Fair Society, Healthy Lives

The Marmot Review
Figure 1 Life expectancy and disability-free life expectancy (DFLE) at birth, persons by neighbourhood income level, England, 1999–2003

Source: Office for National Statistics
Figure 2 Age standardised mortality rates by socioeconomic classification (NS-SEC) in the North East and South West regions, men aged 25–64, 2001–2003

Notes: NS-SEC = National Statistics Socio-economic Classification
Source: Office for National Statistics
Figure 3 Age standardised percentage of women with a General Health Questionnaire (GHQ) score of 4 or more by deprivation quintile, 2001 and 2006

Percent

Source: Health Survey for England\textsuperscript{14}
Figure 4: The Conceptual framework

Reduce health inequalities and improve health and well-being for all.

Create an enabling society that maximises individual and community potential.

Ensure social justice, health and sustainability are at heart of policies.

Policy objectives

A. Give every child the best start in life.

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

C. Create fair employment and good work for all.

D. Ensure healthy standard of living for all.

E. Create and develop healthy and sustainable places and communities.

F. Strengthen the role and impact of ill health prevention.

Policy mechanisms

Equality and health equity in all policies.

Effective evidence-based delivery systems.
Figure 5: Action across the life course

Areas of action

- Sustainable communities and places
- Healthy Standard of Living
- Early Years
- Skills Development
- Employment and Work
- Prevention

Life Course

Accumulation of positive and negative effects on health and wellbeing

Life course stages

Prenatal | Pre-School | School | Training | Employment | Retirement
---------|------------|--------|----------|------------|-------------
Family Building
Figure 6 Inequality in early cognitive development of children in the 1970 British Cohort Study, at ages 22 months to 10 years

Average position in distribution

High Q at 22m

Low Q at 22m

High socioeconomic status
Low socioeconomic status

Note: Q = cognitive score
Source: 1970 British Cohort Study17
Figure 7 Standardised limiting illness rates in 2001 at ages 16–74, by education level recorded in 2001

Percent ill

Qualifications

3rd level  2+As  5+O's  GCSE  Other Qual  No Qualifications

Note: Vertical bars (I) represent confidence intervals
Source: Office for National Statistics Longitudinal Study
Figure 8 Mortality of men in England and Wales in 1981–92, by social class and employment status at the 1981 Census

Source: Office for National Statistics Longitudinal Study
Figure 9 Taxes as a percentage of gross income, by quintile, 2007/8

Percent

Quintile of household equivalised disposable income

- All indirect taxes
- All direct taxes

Source: Office for National Statistics
**Figure 10** Populations living in areas with, in relative terms, the least favourable environmental conditions, 2001–6

Percentage of the population

<table>
<thead>
<tr>
<th>Least deprived areas</th>
<th>Level of deprivation</th>
<th>Most deprived areas</th>
</tr>
</thead>
</table>

- **No conditions**
- **1 condition**
- **2 conditions**
- **3 or more conditions**

**Environmental conditions:** river water quality, air quality, green space, habitat favourable to biodiversity, flood risk, litter, detritus, housing conditions, road accidents, regulate sites (e.g. landfill)

Source: Department for Environment, Food and Rural Affairs\(^2\)
Figure 11  Prevalence of obesity (>95th centile), by region and deprivation quintile, children aged 10–11 years, 2007/8

Prevalence of obesity

Quintile 1 (least deprived)
Quintile 2
Quintile 3
Quintile 4
Quintile 5 (most deprived)

Region of residence

Source: National Obesity Observatory, based on National Child Measurement Programme^24
Figure 2.1 Life expectancy at birth by social class, a) males and b) females, England and Wales, 1972–2005

b) Females

Years

Social Class

Source: Office for National Statistics Longitudinal Study
Figure 2.6 Age standardised mortality rates by socioeconomic classification (NS-SEC) and region, men aged 25–64, 2001–2003

Mortality rate per 100,000

Region

England & Wales  E  SW  SE  EM  WM  YH  L  NW  NE

Routine  Semi-routine  Lower supervisory & technical  Intermediate  Lower managerial, professional  Higher managerial, professional

Source: Office for National Statistics

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Figure 2.9 Disability-free life expectancy at birth, persons: regional averages at each neighbourhood income level, England, 1999–2003
Figure 2.10 Age standardised (a) circulatory disease and (b) cancer death rates at ages under 75, by local ward deprivation level, 1999 and 2001–2003

(a) Circulatory disease

Rate per 100,000 population

Least deprived  Deprivation twentieths  Most deprived

Males
Females

Source: Office for National Statistics Health Statistics Quarterly

60
Figure 2.10 Age standardised (a) circulatory disease and (b) cancer death rates at ages under 75, by local ward deprivation level, 1999 and 2001–2003

(b) Cancer

Rate per 100,000 population

Least deprived ➔ Deprivation twentieths ➔ Most deprived

Males

Females

Source: Office for National Statistics Health Statistics Quarterly

60
Figure 2.11 Age standardised percentage of women with a General Health Questionnaire (GHQ) score of 4 or more by deprivation quintile, 2001 and 2006

Source: Health Survey for England™
Figure 2.12 Rates of poor social/emotional adjustment at ages 7, 11 and 16, by father’s social class at birth, 1958 National Child Development Study

Source: 1958 National Child Development Study

Percent poor adjustment

Social class at birth

Aged 7
Aged 11
Aged 16
Figure 2.13 Percentage of (a) males and (b) females smoking, by socioeconomic class (NS-SEC), 2001–7

(a) Males

Percent

Year

Managerial and professional
Intermediate
Routine and manual

Note: NS-SEC=National Statistics Socioeconomic Classification
Source: Office for National Statistics General Household Survey 65
Figure 2.13 Percentage of (a) males and (b) females smoking, by socioeconomic class (NS-SEC), 2001–7

(b) Females

Percent

Year

2001 2002 2003 2004 2005 2006 2007

Managerial and professional
Intermediate
Routine and manual

Note: NS-SEC=National Statistics Socioeconomic Classification
Source: Office for National Statistics General Household Survey®
Figure 2.14 Alcohol-attributable hospital admissions by small area deprivation quintile in England, 2006–2007

Age standardised persons per 100,000

Deprivation quintile (IMD 2007)

- Males (Gradient = 2.6)
- Females (Gradient = 2.4)

Note: IMD = Index of Multiple Deprivation for Lower Level Super Output Areas
Source: NHS Information Centre Hospital Episode Statistics
Figure 2.15 Obesity prevalence at ages 16 and over by social class, (a) males and (b) females, 1997–2007

(a) Males

Percentage obese (BMI > 30)

Year


I - Professional
II - Managerial, technical
IIIN - Skilled non-manual
IIIM - Skilled manual
IV - Semi-skilled manual
V - Unskilled manual

Source: National Obesity Observatory, based on the Health Survey for England
Figure 2.15 Obesity prevalence at ages 16 and over by social class, (a) males and (b) females, 1997–2007

(b) Females

Percentage obese
(BMI > 30)

Year

Source: National Obesity Observatory, based on the Health Survey for England.
Figure 2.17 Prevalence of problematic drug users aged 15–64 years by local authority of residence and Index of Multiple Deprivation, 2006/7

Rate per 1,000

IMD Score 2007

IMD = Index of Multiple Deprivation
Source: North West Public Health Observatory

80
Figure 2.19 Estimated number of infant deaths that would be avoided if all quintiles had the same level of mortality as the least deprived, 2005–6

Pre-term births

Full-term births

Source: Office for National Statistics Health Statistics Quarterly
Figure 2.20 Links between socioeconomic status and factors affecting child development, 2003–4

- **Birth weight**
  - Socioeconomic status:
    - Lowest
    - 2
    - 3
    - 4
    - Highest

- **Mother suffered post-natal depression**
  - Socioeconomic status:
    - Lowest
    - 2
    - 3
    - 4
    - Highest

- **Read to every day at age 3**
  - Socioeconomic status:
    - Lowest
    - 2
    - 3
    - 4
    - Highest

- **Regular bed times at age 3**
  - Socioeconomic status:
    - Lowest
    - 2
    - 3
    - 4
    - Highest

Source: Department for Children, Schools and Families
Figure 2.22 Indicators of school readiness by parental income group, 2008

Average percentile score

Test Score

Source: Washbrook and Waldfogel
Figure 2.23 Attainment gap from early years to higher education by eligibility for free school meals, 2009

Percentage reaching expected level

- Not eligible for free school meals
- Eligible for free school meals

Source: Department for Children, Schools and Families and Higher Education Statistics Agency.\(^{107}\)
Figure 2.24 Percentage of pupils achieving 5 or more A*-C grades at GCSE or equivalent by gender, free school meal eligibility and ethnic group, 2008/9

Per cent

<table>
<thead>
<tr>
<th>Group</th>
<th>Girls not eligible for free school meals</th>
<th>Boys not eligible for free school meals</th>
<th>Girls known to be eligible for free school meals</th>
<th>Boys known to be eligible for free school meals</th>
</tr>
</thead>
<tbody>
<tr>
<td>White British</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traveler of Irish Heritage</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Gypsy/Roma</td>
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<td></td>
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<tr>
<td>Any other white background</td>
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<tr>
<td>White and black background</td>
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<td>Indian</td>
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<td>Pakistani</td>
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<tr>
<td>Bangladeshi</td>
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<td>Black Caribbean</td>
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</tr>
<tr>
<td>Black African</td>
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<tr>
<td>Chinese</td>
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<td>Any other mixed background</td>
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<td>Any other Asian background</td>
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</tr>
<tr>
<td>Any other Black background</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>All pupils</td>
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</tr>
</tbody>
</table>

Source: Department for Children, Schools and Families 108
Figure 2.26 Standardised limiting illness rates in 2001 at ages 16–74, by education level recorded in 2001

Percent ill

![Bar chart showing percentage of males and females ill by education level.](chart)

Qualifications: 3rd level, 2+As, 5+Os, GCSE, Other Qual, No Qualifications

Males (green) and Females (light green) bars are shown with confidence intervals.

Note: Vertical bars (I) represent confidence intervals.
Source: Office for National Statistics Longitudinal Study[^112]
Figure 2.28 Unemployment rate by previous occupation, July–September 2009

Percent

Previous Occupation

1. Managers and Senior Officials
2. Professional
3. Associate Professional and Technical
4. Administrative and Secretarial
5. Skilled Trades
6. Personal Service
7. Sales and Customer Service
8. Process, Plan and Machine Operatives
9. Elementary

Source: Office for National Statistics Labour Force Survey

108
Figure 2.29 Mortality of men in England and Wales in 1981–92, by social class and employment status at the 1981 Census

Standardised Mortality Rate

Employed in 1981

Unemployed in 1981

Social Class

Source: Office for National Statistics Longitudinal Study 129
Figure 2.30 Employment rates among working age adults by type of disability, 2008

Type of impairment

Diabetes
Skin conditions, allergies
Chest, breathing problems
Heart, blood pressure, circulation
Stomach, liver, kidney, digestion
Difficulty hearing
Other problems, disabilities
Difficulty seeing
Arms, hands
Back of neck
Legs or feet
Progressive illness
Epilepsy
Speech impediment
Depression, bad nerves
Learning difficulties
Mental illness, phobia, panics

Employment rate (percent)

Note: For each disability, the percentage employed are indicated by the solid horizontal bar. Horizontal lines (—) indicate the width of the 95 per cent confidence interval.  
Figure 2.31 Proportion of men with limiting long-standing illness in work, by educational qualifications, 1974–6, 1988–90, 2001–3

Source: Department for Work and Pensions (2013)
Figure 2.32 Seasonally adjusted trends in unemployment rates for young people in the UK, 1992–2009

Percent

Source: Office for National Statistics
Labour Force Survey

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Figure 2.33 The association of civil service grade with job control, Whitehall II study, 1985–88

Notes: Score calculated as a z score
Source: Whitehall II Study\textsuperscript{143}
Figure 2.34 The social gradient in the metabolic syndrome, Whitehall II study, 1991–1993

Odds Ratios

Civil Service Employment Grades

Source: Whitehall II Study
Figure 2.37 Percentage shares of equivalised total gross and post-tax income, by quintile groups for all households, 1978–2007/8

Note: Gross income comprises original income and direct cash benefits (e.g. pensions, child benefit, housing benefit and income support). Post-tax income comprises gross income after direct and indirect taxes (e.g. VAT).

Source: Office for National Statistics
Figure 2.38 Percentage distribution of total household wealth by component, 2006–8

Percent of total wealth

Decile of household wealth

Source: Office for National Statistics Wealth and Assets Survey

- Pension wealth
- Possessions
- Financial wealth (net)
- Property wealth (net)
Figure 2.39 Median total wealth by socioeconomic classification (NS-SEC), 2006–8

£ (Thousands)

Socioeconomic classification (NS-SEC)

- Large employers and higher managerial
- Higher professional
- Lower managerial & professional
- Intermediate occupations
- Small employers & own account workers
- Lower supervisory and technical
- Semi-routine occupations
- Routine occupations
- Never worked/long term unemployed

Source: Office for National Statistics Wealth and Assets Survey
Figure 2.41 Distance travelled per person per year in Great Britain, by household income quintile and mode, 2008

Distance travelled
(miles)

Source: National Travel Survey

- Other public transport
- Taxi and minicab
- Rail
- Bus and coach
- Other private transport
- Car passenger
- Car driver
- Cycle
- Walk
Figure 4.1 Education expenditure by age group, 2001–8

Percent

<table>
<thead>
<tr>
<th>Year</th>
<th>Under fives</th>
<th>Secondary</th>
<th>Primary</th>
<th>Post 16</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001-02</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>20</td>
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<td>2002-03</td>
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<td>2006-07</td>
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<td>20</td>
</tr>
<tr>
<td>2007-08</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: Department for Children, Schools and Families
Figure 4.2 Reading at age 11 by social class and pre-school experience, findings from the Effective Provision of Pre-School Education Project (EPPE), 2008

Mean Year 6 reading level

Social Class

- Professional
- Skilled
- Un/Semi-skilled

Preschool
No Preschool

Source: Department for Children, Schools and Families, Effective Provision of Pre-School Education Project
Figure 4.5 Minimum Income Standard as a percentage of median income, April 2008

Per cent of median income

Source: Family Resources Survey
Figure 4.6 Proportion reporting any cycling in a typical week in the previous year, by social grade, 2006 and 2009

Percentage

Social Grade

2006

2009

Source: Department for Transport 398
Figure 4.7 Percentage of population by social grade who visit a green space infrequently in a year, 2009

Percent of population

Source: Department for Environment, Food and Rural Affairs, Energy Savings Trust⁴²⁶
Figure 4.8 Modelled changes in air pollution concentration due to London Congestion Charge, by area of London and level of socioeconomic deprivation, 2003–07

Note: Post – pre difference $\mu g/m^3$ = change in air pollution concentration measured in micrograms per cubic metre
Source: Tonne et al \cite{438}
Figure 4.9 The risk of fuel poverty according to household income, 2009

Note: Percent in fuel poverty relates to households in fuel poverty after deducting housing costs.

Source: English House Conditions Survey, Department of Communities and Local Government.
Figure 4.10 Percentage of those lacking social support, by deprivation of residential area, 2005

<table>
<thead>
<tr>
<th>Deprivation Level</th>
<th>Some Lack (%)</th>
<th>Severe Lack (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Least deprived</td>
<td>23</td>
<td>12</td>
</tr>
<tr>
<td>Second quintile</td>
<td>25</td>
<td>13</td>
</tr>
<tr>
<td>Third quintile</td>
<td>24</td>
<td>13</td>
</tr>
<tr>
<td>Fourth quintile</td>
<td>25</td>
<td>16</td>
</tr>
<tr>
<td>Most deprived</td>
<td>26</td>
<td>19</td>
</tr>
</tbody>
</table>

Source: Health Survey for England^475
Figure 4.12: Prevalence of underweight, overweight and obese children in Year 6, by ethnic category, England, 2008/9.

The bar chart shows the percentage of children who are underweight, overweight, and obese in different ethnic categories. The data is presented as a bar graph with error bars for each category, indicating the range of values.

- **Chinese**: 1.8% underweight, 16.1% overweight, 18.1% obese
- **White**: 1.1% underweight, 14.2% overweight, 17.9% obese
- **Unknown**: 1.1% underweight, 16.2% overweight, 19.2% obese
- **Mixed**: 1.1% underweight, 16.0% overweight, 19.5% obese
- **Asian or Asian British**: 1.6% underweight, 16.1% overweight, 21.0% obese
- **Any other Ethnic Group**: 1.0% underweight, 15.0% overweight, 23.2% obese
- **Black or Black British**: 1.1% underweight, 16.6% overweight, 25.3% obese

The chart also includes the national average for obesity, underweight, and overweight, with error bars indicating the variability of the data.

Figure 4.13 Minutes per day spent doing sport, on school and non-school days, across four income bands, 2007

Source: Carol et al. 538
Figure 5.1 Future delivery scenario

Strategic Direction

Increase disability free life expectancy and reduce inequalities across the social gradient

Delivery Systems

- Integrated action to deliver on the social determinants of health
- Comprehensive and scaled up health equity strategies based on social determinants of health. Downstream and upstream action at population level, community level, personal level, to address health and wellbeing across the gradient.

Evidence Base

- Interventions based on best available evidence focussed on social determinants of health

Value Base

- Equality and health equity in all policies promoting fairness

Systematic evaluation of interventions

Evaluation of the impact on health equity and fairness
Figure 5.2 Framework for indicators and targets

- Policy objectives and mechanisms
  - Targets
  - Monitoring
    - Outcome indicators
    - Output indicators
  - Process indicators
  - Performance improvement
  - Specific interventions and policies
    - Delivery processes
    - Outputs from interventions
  - Outcomes of interventions