Baseline Health Assessment for Barrow-in-Furness: 2009

Supporting the Health Improvement and Health Inequalities Strategy for Barrow-in-Furness

1 Contents

2 Executive Summary

The purpose of this report is to inform the priorities and action in the revised Health Improvement Plan (HIMP) for Barrow-in-Furness. The report will outline differences in health indicators between Barrow and England as well as differences in health within Barrow with the causes of these differences being analysed and priority areas for action being identified.

The health of people living in Barrow-in-Furness

- Life expectancy for men in Barrow (76.4 years) is 1.5 years lower than the England average. Barrow is currently on track to meet the 2010 national health inequalities target of reducing the relative gap by 10%.
- Life expectancy for women in Barrow decreased in 2006-2008 from the 2005-2007 value (from 80.9 years to 80.8 years) and is currently 1.2 years lower than the England average. As a result, Barrow is off track to meet the 2010 national health inequalities target of reducing the relative gap by 10%.
- Life expectancy at birth is lower in the more deprived wards of the district.
- Bringing life expectancy in Barrow up to the target level would mean preventing about 52 deaths each year in 2009-2011. This is an improvement on the 70 deaths each year that needed to be prevented in the February 2008 Health Improvement Plan.
- The burden of chronic ill health in Barrow is large: 45% of households include one or more person with a long term limiting illness as compared to 34% nationally; 8% of the population aged 16 years and over are on incapacity benefit; and 41% of incapacity benefit and severe disability allowance claimants are unable to work because of mental health or behavioural problems.
- Although infant mortality is currently not higher than the national average, there has been an increasing long-term trend in Barrow since 1998-2000. Nationally, infant mortality has been decreasing since this period. It should be noted however that the 2005-2007 infant mortality rate of 3.8 per 1,000 live births is a decrease on the 2004-2006 rate of 4.3 quoted in the February 2008 Health Improvement Plan.
- The rate of premature mortality from circulatory disease in Barrow has shown a declining trend since 1993-1995 with the 2005-2007 directly standardised rate of 89.4 per 100,000 being lower than the 2004-2006 rate of 99 per 100,000 (February 2008 Health Improvement Plan). Given this trend, it is therefore likely that the Local Area Agreement target for Barrow will be met. The rate of decrease has been greatest in the 20% most deprived wards in Barrow and the gap between these areas and Barrow overall is narrowing.
- The 2004-2006 directly standardised rate of premature mortality from cancer in Barrow of 146 per 100,000 has declined to 132.2 per 100,000 in 2005-2007 with the long-term trend since 1993-1995 showing a fluctuating but decreasing trend indicating that it is currently on track to meet the national 2010 target. The rate of decrease in the 20% most deprived wards in Barrow is greater than that for Barrow overall and the gap is thus narrowing.
- Mortality from colorectal cancer and mesothelioma is significantly higher than the national average in men aged under 75 years in Barrow.
- Survival from some cancers in Cumbria PCT is lower than that found nationally, especially in lung cancer.
- Mortality from suicide and injury undetermined has shown a declining trend since 1993-1995 and is already below the 2010 national target. Indeed the 2005-2007 directly standardised rate has fallen further from the 2004-2006 rate quoted in the previous

Barrow Health Improvement Plan (9 per 100,000 to 6.4 per 100,000). A recent decline has also occurred in one of the most at-risk groups: men aged 15-44 years.

- Mortality from accidents in Barrow is 25% higher than that occurring nationally and has shown an increasing trend. If this trend continues, the 2010 national target will not be met. However, the directly standardised rate has fallen recently: from 24 per 100,000 in 2004-2006 to 20.8 per 100,000 in 2005-2007.

The causes of ill health

- Indicators of the level of smoking, healthy eating, misuse of alcohol and physical activity are all slightly worse for Barrow than the national average.
- In the economically deprived Neighbourhood Management Initiative Areas, just under one-third of people smoke and only 14% of people eat the recommended 5 portions of fruit and vegetables per day.
- In 2008, 50% of babies born in Barrow were recorded as having breastfeeding initiated. Furthermore, less than 2 in 5 babies born to mothers living in Ormsgill had breastfeeding initiated compared to nearly 4 in 5 babies in Hawcoat.
- In terms of housing conditions and education, improvements still need to be made with levels in Barrow being worse than that seen nationally.

The potential impact of interventions

- Reducing smoking prevalence by 2% each year would prevent about 10 deaths per year.
- Identifying people at risk and ensuring that people with circulatory disease are given optimum treatment could result in 20 fewer deaths per year.

Priority areas for action

- To improve life expectancy in Barrow there will need to be action to reduce the number of deaths from circulatory disease, cancer, suicides and injury undetermined and accidents. In terms of accidents this will require action to alter the current trend.
- Actions will need to focus on improving the health of both men and women in Barrow.
- These improvements will need to occur across all areas in Barrow, but be most pronounced in the most deprived areas. This will mean that some actions will need to be targeted at the most deprived 20% of areas, as shown in Figure 4.
- In the short term, priority actions will need to focus on:
    - Improving the early diagnosis and treatment of cancer and circulatory disease.
    - Reducing smoking, improving diet, increasing physical activity and reducing excessive alcohol consumption.
    - Preventing accidents particularly in young men,
    - Improving mental health and preventing suicides,
    - Helping people with disabilities and chronic ill health into work.

3 Introduction

This baseline assessment of health inequalities was originally commissioned by the Barrow Healthy Communities and Older People (HCOP) task group of the Furness strategic partnership. The purpose of this report is to inform the priorities and action in the revised Health Improvement Plan (HIMP) for Barrow. Life expectancy rates in Barrow are below the England and Wales average and there are large differences in life expectancy between areas within Barrow. Therefore the primary focus of the health improvement plan is to determine action required to achieve improvements in the health of the population of Barrow with respect to the rest of England and to improve the health of the most disadvantaged areas within Barrow. Progress towards these objectives is monitored through targets laid out in Public Service Agreements (PSA), the Local Area Agreement (LAA) and the Furness Partnership Community Plan. These targets are given below.

PSA: Life Expectancy

The target by 2010 is to increase life expectancy at birth in England to 78.6 years for men and 82.5 years for women with the following specific targets:

- To reduce premature mortality from all circulatory disease by at least 40% by 2010 from the baseline rate in 1995-97, with at least 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 (this is subject to a further stretch target in the Cumbria LAA).
- To reduce premature mortality from all cancers by at least 20% by 2010 from the baseline rate in 1995-97, with a reduction in the inequalities gap of at least 6% between the fifth of the areas with the worst health and deprivation indicators and the population as a whole.
- To reduce mortality from suicide and undetermined injury by at least 20% by 2010 from the baseline rate in 1995-97.
- To reduce mortality from accidents by at least 20% by 2010 from the baseline rate in 1995-97.

PSA: Health Inequalities

The target is a 10% reduction in the relative gap (i.e. percentage difference) by 2010, as measured by infant mortality and life expectancy at birth, between the most deprived areas:

- Infant mortality: reduce the gap in mortality between ‘routine and manual’ socioeconomic groups and the population as whole by at least 10%.
- Life expectancy: reduce the gap between the fifth of local authorities with the worst health and deprivation indicators and the population as a whole by at least 10%.

LAA: Cumbria Community Strategy

The target is to reduce the gap in all cause mortality between Barrow and England by at least 10% by 2010 (compared to baseline 1995-97).

Furness partnerships community plan

By 2010, the target is at least a 10% reduction in the relative gap between the 20% of areas in Barrow with the lowest life expectancy at birth and the population as a whole.

This report outlines the causes of the differences in health status between Barrow and England, the causes of health inequality within Barrow and identifies areas for action to address these inequalities.

In particular it will try and answer the following questions:

- To what extent does the health of people in Barrow differ from England as a whole?
- How much does the health of people in the most disadvantaged areas of Barrow differ from the district as a whole?
- What are main diseases or conditions resulting in these differences?
- What are the main risk factors resulting in these diseases?
- To what extent are differences in mortality related to the prevalence of risk factors in the population of Barrow and to what extent are they related to the effectiveness of health services in diagnosing and treating these conditions early?

4 The population of Barrow

Located in the south of Cumbria, and covering an area of just over 77 square kilometres, Barrow-in-Furness is the smallest geographical district in the county with a population of 71,800 (mid-2007 population estimate, ONS[1]). Compared to England as a whole, Barrow has a higher proportion of older people over 65 years of age and a lower proportion of 20-39 year olds and 0-4 year olds (Figure 1).

Figure 1: 2007: Barrow-in-Furness and England population age structure (Source: ONS)

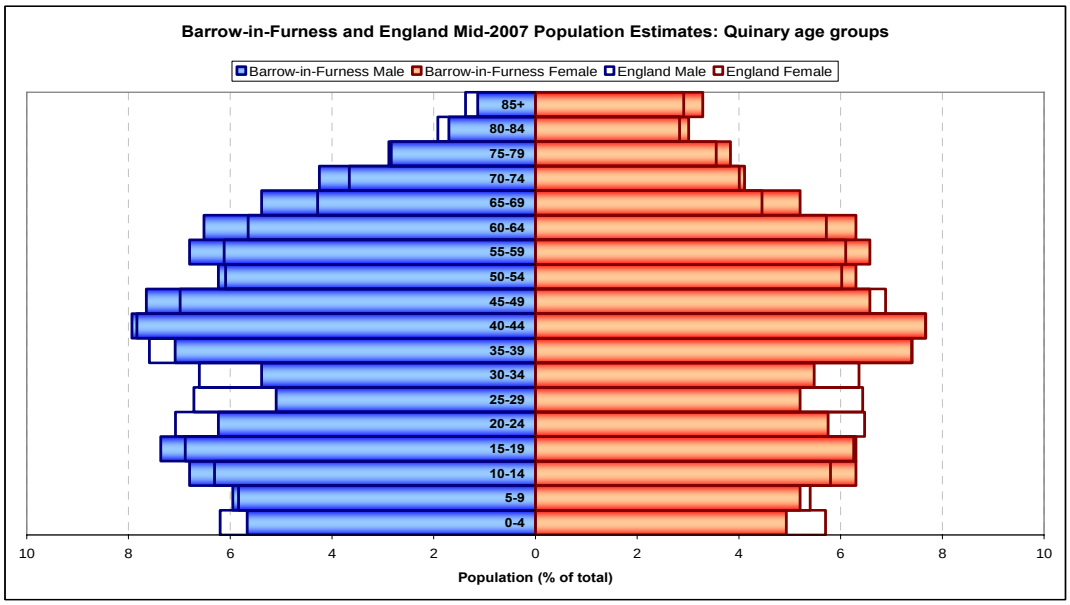
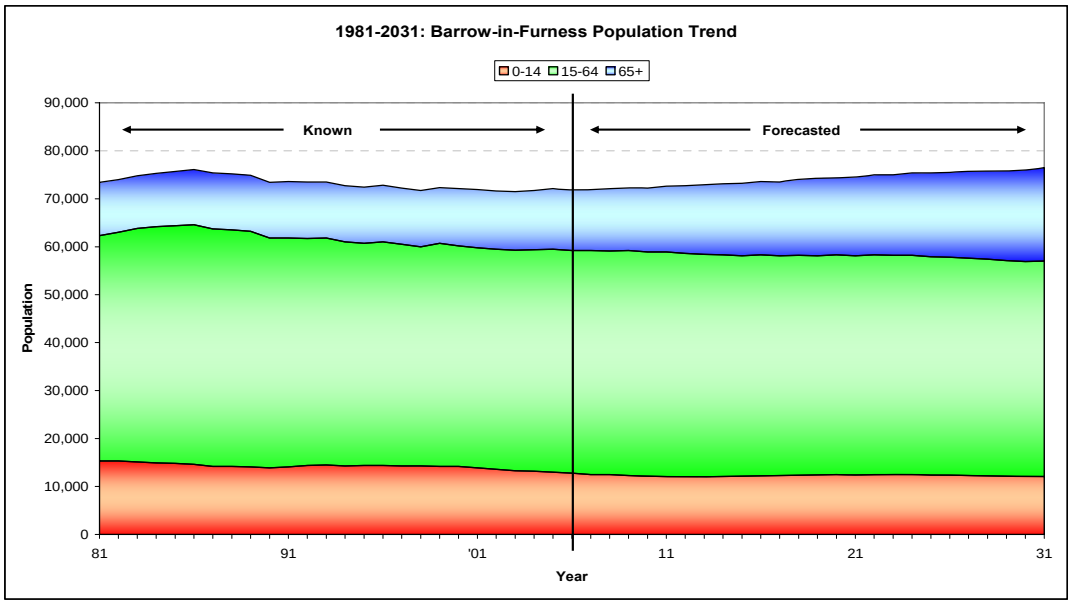


Figure 2 shows how the proportion of older people in the population is likely to increase markedly in the future. It is estimated that the proportion of people in Barrow aged over 65 will have increased from 18% in 2006 to 26% in 2031 (2006 based subnational population projections).

Figure 2: 1981-2031: Barrow-in-Furness long-term population trend (Source: Cumbria Intelligence Observatory; ONS)



5 What are health inequalities and what causes them?

There is a wealth of evidence that illness does not strike people by chance: to a large extent it is people's social and economic circumstances that determine their risk of developing disease. We know that across the UK there is a gradient of health from the most disadvantaged groups to the most affluent[2]. Areas with better economic, housing, crime, education and environmental indicators have better health. For example, people living in the most affluent area in Cumbria (Kendal Heron Hill, South Lakeland) live on average 9 years longer than people living in the most deprived area (Central Ward, Barrow)[3]. Health inequalities refer to these systematic differences in health that are related to social differences rather than being determined biologically[4].

The determinants of health can be looked at in four main layers as shown in Figure 3. Individual behaviour (e.g. diet, physical activity, smoking, alcohol consumption and sexual behaviour) is influenced by relationships within the family and the wider community which in turn is influenced by living and working conditions. These are largely determined by the wider economic and social environment[4]. Action across all these levels is needed to reduce health inequalities.

Figure 3: Model of the determinants of health
(Source: 2009 Annual Report of the Director of Public Health)

6 Social and economic deprivation

In order to tackle health inequalities, activities need to be focused on those most in need. One way to approach this is to target the most deprived areas. Overall levels of deprivation can be measured in terms of income, health, housing, crime, education and the environment. Based on the Indices of Multiple Deprivation[5], which measures indicators across each of these areas, Barrow is the 29th most deprived local authority out of 354 in England. As Barrow is in the worst 5th of areas in the UK, it is one of the target areas in the national inequalities strategy, known as *spearhead areas*. This means that health needs to be improved across Barrow to bring it up to the level of England as a whole.

There are however wide differences in deprivation within Barrow. The map below shows the most deprived 20% of areas within Cumbria for Barrow (Figure 4) and these are all contained in five wards. Figure 5 shows the population in each ward and the proportion living in the 20% most deprived areas (13,653 people in total) with Table 1 detailing the overall deprivation score, rank and quintile for each ward.

Figure 4: 20% most deprived areas in Barrow-in-Furness (Source: IMD, 2007)

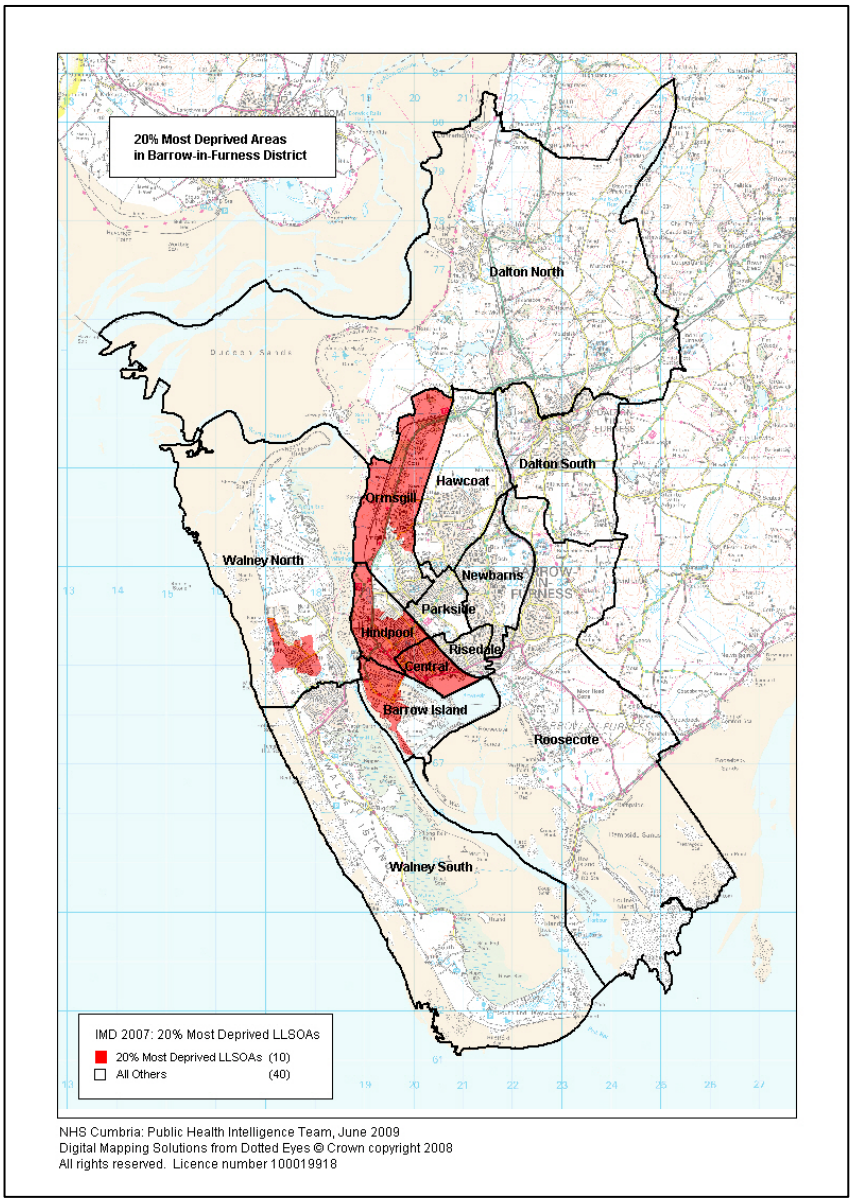


Figure 5: 2007: Population and proportion living in the 20% most deprived areas by ward (Source: ONS; IMD 2007, Dept. for Communities and Local Govt.; Cumbria Intelligence Observatory)

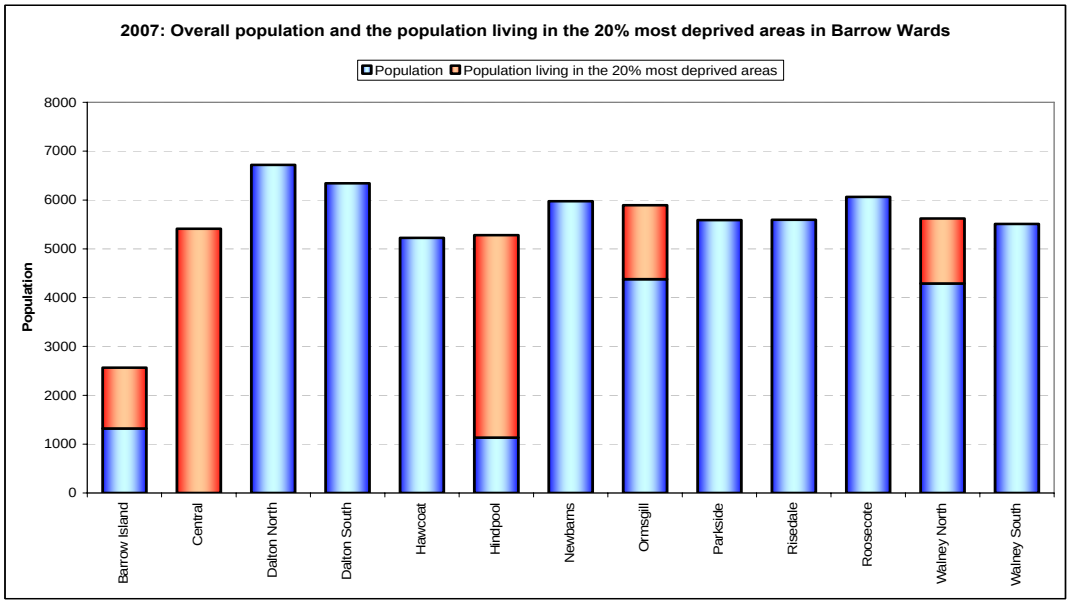


Table 1: Overall indices of multiple deprivation score, rank and quintile by ward (Source: ONS; IMD 2007, Dept. for Communities and Local Govt.; Cumbria Intelligence Observatory)

Ward	Indices of Multiple Deprivation Score	Ward Rank within Cumbria (Out of 167, 1 is most deprived)	Ward Quintile within Cumbria (1 is most deprived)
Central	63.8	1	1
Hindpool	54.1	4	1
Barrow Island	50.3	5	1
Ormsgill	43.8	6	1
Risedale	43.6	7	1
Walney North	32.4	17	1
Newbarns	27.3	32	1
Walney South	25.0	37	2
Roosecote	22.8	44	2
Dalton South	21.8	46	2
Parkside	20.9	49	2
Dalton North	19.6	55	2
Hawcoat	14.6	89	3

In tackling health inequalities, action not only needs to take place across the district as a whole but the most deprived areas (Figure 2) also need to be targeted. In this report health indicators will be presented (where available) for the district as a whole, for each ward, and for the worst 20% of areas within the district.

6.1 Community experience

The 2006 Cumbria Quality of Life Survey[6] highlights marked differences in perceptions of quality of life and local service delivery between Cumbria as a whole and the economically deprived Neighbourhood Management Initiative Areas. 88% of Cumbria residents say they are satisfied compared to only 61% in the Barrow Neighbourhood Management Initiative

Areas. Interestingly, a recent focus group carried out by ‘StreetSafe’ (06/12/07) in a Public House in Barrow showed that some people’s perceptions of their health in Barrow was actually quite positive. Out of 28 customers, 9 described that their health as ‘*very good’*, 11 as ‘*good*’, 7 as ‘*average*’ and 1 as ‘poor’.

7 The health of people in Barrow

7.1 Mortality

The most basic way to measure the health of a community is to look at when and how people die. Life expectancy at birth is an estimate of how long on average people who are born today may live if the current mortality rates applied. It is affected by the number of people dying and the age at which they die.

Life expectancy in males in Barrow has consistently been below the England average. The life expectancy for men in 2006-2008 was 76.4 years, 1.5 years lower than the England average of 77.9 years (Figure 6).

Figure 6: 1991-1993 to 2006-2008: Male life expectancy at birth (Source: ONS)

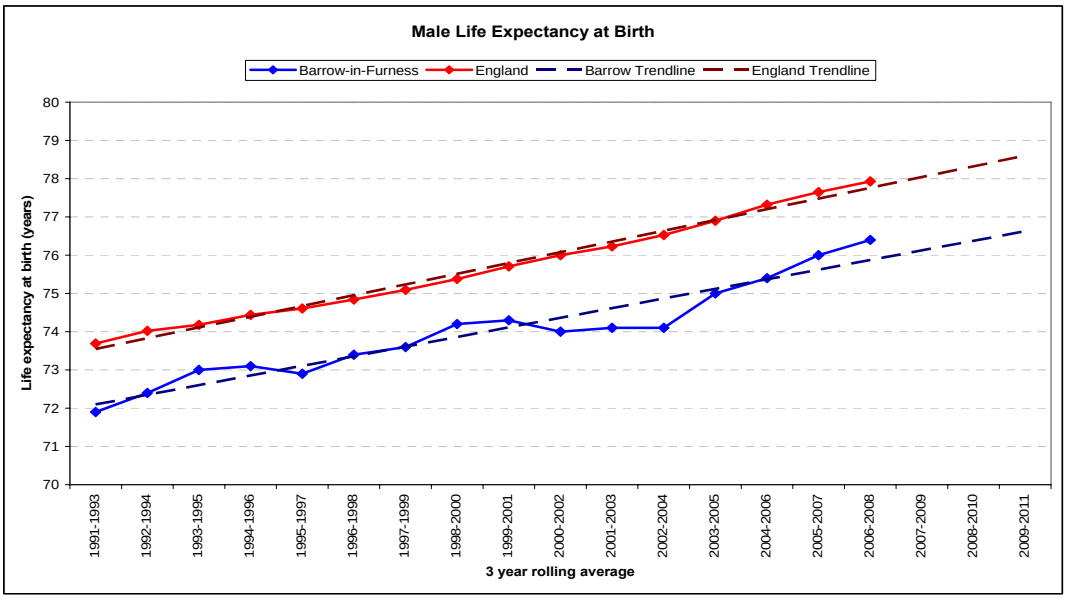


Table 2 shows the absolute gap (i.e. the difference in years between Barrow-in-Furness and England) and the relative gap (i.e. the difference in years between Barrow-in-Furness and England as a percentage of the England value) in male life expectancy for the period 1995-1997 to 2006-08. The national target for inequalities in life expectancy is to reduce the relative gap in life expectancy at birth between Barrow-in-Furness and the England average by at least 10% by 2010 from the baseline of 1995-1997. The data shows that since 2005-2007 Barrow-in-Furness has been on track to meet the target of a relative gap of 2.1% in 2009-2011.

Table 2: 1995-1997 to 2006-2008: Male life expectancy at birth (Source: ONS)

Time Period	Life Expectancy (Years)		Absolute Gap (Years)	Relative Gap (%)
	Barrow-in-Furness	England		
1995-1997 (Baseline)	72.9	74.61	1.7	2.3%
1996-1998	73.4	74.84	1.4	1.9%
1997-1999	73.6	75.09	1.5	2.0%
1998-2000	74.2	75.38	1.2	1.6%
1999-2001	74.3	75.71	1.4	1.9%
2000-2002	74.0	76.00	2.0	2.6%
2001-2003	74.1	76.23	2.1	2.8%
2002-2004	74.1	76.53	2.4	3.2%
2003-2005	75.0	76.90	1.9	2.5%
2004-2006	75.4	77.32	1.9	2.5%
2005-2007	76.0	77.65	1.7	2.1%
2006-2008	76.4	77.93	1.5	2.0%
Target (2009-2011)				**2.1%**

Life expectancy for women in Barrow has also been consistently lower than that for England with the value in 2006-08 being 80.8 years: 1.2 years lower than the England average (82.0 years) (Figure 7).

Figure 7: 1991-1993 to 2006-2008: Female life expectancy at birth (Source: ONS)

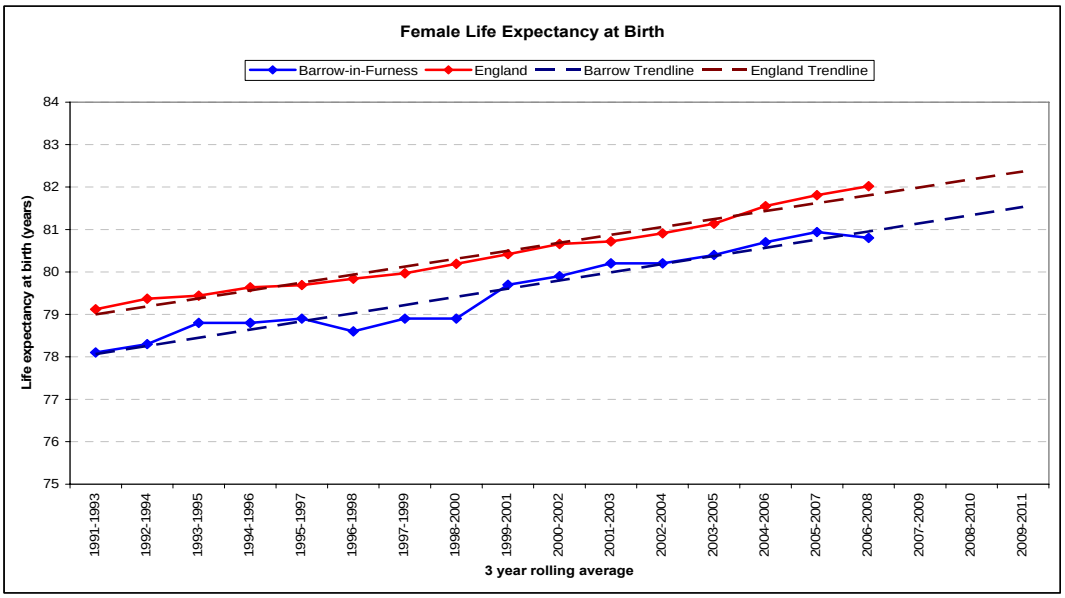


Table 3 shows the absolute gap and the relative gap in female life expectancy between Barrow-in-Furness and England for the period 1995-1997 to 2006-2008. As can be seen, in 2006-2008 Barrow-in-Furness was off track to meet the target of a relative gap of 0.9% by 2009-2011.

Table 3: 1995-1997 to 2006-2008: Female life expectancy at birth (Source: ONS)

Time Period	Life Expectancy (Years)		Absolute Gap (Years)	Relative Gap (%)
	Barrow-in-Furness	England		
1995-1997 (Baseline)	78.9	79.69	0.8	1.0%
1996-1998	78.6	79.84	1.2	1.6%
1997-1999	78.9	79.97	1.1	1.3%
1998-2000	78.9	80.19	1.3	1.6%
1999-2001	79.7	80.42	0.7	0.9%
2000-2002	79.9	80.66	0.8	0.9%
2001-2003	80.2	80.72	0.5	0.6%
2002-2004	80.2	80.91	0.7	0.9%
2003-2005	80.4	81.14	0.7	0.9%
2004-2006	80.7	81.55	0.8	1.0%
2005-2007	80.9	81.81	0.9	1.1%
2006-2008	80.8	82.02	1.2	1.5%
Target (2009-2011)				**0.9%**

Life expectancy is not always well understood as a concept. In Local Area Agreements, all age all cause mortality rates have been used as an indicator as it is easier to interpret locally and correlates well with life expectancy: if all age all cause mortality rates improve, life expectancy will improve. The main difference from life expectancy is that it is affected equally by deaths at a young age and by deaths at an older age.

Figures 8 and 9 below show the trend in all age all cause mortality from 1993-1995 to 2005-2007 for males and females respectively. For both genders, the directly standardised rates* in Barrow have been consistently higher than those for England and Wales although the long-term trends are of decreasing rates. It should also be noted that, despite the declining mortality rate for males in Barrow, the 2010 Local Area Agreement target of 769 per 100,000 is not projected to be met whilst the mortality rate for females is currently on track to meet the target rate set (503 per 100,000).

* Directly Standardised Rates (DSRs) take into account the different age structures of populations so that their mortality experiences can be compared. In DSRs the age specific death rates of the study population (i.e. Barrow-in-Furness) are applied in turn to the numbers in each corresponding age group of the standard population (i.e. the European Standard population) to give the number of deaths expected in the standard population if the death rates in Barrow-in-Furness had applied.

Figure 8: 1993-1995 to 2005-2007: Male all age all cause mortality in Barrow-in-Furness and England and Wales (Source: NCHOD)

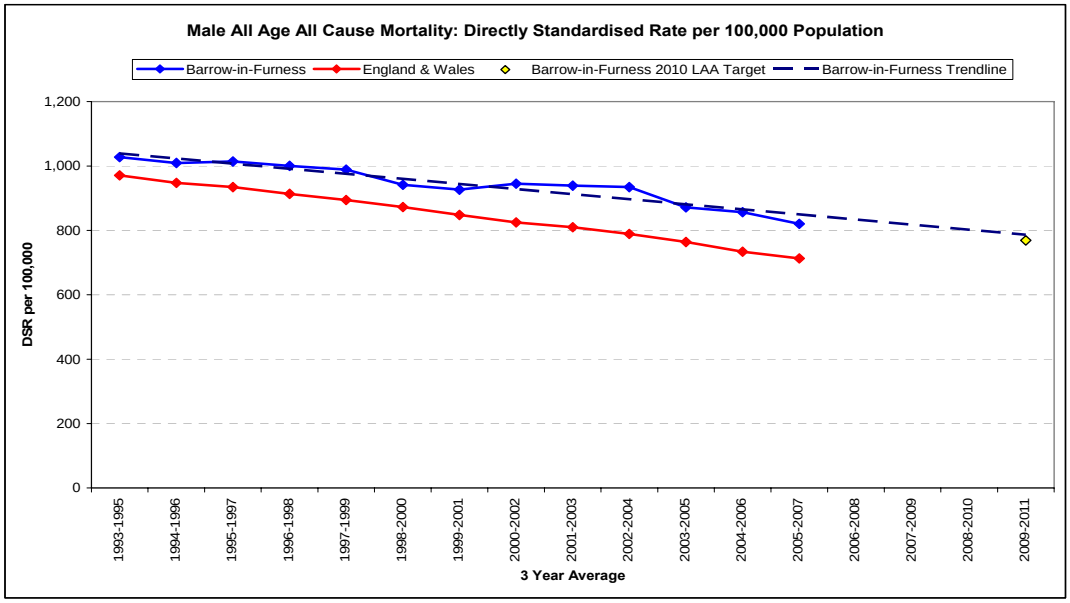
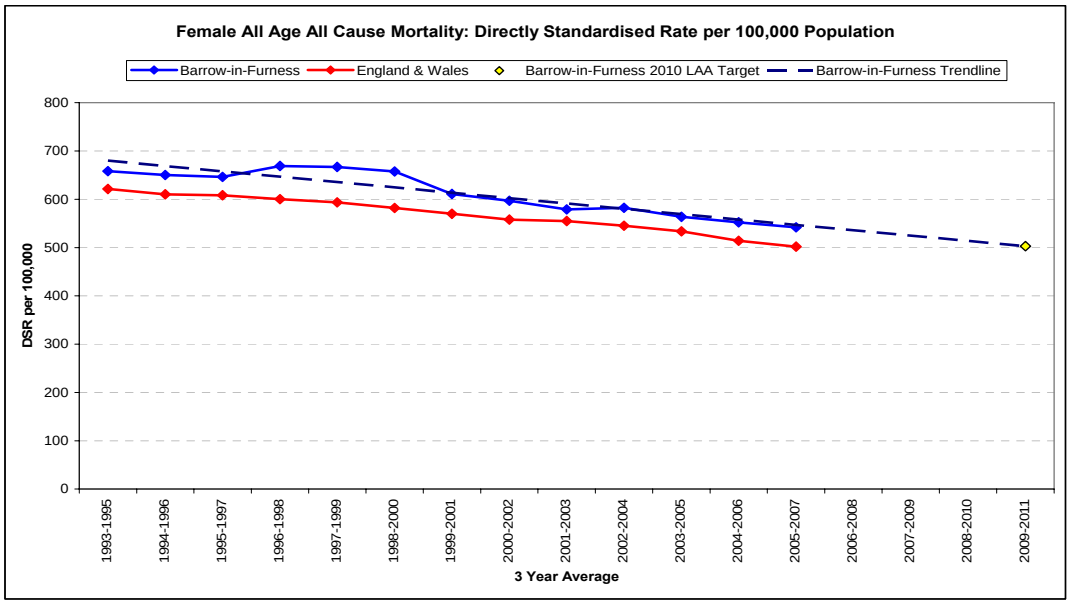
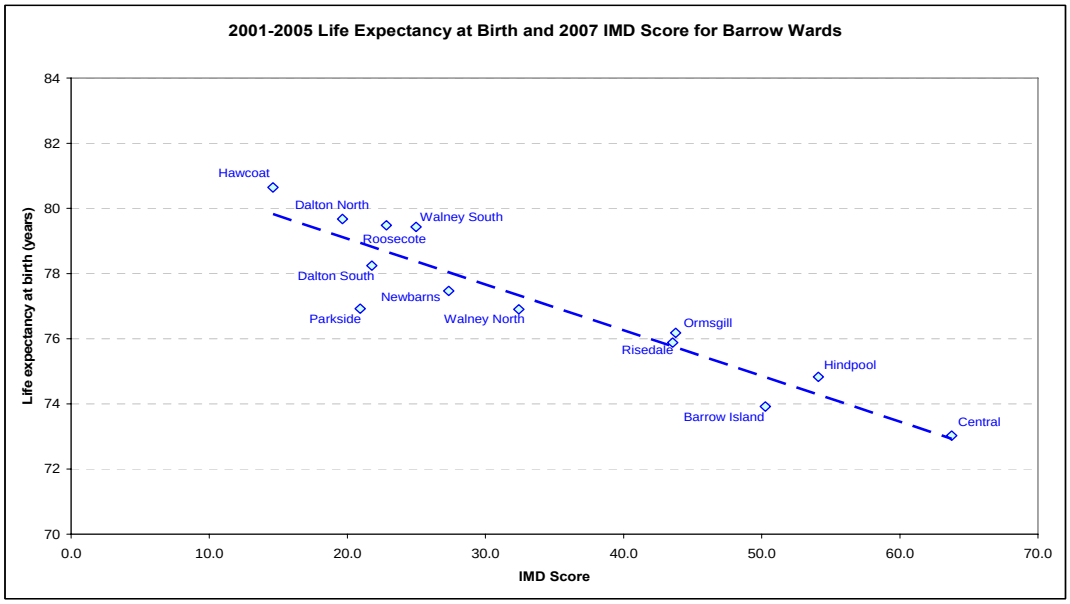


Figure 9: 1993-1995 to 2005-2007: Female all age all cause mortality in Barrow-in-Furness and England and Wales (Source: NCHOD)



As well as having poorer health than the national average, there are wide differences in health between areas within Barrow. Figure 10 below shows that life expectancy is lower in the more deprived wards in Barrow (i.e. wards with a higher Indices of Multiple Deprivation score).

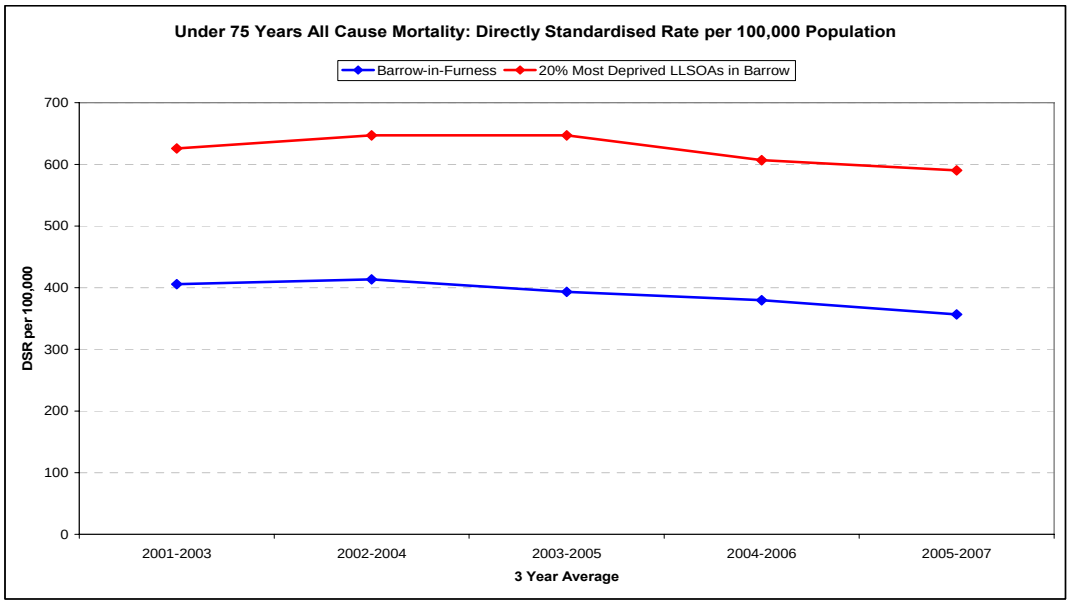
Figure 10: 2001-2005: Life expectancy at birth and IMD score by ward (Source: Cumbria Intelligence Observatory Interactive Atlas[3])



In the period 2001-2005, there appears to have been an inverse relationship between deprivation and life expectancy in the Barrow wards with life expectancy being lower in the more deprived wards. Therefore whilst health improvements need to be made across the whole district, they will need to be most pronounced in the more deprived areas.

Figure 11 shows the mortality rate in under 75 year olds in Barrow for all causes compared to the most deprived 20% of areas within Barrow. There has been a slight decline in the premature mortality rate in Barrow over the period 2001-2003 to 2005-2007 with the level of mortality being markedly higher in the more deprived areas.

Figure 11: 2001-2003 to 2005-2007: Under 75 years all cause mortality in Barrow-in-Furness district and the 20% most deprived LLSOAs in Barrow (Source: NCHOD; NHS Cumbria Deaths Database)



7.2 Long term limiting illness

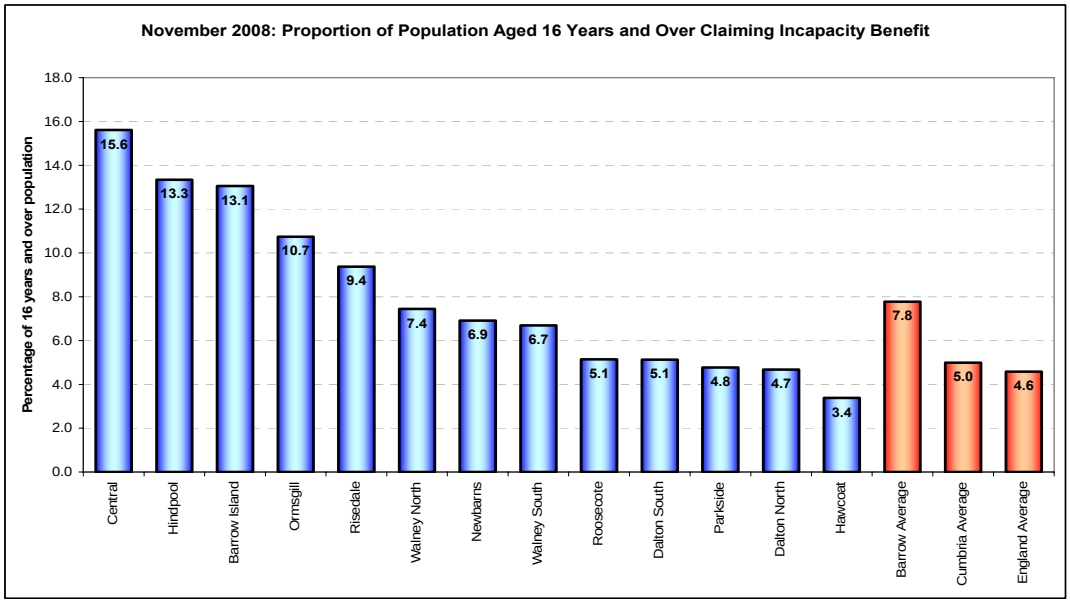
Mortality is not the only measurement of the health of people living in Barrow; whether people are suffering from long term illnesses also needs to be considered. In the 2001 census 45% of households in Barrow included one or more person with a long term limiting illness as compared to 34% nationally. In November 2008, 7.8% of the Barrow population aged 16 years and over claimed incapacity benefits compared to 5.0% for Cumbria and 4.6% for England. The main types of disability reported by people claiming incapacity benefit were mental health and musculoskeletal problems[7; 8] (Table 4).

Table 4: November 2008: Incapacity benefit and severe disability allowance claimants in Barrow-in-Furness by disabling condition (Source: DWP Information Directorate)

Disabling Condition	Number of Claimants	Percentage
Mental	2,075	41.2
Musculoskeletal	1,020	20.3
Respiratory or Circulatory	420	8.3
Nervous System	315	6.3
Injury, poisoning	275	5.5
Other	930	18.5
Total	5,035	100.0

Although the differences in terms of mortality between Barrow and the rest of country are large, the differences in terms of long term limiting illness are much greater. Healthy life expectancy at age 65 is a measure of how long people in each area could expect to live in good health after reaching this age. In Barrow in 2001, male healthy life expectancy at 65 was 11.1 years compared to the 12.5 years for England whilst for females it was 12.9 years in Barrow and 14.5 years in England (ONS). Furthermore, the highest burden of long term limiting illness appears to be in Central, Hindpool and Barrow Island wards (Figure 12), where over 1 in 8 of the population aged 16 years and over are receiving incapacity benefit.

Figure 12: November 2008: Proportion of the population aged 16 years and over claiming incapacity benefit by ward (Source: DWP Information Directorate)

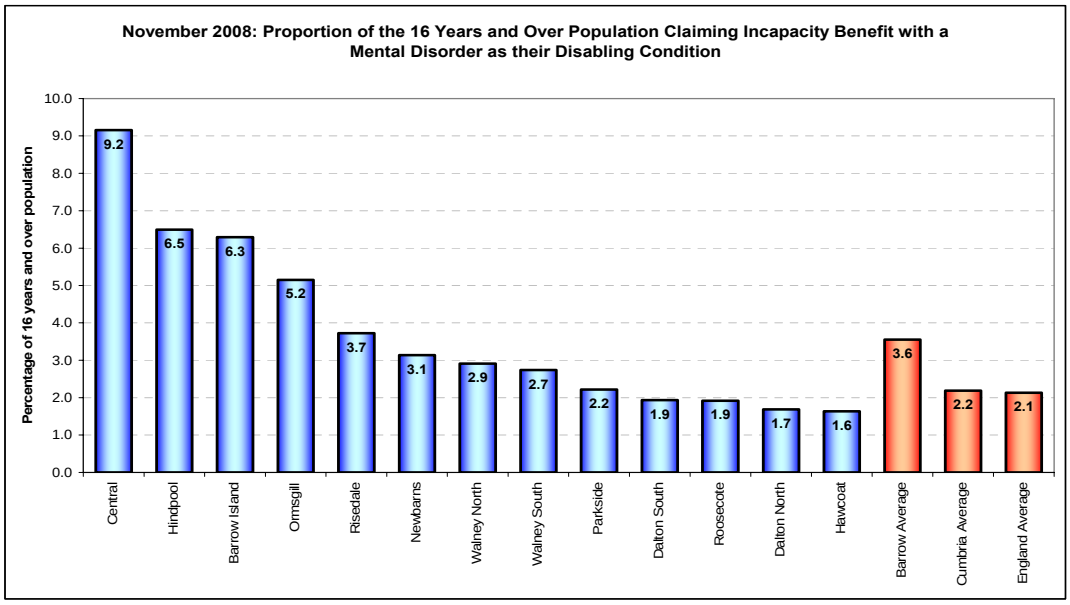


7.2.1 Mental health

Whilst mental health problems can result in people dying (i.e. through suicides), they make up a much bigger proportion of the burden of chronic disease. Nationally 26% of the total burden of disease is related to mental health and other neuro-psychiatric diseases[9].

In Barrow mental health is a particular problem. In November 2008, 3.6% of the population aged 16 years and over were on incapacity benefit with a mental disorder stated as the disabling condition compared to only 2.1% nationally. There is a wide variation in mental health across the district with Central, Hindpool, Barrow Island, Ormsgill and Risedale wards having higher levels than the district average (Figure 13).

Figure 13: November 2008: Proportion of the population aged 16 years and over claiming incapacity benefit with a mental disorder as the disabling condition by ward (Source: DWP Information Directorate)

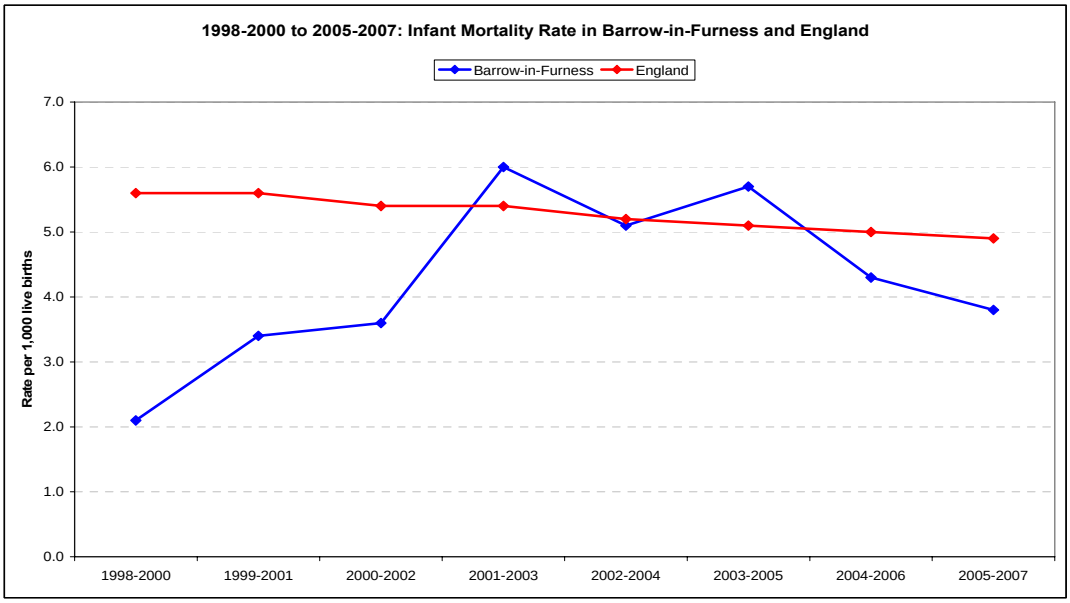


7.3 Infant mortality

Infant mortality refers to the number of deaths that occur within one year of birth as a proportion of all live births in an area. Although this involves a very small number of deaths, young children are the group most affected by adverse social and environmental conditions. They are sensitive not only to conditions in their immediate environment after birth, but also to the pre- and post-natal health of their mother. Information on infant mortality provides a specific indication of the health status of young children and a more general indicator of the overall socioeconomic conditions.

Between 2005 and 2007 there were 9 infant deaths in Barrow-in-Furness with the infant mortality rate of 3.8 per 1,000 live births not being statistically significantly different from the 4.9 for England. What is noticeable, however, is that although the rate in Barrow has fallen since 2003-2005 and is once again below the national average, it is still almost double the rate for 1998-2000 (Figure 14).

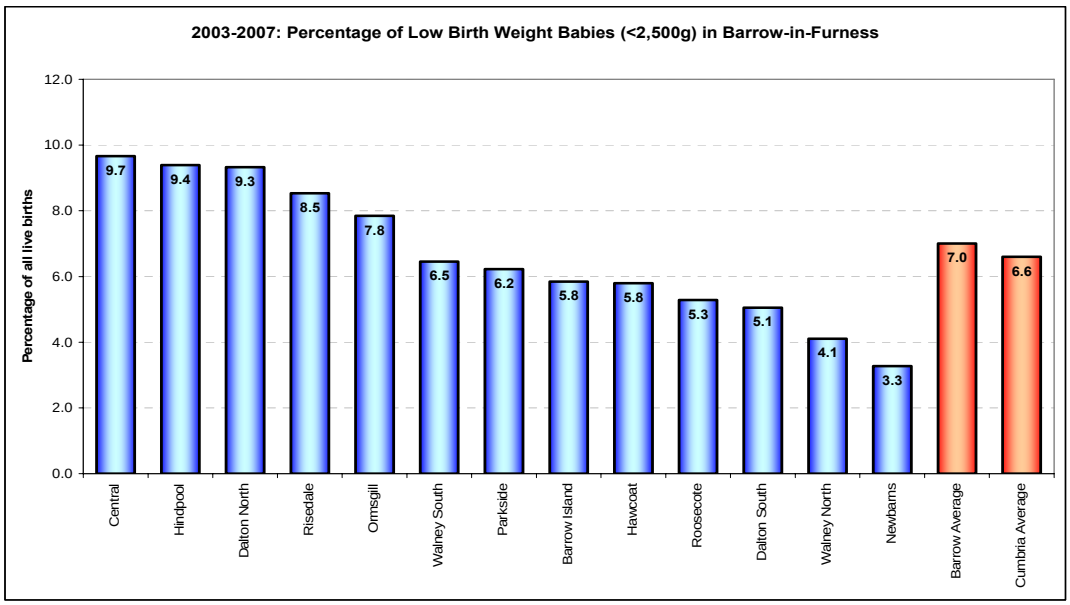
Figure 14: 1998-2000 to 2005-2007: Infant mortality rate in Barrow and England (Source: NCHOD)



Nationally in 2005-07 infant mortality was 16% higher in routine and manual groups as compared to the national average. This had increased from a 13% gap in the baseline period of 1997-1999[10]. Improvements in socioeconomic conditions in the long term will reduce infant mortality. However we know that nationally, differences in infant mortality are mainly the result of five immediate causes: immaturity; low birth weight; Sudden Unexpected Death in Infancy (SUDI); congenital disorders and infection[11]. In the short term, a reduction in smoking in pregnancy, teenage pregnancy, obesity, improved parental nutrition and an increase in breast feeding will all contribute to improvements in infant mortality[11].

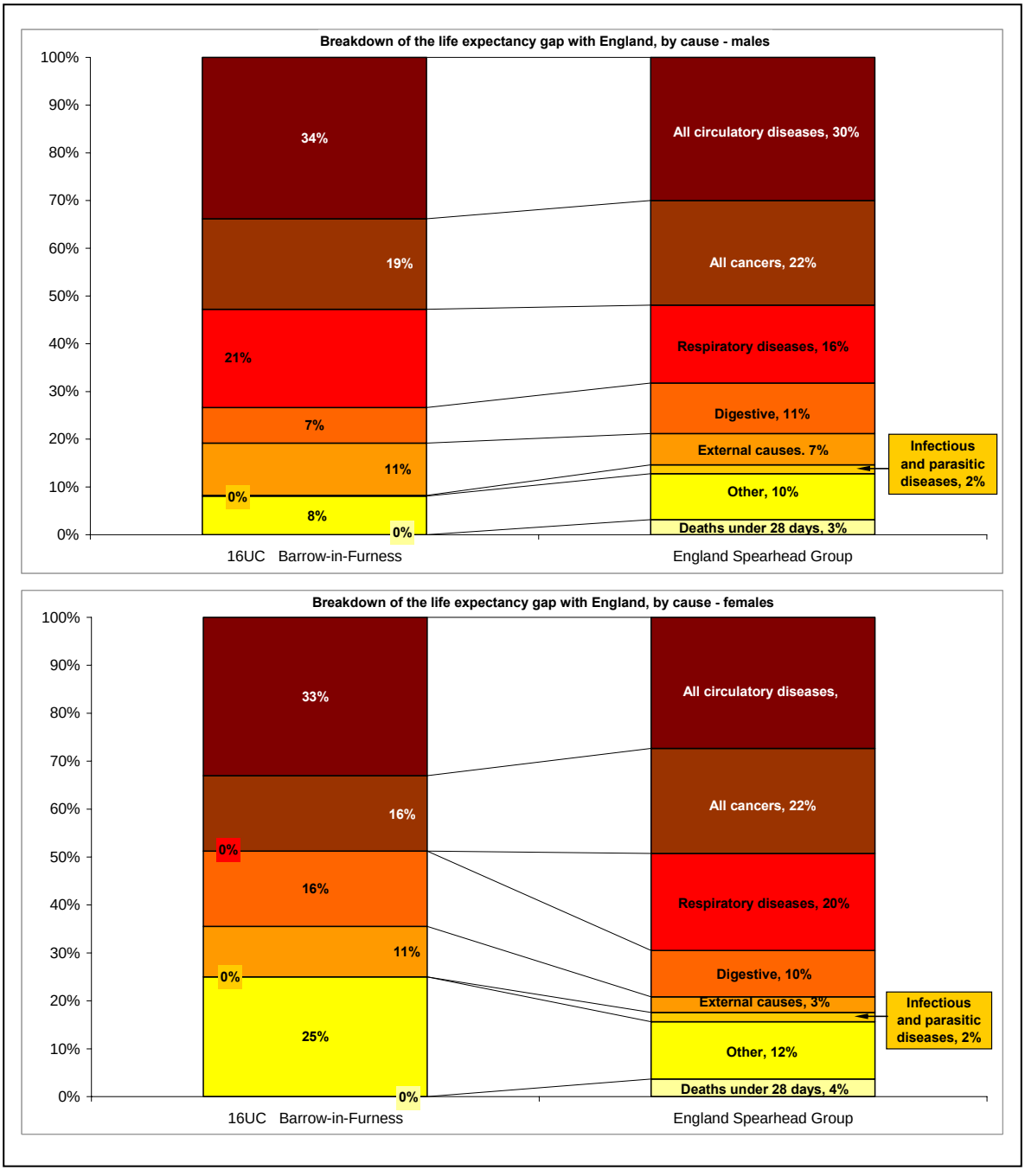
As mentioned above one of the main factors contributing to infant mortality is low birth weight, often due to immaturity. Figure 15 shows the number of babies born under weight (less than 2,500g) as a percentage of all live births in each ward. The highest proportion is found in Central ward with Hindpool, Dalton North, Risedale and Ormsgill having levels greater than the district as a whole.

Figure 15: 2003-2007: Percentage of low birth weight babies by ward (Source: NHS Cumbria Births database)



8 What are the main diseases causing the low level of life expectancy in Barrow?

Figure 16: 2005-2007: Breakdown of life expectancy gap by disease in Barrow-in-Furness and England Spearhead Group (Source: APHO)



As previously mentioned, PSA national targets have been set to reduce premature mortality from all circulatory disease, premature mortality from all cancers, mortality from suicide and undetermined injury and mortality from accidents by 2010 in order to improve life expectancy. Some of the difference between life expectancy in Barrow and the average for England is related to these main groups of diseases and conditions with Figure 16 showing the proportion of the gap in life expectancy that is attributed to these causes based on mortality data from 2005-2007[12]. In other words, of the 1.7 year gap in male life expectancy between

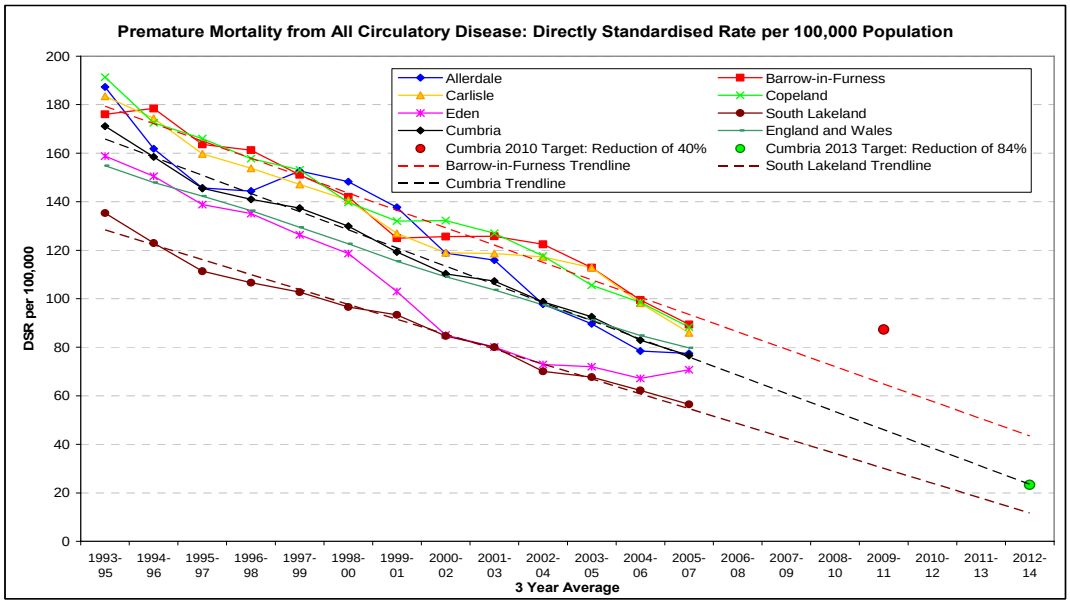
Barrow and England in 2005-2007, 34% of that gap is due to circulatory diseases, 19% is due to cancer, etc. In practice this means that if male mortality due to circulatory disease, cancer, suicides and accidents in Barrow was improved so that it was the same as that found nationally, the gap in life expectancy would be reduced by 64%. Similarly the 2005-2007 0.9 year gap in female life expectancy would be reduced by 60%. Focusing on the causes of these conditions and diseases will have a large impact in terms of improving life expectancy in Barrow. The following section will look in detail at these four main diseases and conditions.

8.1 Circulatory diseases

The directly age-standardised mortality rate from all circulatory diseases for persons aged under 75 is a target indicator in the "Saving Lives: Our Healthier Nation" strategy. The national target set is a 40% reduction by the year 2010 from the baseline rate in 1995-1997. There is also a further World Class Commissioning** (WCC) target of an 84% reduction by the year 2013 from the 1995-1997 baseline rate.

Figure 17 shows that the premature mortality rate from circulatory disease in Cumbria has declined over the period 1993-1995 to 2005-2007 and the ongoing long-term trend indicates that Cumbria is currently on track to meet the 40% reduction target in 2010 but is projected to marginally miss the 84% reduction target in 2013. Figure 17 also highlights that Barrow-in-Furness was the worst performing district in 2005-2007 with South Lakeland remaining the district with the lowest premature mortality rate.

Figure 17: 1993-1995 to 2012-2014: Premature mortality from all circulatory diseases (Source: NCHOD)

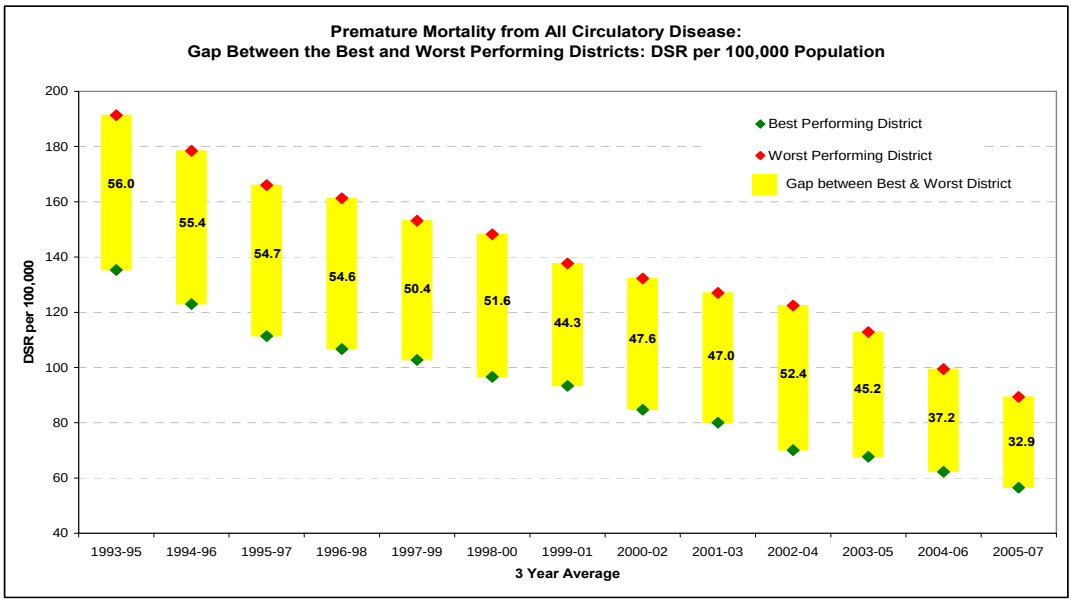


** World Class Commissioning is concerned with improving health outcomes and reducing health inequalities. It helps PCTs ensure delivery of better services which are more closely matched to local needs resulting in better quality of care, improved health and well-being and a reduction in health inequalities across the community.

All PCTs are required to develop a Strategic Plan to shape their commissioning plans over the next five years. The process is designed to ensure that all PCTs have identified priorities that have a demonstrable health benefit for the population they serve and reduce inequalities. Two of these key priority areas are premature mortality from circulatory diseases and cancers. The final NHS Cumbria Strategic Plan for 2008-2013 can be found at: http://www.cumbria.nhs.uk/AboutUs/OurPrioritiesAndHowAreWeDoing/FullStrategicPlan.pdf.

However, it should be noted that the gap between the best and worst performing districts has narrowed over the stated period with the difference between the DSRs being at its lowest in 2005-2007 (Figure 18).

Figure 18: 1993-1995 to 2005-2007: Gap between the best and worst performing districts



The 2005-2007 mortality rate in people aged under 75 years for circulatory diseases in Barrow was 11% higher than that found nationally although this difference was not statistically significant (Standardised Mortality Ratio*** (SMR) =111, 95%CI 97-127). Premature mortality was higher for both males and females: 2% higher in males and 31% higher in females with only the female mortality difference being statistically significant (NCHOD). Mortality from circulatory disease accounts for 34% of the gap in male life expectancy and 33% of the gap in female life expectancy (Figure 16). Premature mortality from circulatory disease in Barrow has shown a declining trend over the period 1993-1995 to 2005-2007 (Figure 19). Within the Local Area Agreement a target has been set to reduce circulatory disease premature mortality to 87 per 100,000. This is a more challenging target than that previously set by the Department of Health ("Saving Lives: Our Healthier Nation") however the ongoing long-term trend indicates that Barrow is currently on trend to meet the target rate set.

*** An SMR compares the number of deaths occurring in a population with the number expected by means of a ratio. A ratio greater than 100 means there were more deaths than expected and a ratio less than 100 means fewer deaths than expected (where 100 is the rate for England). A ratio of 150 means that people are, on average, 50% more likely to die, whilst a ratio of 50 means they are 50% less likely to die from a given condition.

Figure 19: 1993-1995 to 2005-2007: Premature mortality from all circulatory diseases in Barrow-in-Furness and England and Wales (Source: NCHOD)

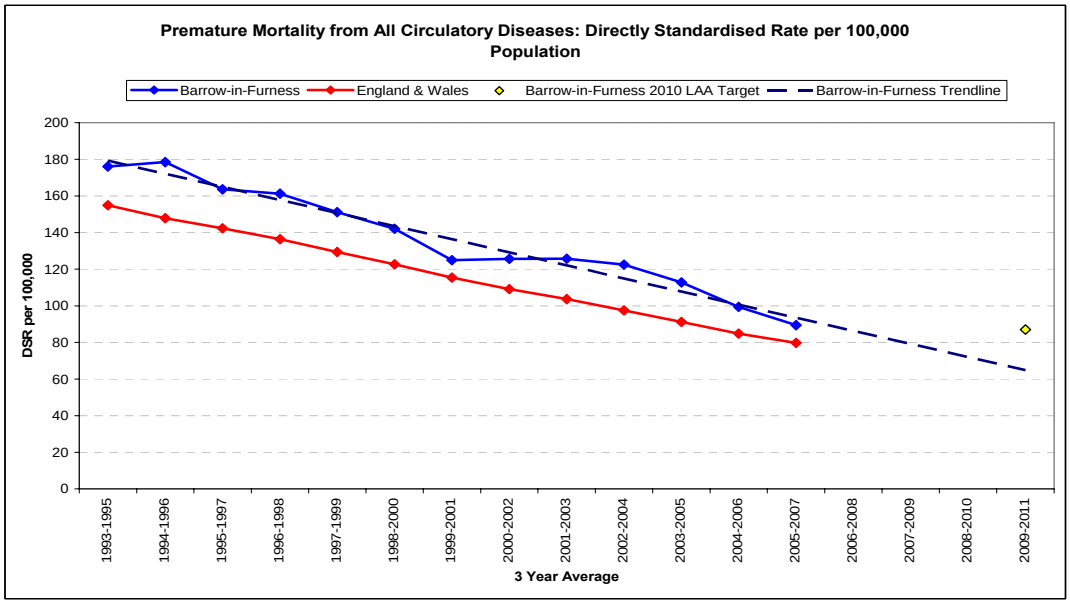


Figure 20 shows the variation that exists in the premature mortality rates from all circulatory disease for each of the wards in Barrow for the 5 year period 2003-2007. Barrow Island and Central wards have rates that are statistically significantly higher than the average for Barrow.

Figure 20: 2003-2007: Premature mortality from all circulatory diseases in wards in Barrow-in-Furness (Source: NHS Cumbria Deaths Database)

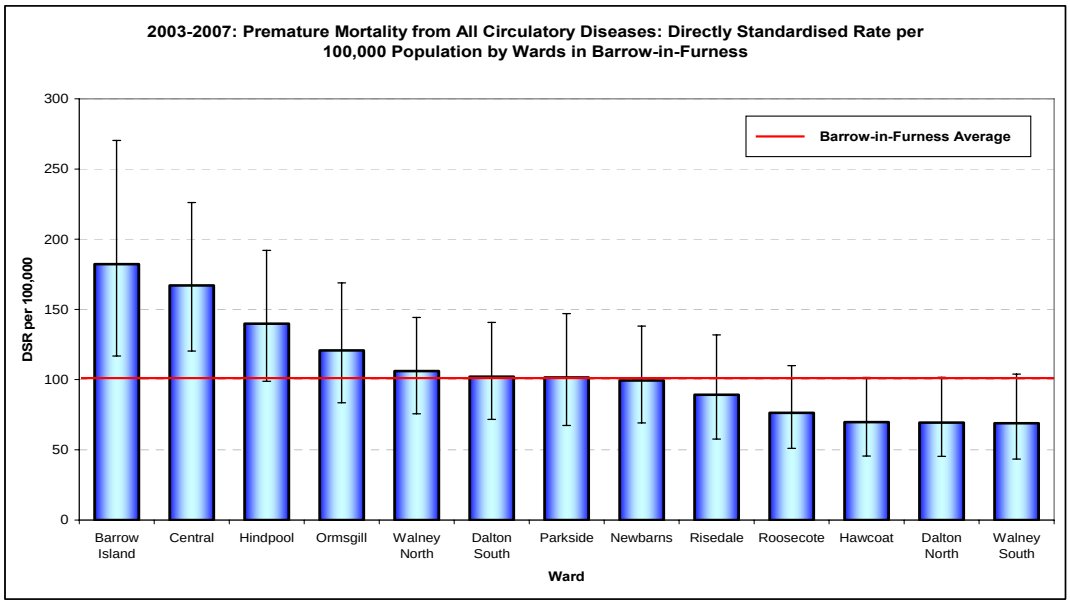
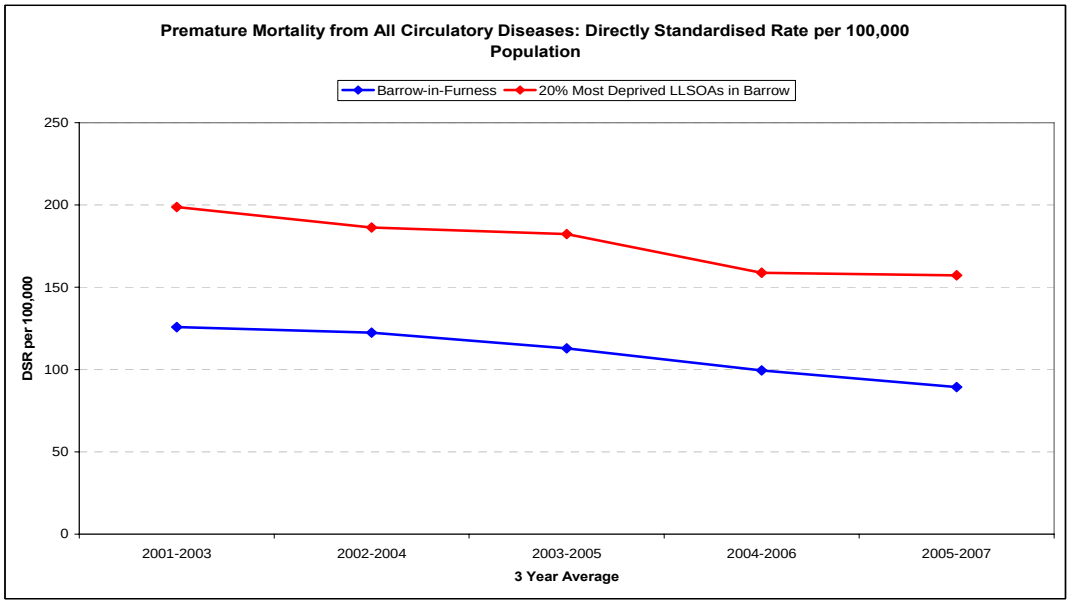


Figure 21 shows the premature mortality rate for all circulatory diseases in the most deprived 20% of areas in Barrow as compared to Barrow as a whole. Over the period of 2001-2003 to 2005-2007, although mortality was higher in the more deprived areas, the rate has decreased at a faster rate in these areas and the gap is narrowing.

Figure 21: 2001-2003 to 2005-2007: Premature mortality from all circulatory diseases in Barrow-in-Furness district and the 20% most deprived LLSOAs in Barrow (Source: NCHOD; NHS Cumbria Deaths Database)



The main behavioural risk factors that result in high levels of circulatory disease are smoking, diet and levels of physical activity. As well as exposure to these particular risk factors, mortality from cardiovascular disease may be related to whether people with these diseases, or at risk of these diseases, are identified early and provided with effective treatment. One important factor will be whether people are assessed by their GPs.

Based on the Health Survey for England[13], it can be estimated that there would be about 19,000 people in Barrow who would have a greater than 20% risk of developing cardiovascular disease in the next 10 years[14]. The Joint British Societies guidelines[15] recommends that these people are assessed in primary care. This could lead to real improvements in life expectancy by giving those who are 'at risk' lifestyle advice and/or medication at an earlier stage. Similarly, it was estimated that there was approximately 19,000 people in Barrow with hypertension (diagnosed and undiagnosed)[16]. In 2007-08 GP practices in Barrow reported that they had 10,586 people on their registers with hypertension (QMAS). This would indicate that there are potentially about 9,000 people with untreated hypertension in Barrow. Diagnosing and treating hypertension in this population would prevent a significant number of premature deaths in Barrow[12].

The Coronary Heart Disease National Service Framework recognised in 1999 that barely half of all eligible patients actually receive effective treatments for myocardial infarction, angina or heart failure[17], resulting in 20,000 avoidable coronary deaths nationally each year[18]. 2007 estimates suggest that there were over 3,800 people with Coronary Heart Disease (CHD) in Barrow[19]. In 2007-08 GP practices reported that they had 3,374 people on their registers with CHD. Whilst this recorded value is fairly close to the estimated level, suggesting that access to primary care for people with CHD in Barrow is reasonable, nearly 12% of people with CHD in Barrow remain undiagnosed. Progress could therefore be made in these areas by improving the process used to identify people with the condition and providing them with appropriate advice and treatment.

8.2 Cancer

The directly age-standardised mortality rate from all cancers for persons aged under 75 is also a target indicator in the "Saving Lives: Our Healthier Nation" strategy with the target being a 20% reduction by the year 2010 from the baseline rate in 1995-97. The World Class Commissioning (WCC) target is a 43% reduction by 2013 from the 1995-1997 baseline rate.

Based on the current trend, Cumbria appears to be on target to meet the 20% reduction in the premature mortality rate from all cancers (Figure 22) with rates generally declining over the period 1993-1995 to 2005-2007. However, at current projections it is unlikely that Cumbria will meet the WCC target of a 43% reduction by 2013 with some districts performing significantly worse than others. Within Cumbria, Eden is the best performing district with Barrow-in-Furness the worst. It should be noted however that Barrow's premature mortality rate declined in 2005-2007 thus halting the recent trend of a widening gap between districts (Figure 23).

Figure 22: 1993-1995 to 2012-2014: Premature mortality from all cancers (Source: NCHOD)

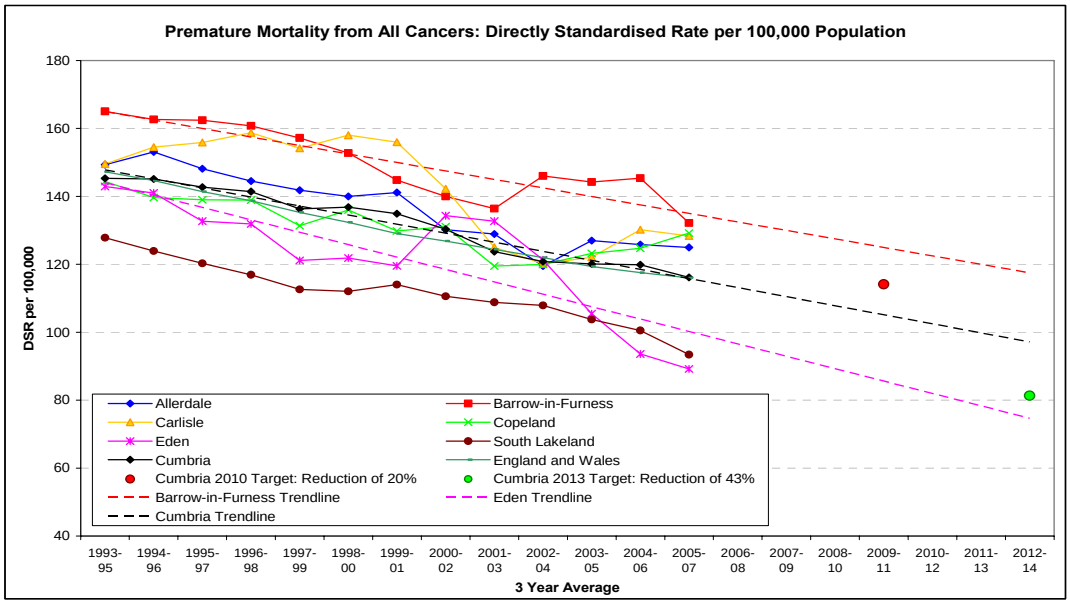
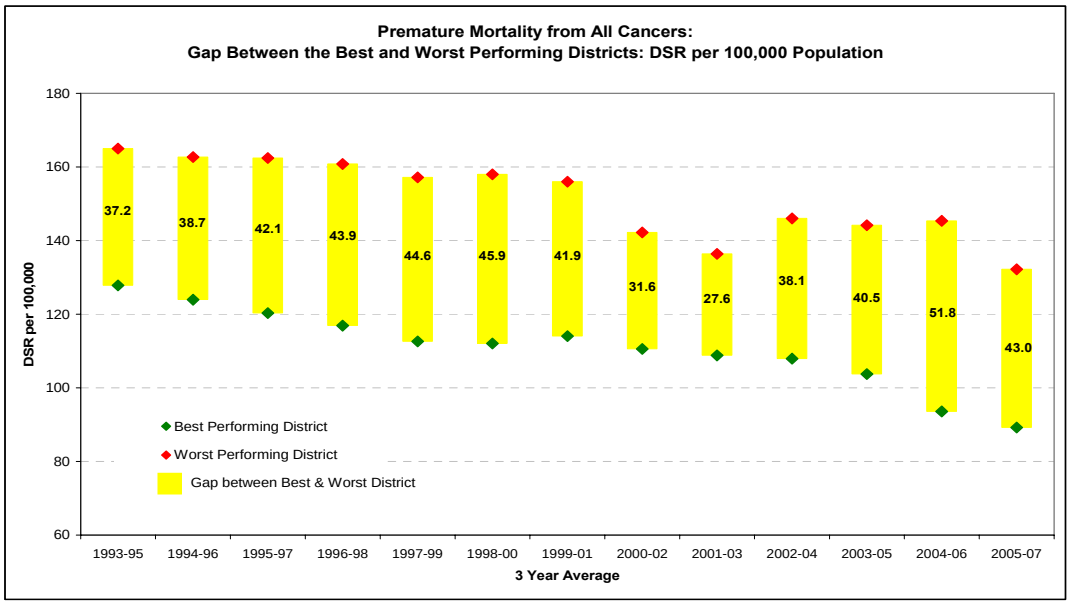


Figure 23: 1993-1995 to 2005-2007: Gap between the best and worst performing districts



Mortality from cancer accounts for 19% of the gap in male life expectancy between Barrow-in-Furness and England and 16% of the gap in female life expectancy (Figure 16). In 2005-2007 the premature mortality rate for all cancers in Barrow was 15% higher than the England average – a difference that was statistically significant. The rates were also higher for both males and females (Male SMR=117, 95%CI 101-135; Female SMR=113, 95%CI 95-132) (NCHOD). Premature mortality from cancer in Barrow has consistently been higher than the England and Wales average (Figure 24) however, until 2001-2003, the gap had been narrowing. Since this period, the Barrow rate has experienced a slight fluctuation although the ongoing decreasing trend indicates that Barrow is currently on track to meet the target rate set in "Saving Lives: Our Healthier Nation" of a 20% reduction by the year 2010 from the baseline rate in 1995-1997 (i.e. 129.95 per 100,000).

Figure 24: 1993-1995 to 2005-2007: Premature mortality from all cancers in Barrow-in-Furness and England and Wales (Source: NCHOD)

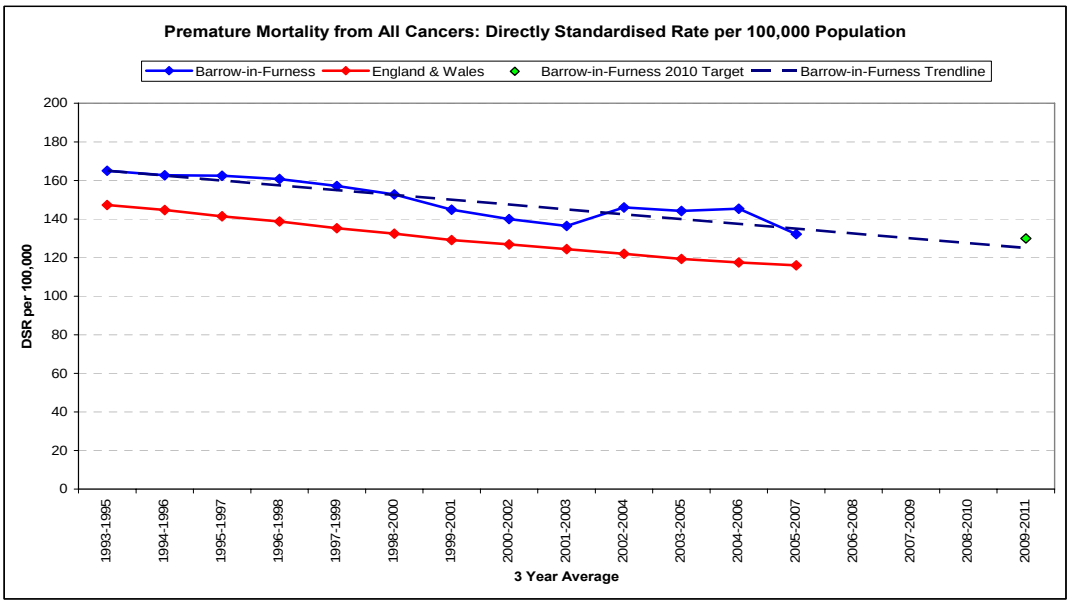


Figure 25 shows the variation that exists in the premature mortality rates from all cancers for each of the 13 wards in Barrow for the 5 year period 2003-2007. Hindpool is the only ward to have a statistically significantly higher mortality rate compared to the average for Barrow.

Figure 25: 2003-2007: Premature mortality from all cancers in wards in Barrow-in-Furness (Source: NHS Cumbria Deaths Database)

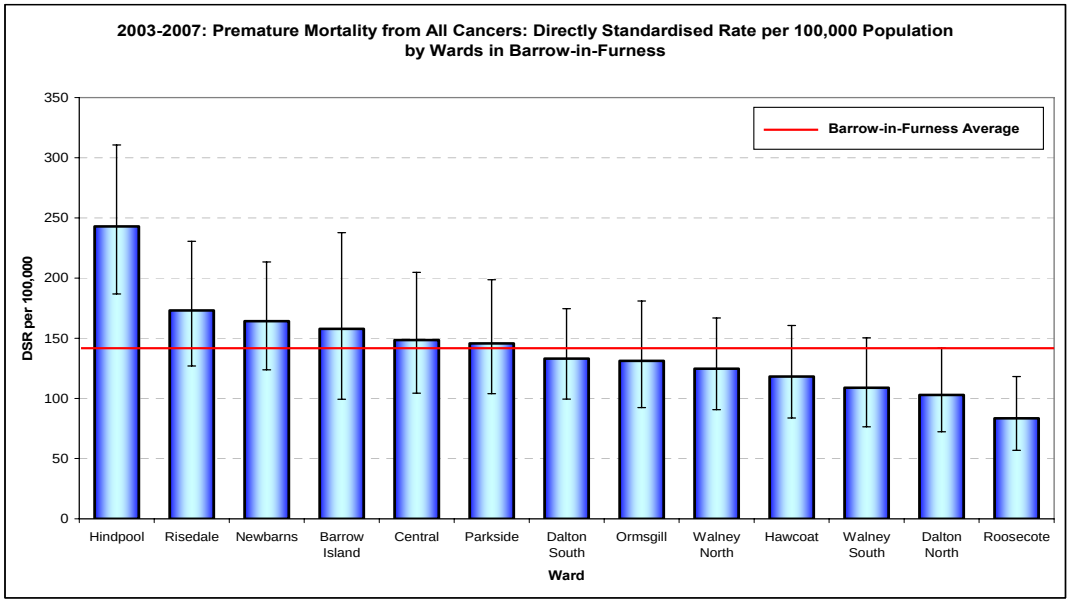
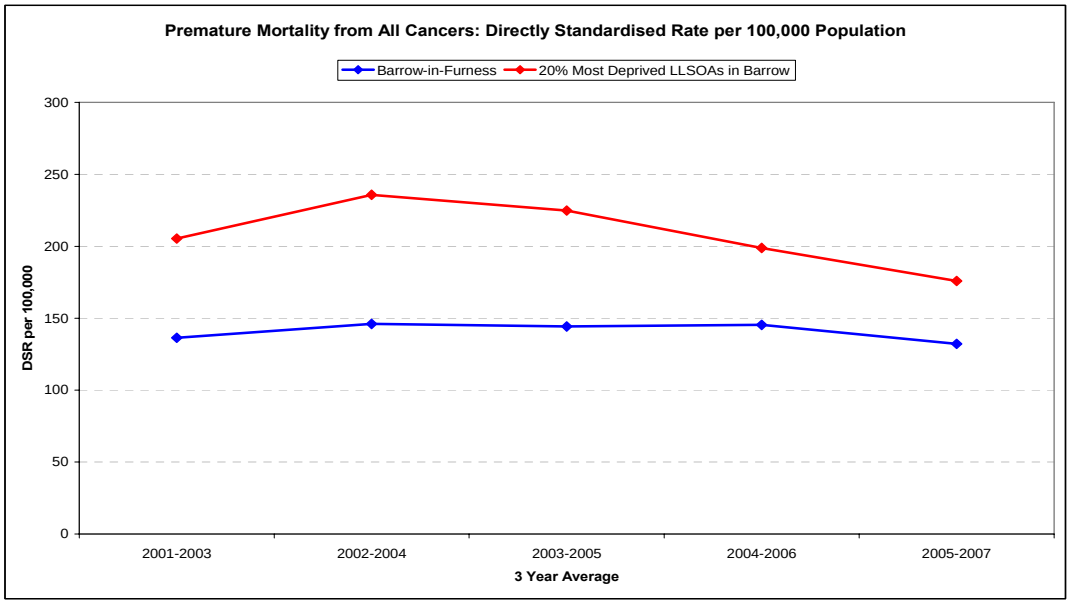


Figure 26 shows the premature mortality rate for all cancers in the most deprived 20% of areas in Barrow as compared to Barrow as a whole. Over the period of 2001-2003 to 2005-2007, although mortality was higher in the more deprived areas, the rate in these areas has decreased at a faster rate (with that for the district overall remaining relatively constant) and the gap is thus narrowing.

Figure 26: 2001-2003 to 2005-2007: Premature mortality from all cancers in Barrow-in-Furness district and the 20% most deprived LLSOAs in Barrow (Source: NCHOD; NHS Cumbria Deaths Database)



8.2.1 Which types of cancer are contributing to this high mortality?

Table 5 shows the number of deaths between 2004-2006 by cancer site in males aged under 75 years and the standardised mortality ratio (SMR). It also shows the number of new cancer

registrations of males between 2003-2005 and the standardised registration ratio**** (SRR). During 2004-2006, lung cancer, colorectal cancer and mesothelioma were the cause of the greatest number of cancer deaths with the SMRs for colorectal cancer and mesothelioma being statistically significantly higher in Barrow as compared to the national average (70% and 402% higher respectively). Registrations for mesothelioma and prostate cancer were significantly higher than the national average for the period 2003-2005 (342% and 31% higher respectively).

Table 5: Number of registrations, Standardised Registration Ratio (SRR), number of deaths and Standardised Mortality Ratio (SMR) for males aged under 75 years in Barrow-in-Furness by cancer site (Source: 'Cancer in Cumbria' report[20])

Site	2003-05: Under 75 Years Registrations				2004-06: Premature Mortality			
	Expected	Observed	SRR	Sig	Expected	Observed	SMR	Sig
All Cancers (exc. nmsc)	347	359	104		163	198	121	☹
Oesophagus	12	7	57		11	10	90	
Stomach	11	14	127		7	6	92	
Colorectal	45	54	120		17	29	170	☹
Pancreas	9	…	57		8	7	84	
Lung	50	57	113		42	52	123	
Malignant Melanoma	12	8	68		3	…	109	
Mesothelioma	5	21	442	☹	4	21	502	☹
Prostate	56	74	131	☹	12	12	101	
Testis	8	13	173		0	0	0	
Kidney	11	16	139		5	7	135	
Bladder	12	13	105		5	…	107	
Non-Hodgkin's Lymphoma	15	10	69		5	…	93	
Leukaemia	10	8	79		5	…	79	

☹ Rate is higher than national average at the 95% significance level and difference did not occur by chance.
'…' Denotes that the data have been suppressed due to the small numbers involved.

Table 6 shows the same information for females in Barrow-in-Furness. The greatest number of deaths from cancer were for lung, breast and colorectal cancers over the period 2004-2006 and, although there were several types of cancer for which there were higher mortality experiences than the national average, none of these were statistically significant and the difference could have occurred by chance. The high mortality rate (statistically significant) for all cancers in women in Barrow does not therefore appear to be related to a high rate at any individual cancer site. The same is true for cancer registrations with no individual cancer site having rates statistically significantly higher than those for England with the SRR for malignant melanoma being significantly lower than the national average.

**** Like SMRs, SRRs compare the number of new registrations occurring in a population with the number expected by means of a ratio. A ratio greater than 100 means there were more registrations than expected and a ratio less than 100 means fewer registrations than expected (where 100 is the rate for England).

Table 6: Number of registrations, Standardised Registration Ratio (SRR), number of deaths and Standardised Mortality Ratio (SMR) for females aged under 75 years in Barrow-in-Furness by cancer site (Source: 'Cancer in Cumbria' report[20])

Site	2003-05: Under 75 Years Registrations				2004-06: Premature Mortality			
	Expected	Observed	SRR	Sig	Expected	Observed	SMR	Sig
All Cancers (exc. nmsc)	334	377	113	☹	131	165	126	☹
Oesophagus	4	5	113		4	3	84	
Stomach	4	5	113		3	3	111	
Colorectal	29	35	121		8	14	170	
Pancreas	7	6	89		6	6	94	
Lung	32	36	113		26	33	125	
Malignant Melanoma	14	6	44	☺	2	1	54	
Mesothelioma	1	1	135		1	1	156	
Breast	127	141	111		26	36	139	
Cervix	11	9	81		2	3	123	
Uterus	15	16	110		2	3	135	
Ovary	17	16	93		10	8	80	
Kidney	5	10	182		2	5	209	
Bladder	4	5	113		2	2	115	
Non-Hodgkin's Lymphoma	11	9	82		4	5	141	
Leukaemia	6	3	49		3	5	170	

☹ Rate is higher than national average at the 95% significance level and difference did not occur by chance.
☺ Rate is lower than national average at the 95% significance level and difference did not occur by chance.
'…' Denotes that the data have been suppressed due to the small numbers involved.

The level of mortality from cancer is likely to reflect the number of new people developing the disease and the length of time they survive once they have been diagnosed. Table 7 shows the percentage of people within Cumbria PCT surviving 5 or more years after diagnosis as compared to England as a whole. This indicates that the average survival rate is lower for the local population for all cancers and lung cancer but higher for colorectal cancer and breast cancer in women. The slightly higher level of survival for people diagnosed with breast cancer may be related to a higher level of screening uptake: 78.9% for Cumbria PCT as compared to the 76.7% average for England in 2007-2008[21].

Table 7: Five year relative survival following diagnosis with lung, colorectal and breast cancer (Source: 'Cancer in Cumbria' report[20])

Cancer site	England (1998-2002)	Cumbria PCT (1998-2002)
All cancers (exc.nmsc)	49.7%	46.9%
Lung	7.5%	4.7%
Colorectal	52.1%	52.9%
Breast (female)	82.0%	82.7%

Poor survival could be the result of several causes: people being identified later with more advanced stages of the disease; people having more co-morbidities or other risk factors (e.g. smoking); or people having poorer access to effective treatment.

8.3 Accidents and suicides

Accidents and suicides account for 11% of the gap in life expectancy between men in Barrow and England as a whole and also account for 11% of the gap for women (Figure 16).

The suicide and injury undetermined mortality rate was lower than the national average in Barrow in 2005-2007. 9 men died from suicide and injury undetermined in Barrow in this period, giving a mortality rate that was 32% lower than the national average (SMR=68; 95%CI 31-130). 4 female deaths were also recorded with a mortality experience 12% lower than that for England (SMR=88; 95%CI 24-226). It should be noted however that these differences were not statistically significant (NCHOD).

The small number of suicides annually means that the rate tends to vary considerably from year to year however, until 2005-2007, the suicide rate had consistently been higher than the level for England and Wales as a whole (Figure 27). Over the period 1993-1995 to 2005-2007 the ongoing trend has been one of a decreasing rate with a sharp decline since 2002-2004. In fact, since 2003-05 the rate has already fallen below the target set in "Saving Lives: Our Healthier Nation" of a 20% reduction by the year 2010 from the baseline rate in 1995-97 (i.e. 13.26 per 100,000). This reduction in the mortality rate has also been seen in recent years in one of the most at risk groups (i.e. males aged 15-44) (Figure 28).

Figure 27: 1993-1995 to 2005-2007: Mortality from suicide and injury undetermined in Barrow-in-Furness and England and Wales (Source: NCHOD)

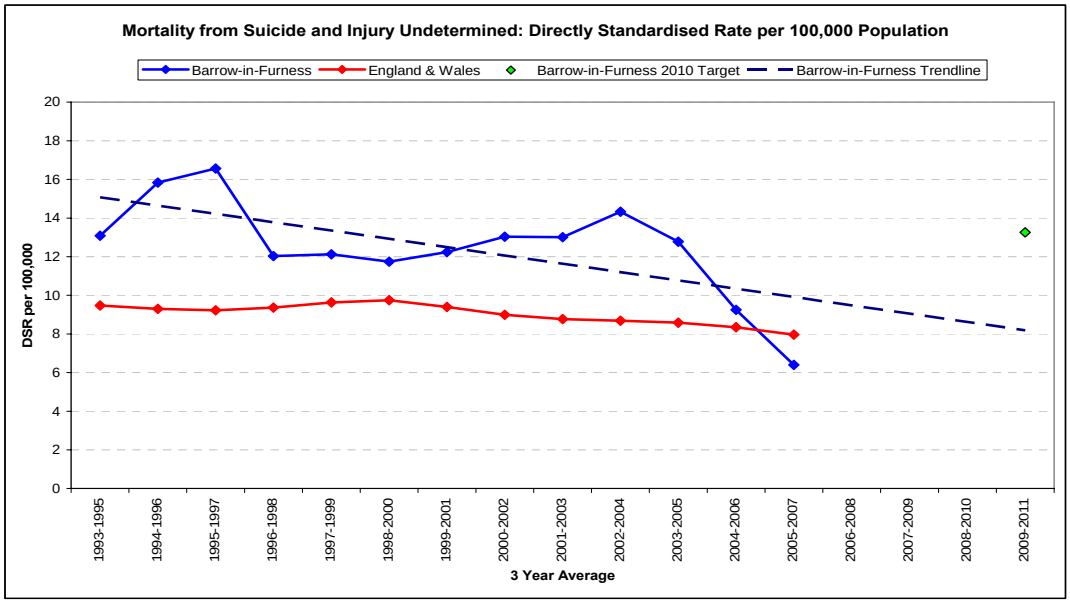
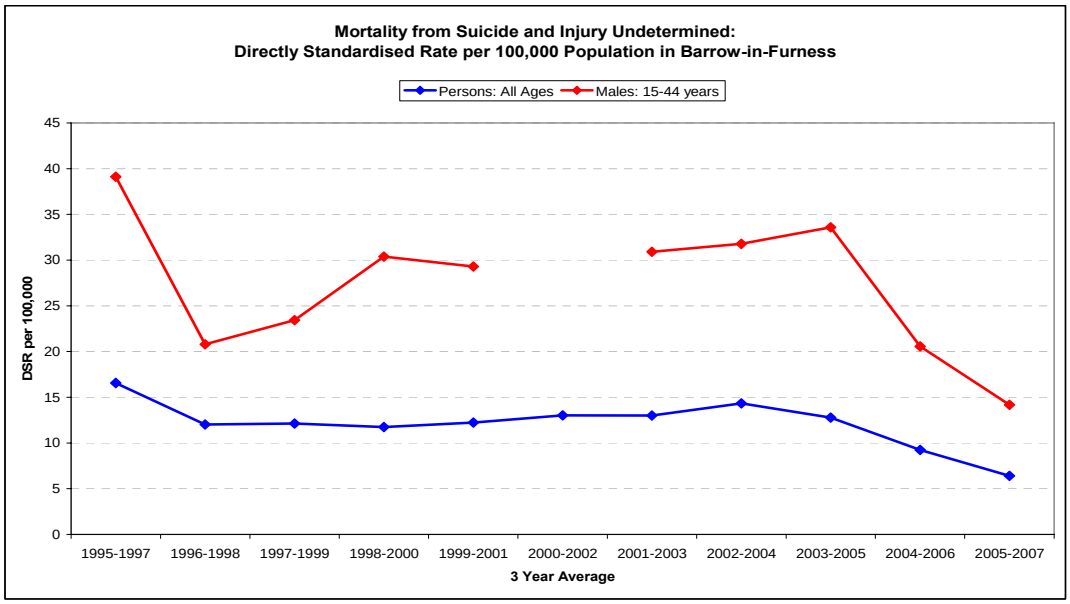
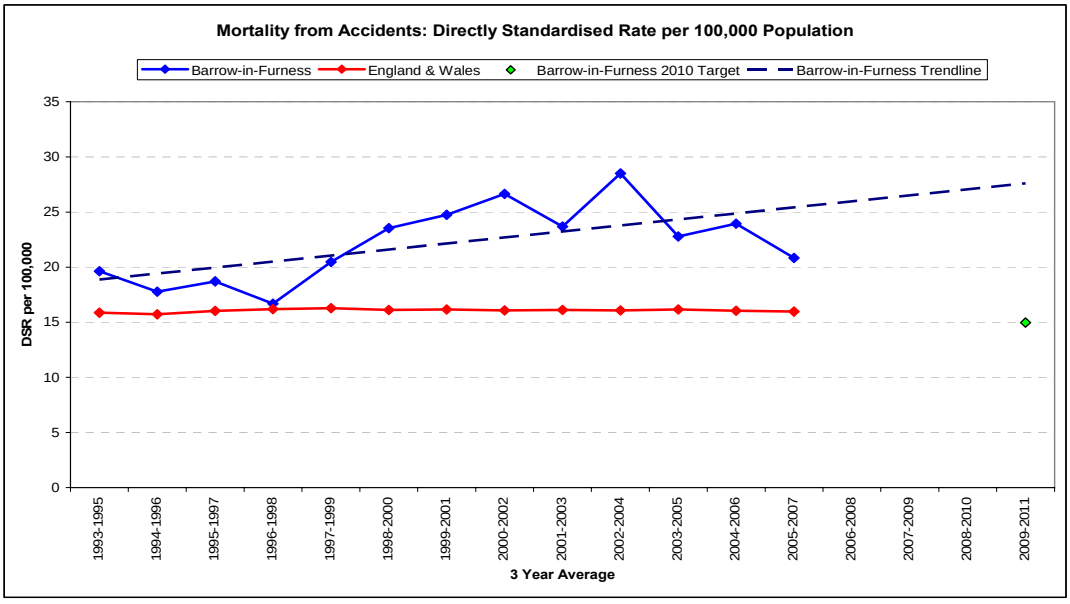


Figure 28: 1995-1997 to 2005-2007: Mortality from suicide and injury undetermined in Barrow-in-Furness by persons of all ages and males aged 15-44 (Source: NCHOD)



Over the period 2005-2007, 60 people in Barrow-in-Furness died from accidents: this was a 25% higher mortality experience than that for England, although not statistically significant (SMR=125; 95%CI 96-161) (NCHOD). Despite a slight decline in the mortality rate in recent years, the long-term trend since 1993-1995 has been one of an increasing rate (Figure 29). At current projections it is therefore unlikely that Barrow will meet the target set in "Saving Lives: Our Healthier Nation" of a 20% reduction by the year 2010 from the baseline rate in 1995-97 (i.e. 14.97 per 100,000).

Figure 29: 1993-1995 to 2005-2007: Mortality from accidents in Barrow-in-Furness and England and Wales (Source: NCHOD)



The most frequent causes of death from accidents in Barrow-in-Furness over the period 2002-2007 were due to falls, motor vehicle traffic accidents, drowning or other accidental threats to breathing and accidental poisonings or other hazardous exposure (Table 8). Accidents did not appear to be a major cause of death in children in Barrow: there were two deaths in people aged under 18 years from accidents during these 6 years with the median age of death being 71 years.

Overall the majority of accidents occurred in the home or residential institution but, of those that occurred outside the home, three-quarters were in men. Furthermore, a particularly high proportion of deaths from motor vehicle transport accidents and drowning incidents were in young men. Other studies have identified that alcohol and drug use were important contributory factors to deaths from injury and poisoning in young men[22; 23]. Nationally young men are more likely to be involved in road traffic accidents attributable to alcohol than any other age group[23].

Falls were however the most common cause of accidental deaths. Over 50% of all accidental deaths were from falls (61.5% female) and these were generally in elderly people with the median age of death being 82 years (Table 8).

Table 8: 2002-2007: Deaths from accidents in Barrow-in-Furness (Source: NHS Cumbria Deaths Database)

Cause of death	ICD 10 code	No. of deaths	% of all deaths	% male	Years of life lost	% of total YLL	Median age
Motor vehicle traffic accidents	V01-V79	22	17.6	81.8	625.5	34.5	47.5
Falls	W00-W19	65	52.0	38.5	334.5	18.5	82.0
Drowning or other accidental threats to breathing	W65-W84	16	12.8	93.8	393.0	21.7	44.0
Electrocution	W85-W87	…	1.6	100.0	55.5	3.1	49.5
Exposure to fire or other heat source	X00-X19	…	4.0	80.0	66.5	3.7	59.0
Exposure to forces of nature	X30-X39	…	4.0	60.0	31.0	1.7	85.0
Accidental poisonings or other hazardous exposure	X40-X49	10	8.0	60.0	305.0	16.8	43.5
Place of death	**ICD 10 code**	**No. of deaths**	**% of all deaths**	**% male**	**Years of life lost**	**% of total YLL**	**Median age**
Outside the home	-	24	19.2	75.0	808.5	44.6	41.0
Home or residential institution	-	101	80.8	54.5	1,002.5	55.4	79.0
Total	**-**	**125**	**100.0**	**58.4**	**1,811**	**100.0**	**71.0**

('…' denotes that the data have been suppressed due to the small numbers involved).

9 The number of deaths that would need to be prevented to achieve these targets

In order to increase life expectancy in Barrow to the target level there will need to be approximately 52 fewer deaths each year in 2009-2011 as compared to 2005-2007 (Table 9). This will reduce the mortality rates for men and women to the target levels in the Cumbria Local Area Agreement and increase life expectancy in line with the national health inequalities target.

However, just meeting each of the mortality targets stated in Table 9 is insufficient to achieve the reductions in life expectancy required. Furthermore, it is unlikely (based on current trends) that the targets for mortality from accidents, infant mortality and male all age all cause mortality will be met. This indicates that either mortality from the four conditions that are on track to meet their targets will need to be reduced beyond the targets set or there will need to be reductions in deaths from other causes in order for the life expectancy target to be reached.

Table 9: Mortality targets for Barrow Health Improvement Plan
(all rates are per 100,000 population and are directly age standardised except the infant mortality rate (per 1,000 live births) and life expectancy (years))

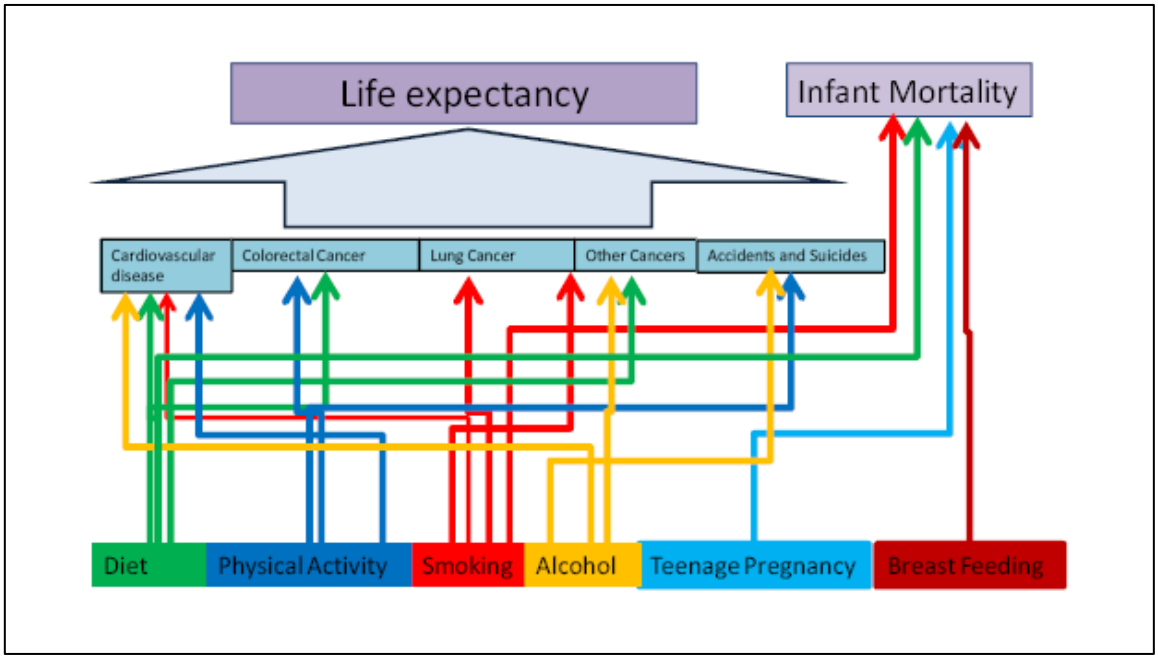
Indicator	2005-2007 Rate	Approximate number of deaths that need to be prevented each year in 2009-2011 to meet target	2009-2011 Target Rate	On Track to meet Target?	Current Trend
Male life expectancy	76.4 (2006-2008)	-	2.1% relative gap with Eng	Yes*	↑
Female life expectancy	80.8 (2006-2008)	-	0.9% relative gap with Eng	No*	↑
Male all age all cause mortality	820.4	24	769	No#	↓
Female all age all cause mortality	541.9	28	503	Yes#	↓
Under 75 mortality: circulatory disease	89.4	2	87	Yes	↓
Under 75 mortality: all cancers	132.2	2	130.0	Yes	↓
Mortality: suicide and injury undetermined	6.4	0	13.3	Yes	↓
Mortality: accidents	20.8	6	15.0	No	↑
Infant mortality	3.8	1	2.1	No	↑

* National target for spearhead areas (Barrow-in-Furness rates are for 2006-08).
# Local Area Agreement target (Barrow-in-Furness rates are for 2005-07).

10 What are the main behavioural risk factors resulting in the inequalities gap in infant mortality and life expectancy?

There are several main behavioural risk factors that contribute to poor health and health inequalities: diet, physical exercise, smoking, alcohol consumption, teenage pregnancy and breast feeding. Figure 30 shows how each of these behavioural risk factors can have an impact on the diseases and conditions discussed earlier. The following section will look at the current situation of each of these risk factors in Barrow-in-Furness.

Figure 30: Main mechanisms relating behavioural risk factors to life expectancy and infant mortality



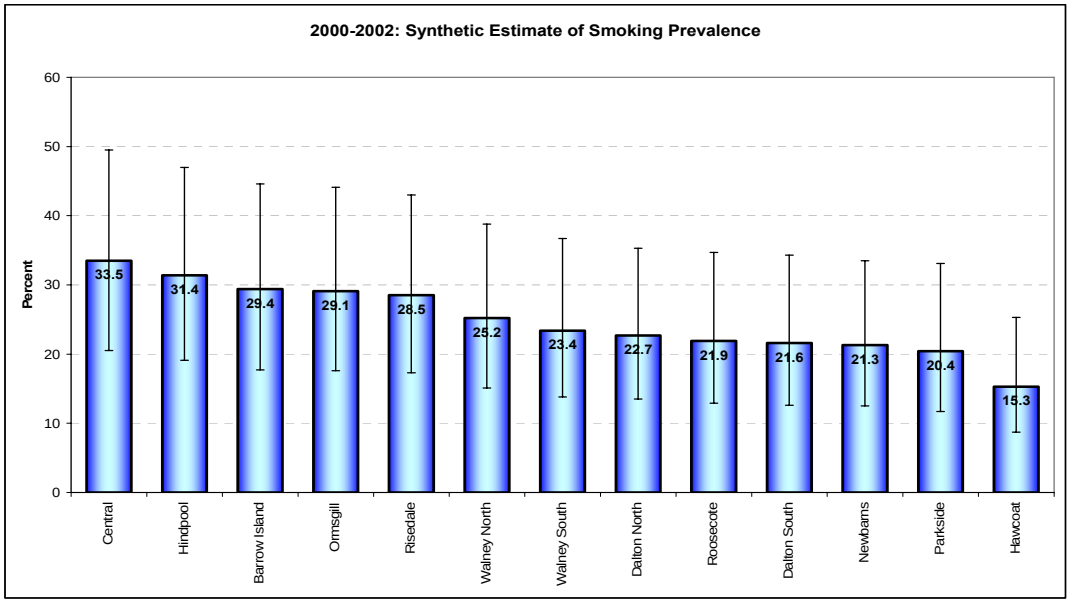
10.1 Smoking

Nationally smoking is the biggest single cause of preventable illness and death: in 2007 in England, 82% of deaths from lung cancer and 14% of deaths from ischaemic heart disease among adults aged 35 and over were attributable to smoking[24]. Smoking in pregnancy is estimated to increase infant mortality by about 40%[9].

2003-2005 modelled-based estimates for current smoking status show that 26.1% (95%CI 23.3-29.2%) of adults smoked in Barrow-in-Furness accounting for approximately 15,200 people aged 16 and over[25]. This is greater in comparison to the 25.7% (24.5-27.0%) in Cumbria and the 24.1% (23.4-24.7%) in England[26]. Within Barrow, the latest data (2000-2002) reveals that smoking prevalence varies greatly with higher rates found in the more deprived wards of Central and Hindpool (a situation repeated nationally) (Figure 31) whilst the Cumbria Quality of Life survey[6] estimated that smoking prevalence was as high as 32% (95%CI 29-36%) in the 663 adult sample from the Neighbourhood Management Initiative

Areas in Barrow. Levels of smoking in Barrow overall are therefore only slightly higher than the national average, but they are markedly higher in the more deprived areas.

Figure 31: 2000-2002: Synthetic estimate of smoking prevalence by wards in Barrow-in-Furness (Source: ONS)



Between 2007-2008 there were 507 smokers in Barrow who had set a date to quit smoking with 65% of these having successfully given up smoking at their 4 week follow-up: a rate greater than the average for the county (Table 10). However, it should be noted that the overall rate for Barrow most likely hides disparities at ward level as it has been found that people living in more deprived areas are less likely to access smoking cessation services and are also less successful at giving up smoking with, nationally, quit rates tending to be lower in areas of higher deprivation[27; 28].

Table 10: 2007-2008: Smoking quit rates (Source: Cumbria PCT NHS Stop Smoking Services)

	Number setting a quit date	Number of successful quitters	% of successful quitters
Allerdale	534	324	60.7
Barrow-in-Furness	507	329	64.9
Carlisle	669	468	70.0
Copeland	756	442	58.5
Eden	322	249	77.3
South Lakeland	778	458	58.9
Cumbria	3,566	2,270	63.7

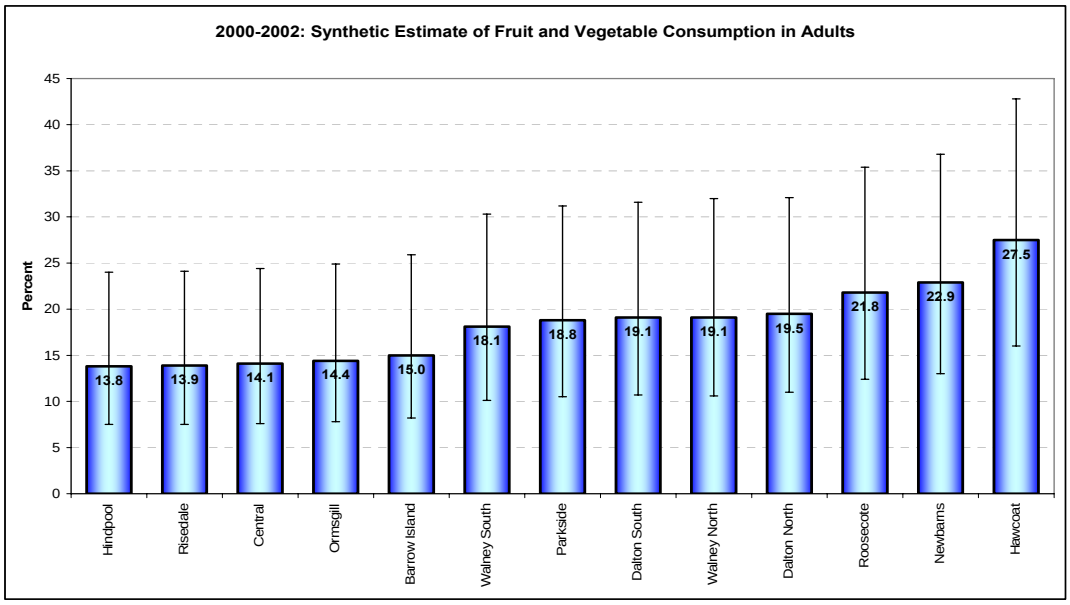
10.2 Diet and obesity

Several dietary factors impact on health. High levels of fat in the diet, particularly saturated fats, are associated with an increased risk of coronary heart disease, as are high levels of salt[29]. Low levels of fruit and vegetable consumption and a high meat intake are associated with increased risk from stomach and colorectal cancer and it is estimated that in

industrialised countries about 30% of cancers are attributable to poor diet[30]. Additionally, deaths in babies under 28 days are more common in women who are underweight, overweight or obese before they conceive[10].

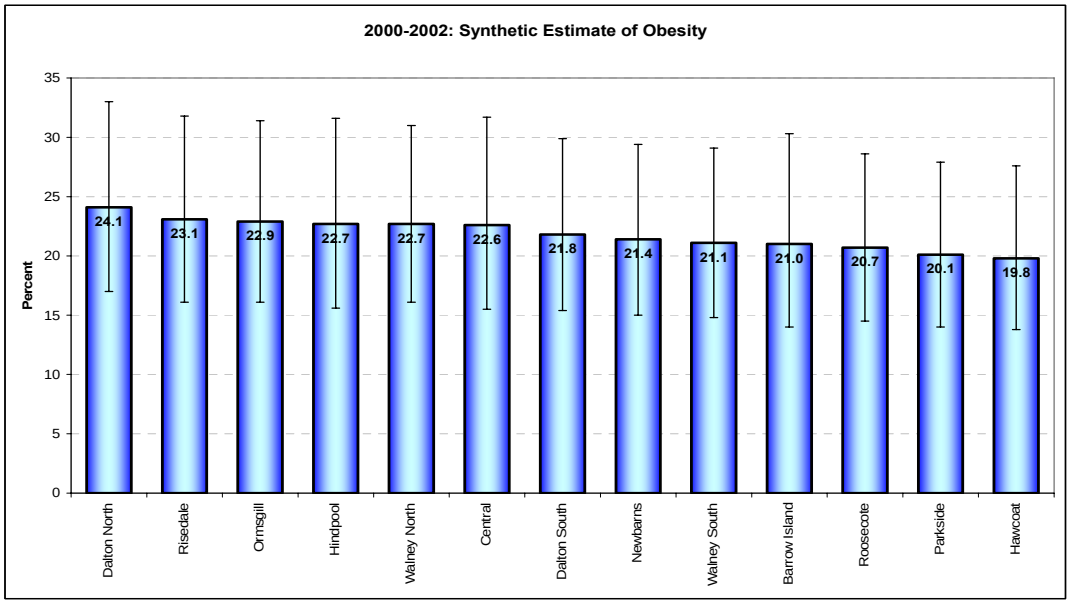
In Barrow it was estimated that 25.6% (95%CI 22.7-28.7%) of adults were eating the recommended 5 or more portions of fruit and vegetables per day in 2003-2005[25]: a value lower than both the average for Cumbria of 28.7% (21.7-35.6%) and the national average of 26.3% (25.6-27.0%)[26]. Latest estimates of fruit and vegetable consumption also varied at ward level with Hindpool being estimated to have the worst levels of healthy eating in 2000-2002 (Figure 32). In the Cumbria Quality of Life survey only 14% of people in the Neighbourhood Management Initiative Areas of Barrow reported eating 5 or more portions of fruit or vegetables per day. Similar to smoking therefore, levels of healthy eating in Barrow overall are worse than the national average, but they are markedly worse in the more deprived areas.

Figure 32: 2000-2002: Synthetic estimate of fruit and vegetable consumption in adults by wards in Barrow-in-Furness (Source: ONS)



2003-2005 modelled-based estimates for adult obesity show that 24.4% (95%CI 21.8-27.2%) of adults in Barrow-in-Furness were classified as obese[25]. This was lower in comparison to the 27.6% (22.9-32.4%) for Cumbria but greater than the 23.6% (23.0-24.3%) for England[26]. At ward level, adult obesity estimates showed less variation than that seen in smoking and fruit and vegetable consumption with the proportion of adults categorised as obese (2000-2002) ranging from 19.8% in Hawcoat to 24.1% in Dalton North (Figure 33).

Figure 33: 2000-2002: Synthetic estimate of obesity in adults by wards in Barrow-in-Furness (Source: ONS)



10.3 Physical activity

People who have a physically active lifestyle are at approximately half the risk of developing coronary heart disease compared to those who have a sedentary lifestyle. Regular physical activity is also associated with a reduced risk of diabetes, obesity, osteoporosis and colon cancer and with improved mental health. In older adults physical activity is associated with increased functional capacities[31].

The 2006 Cumbria Quality of Life Survey estimated that 49% of the adult population of Barrow engaged in moderate physical activity 4 or more times a week with 41% reporting having taken vigorous exercise at least once per week. The proportion that engaged in moderate physical activity 4 or more times a week was actually higher in the Neighbourhood Management Initiative Areas (58%) with 39% reporting having taken vigorous exercise at least once per week.

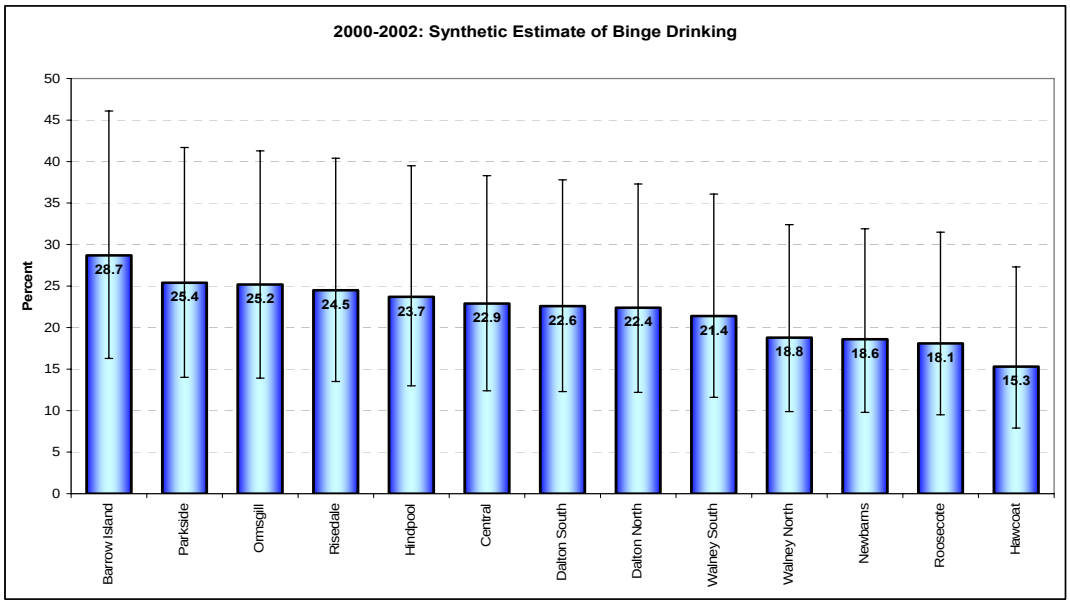
2007-2008 estimates from the Association of Public Health Observatories' Health Profile for Barrow-in-Furness[32] indicated that 15.3% of adults in Barrow participated in the recommended levels of physical activity (i.e. moderate intensity sport and active recreation on average 5 or more times a week) as compared to 10.8% for England and 11.7% for Cumbria[33].

10.4 Alcohol

High levels of alcohol consumption increase the risk of several cancers (e.g. liver, breast, larynx and oesophagus), cirrhosis of the liver, high blood pressure, stroke and coronary heart disease. Alcohol consumption also has an impact on accidents, violent incidents and psychiatric disorders including sexual problems, depression, hallucinations, memory loss and attempted suicide[34]. In the Cumbria Quality of Life Survey, 10% of adults reported drinking over the recommended weekly limit whilst in 2003-2005 it was estimated that 22.4% (95%CI 20.1-25.0%) of adults in Barrow participated in binge drinking[25]. This was the same as the

average for Cumbria of 22.4% (21.4-23.5%) but higher than the national average of 18.0% (17.4-18.6%), a statistically significant difference[26]. Latest estimates of binge drinking also varied at ward level with Barrow Island estimated to have the highest proportion at 28.7% in 2000-2002 (Figure 34).

Figure 34: 2000-2002: Synthetic estimate of binge drinking in adults by wards in Barrow-in-Furness (Source: ONS)



10.5 Teenage pregnancy

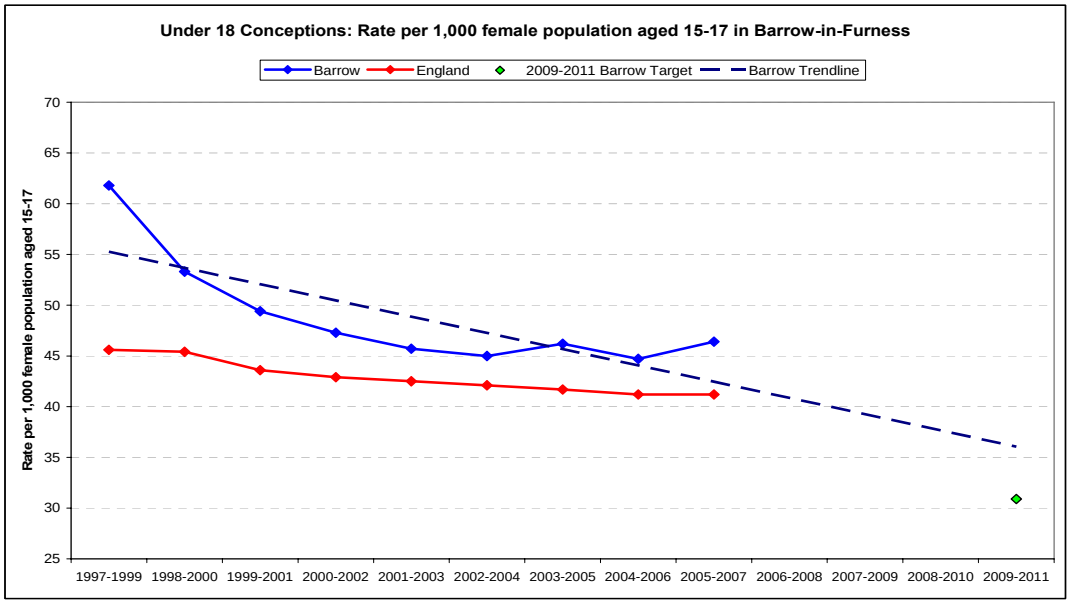
Teenage pregnancy is thought to have various effects on the health and socio-economic position of both mother and baby:

- Teenage mothers tend to end up being poorer, having lower educational attainment and worse mental health as compared to women from similar backgrounds.
- Breast feeding rates tend to be lower in teenage mothers and they are more at risk of having a baby with a low birth weight[35].
- Infant mortality is approximately 60% higher for babies born to mothers under the age of 20 than for those born to mothers aged 20 to 39[10].

Reducing teenage pregnancy is therefore a government priority and a national target has been set to reduce, by at least 50%, the conception rate among under 18's in the worst 20% of areas.

Rates of teenage conceptions in Barrow are higher than the national average but, despite a slight fluctuation in recent years, the long-term trend shows a decreasing conception rate (Figure 35). However, although the rate is declining, Barrow-in-Furness is unlikely to attain the 2010 target of 30.9 conceptions per 1,000 women if the current trend continues, especially as the latest data shows an increase in the under 18 conception rate.

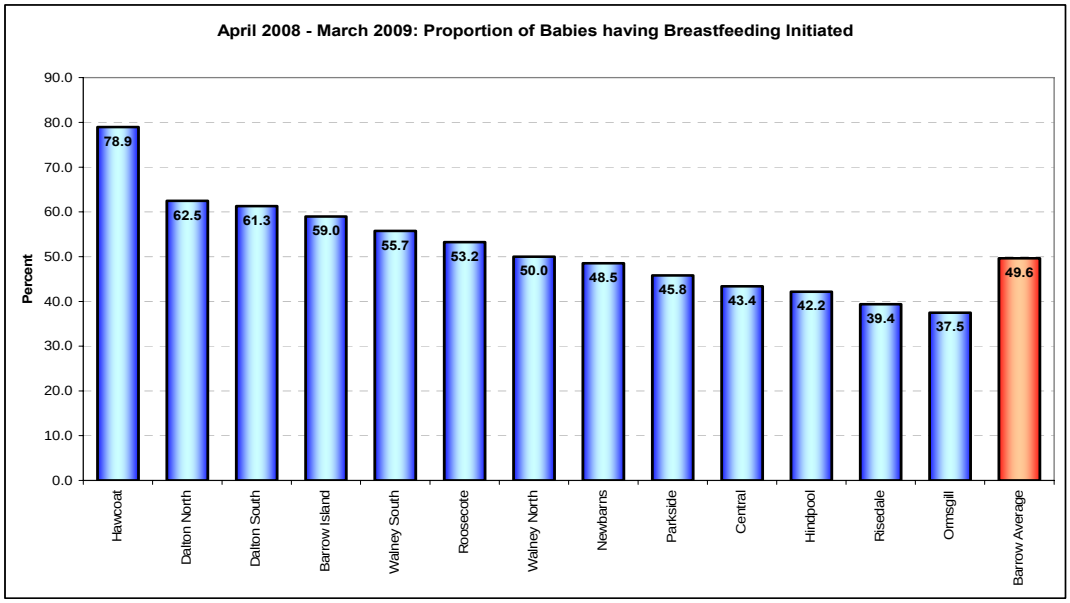
Figure 35: 1997-1999 to 2005-2007: Under 18 conceptions in Barrow-in-Furness and England (Source: 'Under 18 Conception Report'[36]; NCHOD; Conception Statistics, ONS)



10.6 Breast feeding

The benefits of breast feeding include improved nutritional health, prevention from infection and a reduced risk of several diseases in later life such as cardiovascular disease, asthma and diabetes whilst some studies have also suggested that children who are breastfed are less likely to become obese[37; 38]. High breast feeding rates also contribute to a low level of infant mortality. However in 2008-2009 in Barrow only 49.6% of babies were recorded as having breastfeeding initiated, as compared to 78% for England and Wales as a whole (2005)[39]. Levels of breast feeding decrease rapidly following birth: in 2008-09 only 34.0% of babies were being breastfed (fully or partially) on discharge from hospital with this falling to 31.3% by the time of their primary visit. Data at 6 weeks, 3 months and 6-9 months show this trend continuing with 23.6%, 9.1% and 4.1% respectively being fully or partially breast fed in Barrow. At ward level, rates of breastfeeding initiation varied widely ranging from 37.5% in Ormsgill to 78.9% in Hawcoat with lower percentages being found in the more deprived wards (Figure 36). However it should be noted that breast feeding levels have been increasing gradually in recent years.

Figure 36: 2008-2009: Proportion of babies having breastfeeding initiated by wards in Barrow-in-Furness (Source: NHS Cumbria)



11 Wider determinants of health

It is important to remember that behavioural factors only account for part of the differences in health observed between socioeconomic groups. One study has estimated that all the lifestyle factors (diet, physical activity, smoking and alcohol) taken together only explain about a third of the difference between socio-economic groups[40]. Also the way people behave in terms of diet, physical activity, smoking and alcohol is not simply a matter of choice, and will be influenced by people's social and economic circumstances. For there to be sustainable reductions in health inequalities there need to be changes in these conditions, including improvements in income, employment, housing and educational attainment.

11.1 Work, unemployment and incapacity

Work has an important impact on health and particularly health inequalities. The relationship between work and health is complex. The work we do affects our level of wealth and access to resources, which has been shown to influence levels of health[41]. Some work can involve exposure to hazards, such as asbestos, which have a direct impact on health whilst recent studies have shown that stress at work can affect health. Furthermore, access to physical activity and healthy food at work can also affect health.

As well as work affecting our health, our health can affect our ability to work with this having consequences for future income and social inclusion. Traditionally employment in Barrow has been dominated by the shipyard and Barrow continues to be a very self contained labour market with very few people commuting to other areas[7]. Following the decline of the shipbuilding industry, employment levels fell and large numbers of people claimed incapacity benefit rather than unemployment benefits. Consequently Barrow has continued to have one of the largest proportion of people on incapacity benefit nationally.

The latest figures for October 2007 to September 2008 show employment at its highest level since 2004 with 82.2% of the working age population of Barrow-in-Furness in employment, and above the rate for England (Figure 37). As a result of this growth in employment, the number of people on incapacity benefit has begun to decline slightly (Figure 38): a trend broadly in line with what has happened in a number of other old industrial areas in the UK[8].

Figure 37: 2004-2008: Employment rate in Barrow-in-Furness and England (Source: Annual Population Survey, NOMIS, ONS)

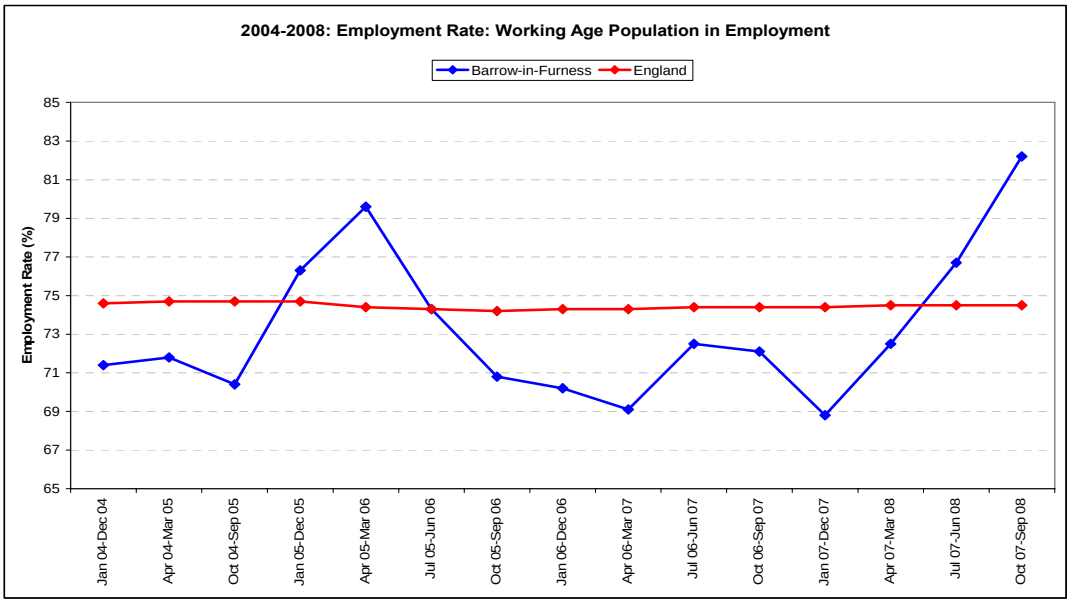
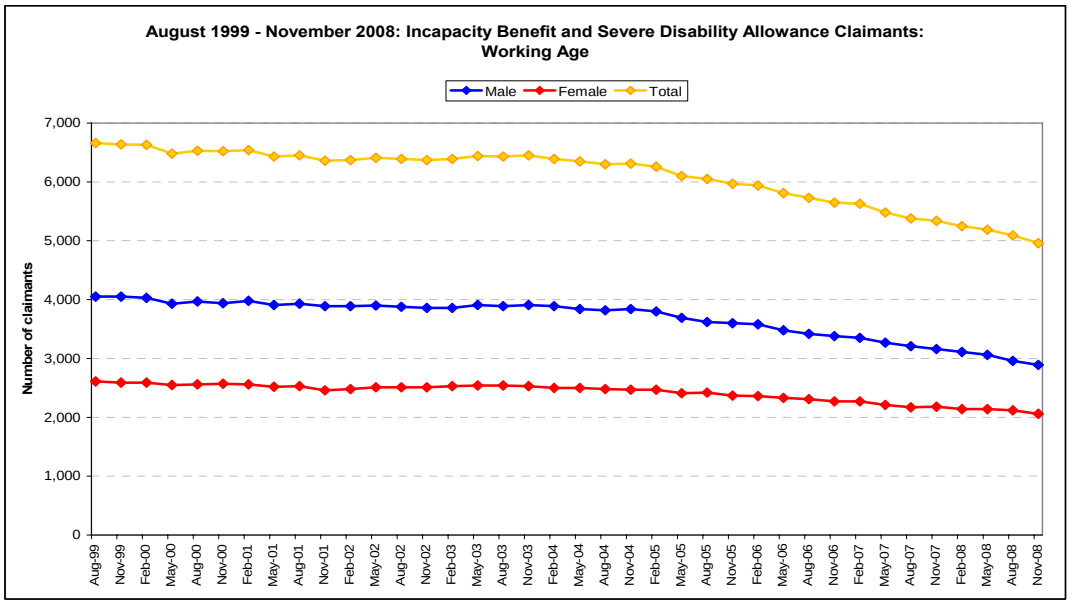


Figure 38: August 1999 – November 2008: Incapacity benefit and severe disability allowance claimants of working age in Barrow-in-Furness (Source: NOMIS, ONS)



However in November 2008 there were still 4,960 people of working age on incapacity benefit, 11.5% of the working age population. Furthermore, the recent downturn in the economy has resulted in the number of people claiming Jobseeker's Allowance in Barrow-in-Furness increasing since June 2008 to its highest rate for the past 3 years (Figure 39): a trend seen nationally. Within Barrow, claimant count rates are notably higher in the more deprived wards of Central and Barrow Island compared to the less deprived wards in the district, Barrow-in-Furness overall and the national rate (Figure 40).

Figure 39: July 2006 – June 2009: Jobseeker's Allowance claimant count rates (% of the working age population) (Source: Cumbria Intelligence Observatory)

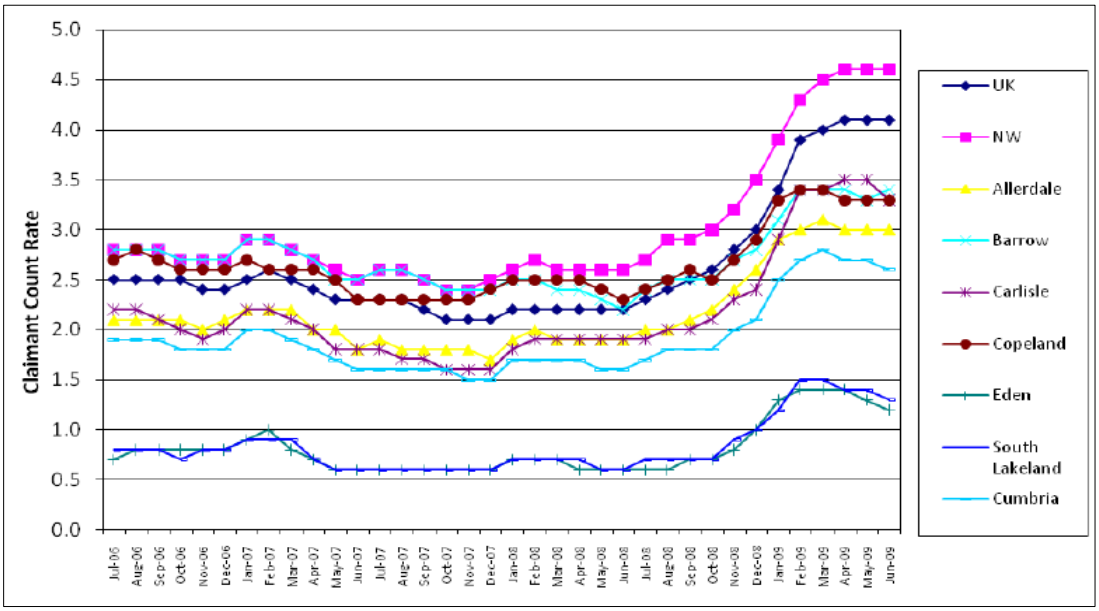
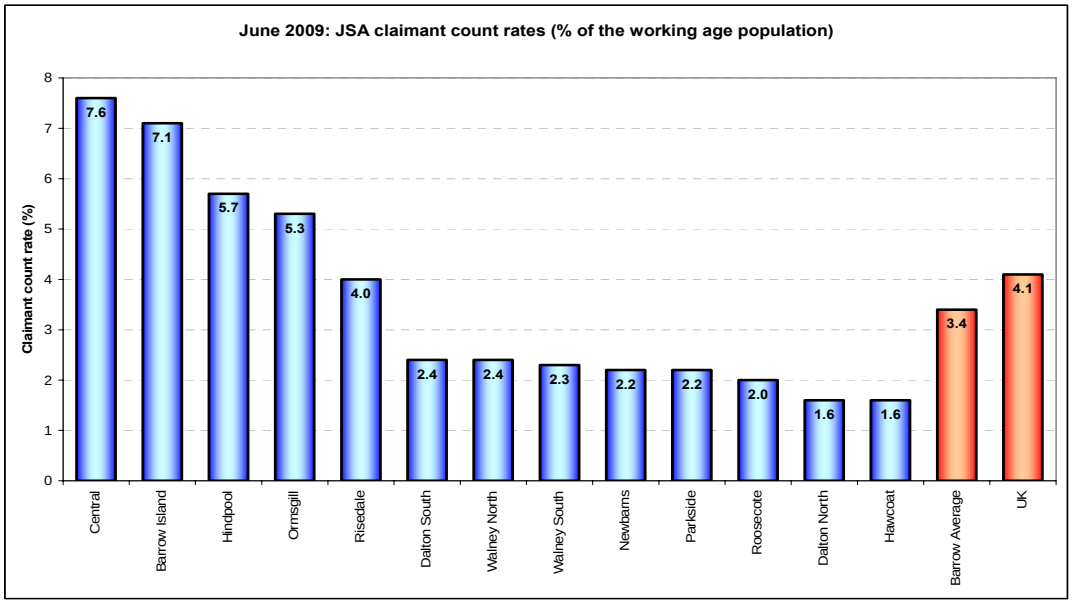


Figure 40: June 2009: Jobseeker's Allowance claimant count rates (% of the working age population) by wards in Barrow-in-Furness (Source: Cumbria Intelligence Observatory)



This increase in Jobseeker's Allowance claimants is likely to have an negative impact on the numbers claiming incapacity benefit as, in a struggling economy and difficult job market, most jobless men and women are financially better off on incapacity benefit than they would be on Jobseeker's Allowance and so many unemployed people with health problems claim incapacity benefits rather than unemployment benefits thus reflecting 'hidden unemployment'.

A 2007 report found that 53% of incapacity benefit recipients in Barrow have no formal qualifications, 47% have not been in employment for more than 10 years and 60% were previously employed in unskilled manual work. The authors of the 2007 report conclude that incapacity benefit claimants in Barrow represent the least skilled, the least healthy and the least motivated sections of the population who have been squeezed out of the labour market[8].

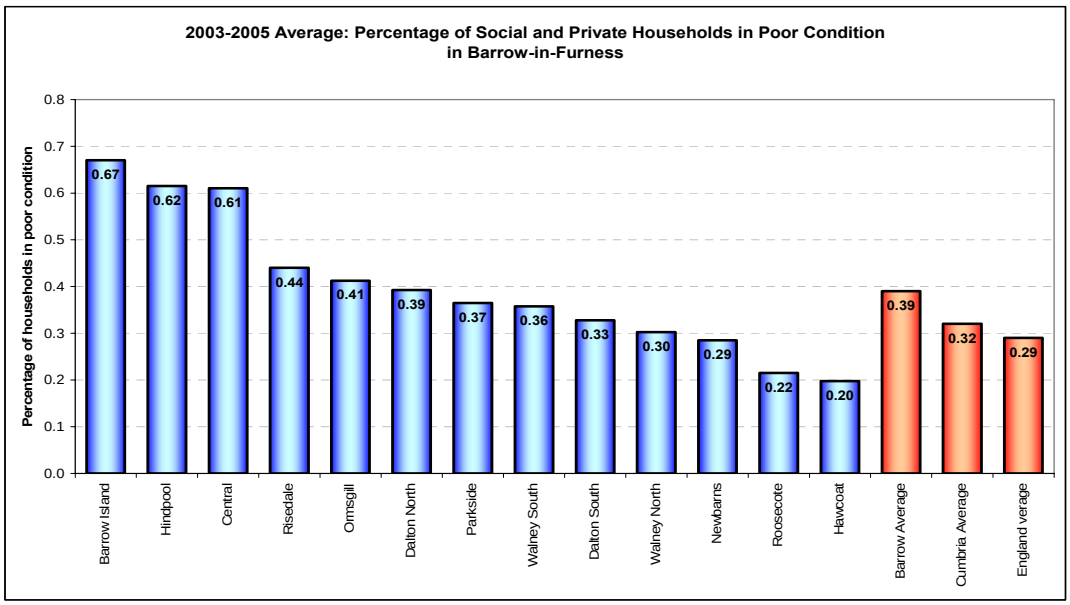
This is a group of people who are on low income and have a history of health problems that are likely to be compounded by the detrimental effects of long term unemployment. They are therefore a key group to be targeted in order to address health inequalities in Barrow. This will require action to promote health as well as employment. At present only 12% of incapacity benefit claimants in Barrow have been offered any kind of rehabilitation[8].

11.2 Housing

The relationship between poor housing and ill health has long been recognised. Poor housing is related to several conditions, including circulatory disease, respiratory disease and mental health[42]. Vulnerable groups, including the elderly, the very young and those suffering from long-term ill health, are at particular risk due to the lengthy periods that they spend indoors whilst people with health problems are most likely to occupy the least health-promoting segments of the housing stock, a factor that may exacerbate their health problems.

In Barrow there have been major problems with the quality of housing. Over the period 2003-2005, an average of 0.39% of social and private housing were deemed to be in poor condition compared to the 0.29% for England (Figure 41). Within Barrow, a greater proportion of households in poor condition were found in the more deprived wards of Barrow Island, Hindpool and Central.

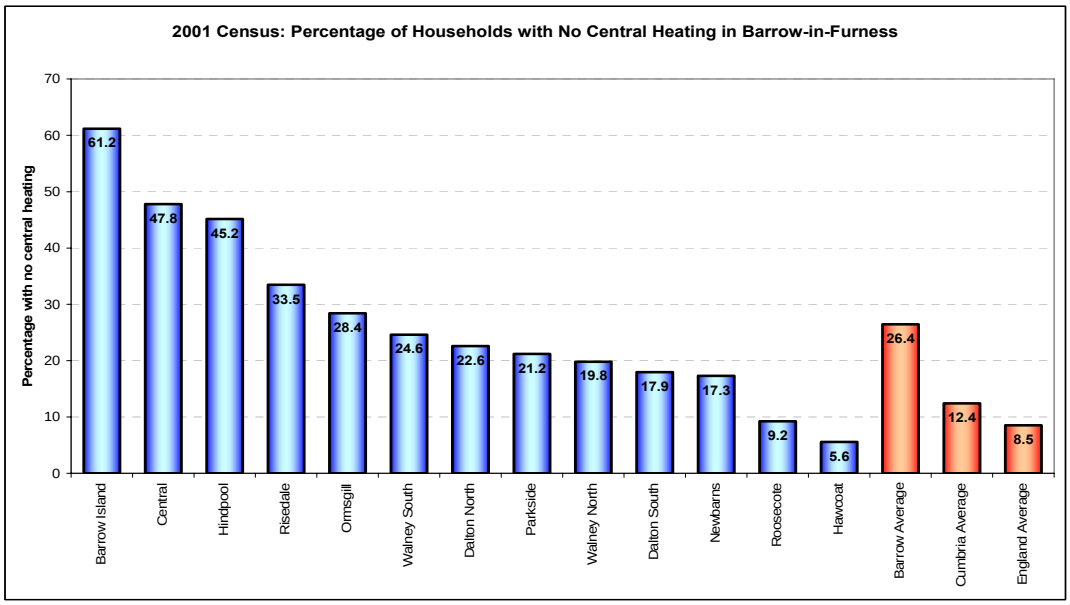
Figure 41: 2003-2005 Average: Percentage of social and private households in poor condition in wards in Barrow-in-Furness (Source: IMD 2007: Building Research Establishment and Communities and Local Government, modelled EHCS)



Each year there are many excess deaths in winter and it is believed that low indoor temperatures and factors related to poor thermal insulation, ineffective heating systems and fuel poverty are associated with increased vulnerability to winter death from respiratory and circulatory diseases – especially in the elderly population[43]. In the winter of 2006-07, there were 29 excess winter deaths in Barrow-in-Furness compared to the average level in the non-winter period resulting in an excess winter deaths index of 11% (calculated as the excess winter deaths divided by the average non-winter deaths, expressed as a percentage). This was in comparison to the 15.1% (23,900 estimated excess winter deaths) for England and Wales for the same period and the 17% (298 excess winter deaths) for Cumbria (Annual Deaths Extract).

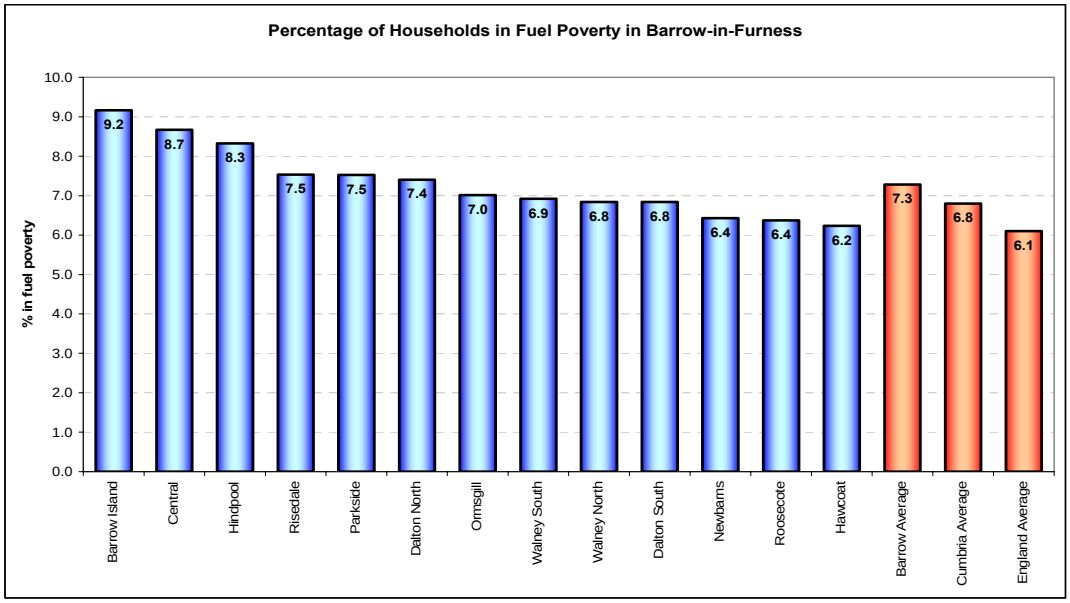
According to the 2001 Census, 26.4% of households in Barrow-in-Furness were without central heating as compared to only 8.5% nationally. Once again, the more deprived wards of Barrow Island, Central and Hindpool had the highest proportion of houses without central heating (Figure 42).

Figure 42: 2001: Percentage of households with no central heating in wards in Barrow-in-Furness (Source: ONS)



In terms of fuel poverty, Barrow-in-Furness had the greatest proportion of households in fuel poverty in Cumbria at 7.3%: accounting for 2,220 homes. This was in comparison to the 6.8% for Cumbria and 6.1% for England. Within Barrow, the more deprived wards of Barrow Island, Central and Hindpool had the highest proportions in fuel poverty (Figure 43). (A household is said to be in fuel poverty if it needs to spend more than 10% of its income on fuel to maintain a satisfactory heating regime (usually 21 degrees for the main living area, and 18 degrees for other occupied rooms)).

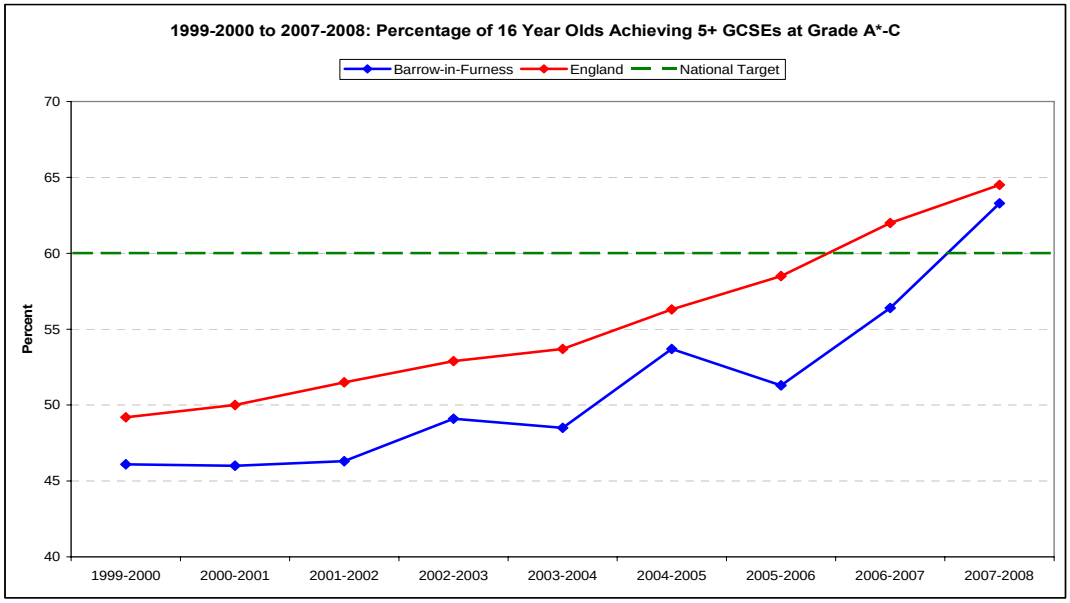
Figure 43: Percentage of households with in fuel poverty in wards in Barrow-in-Furness (Source: Fuel Poverty Indicator, Centre for Sustainable Energy)



11.3 Education

Education plays a major role in influencing health inequalities. Enhanced education is likely to lead to health gains both directly (through the adoption of health promoting behaviours such as eating nutritious food, exercising and not smoking) and indirectly (through a greater likelihood of employment). The proportion of 16 year olds achieving 5 or more GCSEs at grades A*-C in Barrow-in-Furness in 2007-2008 was 63.3%: a value just below the 64.5% for England. Indeed, Barrow has been consistently below the average for England although, similar to the national trend, the percentage has increased over the period 1999-2000 to 2007-2008 and Barrow has exceeded the national 2008 target of 60% (Figure 44).

Figure 44: 1999-2000 to 2007-2008: Percentage of 16 year olds achieving 5+ GCSEs at grades A*-C in Barrow-in-Furness and England (Source: Floor Targets Interactive, Department for Communities and Local Government; Department for Children, Schools and Families)



In terms of employment, housing and education in Barrow, improvements need to be made. Furthermore, an important aspect of the health improvement plan will be to ensure that any developments in social and economic conditions are translated into health gains for the most disadvantaged groups.

12 What effect might interventions have in preventing premature deaths in Barrow?

Whilst it is difficult to precisely assess the effect any specific interventions will have on life expectancy, the number of lives that can be saved can be modelled for some interventions and therefore give an indication of what is achievable. Some examples are given below.

Reducing smoking prevalence

In Barrow reducing the smoking prevalence each year by 2% over the 4 years from 2008 (i.e. 23% in 2008, 21% in 2009, 19% in 2010, 17% in 2011) would prevent approximately 40 premature deaths[44]. About 10 of these would be from circulatory disease and about 14 from cancers. This would work out at about 10 deaths prevented per year in the target period.

Primary prevention of circulatory disease

The identification of 6,000 people with previously undiagnosed hypertension (4,000 men, 2,000 women) and the subsequent treatment of their hypertension plus the provision of Statin treatment for 3,000 people (2,000 men and 1,000 women) would save about 10 lives per year between 2009-2011[13].

Secondary prevention of coronary heart disease

Increasing the number of people receiving optimum treatment for coronary heart disease by 20% in Barrow could save an estimated 11 deaths per year[45].

Colorectal cancer screening

There is little information on the impact of interventions to reduce cancer deaths. Colorectal cancer screening was introduced in 2008 in Cumbria and it is estimated that that this would only result in approximately 1 life saved per year in Barrow[46] in 2009-2011.

Please refer to separate **Action Plan for Improving Health in Barrow**.

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