Lifestyle and health

Wales and its health boards

Lifestyle refers to people's behaviour patterns. Cultural values and beliefs shape these behaviours, which are influenced by personal socio-economic circumstances[1]. Harmful behaviours, for example heavy drinking, can be met with approval within some groups or circumstances, making behaviour change very challenging. Eating a healthy diet may be influenced by availability, cost and time involved[1]. The degree of choice over lifestyle behaviours, however, is the subject of much debate.

This profile uses a range of data, including at local authority level, although local data on lifestyle behaviours is limited for some topics. It presents information on behaviours relating to health, as well as their impact on health in Wales through outcome measures. It aims to provide a snapshot of local patterns in Wales, and some comparisons to other countries. The topics covered in this profile are:

- Diet, physical activity and obesity
- Smoking
- Alcohol
- Illicit drugs
- Sexual health
- Dental health

These profiles consist of this reference document and a set of seven individual health board profiles. It is accompanied by an Indicator Guide and links to additional resources on the website **www.publichealthwales.org.**

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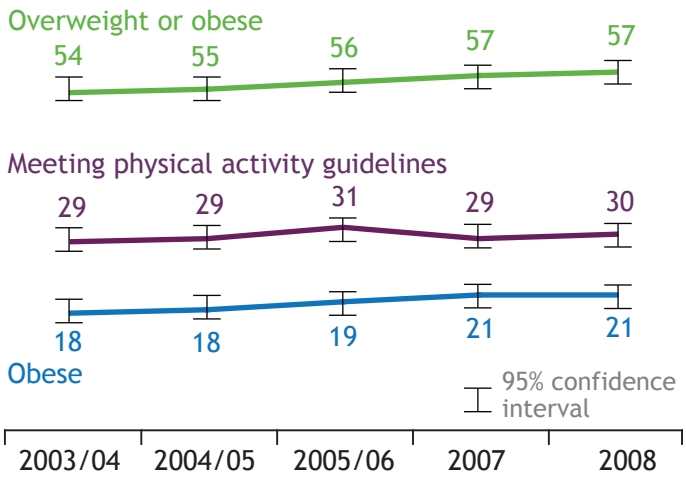
> Diet, physical activity and obesity

A healthy, balanced diet and regular physical activity are essential components of healthy living. Poor diet and lack of physical activity are amongst the leading causes of avoidable illness and premature death in Europe. Complex environmental factors have contributed to the rising prevalence of obesity internationally, which is a major public health concern[2].

Diet, exercise and obesity are important determinants of cardiovascular disease, type 2 diabetes, some cancers, and physical and psychological well-being. Socio-economic, cultural and environmental factors influence diet and activity, as well as personal preference[2]. People living in the most deprived areas of Wales are less likely to eat five or more portions of fruit and vegetables a day (30%) than those living in the least deprived areas (39%)[3]. Overall, only 30% meet physical activity guidelines of half an hour of moderate exercise each day.

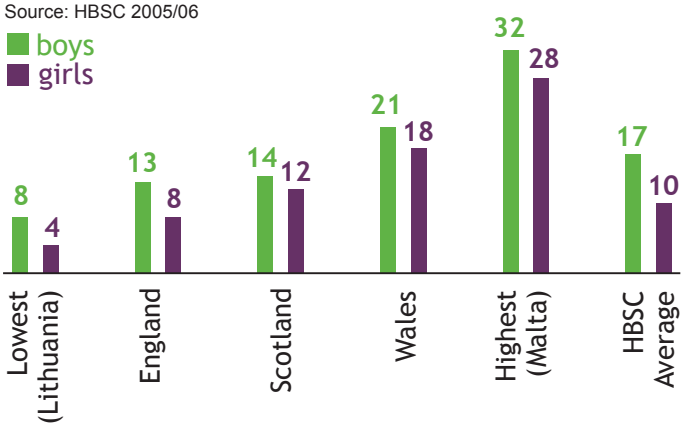
Across local authority areas, between 53% and 64% of adults are overweight or obese (Fig. 11). Obesity in adults in Wales has increased from 18% in 2003/04 to 21% in 2008 (Fig. 1) and this upward trend is of particular concern.

Fig. 1: % overweight or obese (BMI 25+), obese (BMI 30+) and meeting physical activity guidelines, Wales
Source: Welsh Health Survey



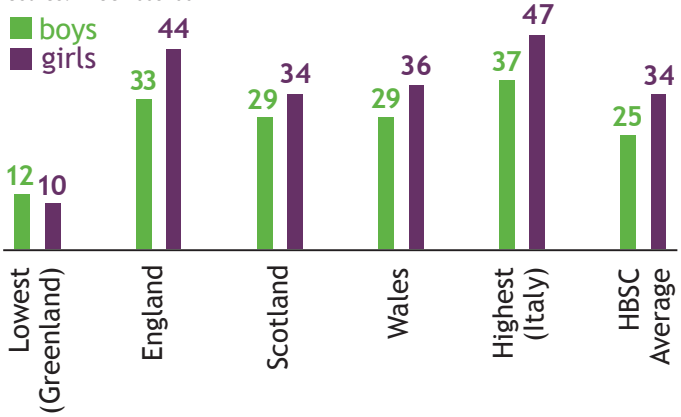
In Wales, 21% of boys and 18% of girls aged 15 are overweight or obese (Fig. 2). This is substantially higher than in Scotland and England and in the top 10 of 41 countries surveyed. Only 29% of boys and 36% of girls eat fruit daily (Fig. 3), similar to children in Scotland but lower than in England.

Fig. 2: % overweight or obese, age 15
Source: HBSC 2005/06



The proportion of young people meeting recommended activity levels declines between the ages of 11 and 15[4]. Girls are less than half as likely as boys to report meeting recommended levels of physical activity (9% versus 21% in 15-year-olds) (Fig. 4). The strategy *Climbing Higher: Creating an Active Wales* (2009) is committed to increasing the percentage of both children and adults who meet the levels of recommended physical activity by 5% in five years[5]. Early intervention is important because eating and activity habits become established in childhood and adolescence.

Fig. 3: % eating fruit daily, age 15
Source: HBSC 2005/06



Obesity is a strategic priority, but the impact of malnutrition in the community should also be considered. Addressing poor diet, sedentary lifestyles and obesity requires action by individuals, communities and organisations working in partnership.

Fig. 4: % moderate-to-vigorous activity daily, age 15

Source: HBSC 2005/06

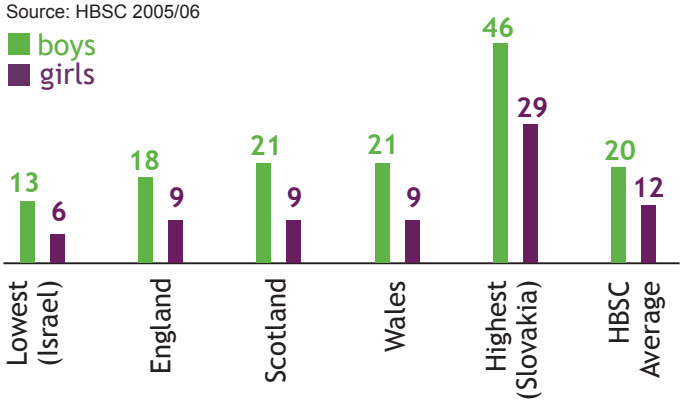


Fig. 5: Indicators by health board area

Compared to Wales

- Statistically significantly worse
- Not statistically significantly different
- Statistically significantly better

	WALES	Betsi Cadwaladr	Powys	Hywel Dda	Abertawe Bro Morgannwg	Cardiff and Vale	Cwm Taf	Aneurin Bevan	Annual number in Wales
Adults who eat fruit & vegetables (5-a-day) (%) [a, 1]	36	37	39	40	33	39	31	34	-
Adults who meet physical activity guidelines (%) [a, 1]	30	32	37	32	28	28	27	28	-
Adults who are overweight or obese (%) [a, 1]	57	54	54	58	58	53	62	60	-
Adults who smoke (%) [a, 1]	24	24	18	22	24	24	25	25	-
Death rate from smoking (males) [a, b, 2, 3]	340	329	277	319	355	328	411	350	3450
Death rate from smoking (females) [a, b, 2, 3]	155	150	121	135	164	148	198	159	2200
Smokers contacting Stop Smoking Wales (%) [a, c]	2.6	2.2	4.9	2.9	4.0	1.0	3.0	2.3	15090
Adults who drink alcohol above guidelines (%) [a, 1]	45	43	43	39	49	49	44	45	-
Hospital admission rate due to alcohol (males) [d, 2, 3]	1940	1855	1489	1732	2141	1982	2156	2033	33180
Hospital admission rate due to alcohol (females) [d, 2, 3]	1073	1057	903	929	1114	1104	1146	1157	20830
Death rate from alcohol (males) [b, 2, 3]	43	43	29	44	46	44	48	38	700
Death rate from alcohol (females) [b, 2, 3]	17	19	17	16	17	17	19	16	350
Hospital admission rate due to drugs (males) [d, 3, 4]	171	173	98	119	230	160	187	152	1530
Hospital admission rate due to drugs (females) [d, 3, 4]	112	125	88	83	129	135	79	100	1020
Teenage conception rate per 1,000 (under 16s) [b]	8.1	7.6	5.8	6.6	8.0	7.5	11.8	8.8	470
No. of decayed, missing or filled teeth (5-year-olds) [e]	2.4	1.9	2.1	2.1	2.5	2.2	2.9	2.7	-

For more details, see Indicator Guide at www.publichealthwales.org

Latest available years shown in brackets; some indicators combine multiple years

a Welsh Health Survey (2008); **b** ONS (2007); **c** Stop Smoking Wales (2008/09); **d** PEDW (2008); **e** Welsh Oral Health Information Unit (2005/06)

1 Age-standardised; **2** Attributable deaths/admissions; **3** Age-standardised rate per 100,000; **4** Individuals with diagnosis directly related to illicit drugs

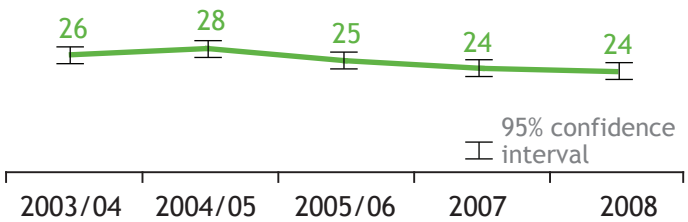
> Smoking

Smoking is the largest single cause of avoidable ill health and early death in Wales. Around 5,600 deaths per year in Wales are caused by smoking (Fig. 5), which is nearly one in five of all deaths. A similar proportion of hospital admissions can also be attributed to smoking[6], with the total cost to NHS Wales estimated at £1 million every day[7].

This is the first time that the number of deaths caused by smoking has been estimated for Wales. These numbers are based on a calculation of how many deaths from different diseases can be attributed to smoking. Among the health board areas, rates of smoking-attributable mortality in males are highest in Cwm Taf (411 per 100,000), with low rates being found in Powys (277) and Hywel Dda (319). These figures reflect the fact that Powys has the lowest percentage of smokers (18%), with rates rising to 29% in Blaenau Gwent and 31% in Merthyr Tydfil (Fig. 11). This variation is also consistent with links between smoking and deprivation: more than one in three people smoke in the most deprived areas of Wales, compared to around one in seven in the least deprived areas[3]. These differences are believed to be a major cause of health inequalities.

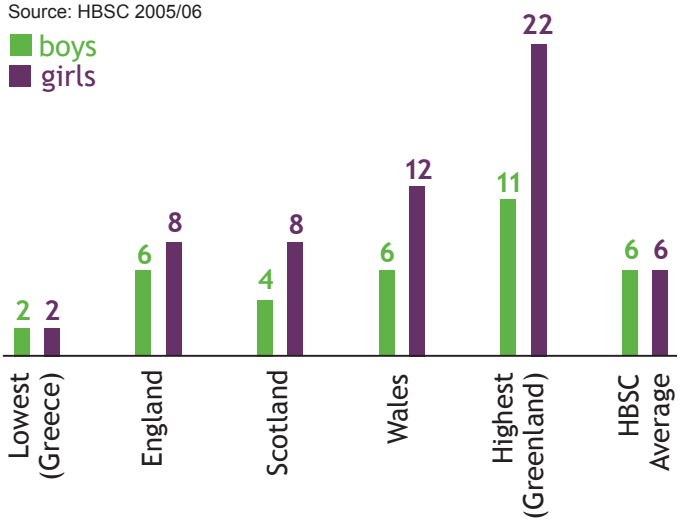
In 1978, an estimated 35% of people in Wales were smokers[8]. This fell to 24% in 2008, although the decline has been slow in recent years (Fig. 6).

Fig. 6: % currently smoking, Wales
Source: Welsh Health Survey



Smoking is generally more common in younger people: more than twice as many 16 to 24-year-olds are smokers (24%) compared to people aged 65 and over (10%)[3]. Also, 12% of girls aged 13 in Wales report that they are smoking every week, which is twice the international average of 6% (Fig. 7). Over a third of women in Wales smoke during pregnancy, with the highest rates found in mothers under 20 years of age[8].

Fig. 7: % smoking weekly, age 13
Source: HBSC 2005/06



The above evidence supports the practice of Stop Smoking Wales[9] in targeting help with quitting towards young people and people living in deprived areas. Figure 5 shows that an estimated one in forty smokers contacted this service in 2008/09. The higher contact rate in Swansea, one in twenty, is the result of widespread support in general practice for Stop Smoking Wales and community pharmacies to work in partnership to deliver the smoking cessation programme. In Wales as a whole, although around seven in ten smokers surveyed in 2008 expressed a desire to quit, only four in ten tried[3].

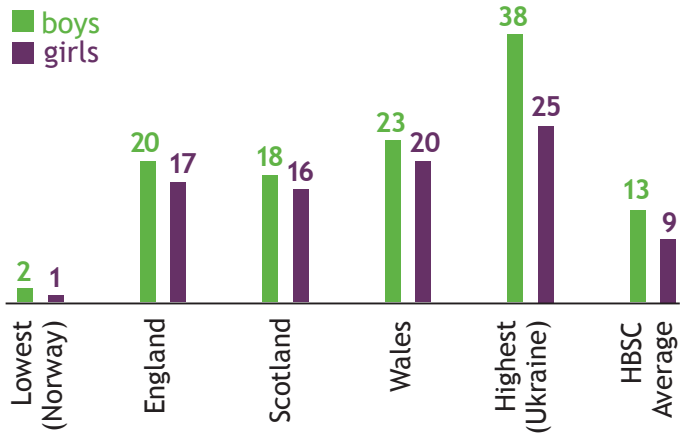
The 2007 ban on smoking in enclosed public places is likely to have had a positive impact on health in Wales[8]. However, the fact that one in four people in Wales continue to smoke presents an enduring challenge to policymakers and service providers.

> Alcohol

Alcohol is enjoyed by many people in moderation. Yet it is also an addictive drug and alcohol misuse can lead to significant harm to individuals, their families and society. Alcohol is estimated to be the third highest of 26 risk factors for ill health in the European Union, behind only tobacco and high blood pressure[10].

Alcohol use in children and young people is of particular concern. In Wales, 23% of boys and 20% of girls aged 13 drink alcohol weekly[4], more than in England and Scotland (Fig. 8). Wales is in the top 10 and above the average of 41 countries. There were also around 1,160 referrals for alcohol treatment in under 20-year-olds in the year 2008/09.

Fig. 8: % drinking alcohol weekly, age 13
Source: HBSC 2005/06



Figures from the Welsh Health Survey show that 45% of adults drink above guidelines (over 4 units per day in men, over 3 in women), ranging from 39% to 49% in health board areas (Fig. 5). Also, 28% of people binge drink (above 8 units in men, above 6 in women). The proportions for Wales are broadly similar to England and Scotland[11]. Results from surveys are, however, likely to underestimate drinking in the population[11]. Binge drinking has declined over the last few years in young adults aged 16-24 in Great Britain[11]. This is still high, but is an encouraging trend.

Self-reported measures of drinking above guidelines and binge drinking are as common in the most deprived as in the least deprived communities[11]. Alcohol-attributable mortality rates, however, show substantial inequalities with rates more than twice as high in the most deprived areas compared to the least deprived[11].

An estimated 1,050 deaths are attributable to alcohol each year in Wales. There are 33,200 hospital admissions in men and 20,800 in women each year that are attributable to alcohol. The rates are highest in the southeast of Wales (Fig. 5). These admissions are placing a substantial burden on the health service, and considering the upward trend over time are of particular concern[11].

Alcohol and its impact in Wales has been covered in detail in a recent report[11]. Alcohol misuse and interventions relating to affordability and availability are much debated in the media. With its wide implications, alcohol misuse presents a major public health challenge for Wales.

> Illicit drugs

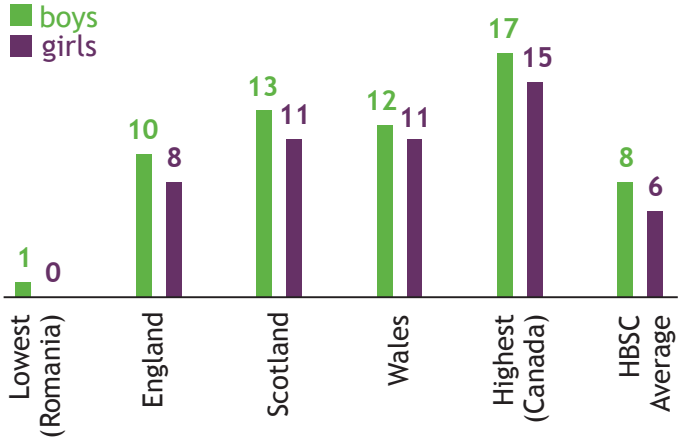
The UK has one of the highest rates of illicit drug use in Europe[12]. Drug misuse can damage both physical and mental health, and may also result in premature death[13]. Associated mental health problems include anxiety, depression and memory or cognitive loss. Injecting drug users are also at increased risk of harm through bacterial and viral infections such as hepatitis C[13]. Drug misuse also affects many other aspects of society:

- Up to 17,500 children and young people in Wales live in families affected by parental drug misuse[13].
- The social burden of care placed on relatives.
- The economic burden of loss of employment and reduced capacity to work.
- The impact on the criminal justice system of those who commit crime to fund their drug use[13].

The current legislation defines three classes of controlled substances (A, B and C): this reflects that drugs are not all the same and affect health in different ways.

Recent estimates suggest there are around 19,500 problematic drug users in Wales[14]. In 2008/09, there were around 10,400 referrals for drug treatment in Wales, of which around 1,500 were in young people aged under 20 years[14]. Compared to the other UK nations, Wales has the second highest rate (after Scotland) of 15-year-olds reporting recent cannabis use (12% of boys and 11% of girls[4], Fig. 9).

Fig. 9: % have used cannabis in last 30 days, age 15
Source: HBSC 2005/06



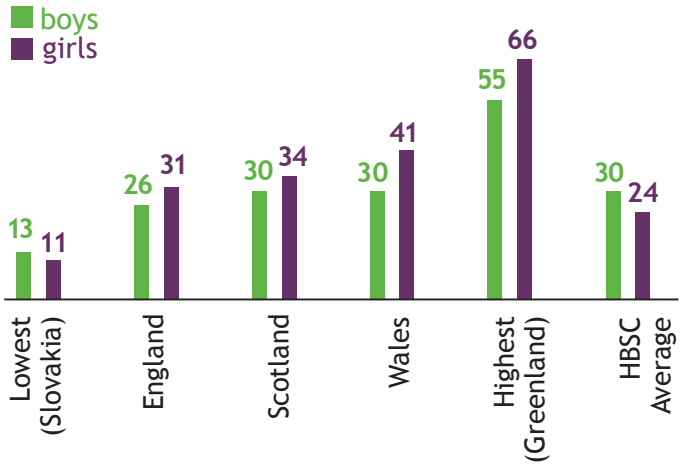
The rate of people admitted to hospital per year with a diagnosis directly linked to drug misuse is 171 per 100,000 males and 112 per 100,000 females. At the health board area level rates are highest for men in Abertawe Bro Morgannwg (230) and Cwm Taf (187) and for women in Cardiff and Vale (135) and Abertawe Bro Morgannwg (129). These rates include both behavioural and mental disorders and poisonings due to drugs, and may also reflect local variations in referral and coding practices. Further work is needed to explore these variations (see Indicator Guide).

Over the last five years the total number of drug related deaths has increased by over 30%. Hospital admissions for mental and behavioural disorders due to both opioids and cocaine have also increased[14]. This presents a real challenge for service provision in Wales. *Working Together to Reduce Harm: The Substance Misuse Strategy for Wales 2008-2018* sets out a clear national agenda to tackle and reduce the harms associated with substance misuse including alcohol[13].

> Sexual health

Sexual health covers contraception, sexually transmitted infections (STIs) and pregnancy. In Wales, among 15-year-olds 30% of boys have had sexual intercourse, compared to 41% of girls. The figure for boys is the same as the study average. However, the percentage for girls is higher than the study average and percentages reported for England and Scotland (Fig. 10). The difference between boys and girls in Wales is also larger than in these nations. Girls having sex under 16 are three times more likely to become pregnant than those who first have sex over 16[15].

Fig. 10: % have had sexual intercourse, age 15
Source: HBSC 2005/06



Some young people make a positive choice to become a parent. However, teenage pregnancy has been associated with poor outcomes for the mother and child[16]. The risk of teenage pregnancy is increased by early onset of sexual behaviour, poor contraceptive use, a mental health problem, involvement in crime, substance misuse and poor educational attainment[17]. In Wales, there are around 470 conceptions in under-16s each year, at a rate of 8.1 per 1,000 (2003-07). This is similar to the rate in England of 7.9 per 1,000 (2005-07). Rates in Wales range from 5.8 in the Powys area to 11.8 in the Cwm Taf area. Within local authorities, Rhondda Cynon Taf has the highest rate (12.0).

Certain population groups are more at risk of contracting an STI e.g. young people, men who have sex with men and some ethnic groups[18]. A considerable number of new HIV diagnoses are among black Africans, the majority of which acquired their infection heterosexually and in Africa[18]. The number of people living in Wales with HIV has more than doubled in the last decade (1,082 persons having HIV-related care in 2008). New cases of genital chlamydia and gonorrhoea have also increased over the last decade, but have levelled off in recent years. The Welsh Assembly Government has a new plan for improving sexual health services in Wales[17].

> Dental health

Good oral health enables an individual to eat, speak and socialise without pain or embarrassment. The main oral disease in children is tooth decay (dental caries). This can be prevented by regular tooth brushing with fluoride toothpaste, limiting sugary foods and regular dental checks. Tooth decay is measured using the decayed, missing or filled tooth index. In 2005/6, five year old children in Wales had on average 2.4 decayed, missing or filled teeth compared to just 1.5 in England. The situation is worst in deprived areas[19].

Fig. 11: Indicators by local authority area

Compared to Wales

- Statistically significantly worse
- Not statistically significantly different
- Statistically significantly better

	WALES	Isle of Anglesey	Gwynedd	Conwy	Denbighshire	Flintshire	Wrexham	Powys
Adults who eat fruit & vegetables (5-a-day) (%) [a, 1]	36	42	42	41	38	37	29	39
Adults who meet physical activity guidelines (%) [a, 1]	30	33	35	31	34	30	30	37
Adults who are overweight or obese (%) [a, 1]	57	56	55	53	54	55	53	54
Adults who smoke (%) [a, 1]	24	23	22	23	28	24	23	18
Death rate from smoking (males) [a, b, 2, 3]	340	334	312	301	341	329	367	277
Death rate from smoking (females) [a, b, 2, 3]	155	135	131	140	161	161	173	121
Smokers contacting Stop Smoking Wales (%) [a, c]	2.6	3.0	0.6	2.4	2.1	3.3	1.8	4.9
Adults who drink alcohol above guidelines (%) [a, 1]	45	41	47	41	42	45	42	43
Hospital admission rate due to alcohol (males) [d, 2, 3]	1940	2064	1959	1974	1911	1817	1588	1489
Hospital admission rate due to alcohol (females) [d, 2, 3]	1073	1059	1103	1154	1141	1006	937	903
Death rate from alcohol (males) [b, 2, 3]	43	40	41	50	48	42	41	29
Death rate from alcohol (females) [b, 2, 3]	17	19	18	23	19	18	19	17
Hospital admission rate due to drugs (males) [d, 3, 4]	171	331	197	184	166	105	162	98
Hospital admission rate due to drugs (females) [d, 3, 4]	112	131	160	114	106	102	143	88
Teenage conception rate per 1,000 (under 16s) [b]	8.1	6.2	6.5	8.9	6.3	6.0	11.2	5.8
No. of decayed, missing or filled teeth (5-year-olds) [e]	2.4	1.8	2.3	1.6	1.8	1.8	2.0	2.1

For more details, see Indicator Guide at www.publichealthwales.org
Latest available years shown in brackets; some indicators combine multiple years

a Welsh Health Survey (2008); **b** ONS (2007); **c** Stop Smoking Wales (2008/09); **d** PEDW (2008); **e** Welsh Oral Health Information Unit (2005/06)

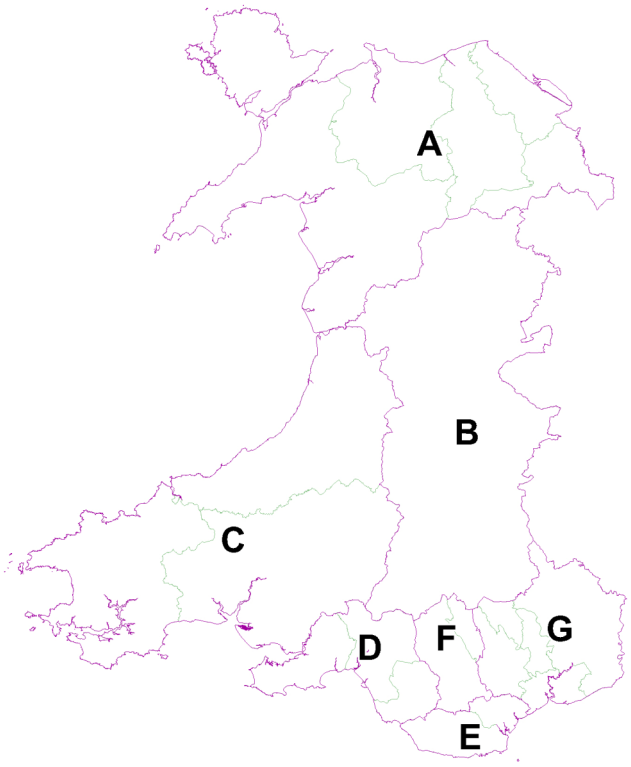
1 Age-standardised; **2** Attributable deaths/admissions; **3** Age-standardised rate per 100,000; **4** Individuals with diagnosis directly related to illicit drugs

> Further information

For further information or to request printed copies please contact us on:
observatoryprofiles@wales.nhs.uk

Ceredigion	Pembrokeshire	Carmarthenshire	Swansea	Neath Port Talbot	Bridgend	The Vale of Glamorgan	Cardiff	Rhondda Cynon Taf	Merthyr Tydfil	Caerphilly	Blaenau Gwent	Torfaen	Monmouthshire	Newport
42	40	38	36	34	27	35	40	31	30	34	27	35	40	33
32	35	30	27	26	30	29	27	26	31	28	27	27	29	28
54	59	60	56	61	59	53	53	62	60	62	64	60	54	60
22	23	21	24	25	23	26	23	24	31	26	29	28	19	25
252	309	356	355	358	359	292	346	409	422	379	413	359	272	334
104	135	148	157	173	167	150	148	190	233	175	212	135	118	160
1.7	2.4	3.9	5.2	2.5	3.7	0.6	1.2	2.7	4.1	2.0	2.8	2.1	2.4	2.5
43	41	36	49	48	49	49	49	44	44	45	47	46	46	45
1335	1817	1857	2130	2292	2015	1904	2024	2082	2465	2095	2654	1947	1539	2037
698	999	994	1122	1201	1012	1098	1115	1100	1341	1160	1530	1161	950	1107
34	48	47	47	43	48	40	46	48	52	42	46	36	28	37
17	17	15	18	14	18	15	18	18	23	17	22	14	11	15
65	77	175	301	194	138	126	175	178	227	121	261	106	125	181
57	72	106	154	123	91	146	134	77	89	89	106	91	82	128
6.5	7.8	5.8	6.1	9.8	9.3	7.3	7.5	12.0	11.0	8.9	9.9	10.6	6.8	8.3
1.7	2.3	2.2	2.6	3.0	1.8	2.3	2.1	2.6	3.9	2.7	4.0	3.4	1.9	2.2

Fig. 12: Health board areas and local authorities (key shows estimated 2008 population in brackets)



A Betsi Cadwaladr University Health Board (680,600)
Isle of Anglesey, Gwynedd, Conwy, Denbighshire, Flintshire, Wrexham

B Powys Teaching Health Board (132,600)

C Hywel Dda Health Board (377,400)
Ceredigion, Pembrokeshire, Carmarthen

D Abertawe Bro Morgannwg University Health Board (501,500)
Swansea, Neath Port Talbot, Bridgend

E Cardiff and Vale University Health Board (449,700)
Cardiff, Vale of Glamorgan

F Cwm Taf Health Board (289,800)
Rhondda Cynon Taf, Merthyr Tydfil

G Aneurin Bevan Health Board (561,800)
Caerphilly, Blaenau Gwent, Torfaen, Monmouthshire, Newport

> Conclusions

Lifestyles in children and young people are of particular concern, as adult behaviours are often set at an early age. Smoking, alcohol consumption and levels of obesity in young people are higher in Wales than in England, Scotland and many other western countries. Dietary and physical activity patterns have contributed to rising obesity levels in adults in Wales. The indicators on hospital admission and deaths due to smoking, alcohol and drugs show the substantial impact of these behaviour patterns on health and the health service in Wales. There are, however, some encouraging trends, such as decreasing alcohol use in young people and decreasing proportion of adult smokers.

The influence of life circumstance on lifestyle behaviours is evident from the variations across Wales, between age groups and men and women. There are also differences between people with different socio-economic circumstances, for example smoking being more common in the more deprived areas. Inequalities also exist in relation to alcohol where deprived areas experience higher mortality rates, or where deprived areas have poorer dental health in children.

Many interventions and policies already target healthier lifestyle behaviour in a number of settings. The Ottawa Charter for Health Promotion (1986) describes wide ranging action, and remains relevant today. The charter emphasises action at policy, environment, community and individual level, and also the re-orientation of health services. Health boards can develop programmes to influence behaviours across these areas. These programmes should take account of both local and individual circumstances, be evidence based and evaluated appropriately[20]. Effective behaviour change is a major collective challenge to the delivery of sustainable services for the population of Wales.

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