Cleadon Park Primary Care Centre
Health Profile (with specific reference to obesity and diabetes) / HIA

South Tyneside Profile

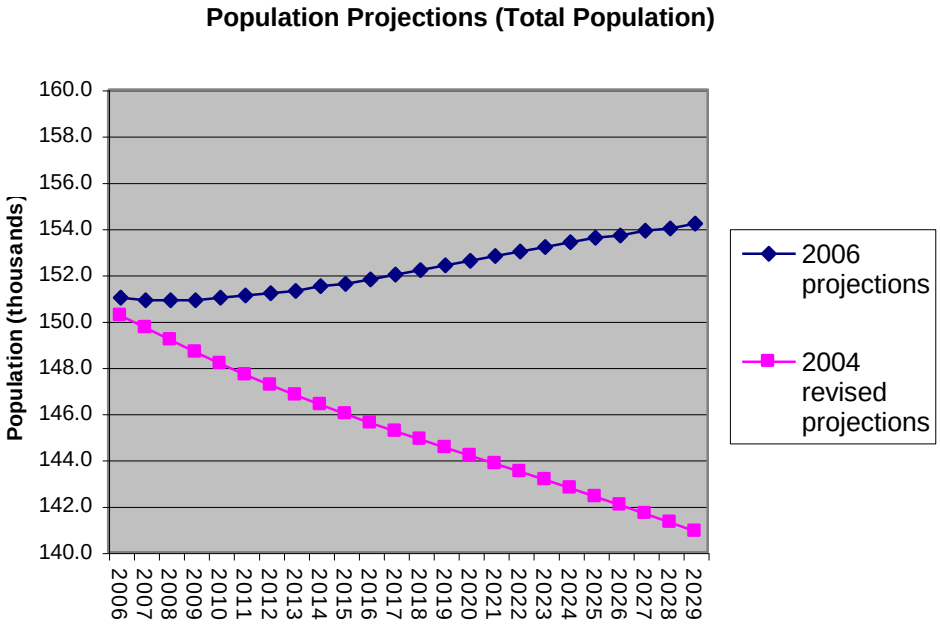
South Tyneside is situated on the South bank of the River Tyne on the North East Coast of England. It is the smallest of the five Tyne and Wear districts and covers and area of 64.43 square kilometres. There is a population estimate of 151, 316 (ONS 2005). South Tyneside has one PCT and is the smallest metropolitan borough in England. It lies within the Northumberland, Tyne & Wear Strategic Health Authority (SHA) area.

South Tyneside is an area which has seen a decline in its traditional industry and suffers from significant socio-economic deprivation. South Tyneside's main industries historically were shipbuilding and coal mining, however the last shipbuilder (Redheads) closed in 1984 and the last coalmine (Westoe Colliery) closed in 1991. In 2001 the service industry was the largest sector of the local economy employing 63% of all workers.

Demographic Profile

In June 2008 the Office of National Statistics released new population projections (SNPP 2006), which replace SNPP 2004. Earlier estimates of population change in South Tyneside (SNPP 2004) predicted a sharp decline in the numbers of people living in the borough. The population was predicted to be just over 150,000 people in 2006 and to fall to 140,900 people in 2029.

The new population projections (June 2008) outline a very different picture. The graph below outlines the current estimates. Rather than a sharp decline, the population of South Tyneside is expected to gradually increase from its current position of 151,000 today to 154,500 over the next twenty years.



However when this population change is outlined by age band there is a significant variation in the population change between the age groups. The table below highlights a drop across all ages with the exception of the over 65 years age group which shows a significant increase of over 40%. This change is due to many different factors, such as the improvements in health, improved life expectancy, and the increasing number of immigrants into South Tyneside.

Age Group	2008 (1000s)	Proportion of the population (2008)	2031 (1000s)	Proportion of the population (2031)	% Change
0 – 15 years	26.7	17.7%	25.4	16.4%	-4.9%
0 – 24 years	45.4	30.1%	40.8	26.4%	-10.1%
16 – 64 years	97.3	64.4%	91.2	59.0%	-6.3%
65 – 90 years	27	17.9%	37.9	24.5%	+40.4%
Total population	151	100%	154.5	100%	+2.3%

Changes in Younger Person Population (Ages 0-24)

Earlier predictions suggested a sharp decline in the number of children. New projections suggest a much more gradual decline. Previous estimates suggested that the 0-24 population of South Tyneside was going to drop from 45,400 to 35,700 by 2029, a loss of 9,700 people aged 0-24 years old. The revised estimates suggest that by 2031 there will be 40,800, which is 5000 more 0-24s than expected. Due to rising birth rates, the next decade will see an increase in nursery / primary age children, followed by a decline in the 2020s. There will be a significant drop in 10-24 year olds until the early 2020s, when they will start to increase, and then drop again slowly.

Changes in the Working Age Population (Ages 16 – 64)

The decline in working age population is less than previously thought: there will even be a slight rise before gradually declining. SNPP 2004 predicted a sharp loss of 12,900 working age people. SNPP 2006 predicts a gradual loss of only 5,100 people, meaning that in 2031 we will have approximately 91,200 working age people. We currently have approximately 96,300 people aged 16-64.

Changes in the Older Person Population (Ages 65+)

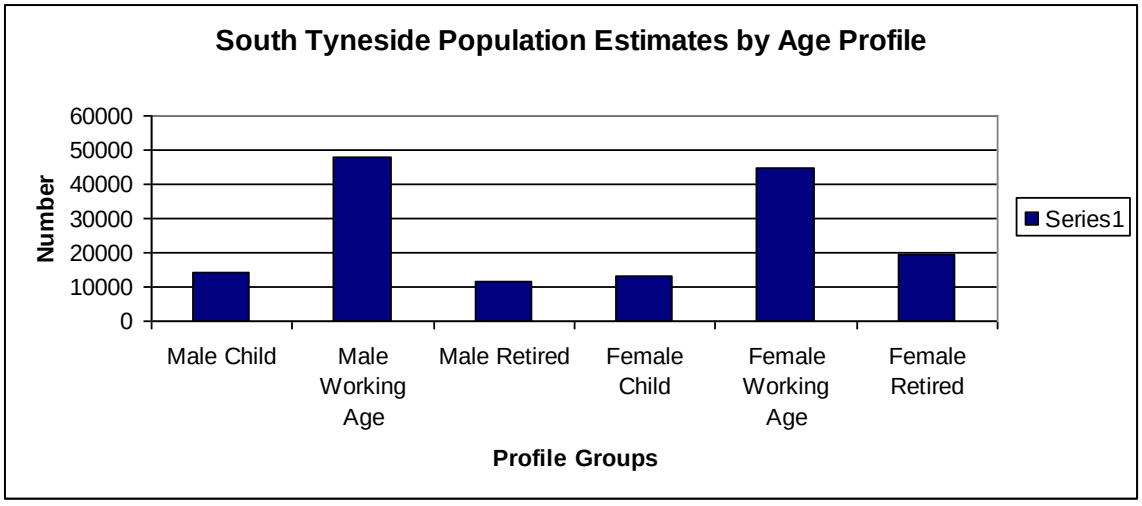
The 65+ age group show almost no change in predicted numbers and it is expected that this group will begin to increase rapidly. By 2031, there could be 37,900 older people, an increase of 10,900, and a 40% rise from 2008.

The next twenty years will see increasing pressure placed on services provided for older people. There will be a 40% increase in people over 65+, and an 83% increase in the

85+ age group – the people most in need of support. Older people will make up 25% of South Tyneside's population, rising from an estimated 18.2% (in SNPP 2004

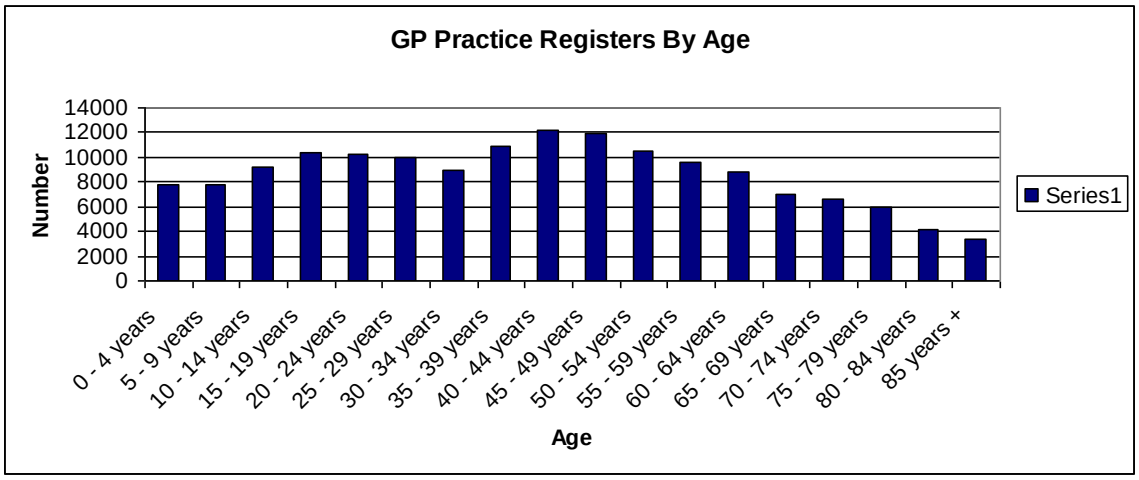
Age Group	2008 (1000s)	2031 (1000s)	% Change
65-69	6.8	10	+47.1
70-74	6.7	8.7	+29.9
75-79	5.8	7	+20.7
80-84	4.1	5.9	+43.9
85+	3.5	6.4	**+82.9**

The graph below outlines the 2006 position for the population in South Tyneside.



GP Practice Population by Age

The graph below outlines the age breakdown of the population registered with General Practice in South Tyneside. This data shows there are 155,000 people registered with general practice which is slightly higher than the population estimates.



Ethnicity

Population estimates (2001) outline that 2.8% of the total population in South Tyneside are from minority ethnic groups equating to around 4300 people. Estimates of population change by ethnic group suggest that there has been 52.7% increase in non -'White: British' prevalence between 2001 and 2005 in South Tyneside. This increase has resulted in BME groups comprising 4.4% of the total population equating to 6,700 people in total.

The BME communities reside primarily in two main wards which are Beacon and Bents and Rekendyke. This population largely comprises established communities living in South Tyneside. The known minority ethnic communities living in South Tyneside include the Arab, Bangladeshi, Indian, Black – African, Black - Caribbean, Chinese and Pakistani communities. The Arab community is one of the most established in the country; its origins can be traced back to 1890s with the arrival of Yemeni seamen. The Bangladeshi community is the largest minority ethnic group represented in South Tyneside.

South Tyneside Index of Multiple Deprivation 2007

IMD 2007 gives an indication of deprivation in small geographical areas called Super Output Areas (SOAs). These areas have fixed boundaries and contain approximately 1500 people, based on the 2001 census. They do not match any political boundaries in the Borough. There are 32,482 SOAs in England with 1,656 in the North East, 719 in Tyne and Wear and 103 South Tyneside.

As in 2004, South Tyneside is the second most deprived area in Tyne and Wear, ranking only ahead of Sunderland. It has climbed 9 places, from 28 to 37 (a smaller improvement than any except Newcastle). While South Tyneside has improved since 2004, we still have more areas counted in the national '20% Most Deprived', and less 'Least Deprived' areas than any other region in Tyne and Wear. South Tyneside also has a lower number of SOAs showing improvement than any other authority in Tyne and Wear.

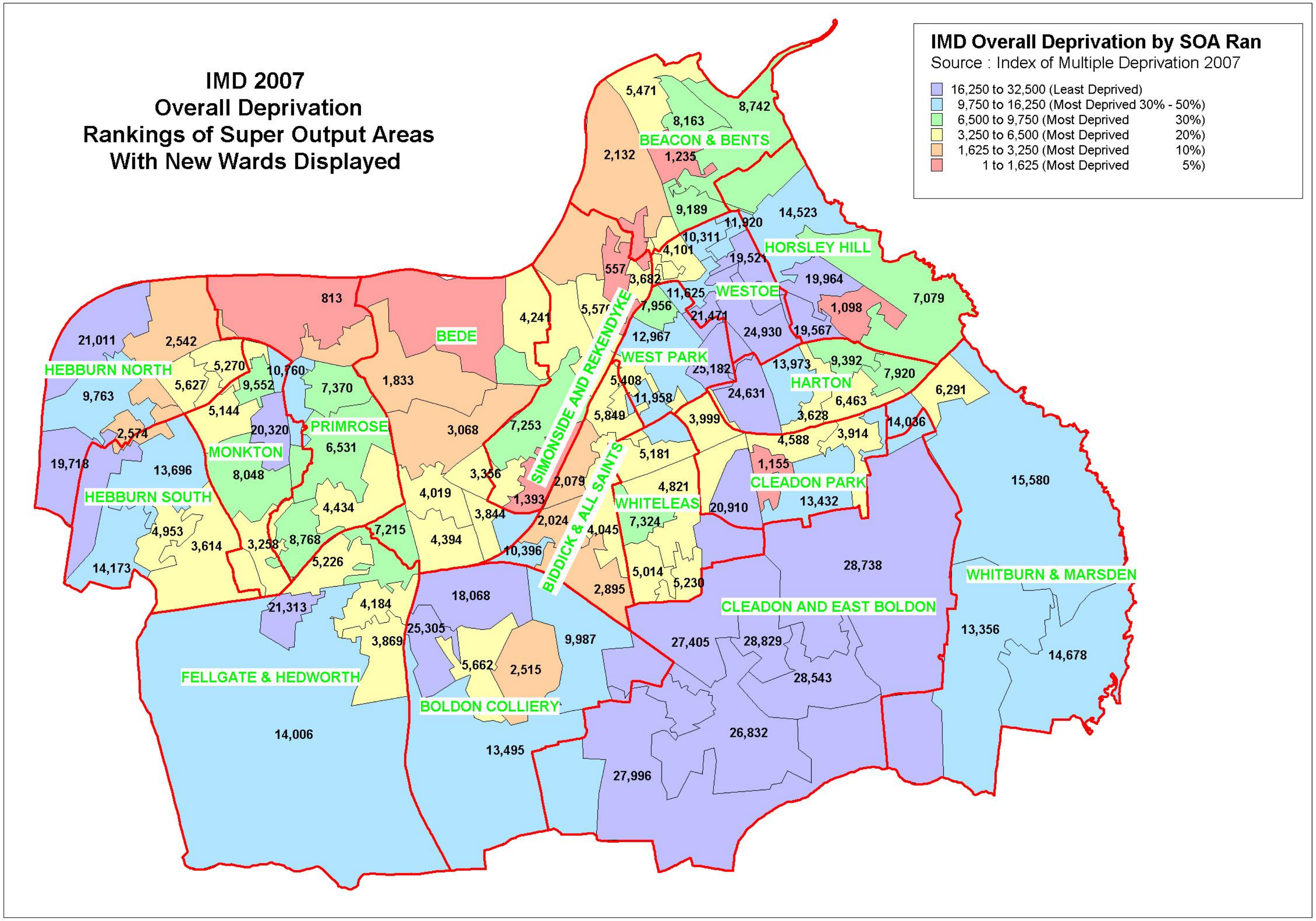
The worst area in South Tyneside (an SOA covering Rekendyke and Laygate, ranked 557) is in the most deprived 1.7% in the county, whereas the best area in South

Tyneside (in Cleadon) is in the top 13% in the country, with a rank of 28827. This is an improvement on 2004, where the lowest was 546 and the highest was 27, 915.

20% of South Tyneside's SOAs are amongst the most deprived 10% in the country, and 47% (48 SOAs) are among the most deprived 20%. However, a further 20% are among the least deprived. In total 84 of the 103 SOAs in South Tyneside have moved up in rank: 9 are no longer classed in the most deprived10% in England. As in 2004, the following neighbourhoods all still contain SOAs in the most deprived 5% in the country.

- Rekendyke
- Jarrow Town Centre
- Horsley Hill
- Cleadon Park
- The Woodbine

An SOA in Simonside has also dropped from the 10% to the 5% most deprived.

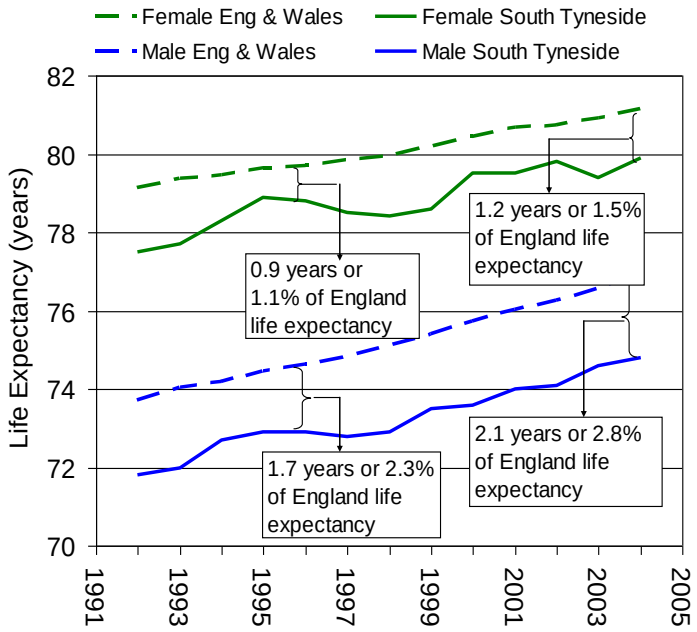

IMD 2007
Overall Deprivation
Rankings of Super Output Areas
With New Wards Displayed
IMD Overall Deprivation by SOA Ran
Source : Index of Multiple Deprivation 2007
16,250 to 32,500 (Least Deprived)
9,750 to 16,250 (Most Deprived 30% - 50%)
6,500 to 9,750 (Most Deprived 30%)
3,250 to 6,500 (Most Deprived 20%)
1,625 to 3,250 (Most Deprived 10%)
1 to 1,625 (Most Deprived 5%)
BEACON & BENTS
HORSLEY HILL
WESTOE
WEST PARK
HARTON
BEDE
HEBBURN NORTH
PRIMROSE
MONKTON
HEBBURN SOUTH
SIMONSIDE AND REKENDYKE
BIDDICK & ALL SAINTS
WHITELEAS
CLEADON PARK
WHITBURN & MARSDEN
CLEADON AND EAST BOLDON
FELLGATE & HEDWORTH
BOLDON COLLIERY
5,471
8,163
8,742
2,132
1,235
9,189
14,523
11,920
10,311
4,101
19,521
557
3,682
11,625
19,964
7,079
1,098
813
4,241
21,471
24,930
19,567
12,967
21,011
2,542
5,270
10,760
1,833
25,182
13,973
9,392
7,920
5,627
9,552
7,370
5,408
24,631
6,291
9,763
5,144
11,958
3,999
3,628
6,463
2,574
20,320
3,068
7,253
5,848
14,036
4,588
3,914
19,718
13,696
6,531
5,181
1,155
8,048
3,356
2,079
4,821
15,580
4,019
1,393
20,910
13,432
4,434
3,844
2,024
7,324
4,953
3,614
3,258
8,768
7,215
4,394
4,045
14,173
5,226
10,396
5,014
28,738
5,230
2,895
18,068
21,313
4,184
25,305
9,987
13,356
3,869
27,405
28,829
14,678
5,662
2,515
28,543
14,006
13,495
26,832
27,996

Life Expectancy

Inequality in life expectancy is linked to many different factors. Life expectancy is affected by geographical variation, socio-economic grouping, ethnicity and gender amongst others. Furthermore a complex range of interacting factors are associated with poor health outcomes. For example, life expectancy is influenced by individual choices, lifestyles and familial factors and risk factors associated with life expectancy - smoking, low physical activity, heavy alcohol consumption, high blood pressure, unhealthy diet and obesity, are also unevenly distributed in the population, with the least well off exposed to the highest risks.

The life expectancy gap between South Tyneside and England

The average life expectancy for men in South Tyneside is 75.3 years compared with 76.9 years for England. The average life expectancy for women is 79.9 years compared with the England average of 81.1 years. The difference in life expectancy between men and women in South Tyneside is approximately 5 years. Further variation is apparent between wards from 81.5 years for men in Cleadon and East Boldon to 72.7 years in Bede. The following graph illustrates the gap in life expectancy between South Tyneside and England as a whole for both men and women.



The table above highlights that despite an overall increase in age of 3.7 years for men and 2.4 years for women their appears to be widening gap in life expectancy between South Tyneside and the national average. This inequality shows a difference of life expectancy of 1.5% (1.2 years) for women and 2.8% (2.1 years) for men.

Life expectancy can be negatively described as 'Years of Life Lost' which is a quantitative measure of premature death. The tables below show the top five causes of death for males and females in Sunderland ranked according to years of life lost.

Top 5 Causes Ranked by Years of Total Life Lost (YLL) For South Tyneside with Comparative National Ranking

Males

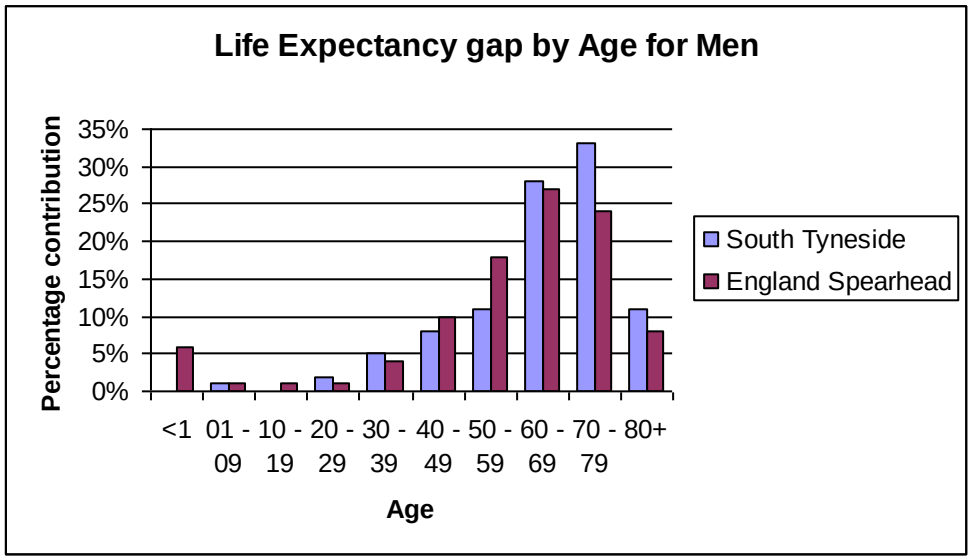
Cause of death	South Tyneside YLL	South Tyneside YLL Rate	South Tyneside Rank	England YLL Rate	England Rank
All cancers	4376	215.2	1	164.6	1
CHD	2556	125.7	2	92.3	2
Accidents	1180	58.0	3	58.4	3
Lung Cancer	1187	58.4	4	36.9	5
Suicide and Injury Undetermined	423	20.8	5	41.7	4

Females

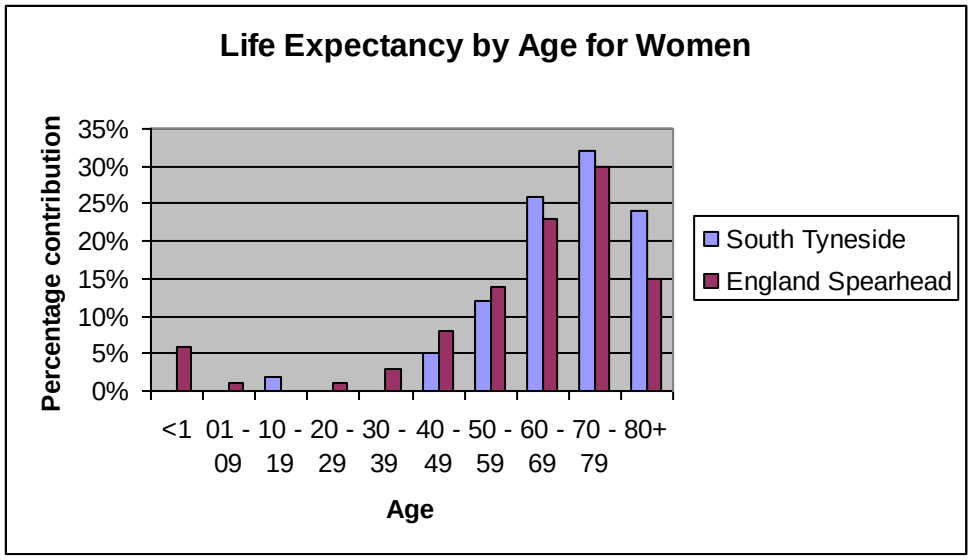
Cause of death	South Tyneside YLL	South Tyneside YLL Rate	South Tyneside Rank	England YLL Rate	England Rank
All cancers	3470	168.2	1	157.6	1
CHD	1028	49.8	2	25.7	3
Accidents	554	26.9	4	38.4	2
Lung Cancer	857	41.6	3	25.0	4
Suicide and Injury Undetermined	274	13.3	5	17.4	5

Life Expectancy gap by Gender and Age

There is apparent variation for different ages in relation to the life expectancy gap for males and females. In South Tyneside the Health Inequalities Tool outlines that the inequality gap is a specific issue for men aged above 60 years and the percentage contribution to the overall inequality gap is greatest within these age groups when compared to the England Spearhead average.

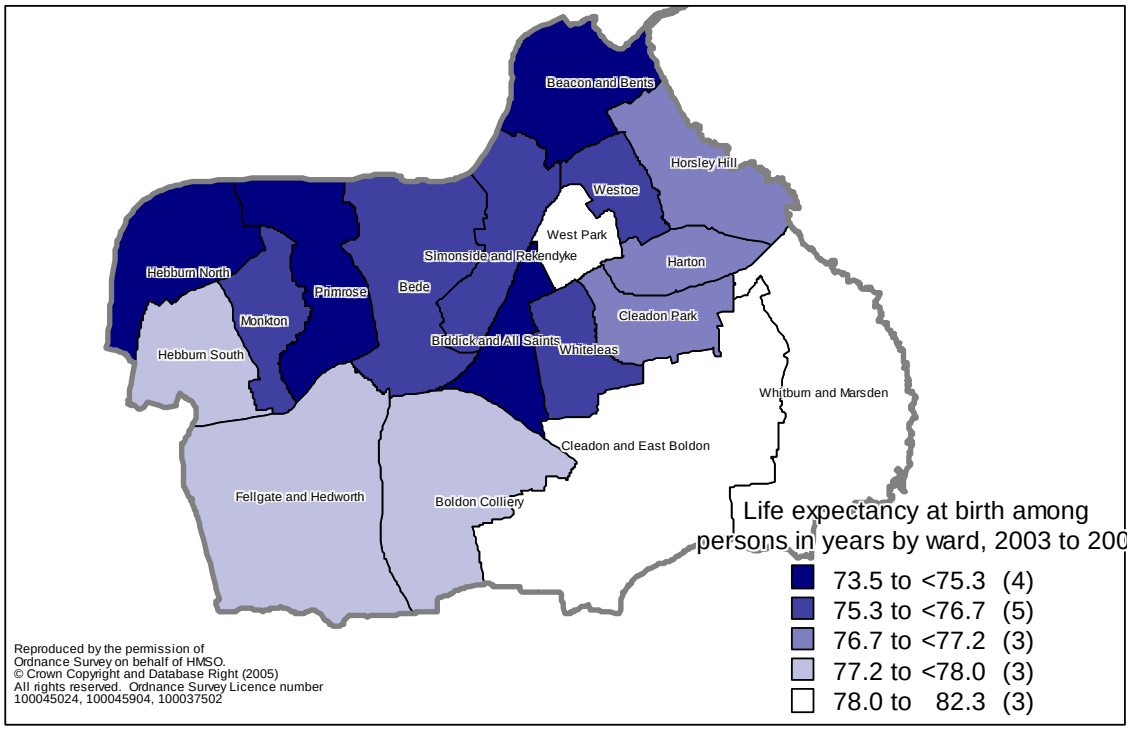


For women the evidence suggests that females over 60 years present the greatest percentage contribution to the overall inequality gap when compared to the England Spearhead average.



Life Expectancy at Birth By Ward

South Tyneside PCT - life expectancy at birth among persons by ward, 2003 to 2005

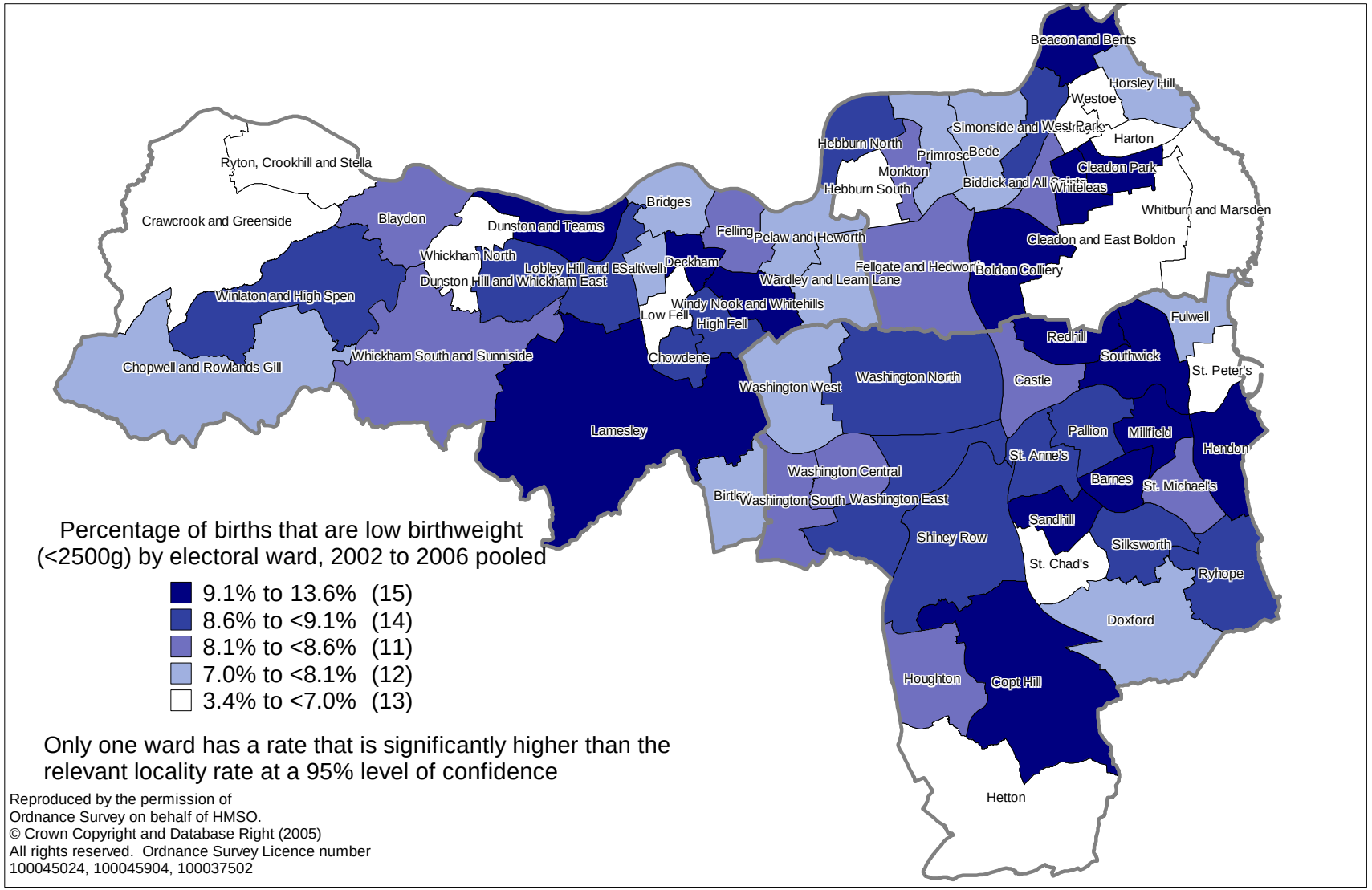


Source: Information Services, NHS South of Tyne and Wear based on data from the Annual Deaths Extract, Office for National Statistics

The map above outlines the difference in life expectancy between wards in South Tyneside.

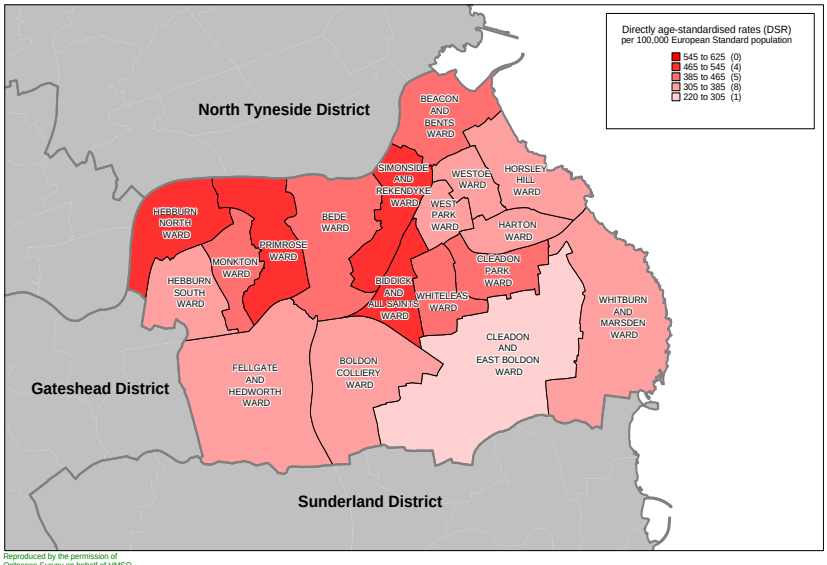
The map below outlines the percentage of births that are low birth weight by electoral ward. Between 9.1 and 13.6% of babies born in Cleadon Park are low birth weight. This places Cleadon Park in the worst wards across the South of Tyne and Wear area for birth weight. Birth weight is a risk factor for poor health later in life.

Percentage of births that are low birthweight (<2500g) by electoral ward, 2002 to 2006 pooled



Mortality by Area of residence

Mortality from all causes in persons aged under 75 years 2003 to 2005 (Pooled)

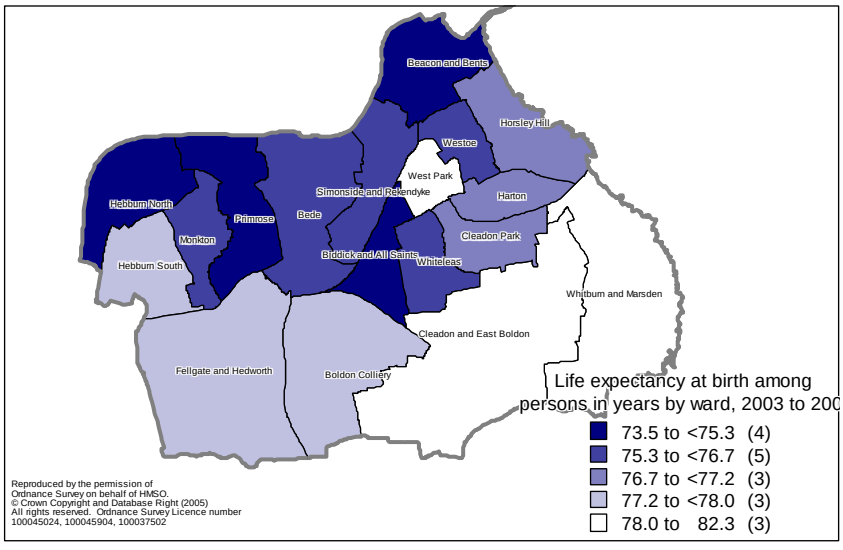


Source:Z:\Groups\MapInfo\Floor Targets 2006
Mortality from all causes in persons aged under
75 years

Data presented on the map above highlights variation between wards in mortality for all causes with the population under 75. Cleadon Park features within the nine worst wards for mortality under 75 showing a range of 385 – 465 deaths per 100,000 for the years 2003 – 2005.

Life expectancy at birth among persons by South Tyneside electoral ward (Source: Information Services, NHS South of Tyne and Wear based on data from the Annual Deaths Extract, Office for National Statistics)

South Tyneside PCT - life expectancy at birth among persons by ward, 2003 to 2005



The table below presents the life expectancy variations between wards across South Tyneside.

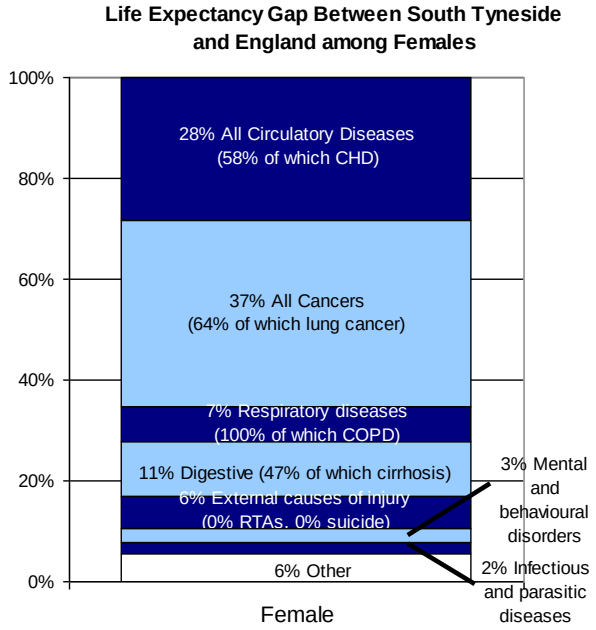
Ward	Persons, Life expectancy at birth (years)	Signi-ficance*
Beacon and Bents	74.9	
Bede	76.4	
Biddick and All Saints	75.0	
Boldon Colliery	77.6	
Cleadon and East Boldon	82.2	H
Cleadon Park	76.7	
Fellgate and Hedworth	77.5	
Harton	76.9	
Hebburn North	73.6	L
Hebburn South	78.0	
Horsley Hill	77.2	
Monkton	75.4	
Primrose	73.9	L
Simonside and Rekendyke	76.4	
Westoe	76.1	
West Park	78.5	H
Whitburn and Marsden	79.1	H
Whiteleas	75.4	
SOUTH TYNESIDE	76.6	

* L = Significantly lower than life expectancy for the PCT area at 95% confidence, H = significantly higher at 95% confidence

Life Expectancy Gap by Disease Group

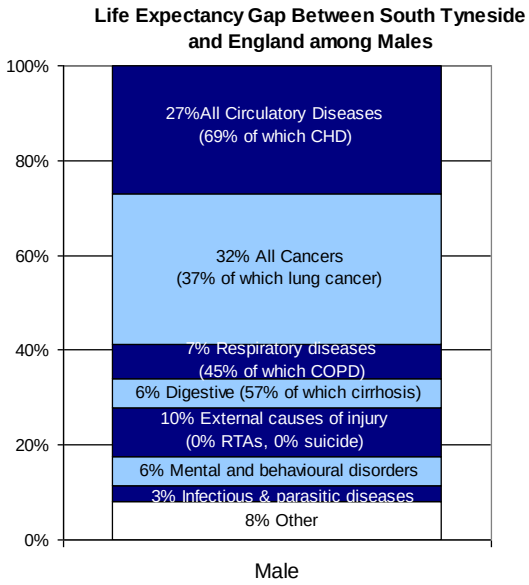
The charts below outlines which diseases contribute most to the Life Expectancy Gap by gender for South Tyneside when compared to England for the years 2003-2005.

Females



The table above highlights considerable inequality in life expectancy for females linked to both circulatory diseases and cancer. These two conditions account for 65% of the total inequality in life expectancy for women. For women 64% of all cancers contributing to the variation in life expectancy are lung cancer with 58% of circulatory diseases attributed to CHD. Within the category of digestive diseases (11% of inequality gap) 47% is cirrhosis.

Males



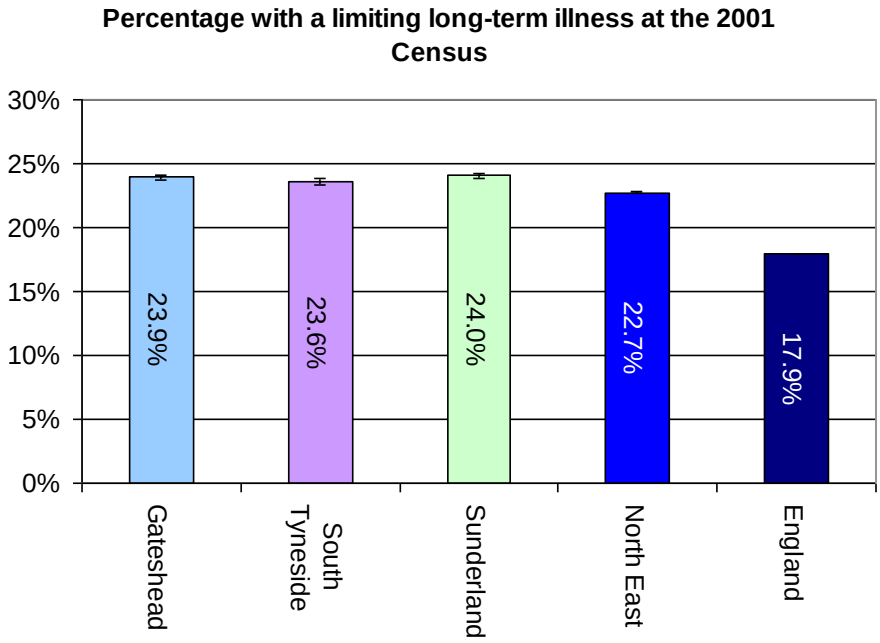
The table above outlines a similar picture of inequality in relation to life expectancy for men with some variation in the disease groups. For men circulatory diseases and cancer account for 59% of the total inequality. The variation in life expectancy due to cancer is different for men with lung cancer accounting for 37% of all cancers. Within the category of digestive diseases (6% of inequality gap) 57% is cirrhosis.

Healthy Life Expectancy

It is also possible to measure Healthy Life Expectancy. Healthy Life Expectancy combines life expectancy and population data on the health of the population to present an index of the expected remaining years of healthy life. This provides an indication of how long people will live in generally good health. Recent national figures show that while life expectancy is improving, Healthy Life Expectancy is not keeping pace. In 1981 the expected time lived in poor health was 6.5 for men and 10.1 for women. By 2001 this has risen to 8.7 years for men and 11.6 years for women. Estimates also suggest that the North East's Healthy Life Expectancy is around 4 years less than the national average.

Long Term Conditions – Prevalence

South Tyneside has prevalence across all long term conditions which are higher than the national average. Almost a quarter of South Tyneside residents have a long term condition[1].



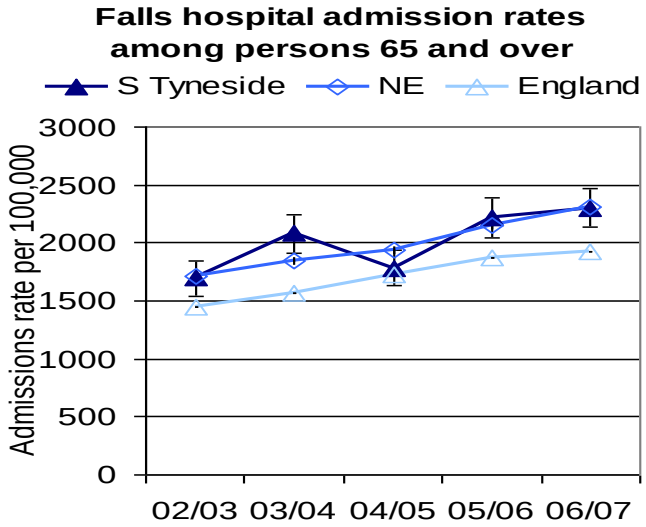
In relation to specific conditions South Tyneside shows a higher prevalence across all conditions detailed with the exception of asthma which presents a marginally lower than the national average.

Condition	South Tyneside Average %	National Average %
Diabetes	4.2%	3.59%
Asthma	5.6%	5.79%
COPD	3.0%	1.42%
CHD	5%	3.55%
STROKE/TIA	2.2%	1.61%
Peripheral vascular disease	1.1%	NA
Heart failure	1.2%	0.78%
Atrial fibrillation	1.5%	1.29%
Hypertension	14.6%	12.4%

Source: QMAS[2] Data Jan 2007[3]

Falls in Older People

South Tyneside has a significantly higher number of people over 65 years experiencing fractured neck of femur (hip fracture). Hip fracture is primarily caused by a fall and leads to an increase in A&E attendances and hospital admissions. The graph below shows the predicted increase in hospital admissions due to falls up to 2025. In terms of hospital admissions data demonstrates that there has been an increase in emergency admissions in South Tyneside due to falls since 2002-3 and the trend is rising. The graph and table below shows the increase in directly age-standardised emergency hospital admission rates due to falls among people ages 65 and over per 100,000



Source: SOTW Health Monitor

As the ageing population is increasing in South Tyneside if we do not address the inequality experienced by the older population in relation to falls the number of people over 65 years admitted to hospital over the next 17 years will continue to rise as shown in the predictions below;

People aged 65 and over predicted to be admitted to hospital as a result of falls, by age group (65-69, 70-74 and 75 and over), projected to 2025

	2008	2010	2015	2020	2025
People aged 65-69 predicted to be admitted to hospital as a result of falls	35	35	45	43	48
People aged 70-74 predicted to be admitted to hospital as a result of falls	62	62	57	73	70
People aged 75 and over admitted to hospital as a result of falls	493	500	530	545	626
Total population aged 65 and over predicted to be admitted to hospital as a result of falls	590	597	632	660	743

Source: POPPI

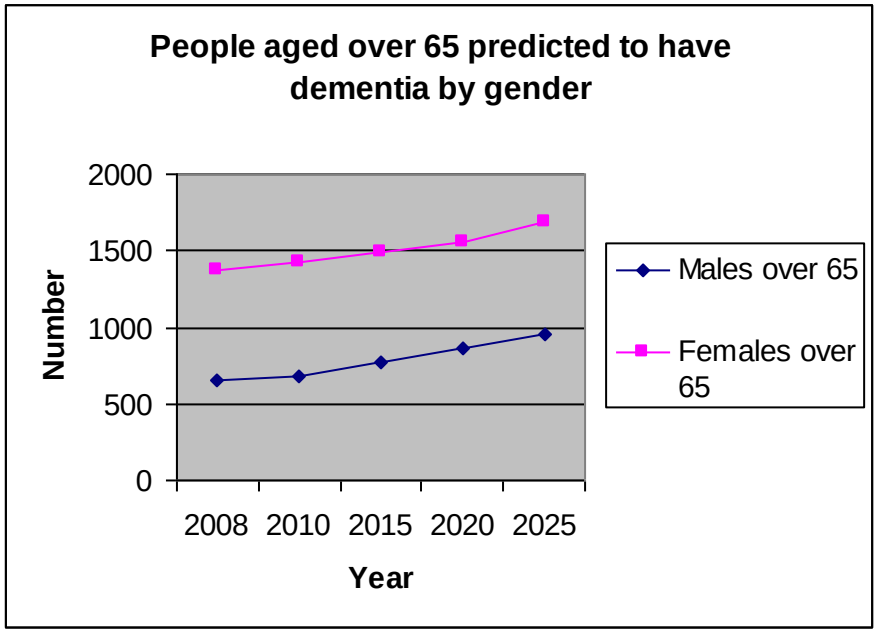
Dementia

Dementia includes a number of conditions such as Alzheimer's disease (60% of cases), vascular dementia (15% - 20%) and dementia with Lewy bodies (15% - 20%).

Dementia is characterised by a progressive decline in memory and other cognitive functions from mild disturbance of recent memory and abstract thinking to loss of personal identity, unintelligible speech, incontinence and gross impairment of mobility. Aggressive or challenging behaviour can also often be a feature.

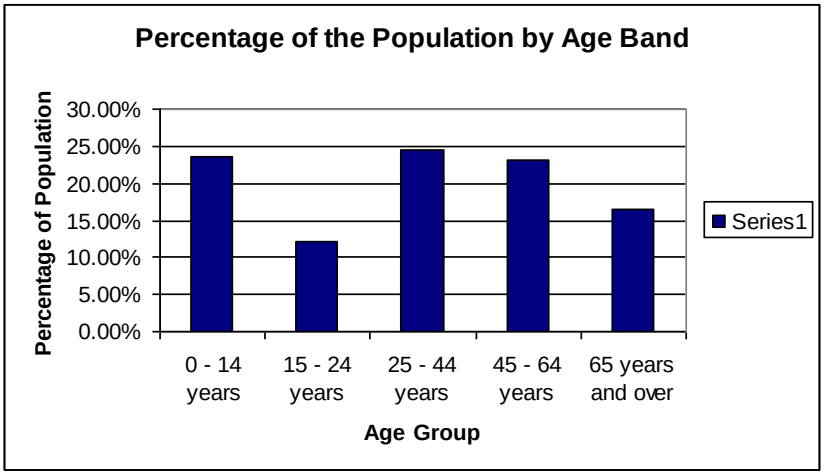
To facilitate estimates of the number of people aged over 65 living with dementia the most recent relevant source of UK data from population samples has been used. For men, 1.4% of 65-69 year olds; 3.1% of 70-74 year olds; 5.6% of 75-79 year olds; 10.2% of 80-84 year olds; and 19.6% of men aged 85 and over are predicted to have dementia. For women, 1.5% of 65-69 year olds; 2.2% of 70-74 year olds; 7.1% of 75-79 year olds; 14.1% of 80-84 year olds; and 27.5% of women aged 85 and over are predicted to have dementia.

By accepting this data estimates suggests an increase in the number of people living with dementia over the the next twenty years with a greater number of women living with dementia.



Cleadon Park Demographic profile (Ward)

The age profile in Cleadon Park shows almost a quarter of the population fitting into the under 14 years age group. Over 6% of the total population is within the 0 – 4 years age group. The age group of working age is the largest banding with those 25 to 44 years accounting for just under a quarter of the population. The age group over 65 accounts for over 15% of the total population.

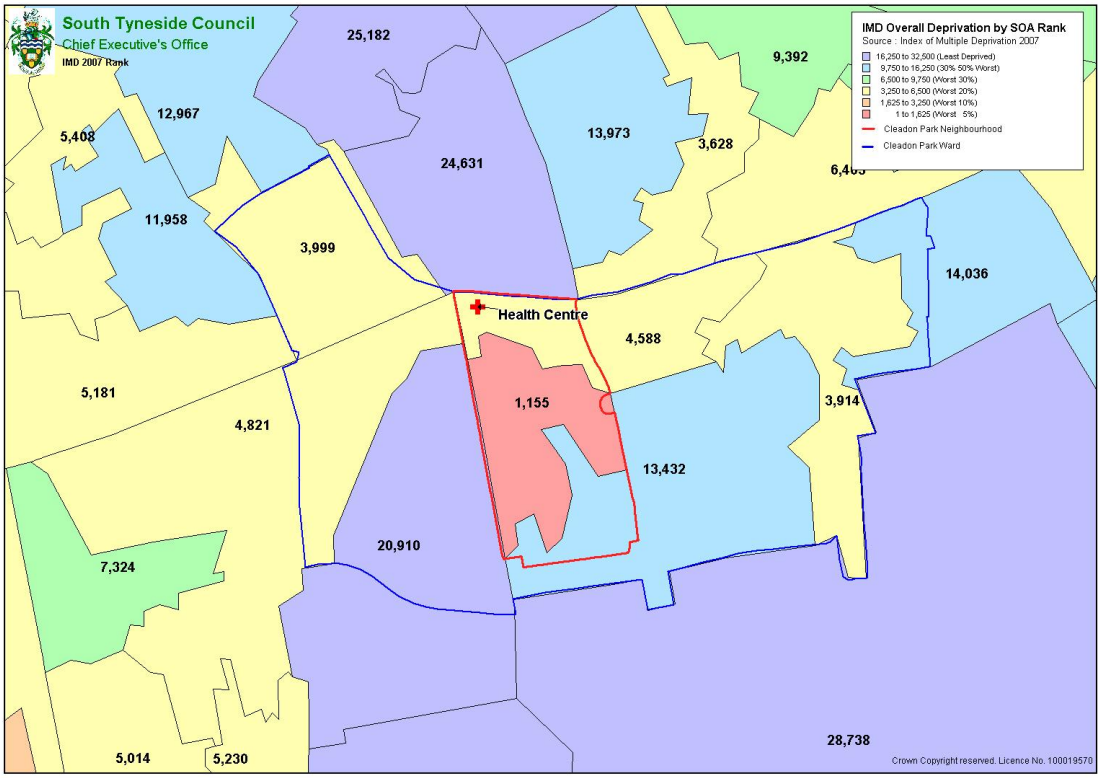


Ethnicity (Ward)

The majority of people living in Cleadon Park are in the White British ethnic group (97%) with over 98% classified as white (Irish or other). All other ethnic groups living in the area account for under 0.5% of the total population.

Cleadon Park Index of Multiple Deprivation

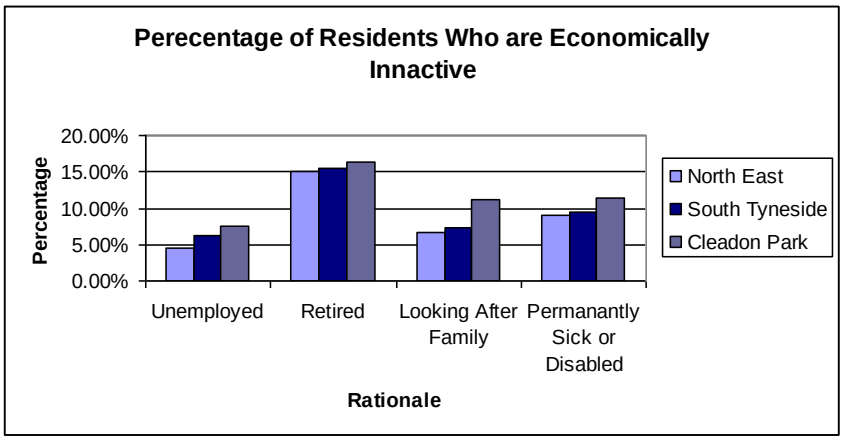
The map below outlines the over all levels of multiple deprivation across Cleadon Park Ward. In relation to the ward boundary for Cleadon Park there are 8 part SOAs included to some extent within the ward. One of these SOAs (known as the neighbourhood of Cleadon Park) is in the worst 5% for deprivation with a further four in the 20% most deprived, 2 further in the most deprived 30 – 50% and one in the least deprived.



The neighbourhood outlined in red highlights the most deprived part of the Cleadon Park ward and is known as the neighborhood of Cleadon Park. The red cross highlights where the new Primary Care Centre will be located.

Economic Inactivity (Ward)

Over 46% of people in Cleadon Park are classified as economically inactive across four key domains. This is significantly higher than the North East or the South Tyneside averages.



Vitality Index – Cleadon Park (Neighbourhood)

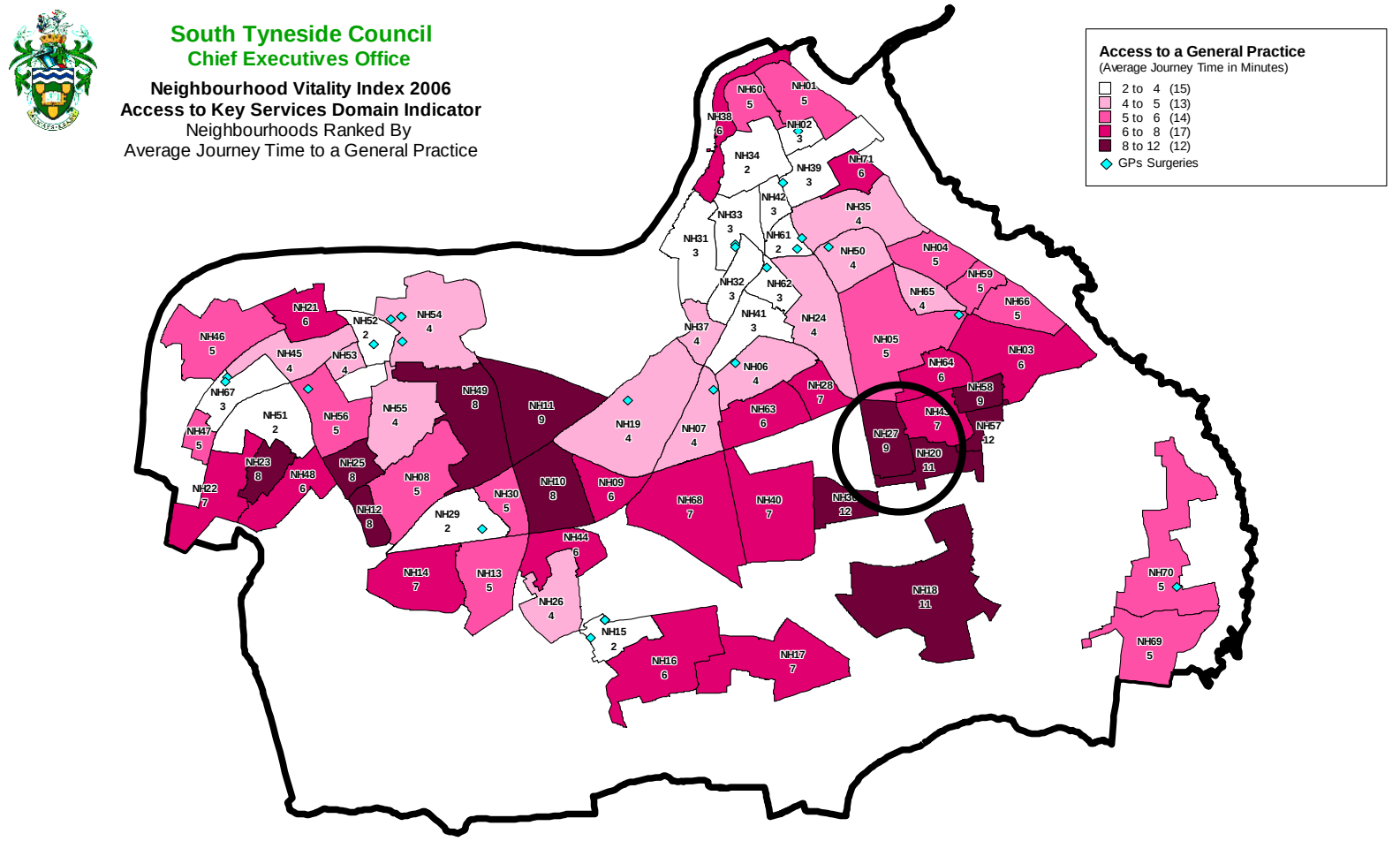
Within the small neighbourhood of Cleadon Park there is significant deprivation across a range of indicators. Out of 71 neighbourhoods in South Tyneside Cleadon Park falls into the worst ten for eleven indicators including access to a GP. The indicators which Cleadon Park fair worst are:

- Working age benefit dependency
- Crime deprivation
- Education deprivation
- Income support claimants
- Housing – Number of voids
- Job Seekers Allowance Claimants
- Disability Living Allowance
- Criminal Damage Rate
- Pupils achieving 5+ (A – C) GCSEs
- Exclusions (school)
- Access to GPs

The map below highlights that the neighbourhood of Cleadon park features in the worst neighbourhoods in the borough for GP access. The circled area is the neighbourhood of Cleadon Park and demonstrates that GP access is a problem. The map on page 16 of this document outlines where the new Primary Care Centre will be located which suggests that the centre is in a prime location to improve the access to GPs with this deprived community.

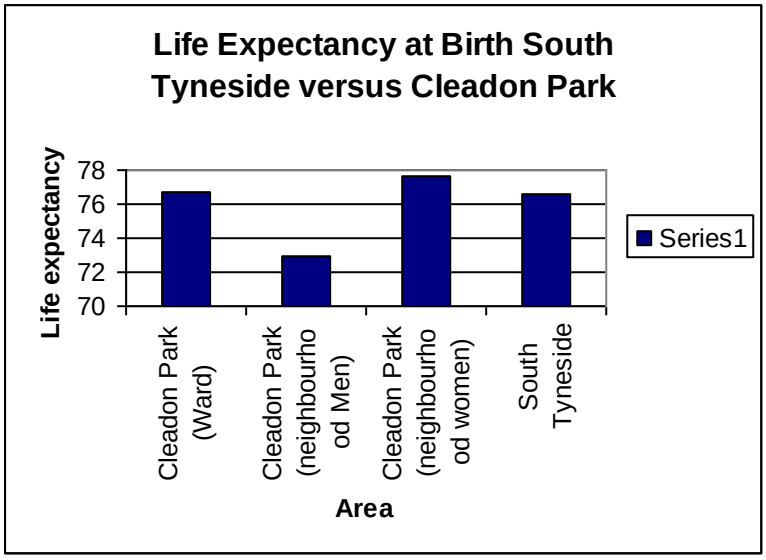
South Tyneside Council
Chief Executives Office

Neighbourhood Vitality Index 2006
Access to Key Services Domain Indicator
Neighbourhoods Ranked By
Average Journey Time to a General Practice

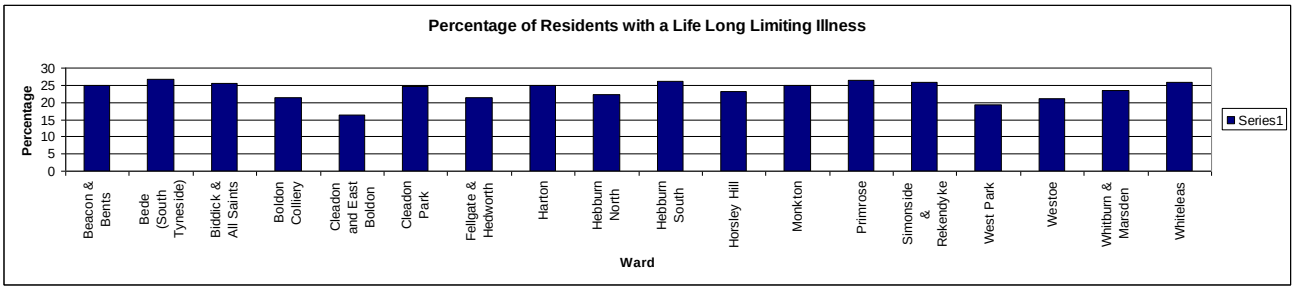


Health of the Population in Cleadon Park

Life expectancy in Cleadon Park (ward) shows a similar picture to the overall life expectancy for South Tyneside, which is significantly lower than the England average. However within the ward of Cleadon Park, at a neighbourhood level life expectancy shows a worse picture and is lower than the South Tyneside or England Average, with a specific issue for men. Males in the neighbourhood of Cleadon Park only live an average of 72.9 years which compares to an England average of 76.9 years. Females in Cleadon Park neighbourhood live on average 77.5 years which again is lower than the England average of 81.1 years.



There are large inequalities across South Tyneside in the experience of chronic diseases. Ward level data outlines variation in prevalence across South Tyneside. This data needs to be viewed alongside data presenting age variation across the Borough as it is expected that wards with a higher older population will also present a higher number of people with LTC.



Ward	% of residents with Life Long Limiting Illness
Beacon & Bents	25
Bede (South Tyneside)	26
Biddick & All Saints	25

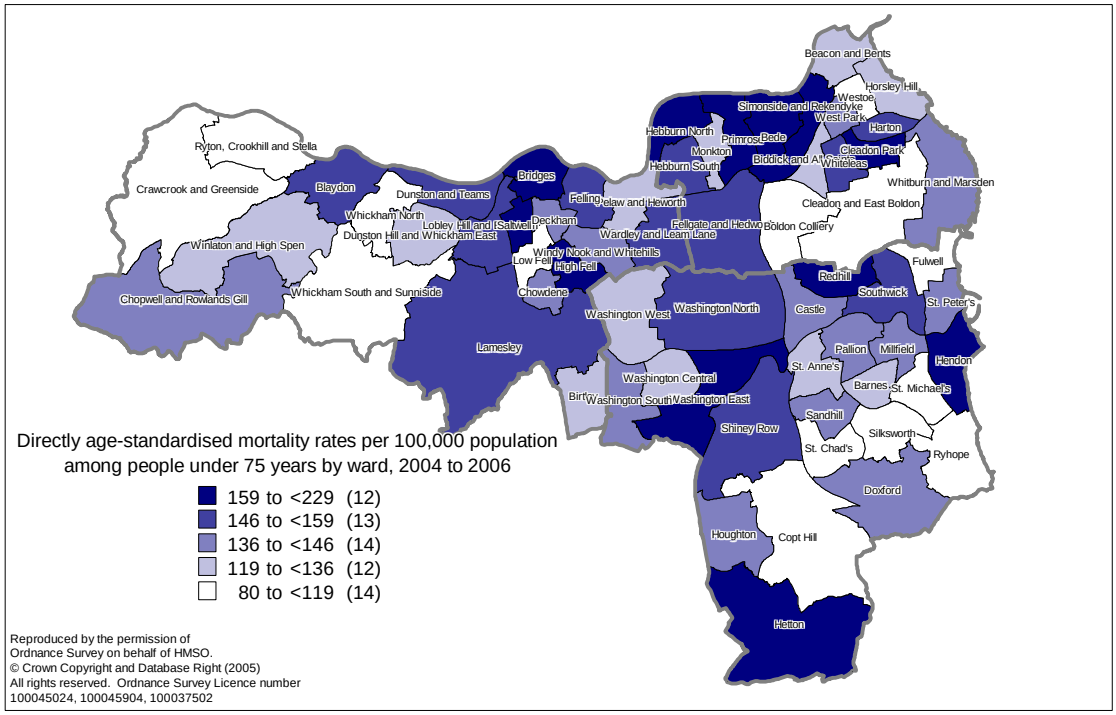
Boldon Colliery	21
Cleadon and East Boldon	16
Cleadon Park	24
Fellgate & Hedworth	21
Harton	25
Hebburn North	22
Hebburn South	26
Horsley Hill	23
Monkton	25
Primrose	26
Simonside & Rekendyke	25
West Park	19
Westoe	21
Whitburn & Marsden	23
Whiteleas	25

Data on life long limiting illness suggests that there is a significant problem in Cleadon Park with almost a quarter of residents living with a Long Term Condition.

Cancer

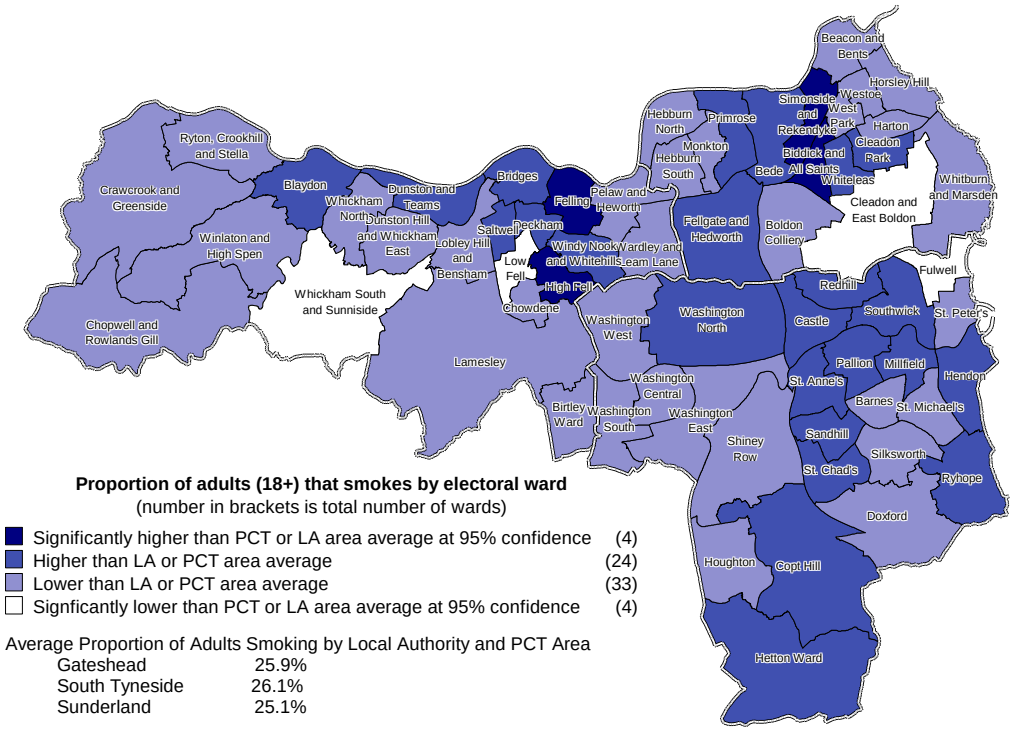
The map below outlines mortality due to all cancers amongst people under the age of 75 years. This data outlines that there is a significant problem with cancer mortality in the ward of Cleadon Park with a directly standardised rate of 190 per 100,000 people. This places Cleadon Park as one of the worst wards across South of Tyne and Wear for cancer mortality.

NHS South of Tyne and Wear - Mortality Due to All Cancers Among People Under 75 Years by Ward, 2004 to 2006



Risk Factors

Smoking Prevalence (based on findings from the 2008 lifestyle survey)



Obesity

Nearly two thirds of men and over half of women in England are overweight or obese. The problem in England is increasing faster than in most other European countries. If prevalence continues to rise at the current rate, more than one in four adults will be obese by 2010[4].

A recent report published by the National Heart Foundation (2007)[5] highlighted both the cost and associated risks of obesity to England as a whole. Cost is documented as impacting on both the NHS, in relation to the treatment of obesity related conditions, and the Economy, in relation to sickness from work and associated benefits. In addition to this the cost to the individual is considered high both in terms of quality of life measures and life lost. Psychological consequences of overweight and obesity are a significant health burden[5].

The House of Commons Health Select Committee (2004) estimated that the economic cost of obesity was between £3.3 and £3.7 billion per year. The direct costs of treating obesity (and its consequences) ranging from £990 million to £1, 135 million equating to between 2 and 2.3% of the total NHS expenditure. In addition the report outlined indirect costs defined as '*lost output in the economy due to sickness absence or death of*

[4] South Tyneside Obesity Strategy (2004)
[5] National Heart Foundation (2007) Lightening the load: tackling overweight and obesity. A toolkit for developing local strategies to tackle overweight and obesity in children and adults. DH. London

workers'. This cost in relation to this aspect was estimated as between £2.3 and £2.6 billion. The House of Commons Select Committee (2004) suggested that there were between 15.5 and 16 million days of certified incapacity which was directly related to obesity.

Health Benefits of weight loss

The health benefits of weight loss include an improvement in physical, psychological and social health[5]. The health benefits of losing 10Kg have been outlined to include[5]:

Condition	Benefit
Mortality	• More than 20% fall in total mortality • More than 30% fall in diabetes-related deaths • More than 40% fall in obesity-related cancer deaths
Blood pressure (in hypertensive people)	• Fall of 10mmHg systolic blood pressure • Fall of 20mmHg diastolic blood pressure
Diabetes (in newly diagnosed people)	• Fall of 50% in fasting glucose
Lipids	• Fall of 10% of total cholesterol • Fall of 15% of low density lipoprotein (LDL cholesterol • Fall of 30% of triglycerides • Increase of 8% of high density lipoprotein (HDL) cholesterol
Other benefits	• Improved lung function, and reduced back and joint pain, breathlessness, and frequency of sleep apnoea • Improved insulin sensitivity and ovarian function

Prevalence

In order to determine the estimated prevalence of obesity in South Tyneside, the NICE Cost Impact Assessment Tool (2006) has been used.

Total Adult Population

Male = 57,456 (47.7%)
Female = 62,951 (52.3%)
Total = 120,407 (100%)

Level 4
Hospital Based Obesity Service
Specialist Weight Management
Team /Bariatric Surgery

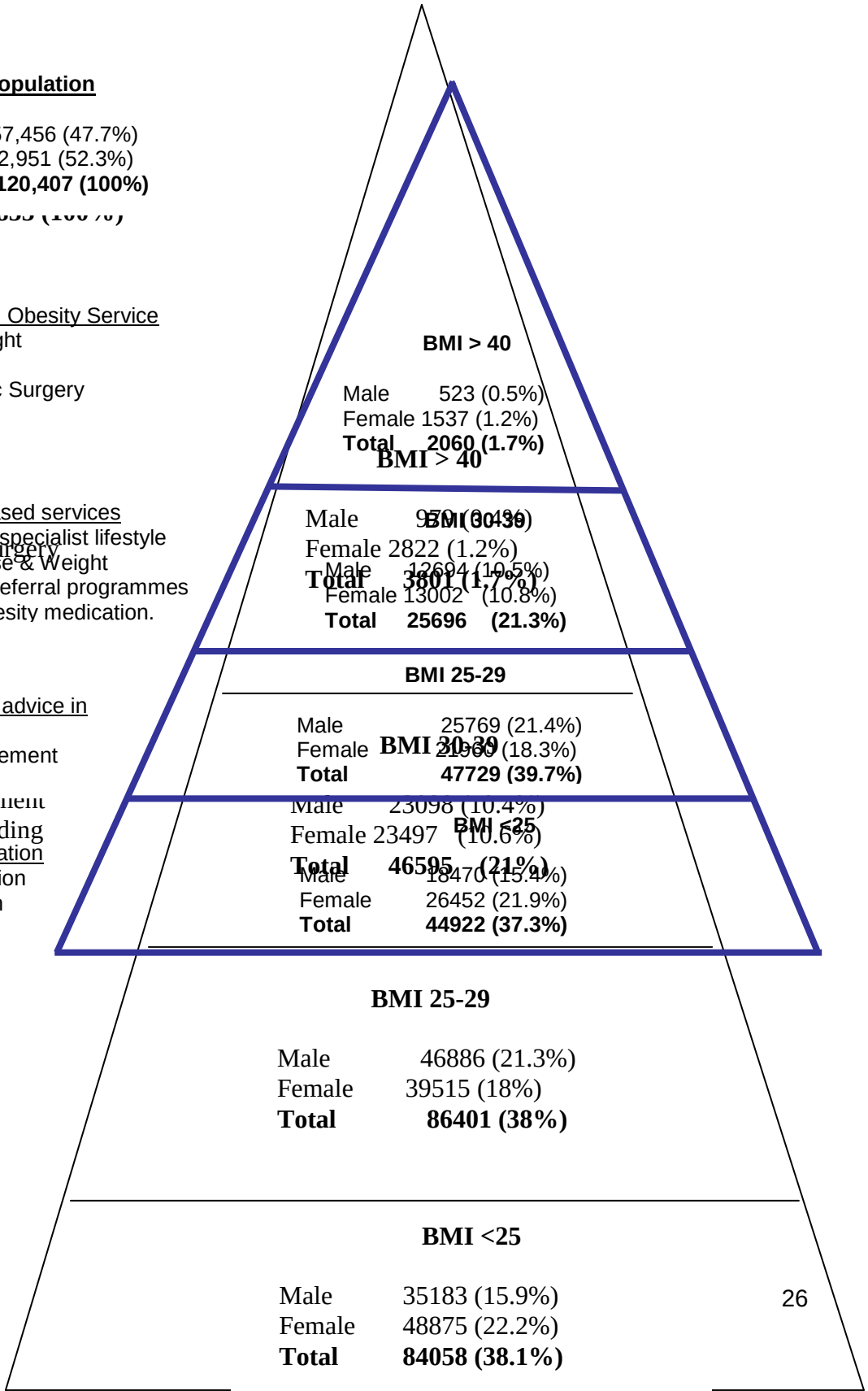
Level 3
Secondary Care
Specialist Weight Management
Team /Bariatric Surgery

Level 3
Community-based services
Cluster based specialist lifestyle clinics/ Exercise & Weight Management referral programmes and/or anti-obesity medication.

Level 2
Basic Lifestyle advice in Primary Care
Weight Management Interventions

Level 2
Primary Care
GP & Weight Management programmes (including pharmacological Interventions)

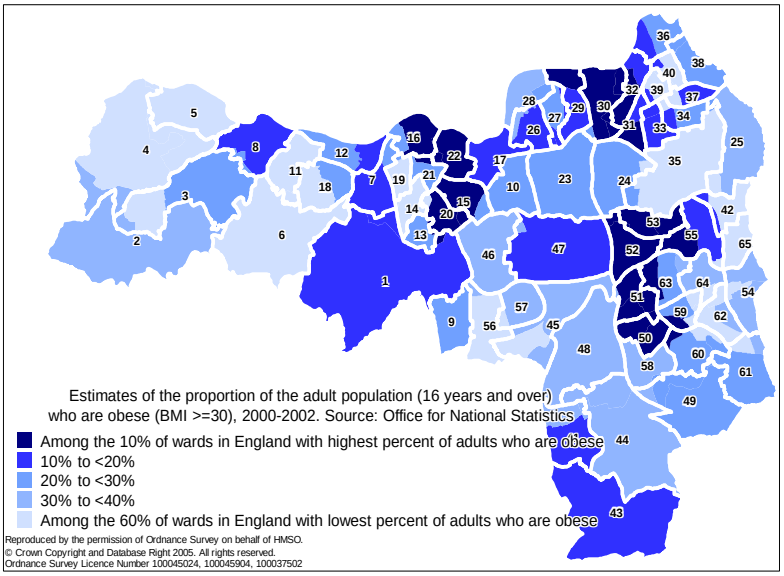
Level 1
General Population
Early Intervention and Prevention



By using this tiered model, it should be expected that the greatest number of patients will be in Tier 1 (General Population). However it is evident that that this is now not the case with over half the adult population now at Tier 2 and above (overweight/obese) and requiring help with weight management.

It is important to note the rapid increase in obesity over the past two decades and the possibility that this trend might continue. Whilst these figures are an estimated prevalence of obesity, most obesity is undiagnosed and not all cases will be identified or treatment sought.

Estimates of the Proportion of Adult Population Who Are Obese By Electoral Ward



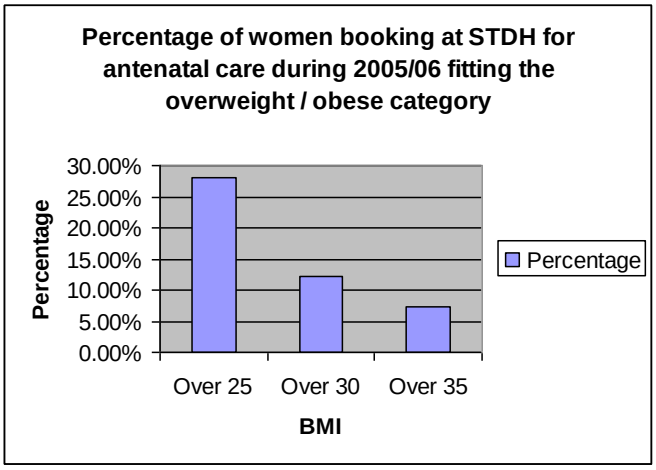
Maternal Obesity

There is concern with the increasing prevalence of obesity in recent years among adults, as observed in national surveys such as the Health Survey for England[6]. A recent paper published by the North East Public Health Observatory[7] suggests that maternal obesity is associated with increased complications throughout pregnancy and increases the health risk to both mother and infant. The paper concluded that information relating to maternal obesity and the way in which this is collected, varies between maternity units in the North East region.

CEMACH (2007)[8] identified that over 50% of all maternal deaths where BMI was known were women in the overweight or obese category (BMI greater than 30). This reflects the 2004 report[9] where 35% of all maternal deaths were women in the obese category; 50% more than in the general population. Obese women of every age die from a variety of causes of maternal death because either their physical size precluded the availability of optimum care or their obesity had clinical implications for their health.

Antenatal obesity

Local data provided by the Foundation Trust for 2005 / 2006 identified that almost half of all women booking with South Tyneside had a BMI over 25 (overweight) with almost a fifth of women (19.5%) presenting with a BMI greater than 30 and 7.5% with a BMI over 35 both of which places them in the at risk category.



Children

[6] NHS Information Centre (2007) "Health Survey for England: updating of trend tables to include 2005 data", Information Centre, Leeds

[7] Heslehurst N, Lang B et al (2006) "Maternal Obesity and Pregnancy Outcome: A Scoping Study", North East Public Health Observatory, Stockton

[8] CEMACH (2007) Saving Mothers' Lives: Reviewing maternal deaths to make motherhood safer – 2003 – 2005. Executive Summary and Key Recommendations. December 2007. CEMACH. London

[9] www.cemach.org.uk

The heights of children in reception year (ages 4 or 5 years) have been measured for many years to monitor child development. In 2005/06, for the first time, this monitoring was extended to measuring both height and weight, so that the prevalence of overweight and obese could be monitored at the population level. In 2006/07 this monitoring was extended to Year 6 pupils (ages 10 or 11 years). Figures are shown below, separately for Reception Year and Year 6, for the prevalence of overweight and obese within South Tyneside and neighboring PCT areas of Gateshead and Sunderland together with the number of measurements on which the prevalences are based. 95% confidence limits are shown, which indicate the level of uncertainty about each value. Because of variable data quality from area to area, the Department of Health did not publish the results from the 2005/06 exercise. There are plans to publish the results from the 2006/07 programme, at PCT level for all PCTs in England, in the spring of 2008.

Reception Year

Proportion of children in Reception Year (4 or 5 years) who are overweight or obese

Year and PCT	Pupils measured	% measured	% Overweight	Upper Limit	Lower Limit	% Obese	Upper Limit	Lower Limit
05/06 Gateshead	1497	75.5%	19.0%	21.0%	17.1%	11.3%	12.9%	9.7%
06/07 Gateshead	1852	99.6%	14.4%	16.0%	12.8%	10.3%	11.7%	8.9%
05/06 S Tyneside	n/a	n/a	12.2%	n/a	n/a	9.7%	n/a	n/a
06/07 S Tyneside	1369	95.6%	14.8%	16.7%	12.9%	12.4%	14.1%	10.7%
05/06 Sunderland	n/a	n/a	n/a	n/a	n/a	13.1%	n/a	n/a
05/06 Sunderland	2511	91.7%	15.6%	17.0%	14.2%	12.6%	13.9%	11.3%

Source: NHS South of Tyne and Wear

Year 6

Proportion of children in Year 6 (10 or 11 years) who are overweight or obese

Year and PCT	Pupils measured	% of all pupils measured	% Overweight	Upper Limit	Lower Limit	% Obese	Upper Limit	Lower Limit
05/06 Gateshead	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
06/07 Gateshead	2075	98.8%	13.8%	15.3%	12.3%	20.2%	21.9%	18.5%
05/06 S Tyneside	n/a	n/a	15.3%	n/a	n/a	22.2%	n/a	n/a
06/07 S Tyneside	1607	91.2%	15.7%	17.5%	13.9%	20.2%	22.2%	18.2%
05/06 Sunderland	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
05/06 Sunderland	2785	84.2%	17.0%	18.4%	15.6%	21.4%	22.9%	19.9%

Source: NHS South of Tyne and Wear

Unmet Need

It is estimated that the annual costs of treating obesity per 500,000 of the population is £21,500,000 per annum. National estimates suggest that 23% of the total population is obese. 23% of 500,000 people equates to 115,000 people which translates into a cost of £187 per annum for each obese person. This cost estimate takes into account hospital appointments and procedures, GP visits and prescription charges. This estimate takes

account of the cost to the NHS in relation to the treatment of associated health conditions taking no account of the cost to the local economy in relation to sickness from work and related benefits.

South Tyneside has a population of 151,316 (ONS, 2005). By applying the above estimate this would equate to a local cost of £6,506, 588 per annum in obesity related diseases. However, as South Tyneside has a higher proportion of people fitting into the obesity category (circa 30%), the expected cost would be greater (£8,573,715.8).

Diabetes

The rapidly increasing number of people developing diabetes around the world is creating a major public health concern. Concern is growing about the steadily increasing prevalence of diabetes in Western countries, primarily due to changes in lifestyles with a heavy burden of the disease falling on people from some ethnic minority groups and those from socially excluded groups[10],[11].

The associated complications of diabetes such as blindness, renal failure and lower limb amputations and the immense material, social and psychological implications of living with diabetes, place huge pressures on the individuals themselves, their families, their support networks and the healthcare system[12].

Diabetes mellitus is a medical condition in which levels of sugar (glucose) in the blood become too high. Insulin, a hormone produced by the pancreas, helps to control the amount of glucose in the blood. If either the pancreas fails to produce enough insulin, or the body cannot make use of the insulin available, diabetes can result. Long term high blood glucose levels (hyperglycaemia) are associated with damage, poor function and failure of various organs of the body, the eyes, kidneys, nerves, heart and blood vessels are particularly at risk.

There are four subcategories of diabetes:

- **Type 1 Diabetes**

Type 1 diabetes (also known as insulin dependent diabetes) occurs if the body is unable to produce any insulin. This type of diabetes usually occurs before the age of 40. It is treated by regular insulin injections and by diet.

- **Type 2 Diabetes**

Type 2 diabetes (also known as non-insulin dependent diabetes) is much more common. This occurs when the body can still produce some insulin, but not enough, or when the insulin that is produced is not used properly by the body (insulin resistance). Type 2

[10] Tang, M., Chen Y., and Krewski D., (2003). Gender-related differences in the association between socio-economic status and self-reported diabetes. International Journal of Epidemiology, 32, 381-385.

[11] Department of Health (2001). National Service Framework for Diabetes. London: The Stationary Office.

[12] Cravey, A., et al., (2001). Developing socio-spatial knowledge networks: a qualitative methodology for chronic disease prevention. Social Science and Medicine, 52, 1763-1775.

diabetes usually occurs in people over the age of 40, although it can occur in younger people, especially in some ethnic groups. It is usually treated by diet alone or by diet and tablets. Occasionally it is treated with insulin injections.

- **Gestational Diabetes**

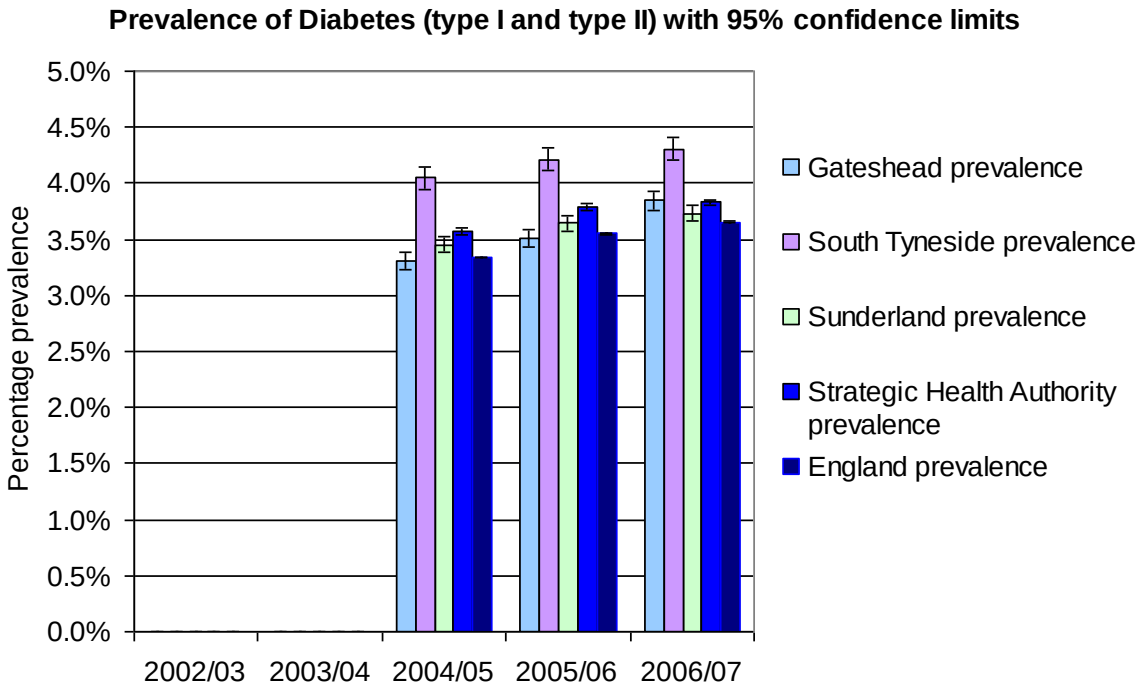
Gestational diabetes is defined as any degree of impaired glucose regulation, resulting in raised blood glucose levels of variable severity, which is first recognized during pregnancy. This includes Type 1 diabetes presenting for the first time during pregnancy; Type 2 diabetes identified during pregnancy, which in many cases was probably present but undiagnosed before the pregnancy; and lesser degrees of impaired glucose regulation, which in most cases reverts to normal after the pregnancy. A disproportionately high number of women who develop gestational diabetes are from minority ethnic groups.

- **Other specific types, e.g. Drug Induced Diabetes**

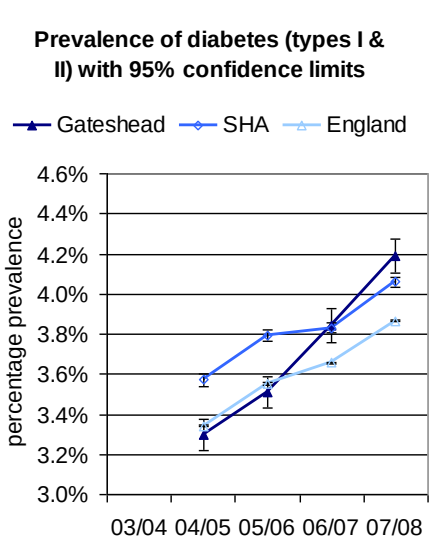
Diabetes can be diagnosed by finding very high glucose levels in the blood or the urine. If blood glucose levels are only mildly raised, a glucose tolerance test (in which a high sugar drink is taken followed by a series of blood tests) can be used to make the diagnosis.

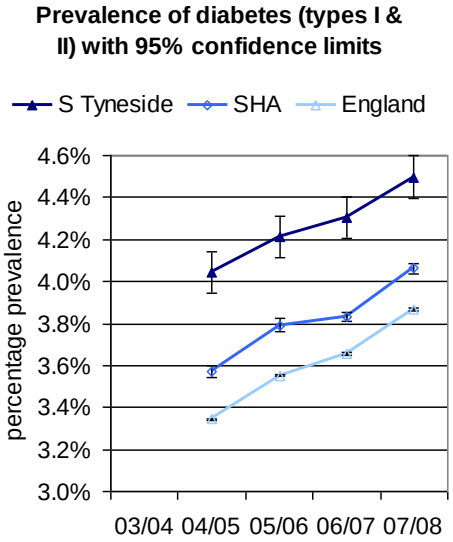
Prevalence

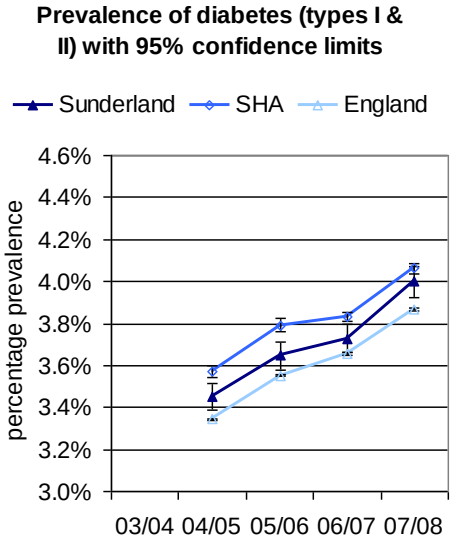
Data shows that diabetes prevalence is significantly higher for South Tyneside than the national, regional and local PCT neighbours prevalence. Furthermore data shown below outlines an increase in both types of diabetes over the past five years.


Prevalence of Diabetes (type I and type II) with 95% confidence limits
Percentage prevalence
5.0%
4.5%
4.0%
3.5%
3.0%
2.5%
2.0%
1.5%
1.0%
0.5%
0.0%
2002/03
2003/04
2004/05
2005/06
2006/07
Gateshead prevalence
South Tyneside prevalence
Sunderland prevalence
Strategic Health Authority prevalence
England prevalence

Prevalence of diagnosed diabetes mellitus, all ages







Year	Gateshead number on disease register	Gateshead Prevalence (%)	South Tyneside number on disease register	S Tyneside Prevalence (%)	Sunderland number on disease register	Sunderland Prevalence (%)	SHA Prevalence (%)	England Prevalence (%)
03/04								
04/05	6717	3.3	6,305	**4.0**	9,922	**3.5**	**3.6**	3.3
05/06	7152	3.5	6,541	**4.2**	10,424	**3.6**	**3.8**	3.6
06/07	7862	**3.8**	6,691	**4.3**	10,623	3.7	**3.8**	3.7
07/08	8604	**4.2**	6,984	**4.5**	11,371	**4.0**	**4.1**	3.9

Source: NHS Information Centre at www.ic.nhs.uk based on data from the Quality Outcomes Framework (QOF)

Figures in bold indicate that these are significantly higher or lower than the comparative England prevalence at 95% confidence.

Health Impact Assessment (HIA)

A rapid health impact assessment (HIA) was carried out in relation to Washington Primary Care Centre. The outcomes from the HIA have been used to inform a rapid HIA for Cleadon Park in order to maximise the potential for this proposal to impact on health in the long term and to minimise the potential negative health effects of the short term construction phase.

Short term health impact
It is well established through the published research evidence base into impacts on health and wellbeing of construction work that the following is likely[13]:

Health determinant	Construction Short term	Operation Long Term
Air pollution	↑	↓
Road traffic injuries	↑	↓
Physical activity	↓	↑
Community severance	**?**	↓
Noise	↑	↓
Access/mobility	↓	↑
Inequalities	↑	↓

During the construction phase steps can be taken to minimise the negative impacts outlined above by working proactively with the immediate local community, businesses and contractors.

Longer Term Heath Impact

HIA recognises that health is affected by a range of factors. These include individual genetic and lifestyle factors, improving access into services including health, lifestyles and macro socio-economic, cultural and environmental conditions with 'social cohesion' playing a vital role particularly for vulnerable less well off communities. Acknowledging and understanding these factors can help to ensure that services are designed and developed to reduce health inequalities for those most in need in the population.

The table below suggests the potential positive or negative long-term health impact of Cleadon Park Primary Care Centre.

Vulnerability Factors	Potential impact
Low income and social status	Positive
Lack of social support networks	Positive
Poor education and literacy	Neutral

[13] Adapted from 'Carrying out a health impact assessment of a transport policy'. Guidance from the Transport & Health study group. (2000). Faculty of Public Health Medicine.

Unemployment or poor working conditions	Neutral
Poor social environments	Positive
Poor physical environments	Positive
Poor personal health practices and coping skills	Positive
Unsafe start in life	Positive
Biology and genetics predisposing towards ill health	Positive
Poor uptake of health services	Positive
Sex/gender related vulnerabilities	Unknown but potentially negative
Cultural barriers to good health	Negative

From the table above it can be seen that the majority of the health impacts in terms of the development of the Primary Care Centre are likely to be positive due to the development of a new building as a focal point for the community, the range of new diagnostic and treatment services provided and in particular due to the number of preventative services provided. However the potential for negative impact in terms of widening health inequalities is very real unless specific measures are put in place in service planning, design and delivery to ensure that barriers to specific social, gender and religious and cultural groups accessing services are minimised.

Potential barriers to accessing services

The potential barriers for specific individuals and groups in the local community can be summarised as follows;

Barrier	**Intervention or service design**
Lack of appropriate services	The needs of key groups including those who are hard to reach or vulnerable must be considered in the development of services and interventions
Lack of information in relation to services	Information on services should be user friendly, easily available and written appropriately for target groups
Lack of accessible services	Transport links need to be taken into account when new services are designed or services should be located in locations with good access (including access for disabled clients)
No motivation to change	All interventions designed to support clients in changing behaviour need support for motivational change as part of the design
Low self-esteem & poor self image	Some clients may need to be supported intensively initially to help to access services.
Low income	Any recommended lifestyle changes must be affordable for clients who need them most and

	where possible interventions and services if not free should be subsidised for those on low income
Acceptance of poor health being inevitable and unavoidable i.e. through family history	Potential clients need to be persuaded and supported to believe that their poor health can be managed and even prevented.
The need for 'props' (i.e. smoking, alcohol, drugs) to help with stress or other psychological issues	Clients will need to be supported to enable them to make changes and find alternative ways of coping with stress or anxiety
Social isolation	Services and interventions need to be designed in relation to reaching and supporting socially isolated clients. Methods such as peer support, psychological support and initial home visiting will help to address social isolation

Summary & recommendations in relation to the health and health inequalities of the population

In relation to population trends and mortality, morbidity and deprivation data analysed the following recommendations can be made in relation to which services might be provided at Cleadon Park Primary Care Centre;

Indicators in relation to key health priorities include;

- CHD and the causal factors linked to CHD including high blood pressure, diabetes, smoking, obesity and lack of physical activity
- Cancers; in particular lung cancer for men and women with the main causal factor being smoking but also linked to industrial disease due to asbestos for example.
- In terms of other chronic or long term illnesses rates of long term limiting illness are higher in South Tyneside wards compared with England as a whole. This percentage is higher again in Cleadon Park with 24% of people living with a life long limiting illness
- There is a clear population shift with an estimated 40% increase in the population aged over 65 years. By age 60 half of all people will have a LTC. People with LTC account for 55% of GP appointments, 68% of outpatient and A&E appointments and 77% on inpatient bed days.
- 4.5% of adults in South Tyneside have diabetes which is higher than any other PCT area across South of Tyne and Wear or the England average. This figure is higher again in deprived communities. Type 2 diabetes reduces life expectancy by 10%.
- Smoking prevalence is up to 35% of the population and is highest in wards which also rank highest in terms of deprivation and conversely the quit rate in these wards if often lower. Smoking prevalence in Cleadon Park is higher than the South Tyneside and England average.
- One in four people in Britain will experience a mental health problem at any one time
- Half of all women and a quarter of all men will be affected by depression at some point in their lives. Mental ill health is associated with a variety of wider determinants

including being male, unemployment, living alone, long term illness, Alcohol or drug misuse and poverty.

- Around one in ten children between the ages of 5 and 15 in the UK are experiencing mental health problems requiring professional help.
- In terms of a healthy start in life, the percentage of low birth weight births is between 9.1 and 13.6% in the worst South Tyneside wards. Cleadon Park is one of the highest wards for low birth weight babies which are recognised as an indicator of poor health throughout life.
- Changes to the local employment and industry profile is resulting in new risks and health challenges. The European Agency for Safety and Health at Work identified the top emerging risks for workers and employers. This specifically acknowledged an increased likelihood of musculoskeletal disorders (MSD) resulting from a lack of physical activity combined with prolonged sitting or standing and poor ergonomic design of work equipment (amongst others) alongside stress linked to job insecurity, high or low job demand, complex tasks leading to mental exhaustion, low job control, low decision level poor support amongst others.

Indicators and recommendations for service provision include;

- As the top five causes of death for both males and females include a number of cancers this would suggest the need for ensuring adequate provision of services in relation to cancer prevention, screening, referral and rehabilitation
- The degree to which people access health services can have a significant impact on their health. This includes the full range of health services; preventative, screening and diagnostic, treatment, rehabilitation and palliative care. Broadly the most health gain will be from preventative services
- Health indicators in relation to risk of Cardiovascular Disease (CVD) which includes diabetes, CHD and stroke indicate that there needs to be greater emphasis on the identification of individuals at high risk of CVD and that the Primary Care Centre should offer a prevention/early intervention service to screen people for high blood pressure, high cholesterol, abnormal glucose and lifestyle factors for example. There are opportunities to target this at those individuals who are less likely to access mainstream health services.
- Long term conditions are higher in both South Tyneside and Cleadon Park. The management of people with Long Term Conditions needs to be included in provision due to both the prevalence and the population shift. The population over 65 is due to increase by 40% over the next 20 years. It is therefore essential that the Primary Care Centre provides preventative services for people living with LTC to prevention crisis intervention and reduce the level of hospital admissions.
- Diabetes appears to be a significant issue in South Tyneside and services targets to reduce lifestyle and risk factors associated with the condition as well as provision of care and treatment should be considered.
- Self care was highlighted in the NHS Plan[14] as one of the key building blocks for a patient centred health service. Research highlights that supporting self care leads to improved health outcomes and a rise in patient satisfaction. Evidence indicates that effective self-care symptom management improves outcomes e.g. reduction in pain, anxiety / depression and quality of life, with increased independence. These positive effects are matched by a significant impact on the use of services, with fewer primary

[14] Department of Health, (2000) *NHS PLAN* UK

care consultations (a 40% reduction) and a decrease in the use of hospital resources[15].

- The wider determinants for mental ill-health in Cleadon Park are apparent. Furthermore a high percentage of the population is Children and Young People. It is recommended that the PCC considers the inclusion of services to promote mental well-being and prevent mental illness.
- As a result of the current population shift and the predicted increase in the population over 65 years there is a need to consider the provision of falls prevention and rehabilitation services as well as support for those people living with dementia within the PCC.
- As a result of the changes in employment and local industry the Primary Care Centre needs to consider the provision of MSK services.

Indicators in relation to addressing health inequalities include;

- To reduce the likelihood of a negative health impact the needs of more vulnerable and hard to reach groups need to be considered in the planning and development stages of the centre
- Outreach from the centre could be undertaken to engage with clients who may not traditionally access services
- Services need to be designed to ensure that they meet the needs of a range of clients including those from Black and Minority Ethnic Groups, those with mental health problems, those with learning disabilities and those with physical disabilities for example.
- Services in the centre should consider offering a mentoring or support service for patients and clients who need help accessing the centre for a range of reasons
- Opening times at the Primary Care Centre need to be flexible to enable a range of clients to access services
- Information about the services at the centre needs to be made available widely and in a range of formats to ensure that individuals are able to access and utilise services as appropriate and local organisations are able to support clients to access services.
- Transport links to the centre need to be established to ensure access form a wide range of geographical locations across the city.
- Partnership working between the Local Authority and the PCT could enhance delivery particularly with reference to work required to address lifestyle interventions.

[15] World Health Organization (2002) *National cancer control programmes: policies and managerial guidelines*, 2nd ed. Geneva,