Section 2: health inequalities

Inequality in outcomes

a single version of the truth

NHS Wiltshire Clinical Commissioning Group

Wiltshire Council Where everybody matters

Wiltshire Assembly Public Services Board

Related briefings in the JSA for Health and Wellbeing

Briefing	Section
Entire section	Health inequalities
Child mortality	Children and Young People
Health inequalities	Children and Young People
Men's health	Health promotion and prevention services
Impact of severe weather	Wider determinants of health
Deprivation	Resources

Outcome Frameworks Summary

The Public Health Outcomes Framework for England, 2013-2016[1] outlines the overarching vision for public health as "to improve and protect the nation's health and wellbeing, and improve the health of the poorest fastest". Each indicator domain has an objective that includes health inequalities:

Domain	Objective
1. Improving the wider determinants of health	Improvements against wider factors that affect health and wellbeing and *health inequalities*
2. Health improvement	People are helped to live healthy lifestyles, make healthy choices and reduce *health inequalities*
3. Health protection	The population's health is protected from major incidents and other threats, while reducing *health inequalities*
4. Healthcare public health and preventing premature mortality	Reduced numbers of people living with preventable ill health and people dying prematurely, while reducing the *gap between communities*.

Edition

Edition	Version no.	Changes/Comments
2012/13	1	N/A
2012/13	2	Excess winter deaths section added
2013/14	1	

Executive summary

This section concentrates on health inequalities between different socio-economic groups. It examines inequalities found at different ages and in different parts of Wiltshire.

Inequalities do exist in Wiltshire and it is clear that people in Wiltshire still die prematurely as a result of deprivation. This highlights the need to concentrate efforts in targeting interventions to reach those most in need. These interventions are not merely health based and need to address wider determinants of health such as income, education, housing and the environment.

In 2009-11 life expectancy was 6.1 years lower for men and 2.8 years lower for women in the most deprived areas of Wiltshire than in the least deprived areas.[2] The gaps for males and females have widened since 2001-05.

Four Community Areas (Melksham, Salisbury, Trowbridge and Royal Wootton Bassett and Cricklade) were found to have statistically significantly lower life expectancies in their most deprived areas compared to their least deprived areas.

In Wiltshire, in 2009-11, males could expect to live 66.5 years in good health and females 68.0 years. Nationally, males are spending a greater proportion of their lives in favourable health compared with females. However, in recent years this gap has narrowed as the health of females has improved more rapidly than for males[3].

Many major conditions are strongly correlated to deprivation as are the lifestyles that contribute to them. Among the interventions that are evidenced to reduce the life expectancy gap are smoking cessation; statin therapy[4], use of anti-hypertensives[5] and early detection of cancer[6].

The cost to the taxpayer of health inequalities in Wiltshire has been estimated at around half a billion pounds per year (£281 million in productivity losses; £229 million in lost taxes and higher welfare payments and £48 million additional NHS healthcare costs).

Why this area is important?

People with higher socioeconomic position in society have a greater array of life chances and more opportunities to lead a flourishing life. They also have better health. The two are linked: the more favoured people are, socially and economically, the better their health. This link between social conditions and health is not a footnote to the 'real' concerns with health – health care and unhealthy behaviours – it should become the main focus[7].

Inequalities within Wiltshire, and the need to maintain focus on major health issues, for example reducing premature mortality and deaths from cancer and cardiovascular disease, mean that local services cannot be complacent. Inequalities do exist in Wiltshire and, especially with an ageing population structure, health needs are subject to change over future years.

Life expectancy

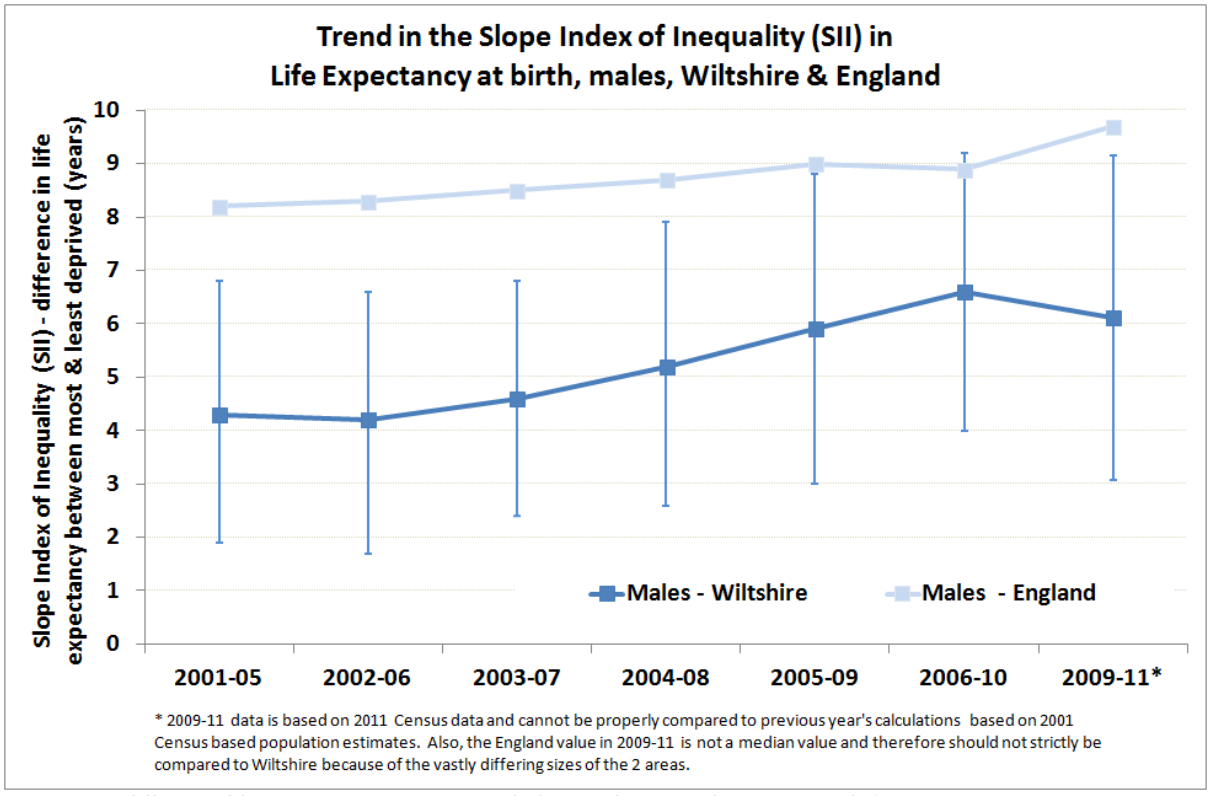
Life expectancy at birth is often used as a measure of the health of a population. It is calculated as the average number of years a new-born baby might be expected to live based on current trends. Life expectancy in England has increased over the last century and this general trend is continuing as health services and the wider determinants of health generally improve. This pattern is also reflected in Wiltshire see Life expectancy and mortality section.

Slope Index of Inequality

- The Slope Index of Inequality (SII) in Life Expectancy is a single score representing the gap in life expectancy between the most deprived 10% and the least deprived 10% of the population.

- For males in Wiltshire, the SII gap is 6.1 years in 2009-11. This is slightly narrower than in 2006-10, 6.6 years but it has increased by 1.8 years since 2001-05.

Figure 1: Trend in slope index of inequality (males)



Source: Public Health Outcomes Framework (PHOF) www.phoutcomes.info

- Females in Wiltshire experienced a shrinking of the SII gap from 3.8 years in 2006-10 to 2.8 years in 2009-11. However, the overall trend since 2001-05 shows the female gap has increased by 0.8 years.

Figure 2: Trend in slope index of inequality (females)

Source: Public Health Outcomes Framework (PHOF) www.phoutcomes.info

- Comparisons between 2009-11 and previous years have been made less robust by the use of a shorter time period and population data based on different censuses.

- In males and females over the period 2009-11, Wiltshire's SII gap is lower than England. However, this is to be expected because there is more natural variation in larger areas.

- For both males and females Wiltshire is in the best performing national quintile in 2009-11 and has been in every 5 year period from 2001-05 to 2006-10.

- Further analysis of the SII is contained in a statistical briefing note

Community Area level

Inequalities occur within Community Areas in the same fashion that they do within Wiltshire. However, as the geographical area under consideration becomes smaller the amount of data to assess the extent of this variability or inequality diminishes.

The 2011 Joint Strategic Assessments for Community Areas[8] used the difference in life expectancy between the most deprived 20% of a Community Area compared to the least deprived 20% of a Community Area. This analysis has been updated using data from 2004 to 2009 and 4 Community Areas were found to have statistically significantly lower life expectancies in their most deprived areas compared to their

least deprived areas. In other words these differences were unlikely to be chance observations. The 4 Community Areas were:

- Melksham
- Salisbury
- Trowbridge
- Royal Wootton Bassett and Cricklade

Healthy life expectancy

In Wiltshire, in 2009-11, males could expect to live 66.5 years in good health and females 68.0 years. These are statistically significantly higher than the corresponding England values of 63.2 years for males and 64.2 years for females. However, the gender gap is greater in Wiltshire (1.5 years) than in England overall (1.0 years)[9]. Nationally, males are spending a greater proportion of their lives in favourable health compared with females. However, in recent years this gap has narrowed as the health of females has improved more rapidly than for males[10].

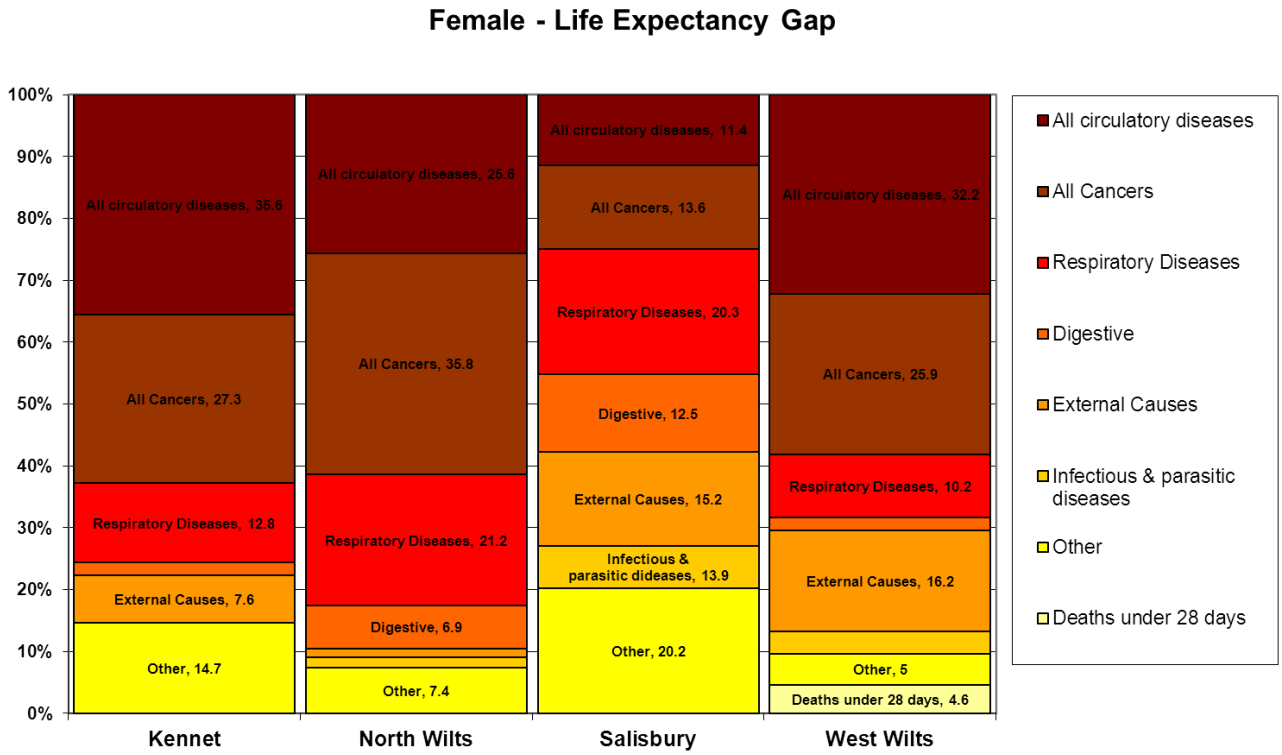
Disability-free life expectancy

In England and in Wiltshire inequalities between the sexes are narrowing in terms of disability-free life expectancy after age 65. In Wiltshire, between 2000-2002 and 2007-09, disability-free life expectancy increased by 27.4% in males over the age of 65, and 22.8% in females. If these trends continue to 2014-16 then males in Wiltshire reaching age 65 would expect 12.6 years of disability-free life, and females would expect 12.9 years.

Causes of life expectancy gap

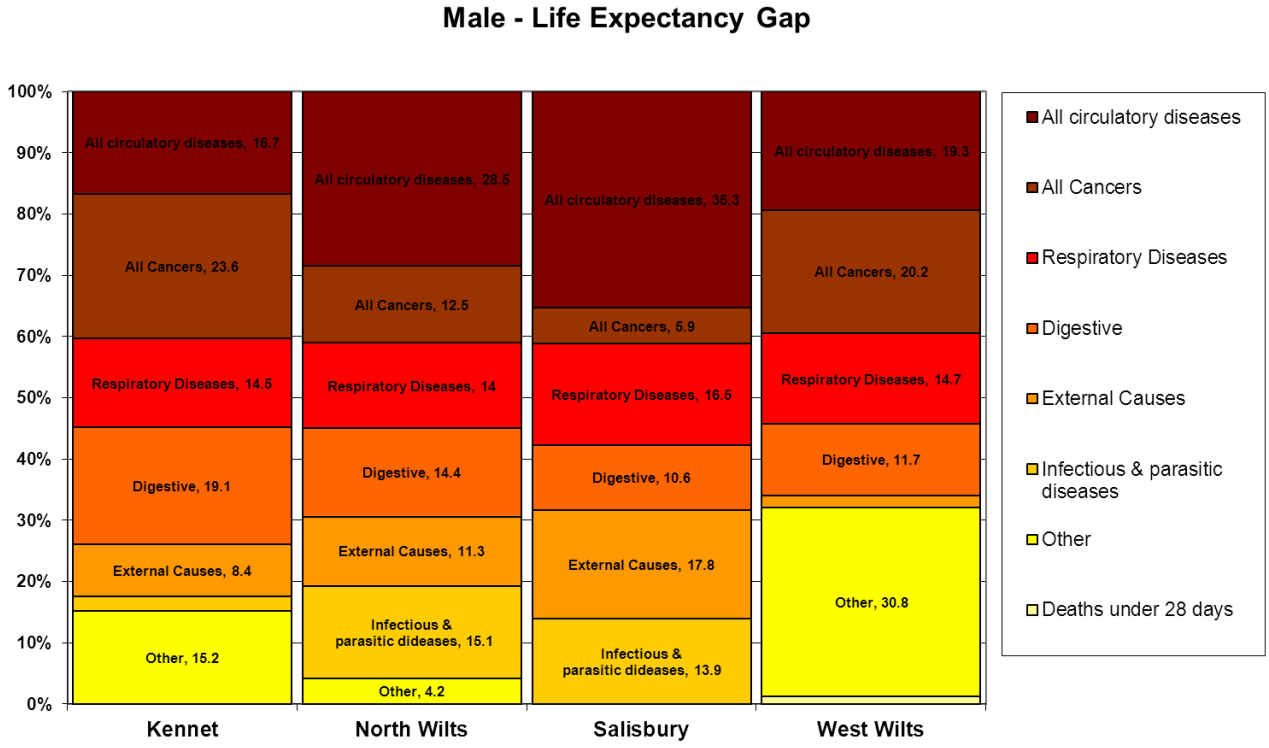
Variations in life expectancy linked to deprivation are associated with variations in morbidity and mortality from different conditions or diseases. The pattern of causes of deaths contributing to the life expectancy gap is broadly similar for both males and females, with cancers, circulatory and respiratory diseases accounting for over 65% in each. Figure 3 and Figure 4 show the causes of death that constitute the life expectancy gap for males and females. This tool was developed in 2008 using data from 2001-05 that was only available for the four former Wiltshire districts.

Figure 3: Life expectancy gap - females



Source: Department of Health / London Public Health Observatory

Figure 4: Life expectancy gap – males

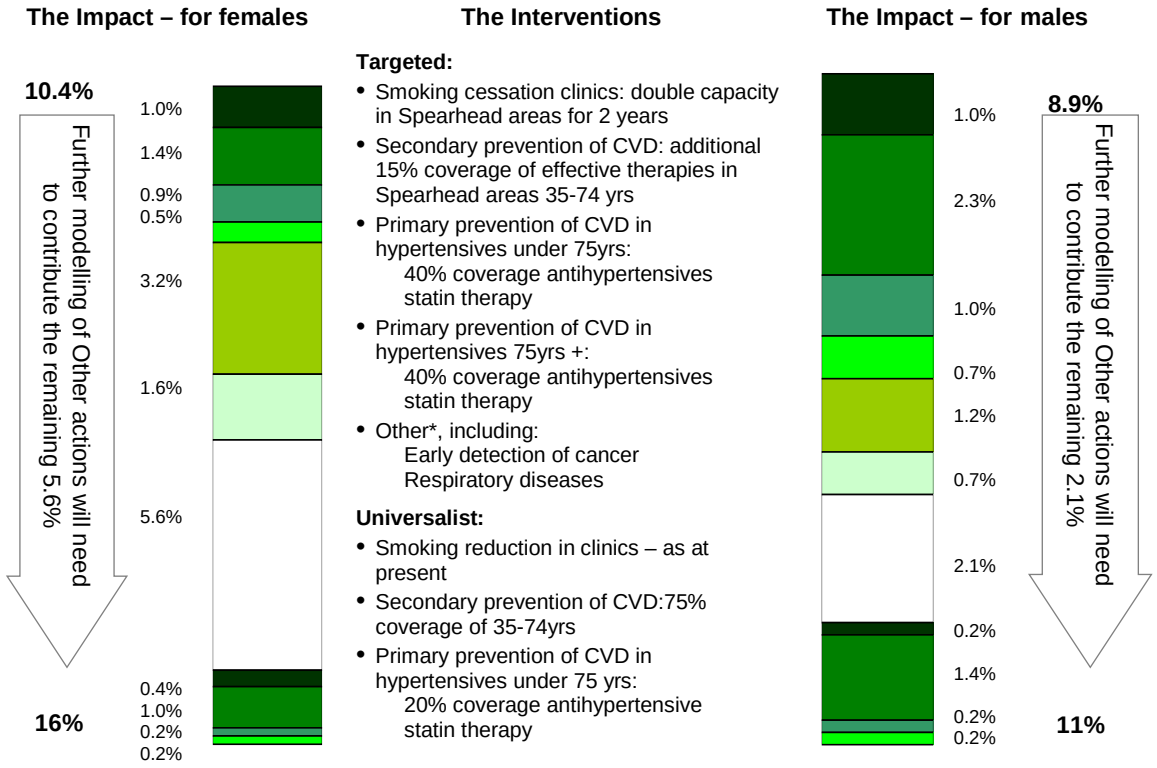


Source: Department of Health / London Public Health Observatory

Interventions to reduce life expectancy gap

There is evidence that actions targeting causes of early death, particularly those related to health inequalities, can contribute to improving life expectancy. Figure 5 illustrates this.

Figure 5: Interventions to reduce the inequalities gap



Source: Tackling Health Inequalities: 2004-06 data and policy update for the National Target, Department of Health, Health Inequalities Unit, Dec 2007

Health inequalities continue to be a priority for both the NHS and local government in its new public health role. The NHS Outcomes Framework[11] and the Public Health Outcomes Framework[12] both reflect the aim to reduce health inequalities. NHS Wiltshire CCG reflects this priority by stating it will 'focus on the needs of inequalities and the different groups of people in Wiltshire by working through the localities' in its High-Level Strategic Plan (2013-15)[13]. Wiltshire Council in its Business Plan (2013-17) has set out 6 outcomes it wishes to achieve. Outcome 4: Wiltshire has inclusive communities where everyone can achieve their potential reflects a focus on inequalities of all kinds including socio-economic, gender, urban and rural, etc. Indeed the Plan states 'we will reduce inequalities between the most and least deprived communities and between urban and rural areas'.

There are a range of wider determinants of health that impact on inequalities including rurality, transport deprivation, service deprivation and housing deprivation. The increased needs of particular groups such as families, young people, the elderly, disabled persons and carers[14], the military, prisons, black and minority ethnic groups

and gypsies and travellers and the way these are met can also affect the inequality gap.

Gender life expectancy gap

Female life expectancy is higher than male life expectancy in most societies. The reasons for this are not entirely certain, although socio-environmental factors are certain to play a role. Historically, men have generally consumed more tobacco, alcohol and drugs than females in most societies, and are more likely to die from many associated diseases such as lung cancer, tuberculosis and cirrhosis of the liver. Men are also more likely to die from injuries, whether unintentional (such as car accidents) or intentional (suicide, violence, war)[15]

In Wiltshire, in 2010-12, life expectancy was 80.4 for males and 83.9 for females. Life expectancy is increasing faster for males than for females, probably partly as a result of the reduction of male smoking. In 2010-12, in Wiltshire, life expectancy is 3.5 years less for males than females. More information on gender inequalities is contained in the men's health section.

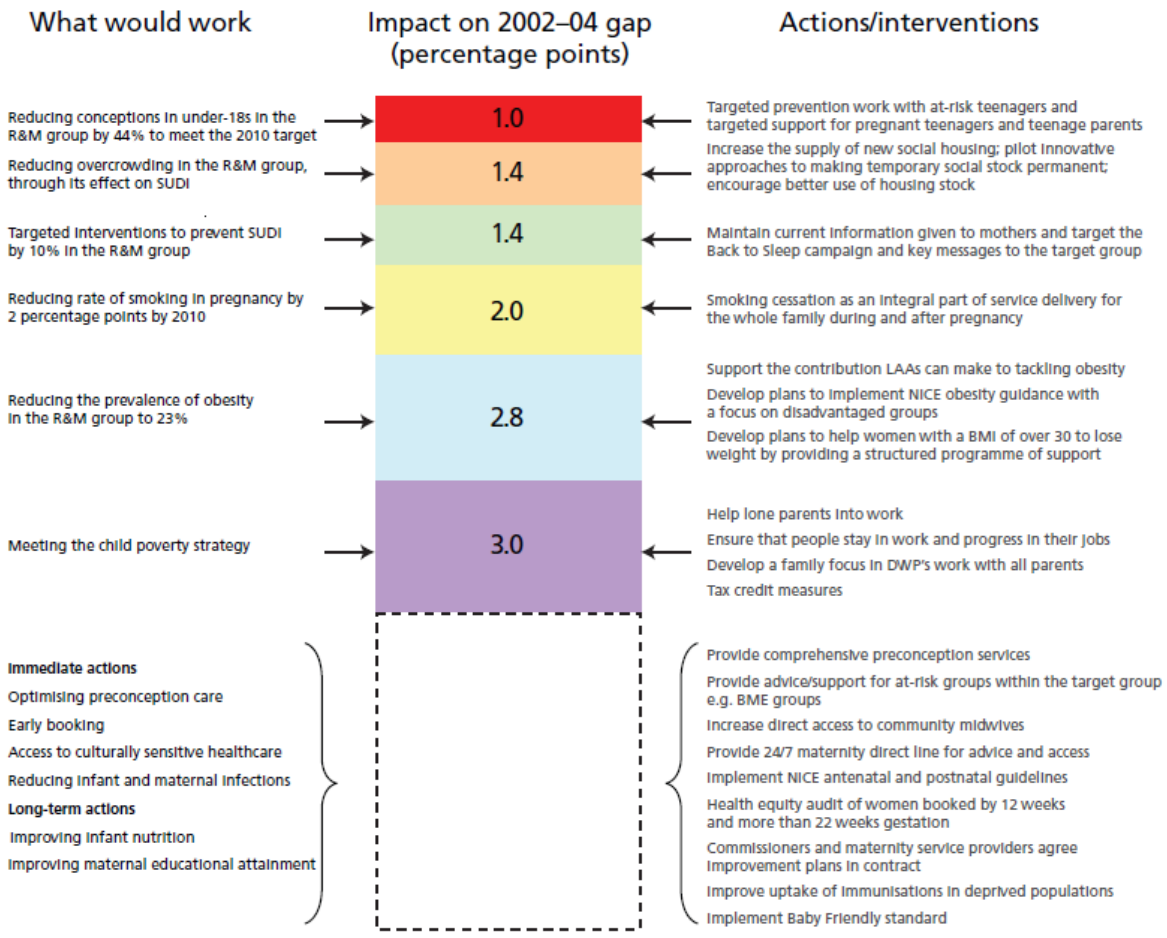
Infant mortality

See the Children and Young People's mortality section for analysis and discussion of mortality figures for children and young people aged under 20.

Mortality rates[16] in infants (children under 1) have risen in Wiltshire in recent years. The infant mortality rate in 2009-11 was 3.7 per 1,000 live births and has increased in each period since an historical low point of 3.2 per 1,000 in 2005-07. This places Wiltshire below the national rate (4.4 per 1,000) but above the rate for the South West (3.6 per 100,000) but not significantly different in either case. However, the national and regional rates have been decreasing between 2005-07 and 2009-11. Numbers in Wiltshire are too small to conduct local analysis but national evidence[17] shows that infant mortality rates are higher in more deprived areas.

Tackling health inequalities (including infant mortality) requires local service providers to work in partnership to address the wider determinants of health such as poverty, employment, poor housing and poor educational attainment. The Department of Health has examined the interventions that work in reducing infant mortality (see Figure 6).

Figure 6: Infant mortality target[18]: fast impact interventions



Source: Department of Health

Excess winter mortality

Excess deaths in winter (EWD) continue to be an important public health issue in the UK, potentially amenable to effective intervention. This excess death is greatest in both relative and absolute terms in elderly people and for certain disease groups. It also varies from area to area. EWD are also associated with cold weather, but it has been observed that other countries in Europe especially the colder Scandinavian countries have relatively fewer excess winter deaths in winter compared to the UK.

Information on excess winter deaths is important in:

- tackling certain premature deaths;
- supporting energy efficient interventions in housing;
- encouraging fuel poverty referral.

The Public Health Outcomes Framework includes reducing excess winter mortality as one of the outlined outcomes for the "Healthcare public health and preventing premature mortality" domain.

The West Midlands Public Health Observatory (WMPHO) produces the Excess Winter Deaths in England Atlas. The Excess Winter Deaths Atlas is available at: http://www.wmpho.org.uk/excesswinterdeathsinenglandatlas/

This interactive mapping tool allows the user to view excess winter deaths data in England with the facility to drill down to local authorities to access:

- Single and three year rolling trend data from 1990-2011
- Excess winter deaths by selected age groups
- Excess winter deaths by selected condition (underlying causes of death)

In Wiltshire, the three year index has reduced from 22.6% in 2007-2010 to 20.5% in 2008-2011 whilst the index for England has risen over the same period. The single year figures show an even greater improvement from a high of 28.7% in 2008/09 to 11.9% in 2011/12, where the Wiltshire index is now statistically significantly less than the England index (15.8%).

In statistical terms it should be noted that at no time has Wiltshire been significantly different to the England index on the three year measure. Nor is Wiltshire statistically significantly different for any of the age or condition indices.

More information on the effect of severe weather on mortality and health can be found in the impact of severe weather topic report in the Health and wellbeing JSA.

More information on fuel poverty and winter warmth can be found in the Housing section of the Health and wellbeing JSA.

Cost of inequality

The Marmot Review ('Fair Society Healthy Lives[19]') calculated that every year health inequalities cost the taxpayer in England:

- Productivity losses of £31-33 billion
- Lost taxes and higher welfare payments in the range of £20-32 billion
- Additional NHS healthcare costs well in excess of £5.5 billion

Every year health inequalities cost the taxpayer in Wiltshire*:

- Productivity losses of £281 million
- Lost taxes and higher welfare payments in the range of £229 million
- Additional NHS healthcare costs well in excess of £48 million

*Pro rata for Wiltshire's population (2010)

What works and what resources are there?

'Fair Society Healthy Lives' (The Marmot Review) [20]'

In November 2008, Professor Sir Michael Marmot was asked by the then Secretary of State for Health to chair an independent review to propose the most effective evidence-based strategies for reducing health inequalities in England from 2010.

The final report, 'Fair Society Healthy Lives', was published in February 2010, and concluded that reducing health inequalities would require action on six policy objectives:

1. Give every child the best start in life

2. Enable all children, young people and adults to maximise their capabilities and have control over their lives

3. Create fair employment and good work for all

4. Ensure healthy standard of living for all

5. Create and develop healthy and sustainable places and communities

6. Strengthen the role and impact of ill-health prevention.

Marmot Indicators[21]

In February 2010, Fair Society, Healthy Lives recommended action that emphasised the importance of tackling social inequalities in reducing health inequalities – a so-called 'social determinants' approach to preventing ill health. The UCL Institute of Health Equity commissioned the London Health Observatory to update the key indicators used to monitor health inequalities, first published in February 2011.

The figures for 2012 show that life expectancy has improved in most local authorities. However, they also show that the gap in life expectancy between the wealthiest and the most deprived areas has widened for both males and females in the majority of England's local authorities. The update also reveals around a three per cent improvement across England as a whole in the percentage of children achieving a good level of development at age five.

The Marmot Indicators for Wiltshire are available here: http://www.lho.org.uk/LHO_Topics/national_lead_areas/marmot/Documents/2012_PDF_LA_00HY.pdf

Wiltshire Health Inequalities strategy

The Wiltshire Health Inequalities Strategy and Implementation Plan 2007-2010 described the scale and nature of local inequalities problems and planned interventions to narrow the gap in life expectancy. http://www.wiltshirepct.nhs.uk/Publications/Strategies/HealthInequalitiesStrategy_2007_2010.pdf

Health Inequalities Gap Measurement Tool[22]

The Health Inequalities Gap Measurement Tool (the 'gap tool') provides detailed information on the nature and extent of health inequalities across England. It shows inequality gaps in mortality rates within and between areas by grouping local populations according to relative levels of deprivation.

Results are available for all Local Authorities and now defunct Primary Care Trusts, and Strategic Health Authorities, as well as regions and England as a whole. Users can select a wide range of comparisons. For example, mortality rates for the most deprived parts of an area can be displayed alongside the rates for the least deprived parts, illustrating the inequality gap between them.

The gap tool can be used to support planning and commissioning to reduce health inequalities by giving users the means to:

- identify the causes of death with the largest inequality gaps within areas
- see the age groups with the greatest absolute and relative gaps in mortality
- compare the overall mortality profiles for different areas
- view the 'direction of travel' for mortality rates and the local inequality gap.

The Excess Winter Deaths Atlas

The West Midlands Public Health Observatory (WMPHO) produces the Excess Winter Deaths in England Atlas. The Excess Winter Deaths Atlas is available at: http://www.wmpho.org.uk/excesswinterdeathsinenglandatlas/

Challenges for consideration

In 2009-11 life expectancy was 6.1 years lower for men and 2.8 years lower for women in the most deprived areas of Wiltshire than in the least deprived areas.[23] The gaps for males and females have widened since 2001-05.

Four Community Areas (Melksham, Salisbury, Trowbridge and Royal Wootton Bassett and Cricklade) were found to have statistically significantly lower life expectancies in their most deprived areas compared to their least deprived areas.

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[1] Healthy Lives, Healthy People: Improving outcomes and supporting transparency, Department of Health, January 2012 https://www.gov.uk/government/publications/healthy-lives-healthy-people-improving-outcomes-and-supporting-transparency
[2] Public Health Outcomes Framework (PHOF), www.phoutcomes.info (accessed November 2013).
[3] Health Expectancies at Birth and Age 65 in the United Kingdom, 2008-10, ONS, 29 August, 2012. http://www.ons.gov.uk/ons/rel/disability-and-health-measurement/health-expectancies-at-birth-and-age-65-in-the-united-kingdom/2008-10/index.html
[4] A class of drug used to lower cholesterol levels
[5] A class of drug used to treat hypertension (high blood pressure)
[6] Tackling Health Inequalities: 2004-06 data and policy update for the National Target, Department of Health, Health Inequalities Unit, Dec 2007
[7] Fair Society, Healthy Lives: A Strategic Review of Health Inequalities in England Post-2010. Published by The Marmot Review, February 2010. ISBN 978–0–9564870–0–1 url: http://www.instituteofhealthequity.org/Content/FileManager/pdf/fairsocietyhealthylives.pdf
[8] http://www.intelligencenetwork.org.uk/local-area-profiles/
[9] Public Health Outcomes Framework (PHOF), www.phoutcomes.info (accessed November 2013).
[10] Health Expectancies at Birth and Age 65 in the United Kingdom, 2008-10, ONS, 29 August, 2012. http://www.ons.gov.uk/ons/rel/disability-and-health-measurement/health-expectancies-at-birth-and-age-65-in-the-united-kingdom/2008-10/index.html
[11] NHS Outcomes Framework 2013 to 2014, Department of Health, November 2012. https://www.gov.uk/government/publications/nhs-outcomes-framework-2013-to-2014
[12] Department of Health http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_132358]
[13] The right healthcare for you, with you, near you. Two year strategic Plan 2013-2015, part 1: High Level Strategic Plan (2012/13 to 2014/15), Wiltshire Clinical Commissioning Group www.wiltshire.nhs.uk
[14] People looking after or giving help or support to family members, friends, neighbours or others because of long term physical or mental ill health or disability or because of problems associated with old age.
[15] World Health Organization (2004). "Annex Table 2: Deaths by cause, sex and mortality stratum in WHO regions, estimates for 2002" (PDF). The world health report 2004 - changing history. www.who.int/entity/whr/2004/annex/topic/en/annex_2_en.pdf. Retrieved 2008-11-01.
[16] The NHS Information Centre for health and social care. © Crown Copyright.
[17] Office for National Statistics. Oakley L, Maconochie N, Doyle P, Dattani N and Moser K. Multivariate analysis of infant deaths in England and Wales in 2005-06, with focus on socio-economic status and deprivation. Health Statistics Quarterly 42, Summer 2009.
[18] DH (2007) Implementation Plan for Reducing Health Inequalities in Infant Mortality: A Good Practice Guide. HMSO: London
[19] Fair Society, Healthy Lives: A Strategic Review of Health Inequalities in England Post-2010. Published by The Marmot Review, February 2010. ISBN 978–0–9564870–0–1 url: http://www.instituteofhealthequity.org/Content/FileManager/pdf/fairsocietyhealthylives.pdf
[20] Fair Society, Healthy Lives: A Strategic Review of Health Inequalities in England Post-2010. Published by The Marmot Review, February 2010. ISBN 978–0–9564870–0–1 url: http://www.instituteofhealthequity.org/projects/fair-society-healthy-lives-the-marmot-review
[21] Marmot health inequality indicators

http://www.lho.org.uk/LHO_Topics/National_Lead_Areas/Marmot/MarmotIndicators.aspx
[22] http://www.sepho.org.uk/gap_intro.aspx
[23] Public Health Outcomes Framework (PHOF), www.phoutcomes.info (accessed November 2013).