

5.1 Life expectancy and healthy life expectancy

Why is this issue important?

Life expectancy tells us how long a baby born today would be expected to live if they experienced the current mortality rates of the area they are born in throughout their lifetime.

Whilst other factors, such as biological or genetic disposition, are important, social inequalities are a key driver of ill-health. It has been estimated that the NHS contribution to any future reduction in the life expectancy gap, whilst significant, is limited and that other factors (the social determinants of health) such as education, employment and housing have a greater impact.

Key outcomes

- **Increased healthy life expectancy (Public Health Outcomes Framework)**
- **Reduced differences in life expectancy and healthy life expectancy between communities (Public Health Outcomes Framework)**
- **Life expectancy at 75 for males and females (NHS Outcomes Framework)**

Impact in Brighton & Hove

	Brighton & Hove	Regional Centres	South East	England
Life expectancy at birth (2011-2013)				
Males	78.8	78.1	80.4	79.4
Females	83.1	82.5	83.9	83.1
Life expectancy at 65 years (2011-2013)				
Males	18.6	18.1	19.3	18.7
Females	21.2	20.8	21.7	21.1
Healthy life expectancy at birth (2010-2012)				
Males	63.6	67.9	65.8	63.4
Females	66.5	72.0	67.1	64.1

Source: Office for National Statistics

Life expectancy in Brighton & Hove is 78.8 years for males and 83.1 for females (2011-2013). Whilst females in the city can expect to live the same length of time as nationally, life expectancy for

males is seven months lower than in England (79.4 years for males and 83.1 years for females).

With healthy life expectancy of 63.6 years for males and 66.5 years for females this means, on average, males live for 15.1 years with a limiting long-term illness or disability and females 16.5 years (2010-12). This also has implications in terms of the increasing retirement age, which will mean people are working with health conditions, or on sickness/disability benefit.

Life expectancy at age 65 years is 18.6 years for males and 21.2 years for females in the city compared with 18.7 and 21.1 years respectively for England.

Where we are doing well

Life expectancy in the city is as high as it has ever been, and is continuing to increase at a pace of around five months each year for both males and two months each year females (2006-08 to 2011-13).

Mortality rates are falling, and this is the case for the most affluent and most deprived people in the city.

Female life expectancy is the same as nationally.

Local inequalities

Despite the narrowing gap in life expectancy between men and women, men tend to develop and die from many conditions earlier than women.

The *slope index of inequality in life expectancy* gives a measure of the hypothetical difference in life expectancy between the most deprived and least deprived individuals. It is a more sensitive measure than the difference in mortality between the most deprived and least deprived quintiles of population as it looks at differences in life expectancy across the whole population.

In 2010-2012 the slope index was 8.7 years for males and 6.0 years for females in Brighton & Hove (Table 2). For both males and females this gap is now narrower than nationally.

The gap has narrowed from 10.6 years for males in 2006-10 and from 6.6 years for females.

Mortality rates in the city are falling in all groups (and therefore life expectancy rising), and between

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2006-2010 and 2009-2013 the relative inequality gap has remained the same, an improvement as this had been widening previously.¹ However there are still large inequalities in the City with the mortality rate of the most deprived person being nearly twice that of the least deprived (1.8 in 2006-10 and 2009-2013).

For the five years 2009 to 2013, 19% of deaths were attributable to deprivation – that equates to 2,534 deaths, around 500 deaths per year.

Table 2: Life expectancy inequality (in years) by gender, Brighton and Hove		
	Brighton & Hove	England
Inequality in life expectancy² at birth (2010-2012)		
Males	8.7	9.2
Females	6.0	6.8
Inequality in healthy life expectancy⁵ at birth (2010-2012)		
Males		19.4
Females		19.8

Source: Public Health England. Public Health Outcomes Framework Data Tool.

Predicted future need

A challenge in reducing health inequalities is that while the mortality rate for all groups in the city is expected to improve, it is improving faster in more affluent areas, so local inequalities are expected to increase without intervention:

- The mortality rate in the most deprived quintile in the city is projected to become twice that in the least deprived by 2012.³
- Whilst mortality rates are lower for females, the relative gap is expected to increase to

almost the level of the gap in men by 2012 (2.0 for males and 1.9 for females).⁴

What we don't know

Ethnicity is not recorded on death registration in England. Information on death certificates is restricted to the deceased's country of birth - traditionally used as a proxy for ethnic origin. However, the value of this has diminished over time as subsequent generations have been born in England. In 2012, Scotland became the first UK country to record ethnic origin on death certificates. Death registration also does not record religion, sexual orientation, transgender or whether someone was a carer and life expectancy is not calculated based upon marital status as it is a whole population measure.

Current figures on healthy life expectancy are partly based upon 2001 Census data and are therefore relatively old. The Office for National Statistics is due to publish revised figures, incorporating 2011 Census data on health status, but this is not yet available.

Key evidence and policy

Fair Society, Healthy Lives, the Marmot Review of Health Inequalities provides a strategic review of health inequalities in England.⁵ A life-course based approach is taken, because of the cumulative impact of social, economic, psychological and environmental experiences on health and health inequalities. Five age groups are identified:

- Pre-birth and early years (up to age 5)
- Children and young people in early education (age 5–16)
- Early adulthood (age 17–24)
- Adults of working age (age 25–64)
- Adults of retirement age (age 65+)

Looking at the contribution of specific causes of death to the life expectancy gap between the most

¹ South East Public Health Observatory. Health Inequalities Gap Measurement Tool. http://www.sepho.nhs.uk/gap/gap_national.html [Accessed on 21/08/2012].

² Inequality in life expectancy and disability free life expectancy are measured by the slope index of inequality and are measured in years. More information on the indicator is available at <http://www.apho.org.uk/default.aspx?RID=110504> [Accessed on 21/08/2012].

³ Mortality data has a time lag in its availability and so 2012 data are projected figures.

⁴ South East Public Health Observatory. Health Inequalities Gap Measurement Tool. http://www.sepho.nhs.uk/gap/gap_national.html [Accessed on 21/08/2012].

⁵ Marmot, Fair Society, Healthy Lives: Strategic Review of Health Inequalities Post 2010, 2010. Available at: <http://www.instituteofhealthequity.org/projects/fair-society-healthy-lives-the-marmot-review> [Accessed 21/08/2012]

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deprived quintile in Brighton & Hove and the national average for men, the biggest contributor is coronary heart disease, followed closely by lung cancer, chronic cirrhosis of the liver, suicide and undetermined injury, and other accidents. For women, coronary heart disease and other cardiovascular diseases are the biggest contributors to the gap, followed by lung cancer, other cancers, and suicide and undetermined injury.⁶

The Department of Health has identified the key interventions for reducing the life expectancy gap between the most and least disadvantaged areas (based upon previous PCT areas):

- Greatly increasing the capacity of smoking cessation clinics
- Increasing the coverage of effective therapies for secondary prevention of cardiovascular diseases in people aged less than 75 years
- Primary prevention of cardiovascular disease (all ages) and hypertension through treatment with antihypertensives and statins
- The early detection of cancer
- Interventions aimed at reducing mortality from respiratory diseases, alcohol-related diseases and infant mortality

Matrix for Health England developed a prioritisation method to inform investment in preventative health interventions, based upon the cost-effectiveness, impact on health inequalities, and percentage of people affected.⁷ The results for Brighton & Hove are shown in Table 3.

Recommended future local priorities

The Public Health Strategy for England is adopting the Marmot Review⁸ approach and this will be built on locally. Marmot 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 a 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

Recommendations around inequalities are throughout the relevant JSNA sections.

Key links to other sections

This section links to many within the JSNA but sections with specific reference here include:

- Main causes of death
- Coronary heart disease
- Cancer
- Suicide and suicide prevention
- Alcohol
- Maternal and infant health
- Smoking
- Physical activity
- Diet

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⁶ London Health Observatory, Health Inequalities Intervention Tool available at: http://www.lho.org.uk/LHO_Topics/Analytic_Tools/HealthInequalitiesInterventionToolkit.aspx

⁷ <http://help.matrixknowledge.com/>

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Table 3: Matrix for Health England order of priority for preventative health interventions evaluated to date for Brighton & Hove – national and local interventions.

Category	Intervention	Priority Ranking	Priority Score	Affordability	Certainty
Alcohol	Increases in taxation to reduce population consumption of alcohol	1	11.30 %	★ ★ ★	★ ★ ★
Smoking	Increases in taxation to reduce population smoking rates	2	9.62 %	★ ★ ★	★ ★ ★
Smoking	National mass media campaigns for reducing population smoking rates	3	9.46 %	★ ★ ★	★ ★ ★
Diet, physical activity, obesity	National mass media campaigns to reduce population levels of obesity	4	9.10 %	★ ★ ★	★ ★ ★
Smoking	Brief interventions delivered in GP surgeries to improve quit rates	5	8.98 %	★ ★ ★	★ ★ ★
Alcohol	Brief interventions delivered in GP surgeries to reduce problem drinking	6	8.70 %	★ ★ ★	★ ★ ★
Diet, physical activity, obesity	Brief interventions delivered in GP surgeries to improve uptake of physical activity	7	8.63 %	★ ★ ★	★ ★ ★
Smoking	Nicotine replacement therapy to improve quit rates	8	8.25 %	★ ★ ★	★ ★ ★
STI / teenage pregnancy	Screening and treatment for reducing the prevalence of Chlamydia	9	7.38 %	★ ★ ★	★ ★ ★
Diet, physical activity, obesity	School based group education to reduce population levels of obesity	10	7.25 %	★ ★ ★	★ ★ ★
STI / teenage pregnancy	School based group education for increasing rates of condom use and reducing STIs and unwanted pregnancy	11	6.00 %	★ ★ ★	★ ★ ★
Statins	Statins for primary prevention of stroke and heart disease (demonstrating QALYs for two example CVD risk groups)	12	4.26 %	★ ★ ★	★ ★ ★
Mental health	Assessment and support of caregivers for preventing depression in caregivers	13	0.95 %	★ ★ ★	★ ★ ★
Mental health	Screening and treatment to prevent depression in retirees (age over 65 years)	14	0.12 %	★ ★ ★	★ ★ ★

Source: Matrix for Health England