

Title	Joint Strategic Needs Assessment		
Agenda Item No PCT/10/45	Board	Date	25/03/10

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 Title: Director of Public Health

Purpose:

To inform The Board of the findings of the Joint Strategic Needs Assessment (JSNA) undertaken during 2009/10. It should be noted that section 116 of the Local Government and Public Involvement in Health Act (2007) requires Local Authorities and PCTs to undertake a regular Joint Strategic Needs Assessment (JSNA).

Recommendation:

The Board is asked to note the content and main findings of the draft 2009/10 JSNA document and provide feedback prior to formal circulation and approval by NHS Swindon Board and partner organisations.

Please note that owing to the size of the document, it is being e-mailed separately for perusal and copies will be available for the meeting.

2. Detail

2.1 The core purpose of the JSNA is to inform the planning of health and social care services, while also preventing ill health and promoting future well being. Key findings from the document are presented below:

Section 2 – The Population of Swindon

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- Swindon is expected to see a 64% increase in the population aged 65yrs+ over the next 20 years. This projection is in line with England and the South West. This is expected to have important implications for end of life care; including patient choice to die at home, depression, falls/hip fractures and healthy life expectancy/quality of life in old age.
- With an ageing population there is expected to be an increase in the number of vulnerable older people; including those with visual impairment, individuals living alone, individuals living in council and non-council care homes and individuals in fuel poverty.
- Swindon is projected to have a greater number of middle aged people (in comparison with projections for England and the South West). This has important implications for the provision of care for health problems that typically develop in middle age (including heart disease and diabetes).

Section 3 – Swindon, the Wider Environment and Socio-Demographic Determinants of Health

- Inequalities in health exist in Swindon and many are determined by level of deprivation. Deprivation in Swindon is linked to the following demographic factors:
 - Unemployment
 - Educational achievement
 - BME communities
- Educational achievement in Swindon is relatively low with 40.7% of pupils achieving five or more GCSEs at grades A*-C (including English and Maths). This figure is statistically significantly worse than the South West regional average and within the bottom 25th percentile for the whole of England.
- Improvements are needed in the recording of ethnic group to ensure any associated health and social care needs can be robustly described and addressed.

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Section 4 – Major Health Trends in Swindon

- Average life expectancy (at birth) in Swindon is 77.4yrs for men and 81.2yrs for women (2007). This is similar to the national average. Inequalities exist according to the level deprivation. There is a difference in life expectancy as measured by the Department of Health recommended Slope Index of Inequality (SII), of 8.1 years between the most and least deprived males in Swindon. This gap is 6.4 years for Swindon females. This gap is greater than most other areas in the South West.
- The most deprived areas in Swindon have significantly higher all-age all-cause mortality rates than the least deprived areas. This may account for the local gap in life expectancy (SII score).
- Swindon has a significantly greater proportion of premature deaths (<75yrs) from cancer, Stroke and CHD than the South West. This may partly explain the level of life expectancy in Swindon.
- In Swindon, ward level analysis shows that level of deprivation is significantly associated with premature deaths from cancer, stroke and CHD. This may explain current inequalities in life expectancy (SII score) and differences in all-age all-cause mortality rates.
- In Swindon, males are significantly more likely to die prematurely from cancer and CHD in comparison with females. This may partly explain why locally, males have a lower life expectancy than females.
- Deaths from cancer have overtaken cardiovascular disease as the leading cause of premature death. This is in line with regional and national trends.
- The number of new cases of all cancers in Swindon grew at a statistically significantly faster rate between 2002 and 2007

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than that found in the South West and England when accounting for age, sex and population size.

- The number of premature deaths from heart disease and stroke in Swindon (<75yrs) are statistically significantly greater than both the South West region and national average and are within the bottom 25th percentile for England as a whole.
- Years of life lost prematurely to diabetes in Swindon are nearly twice as high as the rates for the South West and England. This may account for current life expectancy in Swindon.
- The number of people in Swindon registered as diabetic is significantly lower than numbers in the south west and Swindon. It is unclear whether this is due to an actual lower prevalence or a greater proportion of undiagnosed diabetics. A greater proportion of undiagnosed diabetic in Swindon may account for the high mortality rate from diabetes.
- In Swindon there are significantly fewer people who had a 'good' blood glucose reading (HbA1c <10) in the last 15 months. This may indicate poor diabetes management and may account for the number of years lost to diabetes currently in Swindon.
- 75% of eligible women in Swindon attended breast screening appointments. This rate was similar to the UK average; however, uptake was related to deprivation and ranged from 84% in less deprived areas to 39% in more deprived areas.
- 82% of eligible women in Swindon attended cervical screening appointments, a lower rate than the South West and England. Screening uptake was related to deprivation and ranged from 89% to 49%.
- Historically, Swindon has had a higher mortality infant rate than the South West region as a whole. Infant mortality rates in Swindon's most deprived wards are approximately twice that of the rate in the least deprived wards.

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- According to modelled estimates, Swindon currently has the highest rates of adult obesity in the South West; however, more accurate data collection at a local level is needed.
- Approximately 18% of year 6 pupils and 11% of reception year pupils can be classified as obese. Schools in the most deprived wards have a significantly greater proportion of obese children than schools in less deprived wards in Swindon.
- The rate of hip fractures in the elderly is significantly worse than the South West regional average and within the bottom 25th percentile for the whole of England.
- Healthy life expectancy rates in Swindon individuals at the age of 65yrs are now the second poorest in the South West for men and ranked 40/44 for women.
- Under 18yr conceptions rates are related to deprivation. However, outliers exist and it is not only girls from deprived areas who are likely to conceive before their 18th birthday. The rate of underage conceptions is high in some less deprived areas as well, with Covingham and Nythe experiencing the highest teenage pregnancy rate in Swindon.
- Regional figures indicate that Swindon is ranked second lowest in the region (among those PCTs that submitted figures) for percentage of mothers who are breast feeding at 6-8 weeks.
- Incidence of TB in Swindon is lower than the national average and similar to regional levels. Over 67% of all new cases of TB in Swindon are from individuals not born in the UK.
- Childhood immunisation coverage for Meningitis C and DTaP/IPV/Hib at 1yr are lower in Swindon than the South West and England. Over 84% of children in Swindon are fully vaccinated by school entry age. This varies according to deprivation level and coverage ranges from 60% to 94%.

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Section 5 – Major Health Behaviour Trends in Swindon PCT

- Uptake of Chlamydia screening among young people in Swindon is lower than the national and regional average. This is teamed with young people in Swindon having relatively low awareness of the infection and its screening process.
- 1 in 5 local adults report that they regularly take part in sport and 31% of school pupils (aged 14-15yrs) in Swindon state that they achieve the recommended level of exercise each week. This may partly account for current obesity levels in Swindon.
- Approximately 10% of adults and 21% of children in the local population reported that they ate 5 portions of fruit of vegetable per day.
- Hospital admissions for alcohol related harm are increasing for both adults and children in Swindon. There are currently 4896 (3.6%) individuals dependent on alcohol in Swindon. This number is expected to rise to 5206 over the next 5 years.
- Approximately 40% of adults and 40% of children (aged 14-15yrs) in Swindon drink alcohol on a weekly basis. Alcohol consumption is inversely related to deprivation although it is not clear whether a relationship between alcohol-related harm and deprivation exists in Swindon.
- The number of people in Swindon who smoke has been steadily declining. Recent figures (2008) suggest that 17% of the total Swindon population smoke. This figure is 28% in Swindon's five most deprived wards (i.e., neighbourhood Renewal Areas).
- The total number of people accessing the Swindon Stop Smoking service has increased (from 1,157 to 1,223 people). An increase in service access has also been found for people from ethnic backgrounds. 57% of people successfully quit smoking at four weeks from setting a quit date.

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2.2 Further work on a number of these findings is already underway, either through more in-depth research or through service variation. Recent examples include:

- Baseline cancer services review (NHS Swindon - Feb 2010)
- Targeted health checks to address inequalities in stroke and CHD outcomes
- Review of the modelled elderly population as a basis for predicting future mid-term Adult Social Service provision

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Risk Management:

Risk Domains	C x L	Score
1. Patient Safety		
2. Quality		
3. Human Resources		
4. Legislation/Statutory Duty	2 x 1	2
5. Reputation	1 x 1	1
6. Business Objectives		
7. Finance		
8. Business Continuity		

C = consequence L = likelihood

Financial Implications

None

Patient Safety

None

Legal/Equality and/or Health Impact Assessment

Section 116 of the Local Government and Public Involvement in Health Act (2007) requires Local Authorities and PCTs to undertake a regular Joint Strategic Needs Assessment (JSNA).

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The JSNA has a focus on addressing the inequalities experienced by different groups within the community of Swindon.

Previous Committee/Group Pathway	Date	Decision

Background Papers and Appendices

Swindon Joint Strategic Needs Assessment 2008, available from:
<http://www.swindon.gov.uk/socialcare/social-jointstrategicneeds.htm>

Linking Values:

	No.		No.
Vision	1,2,	Sustainability	
*WCC Competencies	2,5,6,7	WCC outcomes	1,2,3,4,5,7,8,9,12
NHS Constitution	1,4	Value for Money	
Objectives	1	Other	
*S4BH Domains	7		

*WCC – World Class Commissioning
 *S4BH – Standards for Better Health

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2009/2010

DRAFT



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Executive Summary

In Swindon, we recognise the importance of using information to identify ways in which we can improve the health and well-being of our local community.

The aim of the Joint Strategic Needs Assessment (JSNA) is, therefore, to bring together information and evidence surrounding the health and social care needs of local residents to help the PCT, Borough Council and associated partners plan for the future. The JSNA's core purpose is to inform the planning of health and social care services, while also preventing ill health and promoting future well being.

The aims of the JSNA are broad and ambitious and this document is just one step in a larger process. As such, in Swindon, the JSNA is seen as a rolling programme of work, consisting of an annual publication which is supported year-round by a continuously updated Information Hub. In this way, it is hoped that the JSNA process will better inform our commissioning and service delivery and improve the health and well-being of local residents.

Specifically, the main objectives of this JSNA are to:

- Outline a high level picture of need in Swindon by reporting against indicators in the Department of Health's Core Data Set
- Place focus, and provide in-depth analysis (e.g., at ward level), for indicators that are particularly relevant to the local population or current climate
- Outline key trends and provide future projections where applicable
- Provide benchmarking at a regional and national level where appropriate
- Identify any unmet needs and gaps in data availability or quality
- Provide evidence that will inform commissioning decisions
- Provide evidence to support the Local Area Agreement and World Class Commissioning Indicators
- Identify needs in a bid to reduce inequalities in the local community

Detailed analysis and discussion in this publication are provided under the following chapter headings:

- The population of Swindon
- Swindon, the wider environment and socio demographic determinants of health
- Major health trends in Swindon
- Major health behaviour trends in Swindon

Emerging themes from this year's JSNA include:

SECTION 2: The Population of Swindon

- Swindon is expected to see a 64% increase in the population aged 65yrs+ over the next 20 years. This projection is in line with England and the South West. This is expected to have important implications for end of life care; including patient choice to die at home, depression, falls/hip fractures and healthy life expectancy/quality of life in old age.
- With an ageing population there is expected to be an increase in the number of vulnerable older people; including those with visual impairment, individuals living alone, individuals living in council and non-council care homes and individuals in fuel poverty.

- Swindon is projected to have a greater number of middle aged people (in comparison with projections for England and the South West). This has important implications for the provision of care for health problems that typically develop in middle age (including heart disease and diabetes).

SECTION 3: Swindon, the Wider Environment and Socio-Demographic Determinants of Health

- Inequalities in health exist in Swindon and many are determined by level of deprivation. Deprivation in Swindon is linked to the following demographic factors:
 - Unemployment
 - Educational achievement
 - BME communities
- Educational achievement in Swindon is relatively low with 40.7% of pupils achieving five or more GCSEs at grades A*-C (including English and Maths). This figure is statistically significantly worse than the South West regional average and within the bottom 25th percentile for the whole of England.
- Improvements are needed in the recording of ethnic group to ensure any associated health and social care needs can be robustly described and addressed.

SECTION 4: Major Health Trends in Swindon

- Average life expectancy (at birth) in Swindon is 77.4yrs for men and 81.2yrs for women (2007). This is similar to the national average. Inequalities exist according to the level deprivation. There is a difference in life expectancy as measured by the Department of Health recommended Slope Index of Inequality (SII), of 8.1 years between the most and least deprived males in Swindon. This gap is 6.4 years for Swindon females. This gap is greater than most other areas in the South West.
- The most deprived areas in Swindon have significantly higher all-age all-cause mortality rates than the least deprived areas. This may account for the local gap in life expectancy (SII score).
- Swindon has a significantly greater proportion of premature deaths (<75yrs) from cancer, Stroke and CHD than the South West. This may partly explain the level of life expectancy in Swindon.
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- Deaths from cancer have overtaken cardiovascular disease as the leading cause of premature death. This is in line with regional and national trends.

- The number of new cases of all cancers in Swindon grew at a statistically significantly faster rate between 2002 and 2007 than that found in the South West and England when accounting for age, sex and population size.
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- Historically, Swindon has had a higher mortality infant rate than the South West region as a whole. Infant mortality rates in Swindon's most deprived wards are approximately twice that of the rate in the least deprived wards.
- According to modelled estimates, Swindon currently has the highest rates of adult obesity in the South West; however, more accurate data collection at a local level is needed.
- Approximately 18% of year 6 pupils and 11% of reception year pupils can be classified as obese. Schools in the most deprived wards have a significantly greater proportion of obese children than schools in less deprived wards in Swindon.
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- Under 18yr conceptions rates are related to deprivation. However, outliers exist and it is not only girls from deprived areas who are likely to conceive before their 18th birthday. The rate of underage conceptions is high in some less deprived areas as well, with Covingham and Nythe experiencing the highest teenage pregnancy rate in Swindon.
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SECTION 1:

1 Introduction

1.1 Joint Strategic Needs Assessment

The *Local Government and Public Involvement in Health Act (2007)* requires Local Authorities (LAs) and Primary Care Trusts (PCTs) to undertake a regular Joint Strategic Needs Assessment (JSNA).

The JSNA is a process that identifies the health needs of the local population in order to improve health outcomes and reduce inequalities. In particular it informs commissioning prioritisation and associated service change. It is therefore an important process which includes review of all relevant, accessible information surrounding the health and social care of local Swindon residents and specifically seeks to assess hard to reach populations, groups most at risk of illness, or areas where healthcare is not effectively reaching some local residents. By carrying out this process regularly, the PCT and Borough Council with its wider stakeholders can better plan health and social care and thereby, reduce inequalities and improve the health of all people in the local population. As a result, it is expected that the JSNA will inform both shorter-term (3 to 5 year) priorities set by local area agreements (LAAs) and longer-term (5 to 10 year) strategic plans.

1.2 Aims of the JSNA

The overall long-term aim of the JSNA is to improve the health of local people in Swindon by reducing health-related inequalities. Key foci as we move forward will therefore be to:

- Establish a picture of current and future needs, with emphasis on examining inequalities in health status between communities and identifying areas and communities where current service provision does not meet need,
- Provide a summary of the evidence base on what services might best be used to reduce health inequalities,
- Provide a summary of the evidence base on what services might best be used to reduce inequalities,
- Embed evidence and data in the cycle of commissioning of services,
- Signal commissioning intentions to service providers (including the Voluntary and Community Sector) to support their direction and development

As such, it is crucial that the JSNA process is driven by the local community and that outcomes of this process remain Swindon specific. This means that the focus and approach of every region's JSNA will be different; our approach at Swindon is outlined below.

1.3 Revision of the 2008 Swindon JSNA process

Swindon's inaugural 2008 JSNA was considered to be a valuable first step towards understanding the needs of Swindon's population by providing a central point of integrated information on key features of local well-being. However, in order for the JSNA to become a useful commissioning tool, it has been recognised that key

developments are needed in its structure and timeliness. As a result the 2009 Swindon JSNA has been produced as the start of a redevelopment programme designed to strategically reposition needs assessment for maximum impact in driving forward a responsive commissioning agenda across all partner organisations. This new approach has included

- The construction of an internal continuously updated local information hub to provide consistent, timely information on the most commonly used shared indicators
- Progressive work through Swindon Intelligence Network and Swindon Strategic Partnership Board to align partner data sharing and use
- Agreement to construct a metadata store of datasets used by all partners across Swindon as the first step towards more efficient information use across the wider community and shared interpretation skills
- Positioning local intelligence and research as a central focus for executive decision making across the community

By adopting this revised strategy it is hoped that the JSNA will focus less on communication of data, profiles, facts and figures and will place greater emphasis on data interpretation that highlights Swindon specific issues. In turn this should ensure that the information presented through the JSNA can influence responsive commissioning decisions which are most relevant to Swindon's population.

This strategy will involve the JSNA format moving away from one annual document that contains an outline of the core data set to a systematic ongoing process that includes:

- A continually refreshed online core dataset (information hub) with information supplied from the relevant information owners
- An annually published document which brings together and appraises work across the Borough Council and the PCT, providing in-depth investigation of the needs in Swindon
- Supportive in-depth health needs assessment to explore further the findings of the parent document

In adopting this approach it is hoped that the JSNA will move away from being a broad, data heavy document and become a useful Swindon specific tool to support evidence based decision making.

1.3.1 JSNA Information Hub

To better support the JSNA process Swindon has developed a JSNA Information Hub. The JSNA Information Hub is being created as an interactive tool which will encompass all elements of the JSNA Core Data Set. It is proposed that the Information Hub will:

- Be designed around the JSNA Core Data Set
- Include domains organized by broad and narrower subcategories for easy navigation

- Each domain will be cross referenced against the relevant National, Vital Sign, World Class Commissioning, Strategic Health Authority, and Local Area Agreement indicators
- Data will be refreshed on an ongoing basis to coincide with new data releases. Information, indicating anticipated release date of new data will also be included
- Current, and where possible, historical data will be presented
- Data will be benchmarked to the South Region and England (where available)
- Analysis of data to lower levels will be included where appropriate (including gender, age, ward, BME and deprivation level)
- Data will be tabulated in a user friendly way with accompanying graphics where possible
- Data caveats, descriptions & definitions will be included added to increase data validity

The JSNA Information Hub will have two main roles. The first to act as a starting point when monitoring which Swindon specific issues and indicators will be presented in more detail in the JSNA document. This will have the advantage of providing a better overview of all JSNA domains whilst also ensuring that the published document does not become over burdened with facts and figures.

Second, the JSNA Information Hub will act as a central source and first port of call for commissioners. The data held in the Information Hub will be updated on an ongoing basis so that commissioners will have access to relevant information year round and throughout the commissioning cycle. This will help to enable frequent assessments and improve performance monitoring. In this way it is aimed that the accompanying JSNA Information Hub will be able to;

- Provide Information readily available and in a useable form to be used through out the commissioning cycle
- Provide information on a timely basis so that it is available at people's finger tips
- Ensure that more time is available for in depth analysis by reducing the amount of time spent sign posting as well as the duplication and replication of work
- Improve the recording of data sources, making reliable year-on-year and benchmark comparisons possible
- Reduce the confusion surrounding the reliability of available data by regular refreshes making sure that the most up to date information is always presented
- Bring Swindon's Information Service in line with Information Hubs already established at other PCTs and organisations (Somerset PCT, Bristol PCT)

It is hoped that by creating a central JSNA Information Hub Swindon will experience improvements in evidence based decision making by provision by having:

- Better quality data available
- More time available to spend on in depth needs analysis as well as data interpretation, assistance, consultation
- Better ability to cross-reference health needs
- Better understanding of changes to health indicators / health-related needs
- Data readily available and well sign posted

1.3.2 Timeliness of Information Hub

Without continuous real-time updates information can become obsolete very rapidly. The Information Hub is being developed to address this issue locally for some of the more frequently consulted routine data sources. However some of the data presented in this document will be superseded rapidly and readers should always triangulate information sources and refer to the specific time period from which the data has been drawn. The use of different time periods for data analyses can occasionally result in apparent anomalies in the conclusions drawn from different research. Health Information analysts at NHS Swindon can address any queries related to findings from this document (contact details can be found on page 129).

SECTION 2:

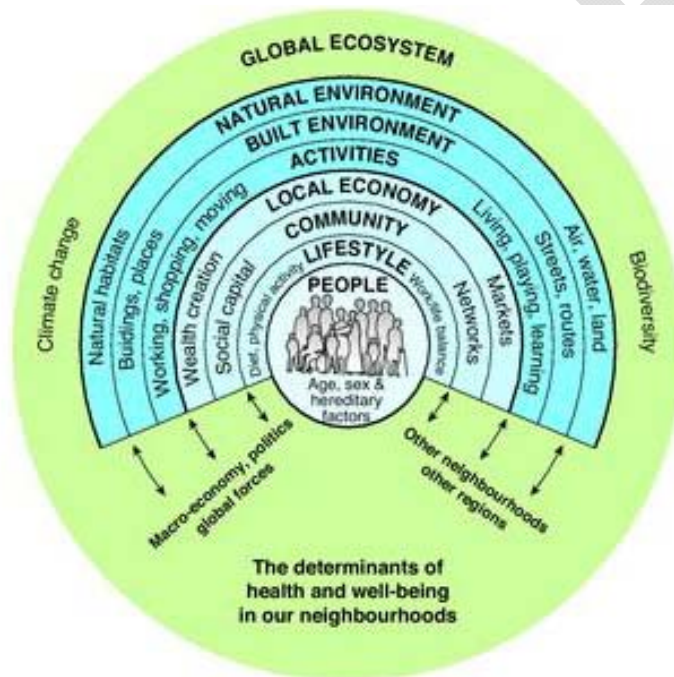
2 The Population of Swindon

The JSNA is designed specifically to support and drive Swindon's Joint Strategic Operating Plan. At the heart of this strategic plan, is the desire to adopt a targeted approach to health and well-being. At the same time, Swindon aims to maintain and improve the quality of health and care services available when required.

The joint approach between the PCT and Local Authority supports the concept that our health is affected by more than just illness and access to health services. The wider environment which includes, housing, access to green space, the links we have with our community and the activities we take part in can all influence our health and well being. Figure 2.1 illustrates the relationship between these multidimensional factors and how they can influence our health and wellbeing.

In light of the potential multidimensional influences on health, and in order to appreciate the importance they may have when identifying health inequalities it is important to first understand the demographic makeup of the local population.

Figure 2.1: The main socio-demographic determinants of health¹



2.1 Swindon's Current Population

According to the Office of National Statistics' (ONS) mid-year estimates (2008) the current population of Swindon is approximately 198,300². Table 2.1.1 below shows that an estimated 18.7% of residents are aged 0-15yrs, while 14.0% of residents are estimated to be 65yrs or over.

¹ Barton H & Grant M (2006). A health map for the local human habit. Journal of the Society for the Promotion of Health, 126 (6).

² ONS 2008 mid year population estimates

Table 2.1.1: Current estimated Swindon Population (2008)³

Age (yrs)	All Persons	Male	Female
0	3,000	1,500	700
1-4	10,500	5,400	2,600
5-9	11,600	6,000	3,100
10-14	11,900	5,900	3,600
15-19	12,100	6,300	3,900
20-24	12,000	6,200	3,500
25-29	13,100	6,600	3,000
30-34	14,800	7,600	3,100
35-39	16,300	8,500	4,000
40-44	16,600	8,500	4,800
45-49	15,100	7,700	4,800
50-54	12,100	6,100	4,400
55-59	10,700	5,300	4,800
60-64	10,400	5,100	5,200
65-69	7,800	3,700	4,200
70-74	6,700	3,200	3,700
75-79	5,700	2,600	3,200
80-84	4,100	1,600	3,000
85+	3,400	1,100	3,600
Total All Ages	198,000	99,000	69,300

2.2 Swindon's Projected Population

When planning ahead, it is important to also understand what the local population may look like in the future.

In Swindon it is predicted that the population will increase by approximately 20,000 people between 2010 and 2020. This is a 9.1% increase which is in line with the expected increase across the South West region as a whole (9.6%); however, this expected population increase in Swindon is anticipated to be higher than the England average which is predicted at 7.8%.

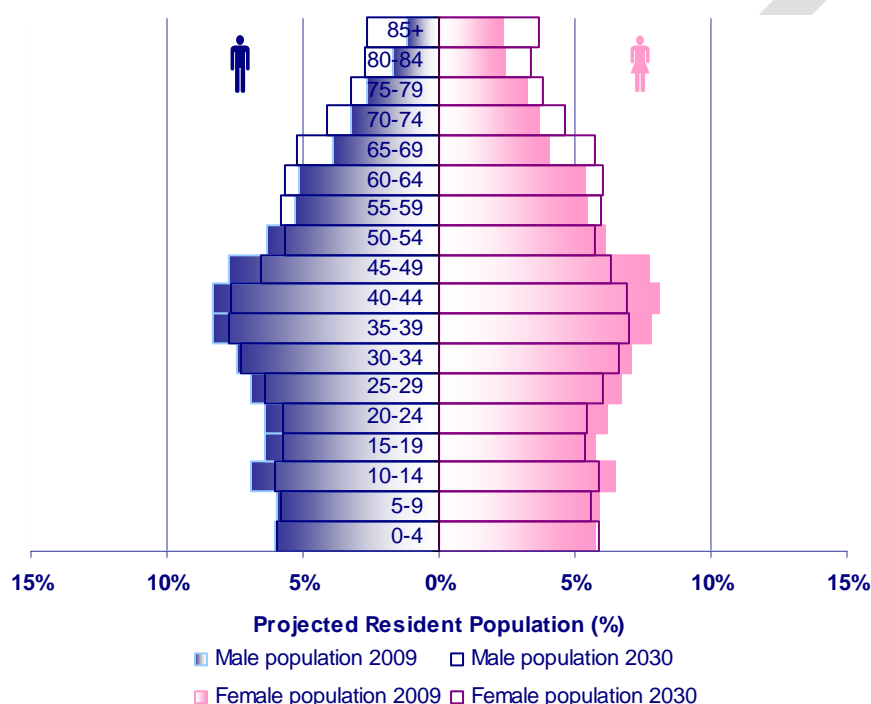
This trend is anticipated to continue, with an expected rise of approximately 27,000 residents in Swindon between 2010 and 2030. This expected rise of 18.7% is anticipated to be greater than the England average of 14.9%.

³ ONS 2008 mid year population estimates

In order to effectively plan according to need, it is important to understand which particular age groups of the population are likely to increase the most. This is because specific age groups will place burdens on health and social care services in different ways.

The population pyramid in Figure 2.2 indicates that the number of children (aged 0-9yrs) in Swindon will remain relatively stable over the next 20 years. In addition, the pyramid shows that there will be a slight decrease in the proportion of people aged between 20 and 55yrs. However, it is important to note that the number of people in Swindon aged 65 years or above will increase by 64.1% over the next 20 years.

Figure 2.2: Swindon’s current and projected population by age and gender⁴



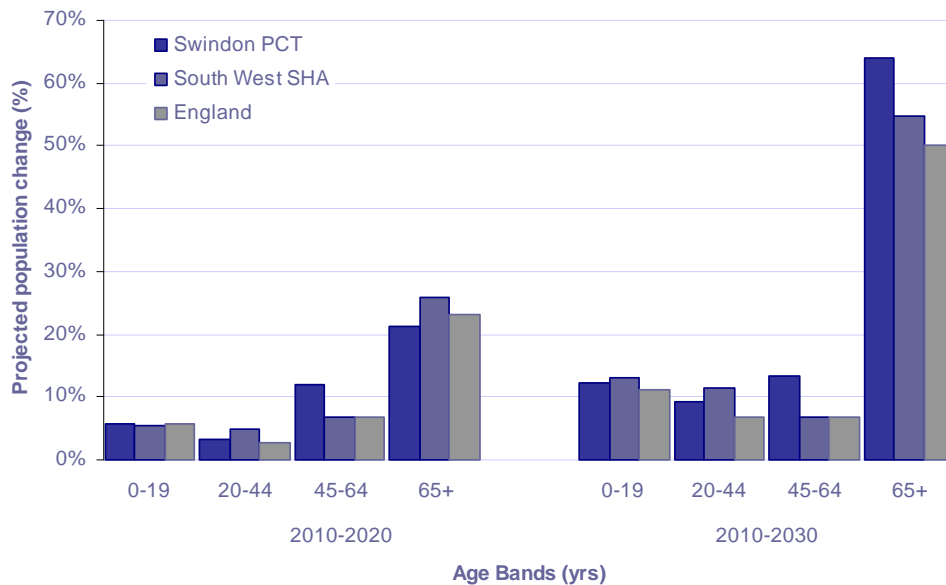
When considering population increases it is also important to account for the growth of Swindon’s population against local and national benchmarks. In doing so we can gain a better understanding of age-related issues that will be specific to Swindon. Figure 2.3 demonstrates that in comparison with the South West and England the increase in the number of children and young people (aged 9-19yrs) are comparable, and that despite the local increase in those aged 65yrs+ this is inline with both national and regional expected increases.

However, there will be an above average increase in Swindon residents aged between 44yrs and 65yrs when compared with projected figures for the South West and England. Between the ages of 44yrs and 65yrs individuals are most likely to develop a number of diseases including heart disease and diabetes.

Figure 2.3: Projected changes in population by age band and region⁵

⁴ ONS 2008 mid year population estimates

⁵ ONS 2008 mid year population estimates



It should be noted that these population projections are based on birth and death rate estimates from the Office of National Statistics. They take some account of migration, but do not account for local housing development. Since Swindon is a new and developing town, rates of growth, particularly of those of working age, may be underestimated.

In order to account for this alteration, the Local Authority is currently commissioning population projections at a local level. These projections will incorporate planned housing developments, which until recently included development, and therefore population increases, on the following Brownfield sites: Abbey Meads, Central, Eastcott, Old Town-Lawn, Wroughton-Chiseldon and the Eastern Development Area (to the east of the A419). The new figures produced by the Local Authority will take into account housing development revisions brought about by the current economic climate. It is anticipated that these projections will be released in early 2010. The revised estimates will also indicate in which geographical areas these age-specific population changes will occur.

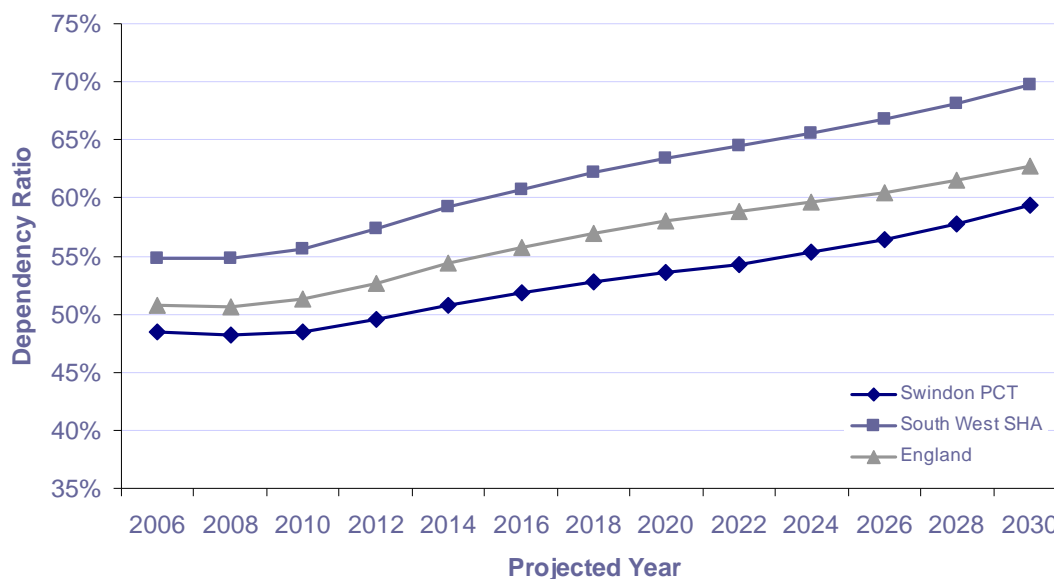
2.3 Dependency Ratio

In the United Kingdom, it is expected that the proportion of the population who are of working age is expected to decline as the numbers of older people increase and the fertility rate falls. Figure 2.3, shows that this trend is also true for Swindon (although the decline in people of working age in Swindon is expected to occur at a slower rate than the rest of the country). This population trend is measured by the dependency ratio – the number of non-working age people (aged 0-15yrs and 65yrs and over) as a percentage of people of working age (16-64yrs)⁶.

Figure 2.4 shows that the dependency ratio in Swindon is currently slightly lower than the national and South West average and is expected to increase in a similar way to the national trend over the next 20 years.

Figure 2.4: Projected dependency ratio by region (2006 to 2030)

⁶ ONS 2008 mid year population estimates



This dependency ratio is important because as it increases, there will be increased strain on the productive part of the population to support upbringing and pensions of the economically dependent. This can have a direct impact on financial elements related to the care of children and/or older people which can leave these groups vulnerable to health and social care problems.

2.4 Black and Ethnic Minority Communities

In 2001 the black and ethnic minority (BME) population comprised 4.8% of Swindon's total population⁷. In 2007 it was estimated that this population had grown to 11.1% of Swindon's total population. This is lower than the national average in 2007 of 15.2%, but higher than the South West average of 7.3%⁸.

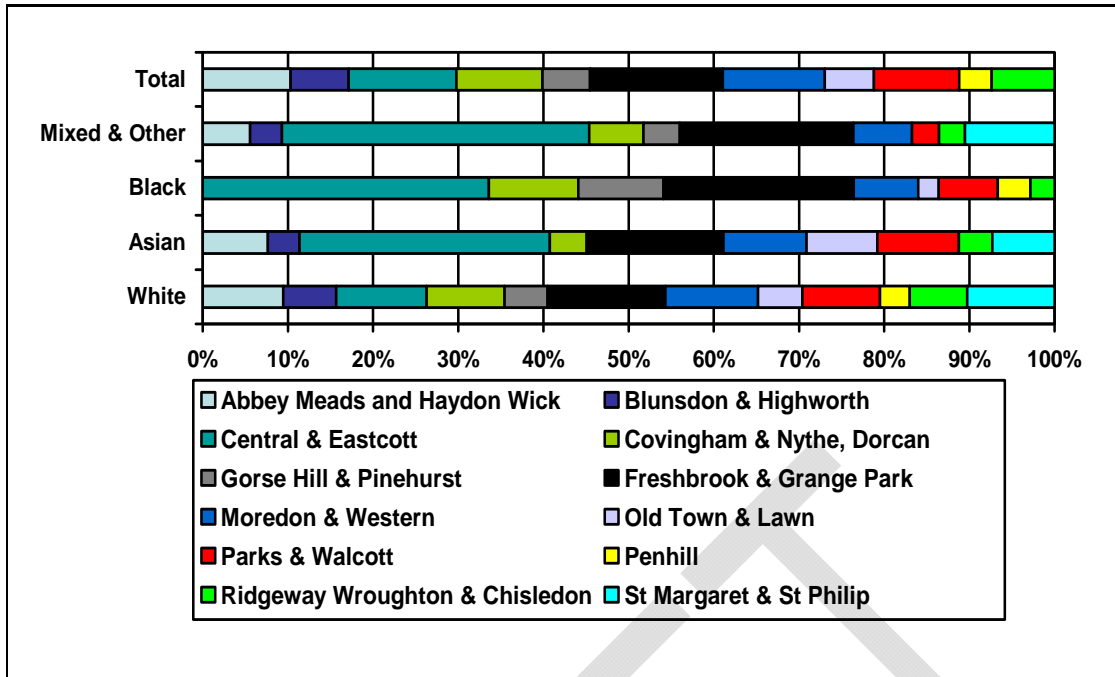
In addition, Figure 2.5 shows that the proportion of BME populations differs widely according to location with the vast majority of BME residents in Swindon living in the five most deprived wards. For example, Swindon Borough Council's Housing Needs Survey found that approximately one thousand BME households were concentrated in the Central and Eastcott sub-area of Swindon, three times the number of BME residents than Swindon as a whole. Five hundred BME households were located in the Freshbrook and Grange Park areas of the town. The Penhill area was found to be the least likely to have BME households (30).

Figure 2.5: Geographical location of Ethnic Groups (2006)⁹

⁷ ONS 2001 Census

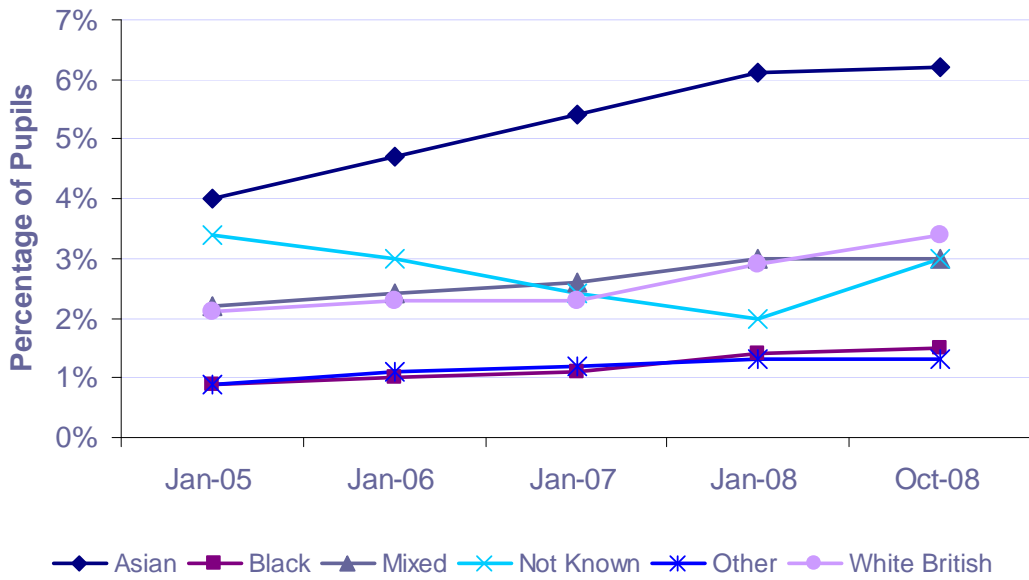
⁸ ONS 2008 Mid Year Population Estimates

⁹ Swindon Borough Council, Housing Needs Assessment



More recent BME population patterns can be seen by analysing school census data. Figure 2.6 indicates that there have been steady increases in pupils from all ethnic backgrounds since 2001; faster rates than total pupil numbers have risen. It should be noted also, that the number of pupils whose BME is unrecorded or not know has improved, indicated by an overall decrease on the graph.

Figure 2.6: Ethnic background of school (primary and secondary) pupils in Swindon (Jan 05 to Oct 08)¹⁰



Further analysis indicates that similar to the adult population, primary and secondary schools in Swindon have a higher population of Asian, Black and Mixed Heritage pupils than (statistically similar) neighbouring Local Authorities, but a similar

¹⁰ School Census 2008

population of Chinese and White Other ethnic groups. All values are lower than percentages for England as a whole.

There are also large school-by-school differences in BME pupil populations. For example, in Swindon the proportion of primary school children from BME backgrounds ranges from 2% in Covingham Park Primary School (in Central South) to 75% of pupils from Drove Primary School (in the Central North)¹¹.

In addition, the percentage of pupils with English as a second language has increased from 8% of the school population in January 2007 to 10% in October 2008. A total of 105 first languages other than English were reported in the October 2008 census, compared to 89 in January 2007¹².

More detailed information will be available from the 2009 Swindon Black and Minority Ethnic Groups Health Care Needs Assessment due to be published at the beginning of 2010.

2.5 Migration

BME population estimates are based on ONS mid year estimates which have been calculated using the 2001 census data, so although the figures give a good estimation of BME population growth they do not account for changes in BME populations due to migration.

Migration rates can be estimated using data from the Department of Work and Pensions which records the number of National Insurance number registrations to adult overseas nationals entering the UK (NINO).

Latest NINO figures show that the number of overseas nationals coming to Swindon to work is steadily increasing, at a faster rate (in proportion to total population size) than that for the South West and England as a whole. Figure 2.7 indicates that Swindon now has a rate of NINOs that is in line with the City of Bristol, higher than the England average and almost twice as high as the South West average.

Figure 2.7: New National Insurance number registrations from overseas nationals by region (2004 to 2008)¹³

¹¹ School Census 2008

¹² School Census 2008

¹³ Department of Work and pensions: New National Insurance number registrations from overseas nationals

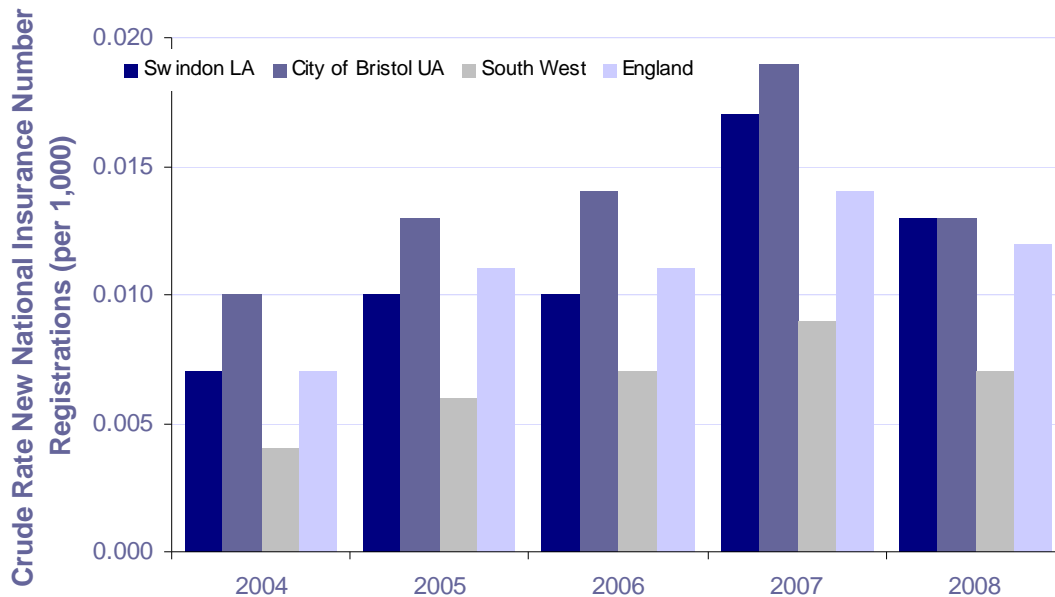
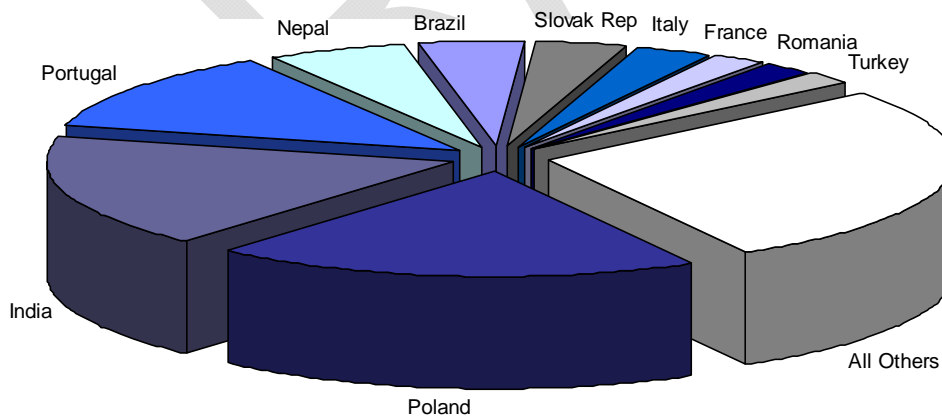


Figure 2.8 indicates that the majority of overseas individuals registering for new National Insurance numbers originate from Poland, India, Portugal, Nepal and Brazil. The rates of Polish nationals are comparable to the England average; however, the rates of those from India, Portugal, Nepal and Brazil are above the England average. This could largely be due to the relatively small number of individuals in Swindon and the fact that migration to a certain area is often concentrated to a few key nationalities because of family ties or international business's located within the area.

Figure 2.8: Nationality of overseas individuals applying for new national insurance numbers registrations in Swindon (2008/09)¹⁴



It should be noted also, that NINO figures only account for individuals that come to the country to work and do not take into account accompanying family or the numbers of individuals who come to the UK to seek asylum. Recent research suggests that approximately 10% of migrants in the South West intend to stay more than two years and half intend to stay for less than three months. It is therefore, important to understand the needs of this population who often have different health needs, are transient or difficult to track.

¹⁴ Department of Work and pensions: New National Insurance number registrations from overseas nationals

In addition, although migrants who move to the UK to work are generally considered to be young and healthy, their level of health generally relates to their country of origin and might be worse than the UK standard. The broad range of countries shown in Figure 2.8 also indicates the range of translation services that may be required within social and health services and the increasing demand for English Speaking for Other Languages (ESOL) courses which are likely to occur.

2.6 Vulnerable Adults

Projecting Adult Needs and Service Information (PANSI) provides projected prevalence rates to estimate the impact of: learning disabilities, including Down's syndrome, autistic spectrum disorders; moderate or serious physical disability (including personal care, stroke, visual impairment and those unable to work), mental health problems including drugs and alcohol, suicide, and early onset dementia.

2.6.1 Down's Syndrome

Individuals with Down's syndrome are more likely to live with heart conditions, sight and hearing problems, thyroid and obesity problems and a lowered immune system in comparison with the rest of the population. They may also experience barriers when accessing health and social care services¹⁵. Table 2.6.1 outlines the number of people in Swindon projected to have Down's syndrome.

Table 2.6.1: Projected Down's Syndrome Prevalence in Swindon PCT¹⁶

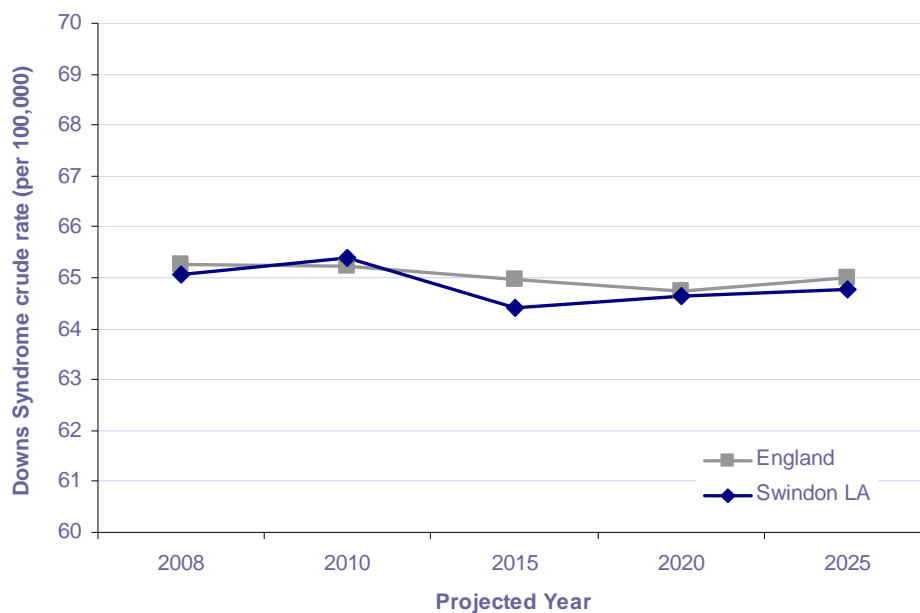
	2008	2010	2015	2020	2025
Swindon PCT	76	78	80	83	85

Figure 2.9 suggests that the rate of Down's syndrome in Swindon is comparable (and not statistically significantly different) from projections for England.

Figure 2.9: Population Aged 18 to 64 Projected to have Down's Syndrome

¹⁵ <http://www.nhs.uk/Conditions/Downs-syndrome/Pages/Introduction.aspx>

¹⁶ PANSI: Projecting Adult Needs and Service Information. www.pansi.org.uk



Projected prevalence rates for Down's syndrome are based on two studies which estimated the prevalence of Down's syndrome to be between 5.9 per 10,000 of the general population¹⁷ and 6.6 per 10,000 of live births (according to the Clinical and Health Outcomes Knowledge Base). The mean of these rates, 6.25 per 10,000 population is therefore used.

2.6.2 Autistic Spectrum Disorders

Individuals with autistic disorders are more likely to live with sensory and social difficulties and learning disabilities that may lead to barriers when accessing health and social care¹⁸. Table 2.6.2 indicates that as the population grows the number of people with autistic disorders is predicted to increase.

Table 2.6.2: Number of persons in Swindon PCT (aged 18-64) projected to have autistic spectrum disorders¹⁹

	2008	2010	2015	2020	2025
Swindon PCT	1,213	1,240	1,286	1,325	1,356

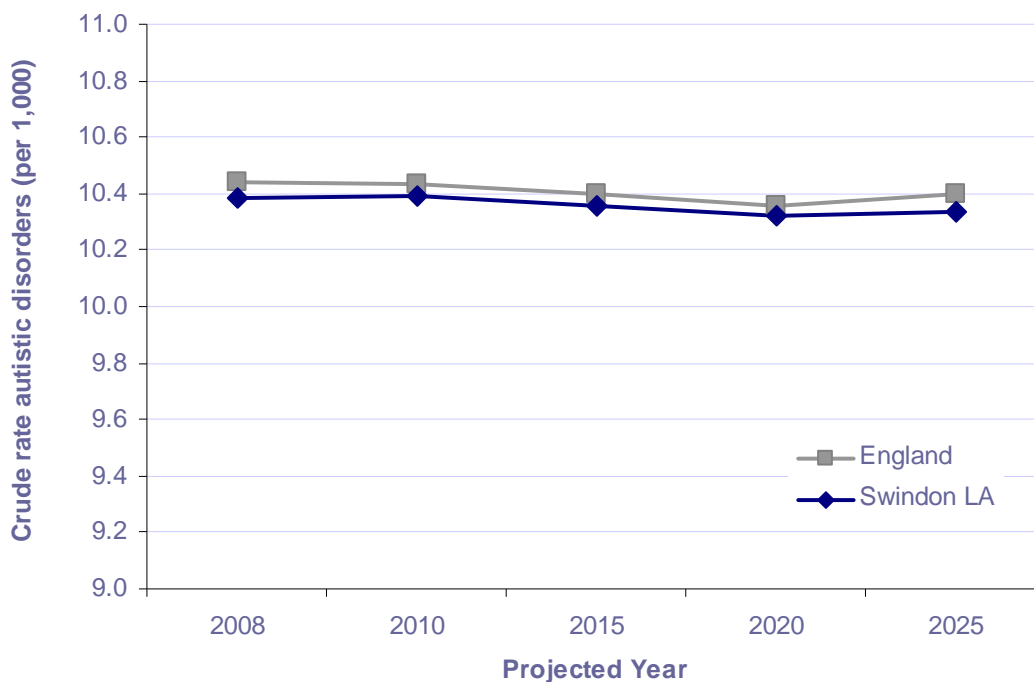
Figure 2.10 suggests that the rate of autistic disorders in Swindon is predicted to remain stable and comparable (i.e., not statistically significantly different) to the projections for England.

Figure 2.10: Population Aged 18 to 64 Projected to have Autistic Spectrum Disorders

¹⁷ Mantry, D., et al, *The prevalence and incidence of mental ill-health in adults with Down syndrome*, Journal of Intellectual Disability Research, 52(2), February 2008, pp.141-155

¹⁸ <http://www.nhs.uk/conditions/autism-aspergers/>

¹⁹ PANSI: Projecting Adult Needs and Service Information. www.pansi.org.uk



Projections in Table 2.6.2 and Figure 2.10 are based on the report of a study conducted by Baird, G. et al (2006)²⁰.

2.6.3 Alcohol and Illicit Drug Dependence

Individuals with alcohol and drug dependence issues are more likely to experience social and financial deprivation, have poorer physical and mental health and may also experience barriers when accessing health and social services.

Alcohol dependence is defined as people drinking above recommended levels and experiencing harm and symptoms of dependence. The overall prevalence of alcohol dependence is predicted to be 3.6%, with 6% of men and 2% of women meeting criteria nationally. This represents 1.3 million people with alcohol dependence nationally in 2008.

Evidence suggests that there is considerable regional variation in levels of alcohol-related need. Prevalence of alcohol dependence ranges from 1.6% to 5.2% by region, with Swindon experiencing rates similar to that of England as a whole. Projections (see Figure 2.11 and Figure 2.12) also suggest that this number will remain in line with the England average.

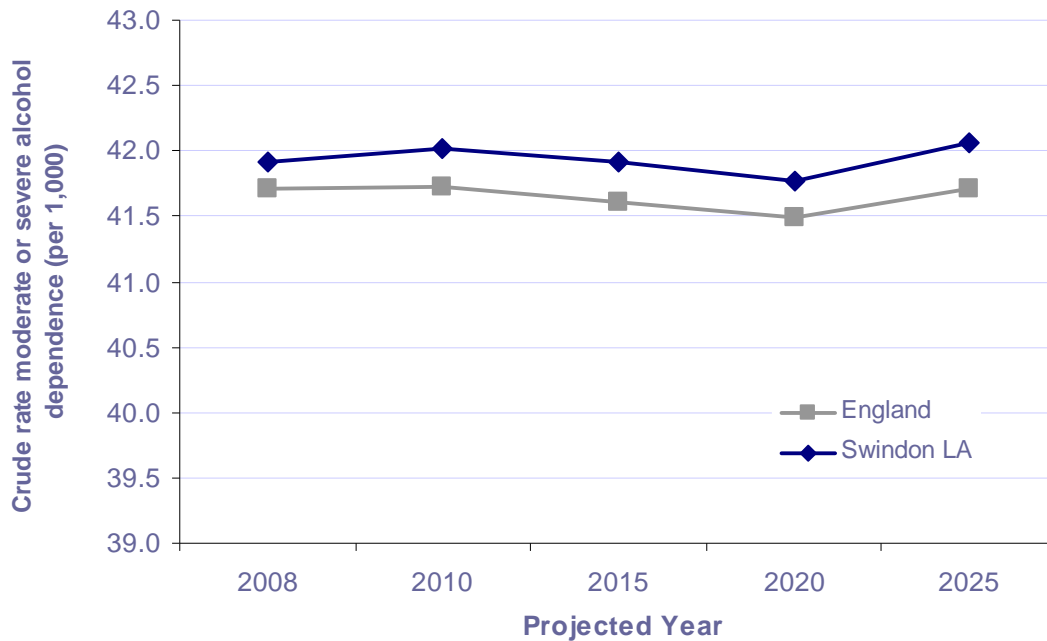
There is an associated decline in all alcohol use disorders with age. And black and minority ethnic groups have a similar prevalence of alcohol dependence to the white population. However, Figure 2.13 and Figure 2.14 demonstrate that alcohol and drug dependency rates are statistically significantly higher for men than women ($p < .05$).

At present it is predicted that 4,896 individuals are dependent on alcohol in Swindon and this is expected to rise to 5,206 over the next 5yrs (5,518 by 2025). Similarly,

²⁰ 'Prevalence of disorders of the autism spectrum in a population cohort of children in South Thames: the Special Needs and Autism Project (SNAP)', Baird, G. et al, The Lancet, 368 (9531), pp. 210-215, 2006.

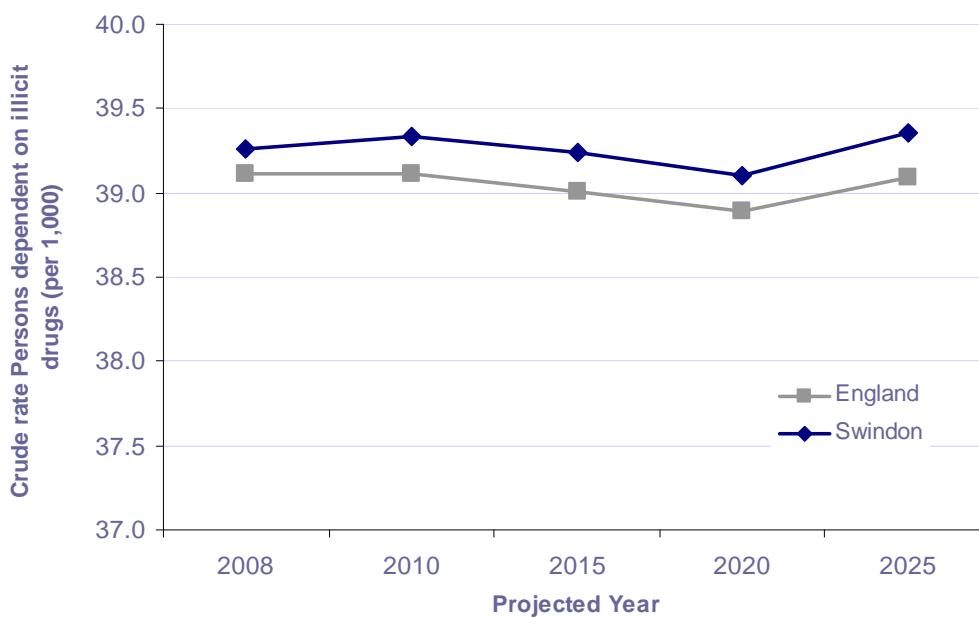
4,586 individuals are estimated to be currently dependent on illicit drugs in Swindon, with this figure expected to rise to 4,874 over the next five years (5,164 by 2025).

Figure 2.11: Population Aged 18 to 64 Projected to have Moderate or Severe Alcohol Dependence



The information surrounding alcohol dependence is based on the Alcohol Needs Assessment Research Project (ANARP), The 2004 national alcohol needs assessment for England, 1 November 2005, Department of Health. This report contains the findings for the first alcohol needs assessment in England conducted on a national scale.

Figure 2.12: Population Aged 18 to 64 Projected to be Dependent on Illicit Drugs



The information surrounding drug misuse is based on the Office for National Statistics report, *Psychiatric Morbidity Among Adults Living in Private Households*, 2000. Singleton, N., Bumpstead, R., O'Brien, M., Lee, A. and Meltzer, H., Office for National Statistics

Figure 2.13: Population in Swindon Aged 18 to 64 Projected to have Moderate or Severe Alcohol Dependence by Sex

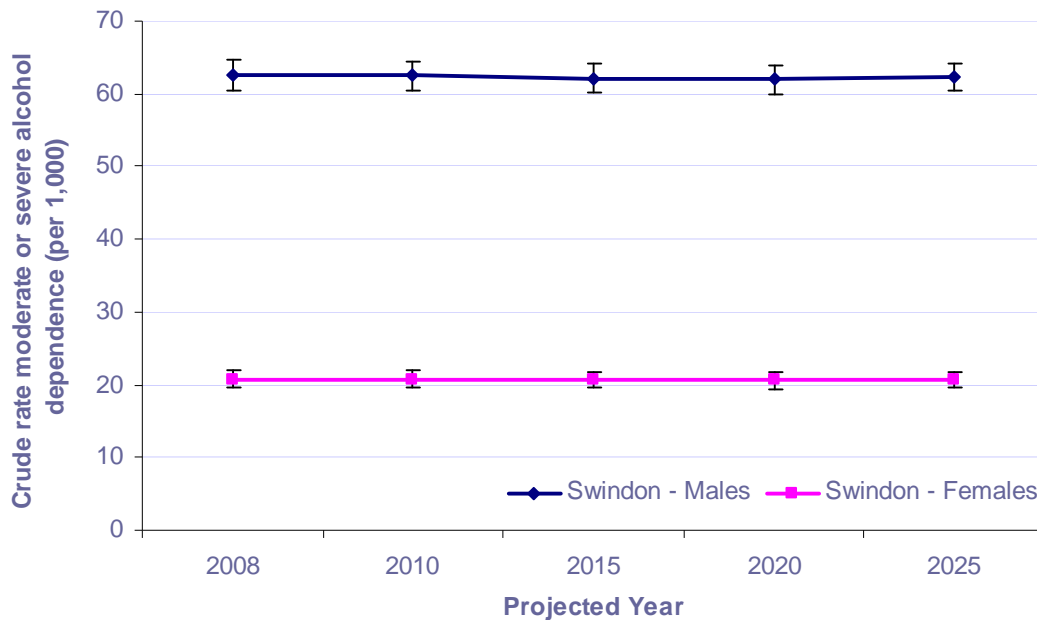
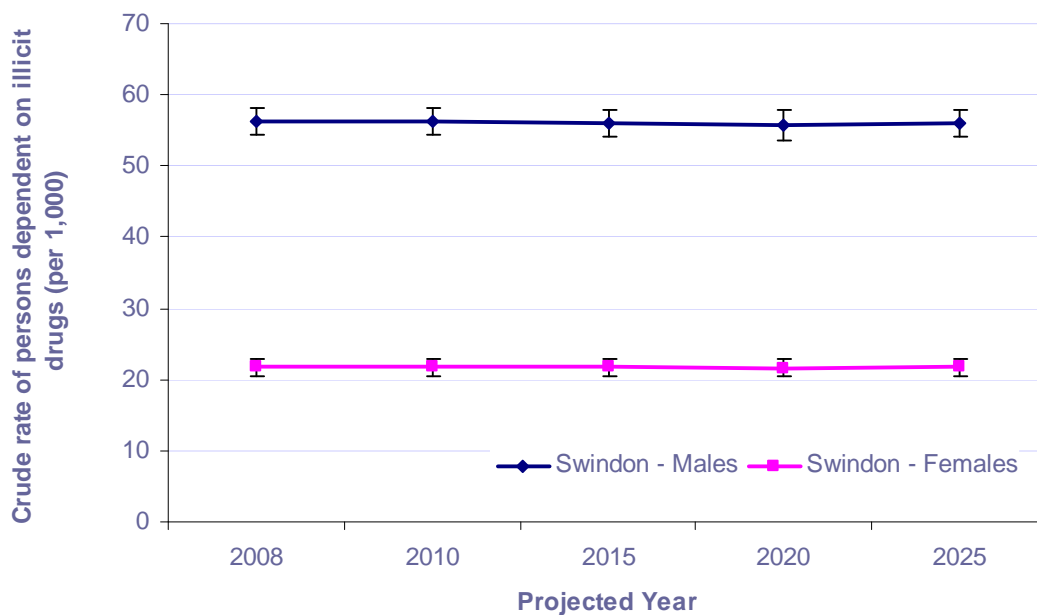


Figure 2.14: Population in Swindon Aged 18 to 64 Projected to be Dependent on Illicit Drugs by sex



2.6.4 Physical Disability

Individuals with physical disabilities often have poorer physical and mental health. In addition to their actual disability, poor health may also result from this population being less able to work, meaning that they are more likely to experience social and financial deprivation. Individuals with physical disabilities may also experience barriers to accessing services and receiving care.

Table 2.6.3 indicates that the number of individuals in Swindon who have a moderate to severe physical disability is increasing; with this comes a steady increase in the number of people who are permanently unable to work because of a physical disability.

Table 2.6.3: Number of people aged 18-64 in Swindon PCT who are projected to have a physical disability or are permanently unable to work because of a physical disability²¹

	2008	2010	2015	2020	2025
Moderate to severe physical disability (N)	11,775	12,109	12,660	13,353	13,792
Physical disability and permanently unable to work (N)	4,930	5,090	5,387	5,709	5,836

Projected rates set out in Figure 2.15 demonstrate that at present Swindon is estimated to have statistically significantly fewer individuals with moderate to severe physical disabilities than England as a whole ($p < .05$). However, it is projected that this number will grow at a faster rate than for England as a whole; and by 2025 Swindon will have a similar rate of persons with physical disabilities to the national average.

Similarly, Figure 2.16 demonstrates that the rate of individuals unable to work because of physical disability will grow at a faster rate than the projections for England as a whole. Figure 2.17 also shows that this rate is statistically significantly higher in men than it is in women in Swindon ($p < .05$).

Figure 2.15: Population aged 18-64 predicted to have a moderate or serious physical disability²²

²¹ PANSI - Projections based on Health Survey for England, 2001

²² PANSI - Projections based on Health Survey for England, 2001

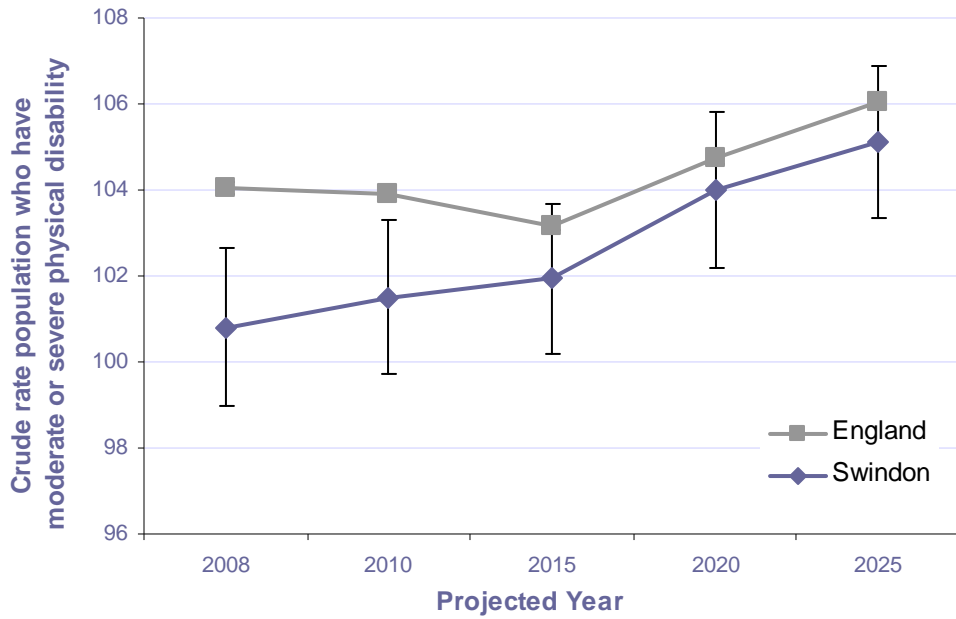


Figure 2.16: Population aged 18-64 predicted to have a physical disability and be permanently unable to work²³

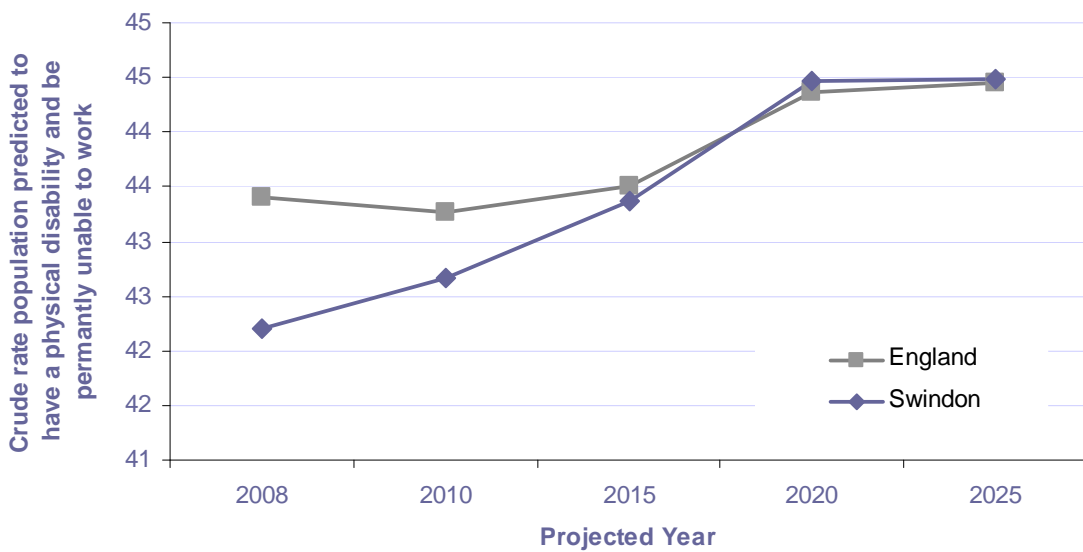
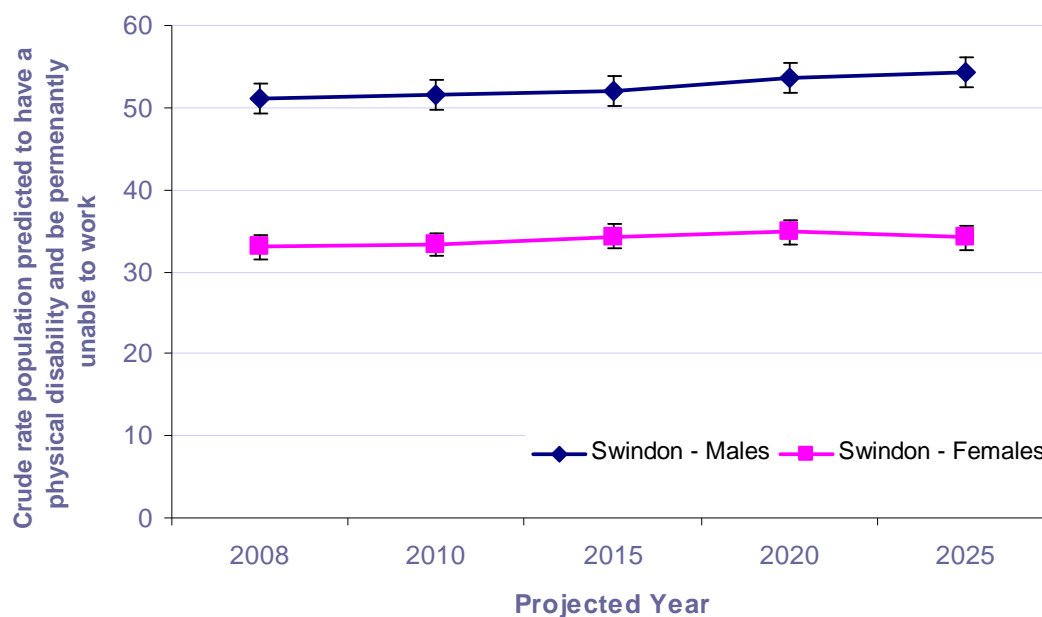


Figure 2.17: Population in Swindon aged 18-64 predicted to have a physical disability and be permanently unable to work by sex

²³ PANSI - Projections based on Health Survey for England, 2001



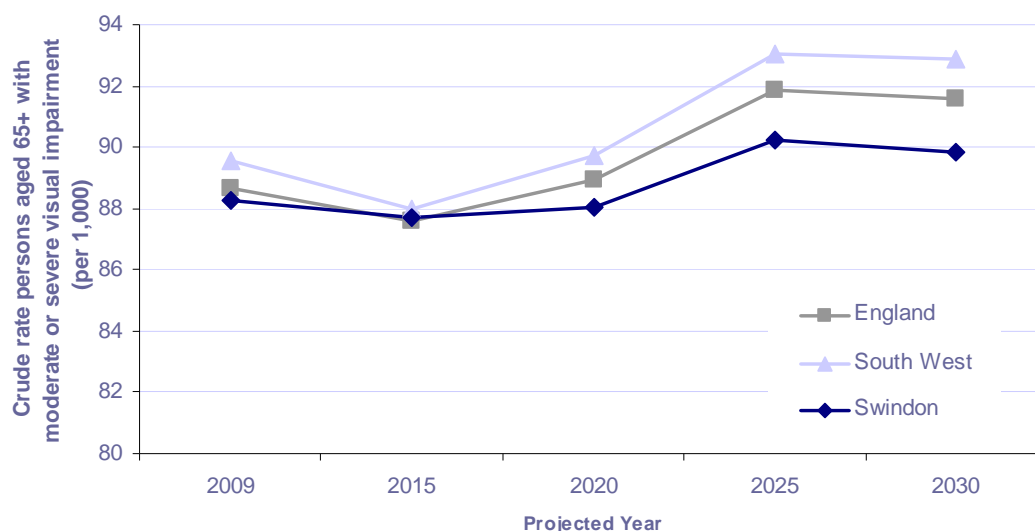
2.6.5 Visual Impairment

Insufficient support for individuals with visual impairment can lead to social and economic deprivation, loneliness and problems with service access²⁴. A recent qualitative survey by the Royal National Institute of Blind People (RNIB), which interviewed ten Swindon residents with visual impairments, found that the majority were unaware of the emotional support and social care provision available to them. Limited involvement and consultation of blind people in service development was also reported.

The overall projected prevalence of visual impairment in Swindon is similar compared with England and the South West (Figure 2.18). In those aged 65-74 years and over with visual acuity (VA) of less than 6/18 (moderate or severe) this is 5.6%, and 12.4% for those aged over 75. VA of less than 6/18 is largely used as the point which approximates to the statutory threshold for qualifying as registered severely sight impaired (blind) or registered sight impaired (partially sighted).

Figure 2.18: Population aged 65yrs+ predicted to have a moderate or severe visual impairment

²⁴ Royal National Institute of Blind People



Although local rates of visual impairment are comparable to the South West and England, an ageing population means that the number of people with visual impairments in Swindon is predicted to steadily increase over the next 5 years (see Table 2.6.4)

Table 2.6.4: Projected Number of Swindon Residents with Visual Impairments²⁵

Age Group	Number of individuals with visual impairment				
	2009	2010	2011	2012	2013
65-74yrs	801	818	834	879	918
75yrs+	1,600	1,649	1,674	1,699	1,736
65yrs+	2401	2467	2508	2578	2654

Figure 2.19 and Table 2.6.4 are based on the prevalence of visual impairment in the UK, A review of the literature, by Tate, Smeeth, Evans, Fletcher, Owen and Rudnicka, RNIB, 2005.

Projected prevalence of visual impairment suggests that Swindon should have similar rates of visual impairment to the South West and England. However, in Swindon there are currently 590 registered blind and partially sighted people, a rate of 3.1 per 1,000 residents (see Figure 2.19). This rate is statistically significantly lower than registered rates in both the South West and England ($p < .05$). This supports the qualitative evidence presented above that visually impaired individuals are not accessing support services at an adequate rate.

Figure 2.19: Individuals registered as blind or partially sighted (2006, 2008) (95% confidence intervals shown)²⁶

²⁵ Projecting Older People Population Information System (POPPI). Department of Health (www.poppi.org.uk)

²⁶ NHS Information Centre: Adult Social Care Statistics

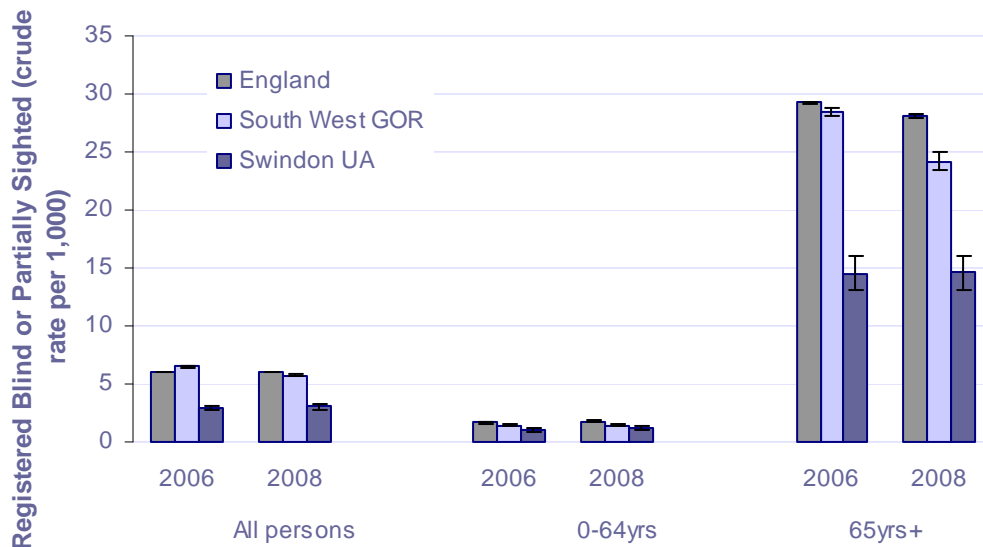
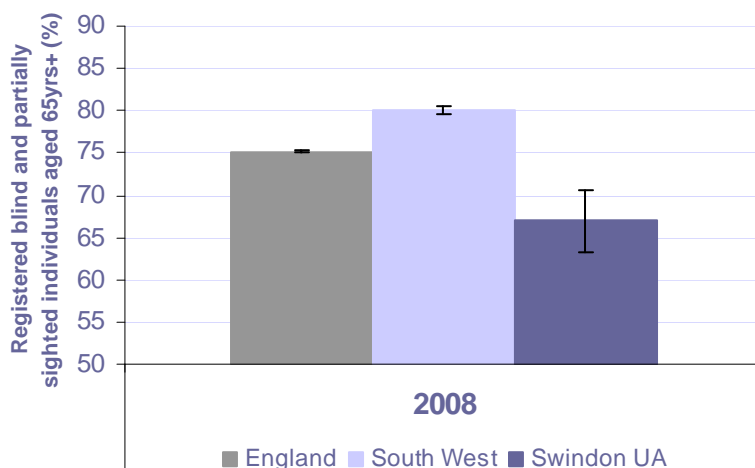


Figure 2.20 also shows that the proportion of individuals aged 65yrs+ that are registered as blind or partially sighted (as a total of those registered) is only 67% in Swindon compared with 75% in England and 80% in the rest of the South West (statistically significant $p < .05$). This implies that work is needed to engage more blind and partially sighted individuals to register particularly with the elderly.

In addition, evidence suggests that, in line with national and regional values 25% of individuals in Swindon who are registered as blind or partially sighted are also registered for another disability or impairment (including learning, physical, hearing impairment or mental health problems). This supports the RNIBs request for a dedicated Eye Clinic Liaison Officer at Swindon Eye Hospital.

Figure 2.20: Proportion of registered blind or partially sighted individuals aged 65yrs+ (95% confidence intervals displayed)



Although visual impairment in old age is common, it can be caused by a number of health conditions and may therefore be preventable for some. For example, at a national level smoking doubles a person's chance of sight loss; while obesity has been linked to sight loss in particular through the development of age-related macular degeneration and diabetic retinopathy. Research shows that the fear of blindness

can act as a powerful incentive for people to take preventative action, including stopping or reducing smoking and taking up exercise²⁷.

2.6.6 Dementia

Individuals with dementia are more likely to experience certain physical and mental health conditions including incontinence, accidents and falls, anxiety and depression²⁸.

With an increasingly elderly population predicted over the next 30 years, there is predicted to be a substantial increase in the number of individuals living in Swindon with dementia. Although the number of individuals with dementia in Swindon is expected to remain comparable to the England average, there are currently estimated to be 1,829 individuals with dementia in Swindon with this number expected to increase by 10.4% over the next 5 years (see Table 2.6.5).

Table 2.6.5: Number of Swindon residents projected to have dementia over next five years²⁹

	2009	2010	2011	2012	2013
65-69	96	100	102	111	117
70-74	180	183	183	183	189
75-79	329	329	329	334	341
80-84	482	493	503	516	526
85+	771	816	836	861	881
Total 65+	1,859	1,920	1,953	2,005	2,053

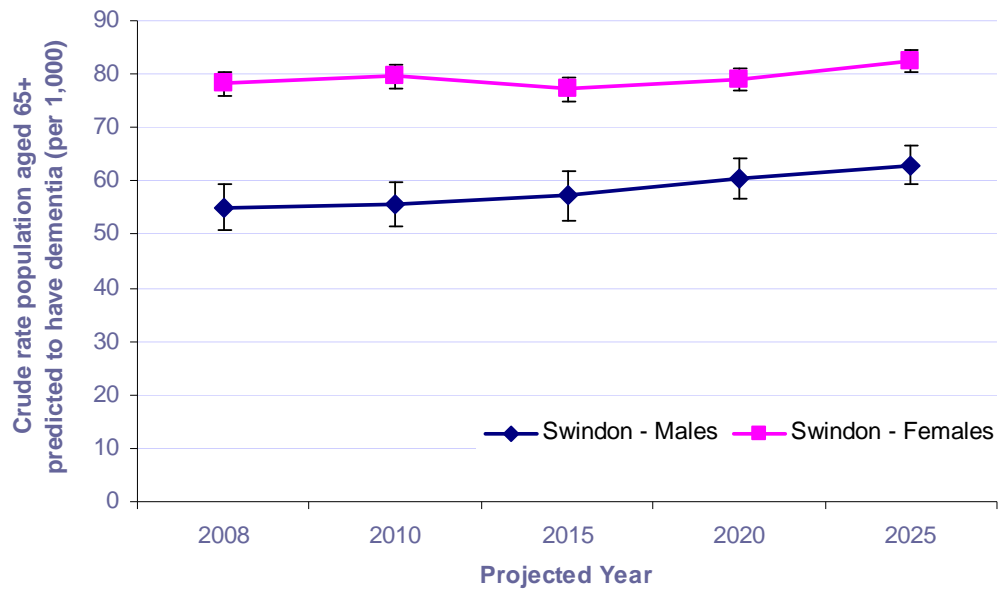
Figure 2.21 also demonstrates that females are statistically significantly more likely to experience dementia than males. This is largely due to women's longer life expectancy.

Figure 2.21: Population in Swindon aged 65yrs and over predicted to have dementia by sex

²⁷ AMD Alliance International Campaign Report 2005. Awareness of age-related macular degeneration and associated risk factors.

²⁸ <http://www.nhs.uk/pathways/dementia/Pages/Landing.aspx>

²⁹ Projecting Older People Population Information System (POPPI). Department of Health (www.poppi.org.uk/)



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2.6.7 Learning Disabilities

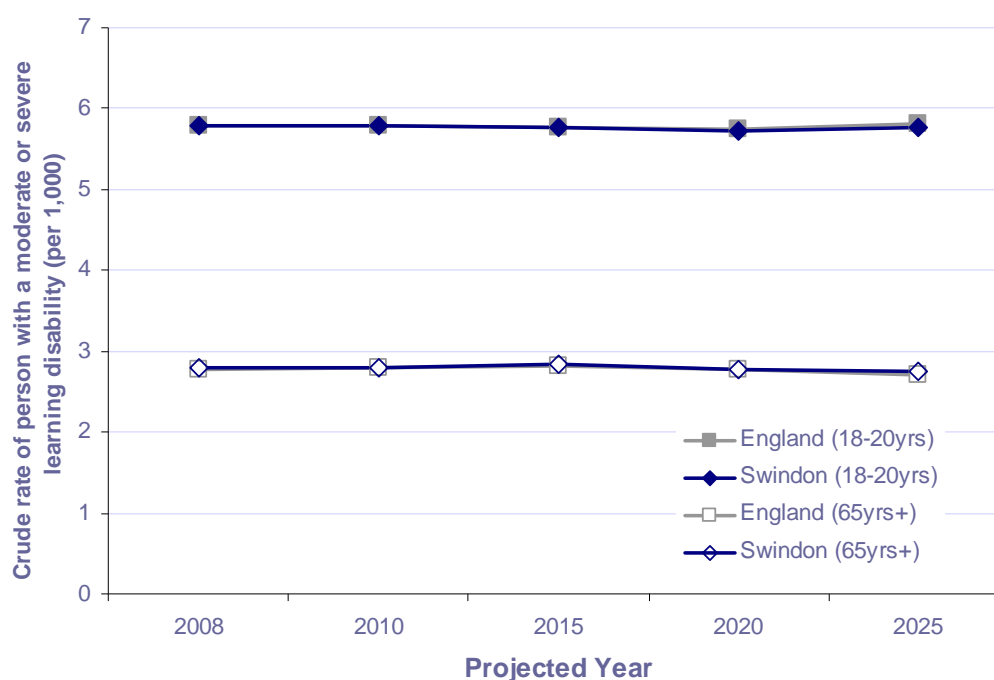
Individuals with learning disabilities are often likely to experience mental and physical health problems (including conditions such as diabetes); they may also experience barriers to receiving social and health care.

Table 2.6.6 estimates that there are currently around 600 persons in Swindon (aged 18-64yrs) with moderate to severe learning disabilities (around 3% of the total local population) and this number is expected to increase as the local population grows. Figure 2.22 indicates that this figure is comparable with the projected England average.

Table 2.6.6: Number of people in Swindon aged 18-64yrs with moderate to severe learning disabilities³⁰

		2008	2010	2015	2020	2025
All learning disabilities (N)	18-64yrs	2,952	3,018	3,134	3,228	3,307
	65yrs+	554	577	658	734	826
Moderate to severe learning disabilities (N)	18-64yrs	675	690	715	736	757
	65yrs+	75	78	90	98	109

Figure 2.22: Population aged 18-64 projected to have a moderate to severe learning disability³¹



³⁰ Projecting Adult Needs and Service Information (PANSI). <http://www.Pansi.org.uk>

³¹ Projecting Adult Needs and Service Information (PANSI). <http://www.Pansi.org.uk>

SECTION 3:

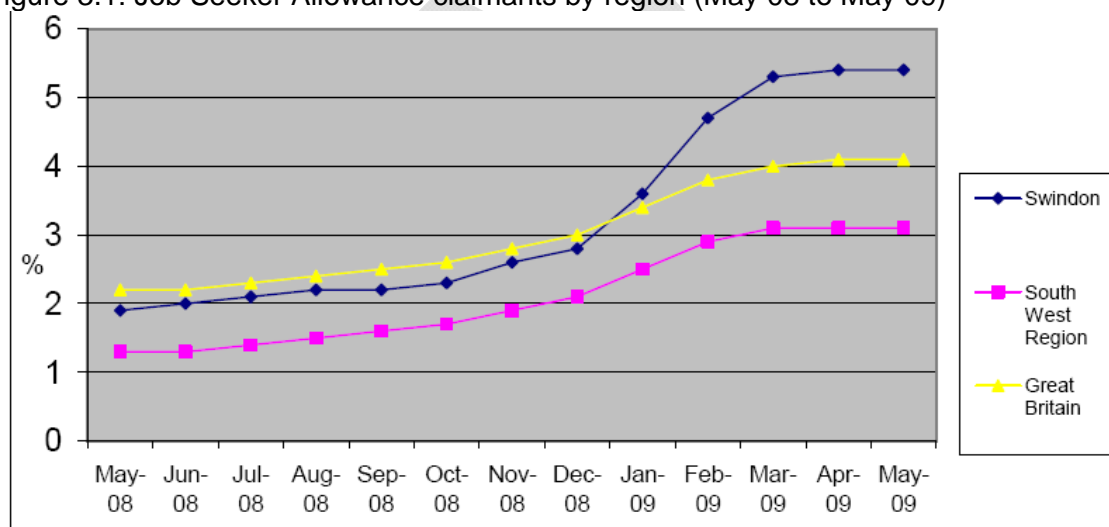
3 Swindon, the Wider Environment and Socio-Demographic Determinants of Health

3.1 Employment

Independent research has consistently shown that unemployment is associated with poor physical and mental health as well as excess mortality³². Reasons for this relationship include an increase in financial strain, poor education, worse housing, self-destructive behaviours and greater deprivation.

Unemployment can be measured by the number of people claiming Job Seeker's Allowance (JSA). Until recently, (Jan 09) the number of people claiming JSA in Swindon was slightly above the South West average but comparable to the number in Great Britain as a whole. However, Figure 3.1 shows that since February 09 the number of people in Swindon claiming JSA has increased at a considerably faster rate than both the South West and Great Britain. Indeed, Swindon now ranks 85th out of 408 local authorities according to the percentage of the workforce now claiming JSA. This has a potential impact for population health as this increase in unemployment may mean that Swindon's residents of working age could experience more health-related problems than those in other parts of the country.

Figure 3.1: Job Seeker Allowance claimants by region (May 08 to May 09)³³



In order to plan more effectively, it is important to know which residents are most likely to be affected by unemployment. Table 3.1.1 outlines JSA claims (as a percentage of the population), IMD score (a measure of deprivation or poverty) are also shown according to the ward in which people live. From the table it can be seen that Penhill, Parks and Walcot have the highest percentage of JSA claimants. These wards also have the highest deprivation scores in Swindon and correlation analysis indicates that more deprived wards in Swindon are statistically significantly more likely to claim JSA than those in less deprived wards ($r = .94, p < .01$). This suggests, therefore, that people who live in these areas are also potentially more likely to have poor health.

³² Bartley M, Ferrie J, Montgomery SM (2005). Health and Labour market disadvantage: unemployment, non-employment, and job security. In Marmot M & Wilkinson R (Ed.). Social Determinants of Health. OUP: Oxford.

³³ Swindon Economic Assessment: <http://www.ssep.org.uk/ssep/projects/economicassessment.htm>

Table 3.1.1: Job Seekers Allowance claimants and level of deprivation by ward (as of April 2009)³⁴

	Job Seekers Allowance Claimants as a % of the Working Age Population	IMD 2007
Penhill	10.8%	47.6
Parks	9.8%	43.0
Walcot	8.6%	31.8
Gorse Hill & Pinehurst	8.1%	31.2
Central	8.1%	24.7
Moredon	5.9%	21.5
Toothill & Westlea	6.1%	17.8
St Phillip	4.6%	15.9
Dorcan	6.4%	15.8
Eastcott	6.4%	15.7
Western	5.9%	14.9
Freshbrook & Grange Park	4.4%	12.3
Wroughton & Chiseldon	3.5%	11.3
Blunsdon	3.2%	11.0
St Margaret	3.4%	9.9
Highworth	3.7%	9.5
Covingham & Nythe	4.9%	8.6
Ridgeway	2.1%	8.2
Old Town & Lawn	3.9%	7.8
Haydon Wick	2.9%	6.8
Abbey Meads	3.9%	5.7
Shaw & Nine Elms	3.6%	5.5

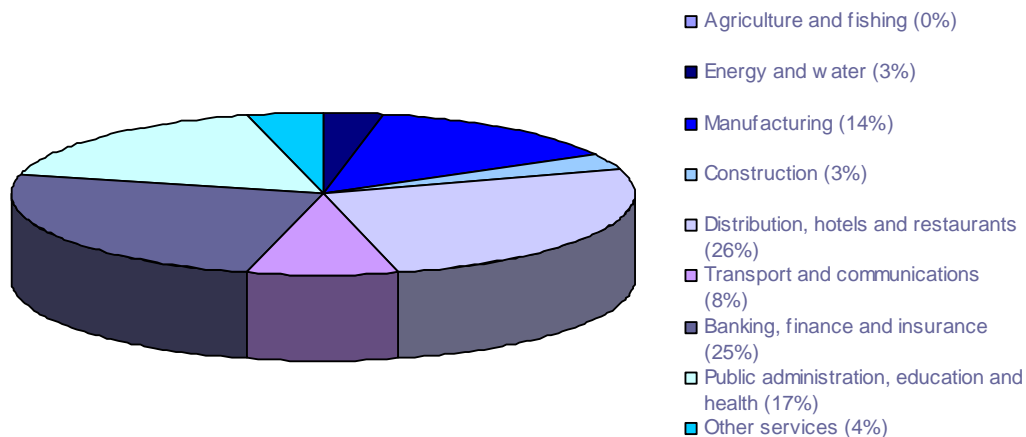
In addition to unemployment, people who have jobs with low security or low control are also more susceptible to poor mental and physical health.

Figure 3.2 shows that in Swindon, the majority of the workforce is employed in the banking and finance sector; however, a large proportion are employed in jobs such as construction and manufacturing which can be more susceptible to redundancy at times of economic difficulty.

Swindon is also home to a relatively small number of big companies who are responsible for employing a large percentage of the workforce. This means that during a time of economic instability, difficulties at one company can have wide reaching unemployment implications for many of Swindon's population. Examples, of this have been seen recently with the closure of the Woolworths distribution centre and the six month closure at Honda early in 2009.

³⁴ Swindon Economic Assessment: <http://www.ssep.org.uk/ssep/projects/economicassessment.htm>

Figure 3.2: Swindon employment by industry (2008)³⁵



For more information on employment and the economy please see the Swindon Economic Assessment developed by Swindon Strategic Economic Partnership and Swindon Borough Council.

<http://www.ssep.org.uk/ssep/projects/economicassessment.htm>

3.2 Education

Higher levels of education are generally associated with better health outcomes and better health behaviours. This relationship can be explained by both a higher level of income but also better health-related decisions and behaviours that typically accompany more educational attainment. Conversely, an area which has poor educational achievement or inequalities in education attainment would expect to have individuals with poorer health (or wide disparities in health status).

In Swindon educational achievement at age 16 (Key Stage 4) is relatively low, with 40.7% of pupils achieving five or more GCSEs at grades A*-C (including English and Maths). This figure is statistically significantly worse than the South West regional average and within the bottom 25th percentile for the whole of England (APHO 2009 Health Profiles). However, it is important to bear in mind that results for Swindon vary greatly by area and as

Figure 3.3 shows there is a 54 percentage point difference in GCSE pass rate between the highest and lowest achieving schools, with only 14% of 16 year olds in Penhill achieving 5 GCSE's and 68% of those in Old Town and Lawn, and Ridgeway

³⁵ Swindon Economic Assessment <http://www.ssep.org.uk/ssep/projects/economicassessment.htm>

achieving 5 GCSE's or more. Figure 3.4 confirms that there is a strong and statistically significant relationship ($r=-.80, p<.05$) between level of deprivation and school achievement.

Figure 3.3: GCSE (including English and Maths) attainment in Swindon by ward (2008)³⁶

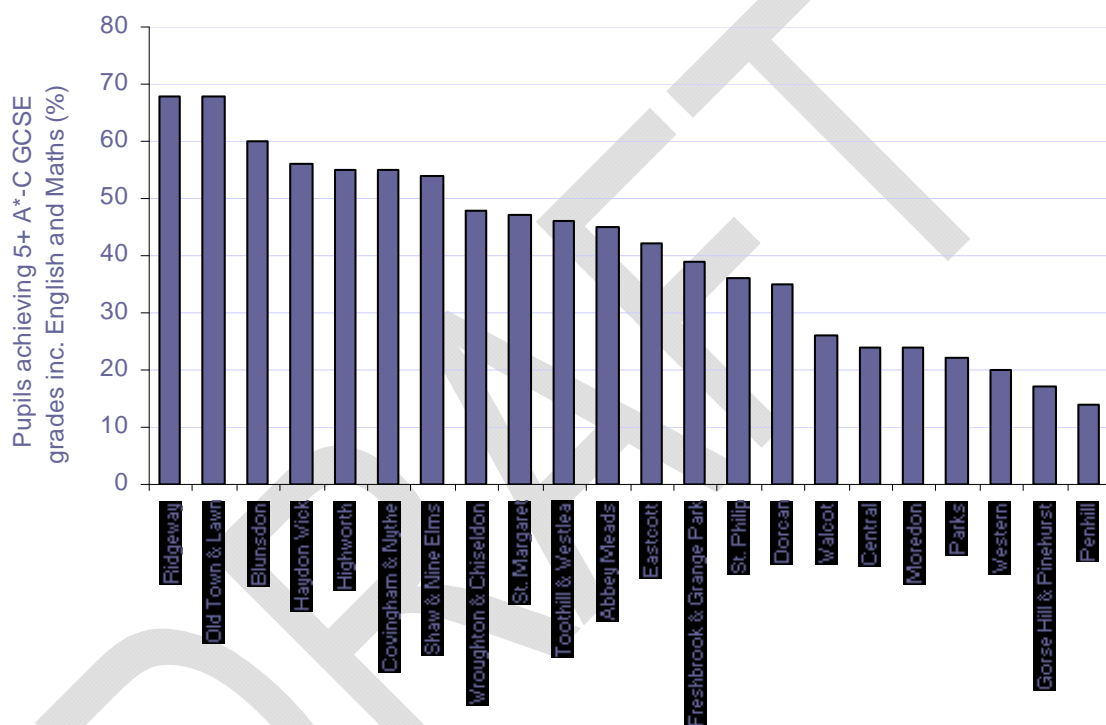
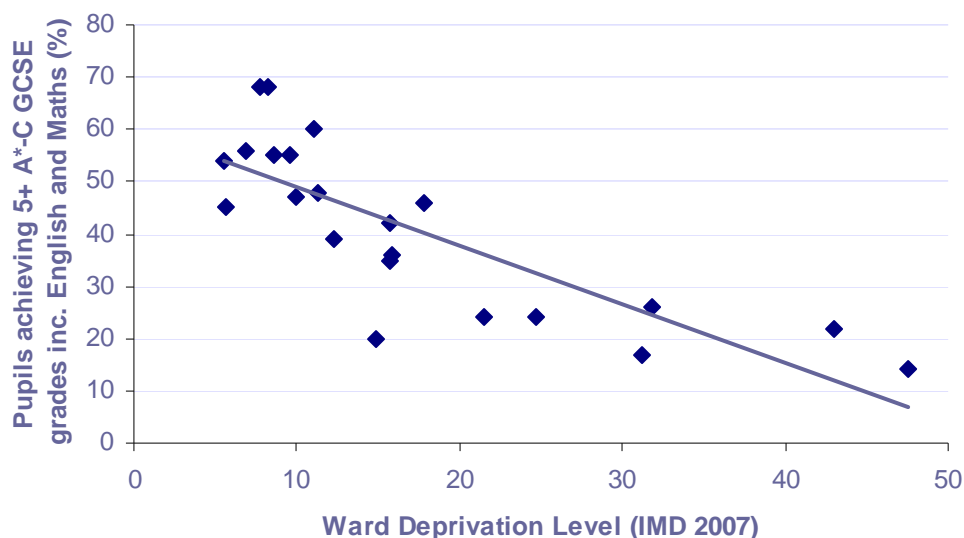


Figure 3.4: GCSE (including English and Maths) attainment in Swindon by ward level deprivation (2008)

³⁶ School Census 2008



Some differences in educational attainment also exist between BME groups. For instance, achievement of pupils from BME groups at Key Stage 4 (5 or more A*-C GCSEs in all subjects) is in line with the borough average. However, when taking into account English and Maths the GCSE achievement of BME groups drops to 4 percentage points below the borough average. This compares to 5% below the Swindon average in 2007³⁷.

Future attainment levels are hard to predict as there are many possible confounds. Despite the fact that secondary level achievement appears to have declined in recent years, Key Stage 1 and Key Stage 2 exam results show a recent reduction in the gap between lowest and highest achieving school. Swindon Borough Council has invested significantly in local schools to ensure that our schools meet future needs from population growth, attainment standards and an increasingly diverse community. For a more detailed analysis please see the 2009 Children and Young Peoples Needs Assessment developed by Swindon's Children and Young People's Strategic Partnership and Swindon Borough Council.

http://www.swindon.gov.uk/socialcare/cypsp/children_youngpeoples_plan.htm

In addition to the impact of a child's education on their own health, parental education can also determine a child's health status (as well as their own). For example, it has been found that higher maternal education is associated with lower rates of infant mortality and improved child nutrition at a national level³⁸.

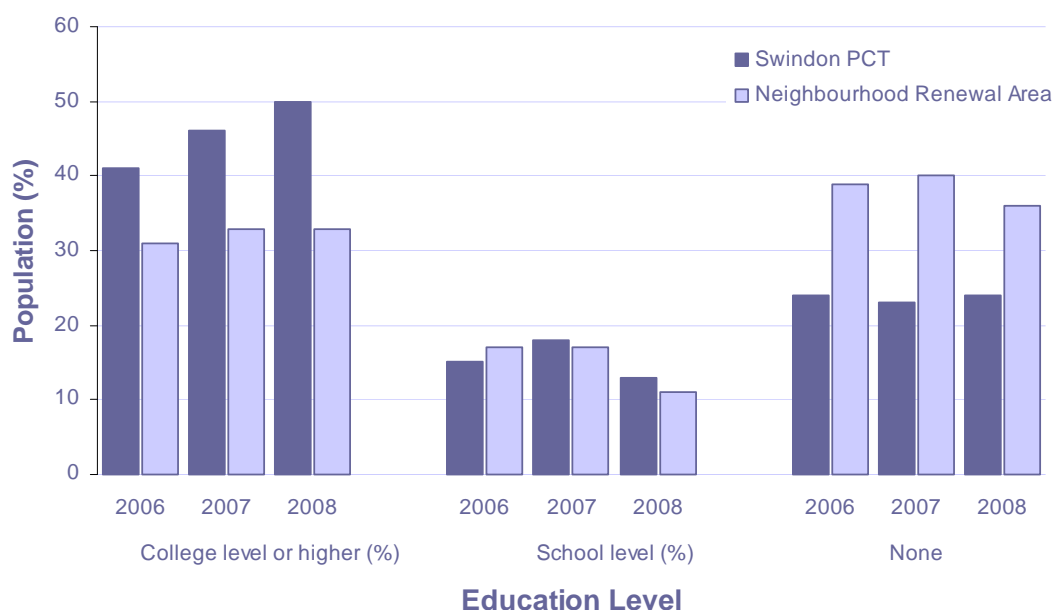
Results from the 2008 Swindon Super Survey demonstrate similar disparities in educational attainment for adults. For instance, Figure 3.5 illustrates that while 41% of adults in Swindon stated that they had achieved a college education or higher this figure was much less (only 31%) for those residents from Neighbourhood Renewal Areas (i.e., people living in one of the five most deprived wards in Swindon). Similarly, Figure 3.5 shows that the percentage of people in neighbourhood renewal areas who did not achieve any education is 12 percentage points higher than the Swindon average. It should also be noted that the Swindon PCT group contains results for all residents including those from NRAs. Educational attainment of non-NRA areas would be greater than the Swindon group if separate analysis of these

³⁷ School Census 2008

³⁸ Marmot M & Wilkinson R (Ed.). Social Determinants of Health. OUP: Oxford

groups was available, thus extending this education gap between NRA and non-neighbourhood renewal areas further.

Figure 3.5: Education level by Neighbourhood Renewal Area (2006 to 2008)³⁹



These disparities in educational achievement could, potentially, have an impact on the current and longer term health status and health-related behaviour of children (for example, with teenage pregnancy) and adults in Swindon.

3.3 Housing

A person's living environment may have a significant impact on their health either directly through actual living conditions or indirectly through level of poverty. For example, it is known that people who live alone (particularly those aged 65yrs+) are more susceptible to poor health (e.g., through falls etc), and that people that live in, or are waiting for council supported properties are more likely to suffer from poor health through greater levels of deprivation. People that live in houses of poor condition are also likely to suffer poor health particularly through over crowding or lack of central heating (especially those aged 65yrs+); while individuals with learning disabilities or those in contact with mental health services may also have special housing needs.

3.3.1 Temporary accommodation

In August 2009 there were 354 households in temporary accommodation. In 2007 this figure was 646.

In August 2009 there were also 10,781 households in Swindon either on the housing waiting list or transfer list. Table 3.3.1 outlines the breakdown of these numbers by property type.

Table 3.3.1: Households in Swindon on housing waiting list or transfer list (August 2009)⁴⁰

³⁹ Swindon Super Survey

⁴⁰ Swindon Borough Council. Housing Tenure Figures

No. of bedrooms	1	2	3	4	Total
Households on housing waiting list or transfer list	4,687	2,248	1,810	334	10,781

In Figure 3.6 these waiting list values are considered in terms of household need. It was found that 309 (2.9%) households in Swindon are currently in acute need of housing and a further 4,983 (46.2%) households are in need of housing.

Figure 3.6: Housing need in Swindon (2006)⁴¹

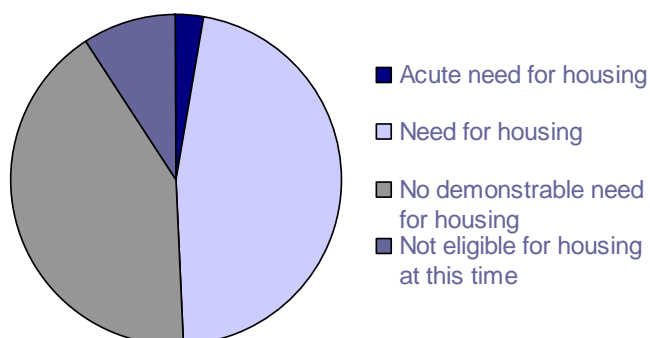


Table 3.3.2 and Figure 3.7 show that in Swindon over 20,000 households currently (2006) own a house with no mortgage. This applies to statistically significantly more people from white background than those from BME backgrounds. In addition, Figure 3.7 demonstrates that statistically significantly more people from white backgrounds live in council housing or housing with registered social landlords. In comparison, statistically significantly more people from BME backgrounds live in privately rented accommodation in comparison with those from white background.

Table 3.3.2: Tenure and Ethnicity by Ethnic Group (2006)⁴²

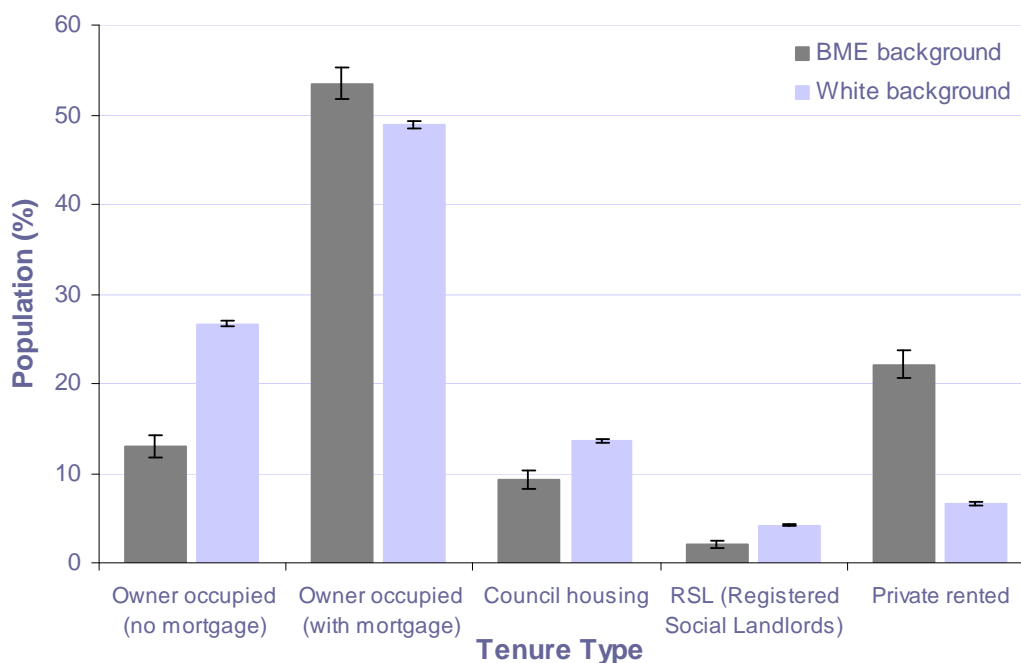
Tenure	Ethnic Group				Total
	White	Asian	Black	Mixed & Other	
Owner occupied (no mortgage)	20,553	158	46	170	20,927
Owner occupied (with mortgage)	37,681	730	352	454	39,217
Council	10,534	62	67	137	10,800
RSL (Registered Social Landlords)	3,238	28	31	0	3,297
Private rented	5,122	198	284	153	5,757
Total	77,127	1,177	781	914	80,000

Figure 3.7: Tenure and Ethnicity by Ethnic Group (2006)⁴³

⁴¹ Swindon Borough Council. Housing Needs Assessment

⁴² Swindon Borough Council. Housing Needs Assessment

⁴³ Swindon Borough Council. Housing Needs Assessment



3.3.2 Living conditions

It is predicted that over 10,000 Swindon residents aged 65yrs+ currently live alone. This is 35.9% of the total population aged 65yrs+ (95% CI: 35.4 to 36.5) and is statistically significantly lower than the South West (37.5%; 95% CI: 37.5 to 37.6) and England (37.2%: 95% CI 37.2 to 37.3). Table 3.3.3 demonstrates that there are more female Swindon residents living on their own (due to greater life expectancy) and that the total number of Swindon residents living alone will increase by 9.8% over the next five years, and by 66.6% over the next 20 years.

Table 3.3.3: Number of Swindon residents aged 65yrs+ projected to live alone⁴⁴

	Projected Year								
	2009	2010	2011	2012	2013	2015	2020	2025	2030
Males	3,148	3,256	3,344	3,438	3,566	3,782	4,262	4,960	5,634
Females	6917	7038	7068	7310	7491	7733	8583	9770	11134
Total	10065	10294	10412	10748	11057	11515	12845	14730	16768

2001 census data shown in Table 3.3.4 indicates that approximately 9% of residents aged 65yrs+ in Swindon lived in a dwelling without central heating. This proportion was statistically significantly lower than rates for England, but not for the South West. Further analysis also revealed that if this census data is applied to 2009 population projections then it would be expected that 2,464 Swindon residents are currently living in a dwelling without central heating (N.B. this is likely to be a conservative estimate).

⁴⁴ Projecting Older People Population Information System (POPPI). Department of Health

Table 3.3.4: Households aged 65yrs + living in a dwelling without central heating (2001)⁴⁵

	Total population aged 65+	Households (65yrs+) with no central heating (N)	Households (65yrs+) with no central heating (%)	95% Confidence interval	
				Lower Limit	Upper Limit
England	7,808,000	763,631	9.78%	9.8	9.8
South West	919,115	84,401	9.18%	9.1	9.2
Swindon	24,840	2,187	8.80%	8.5	9.2

It is predicted that nearly 1,000 Swindon residents aged 65yrs+ currently live in a care home (with or without nursing care). This is 3.3% of the total population aged 65yrs+ (95% CI: 3.1 to 3.5) and is statistically significantly lower than the South West (4.4%; 95% CI: 4.3 to 4.4) and England (3.7%; 95% CI 3.7 to 3.7). Table 3.3.5 demonstrates the total number of Swindon residents living alone will increase by 12.4% over the next five years, and by 96.3% over the next 20 years.

Table 3.3.5: Swindon residents projected to live in care homes (with and without nursing care)⁴⁶

	Projected Year								
	2009	2010	2011	2012	2013	2015	2020	2025	2030
LA care home	191	199	205	211	216	229	267	321	381
Non-LA care home	737	769	786	806	828	880	1017	1222	1441
Total	928	969	991	1016	1043	1109	1285	1543	1822

Table 3.3.5 also indicates that the majority of Swindon residents are projected to live in non-local authority (LA) care homes (79.4%); however, Figure 3.8 shows that the proportion of Swindon residents who live in LA care homes is significantly greater than those in the South West (5.7%) and England (10.7%).

Figure 3.8: Population aged 65yrs+ estimated to reside in LA care homes (with and without nursing care)

⁴⁵ ONS Census 2001. <http://www.neighbourhood.statistics.gov.uk/dissemination/>

⁴⁶ Projecting Older People Population Information System (POPPI). Department of Health



Dwelling overcrowding has also been linked to poor health and deprivation. ONS census data provide a measure of overcrowding that takes into account number of persons per household, relationship of occupants and number of rooms.

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Table 3.3.6 outlines overcrowding data for Swindon (where a negative score indicates too few rooms, i.e., overcrowding). The data presented suggests that in Swindon 5.8% (95% CI: 5.7 to 6.0) of households lived in overcrowded conditions at the time of the 2001 census; this is comparable with rates in the South West (5.0%; 95% CI: 5.0 to 5.0), but statistically significantly less than rates for England (7.1%; 95% CI; 7.1 to 7.1).

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Table 3.3.6: Households residing in overcrowded dwellings (2001)⁴⁷

		Over Crowding score					
		total	+2	+1	0	-1	-2
England	N	20,451,427	10,050,403	5,223,887	3,719,625	1,026,030	431,482
	%		49.14	25.54	18.19	5.01	2.11
South West GOR	N	2,085,984	1,133,769	516,566	331,060	79,578	25,011
	%		54.35	24.76	15.87	3.81489	1.20
Swindon LA	N	75154	38594	19287	12885	3170	1218
	%		51.35	25.66	17.14	4.22	1.62

Additionally, Swindon Borough Council's (2006) Housing Needs Survey found that Asian (23.2%) and Black (17.4%) ethnic groups were most likely to live in 'unsuitable' housing compared to White (6.0%) or Mixed and other (3.5%).

3.3.3 Vulnerable adults with housing needs

The proportion of people in contact with secondary mental health services living in settled accommodation in Swindon (2008/09) was 9.7%. This is in comparison with 6.8% in Bristol LA (lowest in South West Region) and 63.3% in Bournemouth and Poole LA (highest in South West Region)⁴⁸.

The proportion of people with learning disabilities living in settled accommodation in Swindon (2008/09) was 33.5%. This is in comparison with 65.2% in the South West region and 69.5% nationally⁴⁹.

3.4 Deprivation

Each of the individual determinants of health outlined above including education, housing, employment and ethnicity are all highly correlated with deprivation. Consequently, level of deprivation is associated with population health. This relationship typically follows a gradient or a linear pattern; whereby each section of society, according to deprivation level, has better health than the group below it with the least deprived sections of society enjoying the best health with the most deprived populations experiencing the worst health⁵⁰.

The government now produces an Index of Multiple Deprivation (IMD) which provides a deprivation score and rank for each lower super output area (sub-electoral ward areas) in England. The IMD, which was last measured in 2007, combines levels of deprivation from the following seven domains using the different weights specified:

- Income (22.5%)
- Employment 22.5%
- Health Deprivation and Disability (13.5%)
- Education Skills and Training (13.5%)
- Barriers to Housing and Services (9.3%)
- Crime (9%)

⁴⁷ ONS Census 2001. <http://www.neighbourhood.statistics.gov.uk/dissemination/>

⁴⁸ National Adult Social Care Intelligence Service <http://nascis.ic.nhs.uk/>

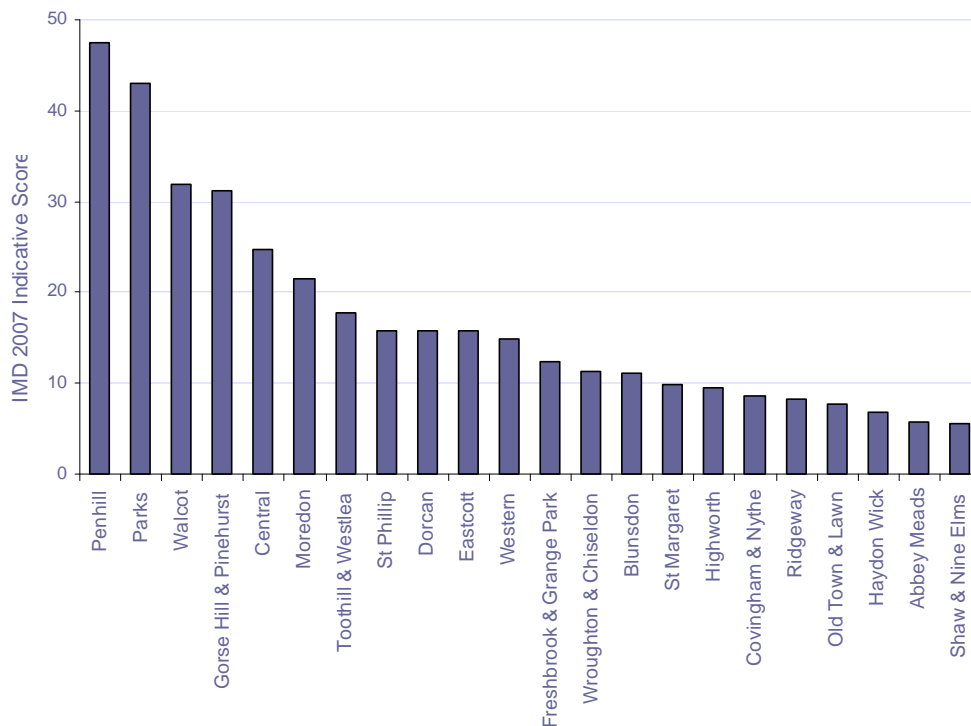
⁴⁹ National Adult Social Care Intelligence Service <http://nascis.ic.nhs.uk/>

⁵⁰ Marmot M & Wilkinson R (Ed.). Social Determinants of Health. OUP: Oxford.

- Living Environment (9.3%)

According to the IMD (2007), Swindon on the whole is relatively prosperous and deprivation is low compared with national levels. However despite this, a few pockets of deprivation do exist in Swindon. Figure 3.9 outlines the deprivation score for each ward in Swindon. According to IMD 2007 scores Swindon has 18 super output areas (SOA) (out of a possible 119) that are among the most deprived 20% nationally. In all, 8 of Swindon's 22 wards contain at least one of these deprived areas.

Figure 3.9: Deprivation level by ward in Swindon (2007)



Swindon also has wide disparities in deprivation level. For example, one SOA, located in Penhill ward, appears in the most deprived 5% nationally, while SOAs in the Shrevenham ward appear in the 10% least deprived SOAs nationally.

The most prominent domain of deprivation in Swindon is in Education, Skills and Training. Over 13% of Swindon's SOAs are among the most deprived 10% in England in this domain. While 15 SOAs in Swindon are among the 20% most deprived nationally for Health Deprivation and Disability.

Such evidence has important implications for health and well being of the local population, as those in the most deprived wards will be more susceptible to poor health and poor service uptake.

3.5 Recession

The impact of the recent economic downturn on health services is likely to be felt first in primary care and community services. Research shows that when families are either facing redundancy or the threat of redundancy the numbers of contacts with General Practitioners (GPs) increases. There is also likely to be an increase in referrals to mental health services and it is possible that the rate of mental health referrals or suicides may increase. Similarly there may be an increase in A&E

attendances, particularly in areas where access is made easier to A&E than to primary care services.

In addition it is likely that there will be pressure at the interface between health and social care, particularly in areas of existing pressure such as discharge. It is anticipated that there may be an increase in delayed discharges as financial constraints hit social care and more people need to rely on social care funded packages of care as their financial positions deteriorate.

In the longer term the impact of the economic downturn is likely to be seen in terms of the overall health of the population and there may be increases in smoking, alcohol and drug abuse. There may also be an impact on teenage pregnancy and sexually transmitted diseases.

The economic downturn may also impact on voluntary and community organisations: including an increased demand for services and/or a reduced amount of funding and resources.

In response, NHS Swindon has established a Recession Scorecard to monitor and mitigate the impact of the economic downturn on the local population. An action plan including a communications plan has also been developed. In addition, NHS Swindon has linked directly with Swindon Borough Council to form a Recession Task Group.

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SECTION 4:

4 Major Health Trends in Swindon

4.1 Life Expectancy

The average life expectancy (at birth) in Swindon is currently 77.4 yrs for men and 81.2 yrs for women (2007). This is similar to the national average; however, large inequalities exist according to the level of deprivation.

Inequalities in life expectancy at a local level can be determined by the Slope Index of Inequality (SII) for life expectancy at birth⁵¹. This is the current Department of Health recommended measure of inequality. It is calculated by grouping lower layer super output areas (LSOAs) within the PCT into deciles based on the IMD 2007 score. The life expectancy for each decile is based on mortality data for the five years, 2003-2007. The figure below shows the difference in life expectancy for each decile according to deprivation in Swindon.

Figure 4.1 and Figure 4.2 show that there is a difference in life expectancy (SII score) of 8.1 years, between the most and least deprived males in Swindon. This gap in life expectancy (SII score) is 6.4 years for Swindon females. In comparison to other PCTs in the South West, Swindon ranks 9/11 for male life expectancy and 10/11 for female life expectancy (where 1 indicates the longest life expectancy). The gap in male life expectancy in Swindon is also slightly less than the national average (which is 8.7yrs), while the gap in female life expectancy is slightly greater than the national average (which is 5.6yrs).

Figure 4.1: Male life expectancy by level of deprivation (2007)

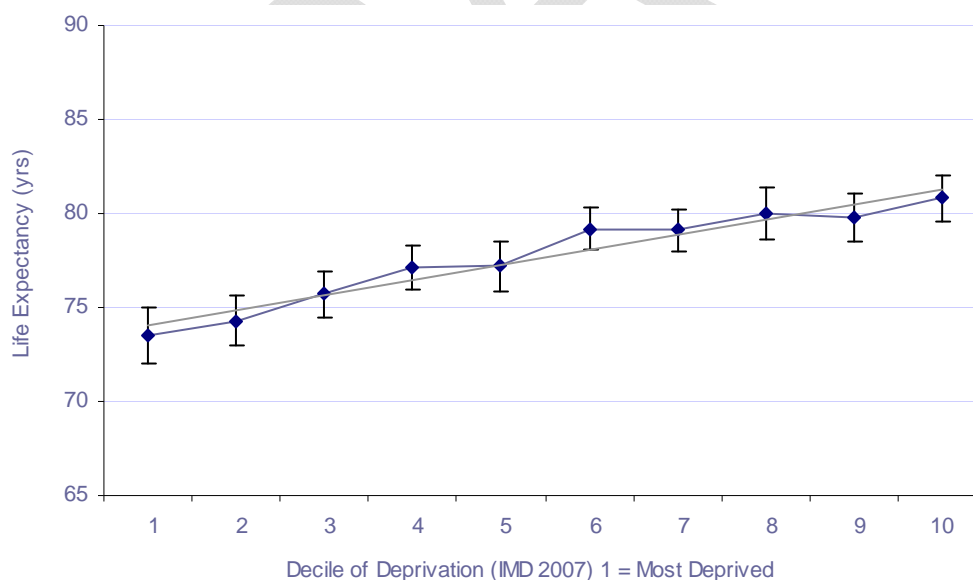
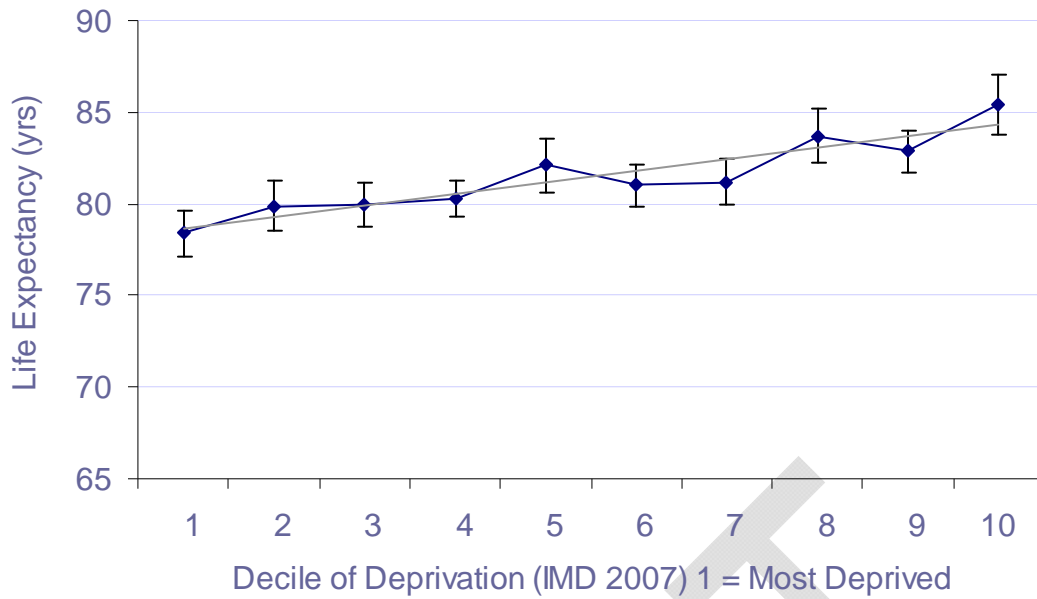


Figure 4.2: Female life expectancy by level of deprivation (2007)

⁵¹ Fryers P & Fitzpatrick J. World Class Commissioning Assurance Framework.: Recommendations for Health Inequalities Indicator. Association of Public Health Observatories.



4.2 All Age All Cause Mortality

Since inequalities in life expectancy exist in Swindon, it is important to understand what might determine this gap. Evidence suggests that inequalities in life expectancy are strongly related to differences in all age all cause mortality.

Figure 4.3: Mortality from All Causes, All Ages

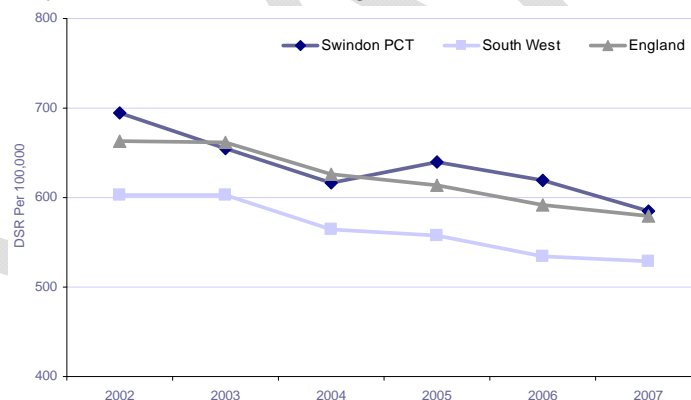
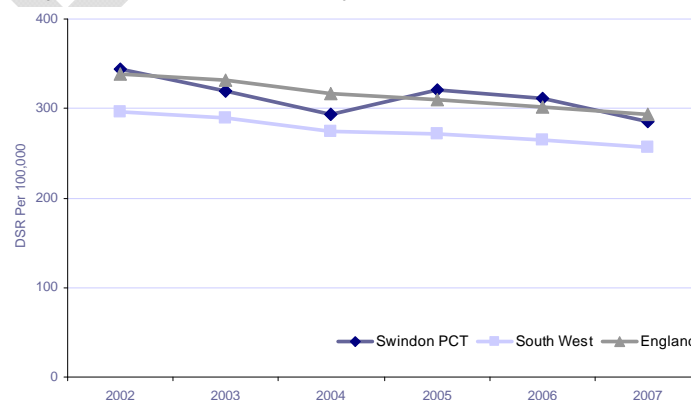
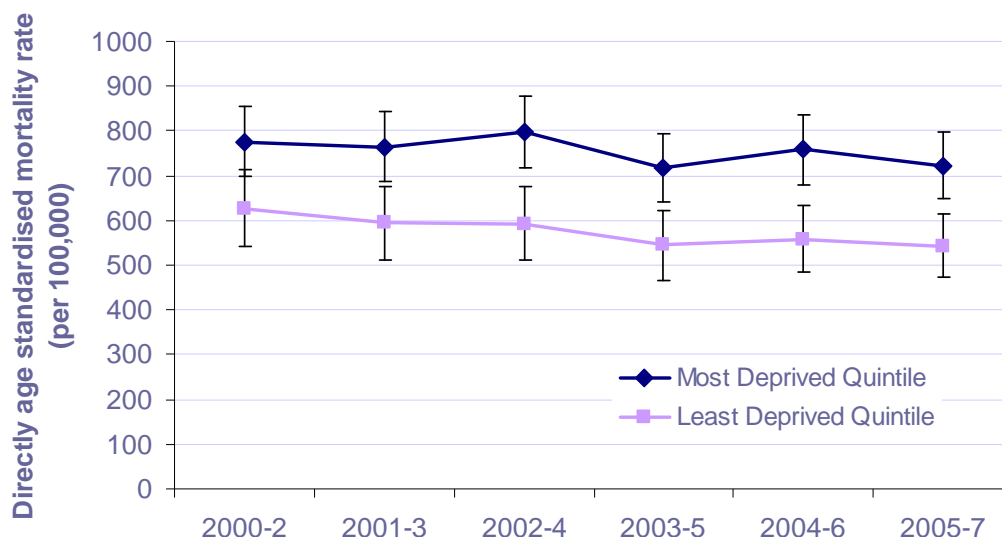


Figure 4.4: Mortality from All Causes, <75yrs



Although all-age all-cause mortality has been steadily declining in all ages and those aged <75yrs (see Figure 4.3 and Figure 4.5)⁵², Figure 4.6 indicates that individuals living in the most deprived areas of Swindon have statistically significantly ($p < .05$) higher rates of mortality than those who live in the least deprived areas.

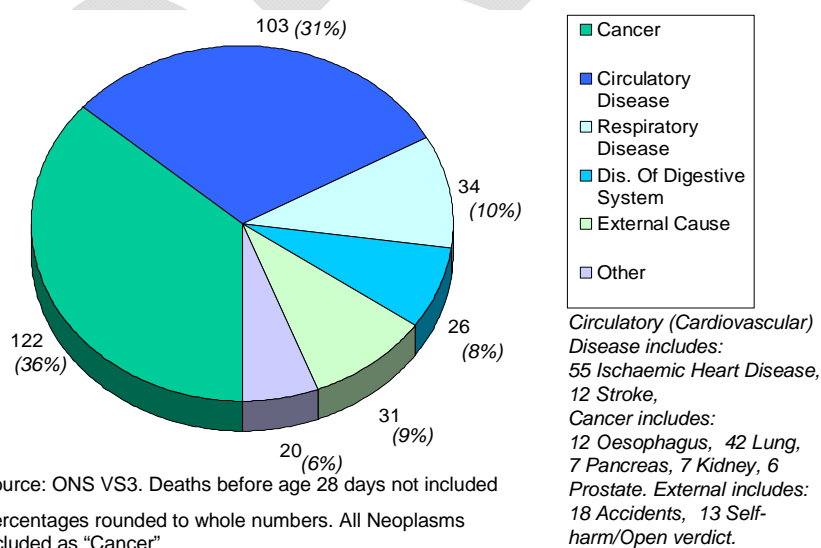
Figure 4.6: All age all cause mortality by deprivation level in Swindon (2001-02 to 2005-07)⁵³



It is important to understand therefore which particular diseases or health behaviours may be accounting for this gap.

4.2.1 Main causes of death for men and women

Figure 4.7 and



⁵² National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

⁵³ South West All Age All Cause Mortality inequalities for Local Area Agreements targets March. SWPHO (2008)

Figure 4.8⁵⁴ suggests that circulatory disease, respiratory disease and all cancers (the 'Big Three') are all major contributors to the gap in life expectancy between the most and least deprived wards in Swindon.

For men, external causes (notably suicide and undetermined injury and road traffic accidents) and digestive diseases (principally liver cirrhosis) are also major contributors to the gap in life expectancy (Figure 4.7). For women digestive disease (including cirrhosis and gastric/duodenal ulceration) is a major contributor to the life expectancy gap (Figure 4.7).

Figure 4.7: Number and proportion of deaths by cause in Swindon males aged <75yrs (2006)

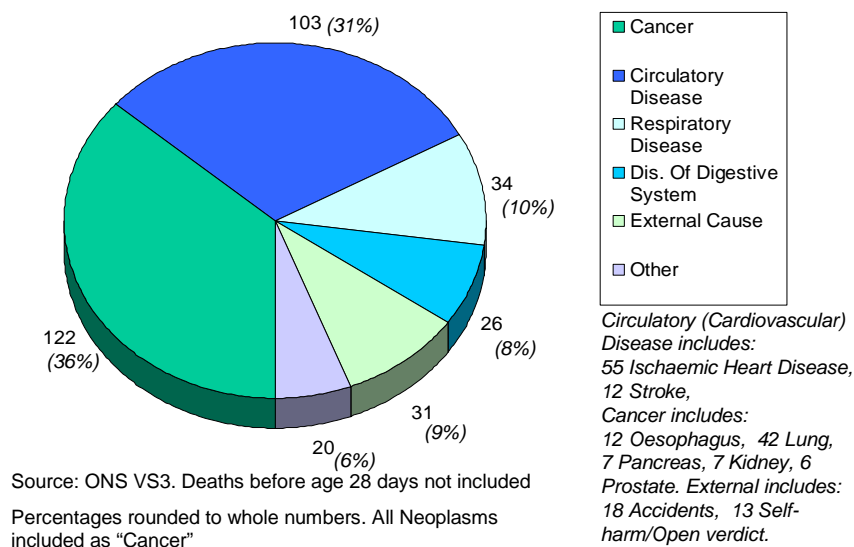
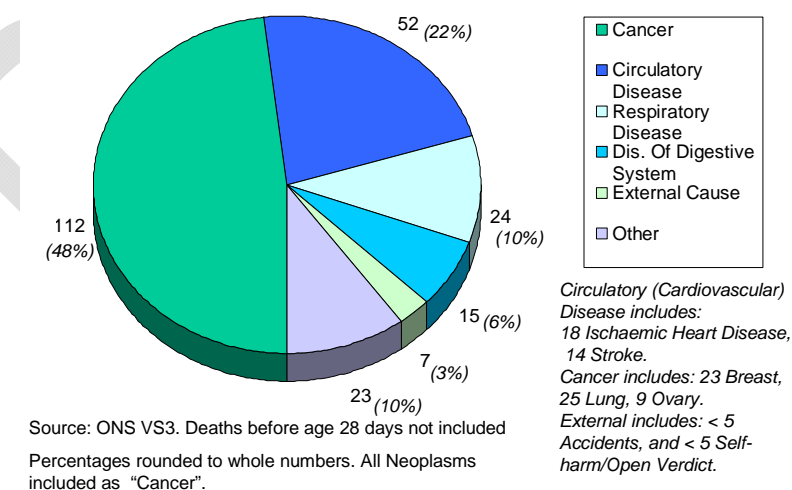


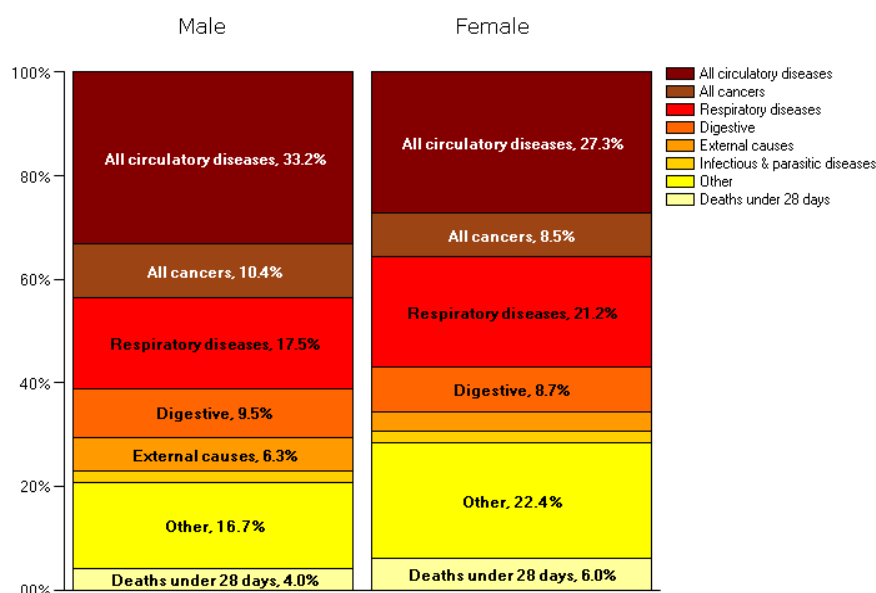
Figure 4.8: Number and proportion of deaths by cause in Swindon females aged <75yrs (2006)



A breakdown of cause of death by level of deprivation shows that there is a pronounced difference in causes of death between those from the most deprived 20% of the local population (most deprived quintile: MDQ) and those in the least deprived 20% of the population (LDQ). This is represented in Figure 4.9, where a large disparity in cause of death is indicated by a wider band.

⁵⁴ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

Figure 4.9: Gap between most deprived quintile (MDQ) and the least deprived quintile (LDQ) in Swindon local authority by cause of death



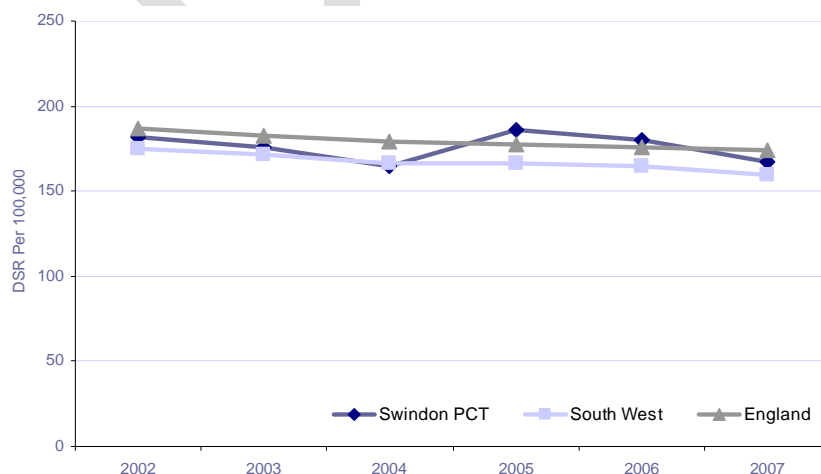
4.3 All Cancers

It should be noted that the section relating to cancer in Swindon is concerned with data primarily from the period 2002 to 2007. Interpretations drawn from data within this time frame may differ from interpretations made from trends over longer time periods. Further, more detailed research is currently underway in NHS Swindon with regard to cancer incidence, mortality and survival.

4.3.1 Mortality from all cancers

Cancer prevention is a national priority⁵⁵. Data presented in Figure 4.10 and Figure 4.11 indicate that mortality rates for all cancers have been declining year on year for the population as a whole and for those under the age of 75yrs⁵⁶. In addition, in recent years deaths from cancer have overtaken cardiovascular disease as the leading cause of premature death. This is line with regional and national trends.

Figure 4.10: Mortality from Cancer, All Ages



⁵⁵ Department of Health (1999). *Saving Lives: Our Healthier Nation*. London: The Stationery Office.

⁵⁶ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

Figure 4.11: Mortality from Cancer, Aged <75yrs

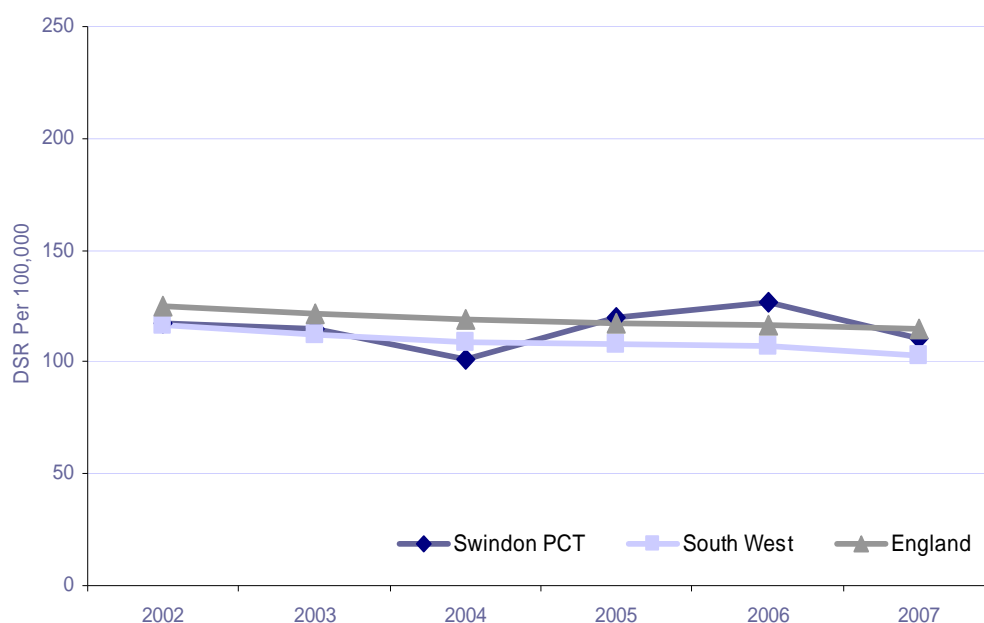


Table 4.3.1 indicates that the total number of deaths, and the number of premature deaths (i.e., those <75yrs) from cancer between 2002 and 2007 in Swindon has remained relatively stable over this time period; this is why, as the population grows, rates displayed above are seen to fall.

Table 4.3.1: Mortality from cancer in Swindon PCT⁵⁷

		2002	2003	2004	2005	2006	2007
Deaths from cancer (N)	<75yrs	208	207	187	224	232	209
	All ages	409	403	389	445	421	412

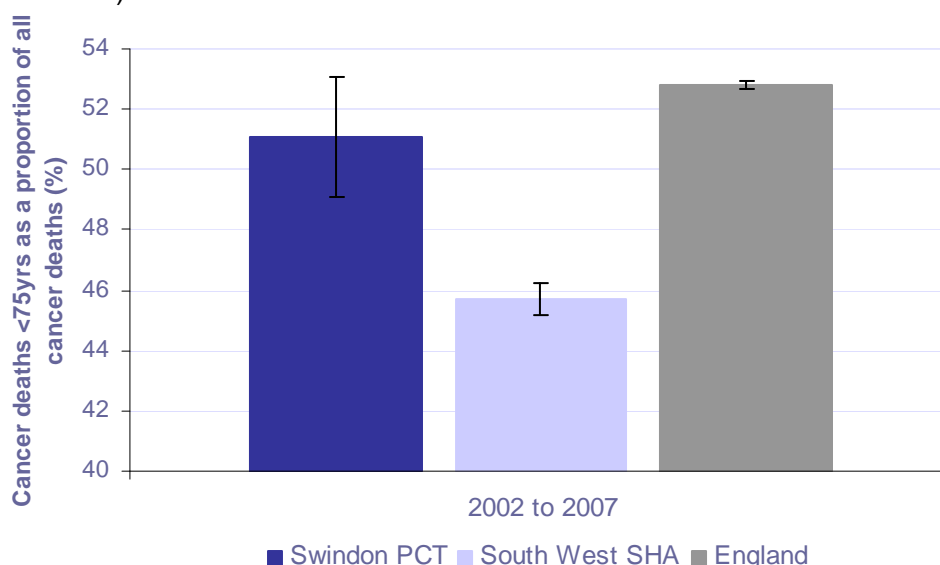
In Swindon, of the 2,479 people in total who died from cancer between 2002 and 2007, 51.1% were aged less than 75 years of age. This is comparable with England (52.8%) but statistically significantly greater than numbers in the South West (45.7%) (

⁵⁷ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

Figure 4.12). This may be one factor which explains why Swindon residents have a shorter life expectancy compared with the rest of the South West region (see Section 4.1).

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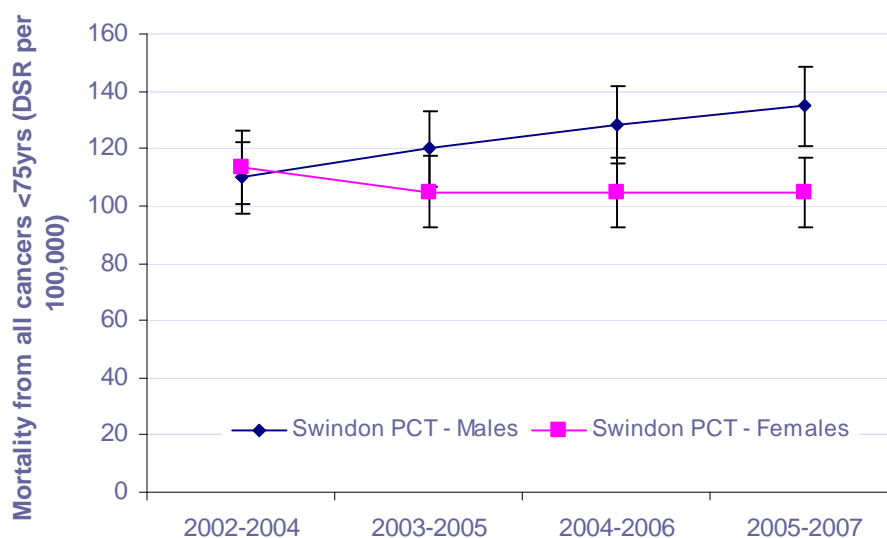
Figure 4.12: Premature cancer deaths (<75yrs) as a proportion of all cancer deaths (2002-2007)⁵⁸



Further analysis was completed to investigate whether inequalities in premature death from all cancers existed.

Pooled data presented in Figure 4.13 shows that from 2002-04 there was no significant difference between male and female cancer mortality rates <75yrs; however since that time male and female premature cancer mortality rates have been diverging. Most recent pooled data (2005-07) shows that there is now a statistically significant difference between male and female cancer mortality rates (<75yrs) in Swindon ($p < .05$). This local rate compares with regional and national benchmarks. For example, of the 1,267 people in Swindon that died from cancer before the age of 75yrs between 2002 to 2007, 51.8% (95% CI; 49.0 to 54.5) were male; this is comparable (i.e., not statistically significantly different) from proportions for the South West (54.0%; 95% CI 53.5 to 54.5) and England (50.7%; 95% CI 50.5 to 50.9). These findings may contribute to gender differences in life expectancy outlined in Section 4.1.

Figure 4.13: Mortality from all cancers <75yrs in Swindon by gender (2002-04 to 2005-07)⁵⁹



⁵⁸ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

⁵⁹ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

Analysis also revealed that inequalities in mortality from cancer exist according to ward location. Figure 4.14 demonstrates that there was a wide variation in premature mortality rate from cancer according to ward when accounting for age.

Figure 4.14: Cancer mortality <75yrs in Swindon by ward (2005-2007 pooled)⁶⁰

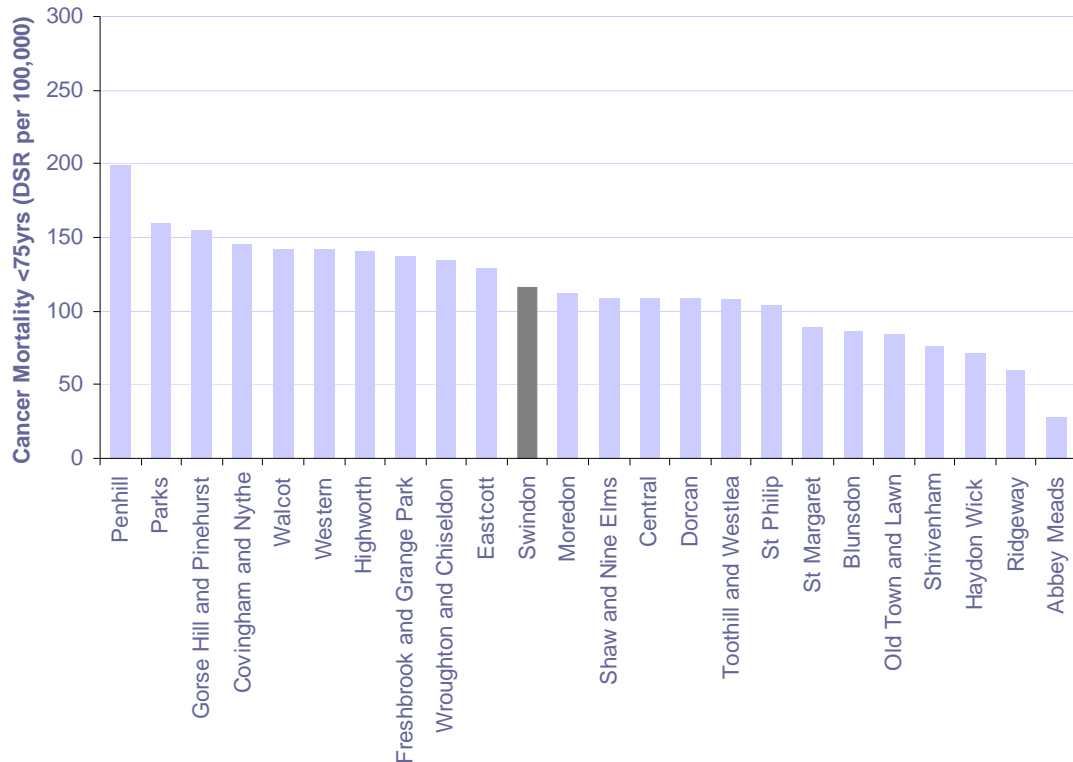
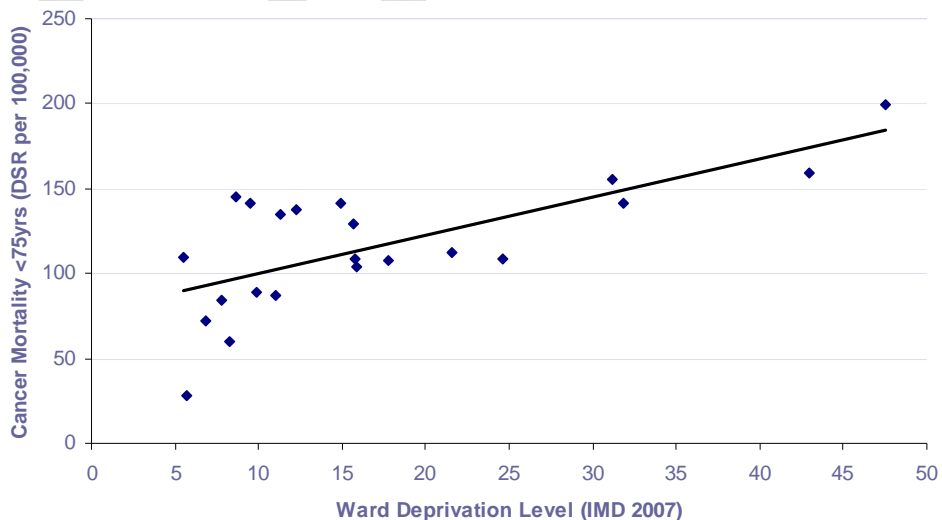


Figure 4.15 also reveals that there was a strong positive correlation between premature cancer mortality and ward level deprivation ($r=.70$, $p<.01$). This means that a person who lives in a deprived ward is statistically significantly more likely to die prematurely from cancer than someone who lives in a less deprived ward.

Figure 4.15: Cancer mortality (2005-07) <75yrs by ward deprivation level (IMD 2007) in Swindon



⁶⁰ ONS Mortality Dataset

4.3.2 Incidence of all cancers

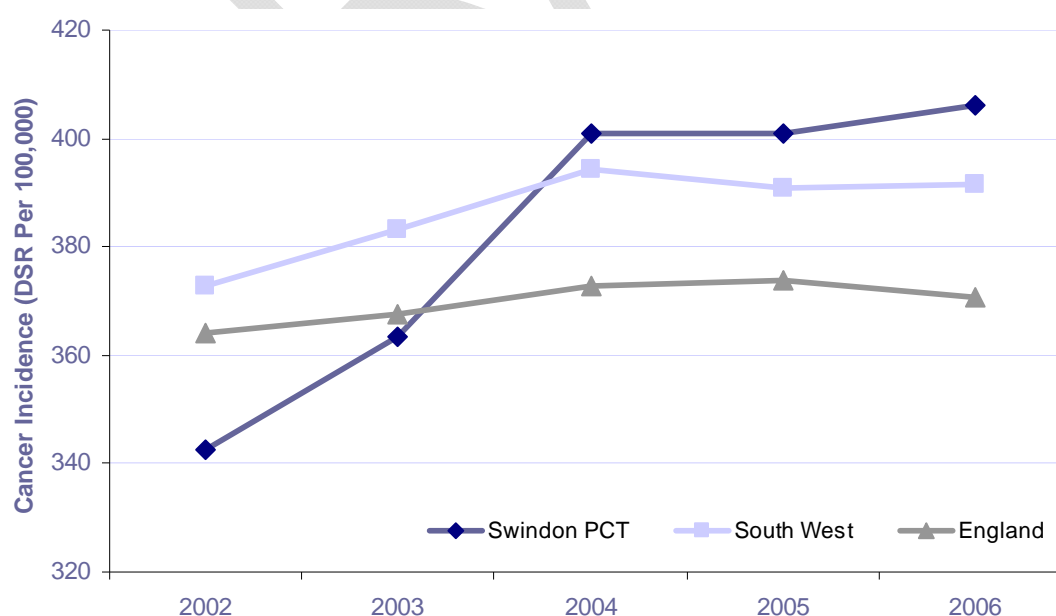
From 2002 to 2007 there was an average of 831 new cases of cancer each year in Swindon. Table 4.3.2 indicates that during this time period there was an increase in new cases of all cancers (cancer incidence). From 2002 to 2007 there was an average year on year increase of 5.01% in Swindon compared with an increase of 2.14% in the South West and 1.28% in England. Overall from 2002 to 2007 there was a 21.24% (95% CI 18.4 to 24.3) increase in cancer rates in Swindon. This increase was statistically significantly greater than that for the South West (8.79%; 95% CI 8.4 to 9.1) and England (5.2%; 95% 5.1 to 5.3); which means that the number of new cases of cancer in Swindon grew at a faster rate than that found in the South West and England.

Table 4.3.2: Incidence of all cancers in Swindon (all ages)⁶¹

	2002	2003	2004	2005	2006
Incidence of all cancers (No. of new cases)	739	771	863	886	896
Increase from previous year (%)		4.33%	11.93%	2.67%	1.13%

A similar trend for cancer incidence was found when taking into account population age and growth. Figure 4.16 demonstrates that cancer incidence rates in Swindon are now higher than those in the South West and England. In addition, further analysis reveals that in Swindon there was a 4.44% average year on year increase in cancer rates; this compares with 1.24% in the South West and 1.85% in England. This means that the number of new cases of cancer in Swindon grew at a faster rate than that found in the South West and England when accounting for age, sex and population size.

Figure 4.16: Incidence of all cancers (2002 to 2007)⁶²



Further analysis was completed to investigate whether inequalities in cancer incidence exist.

⁶¹ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

⁶² National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

Pooled data presented in Figure 4.17 shows that during 2002-04 there was no significant difference between male and female cancer incidence rates; however, since that time, male and female cancer incidence rates have been diverging. Most recent data (2005-2007) shows that there is now a statistically significant difference between male and female cancer incidence rates (<75yrs) in Swindon ($p < .05$). This local rate compares with regional and national benchmarks. For example, of the 4,155 new cases of cancer in Swindon from 2002 to 2007, 51.7% (95% CI; 50.20 to 53.2) were male; this is comparable (i.e., not statistically significantly different) from proportions for the South West (50.2%; 95% CI 49.9 to 50.4) and England (50.2%; 95% CI 50.1 to 50.3).

Figure 4.17: Incidence of all cancers <75yrs in Swindon by gender (2002-04 to 2005-07)

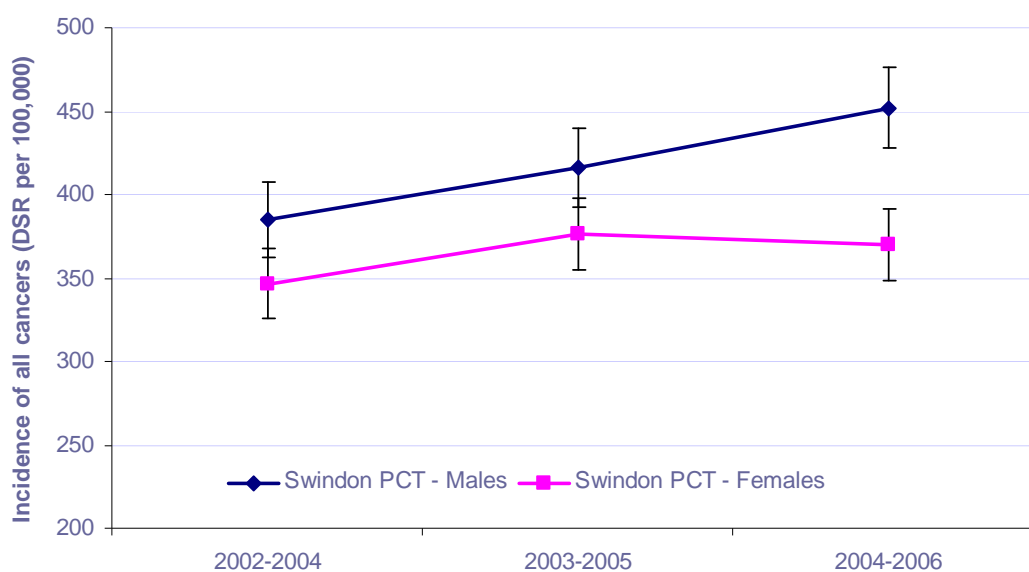


Figure 4.18 shows the number of admissions for cancer by ethnic group per 1,000 of the population. The average number of people admitted with a primary diagnosis of cancer over the three years from 2005 to 2007 was 2,338. Of the number of people admitted, 79.6% were from a White ethnic group, 13.3% were not stated or unknown, 5.4% were from other ethnic groups, 1.3% were from Asian or Asian British groups 0.3% were from Black or Black British groups, the remaining 0.1% were from mixed ethnic groups.

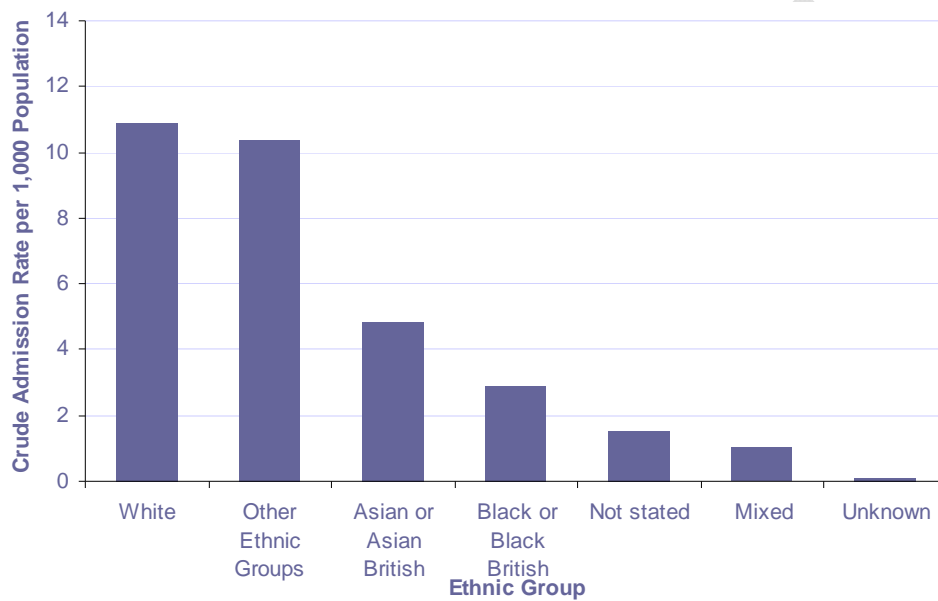
In terms of admission rates per 1,000 of the population the data appears to show a higher rate of hospital admissions for people from white and other ethnic groups. However, rates of cancer among people from black and minority (BME) groups may be underestimated for the following reasons;

- The rate shown is merely a crude rate and was not possible to standardise in terms of age. It is known that the risk of cancer increases with age. It is possible, therefore, that Swindon has a younger black and minority ethnic demographic compared to the white ethnic group which means that the rate of hospital admissions in this group may be underestimated.
- Population statistics used are ONS experimental statistics based on the 2001 census and do not account for BME population changes due to migration.

- The number of admissions from BME groups is small and the number of patients admitted where ethnicity is unknown or not stated is high (13.3%). It is likely that admissions where ethnicity is unknown or not stated are from BME groups. The higher the proportion of admissions where the ethnic group is unknown, the more likely it is that disease rates in BME groups are underestimated.

These concerns suggest that BME data for hospital admissions should be used with caution. They also highlight the need for better recording of ethnicity in the hospital setting and more robust statistics on the ethnicity of the population.

Figure 4.18: Hospital Admissions with a Primary Diagnosis of Cancer by Ethnic Group (2005/06 to 2008/9 pooled)⁶³



4.4 Breast Cancer

Statistics for 2004-06 show that in the UK 45,524 women per year are diagnosed with breast cancer and 12,429 women will die as a result of the disease. This means that approximately 1 in 9 women (2001 data) will suffer from breast cancer at some time in their life. Although the average age of women diagnosed with breast cancer is 50-54, breast cancer is the most commonly diagnosed cancer in women under the age of 35. Breast cancer accounts for nearly a quarter of all cancer cases amongst women worldwide and accounts for 32% of the cancer burden in the UK. Of the total breast cancer cases that occur in this country annually, fewer than 10% can be attributed to a hereditary link. This means that as many as 90% of all breast cancer cases may be attributed to other causes and are, therefore, potentially preventable⁶⁴.

4.4.1 Incidence of Breast Cancer

Table 4.4.1 demonstrates that from the period 2002-2006 an average of 132 new cases of breast cancer were diagnosed in Swindon each year and that from the period 2002-2007 an average of 34 women died from the disease each year.

⁶³ NHS Swindon Commissioning Data Sets & ONS Experimental Ethnicity Population Statistics 2007

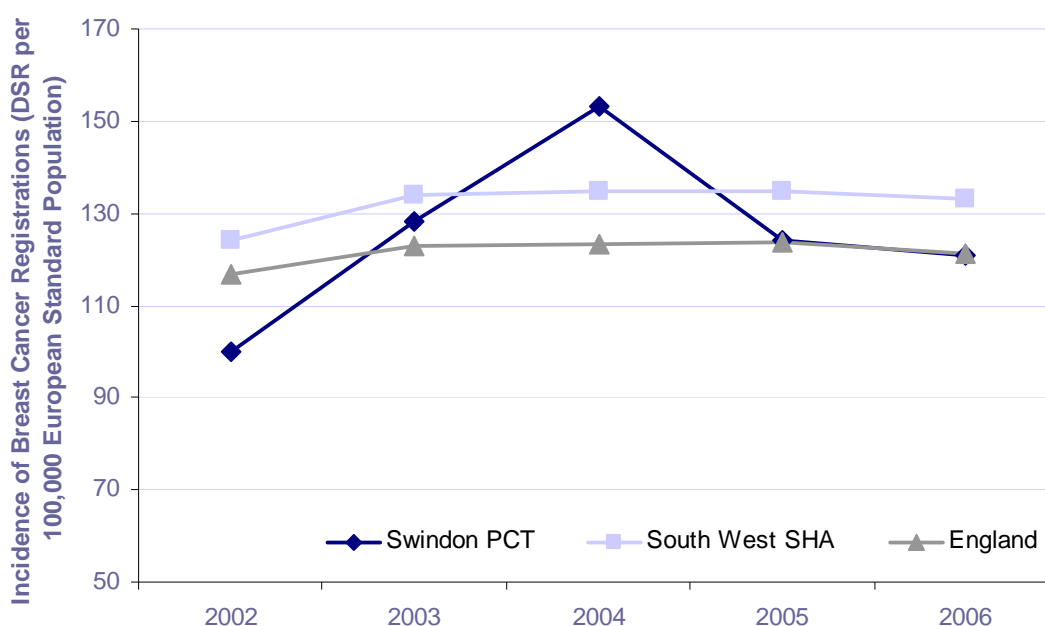
⁶⁴ Breast Cancer UK. <http://www.breastcanceruk.org.uk/statistics/>

Table 4.4.1: Breast cancer incidence and mortality in Swindon PCT (2002 to 2007)⁶⁵

	2002	2003	2004	2005	2006	2007	Mean
Breast cancer incidence (N)	108	131	155	135	129	Not yet available	132
Breast cancer mortality (N)	40	41	26	30	30	39	34

Figure 4.19 presents incidence of breast cancer in Swindon, the South West region and England from 2002 to 2007. Swindon appears to have seen a decline in most recent years but it should be noted that rates have increased gradually by about 20% between 1993 and 2006. Current rates in Swindon are comparable to England and lower than those in the South West.

Figure 4.19: Incidence of breast cancer (2002-2006)⁶⁶



4.4.2 Mortality from Breast Cancer

In the UK the mortality rate from breast cancer has fallen from 42 per 100,000 in 1989 to 27 per 1000,000 in 2007.

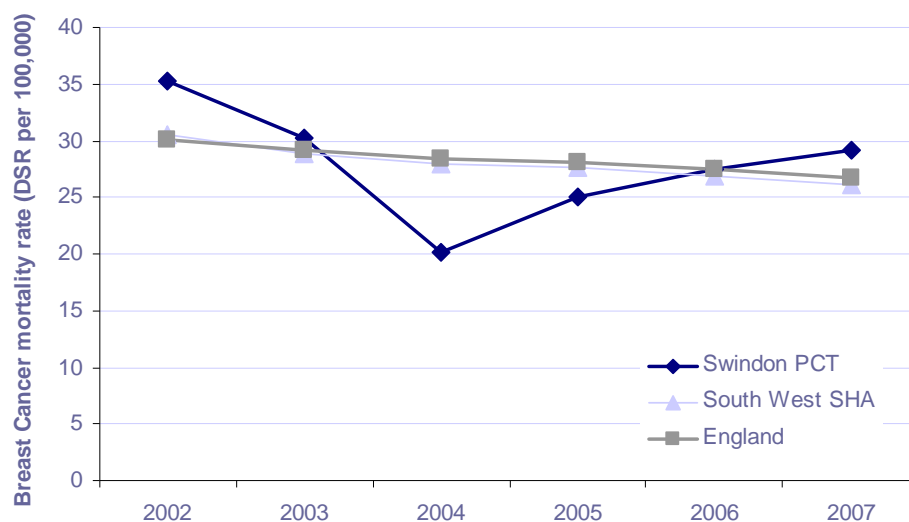
⁶⁵ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

⁶⁶ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

Figure 4.20 shows mortality from breast cancer in Swindon, the South West region and England from 2002 to 2007. Current rates in Swindon are not statistically significantly different from the South West or England.

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Figure 4.20: Breast cancer mortality (2002-2007)⁶⁷



4.4.3 Breast Cancer prevention

Early detection of breast cancer through breast screening can save lives and reduce both incidence and mortality rates. Breast screening can help to find small changes in the breast before there are any other signs or symptoms. If changes are found at an early stage, there is a good chance of a successful recovery⁶⁸.

All women aged between 50 and 70yrs of age are invited for breast screening once every three years. Table 4.4.2 shows the projected number of women that will fall within this age group over the next three years (N.B. total population numbers are shown for each year and do not account for the three year recruitment cycle, these values should be used as a guide to estimate recruitment numbers).

Table 4.4.2: Swindon population projections for women aged 50-70yrs⁶⁹

	2010	2011	2012
Swindon PCT Females aged 50 to 70*	19,440	19,740	20,360

In December 2007, the Department of Health's Cancer Reform Strategy announced that from 2012 the NHS Breast Screening Programme would be extended to cover women between the ages of 47 and 73. This means that all women will get two extra screening invitations in their lifetime. It also means that all women will get their first screening invitation before their 50th birthday. The age extension will be phased in across England over a three-year period, with full coverage from 2012.

Figure 4.21 indicates that rates of breast screening coverage, that is the percentage of eligible women who are invited for screening, is statistically significantly higher in Swindon than England and comparable (non-statistically significant) to rates in the South West.

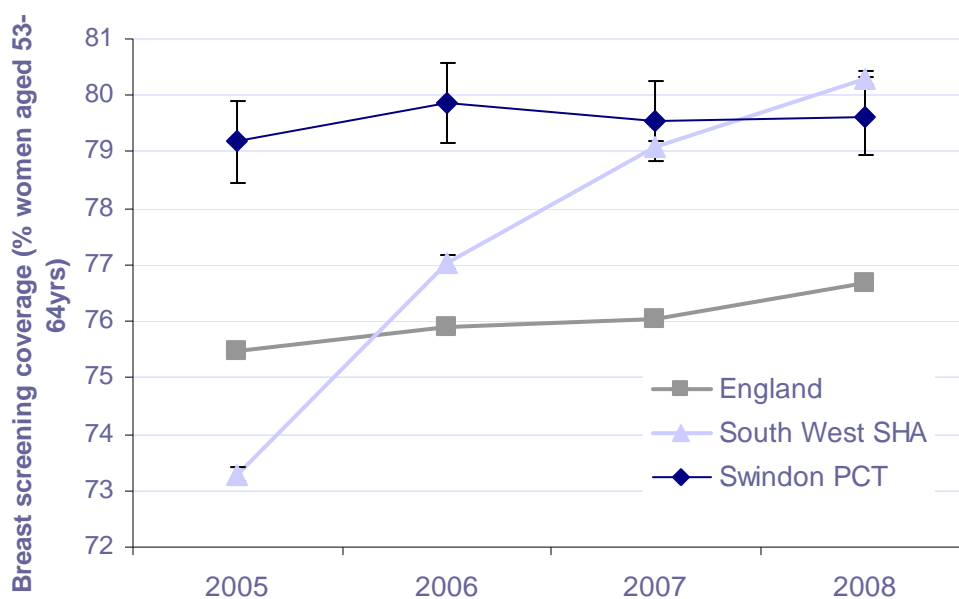
⁶⁷ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or www.nchod.nhs.uk)

⁶⁸ Breast Screening – The Facts, Department of Health 2006

http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4126871.pdf

⁶⁹ ONS 2006 based sub national population projections

Figure 4.21: Breast Screening Coverage (2005-2008)⁷⁰



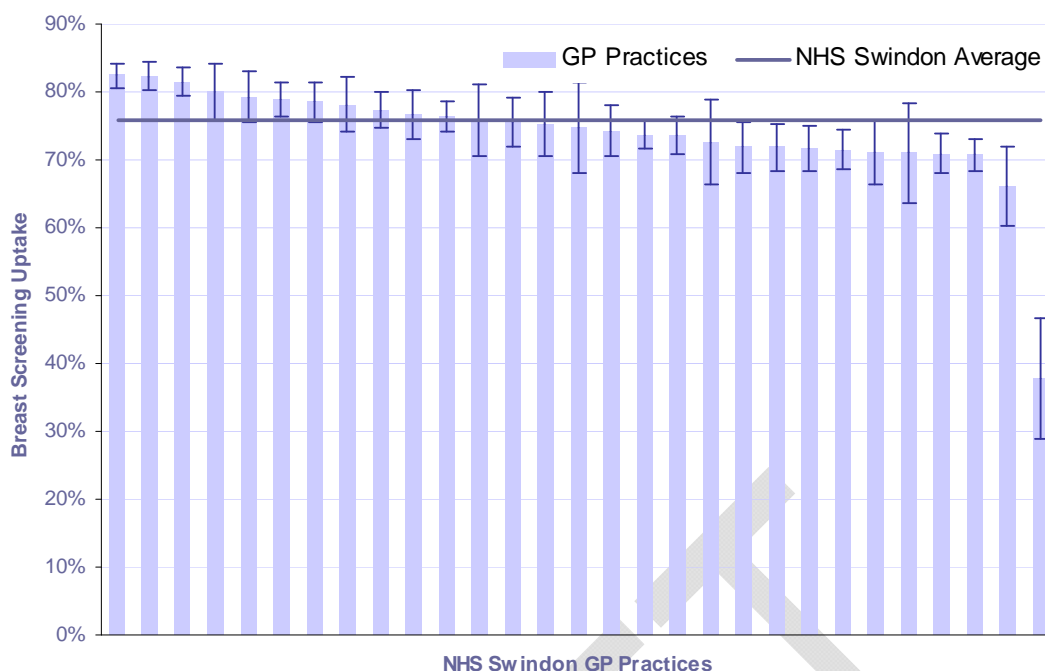
The average number of women who accept breast screening invitations across NHS Swindon is 75.9%. This is slightly above the UK average which was just below 74% in 2006/07⁷¹. Despite this, improvements in screening uptake in Swindon may still be needed as Figure 4.22 indicates that there is a significant difference ($p < .05$) between screening uptake by GP Practice; with the highest uptake at 82.5% and the lowest at 37.8%.

Figure 4.22: Women Undertaking Breast Screening by GP Practice in Swindon (pooled 2005-2008)⁷²

⁷⁰ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

⁷¹ Saving Lives through Screening – NHS Breast Screening Programme Annual Review 2008
<http://www.cancerscreening.nhs.uk/breastscreen/publications/nhsbsp-annualreview2008.pdf>

⁷² Breast Screening Programme, England. NHS Information Centre



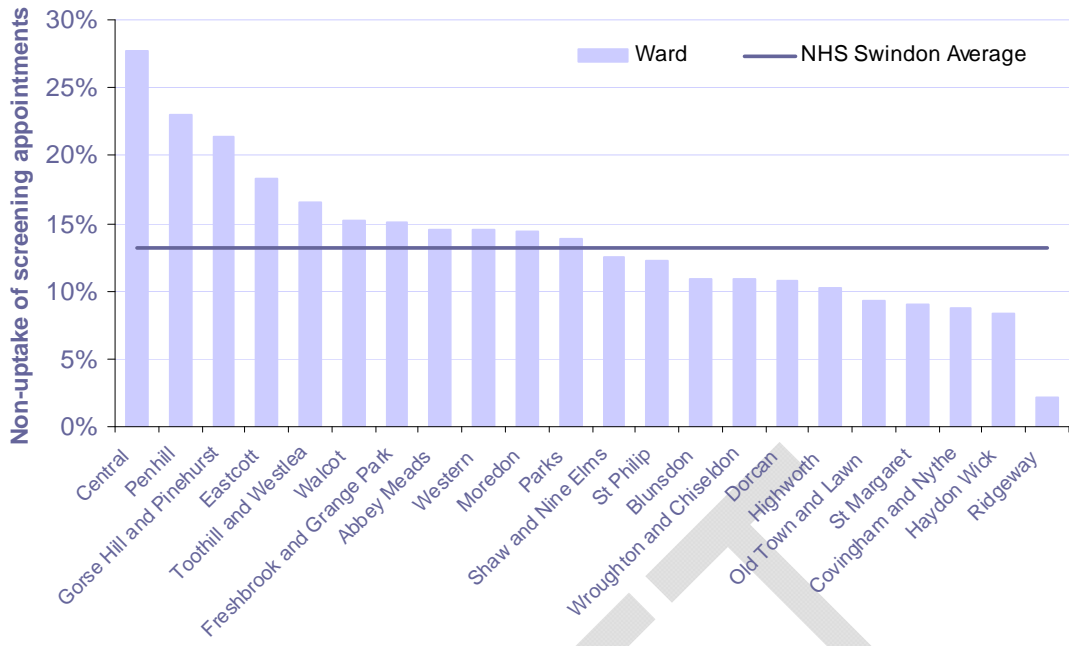
The data presented in Figure 4.23 also suggests that there are inequalities within Swindon according to level of deprivation. For example, a greater proportion of women living in Ridgeway (within the eligible population) accept breast screening appointments compared with those in Central ward which has the highest percentage of non uptake of appointments at 27.7%.

Nationally it is thought that some populations are harder to reach due to their diversity and mobile nature⁷³, this could be true in some populations within Swindon. Figure 4.23 demonstrates that wards known to have higher levels of deprivation such as Penhill and Gorse Hill & Pinehurst appear to have higher non-uptake rates. Correlational analysis also suggests that there is a significant relationship between ward level deprivation and rate of breast screening uptake; women in the least deprived wards are statistically significantly more likely to attend their breast screening appointment than women from the most deprived wards in Swindon ($r=.36$, $p<.01$). However, there are some outliers. For instance, Abbey Meads ward which has a low level of deprivation also has a lower rate of screening uptake than the Swindon average of 14.6%. This data is only an approximation and needs therefore to be treated with some caution.

Figure 4.23: Women in Swindon aged 50 to 70yrs not accepting breast screening appointments (pooled 2005-2008)⁷⁴

⁷³ Saving Lives through Screening – NHS Breast Screening Programme Annual Review 2008 <http://www.cancerscreening.nhs.uk/breastscreen/publications/nhsbsp-annualreview2008.pdf>

⁷⁴ Breast Screening Programme, England. NHS Information Centre



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4.5 Cervical Cancer

Cancer of the cervix is a relatively rare form of the disease. In the UK, approximately 2,800 women are diagnosed with it each year. Cervical cancer is often diagnosed in younger women and is the second most common cancer in women under 35 years of age, after breast cancer. The exact cause of cervical cancer is unknown. However, evidence suggests that a number of risk factors can increase the likelihood of developing cervical cancer. These risk factors include contraction of the sexually transmitted human papilloma virus (HPV) and smoking as well as the number of children you have and at what age⁷⁵.

4.5.1 Incidence of Cervical Cancer

In Swindon an average of 7 women are diagnosed with cervical cancer each year. Figure 4.24 shows the incidence of cervical cancer per 100,000 of the population for NHS Swindon, the South West region and England. Incidence appears to be lower in Swindon compared with regional and national rates. It is important to note, however, that it is not yet clear whether the low incidence rate in Swindon is due to an actual low number of new cases of cervical cancer or due to the number of undiagnosed cases.

Figure 4.24: Incidence of Cervical Cancer (DSR) per 100,000 population



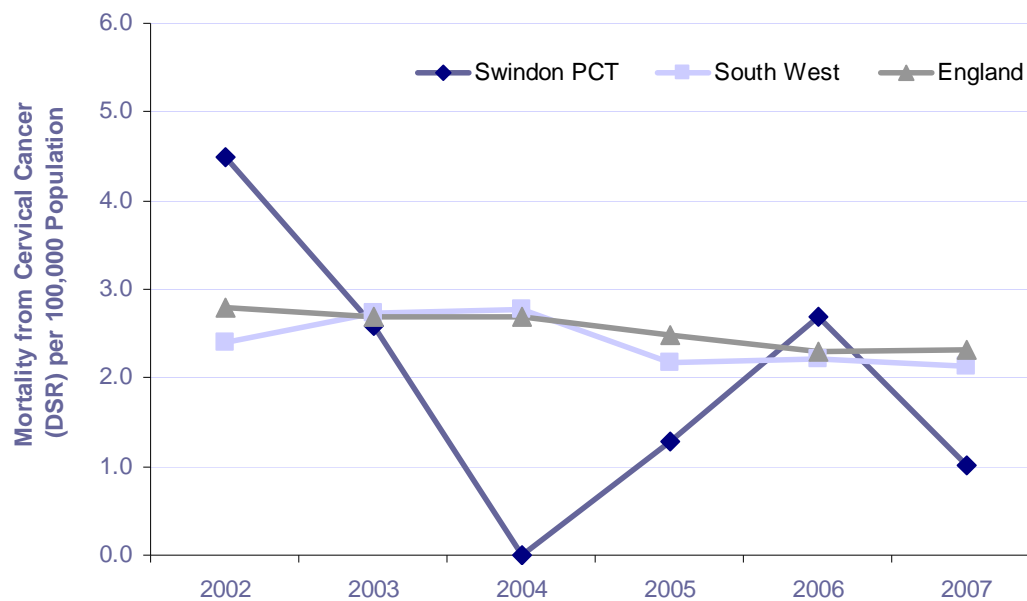
4.5.2 Cervical Cancer Mortality

In total there were 756 deaths from cervical cancer in England in 2007, giving a European age-standardised mortality rate of 2.3 per 100,000 female population. The information presented in

Figure 4.25 shows that the South West rate was similar to the national mortality rate, while the irregular trend pattern for Swindon is explained by the very small number of deaths caused by cervical cancer; on average deaths are less than 5 per year.

⁷⁵ <http://www.nhs.uk/Conditions/Cancer-of-the-cervix/Pages/Causes.aspx>

Figure 4.25: Mortality from Cervical Cancer (DSR) per 100,000 population



4.5.3 Cervical Cancer Prevention

The NHS screening programme aims to reduce the incidence and mortality from cervical cancer through testing for changes in cells in the cervix. Early detection and treatment can prevent cancer developing in around 75% of cases⁷⁶. The programme is offered to women aged between 25yrs and 64yrs. Women aged 25-49yrs are invited for screening every three years and women aged 50-64yrs are invited for screening every five years.

⁷⁶ Cervical Screening; The Facts 2006

http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4126874.pdf

Figure 4.26 presents the uptake of screening in women within the relevant age range in 2007/08. The number of women accepting screening invitations in Swindon was statistically significantly lower ($p < .05$) than women in the South West and England. The data shows that in 2007/08 the uptake of screening among women in Swindon was 82% compared with 83.2% in England and 84.8% in the South West. Screening uptake in Swindon also varied by GP practice, with the highest uptake level being 89.4% and the lowest uptake level being 48.8% (Figure 4.27). It is possible that these local uptake rates may be related to the low incidence numbers outlined in Section 4.5.1.

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Figure 4.26: Uptake of Cervical Screening over a five year period by Women aged 25 to 64 (2007/08)

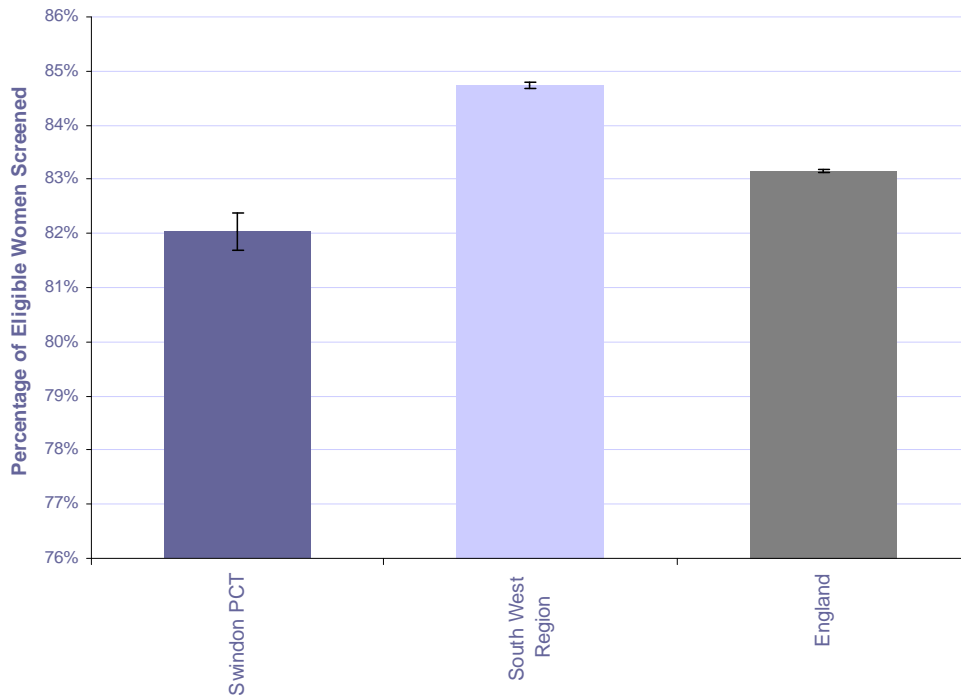
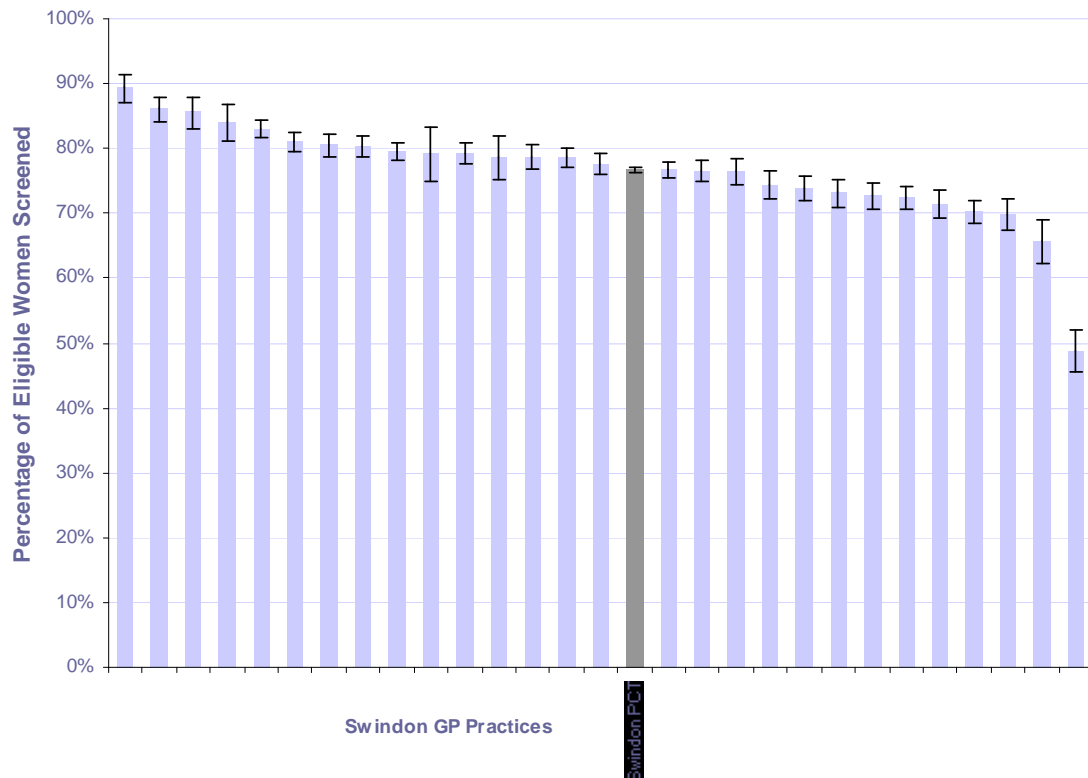


Figure 4.27: Uptake of Cervical Screening by Women in Swindon aged 25 to 64 in 2009 by GP Practice



Over 99% of cases of cervical cancers are thought to be caused by the human papilloma virus (HPV)⁷⁷. It is predicted that the HPV vaccine could prevent around 70% of cases of cervical cancer in the future. The vaccine provides protection against two strains of HPV that are thought to cause most cases of cervical cancer⁷⁸. In September 2008, the NHS launched a vaccination programme for HPV for girls aged 12 to 13yrs. There is also a three-year catch up campaign that offers the HPV vaccine (also known as the cervical cancer jab) to girls aged 13 to 18yrs. The programme is delivered largely through secondary schools, and consists of three injections that are given over a six-month period. Three doses of the vaccine are required, if a child does not have all three injections, they may not be fully protected again the virus.

Experimental statistics on the uptake of the vaccination are presented in Figure 4.28. The information indicates that NHS Swindon administered all three doses of the vaccine to 90.6% of the eligible population; a higher proportion than that achieved across the South West (61.4%) and England (70.4%) as a whole.

Figure 4.28: Percentage of Year 8 Girls Receiving HPV Vaccinations 2008-09



4.6 Bowel Cancer

Bowel cancer is also known as colon, rectal or colorectal cancer. Both men and women are at risk of developing bowel cancer and the risk increases with age. People who have a family history of bowel cancer have an increased risk of developing the disease. Other risk factors associated with developing this type of cancer include taking little exercise, being overweight and having a diet high in red meat and low in vegetables, fruit and fibre. Bowel cancer is the third most common cancer in the UK, and the second leading cause of cancer deaths. About 1 in 20 people in the UK are estimated to develop bowel cancer during their lifetime.⁷⁹

⁷⁷ <http://www.nhs.uk/Conditions/Cancer-of-the-cervix/Pages/Introduction.aspx>

⁷⁸ Cancer Research UK

<http://info.cancerresearchuk.org/spotcancerearly/screening/cervicalcancerscreening/index.htm>

⁷⁹ Cancer Research UK, Cancerstats

4.6.1 Incidence of Bowel Cancer

Figure 4.29 shows an annual trend in the incidence rate of bowel cancer per 100,000 for Swindon, the South West region and England. The data for the nation and the region shows a gradually declining trend. In the most recent year (2007) Swindon observed 44 incidences of bowel cancer; these are very small numbers which may explain the peaks and troughs in the incidence rates presented. On average, from 2002 to 2007 the incidence rate for Swindon was 43 actual cases (ranging from 34 to 51 cases per annum) or 17.89 cases per 100,000, 0.43 below the national average and just above the average for the region. Incidence of bowel cancer is higher in men. On average during the 6 years from 2002 to 2007 there were 23.20 incidences per 100,000 male population compared with 14.48 per 100,000 female population in England. In Swindon the rate for males was 19.97 compared with 15.94 for females.

Figure 4.29: Incidence of colorectal cancer per 100,000 population⁸⁰



4.6.2 Mortality from Bowel Cancer

Bowel cancer is the second most common cause of cancer death in the UK after lung cancer. Around 16,000 people die of bowel cancer each year in the UK⁸¹.

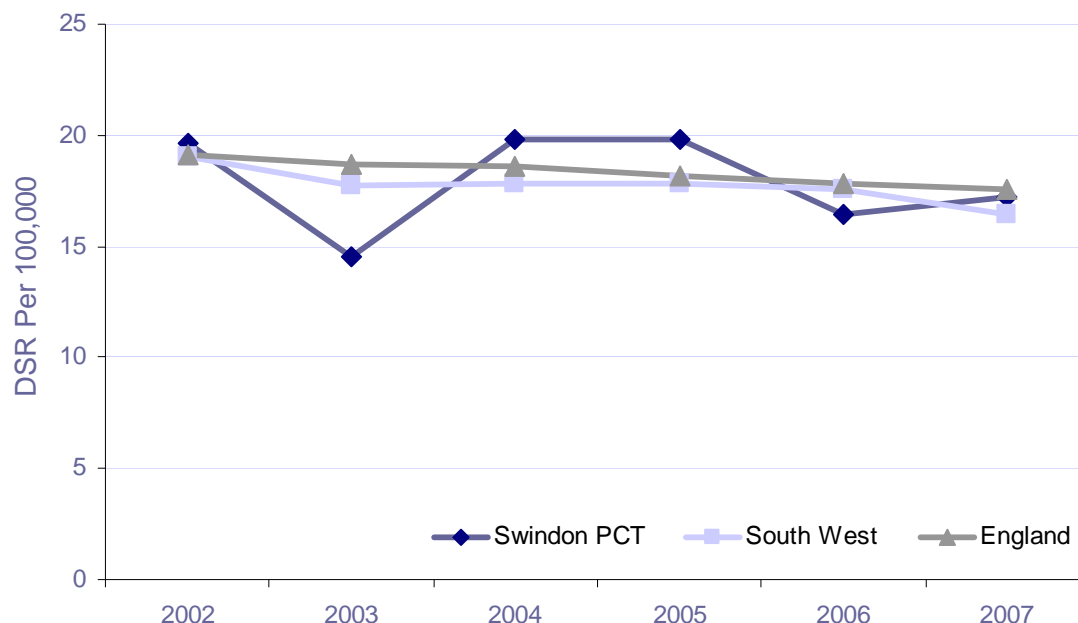
⁸⁰ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

⁸¹ Cancer Research UK, Cancerstats

Figure 4.30 presents the mortality rate per 100,000 population for England, the South West region and NHS Swindon. Like the incidence of bowel cancer, deaths from bowel cancer appear to be declining nationally and in the south west region. Rates in Swindon appear to fluctuate due to the very small number of deaths per year; on average there are 43 deaths a year from bowel cancer among residents in Swindon and Shrivenham. Latest data (2007) shows a mortality rate of 17.19 for NHS Swindon, 0.39 less than England and 0.79 greater than the South West rate.

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Figure 4.30: Mortality rate from colorectal cancer per 100,000 population⁸²



4.6.3 Bowel Cancer Prevention

Regular bowel cancer screening has been shown to reduce the risk of mortality from bowel cancer by 16%.⁸³ The National Bowel Screening Programme is currently being rolled out across the UK with NHS Swindon still to undergo implementation. The aim of the screening programme is to detect bowel cancer at an early stage when treatment is more likely to be effective. The programme will offer screening every two years to men and women aged 60 to 69yrs. People within this age group will be automatically sent an invitation, followed by a screening kit to undertake in their own home. Abnormal results will normally be followed up by more detailed examination of the bowel for the detection of potentially cancerous cells. Table 4.6.1 shows the projected number of the population that will fall within this age group over the next five years (N.B. total population numbers are shown for each year and do not account for the two year recruitment cycle, these values should be used as a guide to estimate recruitment numbers).

Table 4.6.1: Swindon population projections for persons aged 60-69yrs⁸⁴

	2010	2011	2012	2013	2014	2015
Persons Aged 60 to 69	10700	10900	10900	11100	11400	11800

⁸² National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

⁸³ Cochrane Database for Systematic Reviews, 2006. Screening for colorectal cancer using faecal occult blood test: an update.

⁸⁴ ONS 2006 based sub national population projections

4.7 Cardiovascular Disease (CVD) and Stroke

4.7.1 Mortality from CVD and Stroke

In recent years, mortality from cancer has overtaken cardiovascular disease as the leading cause of premature death. Despite this, the data presented in Figure 4.31 to Figure 4.34 show that mortality rates from stroke and cardiovascular disease have increased above regional and national levels⁸⁵ for all ages and those less than 75yrs of age. The Annual Health Profile produced by the Association of Public Health Observatories indicates that the number of early deaths (<75yrs) from heart disease and stroke (2005-2007) in Swindon are statistically significantly greater than both the South West region and national average and are within the bottom 25th percentile for England as a whole⁸⁶.

Figure 4.31: Mortality from CVD, All Ages

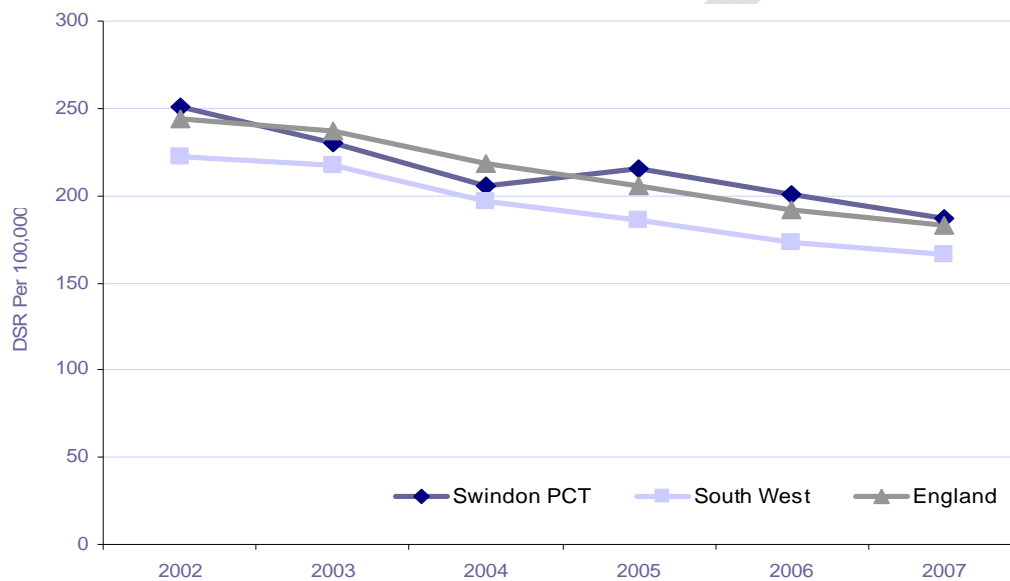
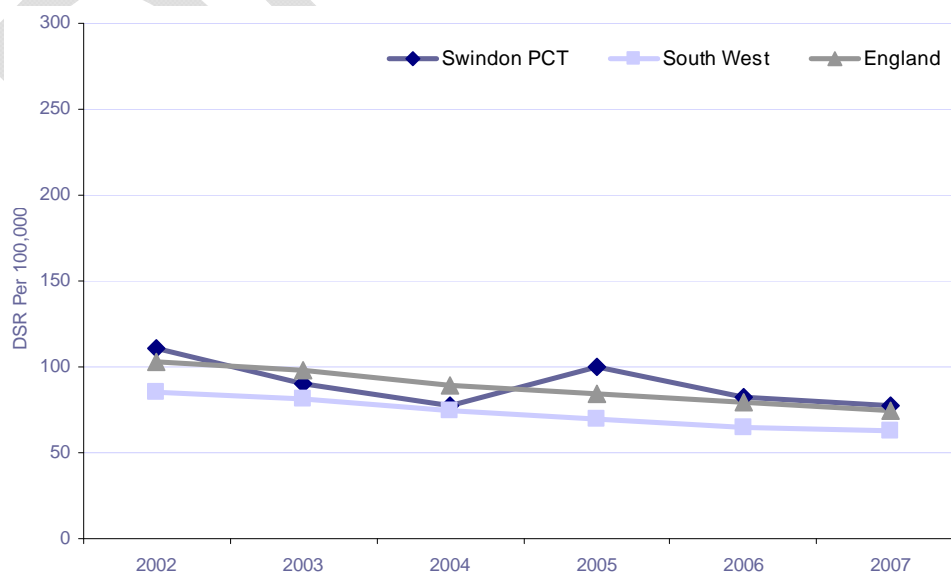


Figure 4.32: Mortality from CVD <75yrs



⁸⁵ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

⁸⁶ Association of Public Health Observatories. Swindon Health Profile 2009

Figure 4.33: Mortality from Stroke, All Ages

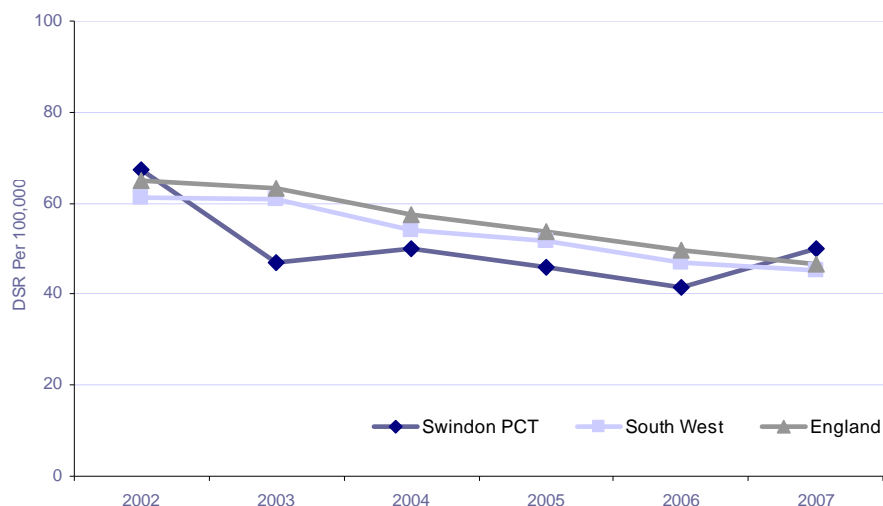


Figure 4.34: Mortality from Stroke <75yrs

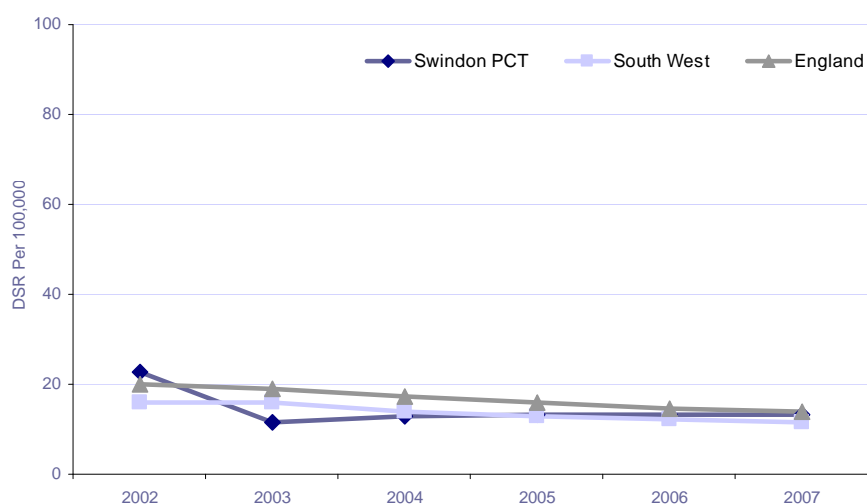


Table 4.7.1 indicates that the total number of deaths, and the number of premature deaths (i.e., those <75yrs) from stroke between 2002 and 2007 in Swindon has remained relatively stable over this time period; which is why, as the population grows, rates displayed above are seen to fall.

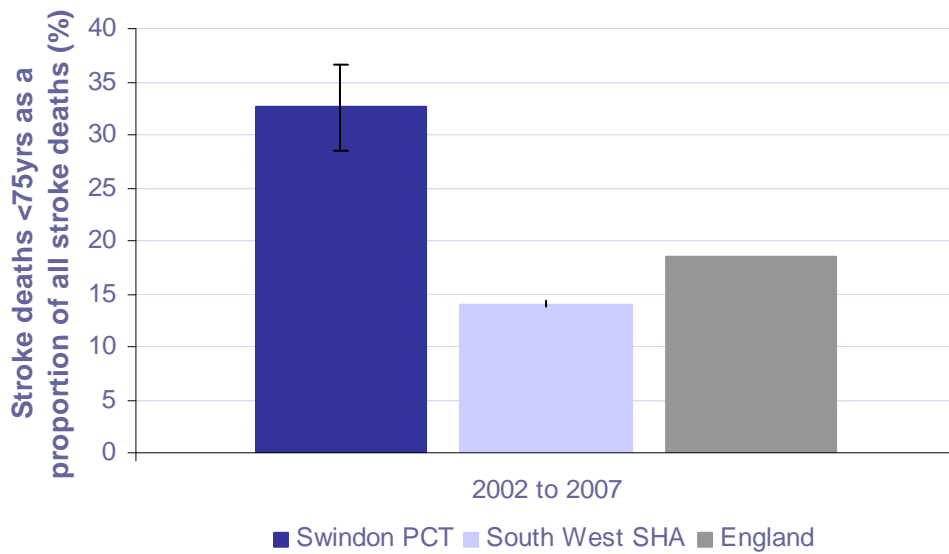
Table 4.7.1: Mortality from stroke in Swindon⁸⁷

		2002	2003	2004	2005	2006	2007
Deaths from stroke (N)	<75yrs	44	22	24	25	26	26
	All ages	107	81	82	81	73	89

In Swindon, of the 2,479 people in total who died from a stroke between 2002 and 2007, 32.6% were aged less than 75 years of age. This proportion is statistically significantly greater than the proportion of premature deaths from stroke in the South West (14.0%) and England (18.5) (Figure 4.35). This may be one factor which explains why Swindon residents have a shorter life expectancy compared with the rest of the South West region (see Section 4.1).

⁸⁷ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

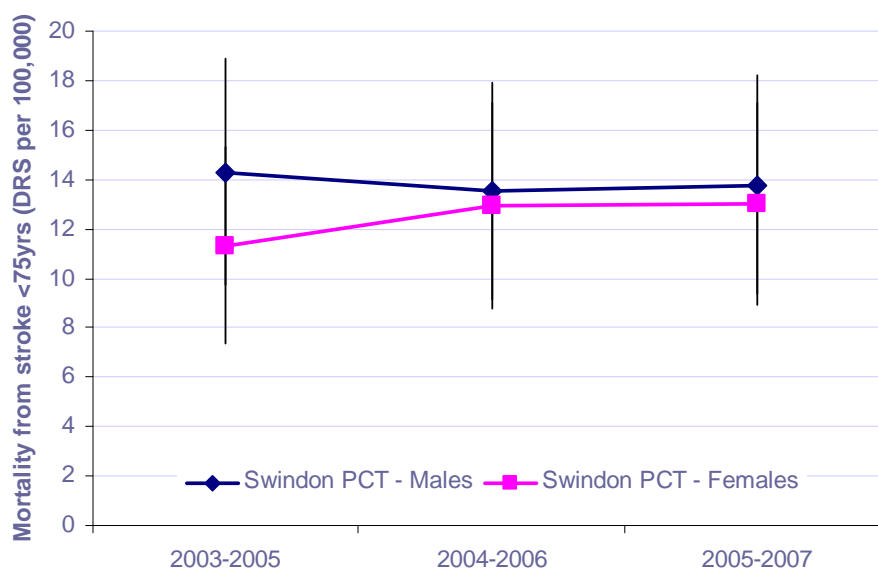
Figure 4.35: Premature stroke deaths (<75yrs) as a proportion of all stroke deaths (2002-2007)⁸⁸



Further analysis was completed to investigate whether inequalities in premature death from stroke exist.

Pooled data presented in Figure 4.36 shows that from 2002-04 to 2005-07 there was no significant difference between male and female stroke mortality rates <75yrs. This local rate compares with regional and national benchmarks. For example, of the 167 people in Swindon that died from a stroke before the age of 75yrs between 2002 to 2007, 49.1% (95% CI; 41.6 to 56.6) were male; this is comparable with (i.e., not statistically significantly different) proportions for the South West (56.0%; 95% CI 54.6 to 57.3) and England (55.1%; 95% CI 54.6 to 55.5).

Figure 4.36: Mortality from stroke <75yrs in Swindon by gender (2002-04 to 2005-07)⁸⁹



⁸⁸ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

⁸⁹ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

Analysis also revealed that inequalities in mortality from stroke exist according to ward location. Figure 4.37 demonstrates that there was a wide variation in premature mortality rate from stroke according to ward when accounting for age.

Figure 4.37: Stroke mortality <75yrs in Swindon by ward (2005-2007 pooled)⁹⁰

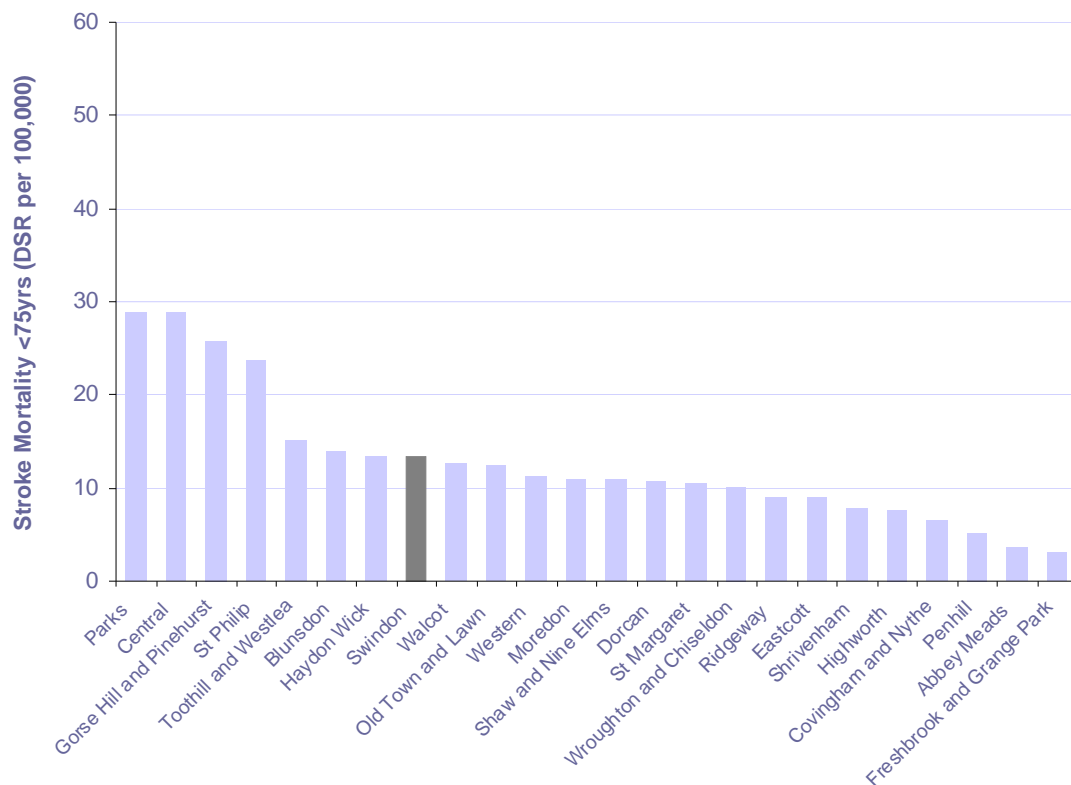
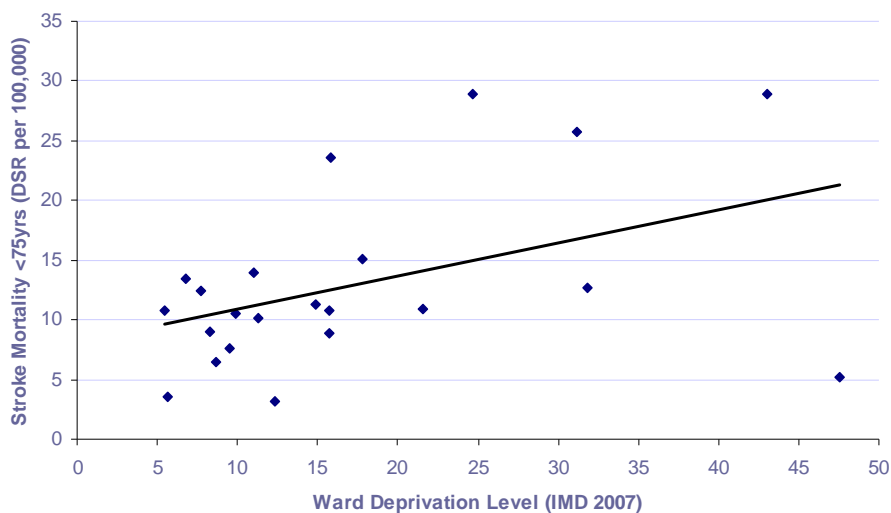


Figure 4.38 also reveals that there was a strong positive correlation between premature stroke mortality and ward level deprivation ($r=.43, p<.05$). This means that a person who lives in a more deprived ward is statistically significantly more likely to die prematurely from stroke than someone who lives in a less deprived ward.

Figure 4.38: Stroke mortality (2005-07) <75yrs by ward deprivation level (IMD 2007) in Swindon



⁹⁰ ONS Mortality Dataset

4.7.2 Incidence of stroke

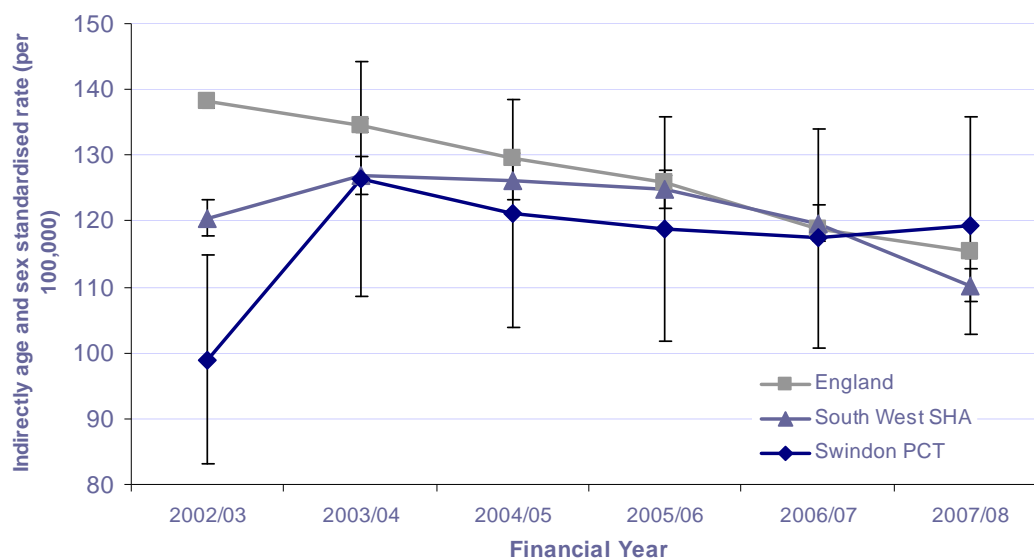
Table 4.7.2 shows that that number of emergency hospital admissions for Stroke in Swindon has increased since 2002. Although there have been year-on-year fluctuations, the number of admissions for stroke in Swindon have increased by 23.8% over the period 2002-2007; this compares with a reduction in stroke numbers of 11% in England and 2% reduction in the South West.

Table 4.7.2: Emergency hospital admissions for stroke (continuous patient spells)⁹¹

	Financial Year					
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
All ages (N)	155	200	195	196	198	207
Aged < 75yrs (N)	44	22	24	25	26	26

Figure 4.39 indicates that in 2002 the rate of inpatient hospital admissions for stroke was statistically significantly below both national and regional rates; however in 2007 rates in Swindon are now above those in the South West and England (although not significantly). This relates to a 20% increase in stroke admission rates in Swindon from 2002-2007; compared with a 16% overall reduction in England and an 8% overall reduction in the South West.

Figure 4.39: Emergency hospital admissions for stroke (2002/03 to 2007/08)⁹²



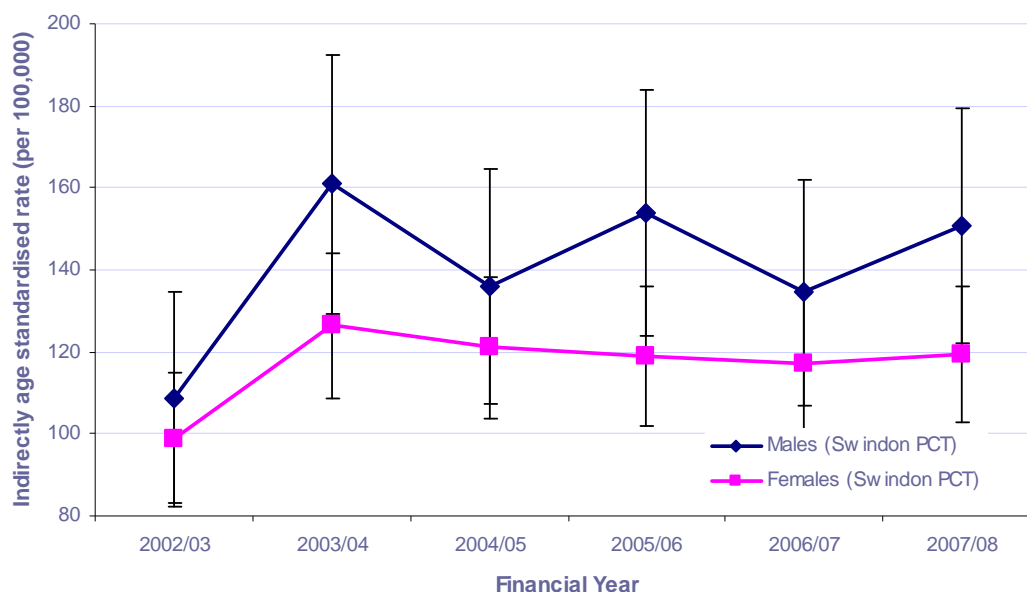
Further analysis was completed to investigate whether inequalities in stroke incidence exist.

Pooled data presented in Figure 4.40 shows that during the period 2002/03 to 2007/08 although there was a consistently higher rate of male admission for stroke, there was no significant difference between male and female emergency admissions for stroke in Swindon at any time point ($p > .05$). This local rate compares with regional and national benchmarks. For example, of the 1,151 emergency admissions for stroke in Swindon from 2002 to 2007, 50.6% (95% CI 47.7 to 53.4) were male; this is comparable (i.e., not statistically significantly different) from proportions for the South West (46.0%; 95% CI 45.6 to 46.5) and England (47.3%; 95% CI 47.2 to 47.5).

⁹¹ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

⁹² National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

Figure 4.40: Emergency admission rate (continuous patient spells) for stroke by gender⁹³



In addition to premature death, stroke may also have an impact on quality of life and physical ability. Table 4.7.3 shows that over the next five years there will be a steady increase in the number of people in Swindon who have a long-term limiting illness caused by a stroke. This number is projected to be higher in females than males due to females' longer life expectancy. These prevalence rates are based on the 2004/05 General Household Survey, National Statistics, general health and use of health services, (Table 7.15 Chronic sickness: rate per 1000 reporting selected longstanding conditions, by sex and age). Information on chronic sickness was obtained by asking about any longstanding illness that has had an effect or will have an effect over a period of time. The prevalence rates have been applied to ONS population projections of the 65 and over population to give estimated numbers predicted to have a stroke to 2025.

Table 4.7.3: Persons in Swindon aged 65yrs + predicted to have a longstanding health condition caused by a stroke⁹⁴

		Projections				
		2009	2010	2011	2012	2013
Males	65-74yrs	193	230	249	266	308
	75yrs+	198	239	277	342	384
Females	65-74yrs	89	107	116	122	143
	75yrs+	146	158	177	209	236
Total population	65yrs+	626	734	820	939	1,070

Programme budgeting analysis also reveals that Swindon has a high spend per head on circulatory diseases (which includes stroke and CVD). This level of spend is

⁹³ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

⁹⁴ Projecting Older People Population Information System (POPPI). Department of Health (www.poppi.org.uk/)

above the national and ONS Cluster mean (although not a statistical outlier)⁹⁵. Ideally high spend should equate to good outcome (i.e., low mortality and/or morbidity rates); however, as outlined above, outcomes for circulatory disorders are within the mid range (compared with England and the South West), and are, in some cases in particular stroke, considered low.

4.8 Coronary Heart Disease (CHD)

4.8.1 Mortality from CHD

Data presented in Figure 4.41 and Figure 4.42 indicate that mortality rates for all coronary heart disease have been declining year-on-year for the population as a whole and for those under the age of 75yrs⁹⁶. This is line with regional and national trends.

Figure 4.41: Mortality from CHD, All Ages

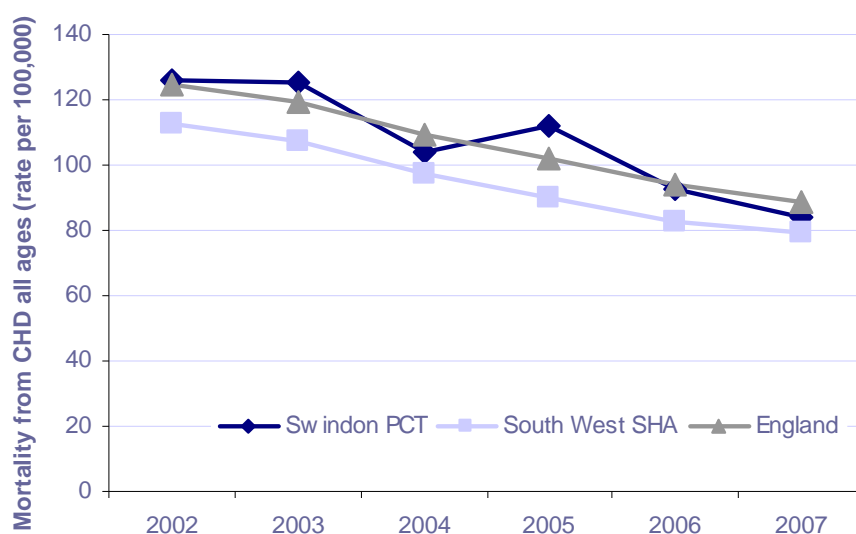
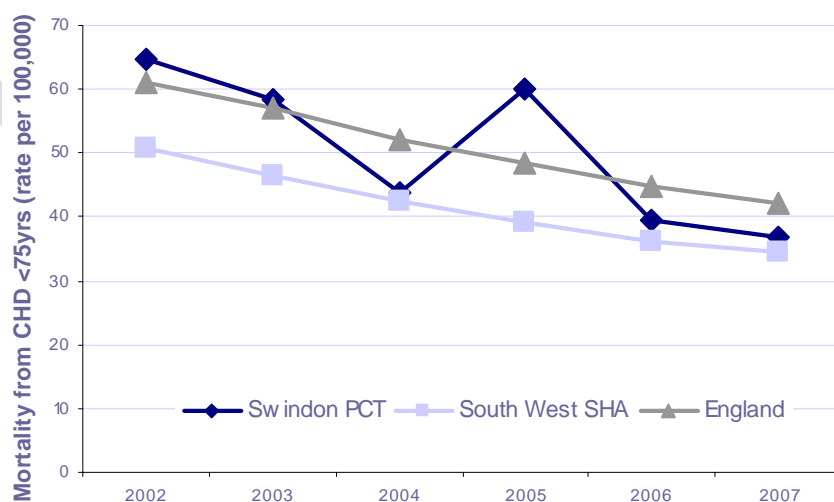


Figure 4.42: Mortality from CHD <75yrs



⁹⁵ Programme Budgeting Atlas. National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

⁹⁶ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

From 2002 to 2007 there was an average of 274 deaths from CHD each year in Swindon; an average of 93.7 of these persons were aged less than 75yrs. From 2002 to 2007 there was an average year-on-year decrease of 5.01% for the rates of deaths from CHD (all ages) in Swindon. This is comparable to trends in the South West (-7.3%) and England (-7.2%). Similar trends were found for premature deaths in CHD which declined in Swindon by 7.2%, -6.8% in the South West and -6.5% in England.

Overall from 2002 to 2007 there was a 42.9% (95% CI -31.5 to -55.0) decrease in CHD mortality rates in Swindon. This decrease was not statistically significantly different from rates in the South West (-31.7%; 95% CI -20.5 to -45.4) and England (-31.1%; 95% -20.9 to -43.6). A similar trend was found for rates of CHD <75yrs in Swindon (-33.1%; 95% CI -25.5 to -41.7), the South West (-29.6%; 95% CI -22.0 to -38.6) and England (-28.5%; 95% CI -21.3 to -37.0); these rates did not differ significantly from each other.

This means that the number of overall deaths, and premature deaths (<75yrs) from CHD in Swindon fell at a similar rate to those in the South West and England, when taking into account population size and age.

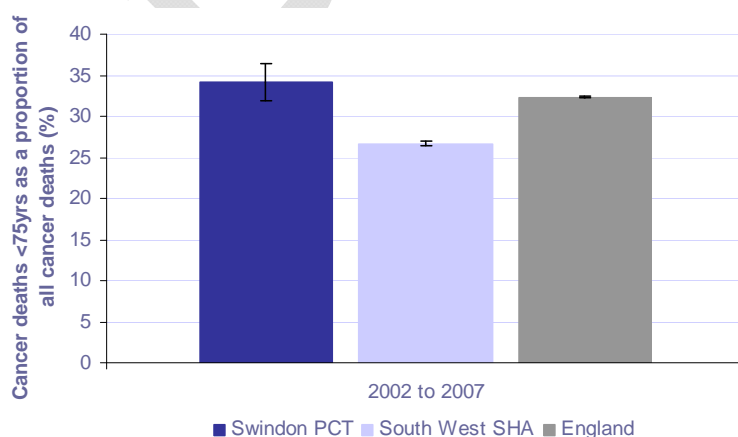
Table 4.8.1 indicates that during this time period there was an overall decrease in deaths from CHD.

Table 4.8.1: Mortality from CHD in Swindon PCT⁹⁷

		2002	2003	2004	2005	2006	2007
Deaths from CHD (N)	<75yrs	117	106	81	113	73	72
	All ages	301	311	264	282	250	236

In Swindon, of the 1,644 people in total who died from CHD between 2002 and 2007, 34.2% were aged less than 75 years of age. This is comparable with England (32.3%) but statistically significantly greater than numbers in the South West (26.6%) (Figure 4.43). This may be one factor which explains why Swindon residents have a shorter life expectancy compared with the rest of the South West region (see Section 4.1).

Figure 4.43: Premature CHD deaths (<75yrs) as a proportion of all CHD deaths (2002-2007)⁹⁸



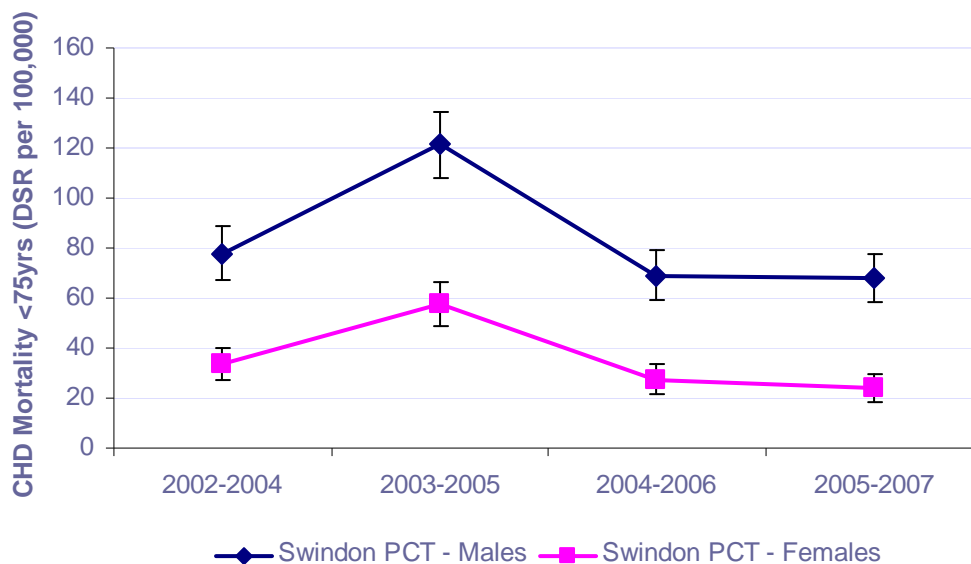
⁹⁷ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

⁹⁸ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

Further analysis was completed to investigate whether inequalities in premature death from CHD exist.

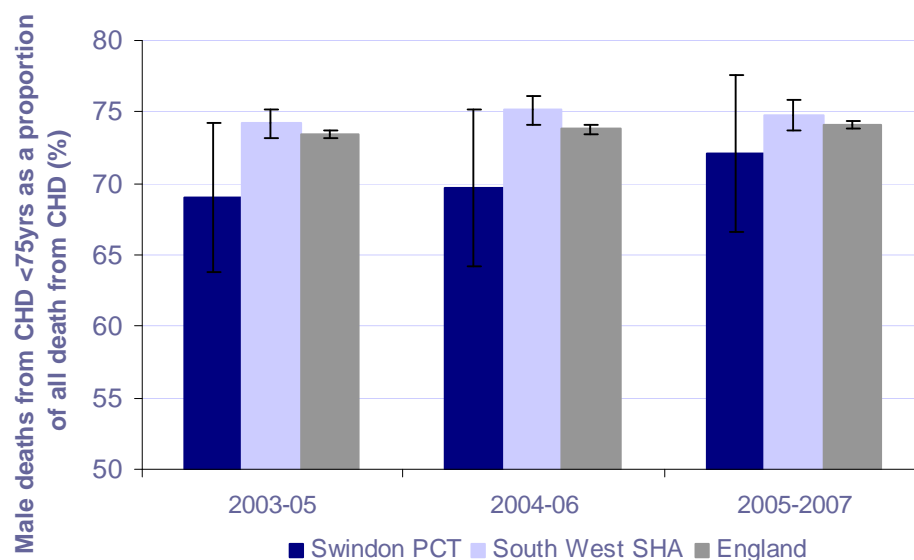
Pooled data presented in Figure 4.44 shows that from 2002-04 to 2005-07 the mortality rate of CHD <75yrs was significantly higher in males compared with females ($p < .05$). This local rate compares with regional and national benchmarks.

Figure 4.44: Mortality from CHD <75yrs in Swindon by gender (2002-04 to 2005-07)⁹⁹



Further analysis indicates that two thirds of CHD patient deaths in Swindon are male. Figure 4.45 shows that local proportions are similar to regional and national benchmarks. Figure 4.45 also indicates that despite the decrease in overall deaths from CHD the proportion of male CHD deaths (<75yrs) in Swindon is increasing (although not at a statistically significant rate).

Figure 4.45: Male deaths from CHD as a proportion of all deaths (pooled data 2003-05 to 2005-07)¹⁰⁰



⁹⁹ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

¹⁰⁰ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

Further analysis also revealed that inequalities in mortality from CHD exist according to ward location. Figure 4.46 demonstrates that there was a wide variation in mortality rate from CHD according to ward when accounting for age.

Figure 4.46: CHD mortality <75yrs in Swindon by ward (2005-2007 pooled)¹⁰¹

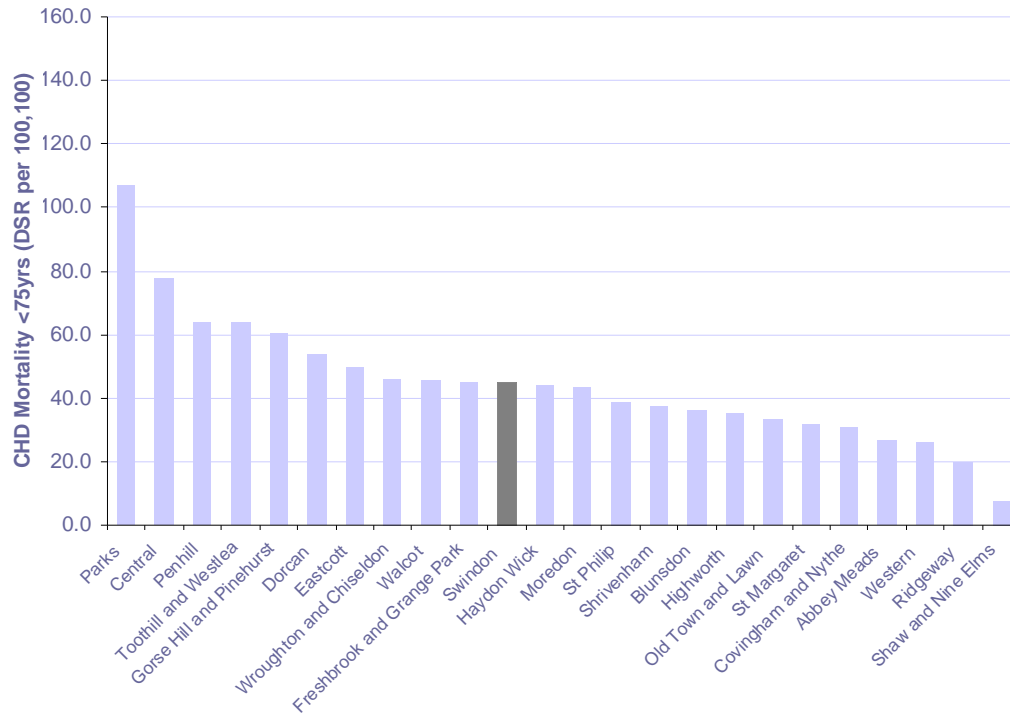
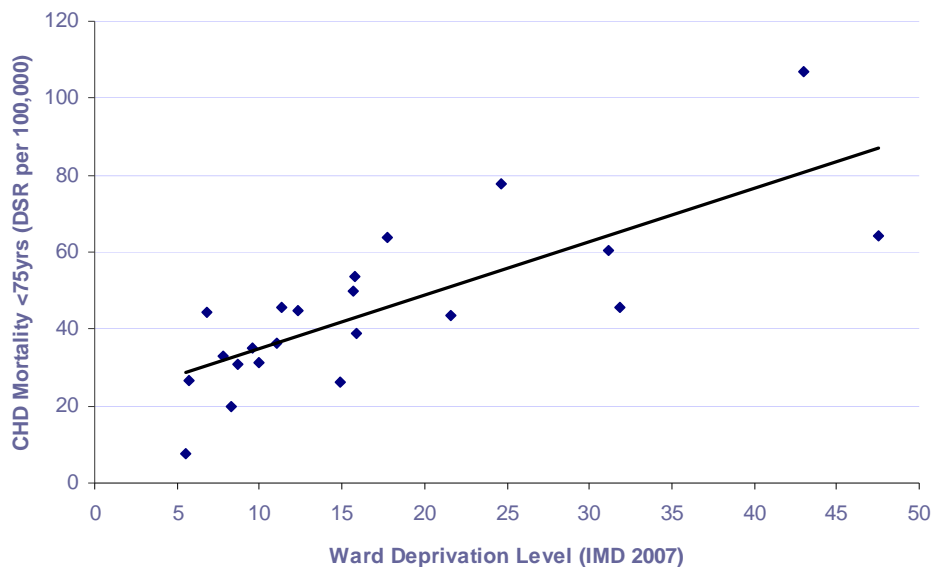


Figure 4.47 also reveals that there was a strong positive correlation between premature CHD mortality and ward level deprivation ($r=.77$, $p<.01$). This means that a person who lives in a deprived ward is statistically significantly more likely to die prematurely from CHD than someone who lives in a less deprived ward.

Figure 4.47: CHD mortality (2005-07) <75yrs by ward deprivation level (IMD 2007) in Swindon

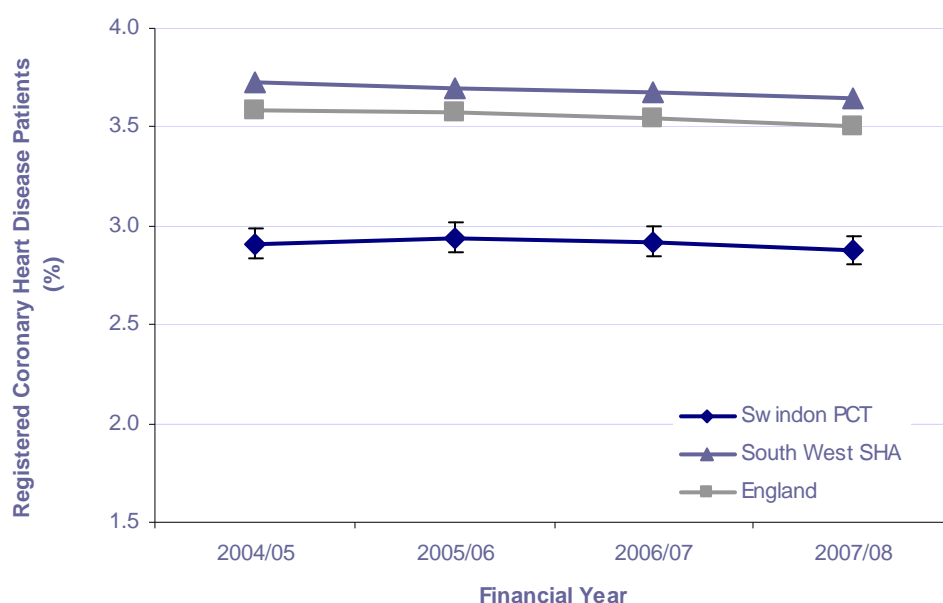


¹⁰¹ ONS Mortality Dataset

4.8.2 Prevalence of CHD

Figure 4.48 shows that the rate of CHD according to QOF registers (Quality Outcome Framework) is significantly lower in Swindon than it is for the south west region and England as a whole. As this data is compiled from disease registers it is unclear at present whether the prevalence rate of CHD in Swindon is truly lower than that of the South West and England. It is possible; however, that this local rate is associated with a higher proportion of undiagnosed cases or less people registering and seeking treatment for their disease. This may be one possible factor, therefore, that could account for the high proportion of the local population who die before the age of 75yrs (in comparison with regional and national benchmarks).

Figure 4.48: Prevalence of Coronary Heart Disease¹⁰²



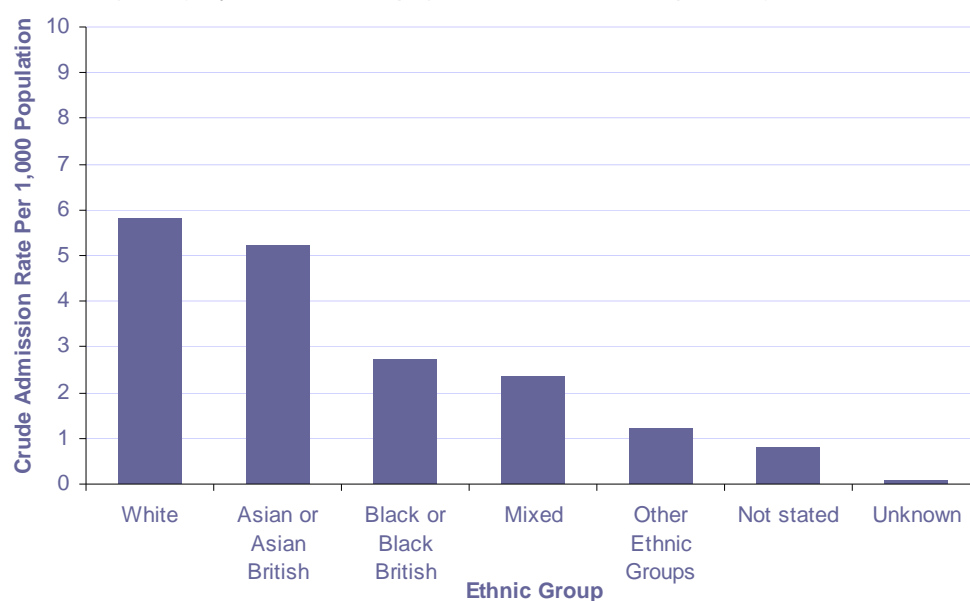
Further analysis was completed to investigate whether inequalities in CHD prevalence exist.

Figure 4.49 shows the number of people admitted for CHD in NHS Swindon and the rate per 1,000 population. The average number of people admitted with a primary diagnosis of CHD over the three year period was 1,241. Of the number of people admitted, 80.1% were from a White ethnic group, 14.1% were not stated or unknown, 2.7% were from Asian or Asian British Groups, 2.3% were from Other Ethnic Groups, 0.5% from Black or Black British groups, the remaining 0.3% were from mixed ethnic groups.

Figure 4.49 shows that the admission rate is highest in people from White and Asian or British Asian ethnic groups. For similar reasons outlined in Section 4.3.2 the validity of the data is not certain as it is probable that the rate of CHD in BME groups is underestimated. Nationally, it is known that the prevalence of heart disease is significantly higher in Pakistani men; and this may be true for Swindon also. Further work is needed, therefore, to improve the recording of ethnic group so that potential health inequalities can be addressed and monitored more effectively.

¹⁰² QOF data: National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or www.nchod.nhs.uk)

Figure 4.49: Hospital Admissions with a Primary Diagnosis of Coronary Heart Disease (CHD) by Ethnic Group (2005/06 to 2008/9 pooled)¹⁰³



4.9 Diabetes

4.9.1 Prevalence of Diabetes

Diabetes is an endocrine disorder, which not only leads to secondary disorders such as visual impairment but may also have an impact on quality of life and can, if poorly controlled lead to premature death.

Table 4.9.1 shows that in the most recent year (2007/08), 7,611 patients were registered with diabetes in Swindon PCT. Disease projections show that as the population ages the prevalence of diabetes is expected to increase.

Table 4.9.1: Prevalence of diabetes in Swindon PCT

	Financial Year ¹⁰⁴				Projected Year ¹⁰⁵			
	2004/05	2005/06	2006/07	2007/08	2010	2015	2020	2025
All ages (N)	6126	6636	7027	7611	8,259	9,282	10,417	11,722

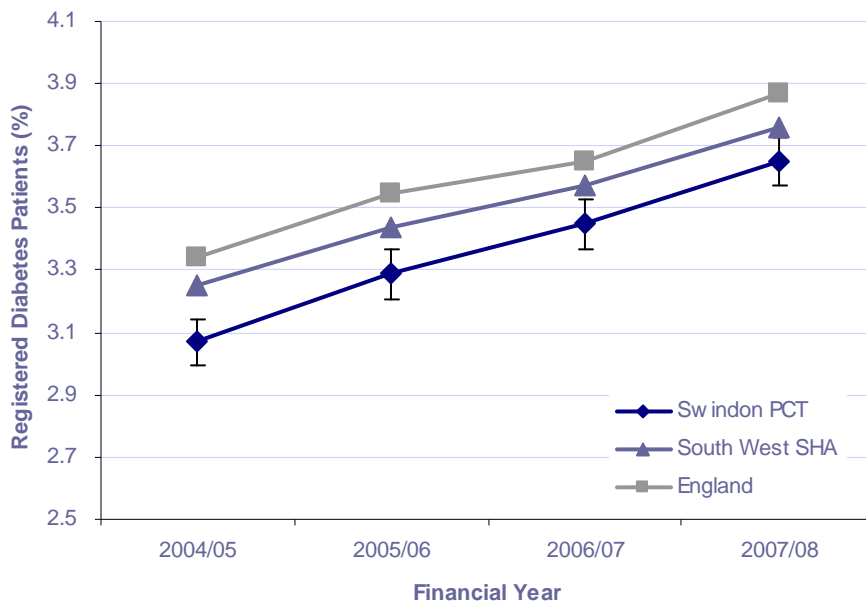
Figure 4.50 indicates that rates in all three areas have been rising steadily since 2004/05 (with Swindon experiencing the fastest rate of growth). It is projected that with an ageing population this rate will continue to rise over the next five years. The Figure also demonstrates that the prevalence rate of diabetes in Swindon is significantly lower than those for the South West and England ($p < .05$). As this data is compiled from disease registers it is unclear at present whether the prevalence rate of diabetes in Swindon is truly lower than that of the South West and England. It is possible that this local rate is associated with a higher proportion of undiagnosed cases or less people registering and seeking treatment for their disease.

¹⁰³ NHS Swindon Commissioning Data Sets & ONS Experimental Ethnicity Population Statistics 2007

¹⁰⁴ QOF data: National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

¹⁰⁵ APHO (YHPHO): PBS Diabetes Population Prevalence Model - Phase 3

Figure 4.50: Prevalence of QOF registered individuals with diabetes (2005)¹⁰⁶



Further analysis was completed to investigate whether inequalities in diabetes prevalence exists.

In 2005 the Association of Public Health Observatories (APHO) published estimated prevalence for diabetes. Figure 4.51 indicates that females in all three regions are statistically significantly more likely to have diabetes ($p < .05$). This is due largely to a higher proportion of older females.

Figure 4.51: Estimated diabetes prevalence (2005)¹⁰⁷

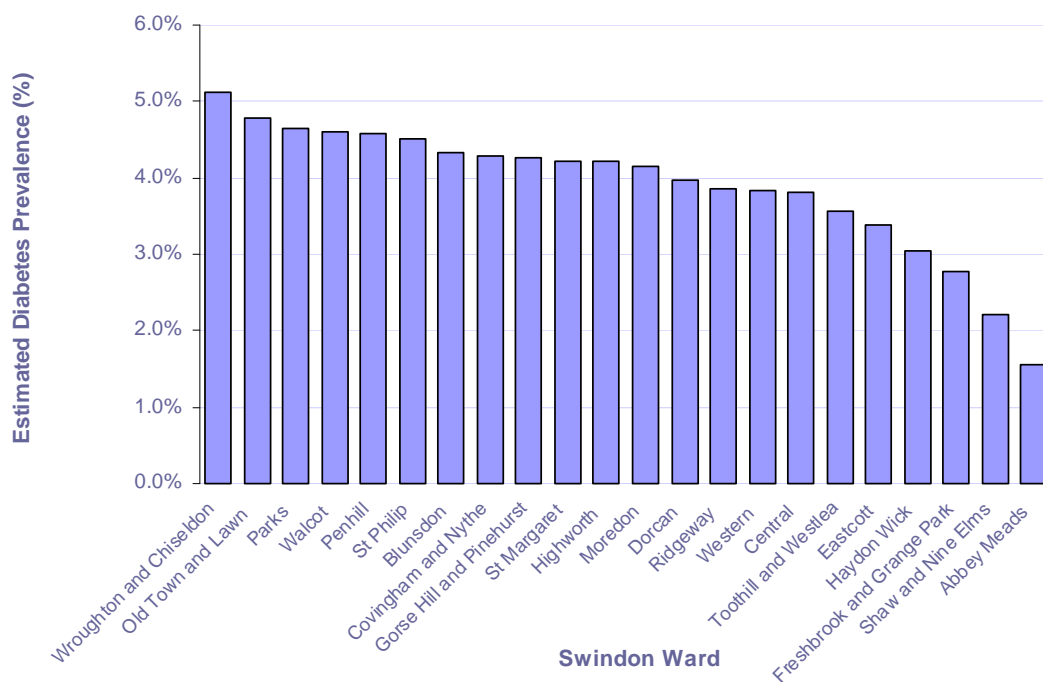


The APHO estimates also propose some potential inequalities in diabetes prevalence in Swindon. Figure 4.52 shows that there are large differences in diabetes prevalence according to ward, which may be due to the age of the ward population.

¹⁰⁶ QOF data: National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

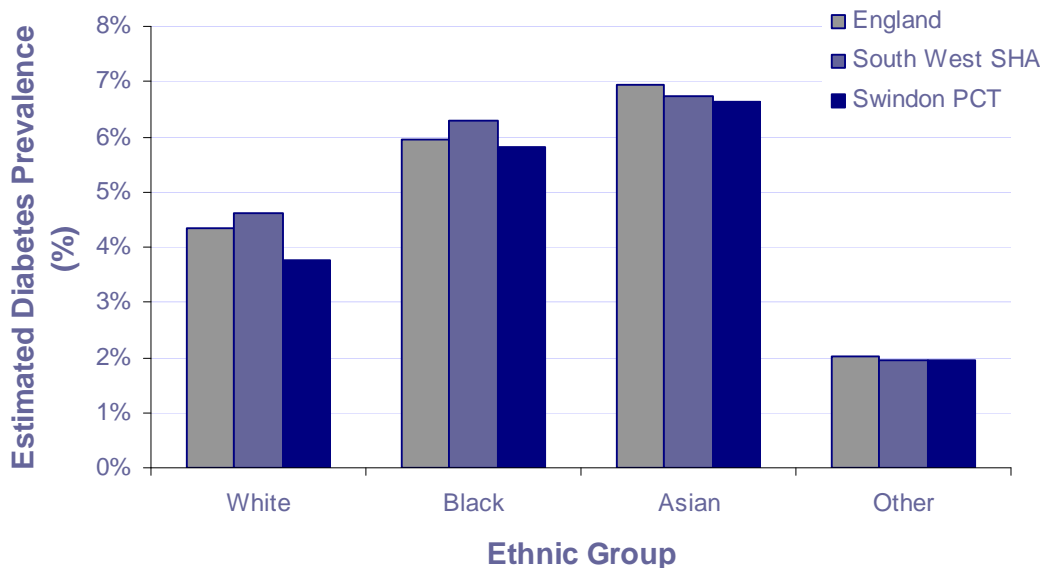
¹⁰⁷ APHO (YHPHO): PBS Diabetes Population Prevalence Model - Phase 3

Figure 4.52: Estimated diabetes prevalence by ward (2005)¹⁰⁸



Preventable inequalities in diabetes prevalence may also exist. For example, Figure 4.53 demonstrates that a higher proportion of Asian and Black communities are estimated to have diabetes.

Figure 4.53: Estimated diabetes prevalence by ethnic group (2005)¹⁰⁹



It is interesting to note, however that projected BME rates of diabetes do not appear to match actual hospital data that is currently available. For example, it is expected that that higher the prevalence of diabetes the greater the hospital admission rate. However, Figure 4.54 shows that the average number of people admitted with a primary diagnosis of diabetes over the three years was 191. Of the number of people admitted, 86.6% were from a White ethnic group, 7.3% were not stated or unknown,

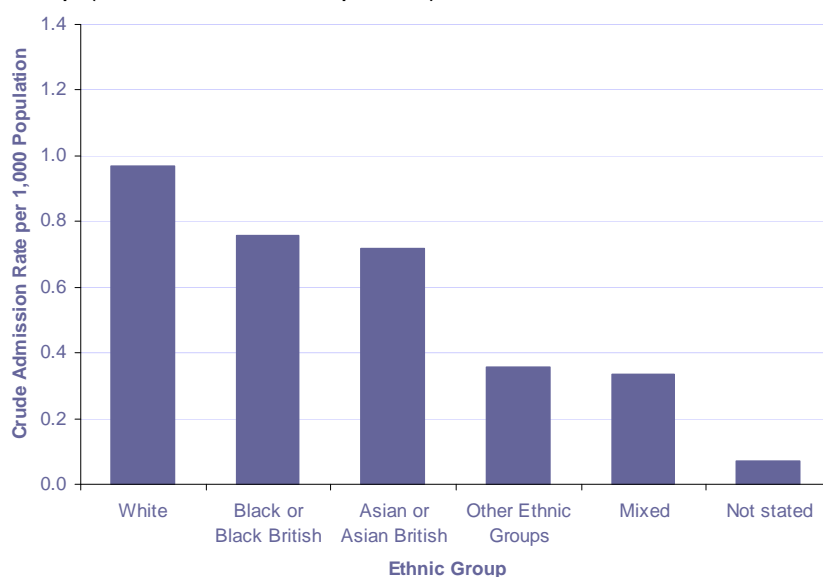
¹⁰⁸ APHO (YHPHO): PBS Diabetes Population Prevalence Model - Phase 3

¹⁰⁹ APHO (YHPHO): PBS Diabetes Population Prevalence Model - Phase 3

2.4% were from Asian or Asian British Groups, 2.3% were from Other Ethnic Groups, 0.9% were from Black or Black British groups, the remaining 0.5% were from mixed ethnic groups.

The number of admissions per 1,000 population appears to show a higher rate in people from White, Black or Black British and Asian or British Asian ethnic groups. As discussed in Section 4.3.2, certainty around the validity of this data needs further exploration as it is possible that the rate of diabetes in BME groups is currently underestimated. Further work is needed to improve the recording of ethnic group so that potential inequalities can be addressed and monitored more effectively.

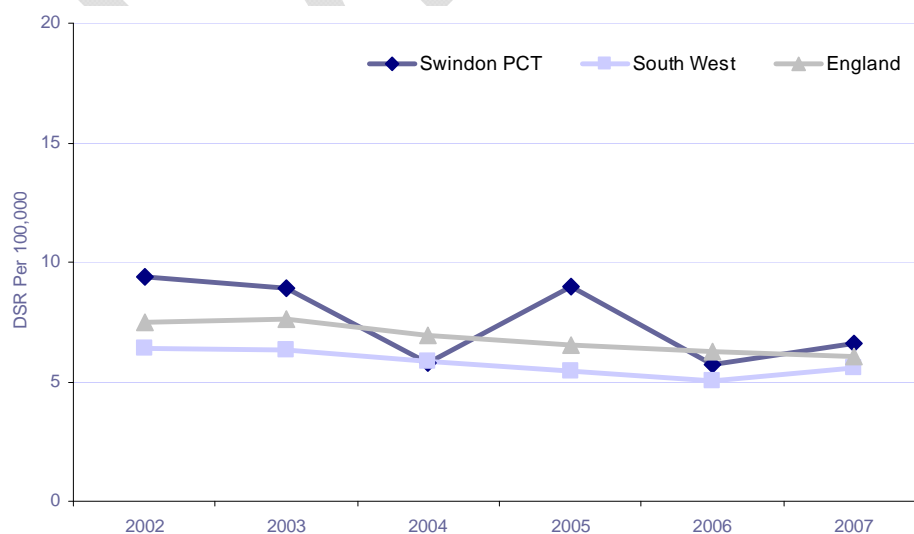
Figure 4.54: Hospital Admissions with a Primary Diagnosis of Diabetes by Ethnic Group (2005/06 to 2008/9 pooled)¹¹⁰



4.9.2 Mortality from Diabetes

Figure 4.55 indicates that despite having low prevalence rates of diabetes, more people in Swindon die from diabetes (as a proportion of the total population) than in the South West and England.

Figure 4.55: Diabetes mortality (2002 to 2007)¹¹¹



¹¹⁰ NHS Swindon Commissioning Data Sets & ONS Experimental Ethnicity Population Statistics 2007

¹¹¹ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or www.nchod.nhs.uk)

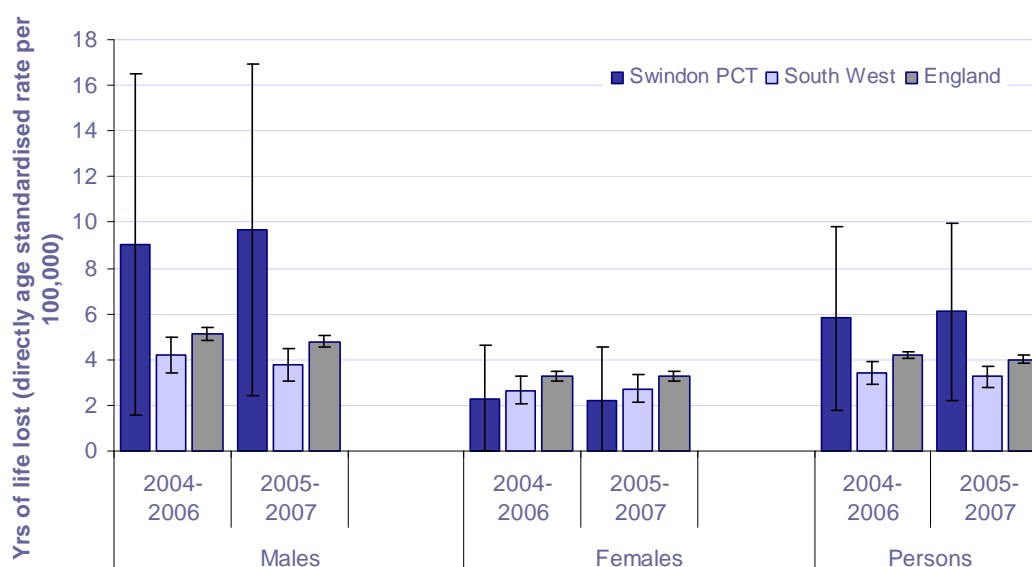
Table 4.9.2 shows the overall number of people, and those aged less than 75yrs, who die in Swindon from diabetes-related disorders. This number is expected to increase as Swindon's population ages.

Table 4.9.2: Mortality from Diabetes in Swindon PCT

	Financial Year		
	2003-2005	2004-2006	2005-2007
Aged <75yrs (N)	21	18	18
All ages (N)	56	54	59

Figure 4.56 also indicates that the rate of years of life lost prematurely due to diabetes in Swindon is nearly twice as high as the rates for the South West and England ($p > .05$). Together this evidence may account for current life expectancy in Swindon.

Figure 4.56: Year of life lost prematurely due to diabetes¹¹²



4.9.3 Diabetes Management

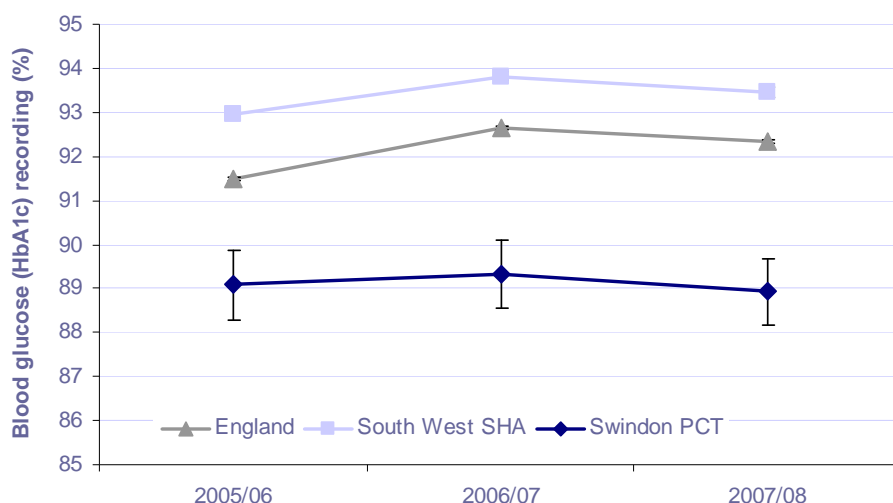
Successful diabetes management can be measured by the amount of HbA1c in the blood (which represents blood glucose levels). Normal levels of HbA1c in people without diabetes typically range from levels of 3.5 to 5.5. Levels of HbA1c in patients with well controlled diabetes are typically around 7.5. Diabetics with an HbA1c level of 10 or more may be experiencing difficulty controlling their disease.

Successful diabetes management is measured therefore by the proportion of people with diabetes who have had their blood glucose levels (HbA1c) recorded as 10 or less in the last 15 months. A low percentage of HbA1c recordings <10 can often indicate that people with diabetes may not be successfully managing their disease. Poor management of diabetes is known to be related to an increased likelihood of developing secondary conditions such as visual impairment and in some cases may lead to premature mortality.

¹¹² National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

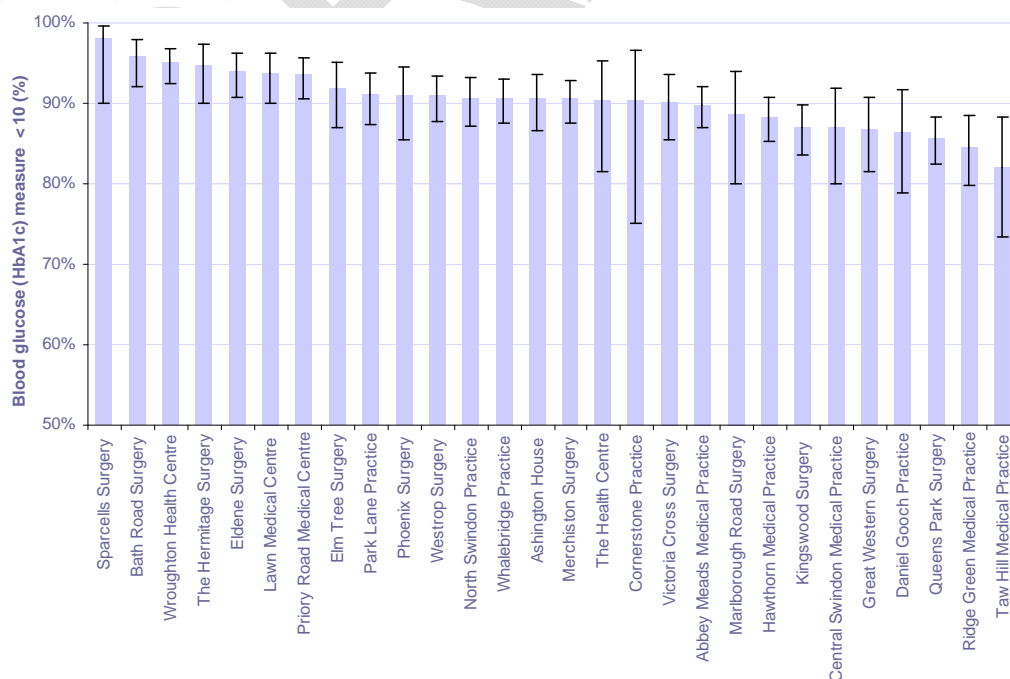
Figure 4.57 indicates that the percentage of people with diabetes in Swindon whose blood glucose was recoded as <10 in the last 15 months has decreased over the last three years. In Swindon there are currently (as of 2007/08) 738 (88.9%) diabetics in Swindon with an HbA1c recording that is 10 or lower. This proportion is statistically significantly lower than rates recorded in the South West (93.4%) and England (92.3%). In fact, Swindon has the second to lowest blood glucose recording rate nationally. This indicates that a significant proportion of diabetics in Swindon may be experiencing difficulties in controlling their disease.

Figure 4.57: Blood glucose (HbA1c) levels <10% in diabetic patients (2005-2008)¹¹³



Further analysis also reveals that inequalities in diabetes blood glucose results exist. Figure 4.58 shows that there are differences in diabetes control according to GP practice with some practices recording statistically significantly more diabetics with an HbA1c recording of 10 or less.

Figure 4.58: Blood glucose (HbA1c) levels <10 in diabetic patients by Swindon GP practice (2008/09)



¹¹³ QOF; National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

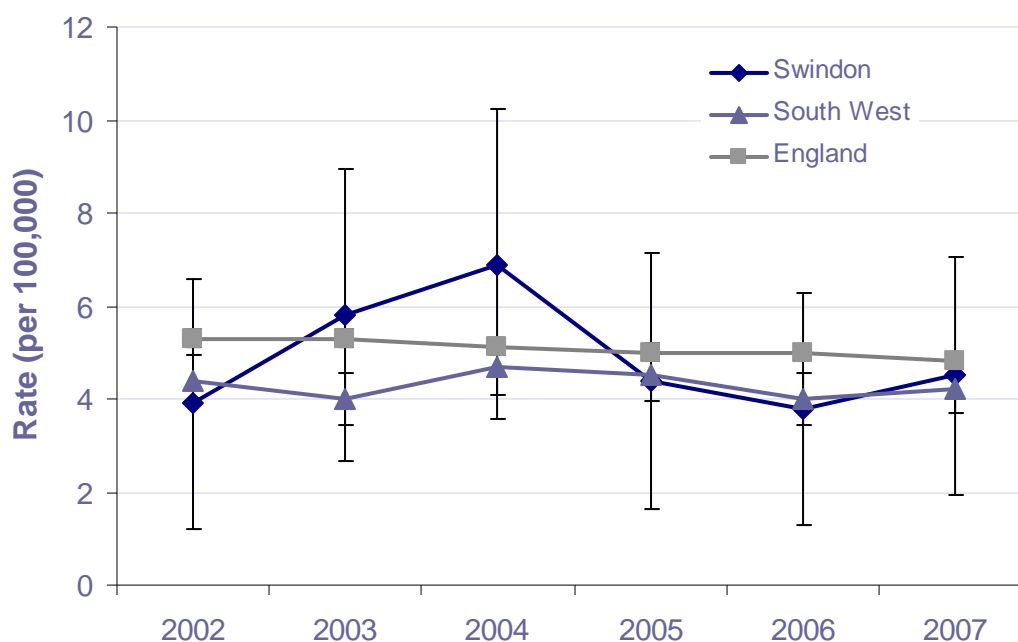
In addition, programme budgeting analysis shows that not only is outcome for diabetes (and the broader category of endocrine, nutritional, metabolic and neurological disorders) a significant outlier (indicating worse health for diabetes patients in Swindon), compared with the South West and other similar PCTs (categorised by the ONS as New and Growing Towns) investment in diabetes care and services is also low.¹¹⁴

Taken together the evidence appears to suggest that, in Swindon, although fewer people are registered to have diabetes (possibly indicating a high level of undiagnosed cases) diabetics are more likely to experience difficulties when managing their disease and are more likely to die prematurely from the disease. This is teamed with budgeting evidence which suggests that investment in this area is low.

4.10 Infant Mortality

Infant mortality (deaths before 1 year of age) is one of the most sensitive indicators of inequalities in health and can be closely related to a number of multidimensional factors including deprivation, maternal care and teenage pregnancy. Figure 4.59 shows that infant mortality rates in Swindon over recent years have rapidly declined; however, rates have begun to increase again and infant mortality rates in Swindon are now above the South West average ($p > .05$).

Figure 4.59: Infant Mortality (2002 to 2007)

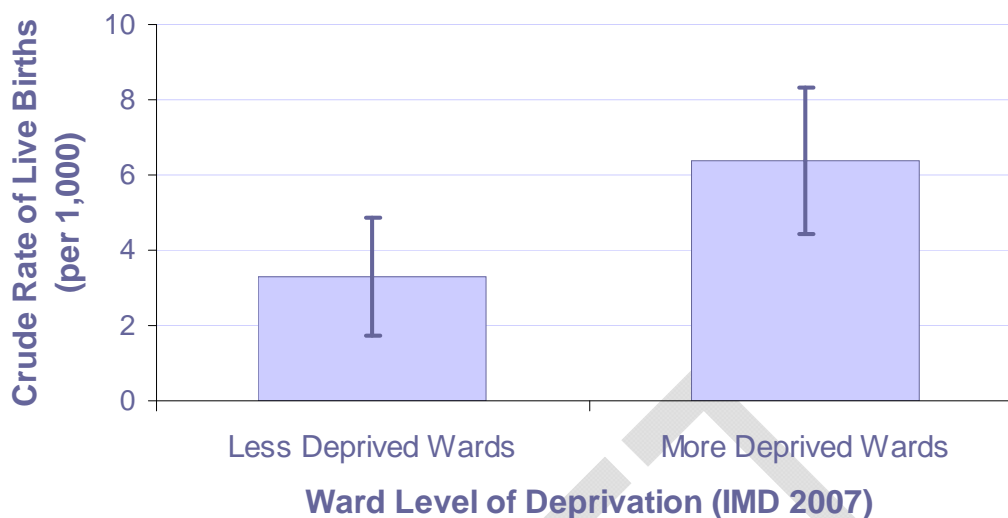


In addition, local level analysis suggests that inequalities in infant mortality, according to parental deprivation level exist.

Figure 4.60 illustrates that the infant mortality rate in the 50% most deprived wards in Swindon is approximately twice that of the rate in the 50% least deprived wards (according to IMD 2007 score).

¹¹⁴ Programme Budgeting Atlas. National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

Figure 4.60: Infant Mortality: deaths before one year per 1,000 live births (years 2002-2006 pooled)¹¹⁵



4.11 Obesity

4.11.1 Adult Obesity

Obesity is currently a major health concern at both a national and local level. As well as being related to premature mortality, obesity is also associated with a number of serious medical conditions, including heart disease, stroke and diabetes, which can reduce people's quality of life and place a burden on health services. With greater awareness and the adoption of a healthy lifestyle, obesity and its related disorders are considered preventable.

For adults, body mass index (BMI) is used as the measure of obesity. BMI is calculated by dividing a person's weight (in kilograms) by the square of their height (in metres). The calculation produces a figure that can be compared to various thresholds that define whether a person is overweight or obese. For adults these thresholds are:

- A BMI below 18.5 is classed as Underweight
- A BMI between 18.5 and 25 is classed as a Healthy Weight
- A BMI between 25 and 30 is classed as Overweight
- A BMI between 30 and 40 is classed as Obese
- A BMI over 40 is classed as Morbidly Obese

BMI is an effective measure of weight status at a population level but can be less accurate for assessing healthy weight in individuals, especially for certain groups (e.g. athletes and the elderly) where a slightly higher BMI is not necessarily unhealthy.

The Health Survey for England (HSE) is currently agreed to be the most robust source of information on obesity prevalence in England¹¹⁶. This annual survey is designed to measure the health and health-related behaviour of adults and children

¹¹⁵ ONS Birth and Mortality Dataset.

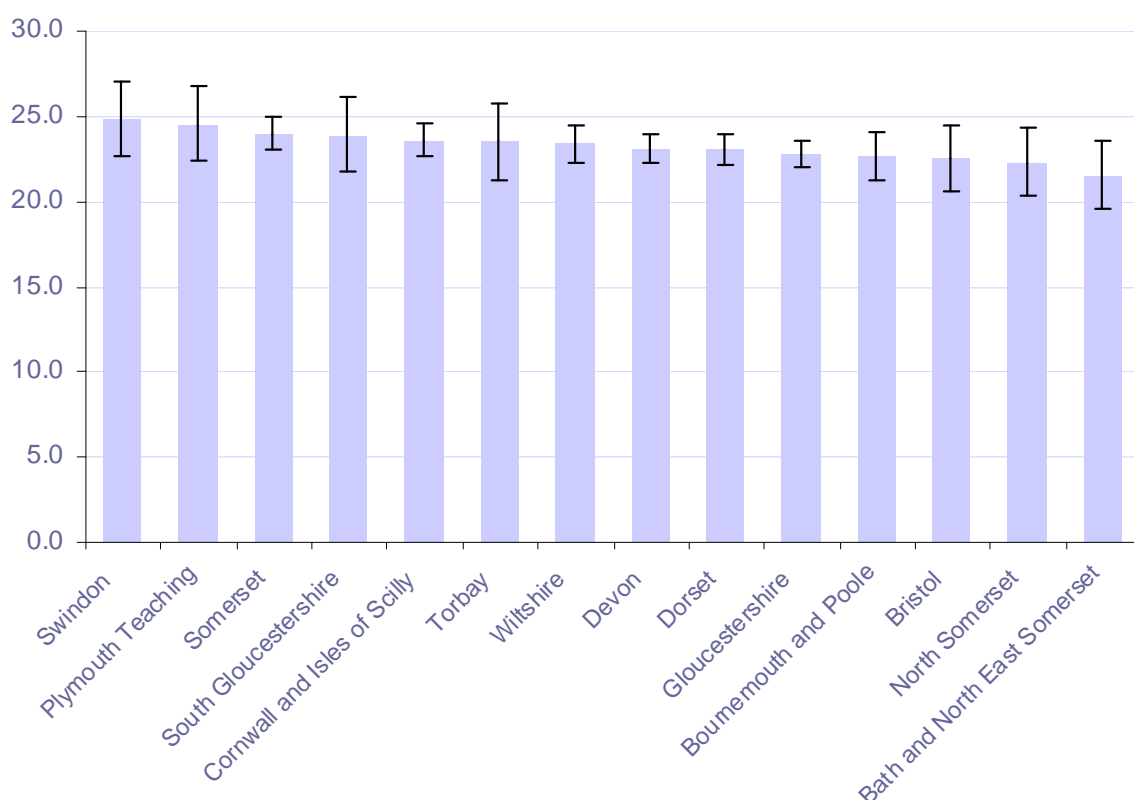
¹¹⁶ National Obesity Observatory, Obesity and Overweight Surveillance 2009

http://www.noo.org.uk/uploads/doc/vid_4483_Obesity_surveillance_data_-_Final_draft_12_11_09.pdf

living in private households in England. It has been undertaken since 1991 and provides many years of data for trend analysis at national level. HSE data can provide estimates of obesity prevalence at national and regional level. Unfortunately, this data is not available at lower geographical levels meaning we cannot compare levels in Swindon to that of the nation. Most recent survey data suggests 24% of the nation's population are obese.¹¹⁷

The data presented below in Figure 4.61 suggests that Swindon has the highest prevalence of obesity in the South West; this is not statistically significantly different from other Primary Care Trusts in the region ($p > .05$). The estimated prevalence of obesity is 24.8%, 0.8% higher than the national average.

Figure 4.61: Model Based Estimates – Prevalence of Obesity in the South West by Primary Care Trust¹¹⁸



The data presented in

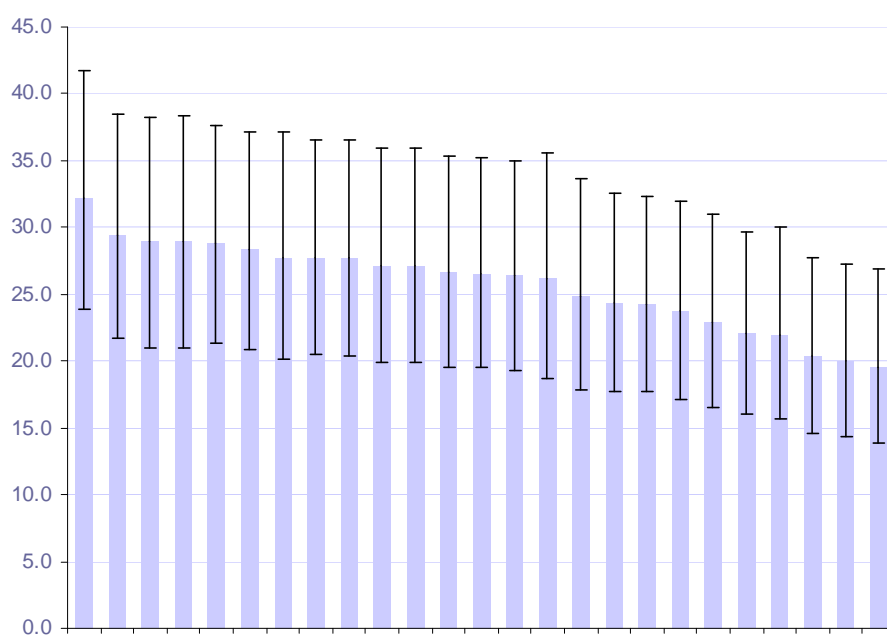
¹¹⁷ Health Survey for England 2007. The NHS Information Centre

¹¹⁸ Healthy Lifestyle Behaviours: Model Based Estimates, 2003-2005 ONS Neighbourhood Statistics

Figure 4.62 suggests that there is variation in the prevalence of obesity within Swindon with some areas having a higher prevalence than others. Although these differences are not statistically significantly different ($p > .05$), it is important to note that variation by geographical area and therefore level of deprivation exists.

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Figure 4.62: Model Based Estimates – Prevalence of Obesity in the Swindon by Middle Layer Super Output Area¹¹⁹



It is important that obesity is adequately measured in order to understand whether interventions are successful. The data presented above gives some indication of obesity prevalence in Swindon; however, these values are synthetic estimates. There are a number of additional data sources which could provide obesity data.

First, BMI is collected by GPs as part of the Quality Outcomes Framework (QOF) system. At present (2009) these records suggest that 31% of Swindon's population is obese. This figure is much higher than the estimated prevalence and may possibly be due to low levels of recording and measurement bias. For example, it is known that only 25% of practice patients have had their BMI recorded and that it is most often those with high BMI that are measured.

Second, new questions have been developed for the 2009 Place Survey, which is conducted as a joint venture between the PCT and Borough Council. Although it is known that individuals typically underestimate their self-reported weight and height, these values can still be used to give an approximation of the distribution and inequalities surrounding obesity in Swindon.

4.11.2 Childhood Obesity

Levels of childhood obesity provide an important insight into the future health status of the local population.

Following recent government initiatives childhood obesity data is available from the National Childhood Measurement Programme (NCMP)¹²⁰. The NCMP seeks to collect local data on the height and weight of children in Reception and Year 6 in schools to enable primary care trusts, local authorities and schools to gain a better understanding of obesity in their locality.

According to data extracted from the National Child Measurement Programme (NCMP) obesity levels in reception year and year 6 pupils have remained relatively

¹¹⁹ Healthy Lifestyle Behaviours: Model Based Estimates, 2003-2005 ONS Neighbourhood Statistics

¹²⁰ National Child Measurement Programme

high over the last 4 years (see Figure 4.63 and Figure 4.64), with 18% of year 6 pupils and 10% of reception age pupils currently classified as obese.

Figure 4.63: Prevalence of Obesity in Reception Year Children (Ages 4-5) in Swindon (2005/06 to 2008/09)

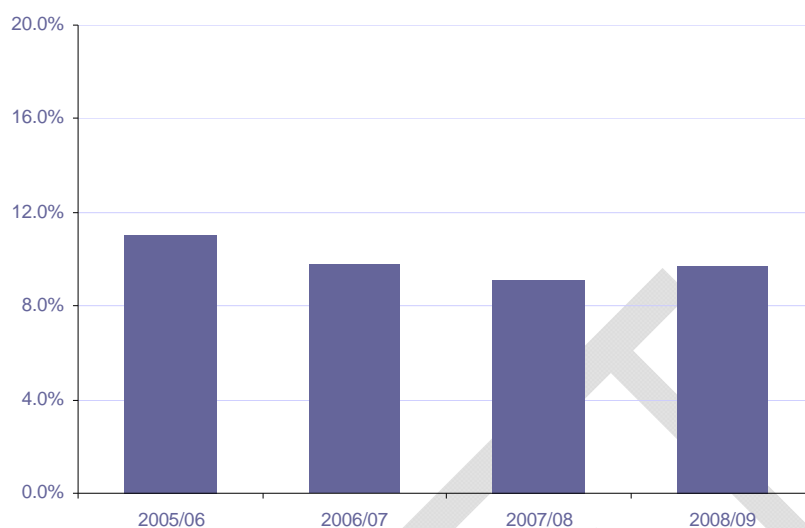
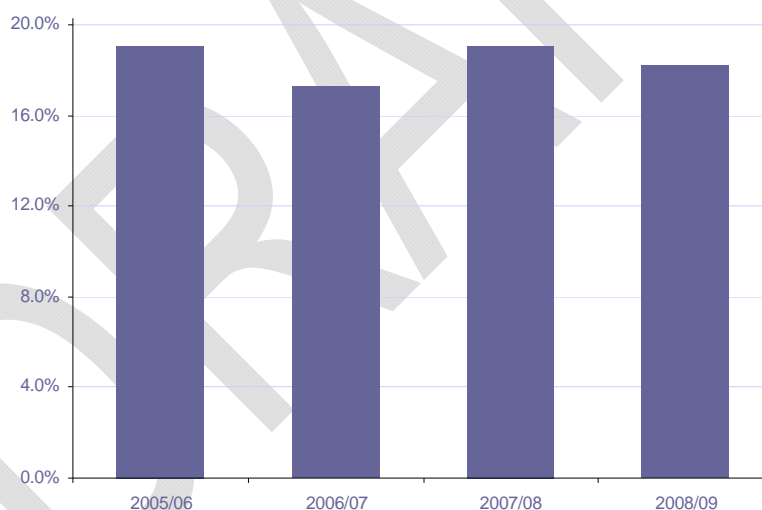


Figure 4.64: Prevalence of Obesity in Year 6 (Ages 10-11) Children in Swindon (2005/06 to 2008/09)



It is important to note that fluctuations in the data over time exist and there is no clear trend emerging from the data yet. For example, data from 2005/06 indicates a high prevalence of 11%; however this is likely to be skewed as the measurement programme only covered 81% of the school population in the first year. Population coverage is now much improved with 93% coverage in 2008/09.

Obesity levels in year 6 children also appear to fluctuate, with the first year of data collection showing a high prevalence at 19.1%. Obesity levels appear to be much higher in year 6 children compared with reception year children; in 2008/09 9.7% of reception year children were obese and 18.2% of children in year 6 were obese.

In order to reduce childhood obesity it is important to understand whether any inequalities in obesity exist. Data from 2008/09 shows that there were very large school-by-school differences in obesity levels. For example the percentage of obese

children in reception year ranged from 4.5% to 19.1%; this range was 5.4% to 33.3% for year 6 pupils.

This indicates that inequalities in childhood obesity exist and Figure 4.66 suggest that these differences may be linked to the ward and therefore level of deprivation that the school is located in (according to IMD 2007 score). For example, confidence intervals shown in the figure below demonstrate that those schools located in the most deprived areas had significantly more obese students in both year 6 and reception year in 2008/09. Caution must be used when interpreting these figures due to relatively small sample sizes.

Figure 4.65: Obesity prevalence in Reception Year pupils in Swindon by school deprivation level (2008/09)

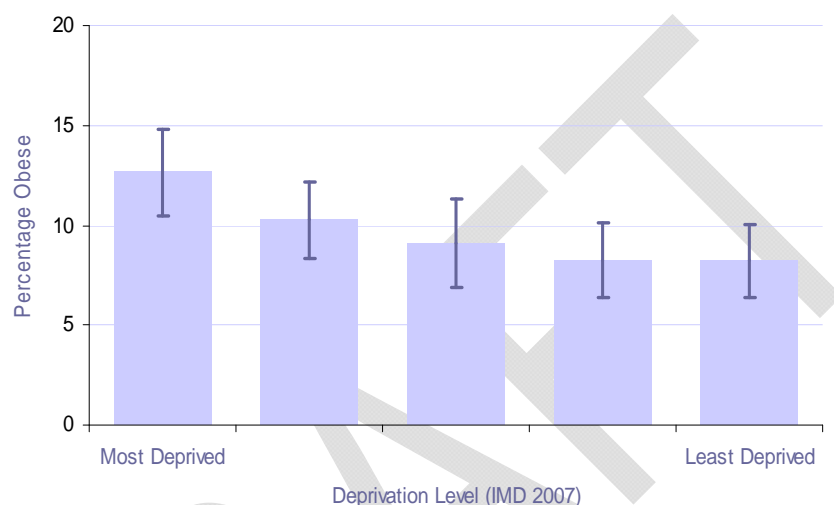
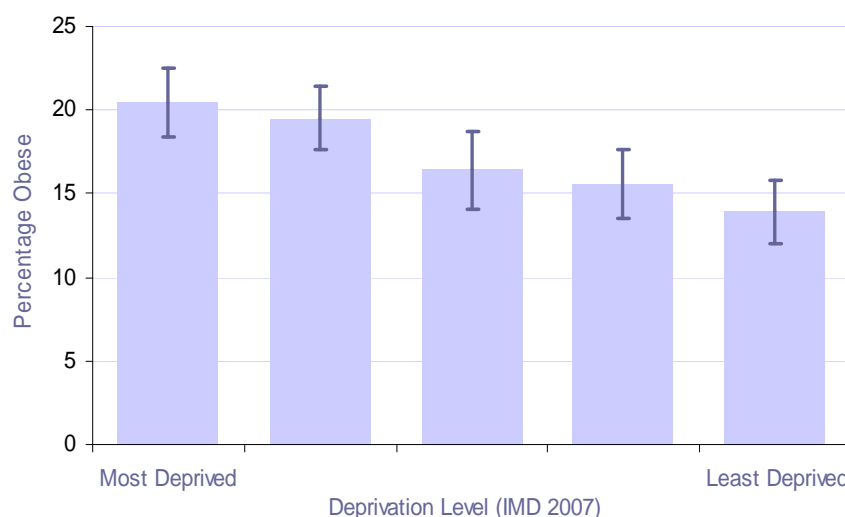


Figure 4.66: Obesity prevalence in Year 6 pupils in Swindon by school deprivation level (2008/09)



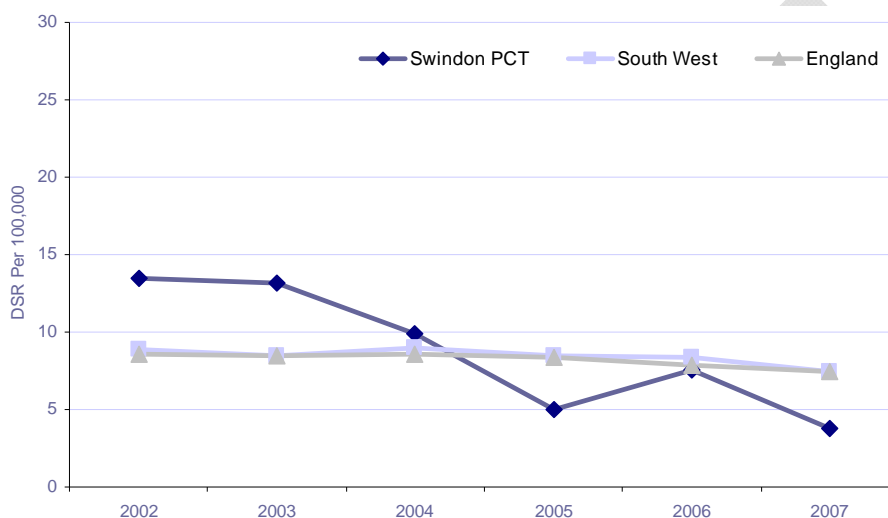
4.12 Mental Health

Swindon's commitment to the reduction in health inequalities in the local population focuses not only on physical health but mental health as well.

4.12.1 Suicide

Inequalities in suicide among Swindon residents exist. In recent years initiatives to reduce overall suicide rates in Swindon have been successful (see Figure 4.67)¹²¹; however, as outlined in Section 2.4.3 suicide is still a main determinant of the gap in life expectancy as determined by deprivation. Gender inequalities in suicide also exist, with males more likely than females to take their own life.

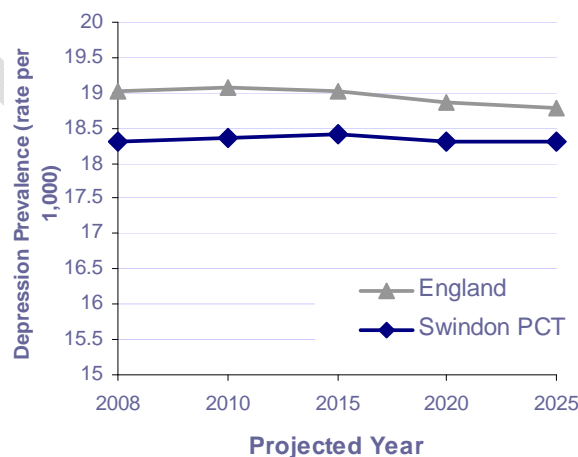
Figure 4.67: Mortality from suicide and injury undetermined, all ages by region (2002-2007)



4.12.2 Depression and Anxiety

Figure 4.69¹²² demonstrates that although the rates of depression and neurotic disorders in Swindon are lower than the England average, this figure is still considered high (particularly for anxiety and neurotic disorders), and projections indicate that rates will remain so.

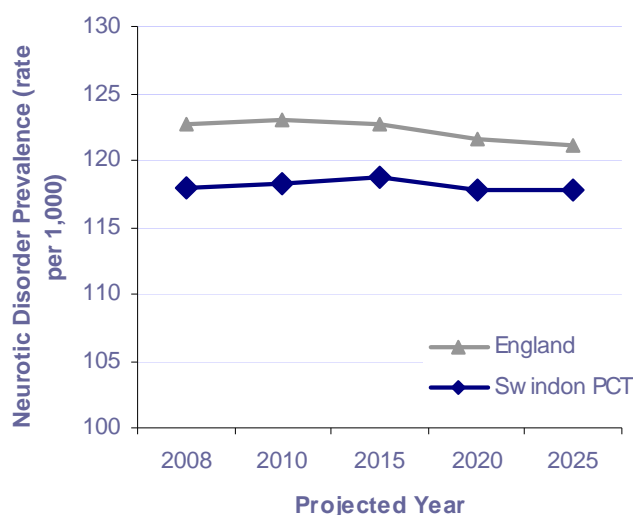
Figure 4.68: Projected prevalence of depression in Swindon and England



¹²¹ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or www.nchod.nhs.uk)

¹²² Projecting Adult Needs and Service Information (PANSI). Department of Health (<http://www.Pansi.org.uk>)

Figure 4.69: Projected prevalence of neurotic disorders in Swindon and England



Inequalities in mental health prevalence among Swindon's residents also exist. At present although males are more likely to commit suicide, they are less likely to seek help for anxiety or depression. Although the numbers in Swindon are small, it is known on a national level that males and females from minority ethnic and cultural backgrounds are less likely to access mental health services.

In addition, analysis reveals that Swindon spends more per head on mental illness than any other health outcome. Despite this high level of spend, outcomes for mental illness are comparable to the South West region¹²³.

4.13 Elderly and End of Life Care

As the population ages, care of the elderly and end of life care will become increasingly important issues. Areas include; patients' choice in end of life location, healthy life expectancy after the age of 65, depression and fall-related injuries.

4.13.1 Falls

Projected data presented in

¹²³ Programme Budgeting Atlas. National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

Table 4.13.1 indicates that the number of people aged 65yrs and over and 75yrs and over who will visit A&E or be admitted to hospital because of a fall. Of those individuals who visit A&E it is projected that 8% will be admitted to hospital as an inpatient. This figure is predicted to rise to 12% by 2013.

In addition, the number of elderly patients who visit A&E because of a fall will increase by 3% from 2009 to 2013; however, there is a predicted 15% rise in the number of elderly patients who are admitted to hospital as an inpatient for a fall from 2009 to 2013.

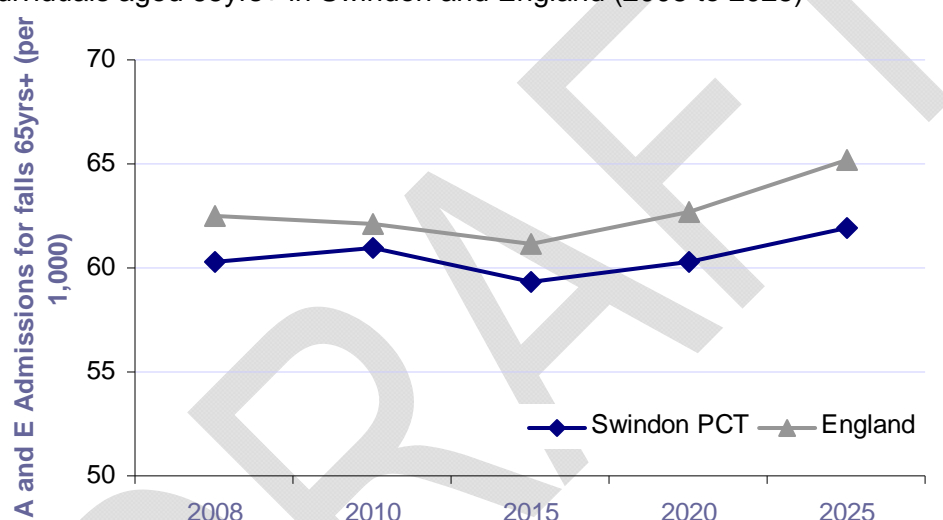
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Table 4.13.1: Projected Accident and Emergency and Hospital Admissions due to Falls in Swindon¹²⁴

	Age group	Projected Year				
		2009	2010	2011	2012	2013
A&E attendance due to fall	65yrs+	7,189	7,390	7,505	7,747	8,000
	75yrs+	4,043	4,160	4,234	4,330	4,431
Hospital admission due to fall	65yrs+	575	659	744	874	995
	75yrs+	475	541	611	736	835

Figure 4.70 indicates that this local increase in falls among the elderly is inline with the national average and is largely due to the predicted ageing population.

Figure 4.70: Projected annual rate of Accident and Emergency admissions for falls in individuals aged 65yrs+ in Swindon and England (2008 to 2025)¹²⁵



A large number of elderly patients who are admitted to hospital after a fall will have fractured a hip. In 2008/09 153 Swindon residents aged 65yrs+ were admitted to hospital with a fractured hip.

¹²⁴ Projecting Older People Population Information System (POPPI). Department of Health (www.poppi.org.uk/)

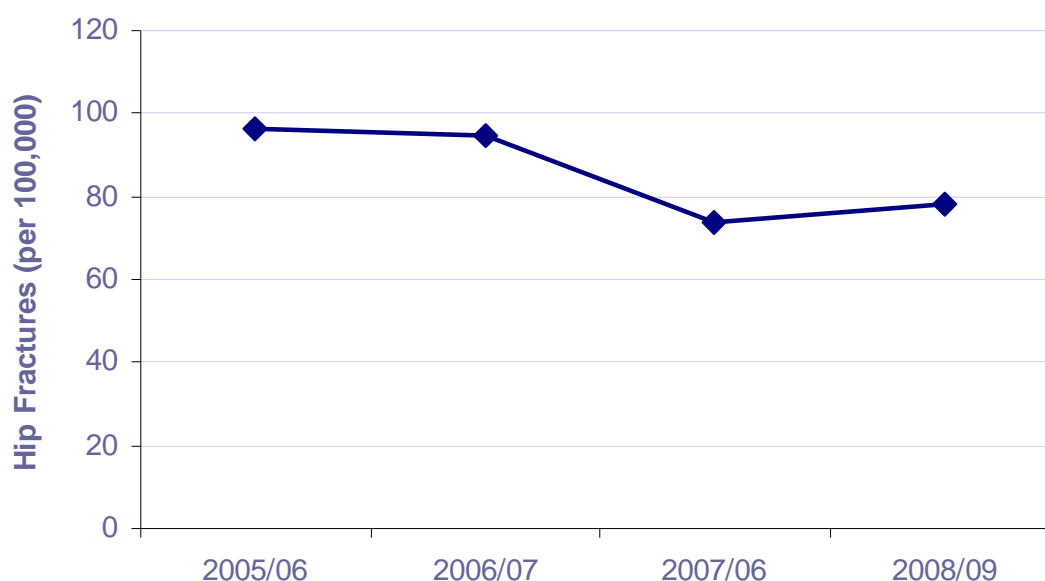
¹²⁵ Projecting Older People Population Information System (POPPI). Department of Health (www.poppi.org.uk/)

Figure 4.71 indicates that although rates of hip fracture in those aged 65+ appear to have been falling, the rate of hip fractures in the elderly are still significantly worse than the South West regional average and within the bottom 25th percentile for the whole of England¹²⁶.

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¹²⁶ APHO Annual Health Profile 2009

Figure 4.71: Annual rate (per 100,000) of hip fractures in Swindon residents aged 65yrs+ (2005/06 to 2008/09)¹²⁷



Programme budgeting analysis also reveals that Swindon has a high spend per head on musculoskeletal disorders which includes hip fractures. This level of spend is above the national and ONS Cluster mean (although not a statistical outlier)¹²⁸. Ideally high spend should equate to good outcome (i.e., low mortality and/or morbidity rates); however, as outlined above, outcomes for musculoskeletal disorders, particularly falls are mid range or poor when compared with England and the South West.

4.13.2 Healthy life expectancy at age 65yrs

As the population ages and years of life are extended, Swindon is particularly conscious of quality of life in old age. It is important, therefore, to consider healthy life expectancy after the age of 65 yrs; that is, the number of additional years someone reaching the age of 65yrs could expect to live. In Swindon this is an important issue as healthy life expectancy rates above the age of 65 are now the second poorest in the South West (just behind the City of Bristol Local Authority) for men and ranked 40/44 for women. Local projections have now been set (see

¹²⁷ Hospital Episode Statistics

¹²⁸ Programme Budgeting Atlas. National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

Figure 4.72 and Figure 4.73)¹²⁹ which could bring healthy life expectancy in Swindon in line with other Local Authorities in the region. Projections are based on Department of Health Guidelines which state that healthy life expectancy should increase at an average rate of .5yrs every 3yrs but that this can be up-rated for the poorest performing local authorities. The projection rate for Swindon has therefore been set at a rate of .8yrs every 3yrs to bring it in line with other local authorities in the South West.

¹²⁹ ONS Mortality and 2001 Census data

Figure 4.72: Projected male healthy life expectancy at aged 65yrs in Swindon, South West and England



Figure 4.73: Projected female healthy life expectancy at aged 65yrs in Swindon, South West and England



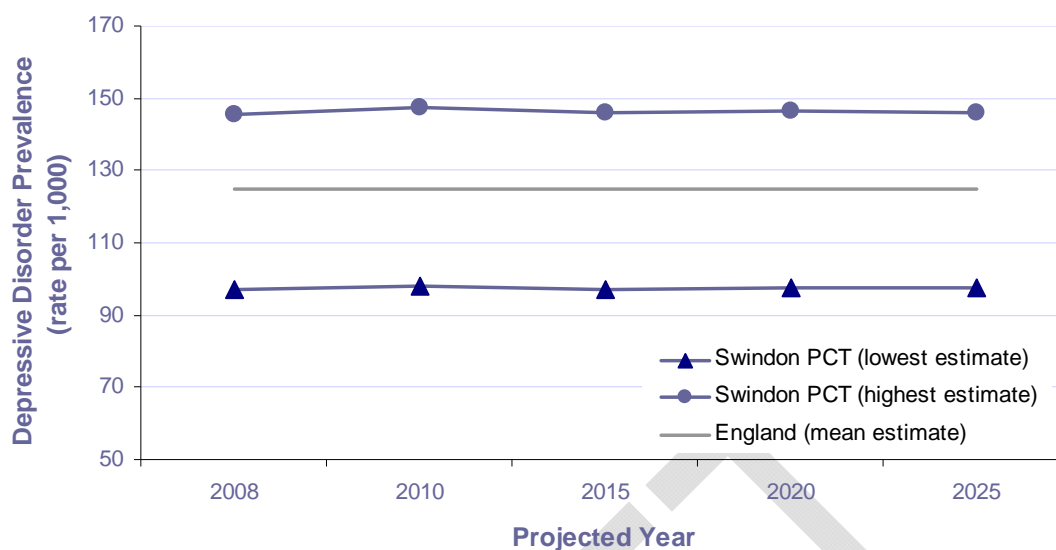
4.13.3 Mental health in the elderly

Quality of life in the elderly can also be measured by rate of depression. As

Figure 4.74 indicates, over 2,600 people aged 65yrs+ are currently living with a depressive disorder at the most conservative estimate. However, as this Figure demonstrates, estimated rates vary widely suggesting that improvement is needed in the determination and recording of depressive illness in the elderly.

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Figure 4.74: Projected annual rate of depressive disorders in individuals aged 65yrs+ in Swindon and England¹³⁰

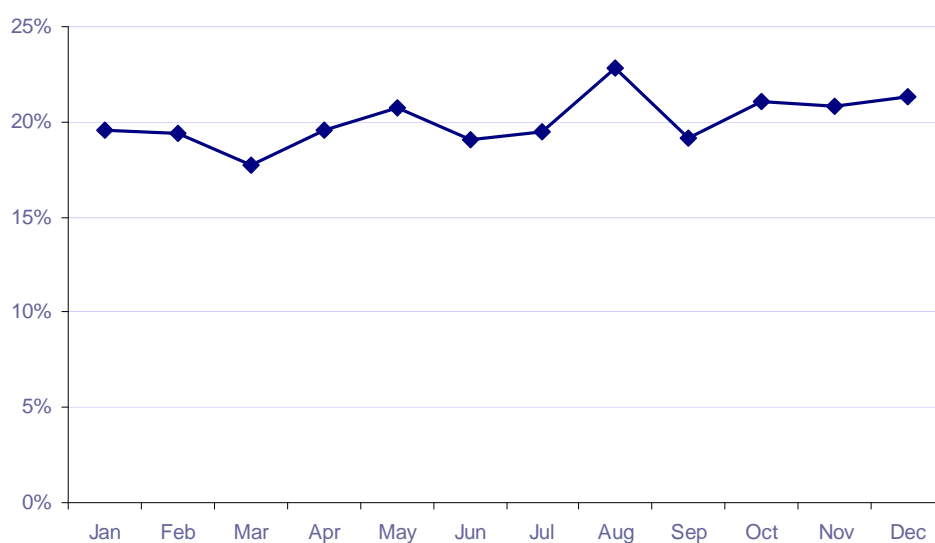


4.13.4 Deaths at home

The End of Life Care Strategy sets out the direction of travel to provide all adults nearing the end of life, regardless of diagnosis, access to high quality palliative care, giving more people the choice to die at home.

In order to improve end of life care and to increase patient choice, Swindon is focussed on increasing the proportion of deaths which occur at home. Inline with seasonal variations in overall deaths, Figure 4.82 illustrates variations in the number of deaths occurring at home.

Figure 4.75: Mean percentage of deaths that occur at home in Swindon (2005 to 2008) by month¹³¹



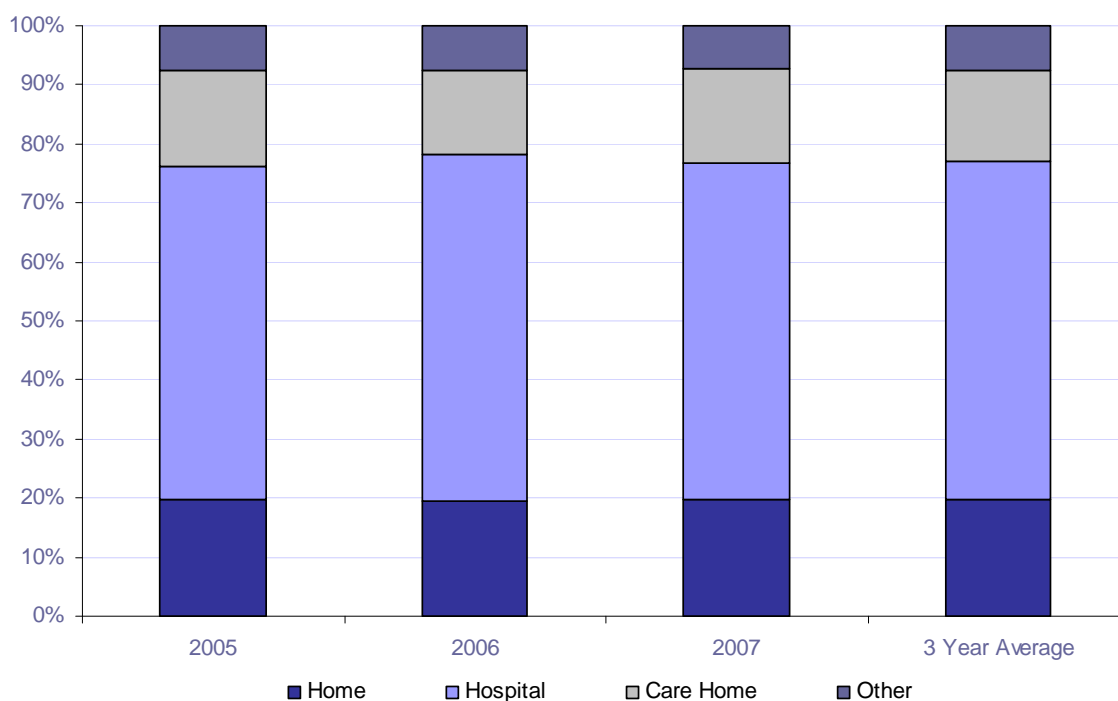
¹³⁰ Projecting Older People Population Information System (POPPI). Department of Health (www.poppi.org.uk)

¹³¹ ONS Birth and Mortality Dataset

At present most deaths in England occur in NHS hospitals (58%), with deaths at home (18%) and in care homes (17%) collectively accounting for around 35% of all deaths (based on ONS figures for 2004). Hospices account for around 4% of deaths, with approximately 3% occurring in other locations¹³².

In 2007 there were 1,588 deaths among residents living within the boundaries of NHS Swindon. Analysis of ONS mortality statistics in Figure 4.83 illustrate that over a three year period, the number of deaths that occur in hospital has remained stable with a yearly average of 57.3% of deaths occurring in hospital, 19.7% at home, 15.5% in nursing or residential homes and the remaining 7.4% in other locations.

Figure 4.76: The proportion of deaths in Swindon that occur at home, in a care home or in hospital (2005 to 2007)¹³³



¹³² End of Life Care Strategy, Department of Health July 2008

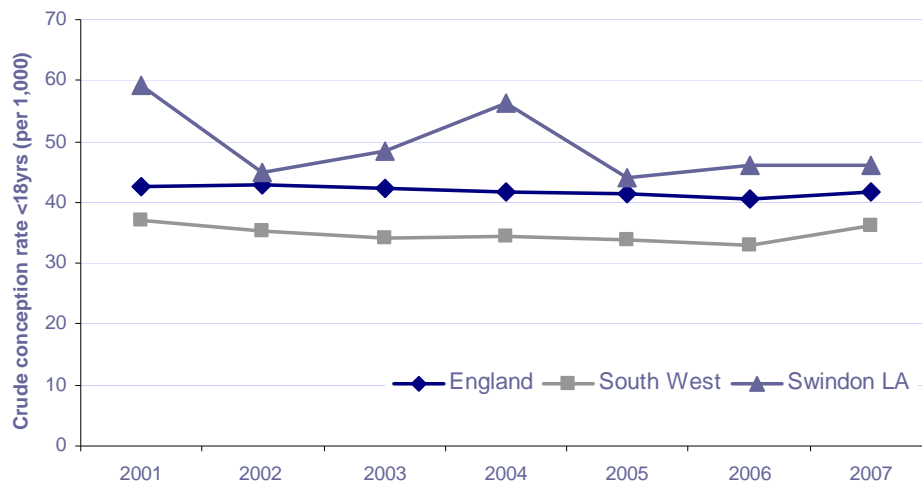
¹³³ Hospital Episode Statistics

4.14 Maternity services

4.14.1 Teenage Pregnancy

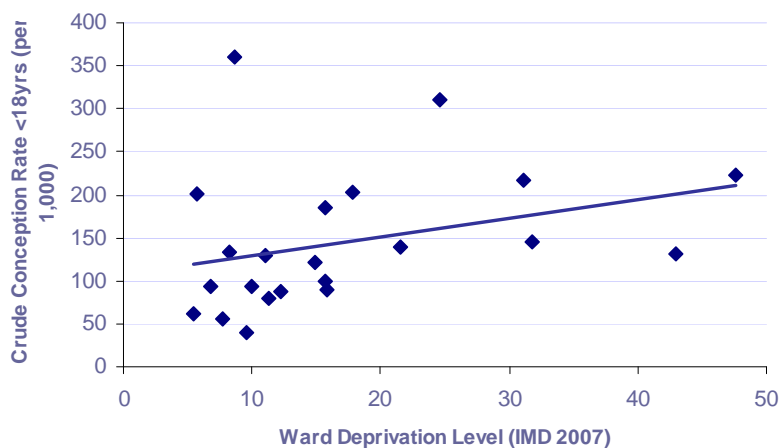
Historical data (shown in Figure 4.77) indicates that the rate of conceptions for under 18 year olds in Swindon has been higher than the regional and national average level since 2001. More detailed analysis at ward level was recently undertaken to try to understand more about who these rates may apply to.

Figure 4.77: Crude annual conception rate in females aged <18yrs (2001 to 2007)¹³⁴



The scatter graph below (Figure 4.78) indicates the relationship between deprivation level (by ward) and under 18 conception rate (actual number of pregnancies). Each point on the graph represents conception data from one ward. The Figure shows a positive correlation between level of ward deprivation and under 18 conception rate with the most deprived wards having significantly more teenage pregnancies than the least deprived wards ($r = .51$ $p = < .025$).

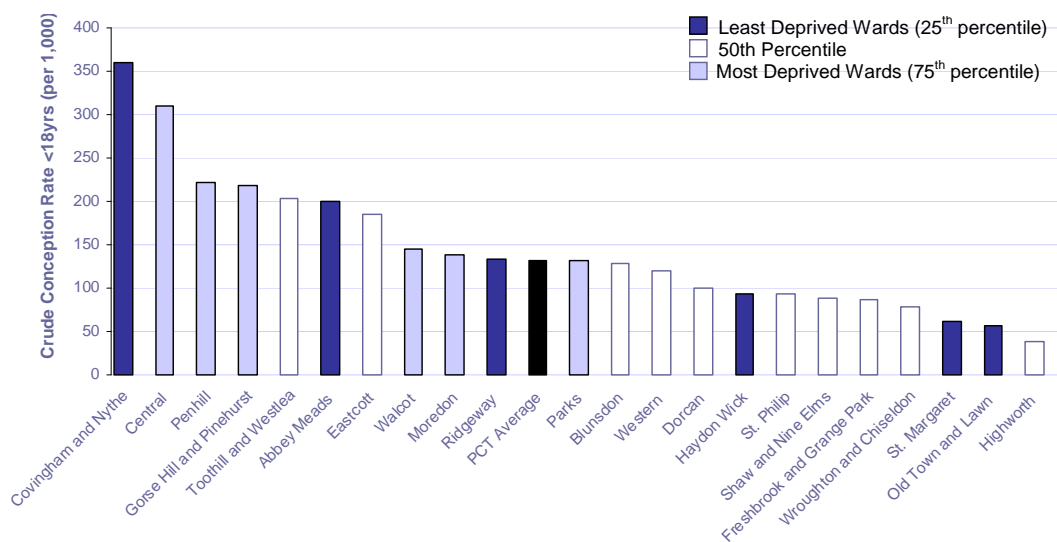
Figure 4.78: Crude conception rate (2007) in females aged <18yrs by ward deprivation level in Swindon



¹³⁴ ONS Conception Statistics

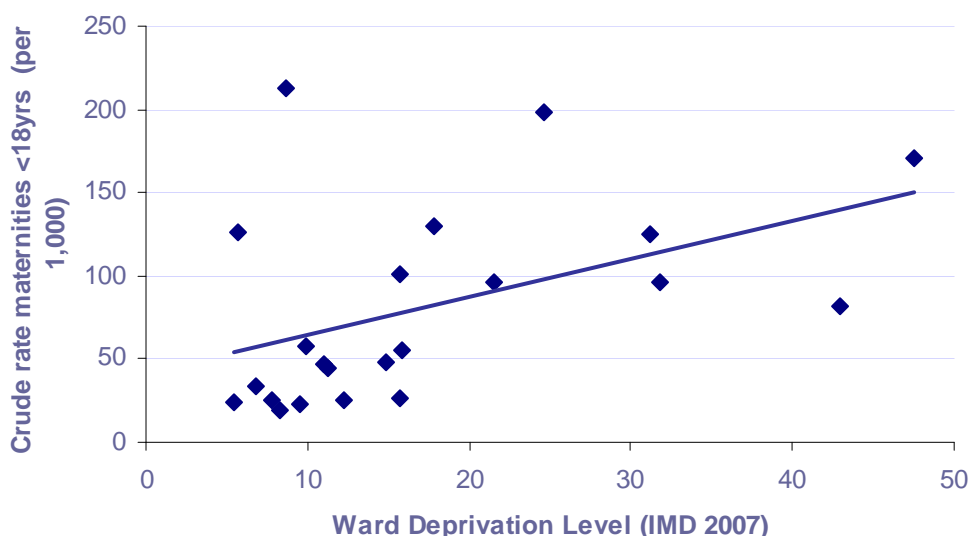
It should also be noted that a number of outliers were found. For example, as Figure 4.79 demonstrates, some of the wards in least deprived 25th percentile (dark blue bars) have high under 18 conception rates which are above the PCT average (including Ridgeway and Abbey Meads). Covingham and Nythe has the highest under 18 conception rate in Swindon despite being the sixth least deprived ward in Swindon according to the IMD 2007. Similarly, other wards such as Parks, which is one of the most deprived wards in Swindon, had a teenage conception rate in 2007 that was below the PCT average.

Figure 4.79: Crude conception rate (2007) in females aged <18yrs and Swindon ward¹³⁵



A similar pattern is found for under 18 maternity rates (see Figure 4.80), where a strong significant relationship exists with ward deprivation level and number of births ($r = .44$, $p < .05$). Again Covingham and Nythe ward has the highest maternity rate, with Abbey Meads and Ridgeway this time having the second and fifth lowest rates of actual births among under 18s.

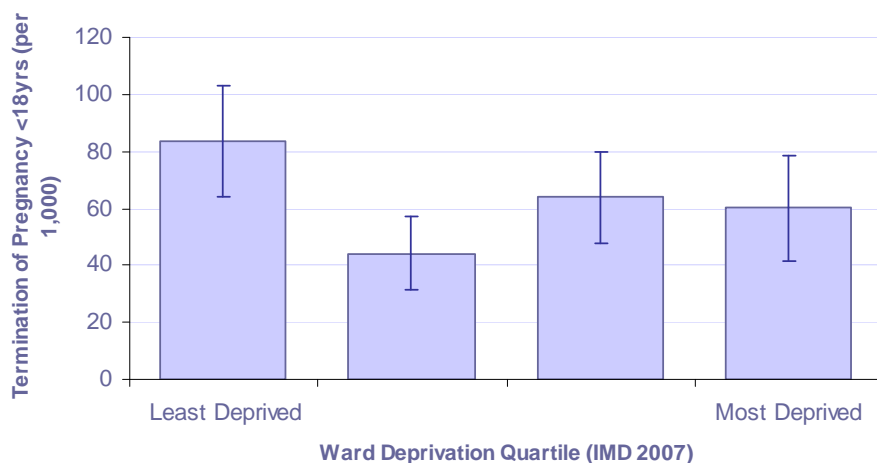
Figure 4.80: Crude maternity rate (2007) in females aged <18yrs by ward deprivation level in Swindon



¹³⁵ ONS Conception Statistics

The difference between ward level rankings for conception and maternity rates may be explained by the local termination of pregnancy rate. Figure 4.81 shows that termination rates in the lower 25th percentile (least deprived wards) were far higher than those in the middle 50th percentile and upper 25th percentiles.

Figure 4.81: Termination of pregnancy rate (2007) in females aged <18yrs by ward deprivation level in Swindon¹³⁶

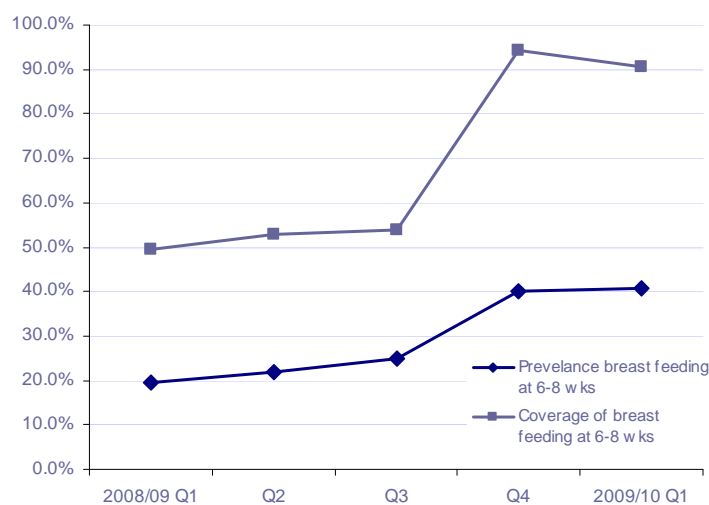


In summary, evidence suggests that it is not only girls from deprived areas who are likely to conceive before their 18th birthday, but that the rate of underage conceptions are high in less deprived areas as well. Some degree of caution should be exercised when using these teenage pregnancy figures at ward levels due to small numbers.

4.14.2 Breast Feeding at 6-8 weeks

Recording the number of mothers who are breast feeding at 6-8 weeks after birth is a relatively new initiative, therefore historical data is only available from Quarter 1 2008 onwards. The percentage of Swindon mother's who have had their breast feeding status at 6-8 weeks recorded (coverage) has steadily increased since recording began. Similarly the number of women who are breast feeding at 6-8 weeks (prevalence) has also increased (see Figure 4.82).

Figure 4.82: Breast feeding prevalence and coverage at 6-8wks (after giving birth) in Swindon¹³⁷

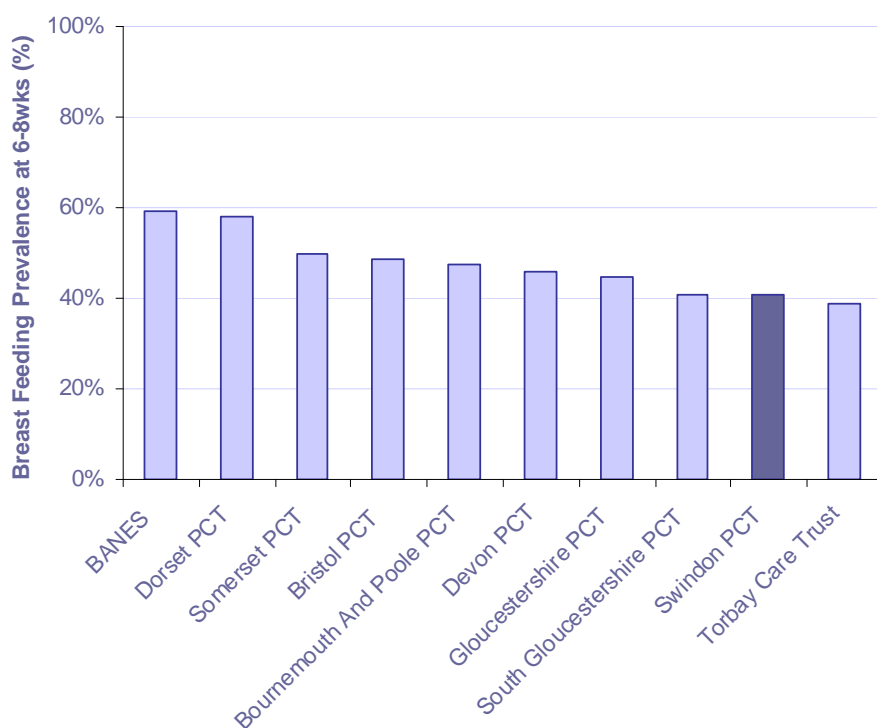


¹³⁶ ONS Conception Statistics

¹³⁷ NHS Vital Signs Monitoring Information

Despite these improvements, regional figures indicate that Swindon is ranked second lowest in the region (among those PCTs that submitted figures) for percentage of mothers who are breast feeding at 6-8 weeks (see Figure 4.83).

Figure 4.83: Breast feeding prevalence at 6-8wks by South West PCT (2008/08)¹³⁸



4.14.3 Smoking during pregnancy

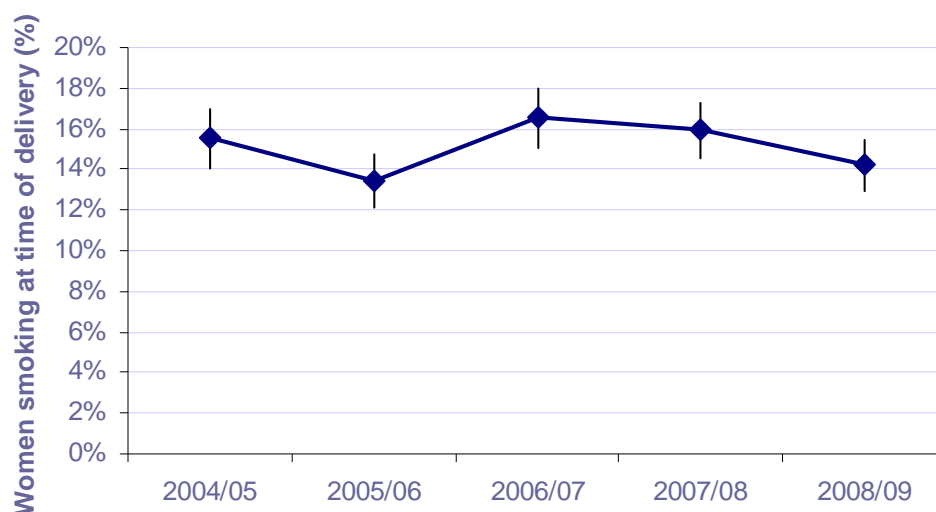
Since the publication of the government White paper 'Smoking Kills' in November 1998, the NHS has been tasked with reducing the proportion of women continuing to smoke throughout pregnancy. This initiative focuses particularly on smokers from disadvantaged groups and is part of the national initiative to reduce the gap in mortality between "routine and manual" groups.

¹³⁸ NHS Vital Signs Monitoring Information

Figure 4.84 indicates that since this initiative commenced, the number of women smoking at time of delivery in Swindon has decreased. In 2008/09 14.2% of women in Swindon smoked at time of delivery, this compared with 14.4% of women in England and 14.6% of women in the South West.

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Figure 4.84: Annual proportion of women in Swindon smoking at time of delivery (2004/05 to 2008/09)¹³⁹

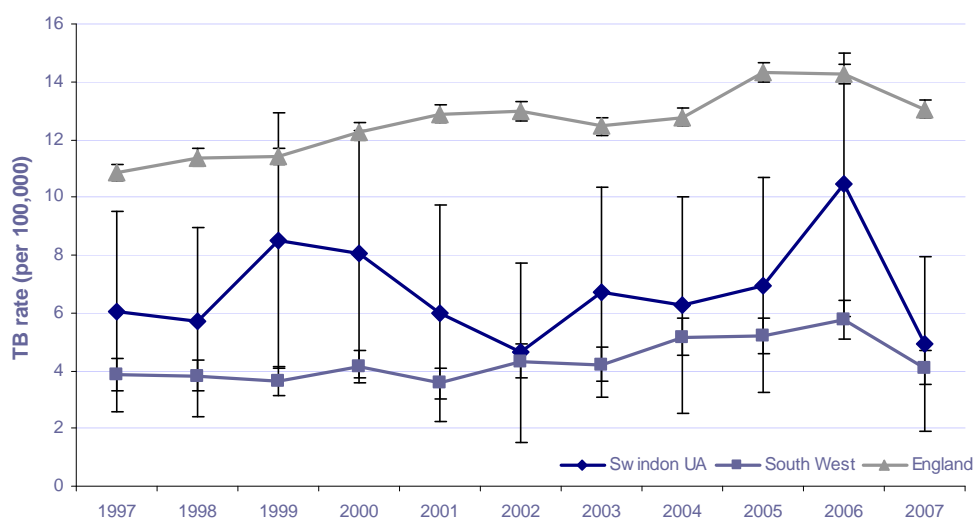


4.15 Infectious Diseases

4.15.1 Tuberculosis (TB)

The data indicate that Swindon currently, and historically, has had lower rates of TB in comparison with England. The relatively large fluctuation in TB rates in Swindon and wide confidence intervals shown in Figure 4.85 suggest that TB rates in Swindon are in fact low and stable over time, but still higher than those rates found in the rest of the South West (although not statistically significantly). Over the past 10 yrs (1997-2007) Swindon has had an average of 13 new TB case per year with a range of 9 to 21 new cases per year). It is important to understand who is most vulnerable to TB in the local population.

Figure 4.85: Annual rate of Tuberculosis (per 100,000) by region 1997 to 2007 (95% confidence intervals displayed)¹⁴⁰



¹³⁹ ONS Conception Statistics

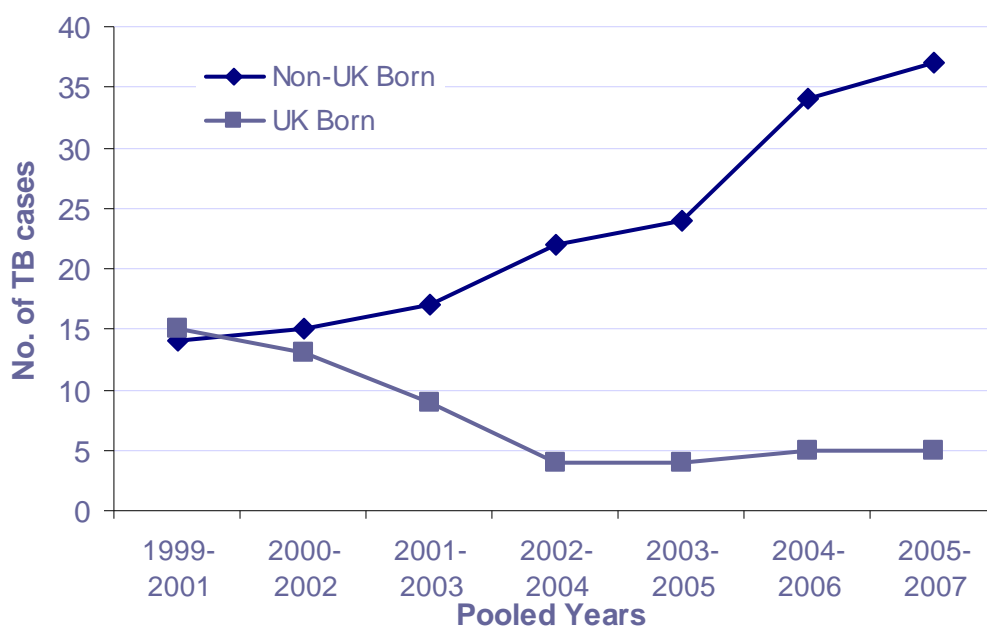
¹⁴⁰ National Clinical and Health Outcomes Knowledge Base (www.nchod.nhs.uk or nww.nchod.nhs.uk)

Tuberculosis is slightly more common among men than women and for age groups 20-29yrs and 30-39yrs. The majority of cases (approximately 70%) were of Black African or Indian sub-continent origin.

In addition, over the period 1999-2008, 67% (95% CI 58.8 to 74.3) of TB cases in Swindon were of those born outside the UK and 20% (95% CI 13.7 to 27.1) were of those born in the UK; with the status of 14% of cases unknown. This is statistically non-significant from the 72% (95% CI 71.5 to 72.4) of TB patients born outside the UK and 28% (95% CI 27.6 to 28.5) of patients born in the UK in England between 2002 and 2007. Of the Swindon cases among whom the date of entry into the UK was known, the majority had only arrived in the UK within the past seven years. Over 90% of cases had not previously received any treatment for Tuberculosis. About 40% of cases had a sputum smear positive test result¹⁴¹.

Figure 4.86 presents estimated TB numbers for those born in the UK against those not born in the UK. The values represent numbers, not rates and therefore do not take into account the number of people in each group (as data is not currently available). Despite this, it is clear that the number of people presenting with TB is steadily increasing among those patients born outside the UK, while there has been a steady decline in TB cases presented from patients born in the UK.

Figure 4.86: Number of TB cases in Swindon residents who are UK and non-UK born (2000/02 to 2005/07)¹⁴²



¹⁴¹ Enhanced National Tuberculosis Surveillance: South West Region Report 2006 and Outcomes 2005-HPA South West

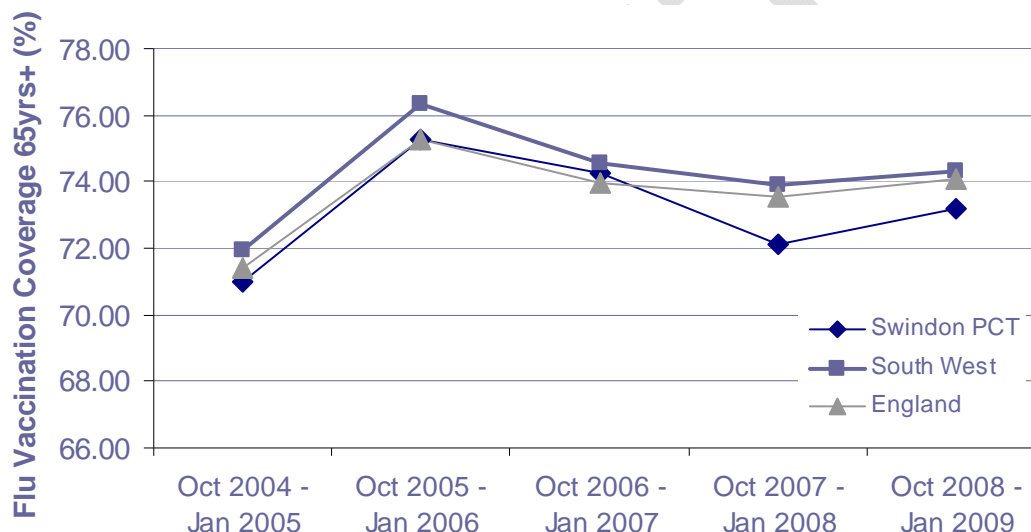
¹⁴² South West Region Health Protection Agency (HPA)

4.15.2 Seasonal Flu

Swindon was estimated to have 72 excess winter deaths from 2004-2007. This value is currently lower than the national and South West regional average and is lower than the number observed in Swindon from 2003-2006 (n=90).

Figure 4.87 shows that coverage for flu vaccinations among the over 65s in Swindon is lower than the South West and England average. In addition, compared with households in the South West, Swindon has a higher level of households vulnerable to fuel poverty. This equates to 9.8% (approximately 12,000 households). The incidence rate is higher in households comprising older residents and is as high as 15.7% in some wards (e.g., Old Town and Lawn and St. Philip) (source: Swindon Affordable Warmth Strategy, 2007). This evidence teamed with an increasingly ageing population suggests the potential for excess winter deaths in Swindon to rise.

Figure 4.87: Flu vaccination coverage in individuals aged 65yrs+ by region (2004/05 to 2008/09)¹⁴³



4.15.3 Childhood infections and immunisation

The routine childhood immunisation programme aims to protect all children against preventable childhood infections. Primary immunisation with diphtheria, tetanus, pertussis, polio and Hib (DTaP/IPV/Hib) vaccine is given at two, three and four months of age. Pneumococcal vaccine (PCV) is given at two and four months. meningococcal serogroup C vaccine (MenC) is given at three and four months. This ensures completion of the primary course at an appropriate age to provide protection against infections such as whooping cough, pneumococcal, Hib and Men C, which are most dangerous for the very young. In addition, three doses of diphtheria, tetanus, pertussis, polio, and *Haemophilus influenzae* type b (Hib) vaccine (DTaP/IPV/Hib); two doses of pneumococcal conjugate vaccine (PCV); and one dose of vaccine for group C meningococcal disease (MenC) are administered before a child's first birthday.

Figure 4.88, Figure 4.89 and Figure 4.90¹⁴⁴ highlight NHS Swindon's vaccination coverage for these three vaccines against South West and England benchmarks. Historically, coverage in Swindon has tended to be lower than the South West

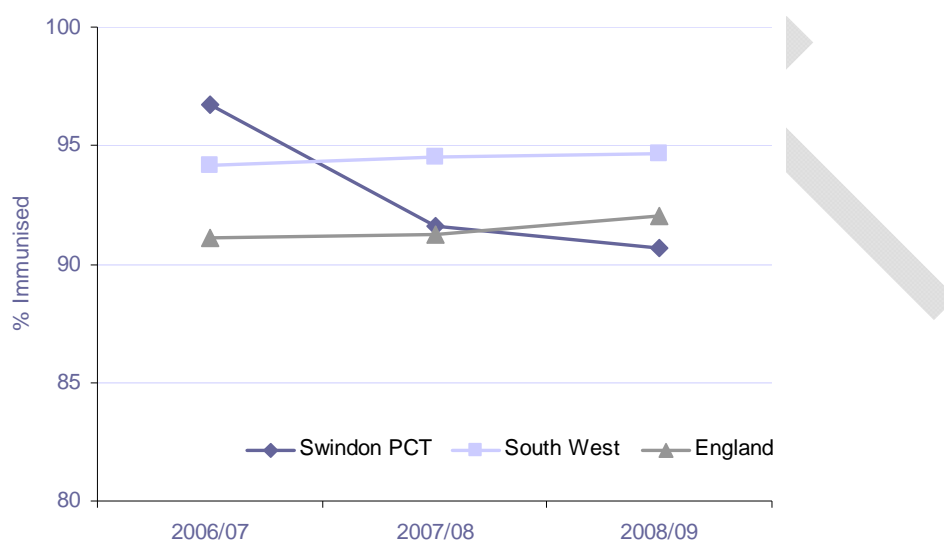
¹⁴³ NHS Immunisation (COVER) Statistics

¹⁴⁴ NHS Immunisation (COVER) Statistics

average and a decline is evident for 2008/09. However, it is important to recognise that NHS Swindon along with 12 other Primary Care Trusts nationally experienced data quality issues in reporting 2008/09 statistics as a result of recent migration to a new Child Health system leading to a lack of confidence in the data reported.

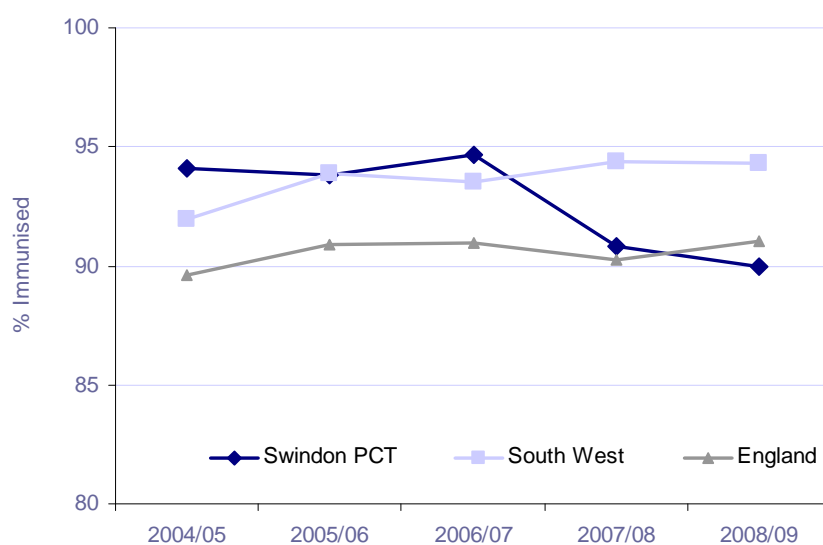
Data presented in Figure 4.88 for both England and South West show an increasing coverage of the DTaP/IPV/Hib vaccination over time. The latest data shows that in the South West 94.7% of the relevant population were vaccinated compared with 92% for England. NHS Swindon has seen a decrease in the number of children receiving this vaccination over the last two years with the latest data at 90.7%.

Figure 4.88: Children aged 1yr immunised for Diphtheria, Tetanus, Polio, Pertussis and Haemophilus Influenza Type B (DTaP/IPV/Hib)



As with the DTaP/IPV/Hib vaccine, Men C vaccines too have seen a rising trend in coverage across the South West and England (see Figure 4.89). NHS Swindon vaccinated 90% of the relevant population in 2008/09 compared with 94.3% across the South West and 91% in England.

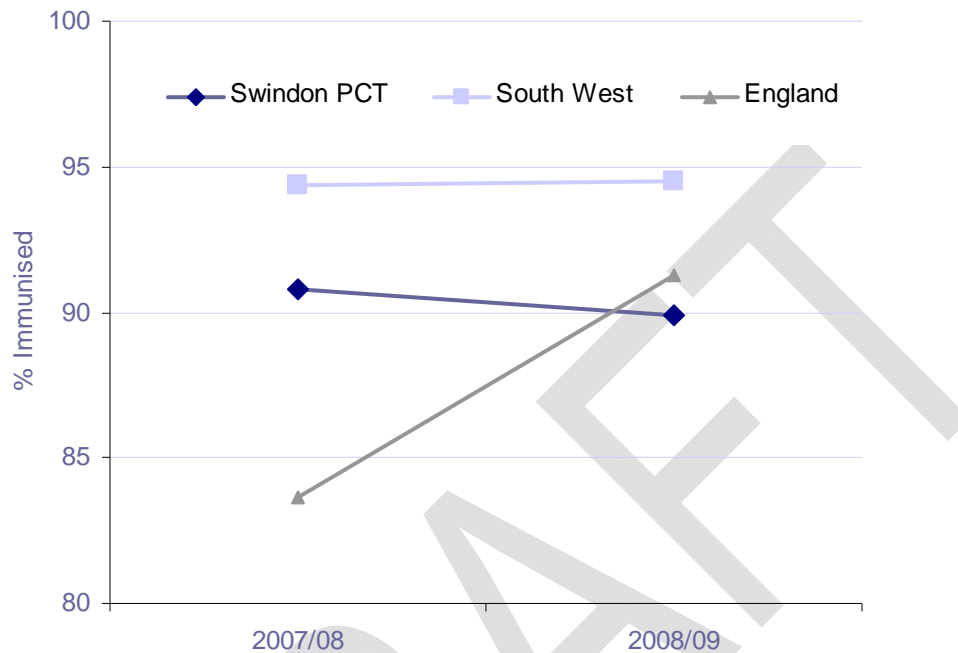
Figure 4.89: Children aged 1yr immunised for Meningitis C (MenC)¹⁴⁵



¹⁴⁵ NHS Immunisation (COVER) Statistics

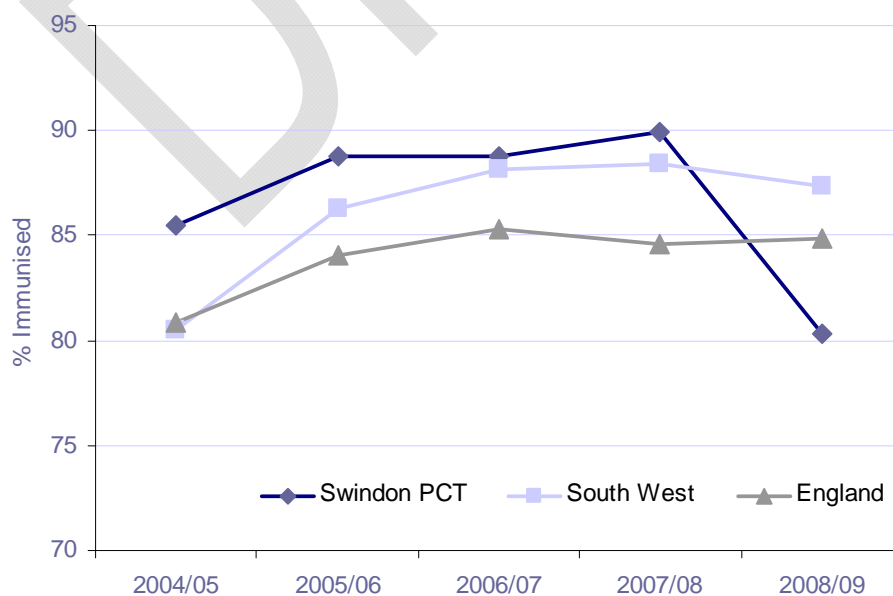
PCV data was collected for the first time in 2007-08, data collected for this year is therefore considered experimental. NHS Swindon appears to have seen a small decrease in the coverage of the PCV vaccination between 2007/08 and 2008/09 from 90.8% to 89.9%. The coverage across England appears to have increased from 83.7% to 91.3% although this may be due to an improvement in the quality of the data (see Figure 4.90).

Figure 4.90: Children immunised for Pneumococcal Conjugate Vaccine (PCV)¹⁴⁶



Children who reached their second birthday would have been scheduled to receive their third dose of primary vaccinations and first measles, mumps, and rubella (MMR) vaccination. Figure 4.91 shows a trend in MMR vaccination coverage for NHS Swindon, the South West and England.

Figure 4.91: Children aged 2yrs immunised for Measles, Mumps and Rubella (MMR).

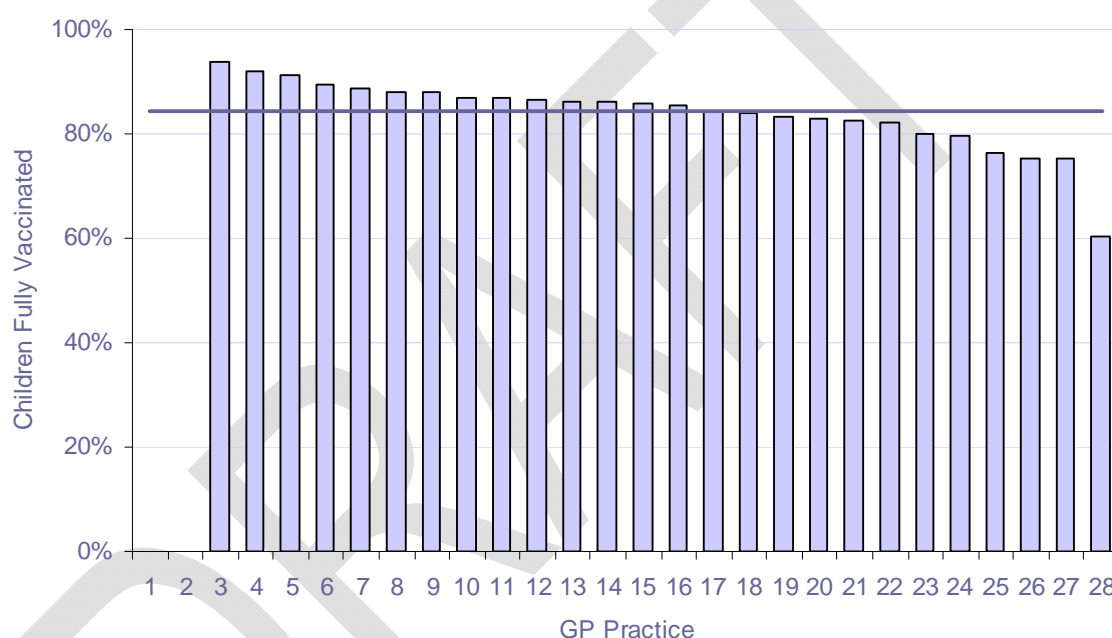


¹⁴⁶ NHS Immunisation (COVER) Statistics

The coverage rate for the MMR vaccine has not changed considerably over the last three years. The relevant population receiving the vaccination decreased in Swindon and in the South West between 2007/08 and 2008/09. Controversy over the MMR vaccine in 2008 is likely to have had an effect on the uptake. The uptake in Swindon decreased substantially between 2007/08 and 2008/09 this could be due to data quality issues associated with the new Child Health System.

By the time of school entry, children should have received their fourth dose of DTaP/IPV or dTaP/IPV and the second dose of MMR. Recent analysis (shown in Figure 4.92) suggests that there are inequalities across GP Practice in NHS Swindon for children completing vaccination programmes by the age of 5yrs; the highest percentage of fully vaccinated children being 93.8% in one GP Practice and the lowest being 60.4%. The average across NHS Swindon is 84.2% with eleven GP Practices falling beneath the average threshold (please note data is not available for two GP Practices).

Figure 4.92: Fully vaccinated children 5yrs and under by GP practice¹⁴⁷



4.15.4 Sexually transmitted infections: Chlamydia

A recent government initiative aims to reduce the prevalence of Chlamydia in young people by increasing screening rates; in particular the proportion of the 15-24 year olds in the total population tested for Chlamydia outside of GUM clinics.

2008/09 data indicates that 11.4% of young people in Swindon were tested for Chlamydia during this period; meaning that Swindon was ranked 128 nationally. This was well below the England average of 15.9% and the South West average of 15.9%¹⁴⁸.

In addition to a low screening uptake rate, it should also be noted that the rate of positive results (of those tested) was 7.8% for young people in Swindon. This is higher than the rate of positive results for England (7.3%) and the South West (7.1%).

¹⁴⁷ NHS Immunisation (COVER) Statistics

¹⁴⁸ NHS National Chlamydia Screening Programme

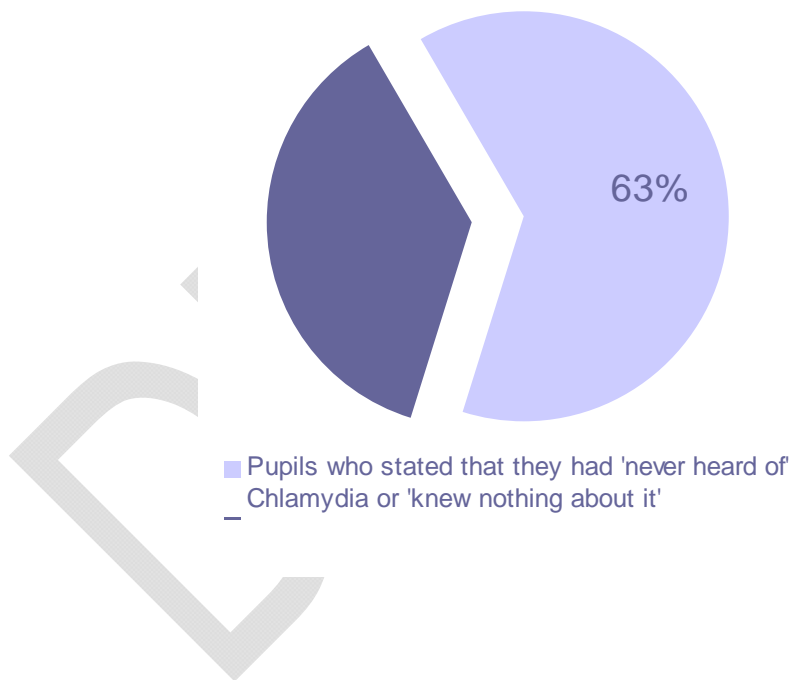
In order to improve screening rates and to reduce the rate of positive results, it is important to understand young peoples' perception of Chlamydia and the screening process.

Recent data from the SHEU – Health Related Behaviour Survey (2008) indicates that 63% of pupils in Swindon (aged 14-15yrs) said that they had either 'never heard of' Chlamydia or 'knew nothing about it' (see Figure 4.93). Other survey results also found that:

- 25% of pupils aged 14-15yrs said that they knew that there was a special contraception and advice centre available locally for young people
- 56% of boys and 60% of girls aged 14-15yrs knew condoms were reliable in stopping infections like HIV
- 68% of boys and 76% of girls aged 14-15yrs knew where to get condoms free of charge

Improvements in sexual health education may be one factor which could support a future increase in sexual health screening in young people in Swindon.

Figure 4.93: Awareness of Chlamydia in Swindon school pupils aged 14-15yrs¹⁴⁹



¹⁴⁹ SHEU – Health Related Behaviour Survey

SECTION 5

5 Major Health Behaviour Trends in Swindon

Health behaviours can be defined as action taken by a person to maintain, attain, or regain good health and to prevent illness. These behaviours can include getting enough exercise, eating a healthy balanced diet, not smoking, having regular health screenings or consuming moderate levels of alcohol. These factors are closely associated with socio-demographic determinants of health and can impact on the causes of mortality and morbidity outlined in the previous sections.

5.1 Physical Activity

Local level data indicate that physical activity in Swindon may be one area where reductions in obesity levels and improvements in general health could be achieved. For example, in Figure 5.1, the inaugural Active People Survey (APS), conducted during 2005/06, found that the Swindon sample was slightly less active than the population sampled in the South West and England. In the second survey, Swindon achieved a 2.7% (statistically non-significant) increase in activity rates. This increase indicates that rates of activity in Swindon are now higher than rates of activity in England and similar to those in the rest of the South West. Overall, national activity rates significantly increased from 2005/2006 to 2007/2008. Despite these increases it is important to note that approximately only one in five people said that they regularly participated in sport.

Figure 5.1: Proportion of individuals in Swindon, England and the South West who regularly participate in sport¹⁵⁰



Similarly, Figure 5.2 indicates that in 2007/2008, 24.2% of the Swindon population sampled were members of a sports club. Sports club membership rates in Swindon were similar to membership rates in England (24.7%) and the South West (24.5%). Since the first APS survey was conducted in 2005/2006 the rates of sport club membership in England have seen a statistically significant decrease (possibly due to the current recession); however this trend did not occur in Swindon where the rates of membership remained stable from 2005/2006 to 2007/2008.

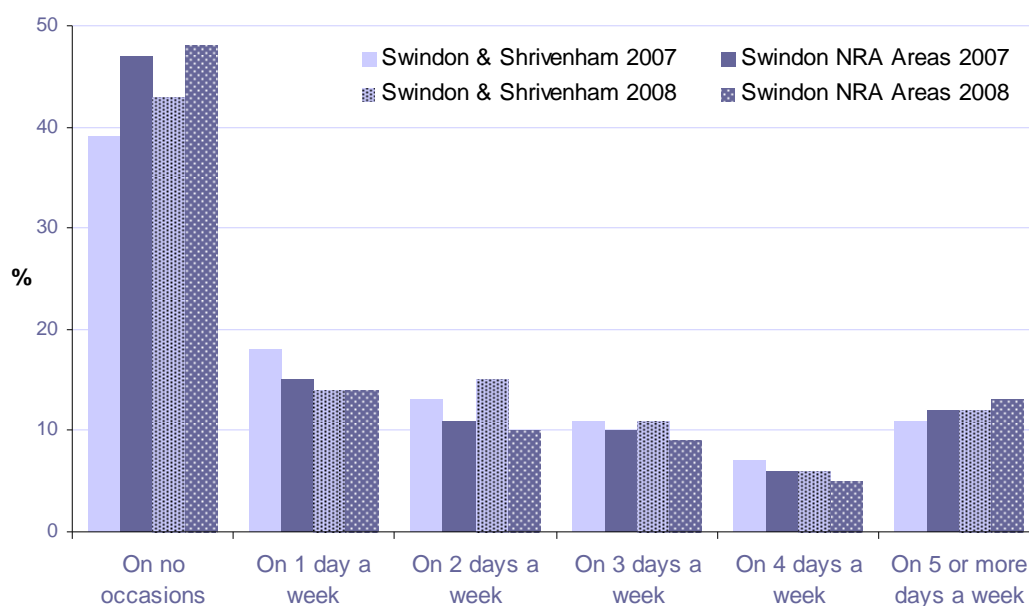
¹⁵⁰ MORI Active People Survey http://www.sportengland.org/research/active_people_survey.aspx

Figure 5.2: Proportion of individuals in Swindon, England and the South West who have currently have sports club membership¹⁵¹



A similar pattern of activity is also found in results from the Swindon Super Survey. Figure 5.3 suggests that the number of people living in Swindon who do not participate in sport is relatively high and increased from between 2007 and 2008. The results also suggest that there are local area disparities in exercise uptake as people living in neighbourhood renewal areas (NRAs) are less likely to engage in sport in comparison with the population of Swindon and Shrivenham as a whole.

Figure 5.3: Proportion of individuals in Swindon, England and the South West who frequently participate in sport of moderate intensity¹⁵²

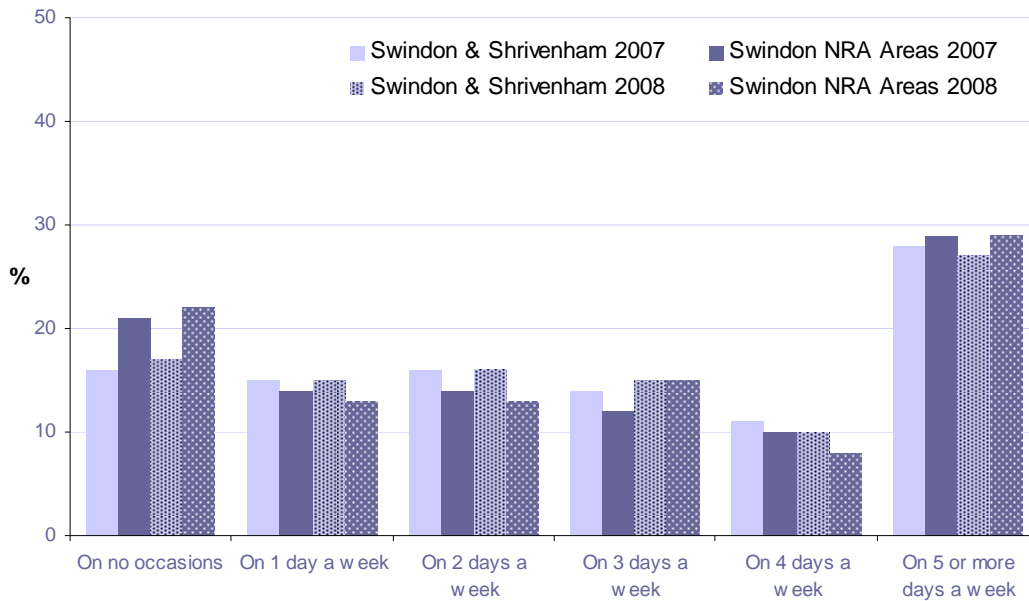


¹⁵¹ MORI Active People Survey http://www.sportengland.org/research/active_people_survey.aspx

¹⁵² Swindon Super Survey

Figure 5.4 suggests an increase in the number of people who do not regularly take moderate intensity exercise. Overall the results suggest that the number of people who exercise on 5 or more days a week has decreased, as have the number of people who exercise on 4 days a week. Similarly, the number of people who exercise on no occasions has increased. However, the number of people who exercise on 3 days a week has increased. People living in NRAs appear to have a greater tendency to take no exercise compared with the whole survey sample again suggesting that inequalities in physical activity level exist according to deprivation.

Figure 5.4: Proportion of individuals in Swindon, England and the South West who frequently participate in exercise of moderate intensity¹⁵³



A similar pattern of physical activity was also found for children in the local population. Figure 5.5 illustrates that 56% of Year 10 (ages 14-15) boys considered themselves 'fit' or 'very fit' compared with only 32% of girls. Figure 5.6 indicates that 31% of pupils (year 8 and year 10; ages 12-13 and 14-15 respectively) reported (in line with government guidance) that they had exercised five times or more, in the last week, which made them breath harder. This level of exercise may be related to current childhood obesity levels in Swindon. Improvements in activity levels are recommended at an early age in order to reduce future health problems.

¹⁵³ Swindon Super Survey

Figure 5.5: Percentage of pupils aged 14-15yrs who considered themselves to be 'fit' or 'very fit'¹⁵⁴

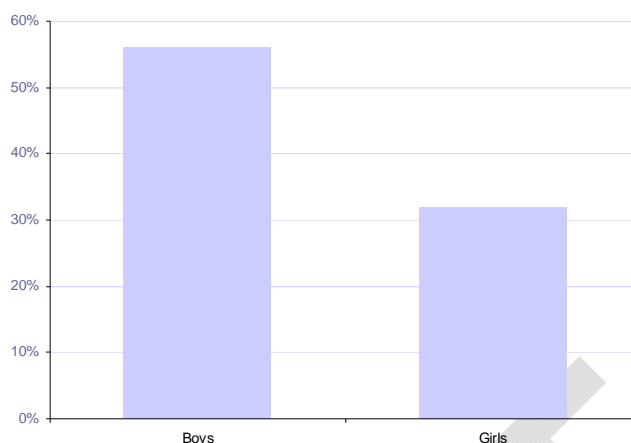
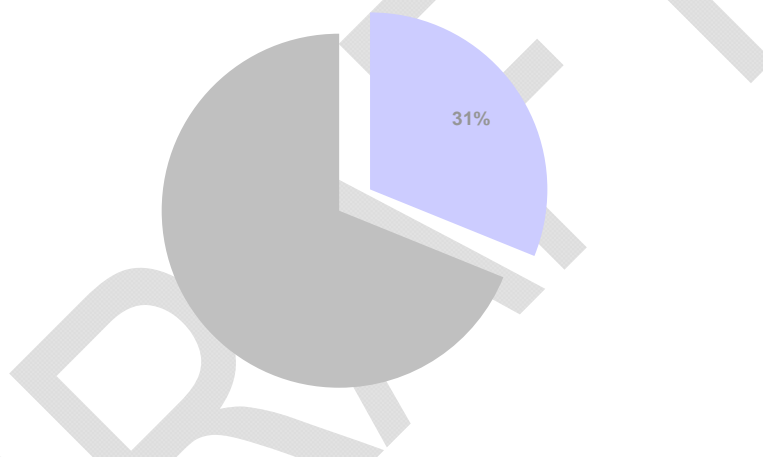


Figure 5.6: Percentage of pupils aged 12-15yrs (31%) who stated that they exercised 5+ times in the last week¹⁵⁵



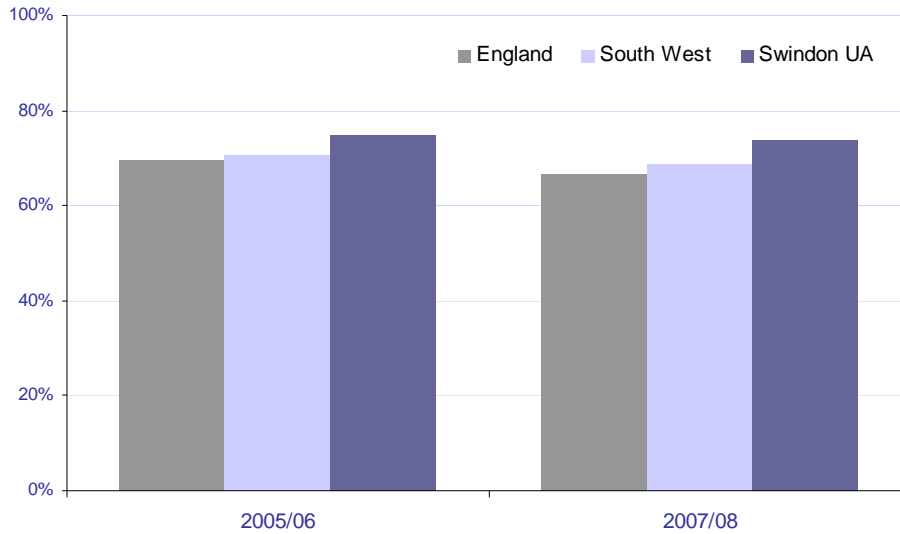
Despite a relatively low level of physical activity among the local population, data suggest that local residents are happy with local sports facilities. For example, Figure 5.7 demonstrates in the 2007/2008 survey 73.7% of the Swindon sample reported being 'fairly' or 'very satisfied' with sport provision in their locality. This was a 1% (statistically non-significant) decrease from the 2005/2006 survey. In comparison, rates of satisfaction in sports provision significantly decreased from 2005/2006 to 2007/2008 in both the South West and in England to 66.6% and 68.5% respectively. This indicates that Swindon now has rates of satisfaction in sports provision that have remained constant over the last 3 years and are now higher than satisfaction rates for both the South west and England.

Figure 5.7: Proportion of individuals in Swindon, England and the South West who are satisfied with local sports provision¹⁵⁶

¹⁵⁴ SHEU – Health Related Behaviour Survey

¹⁵⁵ SHEU – Health Related Behaviour Survey

¹⁵⁶ MORI Active People Survey http://www.sportengland.org/research/active_people_survey.aspx



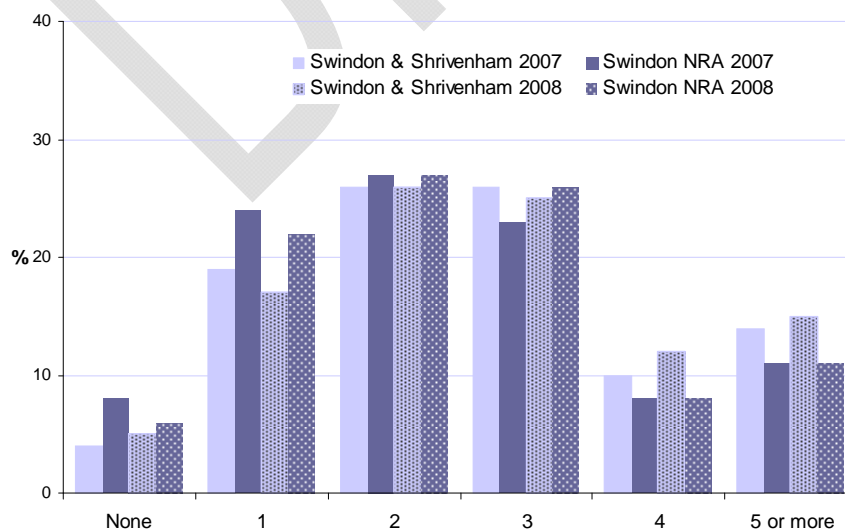
5.2 Healthy Eating

The Government recommends an intake of at least five portions of fruit or vegetables per person per day to help reduce the risk of some cancers, heart disease and many other chronic conditions.

Figure 5.8 shows that in 2007 14% of respondents from the Swindon Super Survey said they consumed 5 or more portions of fruit on a typical day, this figure increased to 15% in 2008. 50% or respondents consumed 3 portions of fruit or more in 2007, in 2008 this increased to 52%.

However, inequalities in fruit consumption exist. In 2007 8% of Swindon residents living in NRAs reported that they did not consume any fruit on a typical day compared with 4% of the overall population of Swindon and Shrivenham. This figure improved in 2008 with 6% of residents from NRAs reporting they did not consume any fruit.

Figure 5.8: Portions of fruit consumed by Swindon residents on a typical day¹⁵⁷



¹⁵⁷ Swindon Super Survey

Figure 5.9 presents the results of the Swindon Super Survey concerning vegetable consumption. A similar pattern to fruit consumption is seen. For example, in 2007 10% of the population surveyed said they consumed 5 or more portions of vegetables on a typical day, this decreased to 8% in 2008. 51% of the sample consumed 3 or more portions of vegetables compared with 46% of the population living in NRAs. In 2008 this increased by 2% to 53% and by 2% to 48% respectively.

Figure 5.9: Portions of vegetables consumed by Swindon residents on a typical day¹⁵⁸



A similar pattern of healthy eating was also found for school age children.

¹⁵⁸ Swindon Super Survey

Figure 5.10 shows that 21% of pupils reported having at least 5 portions of fruit and vegetables the day before completing the survey; 9% of pupils said they had eaten none.

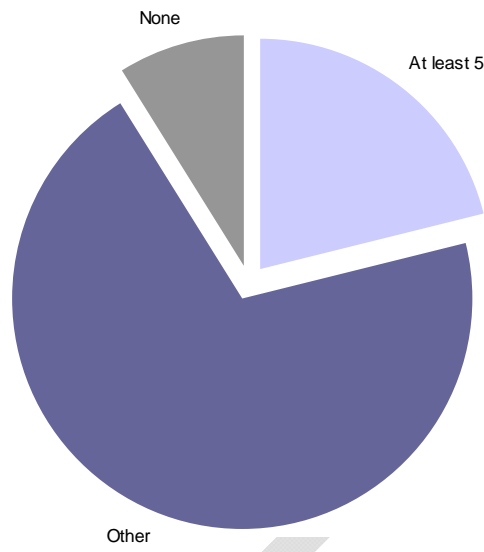
The survey data also suggests that some pupils exhibited bad eating behaviours and that certain inequalities in healthy eating among children exist (for example, girls were particularly concerned with eating and weight issues).

Other key statistics from the survey found that¹⁵⁹:

- 15% of Year 10 girls had nothing more than a drink for breakfast that morning
- 28% of Year 10 girls reported having no lunch the day before the survey
- 55% of Year 10 girls said that they would like to lose weight
- 12% of pupils said they never considered their health when choosing what to eat

¹⁵⁹ SHEU – Health Related Behaviour Survey

Figure 5.10: Daily fruit and vegetable consumption in Swindon pupils aged 14-15 yrs¹⁶⁰



¹⁶⁰ SHEU – Health Related Behaviour Survey

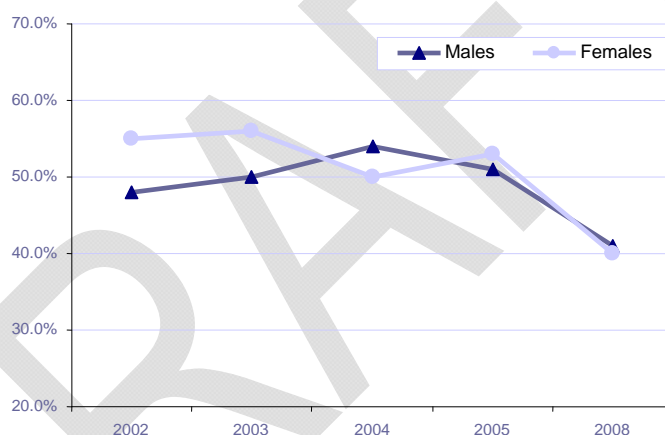
5.3 Alcohol Consumption

'Safe, Sensible, Social' is the Government's alcohol strategy which commits all Government departments to work together to tackle alcohol problems.

The Health Related Behaviour Survey conducted in schools, (Figure 5.11) suggests a declining trend in both male and female 14yr old pupils who frequently consume alcohol. However, 40% of these Year 10 pupils reported that they had consumed alcohol in the previous week.¹⁶¹

- 14% of pupils (Yr 8 & Yr 10) said that they got drunk on at least one day in the last week
- 15% of Year 10 boys drank 7 or more units of alcohol in the 7 days before the survey
- 13% of Year 10 girls drank 7 or more units of alcohol in the 7 days before the survey

Figure 5.11: Proportion of Swindon pupils aged 14-15yrs who consume alcohol weekly¹⁶²



Despite these reductions in alcohol consumption, there continues to be a rise in both child and adult levels of alcohol related harm. For example, there has been a rise in the number of admissions to hospitals for alcohol related conditions in school age children. A similar trend has been observed for adults.

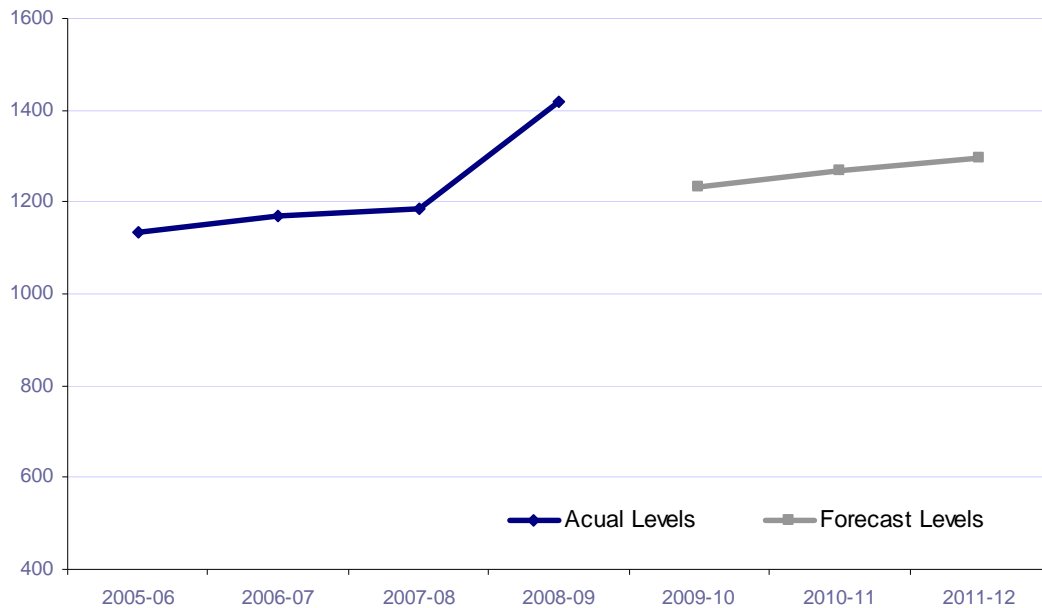
¹⁶¹ SHEU – Health Related Behaviour Survey

¹⁶² SHEU – Health Related Behaviour Survey

Figure 5.12 demonstrates that in 2005/06 1,136 admissions per 100,000 of the population were related to alcohol, this increased by 282 per 100,000 by 2008/09 to 1,418. The sharpest increase was seen between 2007/08 and 2008/09. In addition, liver cirrhosis is now one of the main contributors to the inequality gap in mortality (see Section 4.2 above).

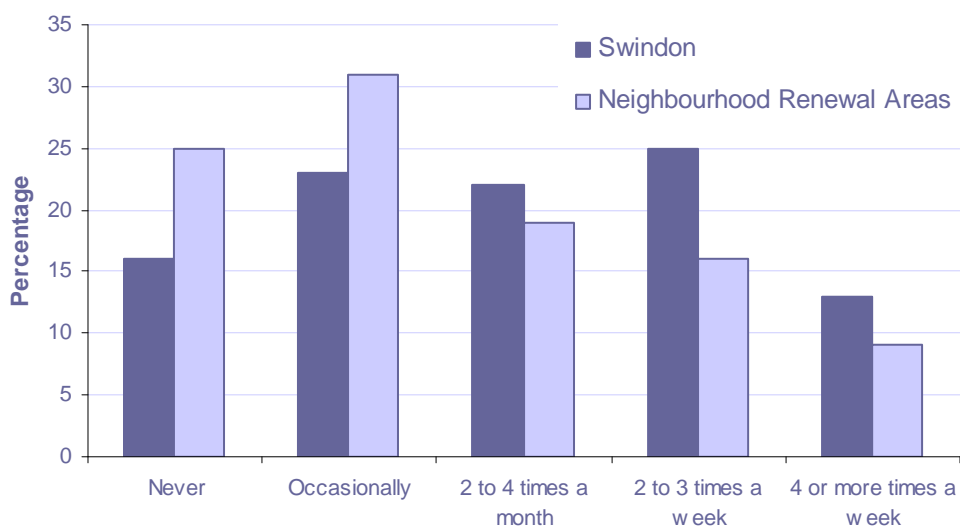
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Figure 5.12: Actual and forecast alcohol-related admission rate (per 100,000) in Swindon¹⁶³



Differences also exist in adult drinking behaviour. Results from Swindon's 2008 Super Survey¹⁶⁴ indicate that individuals from deprived neighbourhoods (Neighbourhood Renewal Areas) drink less frequently when compared with Swindon residents as a whole. In addition, more people from NRAs indicated that they never or occasionally drink alcohol, and fewer people from NRAs indicated that they drink alcohol on a weekly or monthly basis (Figure 5.13). Results were similar for 2006 and 2007.

Figure 5.13: Swindon alcohol consumption by area (2008)¹⁶⁵



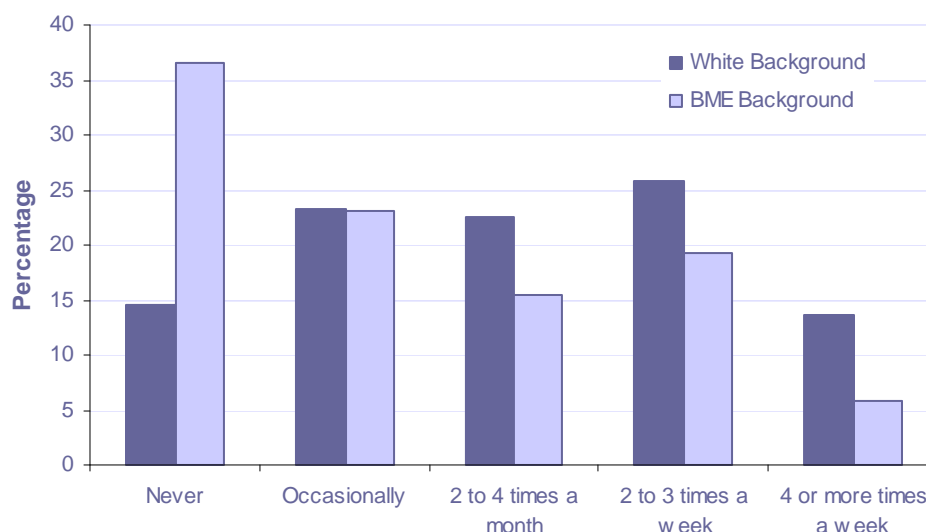
¹⁶³ NHS Vital Signs Monitoring

¹⁶⁴ Swindon Super Survey

¹⁶⁵ Swindon Super Survey

This pattern was also found for individuals from BME communities. Results from the 2008 Super Survey show that people from BME backgrounds were much more likely to never drink alcohol and much less likely to drink alcohol 4 times a week or more than those from white backgrounds (Figure 5.14). Results were similar for 2006 and 2007.

Figure 5.14: Swindon alcohol consumption by ethnic Group (2008)¹⁶⁶



Although individuals from deprived backgrounds and BME communities appear to drink less frequently and less heavily, further work is needed to discover whether these groups also experience less alcohol-related disorders as well. As such a detailed analysis of drinking behaviours and alcohol related harm will be published in the Swindon Alcohol Needs Assessment in January 2010.

The economic cost of alcohol misuse must also be considered. The National Social Marketing Centre estimated that the total annual societal cost of alcohol misuse in England to be £55.1 billion¹⁶⁷. This includes:

- £21 billion cost to individuals and families/households (e.g. loss of income, informal care costs)
- £2.8 billion cost to public health services/care services
- £2.1 billion cost to other public services (e.g. criminal justice system costs, education and social services costs)
- £7.3 billion cost to employers (e.g. absenteeism)
- £21.9 billion in human costs (DALYs).

It is estimated that the cost of alcohol related harm to the NHS in England is £1.7 billion in 2006/07.¹⁶⁸ A further breakdown of these figures is provided in Table 5.3.1.

Table 5.3.1: Annual estimated cost of alcohol misuse to the NHS in England 2006/07¹⁶⁹

¹⁶⁶ Swindon Super Survey

¹⁶⁷ Lister G (2007) Evaluating social marketing for health – the need for consensus. Proceedings of the National Social Marketing Centre, 24-25 September, Oxford

¹⁶⁸ Indication Report August 2007

¹⁶⁹ The cost of alcohol harm to the NHS - The Department of Health

	Estimated Cost (£ Millions)
Hospital inpatient and day visits	
Directly attributable to alcohol misuse	167.6
Partly attributable to alcohol misuse	1,022.70
Hospital outpatient visits	272.4
Accident and emergency visits	645.7
Ambulance services	372.4
NHS GP consultants	102.1
Practice nurse consultants	9.5
Dependency prescribed drugs	2.1
Specialist treatment services	55.3
Other health care costs	54.4
Total:	£2,704.10

5.4 Smoking

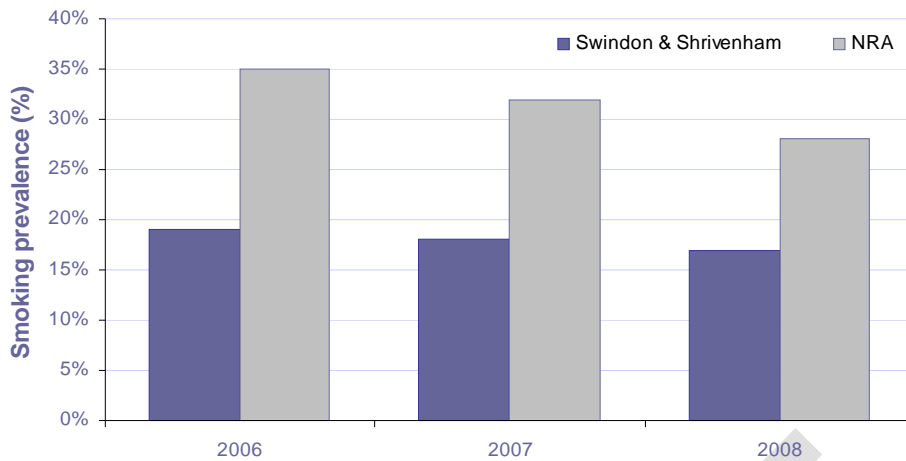
Smoking remains the main cause of preventable disease and premature death in the UK. In England alone, over 80,000 deaths per year are due to smoking and about 8.5 million people still smoke in England today¹⁷⁰. Nationally, smoking accounts for over half of the gap in risk of premature death between social classes. Mortality rates from tobacco are also two to three times higher among disadvantaged social groups than among the least deprived.

Figure 5.15 indicates that over the last three years the number of people in Swindon who smoke has been steadily declining, with recent figures (2008) indicating that 17% of the total Swindon population smoke. However, the figure also demonstrates that clear inequalities in smoking prevalence exist. For example, people living in Swindon's five most deprived wards, the Neighbourhood Renewal Areas are much more likely to smoke (28%); although this rate has also declined in recent years.

Figure 5.15: Smoking prevalence in Swindon residents (2006 to 2008)¹⁷¹

¹⁷⁰ Tobacco – Health Bill 2009, UK Parliament www.parliament.uk

¹⁷¹ Swindon Super Survey



Similarly, Figure 5.16 indicates that inequalities in smoking prevalence between different ethnic groups also exist. For example, according to the 2008 Swindon Super Survey, smoking prevalence in individuals from a white background was three times higher than those from BME backgrounds. The figure also shows that smoking rates in both ethnic groups are higher in NRAs than for the rest of Swindon, and that NRA individuals from a white background are more likely to smoke than individuals from BME groups. However, what is important to note is that the number of people from white backgrounds who live in NRAs and smoke is 70% higher than the number of white people who live in Swindon as a whole. In comparison, the number of people from BME groups who live in NRAs and smoke is 175% higher than the number of individuals from BME groups who smoke and do not live in NRAs. This means that although persons from white backgrounds are much more likely to smoke over all, there is a much bigger inequality gap between smokers and non smokers (according to deprivation) among people from BME backgrounds.

Figure 5.16: Smoking prevalence in Swindon residents by NRA and BME group (2008)¹⁷²



In 2008/09 1,223 individuals quit smoking with the help of Swindon's Stop Smoking Service. Despite a decline in the overall number of people who smoke, the number of people accessing the Stop Smoking Service increased from 1,157 in 2007/08.

¹⁷² Swindon Super Survey

The data presented in Figure 5.17 indicates that quit rates are improving, in 2008/09 57% of people successfully quit smoking at four weeks from setting a quit date. The 2008/09 quit rate was significantly greater ($p < .05$) than quit rates in both 2007/08 and 2006/09.

Inequalities in quit rates and service access also exist. Figure 5.18 shows that just over half, 56% of people accessing the service, are women. Despite this, over the three year period men have been marginally more successful than women at quitting with 55.1% of men being successful at four weeks compared with 52.2% of women.

Figure 5.17: NHS Swindon Stop Smoking Service Quit Rates¹⁷³

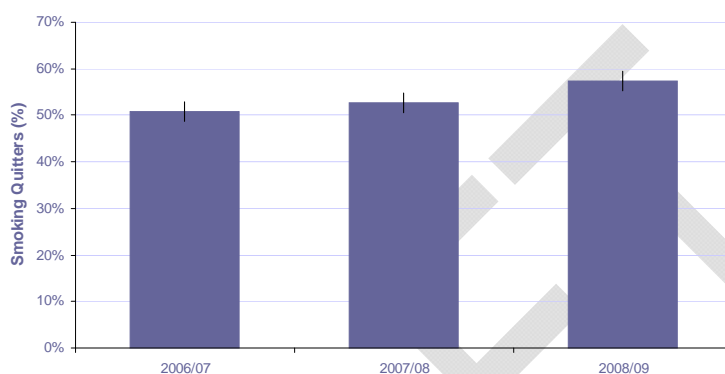
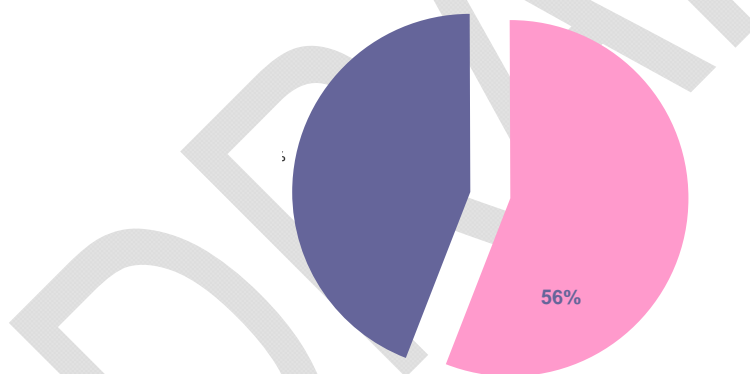


Figure 5.18: NHS Stop Smoking Service Client Base by Gender¹⁷⁴



Recent figures also suggest that there was an increase in individuals from BME communities (including white other, but not Irish) accessing the Stop Smoking Service from 2.1% in 2006/07 to 5.8% in 2008/9; however the number of individuals from BME backgrounds accessing the Stop Smoking Service is disproportionate to the estimated number of people in Swindon (11.1%) who are from BME backgrounds.

In order to project future smoking prevalence rates it is important to understand smoking behaviours in school age children. The Health Related Behaviour survey found that the number of Year 10 pupils smoking is declining. Figure 5.20 demonstrates that this trend is declining in both males and females; however inequalities exist as smoking prevalence remains higher in female year 10 pupils.

¹⁷³ Swindon Stop Smoking Service

¹⁷⁴ Swindon Stop Smoking Service

Evidence also indicates that young people may be vulnerable to passive smoking as well). For instance, in 2008 48% of pupils reported that there was someone who smoked indoors in their home (including themselves) on most days.

Figure 5.19: Proportion (48%) of Swindon pupils (aged 14-15yrs) who reported tobacco exposure and use¹⁷⁵

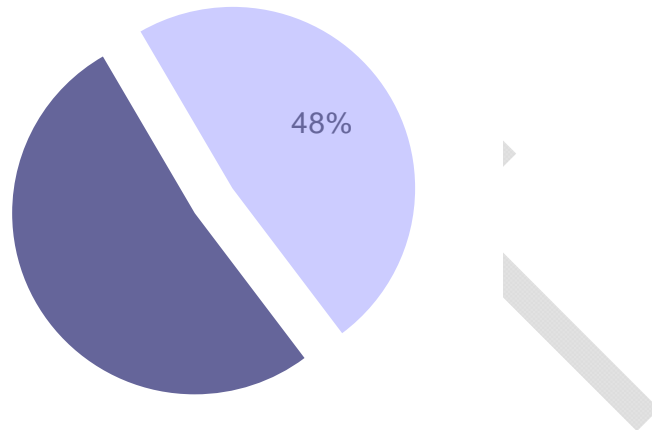


Figure 5.20: Male and female Swindon pupils aged 14-15yrs who smoked within the last 7 days¹⁷⁶



¹⁷⁵ SHEU – Health Related Behaviour Survey

¹⁷⁶ SHEU – Health Related Behaviour Survey

Acknowledgements

Caroline Wright: Epidemiologist
 NHS Swindon PCT

Chloe Johnson: Public Health Information Analyst
 NHS Swindon PCT

Thanks also to all members of the NHS Swindon, Swindon Borough Council and Swindon Intelligence Network who contributed to this document.

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