112</sup>: discusses children facing earlier exposure to alcohol as well as sexual activity and drugs.
- *Choosing Health: Making healthy choices easier*<sup>11</sup>: includes actions to reduce alcohol-related harm.

The *Alcohol Harm Reduction Strategy*<sup>113</sup> published in 2004 focused on improving education, health and treatment services, tackling alcohol-related crime and improving links with the alcohol industry, through a multi-agency approach. The report provided information on targeting groups who are most at risk of drinking at a level that is likely to cause harm and promotes sensible drinking. This report was followed in 2007 by *Safe. Sensible. Social: The next steps in the National Alcohol Strategy*.<sup>114</sup> Both highlight the detrimental effect alcohol misuse has on the health of the British public.

A recent report published by the Portman Group, *Setting the responsible drinking agenda*<sup>115</sup>, also highlighted the role of drinks producers and alcohol retailers in the reduction of harmful drinking, specifically related to the way that they market alcoholic beverages.

It has been suggested that looking at the harm and risk arising from the volume of alcohol consumption alone is not sufficient and that it should be measured alongside other factors, such as personality, mood, sex, tolerance of alcohol, and the physical, social and cultural context in which alcohol is consumed.<sup>116</sup> Recent publications on alcohol reflect these concerns and look to cover the wider determinants surrounding alcohol consumption and the misuse of alcohol.

Alcohol Concern acknowledges that there are difficulties faced by the Department of Health, researchers and others in the broader alcohol field with lack of consensus on what 'binge drinking' actually is.<sup>117</sup> Differing definitions can make analysis of trends across countries problematic. For example, based on government guidelines, in recent years binge drinking has been defined as drinking over half the recommended number of units for one week in one session<sup>116</sup>, which was ten units for men and seven for women. The Office for National Statistics has also classified this level as eight or more units for men and six or more units for women on at least one day in the week, while the *Binge drinking and public health*<sup>118</sup> report defined binge drinking as "the consumption of excessive amounts of alcohol within a limited time period". This report also highlighted the impact of binge drinking in terms of physical and mental health and influences of binge drinking, such as drinking cultures, personal and social factors, availability, and so on.



From an international perspective there are also a number of definitions of binge drinking. For example, in the United States alone there are three definitions:

- 1) five or more drinks for men and four or more for women on one occasion
- 2) five or more drinks per occasion on at least one in the last 30 days
- 3) blood alcohol concentration raised to 0.08g/ml or above.

Finland defines binge drinking as six or more bottles of beer per session, while Canada states it is eight drinks within the same day<sup>xcii</sup>. These varying definitions raise issues surrounding the size and strength of drinks, what is classed as an occasion, and so on.

## 8.2 Existing information

The level of alcohol consumed in the UK has steadily increased over time. The 2006 Health Survey for England showed that 89% of men and 84% of women had consumed an alcoholic drink over the past year and 72% of men and 58% of women had consumed an alcoholic drink over the past seven days. An increasing number of individuals were shown to be drinking more than the recommended levels: 41% of men and 33% of women drank more than the Government's recommended levels on at least one day in the past week.<sup>31</sup>

The survey also showed that individuals who consumed alcohol on five or more days in the week were most likely to be over the age of 45 years and in the higher income household bracket (23% of men and 13% of women). The survey highlighted that 21% of men and 12% women in the North West consumed alcohol on five or more days in the past week.

### Hazardous drinking

Previously published information on hazardous drinking is not strictly comparable to the survey results here as different methods have been used to generate intelligence. However, they can provide the context for where the North West region sits alongside the national average for this measure.

Analysis of the General Household Survey 2005 revealed that 21.9% of men and 15.6% of women in the North West were drinking at hazardous levels in the North West, higher than the England averages of 18.9% and 12.3%.<sup>119</sup>

Mid 2005 synthetic estimates based on the Health Survey for England, Hospital Episode Statistics, Office for National Statistics mid-year population estimates, mortality data and the 2001 Census show that an estimated 22.1% of North West adults were drinking at hazardous levels, higher than the England average of 20.1%.

### Harmful drinking

Previously published information on harmful drinking is not strictly comparable to the survey results here as different methods have been used to generate intelligence. However, they can provide the context for where the North West region sits alongside the national average for this measure.

Analysis of the General Household Survey 2005 revealed that 6.0% of men and 2.5% of women in the North West were drinking at harmful levels, slightly higher than the England averages of 5.6% and 2.2%.<sup>119</sup>

Mid 2005 synthetic estimates<sup>xciii</sup> show that an estimated 6.3% of North West adults were drinking at harmful levels, significantly higher than the England average of 5.0%.<sup>119</sup>

<sup>xcii</sup> Further details can be found at: [www.icap.org/PolicyIssues/BingeDrinking/KeyFactsandIssues/tabid/196/Default.aspx](http://www.icap.org/PolicyIssues/BingeDrinking/KeyFactsandIssues/tabid/196/Default.aspx)

<sup>xciii</sup> Based on the Health Survey for England, Hospital Episode Statistics, Office for National Statistics mid-year population estimates, mortality data and the Census of Population 2001.

## Binge drinking

Previously published information on binge drinking is not strictly comparable to the survey results here as different methods have been used to generate intelligence. However, they can provide the context for where the North West region sits alongside the national average for this measure.

Analysis of the General Household Survey 2007 revealed that more men (33%) than women (21%) across the North West drank *more than 8 (men) / 6 (women) units* on at least one day in the last week. This compared with 25% of men and 11.4% of women across England.<sup>xciii</sup>

Similar analysis of the Health Survey for England 2005 showed that 25.9% of men in the North West were binge drinkers (*eight or more units*), significantly worse than the England average of 19.3%. The proportion of women in the North West who were binge drinkers (11.4%) (*six or more units*) was less than half that of men. This was also higher than the England average (8.1%), but not significantly so.<sup>119</sup>

The 2003-05 synthetic estimates of binge drinking (in this case, defined as *eight or more units* for men and *six or more units* for women) show that 23.0% of adults in the North West binge drink, significantly worse than the England average of 18.0%.<sup>xciv</sup>

### 8.3 Survey and analysis methodology

In order to determine the frequency and pattern of alcohol consumption in the North West, individuals were asked a series of questions relating to the type and quantity of alcohol they consumed in the last seven days.

First, respondents were asked if they drink alcoholic drinks at present and if they did, they were asked if they had an alcoholic drink in the seven days ending yesterday. If the answer was no to either question, the interviewer moved on to the next section of the questionnaire. Next, respondents were asked on which days in the previous week they had an alcoholic drink. Taking each day that they had drunk alcohol on in turn, questions were asked about the type of drink/s that had been consumed and the quantity of that type of drink.

Thinking about last <day of week>, what types of drink did you have that day...?

Non-alcoholic beer or lager	⇒	How many pints of non-alcoholic beer/lager did you drink last <day of week>?
Low alcohol beer or lager	⇒	How many pints of low alcohol beer/lager did you drink last <day of week>?
Normal strength beer, lager, shandy, stout	⇒	How many pints of normal strength beer/lager/shandy/stout did you drink last <day of week>?
Strong beer, lager, shandy, stout	⇒	How many pints of strong beer/lager did you drink last <day of week>?
Alcopops such as Smirnoff Ice, WKD, Bacardi Breezer, etc.	⇒	How many bottles of alcopops did you drink last <day of week>?
Spirits such as gin, vodka, whisky, rum, etc.	⇒	How many single glasses of spirits did you drink last <day of week>?
Wine	⇒	How many standard glasses of wine did you drink last <day of week>?
Fortified wines such as sherry, port, martini, etc.	⇒	How many single glasses of fortified wine did you drink last <day of week>?

<sup>xciii</sup> [www.statistics.gov.uk/downloads/theme\\_compendia/GHS07/GeneralHouseholdSurvey2007.pdf](http://www.statistics.gov.uk/downloads/theme_compendia/GHS07/GeneralHouseholdSurvey2007.pdf)

<sup>xciv</sup> NWPHO for Department of Health: [www.nwph.net/alcohol/lape](http://www.nwph.net/alcohol/lape)

In total, 56 individual variables were created in the dataset containing information on the quantity drunk (i.e. one variable for each day of the week, for each type of drink listed). Next, eight more variables (one for each day of the week and one for a weekly total) were derived containing information on the number of units consumed. To do this, the quantity of each type of drink consumed was multiplied by the number of alcohol units in the drink. The total units drunk in each day were then calculated, and subsequently the seven (daily unit) variables were summed to arrive at a weekly total. A respondent was categorised as a binge drinker if any of their daily unit totals exceeded the appropriate threshold<sup>xcv</sup>, while both hazardous and harmful drinking categories were derived from the total units consumed in a week.

The units in each alcoholic drink were taken from *Estimating alcohol consumption from survey data: updated method of converting volumes to units*<sup>120</sup> and were the new conversion factors (see Units of Alcohol Conversion Table). This document takes into account uplifted measures for beer and wine. The information contained within the following survey results sections is the first time that hazardous, harmful and binge drinking have been estimated this way for the North West region. Therefore, other previously published measures are not strictly comparable.

### Units of Alcohol Conversion Table

Type of drink and volume	Number of units
Pints of non-alcoholic beer, lager, etc.	0
Pints of low alcohol beer, lager, etc.	0.75
Pints of normal strength beer, lager, shandy, stout, etc.	2
Pints of strong beer, lager, shandy, stout, cider, etc.	4
Bottles of alcopops such as Smirnoff Ice, WKD, Bacardi Breezer, VK, Reef	1.5
Single glasses of spirits, such as whisky, vodka, rum, etc.	1
Standard glasses of wine	2
Single glasses of fortified wines such as sherry, port, martini, etc.	1

Respondents were also asked if the information they had given was 'typical' of their drinking behaviour and to provide details if it was not.

The questions were taken from the British Regional Heart Study.<sup>xcvi</sup>

### Hazardous drinking

The total number of units consumed in a week (see section 8.3) was used to identify whether or not an individual was a hazardous drinker. Hazardous drinking is drinking above the recommended levels but not yet experiencing any harm.<sup>8</sup> Hazardous drinking is defined as the consumption of between 22 and 50 units of alcohol per week for men and between 15 and 35 units per week for women.<sup>121</sup>

### Harmful drinking

The total number of units consumed in a week (see section 8.3) was used to identify whether or not an individual was a harmful drinker. Harmful drinking is drinking over the recognised sensible levels and experiencing harm, such as an alcohol-related accident, acute alcohol poisoning, hypertension or cirrhosis.<sup>8</sup> Harmful drinking is defined as the consumption of over 50 units of alcohol per week for men and over 35 units per week for women.<sup>121</sup>

### Binge drinking

The seven units per day variables (see section 8.3) were used to identify whether or not an individual was a binge drinker. Binge drinking is drinking over double the recognised sensible levels, in one day. This is measured by the consumption of over eight units a day for men and

<sup>xcv</sup> Over eight units for men and over six units for women.

<sup>xcvi</sup> [www.ucl.ac.uk/pcph/research/brhs/index.htm](http://www.ucl.ac.uk/pcph/research/brhs/index.htm)

over six units a day for women<sup>8</sup> on the heaviest drinking day during the last week. If an individual had consumed more than eight or six units on any one day out of the last seven, they were classified as a binge drinker.

### 8.4 North West survey results: Alcohol consumption

81% of men and 67% of women said they consume alcoholic drinks at present and 85% of men and 78% of women said they had consumed an alcoholic drink in the last seven days.

Results for hazardous, harmful and binge drinking are presented in the following sections.

#### 8.4.1 Hazardous drinking

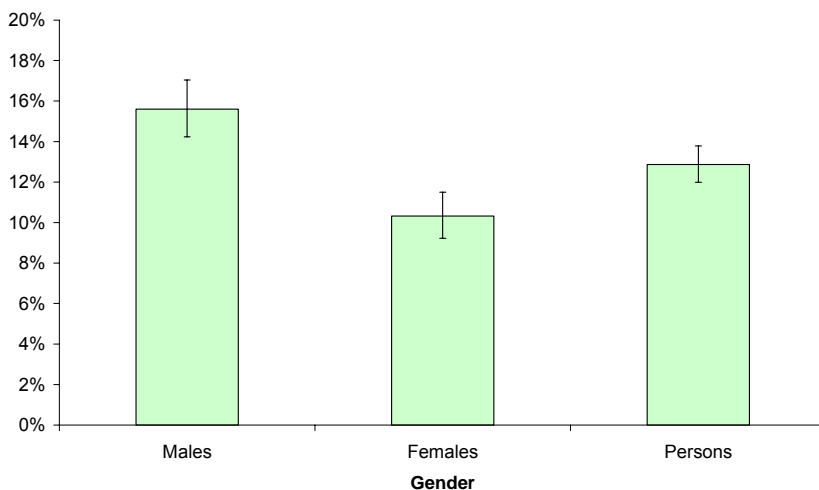
Overall, 13.0% of adults drink at hazardous levels (Figure 63, Table 47). Significantly more men (15.6%) than women (10.3%) are hazardous drinkers.

Across the adult age range, hazardous drinking is most prevalent among those aged 25-34 years (15.9%) and 35-54 years (15.6%): significantly higher than in all age groups over 55 years (Figure 64). Hazardous drinking is least prevalent among those aged 75+ years (4.7%). However, across gender and age groups, the highest proportion of male hazardous drinkers are aged 25-34 years (20.1%), while more women aged 45-54 years than any other age group drink hazardously (14.8%).

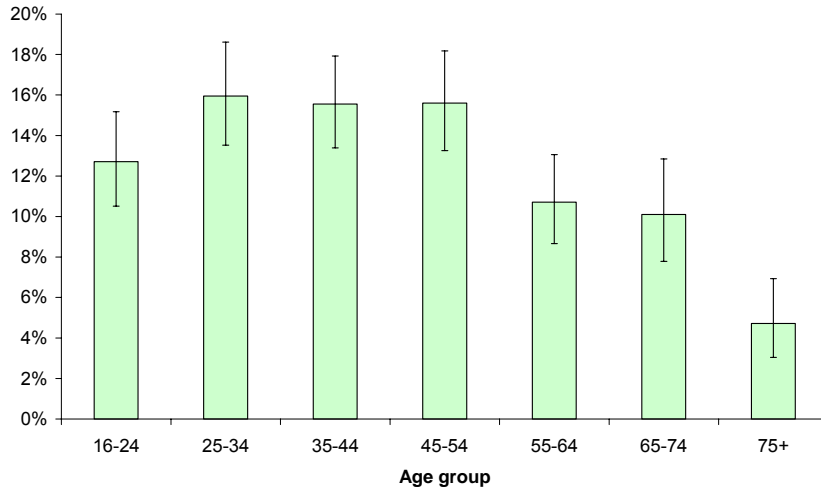
In general, hazardous drinking decreases as deprivation increases, but this trend is mainly due to women’s drinking patterns (Figure 65, Table 48). Women living in the least deprived areas are nearly twice as likely to consume alcohol at hazardous levels (14.6%) than those living in the most deprived areas (7.4%).

There are clear differences in hazardous drinking by ethnic grouping (Figure 66, Table 49). Overall, 13.2% of White adults drink at hazardous levels, significantly higher than the proportion of non-White adults (4.1%) who do so. The difference between ethnic groupings was even more pronounced for women (10.7% of White women and 2.9% of non-White women).

**Figure 63: Percentage of adults consuming hazardous levels of alcohol, by gender.**



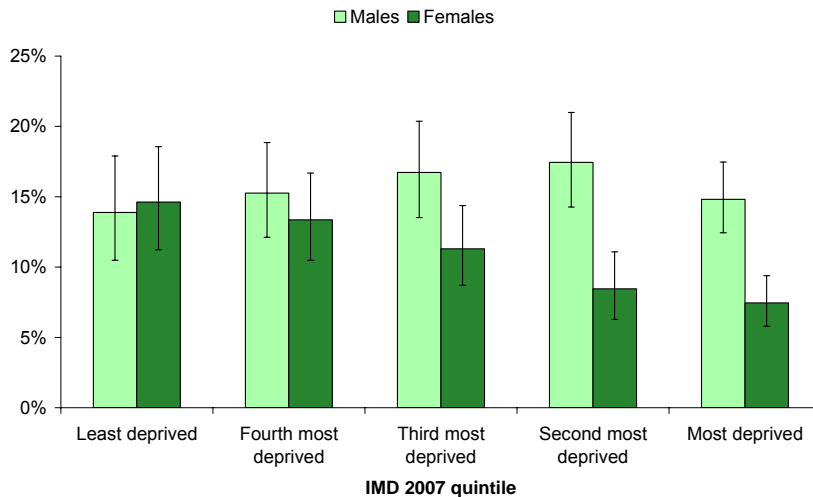
**Figure 64: Percentage of adults consuming hazardous levels of alcohol, by age group.**



**Table 47: Percentage of adults consuming hazardous levels of alcohol, by gender and age group.**

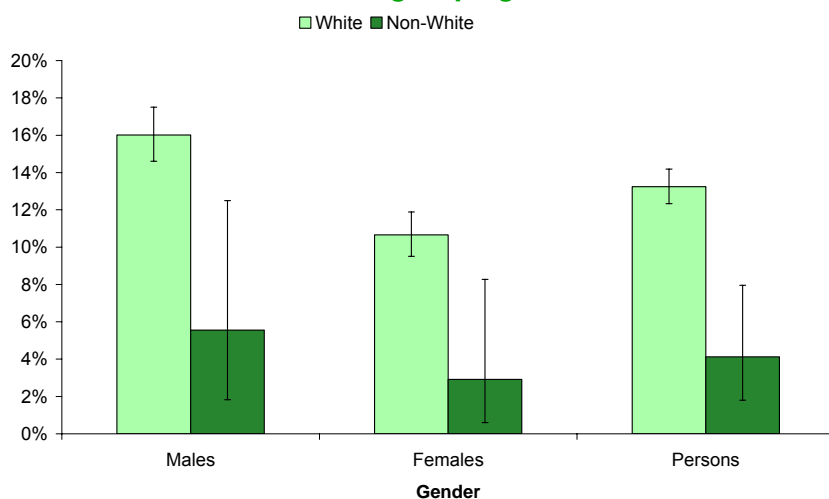
Age group	Males	Females	Persons
All ages	15.6%	10.3%	13.0%
16-24	14.6%	10.8%	12.7%
25-34	20.1%	11.9%	15.9%
35-44	19.4%	11.8%	15.6%
45-54	16.4%	14.8%	15.6%
55-64	12.1%	9.3%	10.7%
65-74	12.0%	8.4%	10.1%
75+	8.4%	2.5%	4.7%

**Figure 65: Percentage of adults consuming hazardous levels of alcohol, by gender and Index of Multiple Deprivation 2007 quintile.**



**Table 48: Percentage of adults consuming hazardous levels of alcohol, by gender and Index of Multiple Deprivation 2007 quintile.**

IMD quintile	Males	Females	Persons
All quintiles	15.6%	10.3%	12.9%
Least deprived	13.9%	14.6%	14.1%
Fourth most deprived	15.3%	13.4%	14.2%
Third most deprived	16.7%	11.3%	13.9%
Second most deprived	17.4%	8.5%	12.8%
Most deprived	14.8%	7.4%	10.9%

**Figure 66: Percentage of adults consuming hazardous levels of alcohol, by gender and White and non-White ethnic groupings.****Table 49: Percentage of adults consuming hazardous levels of alcohol, by gender and White and non-White ethnic groupings.**

Ethnic grouping	Males	Females	Persons
White	16.0%	10.7%	13.2%
Non-White	5.6%	2.9%	4.1%

### 8.4.2 Harmful drinking

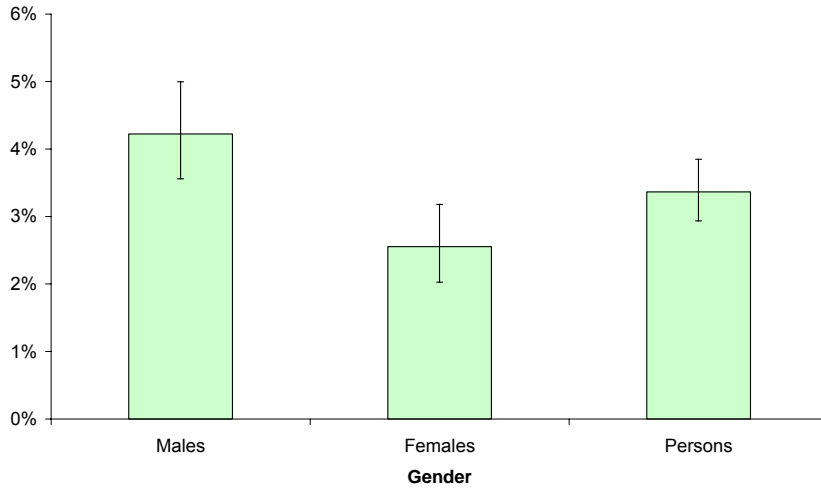
Overall, 3.4% of adults are drinking at harmful levels (Figure 67, Table 50). Significantly more men (4.2%) than women (2.6%) drink harmful levels of alcohol.

Generally, harmful drinking decreases with age, although a slight increase is seen among those aged 55-64 years (Figure 68). Adults aged 16-24 years are most likely to drink harmful levels of alcohol (5.8%) and those aged 75+ are least likely to (0.2%). The proportion of people aged 16-24 years who drink harmful levels of alcohol is significantly higher than all age groups over 45 years and the proportion of people aged 75+ years who drink at this level is significantly lower than all age groups under 65 years. Across the gender and age spectrum, more men aged 16-24 years (7.2%) drink harmful levels of alcohol than any other gender and age group.

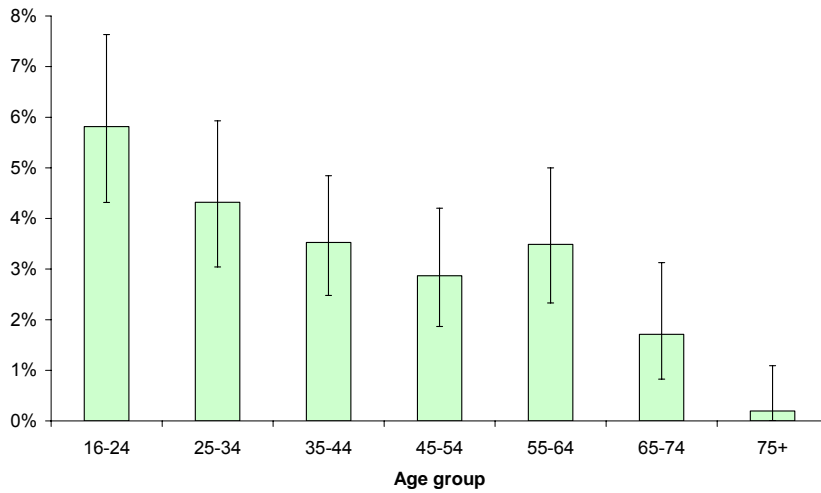
There is no obvious trend in harmful drinking by level of deprivation (Figure 69, Table 51). More (but not significantly so) residents in the second most deprived areas (4.6%) drink at harmful levels than residents in other areas of deprivation.

Significantly more White adults (3.5%) drink at harmful levels than non-White adults (0.5%) (Figure 70, Table 52).

**Figure 67: Percentage of adults consuming harmful levels of alcohol, by gender.**



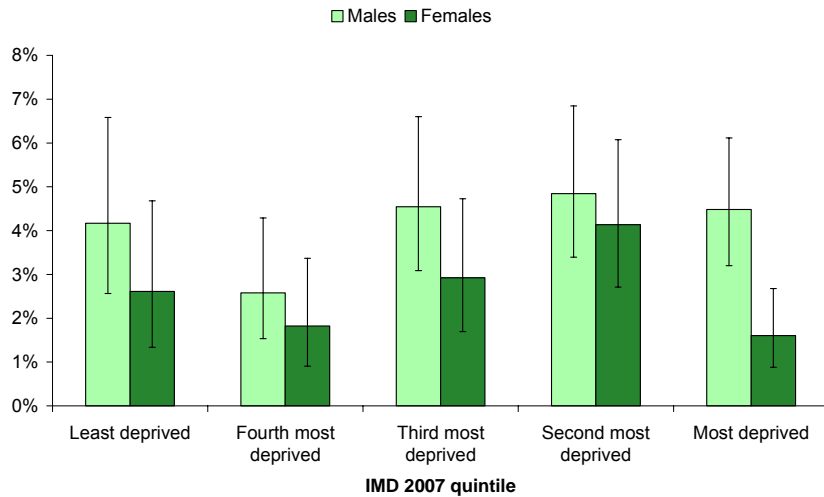
**Figure 68: Percentage of adults consuming harmful levels of alcohol, by age group.**



**Table 50: Percentage of adults consuming harmful levels of alcohol, by gender and age group.**

Age group	Males	Females	Persons
All ages	4.2%	2.6%	3.4%
16-24	7.2%	4.4%	5.8%
25-34	4.4%	4.0%	4.3%
35-44	4.6%	2.5%	3.5%
45-54	3.0%	2.5%	2.9%
55-64	5.1%	2.0%	3.5%
65-74	2.5%	1.3%	1.7%
75+	0.0%	0.3%	0.2%

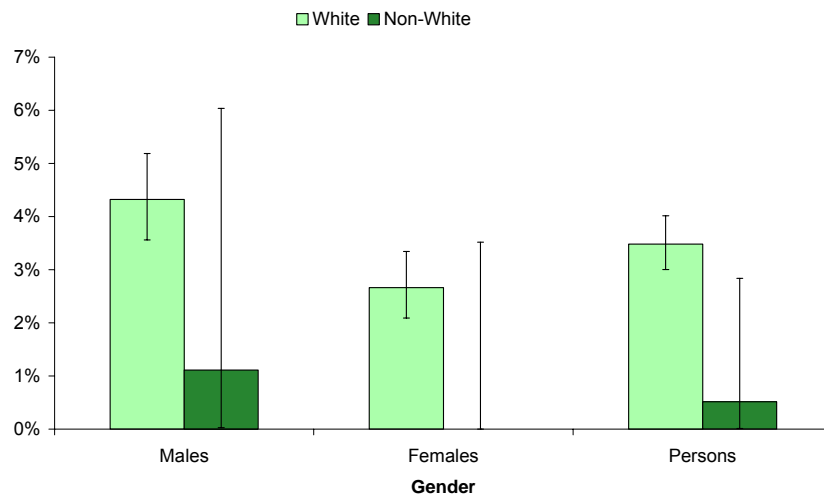
**Figure 69: Percentage of adults consuming harmful levels of alcohol, by gender and Index of Multiple Deprivation 2007 quintile.**



**Table 51: Percentage of adults consuming harmful levels of alcohol, by gender and Index of Multiple Deprivation 2007 quintile.**

IMD quintile	Males	Females	Persons
All quintiles	4.2%	2.6%	3.4%
Least deprived	4.2%	2.6%	3.4%
Fourth most deprived	2.6%	1.8%	2.3%
Third most deprived	4.5%	2.9%	3.7%
Second most deprived	4.8%	4.1%	4.6%
Most deprived	4.5%	1.6%	3.0%

**Figure 70: Percentage of adults consuming harmful levels of alcohol, by gender and White and non-White ethnic groupings.**



**Table 52: Percentage of adults consuming harmful levels of alcohol, by gender and White and non-White ethnic groupings.**

Ethnic grouping	Males	Females	Persons
White	4.3%	2.7%	3.5%
Non-White	1.1%	0.0%	0.5%



### 8.4.3 Binge drinking

Nearly one in five adults (18.3%) binge drink, significantly more men (22.8%) than women (14.0%) (Figure 71, Table 53).

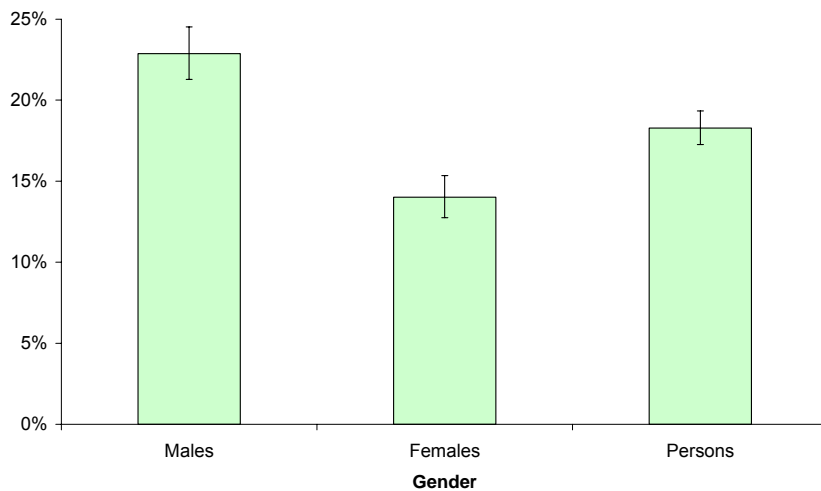
Binge drinking decreases with increasing age, dramatically so after the age of 55 years (Figure 72). The biggest binge drinkers are people aged 16-24 years: nearly three out of ten adults of this age binge drink, significantly higher than all 35+ years age groups. There are also other significant differences by age group: the proportion of all people aged 25-34 years who binge drink (27.0%) is significantly higher than all age groups over 45 years, and so on. Conversely, just 6.0% of adults aged 65-74 years and 1.8% of adults aged 75+ years binge drink, significantly lower than all other age groups.

Of all gender and age groups, men aged 16-24 years are most likely to binge drink (34.9%). For women, those aged 25-34 years (22.6%) and 16-24 years (22.3%) are the most likely to binge drink.

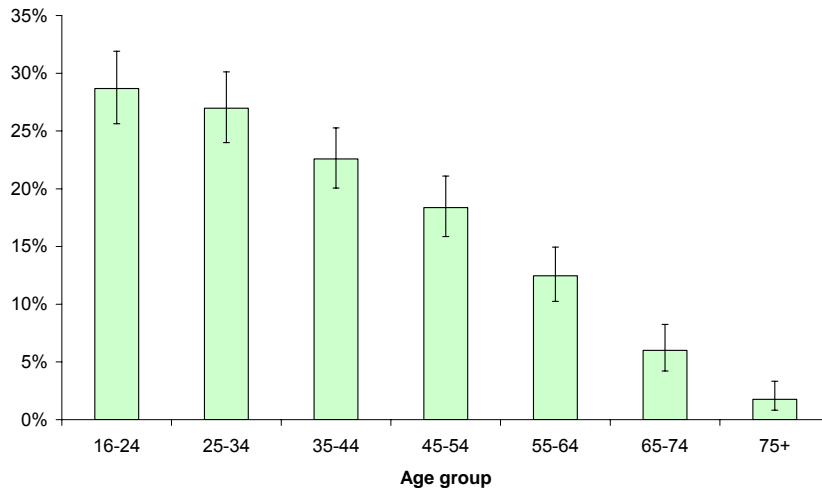
Binge drinking generally increases as deprivation increases, and more people in the most deprived areas (18.9%) binge drink than the least deprived areas (14.7%) (Figure 73, Table 54). However, more adults in the second most deprived areas (21.4%) binge drink than in any other quintile: this is significantly higher than the proportion of adults in the least deprived areas.

Significantly more White adults (18.9%) binge drink than non-White adults (4.1%) and this significant difference is seen for both genders (Figure 74, Table 55).

**Figure 71: Percentage of adults binge drinking, by gender.**



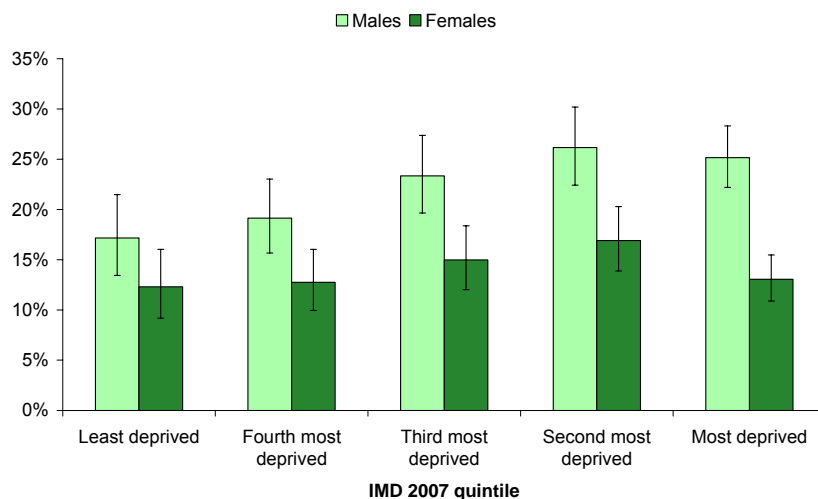
**Figure 72: Percentage of adults binge drinking, by age group.**



**Table 53: Percentage of adults binge drinking, by gender and age group.**

Age group	Males	Females	Persons
All ages	22.8%	14.0%	18.3%
16-24	34.9%	22.3%	28.7%
25-34	31.4%	22.6%	27.0%
35-44	27.4%	17.8%	22.6%
45-54	21.8%	15.0%	18.4%
55-64	16.1%	8.6%	12.5%
65-74	8.8%	3.6%	6.0%
75+	2.1%	1.6%	1.8%

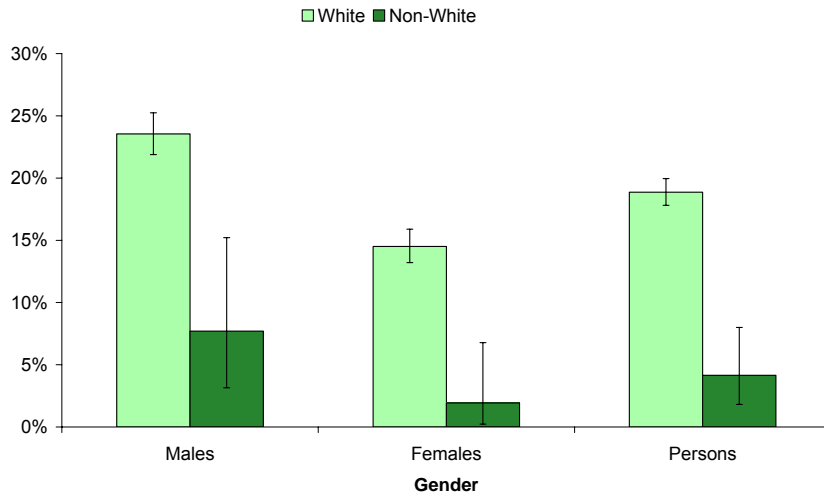
**Figure 73: Percentage of adults binge drinking, by gender and Index of Multiple Deprivation 2007 quintile.**



**Table 54: Percentage of adults binge drinking, by gender and Index of Multiple Deprivation 2007 quintile.**

IMD quintile	Males	Females	Persons
All quintiles	22.9%	14.0%	18.3%
Least deprived	17.2%	12.3%	14.7%
Fourth most deprived	19.1%	12.8%	15.9%
Third most deprived	23.3%	15.0%	19.1%
Second most deprived	26.2%	16.9%	21.4%
Most deprived	25.2%	13.1%	18.9%

**Figure 74: Percentage of adults binge drinking, by gender and White and non-White ethnic groupings.**



**Table 55: Percentage of adults binge drinking, by gender and White and non-White ethnic groupings.**

<b>Ethnic grouping</b>	<b>Males</b>	<b>Females</b>	<b>Persons</b>
White	23.5%	14.5%	18.9%
Non-White	7.7%	1.9%	4.1%

## 9. Smoking

### 9.1 Background

Evidence relating to the ill-effects of tobacco (albeit anecdotal) emerged as early as the 17th century, with the first scientific evidence of the impact of smoking upon life expectancy appearing in the 1930s.<sup>122</sup>

Smoking is the single most preventable cause of premature mortality and morbidity in England and a major contributing factor to health inequalities as well as higher death rates in manual compared with non-manual groups.<sup>9</sup> Over ten million people in Great Britain smoke, around one-sixth of the population.<sup>11</sup> Approximately one out of every five deaths in the UK may be attributed to smoking with an estimated 86,500 deaths from smoking-related illnesses in England between 1998 and 2002.<sup>123; 124</sup> Smoking is also related to a number of long-term conditions including respiratory disease (bronchitis, emphysema), asthma, hypertension, heart and circulatory disease, cancer of the bladder, throat and mouth<sup>122</sup>, with a cost to the NHS of approximately £1.5 billion per year.<sup>125</sup> It is estimated that 34 million days are lost in England and Wales through sickness absence resulting from smoking-related illnesses.<sup>125</sup>

There are longstanding issues surrounding second hand smoke, which has been found to exacerbate asthma and increase the risk of lung cancer, heart disease and stroke.<sup>126</sup> It is also estimated that 49 hospitality workers are killed by lung cancer caused by passive smoking in the UK every year.<sup>xcvii</sup> Ireland was the first country in the northern hemisphere to ban smoking in all enclosed places in March 2004 and England followed in July 2007. It has been suggested that while the introduction of smokefree places has the potential to decrease the value and volumes of alcohol sales<sup>127</sup>, it may also directly result in decreased cigarette consumption and a reduction in certain types of cancers and acute myocardial infarctions.<sup>xcviii</sup>

There are a number of policies related to smoking.

- The *Smoking Kills: A White Paper on Tobacco*<sup>128</sup>, which aimed to tackle tobacco use in Britain. It looked at measures to reduce smoking prevalence including tobacco advertising and sponsorship, cigarette sales, providing support for those who want to quit, smokefree policies, smoking and health in pregnancy, passive smoking and inequalities.
- The *Independent Inquiry into Inequalities in Health Report*<sup>129</sup>, which adopted a socio-economic model of health and highlighted the impact of lifestyle behaviours such as smoking upon health and looked at ways in which these could be changed.
- The *NHS Cancer Plan: a plan for investment, a plan for reform*<sup>74</sup>, that recognised smoking as a major contributor to the prevalence of cancer and that people who wish to stop smoking need to be supported. It also acknowledged that smoking prevalence can only be tackled by looking at the underlying causes of ill health or poverty, unemployment and the broader causes of ill health.
- The *National Service Framework for Coronary Heart Disease*<sup>34</sup>, which provided a framework for tackling heart disease through prevention, diagnosis and treatment. It highlighted support for those who want to give up smoking through the provision of specialist smoking cessation clinics.
- The *Tobacco Advertising and Promotion Act (2002)*, that set out controls for the advertising and promotion of tobacco products.
- *Choosing Health: Making healthy choices easier*<sup>11</sup>, which highlighted local government as key in supporting action for smokefree workplaces.
- The *Health Act (2006)*, which provided legislation regarding smokefree places, premises and vehicles in England. This was passed in July 2006 and came into force in July 2007.

<sup>xcvii</sup> [www.tuc.org.uk/h\\_and\\_s/tuc-11361-f0.cfm](http://www.tuc.org.uk/h_and_s/tuc-11361-f0.cfm)

<sup>xcviii</sup> [www.opsi.gov.uk/acts/acts2006/ukpga\\_20060028\\_en\\_1](http://www.opsi.gov.uk/acts/acts2006/ukpga_20060028_en_1)

Government targets aim to reduce overall prevalence of smoking<sup>128</sup>, but also the proportions of people smoking who are in households that are headed by someone in manual employment. The *Smoking Kills: A White Paper on Tobacco*<sup>128</sup> set a target to reduce the overall prevalence of smoking to 24% by 2010. This target was reviewed by the Department of Health in their PSA targets related to smoking, which aim to tackle the underlying determinants of ill health and health inequalities by “reducing adult smoking rates to 21% or less by 2010” and an additional part of this target introduced in the *NHS Cancer Plan*<sup>74</sup> to “reduce smoking prevalence among routine and manual groups to 26% or less by 2010 (from 32% in 1998)”. There is evidence of progress towards this target: in 2005 in England, 29% of people in manual occupations were smokers, compared with 33% in 1998, a 12.1% decrease.

A second PSA target also relating to smoking and tackling ill health and health inequalities aimed to “deliver a one percentage point reduction per year in the proportion of women continuing to smoke throughout pregnancy, focussing especially on smokers from disadvantaged groups as a contribution to the national target to reduce by at least 10% the gap in mortality between ‘routine and manual’ groups and then the population as a whole by 2010, starting with children under 1 year”.

If these targets were achieved, it is estimated that there would be a cost benefit/saving of £524 million due to the reduction in the number of heart attacks and strokes.<sup>130</sup>

NICE Public Health programme guidance and interventions have also been published on smoking cessation services, including the use of pharmacotherapies in primary care pharmacies, local authorities and workplaces, particularly focussing upon manual working groups, pregnant women and hard to reach communities.<sup>xcix</sup>

## 9.2 Existing information

The General Household Survey 2007 showed the prevalence of smoking in England to be 21%, a fall of one percentage point in a year. The North West region, along with the West Midlands, had the highest prevalence in England in 2007 (both 23%). Smoking in England was higher among men (22%) than women (19%). The survey showed the prevalence of smokers in the routine and manual groups to be 26% and in managerial and professional groups to be 15%.<sup>c</sup>

The Health Survey for England 2006 showed that nationally 22.5% of adults aged 16+ (24.1% of men and 21.1% of women) were current smokers.<sup>31</sup> The prevalence of smoking was higher in younger adults than older adults: 34.2% of men aged 25-34 and 27.7% of women aged 16-24 were current smokers. Individuals in the lowest income quintile had the highest prevalence of smoking (36% of men and 30% of women). The prevalence of smoking in the North West region was shown to be 3% higher for men and 1% higher for women than the national figure.<sup>31</sup>

*Where Wealth Means Health*<sup>27</sup> looked at the geographical variation in smoking prevalence based on synthetic estimates by quintile bands in the North West region. Higher smoking levels were found in Merseyside, Greater Manchester and East Lancashire as well as in diverse localities including Blackpool, Lancaster, Preston and Crewe.

Model based estimates from The Information Centre show that an estimated 24.1% of adults in England smoke<sup>ci</sup> compared with 26.0% in the North West. Within the North West, Knowsley, Liverpool and Manchester have the highest estimated percentages of adults who smoke, while Fylde, Macclesfield and Ribble Valley have the lowest.<sup>cii</sup>

<sup>xcix</sup> [www.nice.org.uk/search/guidancesearchresults.jsp?keywords=smoking+cessation&searchType=guidance](http://www.nice.org.uk/search/guidancesearchresults.jsp?keywords=smoking+cessation&searchType=guidance)

<sup>c</sup> [www.statistics.gov.uk/downloads/theme\\_compendia/GHS07/GeneralHouseholdSurvey2007.pdf](http://www.statistics.gov.uk/downloads/theme_compendia/GHS07/GeneralHouseholdSurvey2007.pdf)

<sup>ci</sup> Relates to national indicator 2007.

<sup>cii</sup> [www.ic.nhs.uk/statistics-and-data-collections/population-and-geography/neighbourhood-statistics/neighbourhood-statistics:-model-based-estimates-of-healthy-lifestyles-behaviours-at-la-level-2003-05](http://www.ic.nhs.uk/statistics-and-data-collections/population-and-geography/neighbourhood-statistics/neighbourhood-statistics:-model-based-estimates-of-healthy-lifestyles-behaviours-at-la-level-2003-05)

### 9.3 Survey and analysis methodology

Individuals were asked a number of questions about their smoking habits to determine whether they were current smokers, ex-smokers or non-smokers. All participants in the survey were asked the following:

- 1) May I just check, have you ever smoked? (Yes / No).  
If the answer was no, the respondent was categorised as a non-smoker, and the survey proceeded to the next section. If the answer was “yes”, the following three questions were asked:
- 2) Have you ever smoked at least 100 cigarettes in your lifetime? (Yes / No).
- 3) Have you ever smoked daily? (Yes / No).
- 4) Do you now smoke...? (Daily / Occasionally / Not at all).

Current smokers were defined as adults who smoke either daily or occasionally. Respondents who had smoked daily but who now did not smoke were categorised as ex-smokers. Non-smokers included adults who had never smoked at all and those who had previously smoked occasionally (but never daily) but did not now smoke.

These questions were taken from the 2004 Tobacco Control Research Bulletin.<sup>131</sup>

### 9.4 North West survey results: Smoking

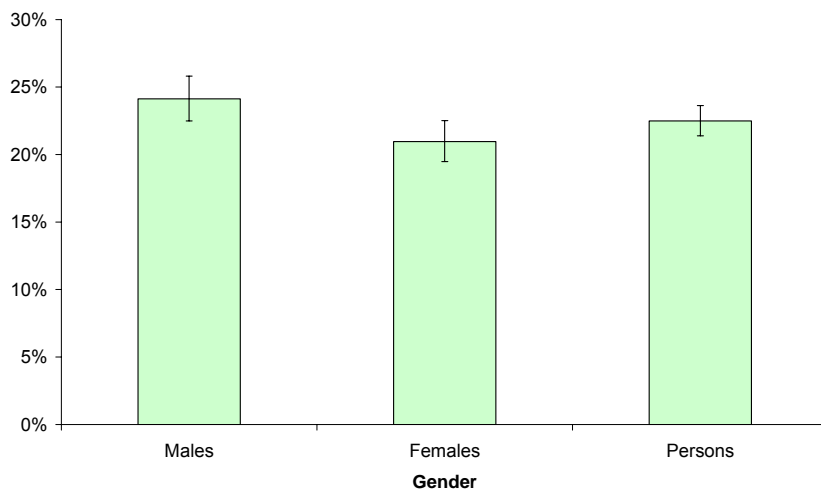
Overall, more than one in five (22.5%) adults currently smoke, significantly more men (24.1%) than women (21.0%) (Figure 75, Table 56).

More people aged 25-34 years smoke than those aged 16-24 years, but then smoking prevalence decreases with increasing age (Figure 76). However, more women aged 35-44 years (nearly one in four) smoke than women in any other age groups. Overall, significantly fewer people aged 75+ years smoke than all age groups under 75 years.

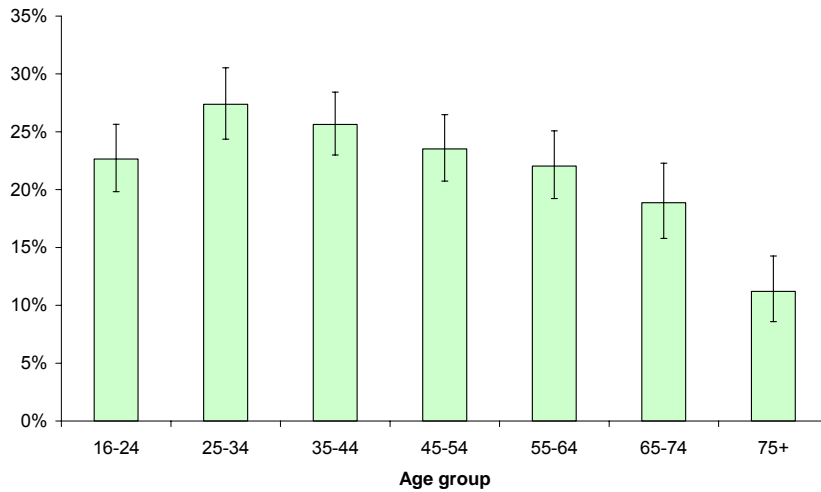
There is a distinct relationship between smoking and deprivation (Figure 77, Table 57). The prevalence of smoking is almost twice as high among adults from the most deprived areas (29.3%) than those from the least deprived areas (15.2%).

Significantly fewer women from a non-White ethnic group smoke than women from White groups (Figure 78, Table 58).

**Figure 75: Percentage of adults who currently smoke, by gender.**



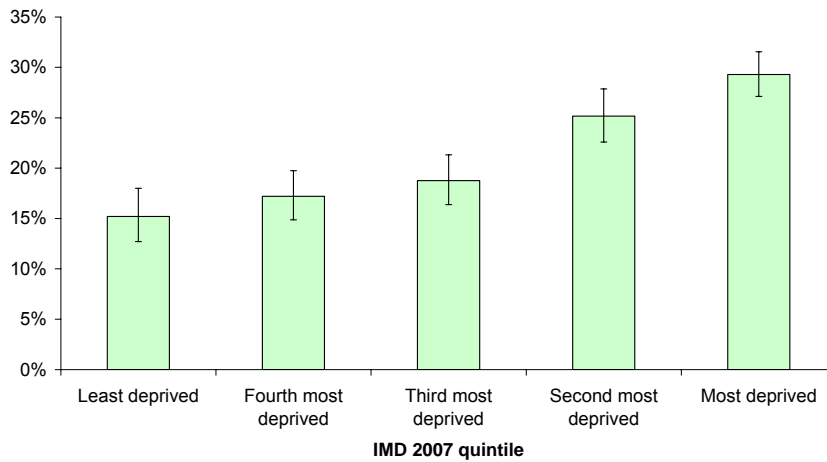
**Figure 76: Percentage of adults who currently smoke, by age group.**



**Table 56: Percentage of adults who currently smoke, by gender and age group.**

Age group	Males	Females	Persons
All ages	24.1%	20.9%	22.5%
16-24	23.2%	21.9%	22.6%
25-34	32.2%	22.6%	27.4%
35-44	26.6%	24.6%	25.6%
45-54	24.3%	22.8%	23.5%
55-64	24.2%	20.0%	22.0%
65-74	18.2%	19.5%	18.9%
75+	10.1%	11.9%	11.2%

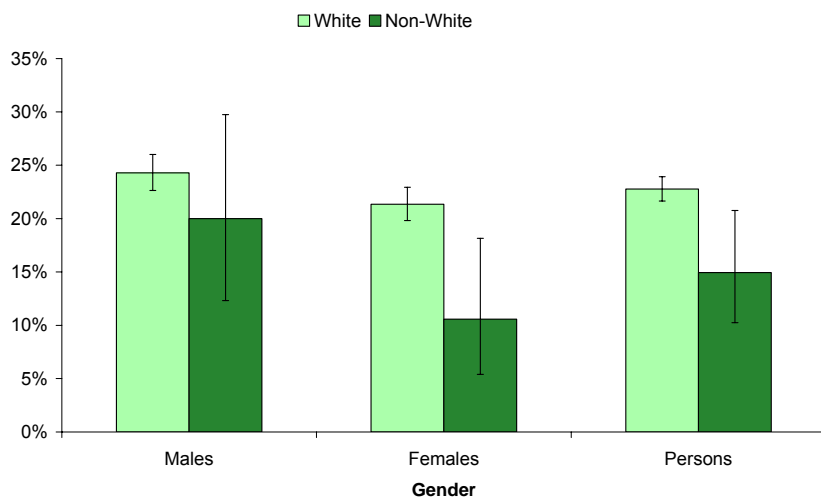
**Figure 77: Percentage of adults who currently smoke, by Index of Multiple Deprivation 2007 quintile.**



**Table 57: Percentage of adults who currently smoke, by gender and Index of Multiple Deprivation 2007 quintile.**

IMD quintile	Males	Females	Persons
All quintiles	24.1%	21.0%	22.5%
Least deprived	16.9%	13.6%	15.2%
Fourth most deprived	19.1%	15.4%	17.2%
Third most deprived	21.1%	16.6%	18.8%
Second most deprived	26.5%	23.9%	25.2%
Most deprived	30.5%	28.1%	29.3%

**Figure 78: Percentage of adults who currently smoke, by gender and White and non-White ethnic groupings.**



**Table 58: Percentage of adults who currently smoke, by gender and White and non-White ethnic groupings.**

<b>Ethnic grouping</b>	<b>Males</b>	<b>Females</b>	<b>Persons</b>
White	24.3%	21.3%	22.8%
Non-White	20.0%	10.6%	14.9%



## 10. Caring Responsibilities

### 10.1 Background

A carer is “..someone who, without payment<sup>ciii</sup> provides help and support to a partner, child, relative, friend or neighbour, who could not manage without their help. This could be due to age, physical or mental illness, addiction or disability”.<sup>civ</sup> Both adults and children<sup>cv</sup> can be carers. Carers are not to be confused with care workers and care assistants who are paid a salary to look after individuals who need support.

Every year, approximately two million people become carers in England.<sup>cvi</sup> The role of carers is invaluable in terms of their contribution to the health and social care system as it is estimated that the economic contribution of carers in the UK amounts to a massive £87 billion per year.<sup>132</sup> In England, the areas with the highest and lowest replacement cost of carers’ contribution were found in Birmingham (£1,600 million) and the Isles of Scilly (£1.5 million) respectively.<sup>cvi; 132</sup>

Carers are twice as likely to suffer from poor health compared with someone with no caring responsibilities.<sup>26</sup> Poor physical and mental health in carers may be due to lack of appropriate support, isolation, financial stresses (including lack of awareness of benefits that are available, resulting in millions of pounds of unclaimed carers’ benefits) and lack of information.

Census data from 2001 shows that in England, 11.9% of carers considered themselves to be in ‘not good’ health, compared with 10.6% of people who did not have caring responsibilities. Among those providing more than 50 hours of care per week, 20.6% said that they were in ‘not good’ health. Across the North West, the equivalent percentages of those in ‘not good’ health was higher: 13.6% of carers, 13.1% of non-carers and 22.7% of those providing care for more than 50 hours per week.

There are also significant health impacts for older carers who may be suffering from ill health themselves when taking on caring responsibilities. Those aged 45-54 and 55-64 years appear to make up the largest number of carers in the UK.<sup>26</sup> The number of carers in ‘not good’ health in the UK increased with age with 4.3% of 290,370 carers aged 16-24 years stating that they were in ‘not good’ health compared with 30.0% of 40,640 carers aged 85+ years.

The 2001 General Household Survey<sup>133</sup> also found that in England of those who cared for someone for 50 hours per week, 24% had a feeling of strain, 47% reported disturbed sleep and 34% said they felt depressed, indicating the increased pressure they are under.

Carer’s Allowance was introduced in order to provide some recognition of the critical role played by carers, particularly those who do not qualify for other benefits.<sup>cvi</sup> In October 2007, the earnings limit which permits carers to undertake part-time work was increased, from £87 to £95. The new limit means that more carers will retain their Carer’s Allowance when their earnings increase, and more carers will be able to receive Carer’s Allowance for the first time. People who receive Carer’s Allowance have a carer premium included in the assessment of any income-related benefits they claim.

Population projections for 2006 show that people aged 75+ made up 7.7% of England’s population in 2006, but will comprise 9.1% of the population by 2020, causing a significant strain on carers.

There are a number of policies and Acts in place to safeguard carers and those they care for, including:

<sup>ciii</sup> This excludes benefits such as Carer’s Allowance.

<sup>civ</sup> [www.carers.org/who-is-a-carer,118,GP.html](http://www.carers.org/who-is-a-carer,118,GP.html)

<sup>cv</sup> A young carer is a child or young person under the age of 18 carrying out significant caring tasks and assuming a level of responsibility for another person, which would normally be undertaken by an adult.

<sup>cvi</sup> [www.carersuk.org/Information/Newtocaring](http://www.carersuk.org/Information/Newtocaring)

<sup>cvi</sup> It is necessary to take into account population sizes when looking at these figures.

<sup>cvi</sup> [www.direct.gov.uk/en/CaringForSomeone/MoneyMatters/DG\\_10012522](http://www.direct.gov.uk/en/CaringForSomeone/MoneyMatters/DG_10012522)

- The *Carers (Recognitions and Services) Act*, 1995.<sup>cix</sup>
- The *National Carers Strategy* (1999), which provides information, support and care for carers. The Government gave local authorities in England money to invest in carers' breaks (considered essential to enable carers to continue caring) through the Carer Grant.<sup>134</sup>
- The *Carers and Disabled Children Act* (2000), which made provision about the assessment of carers needs, services to help carers, and making payments to carers and disabled children aged 16 or 17 in lieu of the provision of services to them.<sup>135</sup>
- *National Service Framework for Older People*<sup>36</sup>, which was established to look at the problems older people face in receiving care in order to deliver higher quality services. The key standards that underpin the Framework include plans to eradicate age discrimination and to support person-centred care with newly integrated services. A new layer of intermediate care is being developed at home or in care settings.
- The *Carers (Equal Opportunities) Act* (2004), which placed duties on local authorities and health bodies in respect of carers. It aimed to ensure that carers are able to take up opportunities that people without caring responsibilities often take for granted, such as working, studying or leisure activities.<sup>cx</sup>
- *Our health, our care, our say*<sup>136</sup>, which highlighted the need to increase investment in information and support for carers.
- *New Deal for Carers*, a new national strategy is currently being drawn up to provide an update to the 1999 *National Carers Strategy* and an additional £33 million of further investment. It aims to enable carers to stay in work through the provision of adequate support services and access to flexible working. This new national strategy invited carers to contribute ideas that may help to shape it.<sup>137</sup> The work is being led by the Department of Health, but is a cross-government priority and also involves the Departments for Work and Pensions; Children, Schools and Families; Trade and Industry; Communities and Local Government and the Treasury.

## 10.2 Existing information

The 2001 Census included for the first time a question on the provision of unpaid care: 'Do you look after or give any help or support to family members, friends or neighbours or others because of: long-term physical or mental ill health or disability or problems related to old age?'.<sup>cxii</sup> It showed that in the UK, 12% of the adult population (approximately six million people) provided unpaid care<sup>26</sup> (there were around 4.85 million carers in England in 2001, including 90,000 under 16 year olds). Across the UK, the number of carers is estimated to rise by a further 3.4 million by 2037.<sup>138</sup> Carers were also asked how many hours per week they spent providing unpaid care. Across England, 3.3 million carers spent between 1-19 hours, 531,000 carers spent 20-49 hours and one million (20.5%) spent 50+ hours per week<sup>cxii</sup>. In terms of age, 45% of carers were between the age of 45 and 64 years and 5% of carers were over 85 years old.

A larger proportion of women than men under the age of 65 years were unpaid carers. The 2001 Census also showed that age was related to the number of hours spent caring for someone: the percentage of older carers providing 50 or more hours per week was higher than the percentage of younger carers. The proportion of carers providing 50+ hours of care per week rose significantly from the age of 65<sup>139</sup> and among carers aged over 85 years, 50.1% spent 50 hours or more caring for someone each week.

The *Where Wealth Means Health* report<sup>27</sup> looks at the geographical variation in unpaid care rates by deprivation and lifestyle group. The report shows that the level of unpaid care provided

<sup>cix</sup> [www.opsi.gov.uk/acts/acts1995/ukpga\\_19950012\\_en\\_1.htm](http://www.opsi.gov.uk/acts/acts1995/ukpga_19950012_en_1.htm)

<sup>cx</sup> [www.opsi.gov.uk/acts/acts2004/plain/ukpga\\_20040015\\_en\\_1\\_content.htm](http://www.opsi.gov.uk/acts/acts2004/plain/ukpga_20040015_en_1_content.htm)

<sup>cxii</sup> Note that there is no specific reference to whether this care is provided within the household or outside the household. Therefore, no explicit link can be created to infer that an individual providing care is providing it to a person within the household who has poor general health, or a limiting long term illness, disability or health problem.

<sup>cxiii</sup> [www.statistics.gov.uk/StatBase/Expodata/Spreadsheets/D8921.xls](http://www.statistics.gov.uk/StatBase/Expodata/Spreadsheets/D8921.xls)

by individuals from the most deprived areas is nearly twice that of the least deprived areas (4.7% and 2.6% respectively).

### **10.3 Survey and analysis methodology**

Individuals were asked if they care for someone with long term ill health related to old age, other than as part of a job, in order to determine the profile of carers in the North West. To ascertain the time individuals spent caring for someone they were asked how much time they spent caring for someone (not as part of their job) in a typical week (between 1 and 19 hours a week, between 20 and 49 hours a week, or 50 or more hours a week). These questions were derived from the 2001 Census.

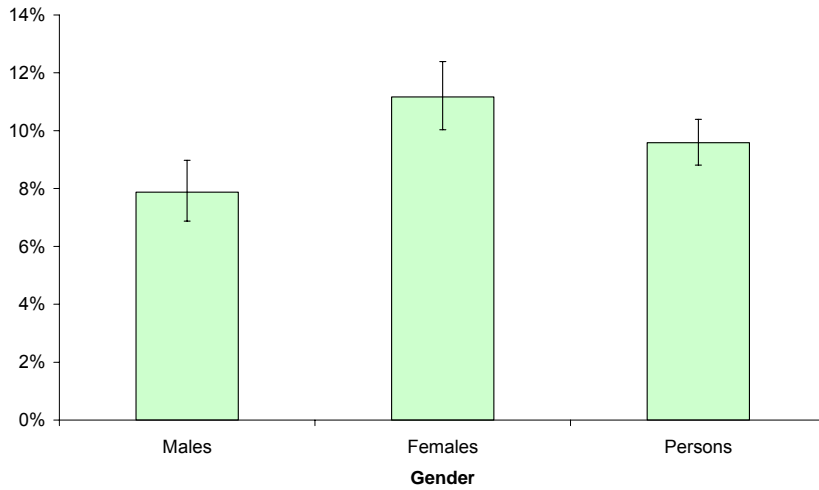
### **10.4 North West survey results: Carers**

Overall, 9.6% of adults care for someone with long-term ill health or problems related to old age (Figure 79, Table 59). Significantly more women (11.2%) than men (7.9%) are carers.

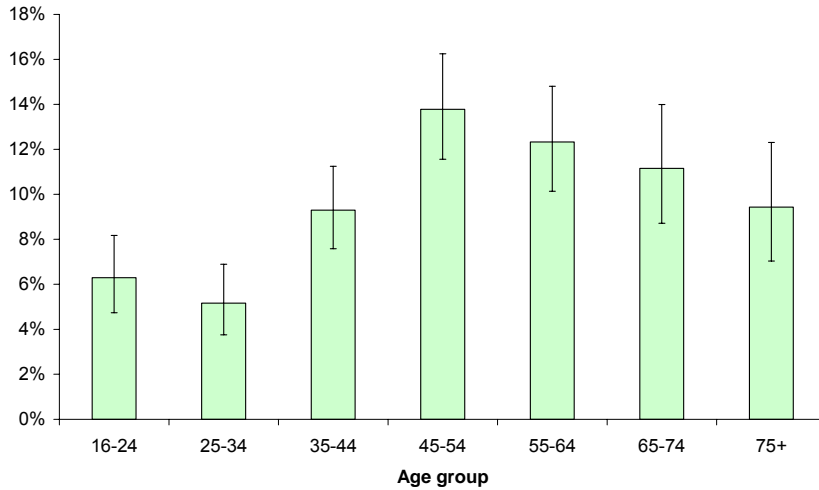
Proportionately more people aged 45-54 years (13.8%) care for someone with long-term ill health problems related to old age than any other age group (significantly higher than all age groups under 45 years) (Figure 80). Even after the age of 75 years, 9.4% of adults are carers. This could be due to their partner's age.

Of those individuals that care for someone with long-term ill health or problems related to old age, just under half (47.4%) provide care for 20 or more hours a week (Figure 83, Table 62). There is little difference in terms of the hours spent caring by gender. However, significantly more people aged 65+ years spend 50 or more hours per week caring than younger age groups (Figure 84). There is little difference in hours spent caring by deprivation quintile (Figure 85, Table 63).

**Figure 79: Percentage of adults caring for someone with long-term ill health or problems related to old age, by gender.**



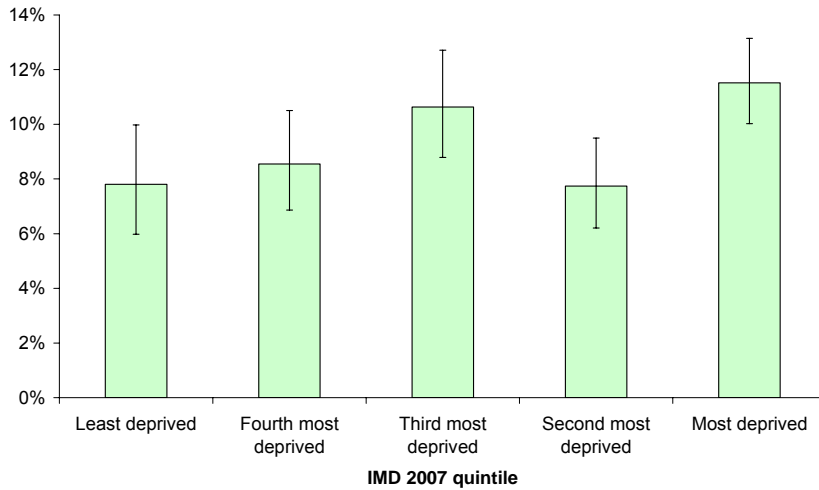
**Figure 80: Percentage of adults caring for someone with long-term ill health or problems related to old age, by age group.**



**Table 59: Percentage of adults caring for someone with long-term ill health or problems related to old age, by gender and age group.**

Age group	Males	Females	Persons
All ages	7.9%	11.2%	9.6%
16-24	6.7%	5.9%	6.3%
25-34	4.1%	6.4%	5.2%
35-44	5.0%	13.5%	9.3%
45-54	11.6%	15.9%	13.8%
55-64	10.3%	14.3%	12.3%
65-74	8.7%	13.3%	11.1%
75+	12.1%	7.8%	9.4%

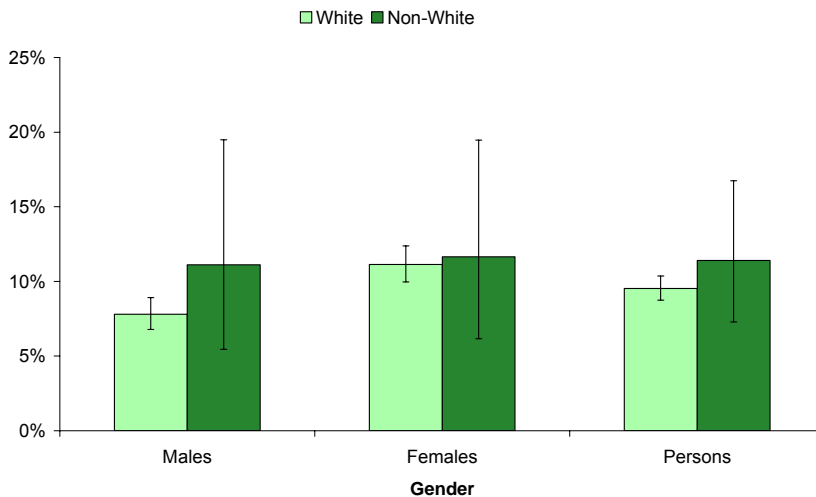
**Figure 81: Percentage of adults caring for someone with long-term ill health or problems related to old age, by Index of Multiple Deprivation 2007 quintile.**



**Table 60: Percentage of adults caring for someone with long-term ill health or problems related to old age, by gender and Index of Multiple Deprivation 2007 quintile.**

IMD quintile	Males	Females	Persons
All quintiles	7.9%	11.2%	9.6%
Least deprived	6.9%	8.9%	7.8%
Fourth most deprived	8.6%	8.5%	8.6%
Third most deprived	8.1%	13.0%	10.6%
Second most deprived	6.4%	9.0%	7.7%
Most deprived	8.7%	14.0%	11.5%

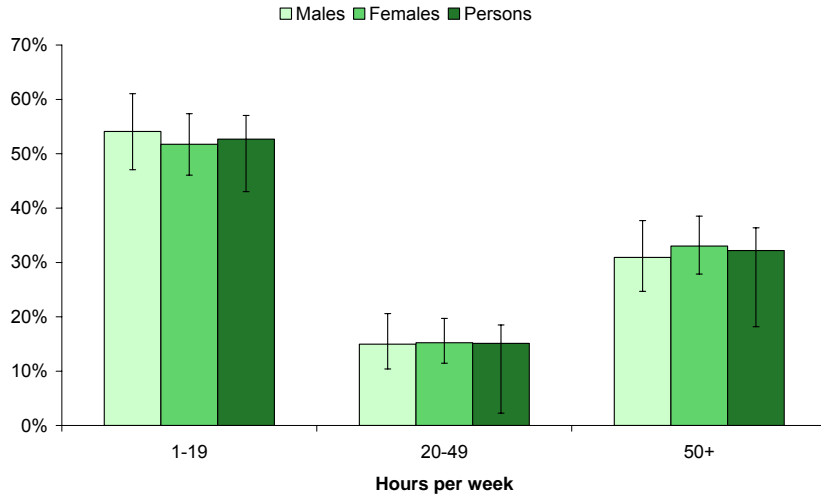
**Figure 82: Percentage of adults caring for someone with long-term ill health or problems related to old age, by gender and White and non-White ethnic groupings.**



**Table 61: Percentage of adults caring for someone with long-term ill health or problems related to old age, by gender and White and non-White ethnic groupings.**

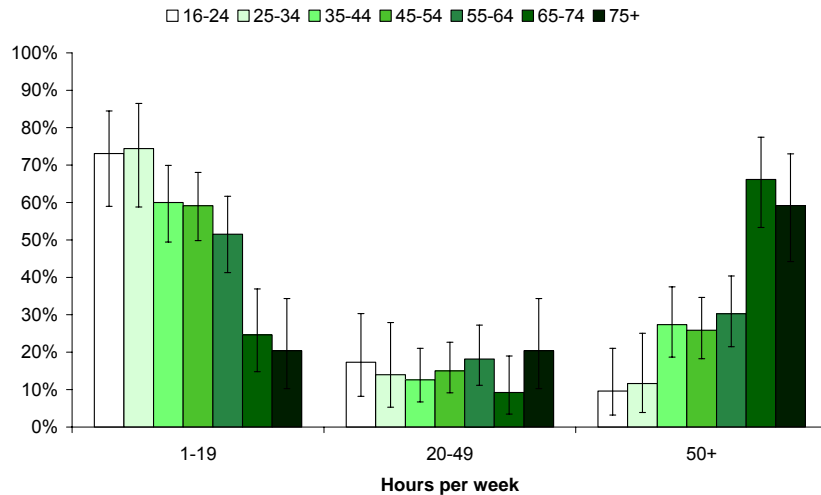
Ethnic grouping	Males	Females	Persons
White	7.8%	11.1%	9.5%
Non-White	11.1%	11.7%	11.4%

**Figure 83: Hours per week spent caring for someone with long-term ill health or problems related to age, by gender.**



Base: Those who care for someone with long-term ill health or problems related to old age other than as part of a job.

**Figure 84: Hours per week spent caring for someone with long-term ill health or problems related to age, by age group.**



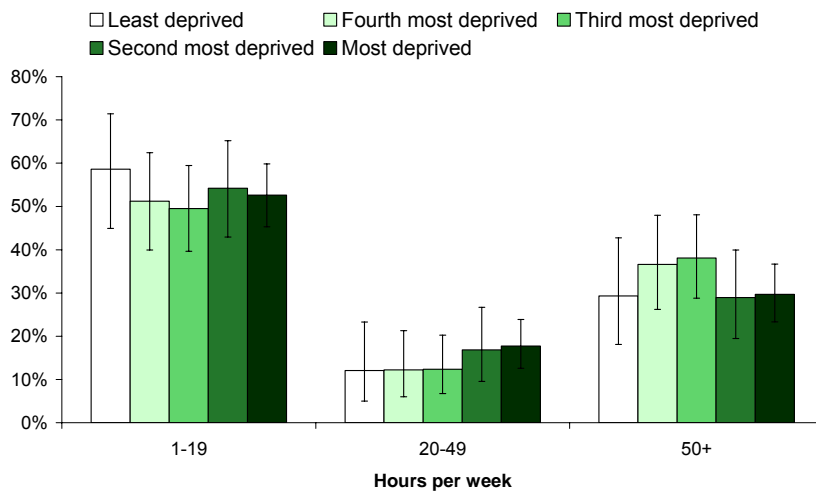
Base: Those who care for someone with long-term ill health or problems related to old age other than as part of a job.

**Table 62: Hours per week spent caring for someone with long-term ill health or problems related to age, by gender and age group.**

	Age group	1-19 hours	20-49 hours	50+ hours
<b>Males</b>	All ages	54.1%	15.0%	30.9%
	16-24	78.6%	17.9%	3.6%
	25-34	76.5%	11.8%	11.8%
	35-44	68.0%	4.0%	28.0%
	45-54	50.0%	22.0%	28.0%
	55-64	56.1%	12.2%	31.7%
	65-74	29.2%	8.3%	62.5%
	75+	21.7%	26.1%	52.2%
<b>Females</b>	All ages	51.7%	15.2%	33.0%
	16-24	66.7%	16.7%	16.7%
	25-34	70.4%	18.5%	11.1%
	35-44	58.6%	15.7%	25.7%
	45-54	65.2%	10.1%	24.6%
	55-64	48.3%	22.4%	29.3%
	65-74	22.0%	12.2%	65.9%
	75+	19.2%	15.4%	65.4%
<b>Persons</b>	All ages	52.7%	15.1%	32.2%
	16-24	73.1%	17.3%	9.6%
	25-34	74.4%	14.0%	11.6%
	35-44	60.0%	12.6%	27.4%
	45-54	59.2%	15.0%	25.8%
	55-64	51.5%	18.2%	30.3%
	65-74	24.6%	9.2%	66.2%
	75+	20.4%	20.4%	59.2%

Base: Those who care for someone with long-term ill health or problems related to old age other than as part of a job.

**Figure 85: Hours per week spent caring for someone with long-term ill health or problems related to age, by Index of Multiple Deprivation 2007 quintile.**



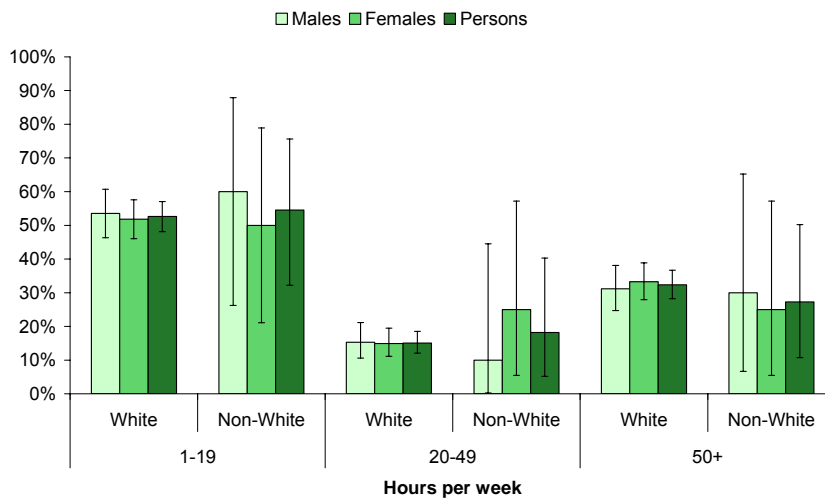
Base: Those who care for someone with long-term ill health or problems related to old age other than as part of a job.

**Table 63: Hours per week spent caring for someone with long-term ill health or problems related to age, by gender and Index of Multiple Deprivation 2007 quintile.**

		1-19	20-49	50+
IMD quintile		hours	hours	hours
<b>Males</b>	All quintiles	54.1%	15.0%	30.9%
	Least deprived	72.0%	4.0%	24.0%
	Fourth most deprived	56.1%	12.2%	31.7%
	Third most deprived	50.0%	12.5%	37.5%
	Second most deprived	54.5%	18.2%	27.3%
	Most deprived	48.6%	20.0%	31.4%
<b>Females</b>	All quintiles	51.7%	15.2%	33.0%
	Least deprived	50.0%	17.6%	32.4%
	Fourth most deprived	47.6%	11.9%	40.5%
	Third most deprived	47.8%	13.4%	38.8%
	Second most deprived	54.0%	16.0%	3.0%
	Most deprived	54.9%	15.6%	29.5%
<b>Persons</b>	All quintiles	52.7%	15.1%	32.2%
	Least deprived	58.6%	12.1%	29.3%
	Fourth most deprived	51.2%	12.2%	36.6%
	Third most deprived	49.5%	12.4%	38.1%
	Second most deprived	54.2%	16.9%	28.9%
	Most deprived	52.6%	17.7%	29.7%

Base: Those who care for someone with long-term ill health or problems related to old age other than as part of a job.

**Figure 86: Hours per week spent caring for someone with long-term ill health or problems related to old age, by gender and White and non-White ethnic groupings.**



Base: Those who care for someone with long-term ill health or problems related to old age other than as part of a job.

**Table 64: Hours per week spent caring for someone with long-term ill health or problems related to age, by gender and White and non-White ethnic groupings.**

		1-19	20-49	50+
Ethnic grouping		hours	hours	hours
<b>M</b>	White	53.6%	15.3%	31.1%
	Non-White	60.0%	10.0%	30.0%
<b>F</b>	White	51.8%	15.0%	33.2%
	Non-White	50.0%	25.0%	25.0%
<b>P</b>	White	52.6%	15.1%	32.3%
	Non-White	54.5%	18.2%	27.3%

Base: Those who care for someone with long-term ill health or problems related to old age other than as part of a job.



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