Annual report 2017

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Avoidable and preventable mortality

Life expectancy has improved through the ages: in the middle ages the average life expectancy was thought to be around 35 years, rising to 47 in 1900, 65 in the 1950's, and 65 in 1971 and in 2015 it was 79 (men). (1)

Now the focus is on reducing avoidable deaths: avoidable deaths can be divided into 2 major areas : amenable and preventable deaths. Avoidable deaths in general focus on those deaths that occur prematurely before 75 years.

"People who die prematurely from avoidable causes lose an average of 23 potential years of life

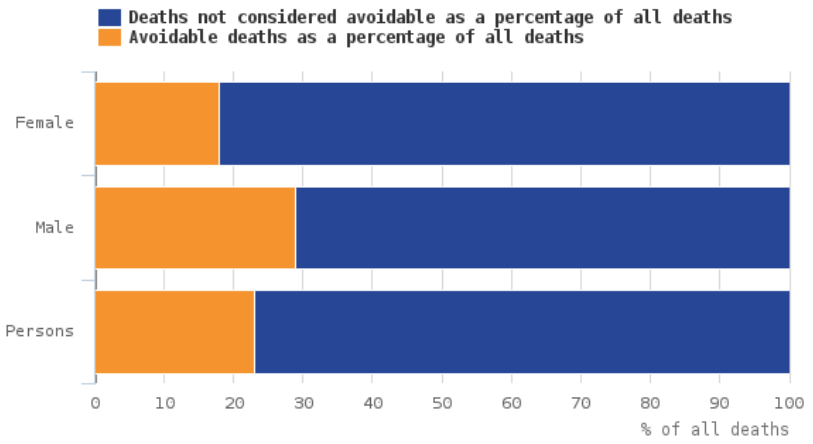
In 2014, nearly a quarter of all deaths (23%; 116,489 out of 501,424) in England and Wales were from causes considered potentially avoidable either through timely and effective healthcare (amenable) or public health interventions (preventable)(2) .

While we may say that a particular condition can be considered avoidable, this doesn't mean that every death from that condition could be prevented. Analysis focuses on deaths prior to 75 years.

Males were more likely to die from an avoidable cause than females and accounted for approximately 60% of all avoidable deaths.

Approximately 29% of all male deaths were from avoidable causes (70,108 out of 245,142 deaths) compared with 18% of all female deaths (46,381 out of 256,282 deaths).

FIG 1: % age of deaths nationally hat are avoidable



Cancers (all) were the leading cause of avoidable deaths accounting for 35% of all avoidable deaths in England and Wales in 2014.

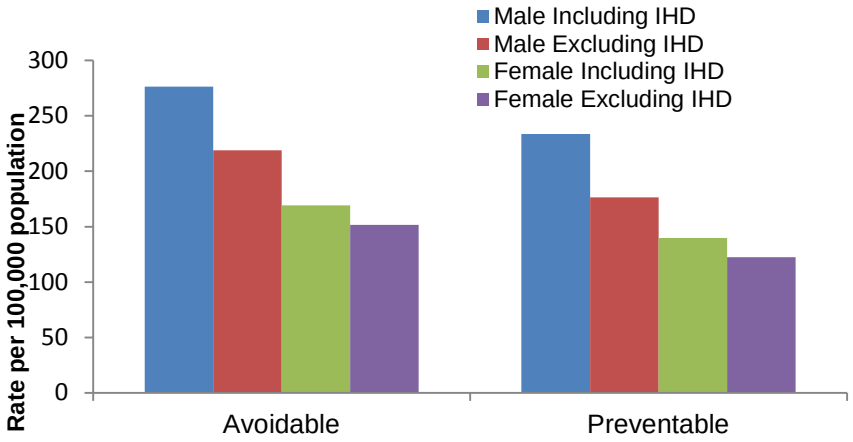
Ischaemic heart disease is the most common single disease that leads to avoidable disease.

Amenable deaths are those that a death is amenable (treatable) if, in the light of medical knowledge and technology at the time of death, all or most deaths from that cause (subject to age limits if appropriate) could be avoided through good quality healthcare.

Preventable Death are those that through our understanding of the determinants of health at time of death, all or most deaths from that cause (subject to age limits if appropriate) could be avoided by public health interventions in the broadest sense.

Local preventable deaths

Fig 2 Rates of avoidable and preventable deaths

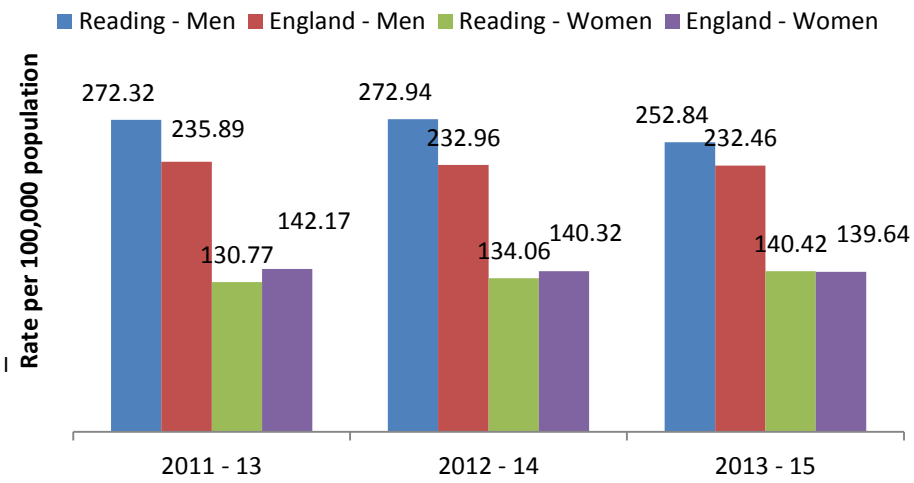


As shown in fig 2 addressing these would have the biggest impact on reducing total numbers of avoidable deaths – sadly though the emphasis does appear to be on increasing health care interventions.

We can measure preventable deaths rates in our own community. The England age standardised rate for preventable deaths is 184 deaths per 100,000, with the rate in Reading being higher at 194 /100,000. i.e. more preventable deaths in Reading.

We can see that in men the rate of preventable deaths are higher than the national average, though reducing, whilst the impact in women is around the England average but increasing : so the impact on health, early death and use of health care by more sustained application of public health measures by health and social care organisations, communities and individuals will reduce early deaths and hence also the demand of our services, and improve health considerably at the local level .

Fig 3 **Mortality rate from causes considered preventable 2011-2015**

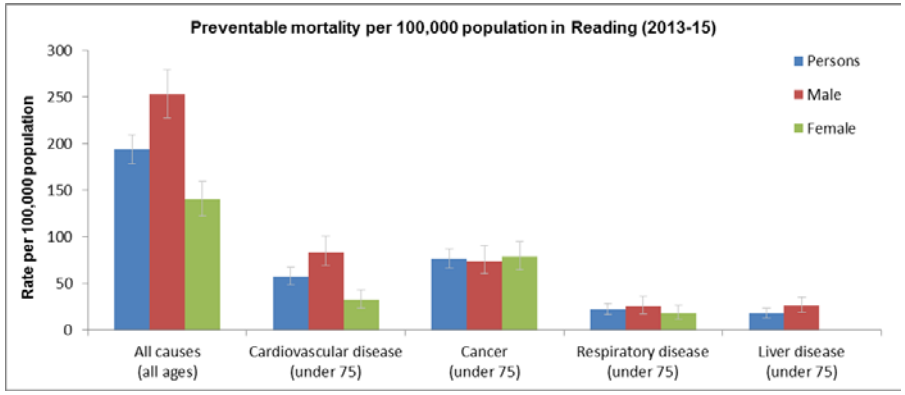


If we look at the major causes of early preventable death within Reading, we see a similar picture to that seen nationally with the biggest generic cause being cancer for all persons and impact being greater for all preventable causes on male deaths though in Reading the impact of cardiovascular disease on men is the highest single cause.

If we examine premature preventable mortality in Reading in more detail by clinical groups then we see that mortality rates are higher in men for all causes except cancer Fig 4 .

Local preventable deaths – needs checking

Fig 4

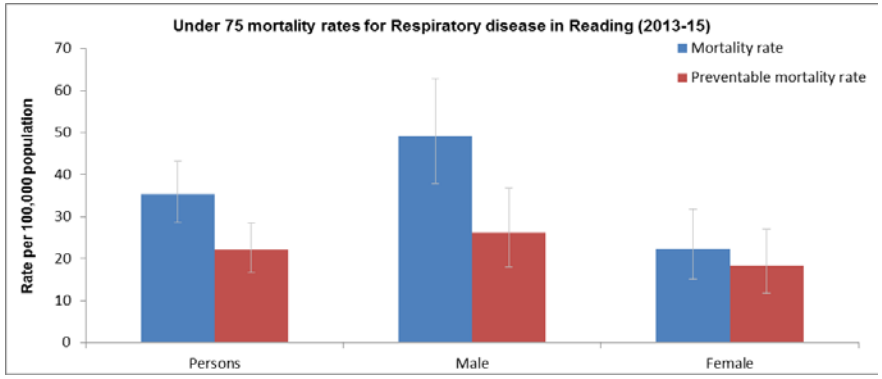


In Reading we see the highest overall liver disease preventable mortality rate in Berkshire (17.9 per 100,000 pop) – 95% of male mortality being preventable .

Fig 5

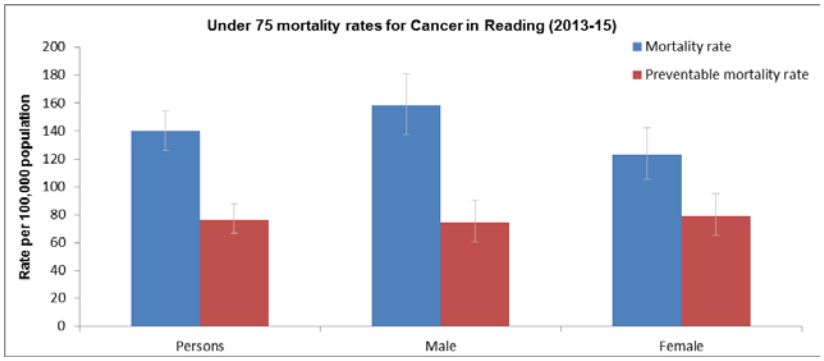
In respiratory deaths whilst females have a lower death rate the percentage due to preventable causes is much higher.

Fig 6



In cancer locally we see that the percentage of preventable cancers is higher than the national picture for men with again a greater percentage being preventable in women (64%) versus men (47%)

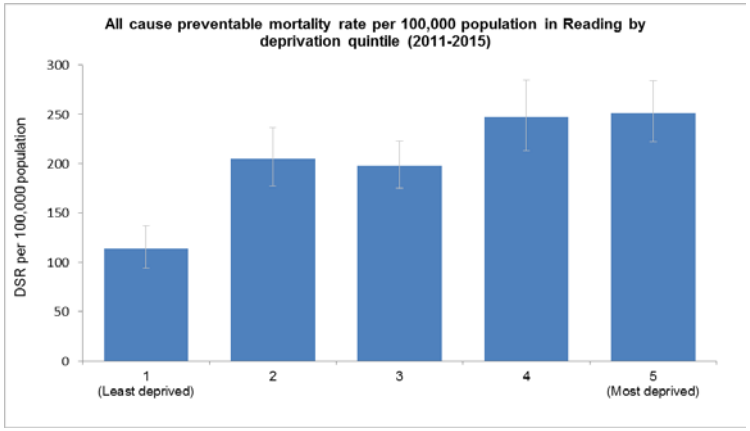
Fig 7



Preventable deaths

The impact of premature mortality from preventable causes can be examined by geography and deprivation.
Accounting for age differences Reading (along with Slough) has higher rates of preventable mortality , and almost 55% of deaths in under 75 year olds are preventable. Across all preventable deaths there is a definite link with deprivation when we group wards by their level of affluence. (3)

Fig 8



This is not unexpected since the evidence shows a consistent pattern in the prevalence of multiple unhealthy behaviours, at the core of preventable causes of ill health, with men, younger age groups and those in lower social classes and with lower levels of education being most likely to have exhibited these multiple lifestyle risks(4)
In 2008 4.2% of professional men exhibited all 4 unhealthy lifestyle behaviours, compared to 8.4% of male unskilled manual workers. Similarly, 3.1% of professional women exhibited these behaviours, compared to 7.0% of female unskilled manual workers.

Worryingly this pattern is persisting with improvement in lifestyle being greatest in those in most affluent groups (4) so the gap is widening.

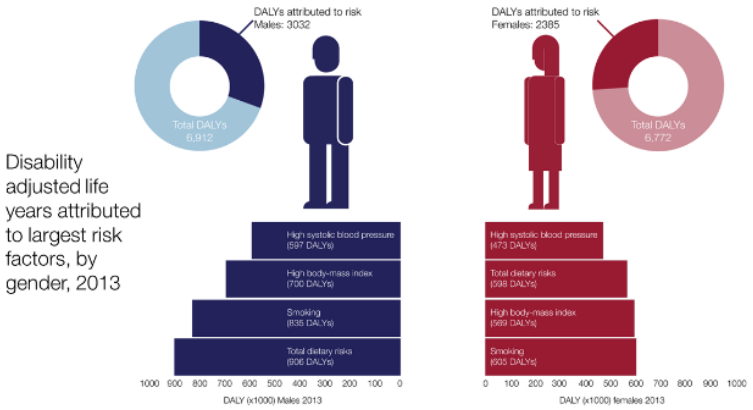
Whilst the strongest risk factors for avoidable hospital admission are age and deprivation (5).

Clustered poor health behaviours are associated with increased risk of hospital admission among older people in the UK. Life course interventions to reduce number of poor health behaviours could have substantial beneficial impact on health and use of healthcare in later life (6). Studies have shown that among men and women, increased number of poor health behaviours was strongly associated ($p<0.01$) with greater risk of long stay and emergency admissions, and 30-day emergency readmissions. Those with three/four poor health behaviours were in men, 1.37[95%CI:1.11,1.69]; women, 1.84[95%CI:1.22,2.77] times more likely to be admitted to hospital than those with no poor health attributes. Associations were unaltered by adjustment for age, BMI and comorbidity.

The impact of improving lifestyle behaviours is not restricted. In a study of over 65 year olds whilst that higher self-care confidence and being an exercise program decreased avoidable hospitalizations, starting exercise program at an older age decreased hospital admissions and also decreased utilization of emergency services in the short and medium term.(7)

Action to address early preventable deaths

There are 8 commonly agreed: alcohol use, tobacco use, high blood pressure, high body mass index, high cholesterol, high blood glucose, low fruit and vegetable intake, and physical inactivity that would reduce preventable death rates



It is estimated that 80 per cent of cases of heart disease, stroke and type 2 diabetes, and 40 per cent of cases of cancer could be avoided if common lifestyle risk factors were eliminated (WHO 2005).

An estimated 42% of cancer cases each year in the UK are linked to a combination of 14 major lifestyle and other factors.(8) The proportion is higher in men (45%) than women (40%), mainly due to sex differences in smoking (CRUK).

The impact of these lifestyle factors is not only key in casing early death within our communities but also as a major cause of illness it drives our increasing utilisation of health and care resources.

In the following section we will briefly review 5 of the major lifestyle and risk factors for preventable deaths in whom there is significant evidence regarding interventions that make a difference. We will briefly describe the pattern of these factors in our community, the impact of each in terms of illness and death, but also in terms of impact on our services.

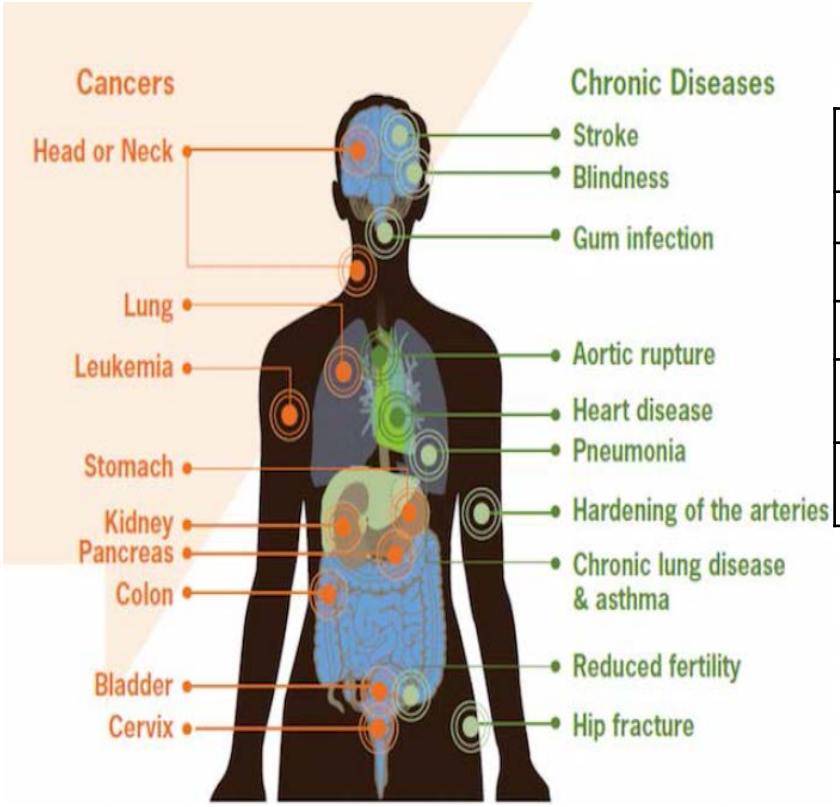
It should be noted that whilst we look at each individually there is data that shows that risky health behaviours interact and have a multiplicative rather than simply additive impact. That is, they have a greater effect together than the sum of each individual risk. For example obesity and alcohol consumption which interact to increase risks of liver disease mortality to a greater extent than the sum of each individual risk [9].

Or alcohol and smoking which together are associated with a greater combined risk for cancer than the sum of the two individual effects [10]. This may be one reason why we see greater alcohol related harm in socioeconomically deprived groups compared to affluent groups - even when the level of alcohol consumption is held constant. It's because the more deprived groups are more likely to be engaging in multiple risky lifestyle behaviours.

Smoking

Smoking remains the biggest single lifestyle cause of preventable mortality and morbidity in the world. The Tobacco Control Plan for England states that it accounts for 1 in 6 of all deaths in England.

Its impact is seen on every organ of the body.



Nationally the prevalence of smoking is decreasing ; 19% of people smoke 2016 v 46% at its peak in 1976 and average daily consumption is also reducing 11 cigarettes a day (16 – 1974)

Smoking is more prevalent in adult men (20%v 17%) , more prevalent in more deprived communities (30% routine and manual v 11% professional), and more prevalent in those with less formal education (9% in those with degrees) and younger people are more likely to smoke 9255 16-34 v 11% >60). In children and young people more girls smoke regularly and the major influence is smoking in the home(11).

2015/16	Reading BC	England
Never smoked	50.9%	48.6%
Adults resident smoking rate	17.6%	16.9%
Manual and routine smoking rate	25.6%	26.5%
Young people under15 regular smoker	6%	5.5%
Smoking in residents with severe mental illness	37.4%	40.2%

It is recognised that smoking has a profound impact on health inequalities. -, there is greater health inequality between smokers and people who have ever smoked than between people of the same sex and smoking status but different social positions.

In both women and men, people in the lowest social positions who had never smoked had substantially better survival rates than smokers in even the highest social classes. (12) 85% of the observed inequalities between socioeconomic groups can be attributed to smoking (13)

Smoking - impact

In 2012-14, there were 275 smoking-attributable deaths per 100,000 population in England. In Reading 2012 -14 the rate is 265 / 100,000.

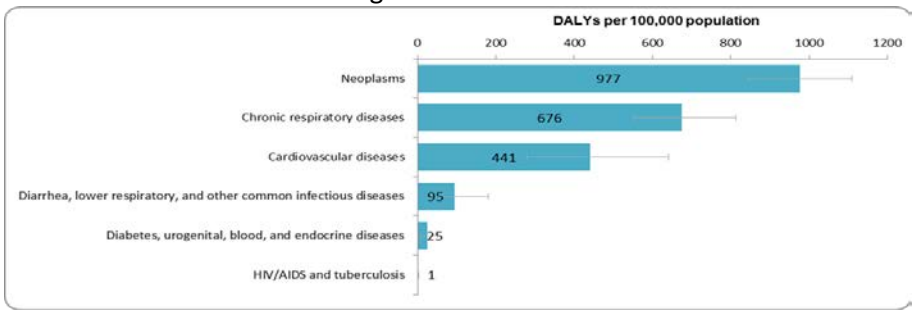
In Reading 487 deaths each year are caused by smoking – 3 deaths a week.

Disability adjusted life years (DALYs) are an important measure used in health care as they not only measure the number of years of life lost (early deaths) but also the number of years lived with disability – so give an assessment of the impact on the life of the individual effected but also that the impact the factor has on health and care usage. This analysis is now available for the South East .

Smoking is the most significant single lifestyle factor that causes the highest number of Disability Adjusted life Years (DALYs lost both regionally and nationally. - 9.1% of DALYs in the South East Region were attributable to smoking in 2013 (2,215 per 100,000 population).

This figure shows the wide impact of tobacco in the South East
Source: Global Burden of Disease (2013) (14)

The largest numbers of DALYs attributable to smoking in general causes were for cancers, chronic respiratory diseases and cardiovascular diseases. Fig 9



If we look at data for specific clinical illnesses and the impact of smoking on each of these then we see a different pattern : smoking accounts for at least 56% of all chronic lung disease, conditions, 70% of COPD and 80% of lung cancer (14).

23% of DALYs for neoplasms were attributable to smoking. Again, this was higher for certain cancers:

- 79% of DALYs for tracheal, bronchus and lung cancer
- 54.1% lip and oral cavity cancer
- 53% oesophageal cancer

We know that smoking prevalence is greater in men , is greater in the most deprived communities and its impact increases over time.

If we look at men aged 55-79, smoking is, as could be expected the single largest cause of DALYS but now accounts for the 12 – 14% of DALYS in the least deprived areas but is in the most deprived communities accounts for 19 – 21% of DALYS : 1 in 5 of DALYs - significantly more than in wealthier areas. (A similar pattern is seen in women).

In a study which looked at chances od survival and smoking after 28 years : people in the lowest social positions who had never smoked had substantially better survival rates (56% women and 36% of men) than smokers in the highest social classes (41% women and 24% men) . (12)

Tobacco accounts for 90% of health inequalities

Smoking - impact

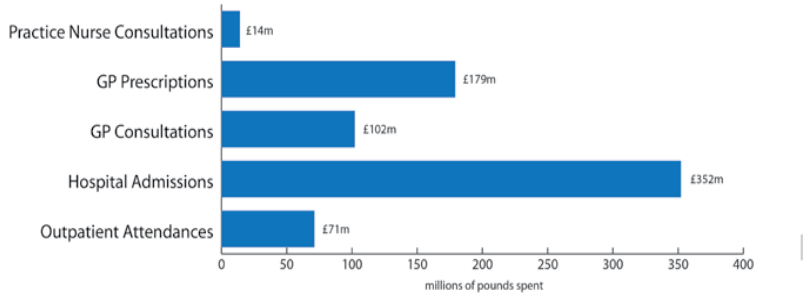
With the major impact on illness it is not surprising that smoking is also responsible for significant care use both in primary and hospital settings: tobacco use accounts for approximately 5.5% of the NHS budget.

There were 1.7 million admissions in 2014/15 across the UK for conditions that could be caused by smoking, an increase of 22% from 2004/5. With 475,000 hospital admissions attributable to smoking in 2014/15, up from 452,000 in 2004/05.

This represents 4% of all hospital admissions (6% of male admissions and 3% of females.) (14,16)

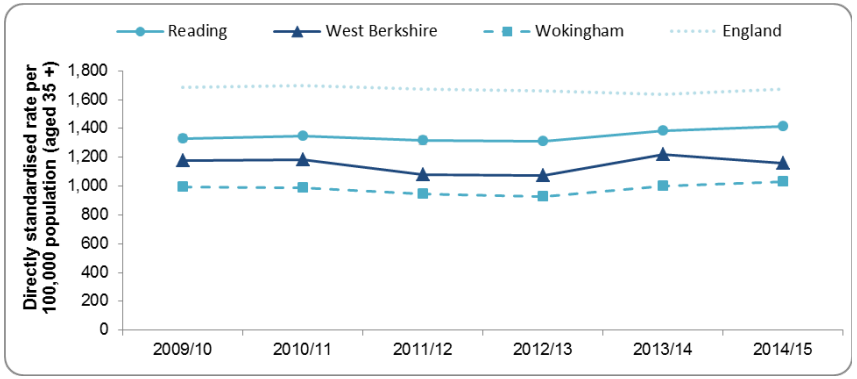
23% of respiratory , 15% of cardiac and nearly 10% of cancer admissions are attributable to smoking

Individuals with mental health problems smoke more heavily than the general population, thus contributing to as much as 43% of tobacco consumption in the UK (16) and it is estimated 3 million UK adults with mental disorders who are also smokers incur total smoking-attributable costs of £2.34 billion. A total of £719 million was spent treating smoking-related disease among people with mental health disorders of which £352m were due to hospital admissions, while other cases were treatments of cancer, cardiovascular disease and respiratory diseases (18)



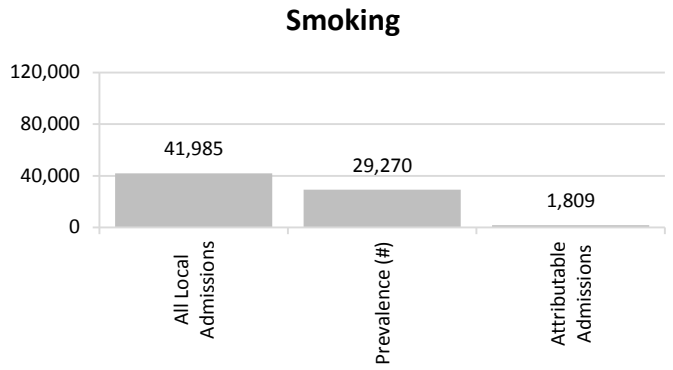
Locally in line with the lower prevalence of smoking (and our lower than average admissions in general) our rates of smoking related admissions are lower than the England average , with Reading having the highest rates across Berkshire.(15,17,20)

Fig 11



Though in West Berkshire it can be seen that over 1800 admissions a year are solely attributable to the effects of smoking. (16)

Fig 12



Smoking - impact

The costs of smoking to the NHS and to the economy in general are well understood, however, there are also costs to the social care system, which are less well known (19).

Recent research, based on adults over 50 , compared the care needs of current and former smokers with those of never smokers. The key findings were that whilst no difference could be seen in use of residential care (small sample size) smokers were more likely to have difficulties in the majority of daily activities and so were at double the risk of developing care needs. In just over half of the activities ex smokers also showed more difficulties.

The impact of smoking related ill health on the social care system, is a cost of £1.4 billion every year, up from £1.1billion in 2014. This is made up of £760 million in costs borne by local authorities, with a further £630 million being spent by those who have to self-fund their care.

Interventions

What Works The biggest short-term savings opportunity lies in helping smokers who are in contact with the NHS; the greatest long-term savings would come from preventing people from ever smoking altogether

Prevention of smoking requires strong partnership working e.g promoting smoke free environments, reducing counterfeit and illegal tobacco sales.

Smoking cessation services are widely available and the local council service continues to see more residents than the England average. In 2015/6 1103 per 100,000 in 2015/6 set a quit date (v 862 England) and 713/100,000 reporting quitting at 4 weeks (v 440 England) (20)

2015/16	Rates per 100,000 population (actual numbers)		
	Setting quit date	Successful quitters	Validated quitters (CO)
England	862	440	314
South East	674	375	271
Reading BC	1,103 (1,408)	713 (916)	433 (557)

Local Gaps However whilst we offer some support to patients within health care settings to give up smoking we have still to maximise this approach.

Recently BHFT have been proactive in ensuring that all mental health facilities are smoke free, with patients being offered nicotine replacement therapy. However all smokers should be identified during treatment and at minimum offered brief intervention and advice to promote smoking cessation as part of their treatment plans. Pregnant women should be screened via carbon monoxide screening and offered specialist support (21)

For those unable / unwilling to stop smoking permanently then temporary abstinence supported by nicotine replacement medication will deliver harm reduction. Smokers having elective surgery are 6 times more likely to have a surgical site infections and so have lengthier post operative stays and recovery periods. Simply supporting abstinence prior to surgery can reduce this risk, improve outcomes and reduce costs associated with care .

Lifestyles – High blood pressure

Blood pressure is recorded with two numbers.

The systolic pressure (higher number) is the force at which your heart pumps blood around your body.

The diastolic pressure (lower number) is the resistance to the blood flow in the blood vessels. They're both measured in millimetres of mercury (mmHg). As a general guide:

- high blood pressure is considered to be 140/90mmHg or higher
- ideal blood pressure is considered to be between 90/60mmHg and 120/80mmHg

Risk factors for high blood pressure

Blood pressure is normally distributed in the population and the risk associated with increasing blood pressure is continuous, with each 2 mmHg rise in systolic blood pressure associated with a 7% increased risk of death from ischaemic heart disease and a 10% increased risk of mortality from stroke.

Overweight or obese
Poor diet : high salt & Less than 5 a day fruit and vegetables
Low Physical activity
High alcohol
Smoker
are over the age of 65
don't get much sleep or have disturbed sleep
are of African or Caribbean descent
Family history of high blood pressure

At least one quarter of adults (and more than half of those older than 60) have high blood pressure(22)

Over 24% of people in England are estimated to have high BP High BP is one of the leading causes of premature death and disability in England. At least half of all heart attacks and strokes are associated with high BP and it is a major risk factor for chronic kidney disease, heart failure and cognitive decline .

Lowering blood pressure per se reduces risk for myocardial infarction by 20% - 25%,(23).

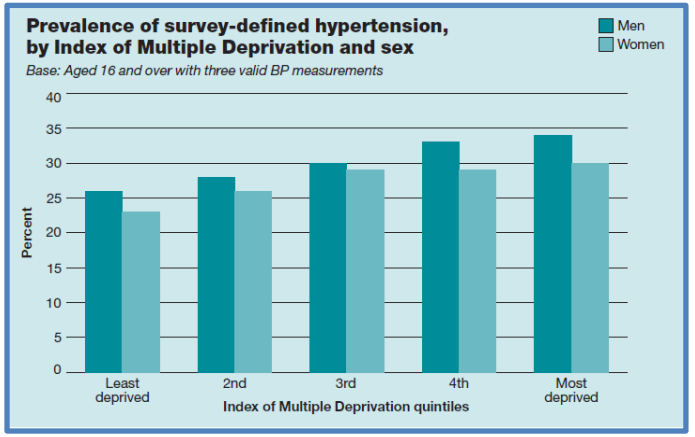
High BP costs the NHS an estimated £2bn, while social care and productivity costs are likely to be much higher High blood pressure causes stroke, myocardial infarction, heart failure, chronic kidney disease, vascular dementia and premature death.

High BP is much more common in deprived communities. The Department of Health's 2010 'Health Survey for England' noted that prevalence increased from

26% of men and 23% of women in the least deprived quintile

34% and 30% respectively in the most deprived quintile.

Fig 13



High blood pressure

For every ten people diagnosed with high BP, seven remain undiagnosed and untreated - this is more than 5.5 million people in England. Those in more deprived communities are less likely to have high BP detected though with the introduction of the quality scheme this gap has reduced (24,25), . In addition we can see the percentage of those in treatment and also adequately controlled reduces with increasing deprivation.

Income level	n	Aware (%)	Treated (%)	Controlled (%)
High	6263	49.0	46.7	19.0
Upper Middle	18123	52.5	48.3	15.6
Lower Middle	23269	43.6	36.9	9.9
Low	10185	40.8	31.7	12.7
Total	57840	46.5	40.6	13.2

(25)

13.1% of all deaths in South East England were attributable to high blood pressure (14)

7.2% of all disability-adjusted life years (DALYs) in the South East Region were attributable to high blood pressure in 2013 (1,766 per 100,000 population).

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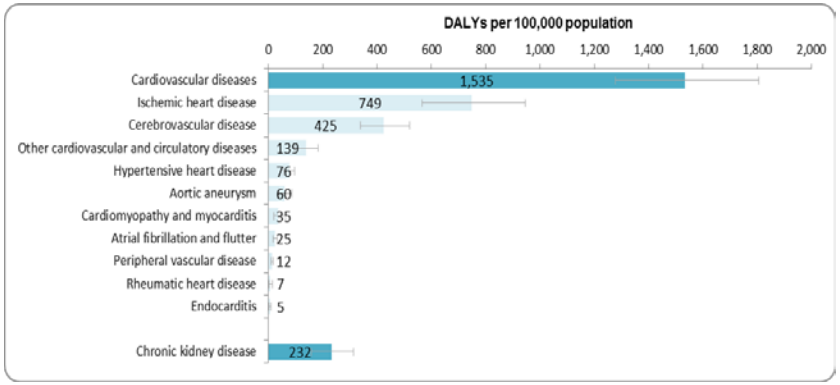
The largest number of DALYs attributable to high blood pressure were for cardiovascular diseases and chronic kidney disease. Within the cardiovascular diseases group, ischemic heart disease and cerebrovascular disease had the largest number of DALYs attributable to high blood pressure.

Fig 14



Source: Global Burden of Disease (2013)

For all cardiovascular events High systolic BP accounts for 43% DALYs; 1,535 per 100,000.

In reviewing premature deaths (deaths before age 75) Reading fares badly with regards heart disease and stroke -being ranked 97 out of all authorities, with 85 deaths per 100,000 (2013-2015) and ranked 14 out of 15 in comparison to similar local authority areas. (26)

High BP –Impact

Across the 2 CCGs, (North west Reading and South Reading) there are estimated to be 50,000 people with high BP , with 29,000 currently being treated -this means that there are 21000 people unaware of their high BP (27).

Fig 15

In addition, of those that are being treated by their GP not all are achieving target BP control: 980 patients (27)

Locally it is possible to measure the impact high BP has on disease and deaths but also the impact on reducing high BP in those with high BP by 10 mm HG in Reading.

Every 10 mmHg reduction in systolic BP reduces the risk of major cardiovascular events by 20% .

If we look at the two CCGs that cover Reading then we can see the impact good control of high BP could achieve.

Condition	Current number of events	Number if treated	Reduction
Stroke	115	84	31
Heart failure	84	60	24
Heart disease	184	153	31
Death	1432	1246	186 (21)

However treatment is not simply reliant on medication : indeed across the long term conditions more than half of all patients do not take their medication as prescribed. Modification of lifestyles factors can have a major impact on high BP with no side effects (and additional positive health impacts).

Of those who address lifestyle after 10 weeks a significant percentage achieve a 10 mm reduction in BP : (28)

- Weight 40%
- Exercise 30%
- Relaxation 25%
- Alcohol 30%
- Salt 25%

Advice given during the consultation for high BP is likely to be acted upon. Compared with those who did not recall being given advice, hypertensive adults who recalled being given advice were more likely to change their eating habits, reduce salt, exercise ,and reduce alcohol consumption (28).

Indeed lifestyle modification is indicated for all patients with hypertension, regardless of drug therapy, because it may reduce or even abolish the need for antihypertensive drugs.

High BP - Intervention

High blood pressure management in the community from a long term perspective is focussed on reducing the risk factors within the community : obesity, physical inactivity, smoking and high slat intake etc. However in the short and medium term there are clear programmes that can reduce the impact of this risk factor (21)

A clear priority is to reduce the number of patients with known high blood pressure for whom treatment is not adequate. This can be achieved by annual audits of practice registers to identify effected patients, and develop the role of pharmacists and other professional to maximise achievement of treatment goals through lifestyle changes and drug therapy. . A 20% improvement in blood pressure control can be cost saving within 5 years.

A key part is wider use of self-monitoring by patients to help eliminate false readings and provide a the skills of the patient to know and monitor blood pressure in daily living to minimise false readings.

Of course it is also key to identify residents in the community who are unaware that they have high blood pressure. Programmes to identify high blood pressure before organ damage occurs through . lifestyle changes and or drug treatment will of course reduce demand for care and costs for health and social care.

Alcohol

It is known that alcohol is harmful to health and the CMO guidelines to reduce risk state that it is safest not to drink more than 14 units a week on a regular basis. And these should be spread over 3 or more days (29,30)

Alcohol is measured in units - one unit is 10ml or 8g of pure alcohol. Since drinks differ in the proportion of alcohol the number of units varies.

Alcohol drinks are often described as alcohol by volume percentage : some wines are 11% ABV - this means that a 1 litre bottle contains 11 units .

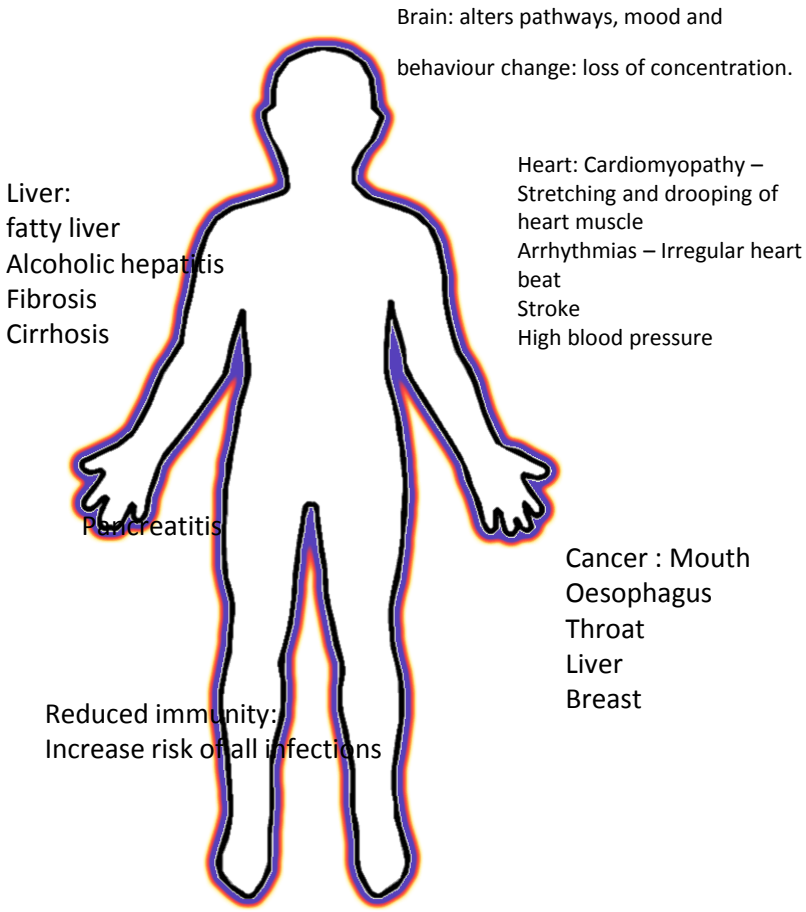
Therefore one 125 ml glass contains 1.64units : a 175 ml glass has 1.9 units and 250 ml glass has 2.5 units

Beer : a pint of 4% beer has 2.3 units

(30)

To keep to safe limits an adult in a week should not drink more than :

Alcohol is the leading cause of death among 15 to 49 year olds and heavy alcohol use has been identified as a cause of more than 200 health conditions (31)



Alcohol

The economic burden of health, social and economic alcohol-related harm is substantial, with estimates placing the annual cost to be between 1.3% and 2.7% of annual GDP.

Currently over 10 million people are drinking at levels which increase their risk of harm to their health. .

- 5% of the heaviest drinkers account for one third of all alcohol consumed

Alcohol caused more years of life lost to the workforce than from the 10 most common cancers combined - in 2015 there were 167,000 years of working life lost (32)

Among those aged 15 to 49 in England, alcohol is now the leading risk factor for ill-health, early mortality and disability.

With increasing dose, there is increasing risk. For example, all alcohol-related cancers exhibit this relationship (33)

Condition		
	3 units of alcohol per day	6 units of alcohol per day
Liver disease	3 times	7 times
Mouth cancer	2.5 times	5 times
Throat cancer	1.8 times	3 times
Breast cancer	1.3 times	2 times
Hypertension	1.7 times	3 times
Ischaemic stroke	No change	2 times
Haemorrhagic stroke	1.8 times	3 times
Pancreatitis	1.3 times	2 times

The health and social harm caused by alcohol is determined by:

the volume of alcohol consumed

the frequency of drinking occasions

the quality of alcohol consumed

In addition a number of individual risk factors moderate alcohol-related harm, such as (34):

- age: children and young people are more vulnerable
- gender: women are more vulnerable
- familial risk factors: exposure to abuse and neglect as a child and a family history of alcohol use disorders (AUD)

Also in the English population, rates of alcohol-specific and related mortality increase as levels of deprivation increase and alcohol-related liver disease is strongly related to the socioeconomic gradient (32)

This despite the fact that lower socioeconomic groups often report lower levels of average consumption. This gives rise to what has been termed the 'alcohol harm paradox' whereby disadvantaged populations who drink the same or lower levels of alcohol, experience greater alcohol-related harm than more affluent populations. The reason for this is not known but may be due to a greater impact of alcohol due to lower resilience: possible higher rates of binge drinking or poorer access to services.

Public Health England has estimated the increase on average life expectancy for men and women if all alcohol-related deaths were prevented. Nationally, this would be 12 months for men and 5.6 months for women *Source: Alcohol Concern*, *Alcohol Harm Map*

Alcohol

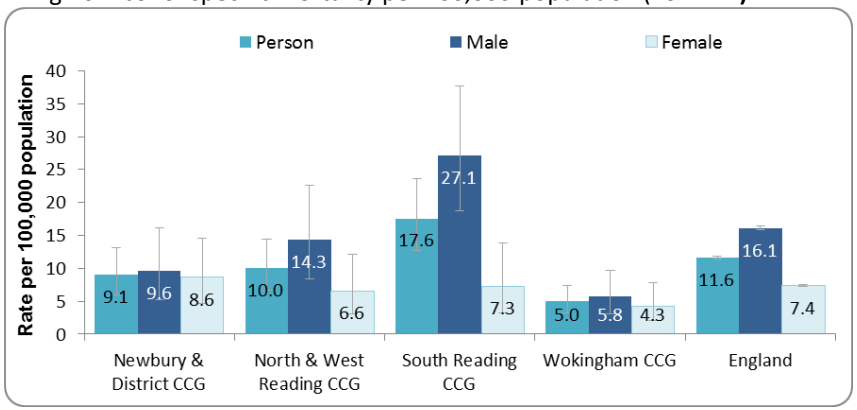
Cause of death	No. of deaths	Average age at death
All causes (England & Wales	501,424	77.6
All alcohol-specific causes	4,329	54.3
Mental and behavioural disorders due to use of alcohol	489	57.5
Toxic effects of alcohol (unspecified)	395	42.4
Accidental poisoning by exposure to alcohol	369	49.1

3.9% of all early death and poor health (DALYs) in the South East Region were attributable to alcohol use in 2013 (965 per 100,000 population).(12)

The largest number of DALYs attributable to alcohol use were for cancers, cirrhosis, mental and substance use disorders and unintentional injuries

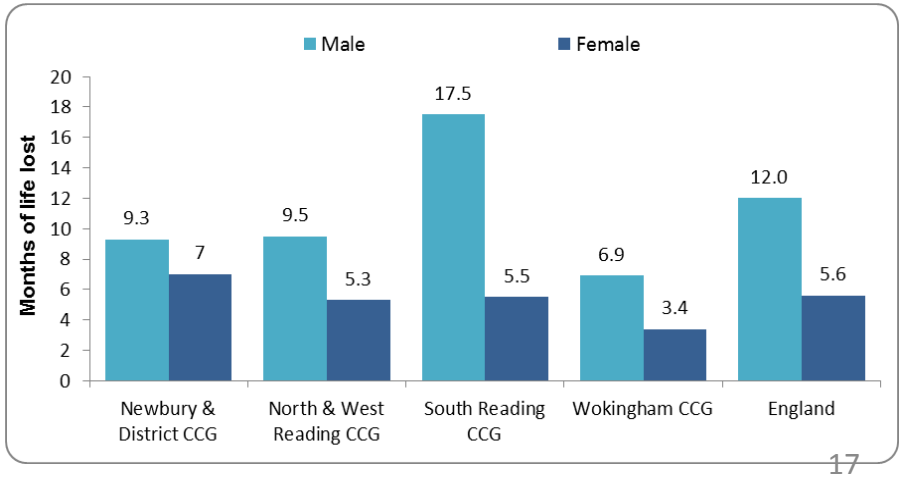
In 2012-14, 130 people died from alcohol-specific conditions in the 4 Berkshire West CCGs. 67% of these were men. The rate of deaths per 100,000 population varied in the area from 5.0 per 100,000 population in Wokingham CCG to 17.6 per 100,000 in South Reading CCG – with male deaths in South Reading being significantly higher. (14)

Fig 16 Alcohol-specific mortality per 100,000 population (2012-14)



If we look at the months of life lost due to alcohol locally then we can see a similar picture where men in South Reading lose 17.5 months – the biggest impact (15,17)

Fig17 Months of life lost due to alcohol (2012-14)

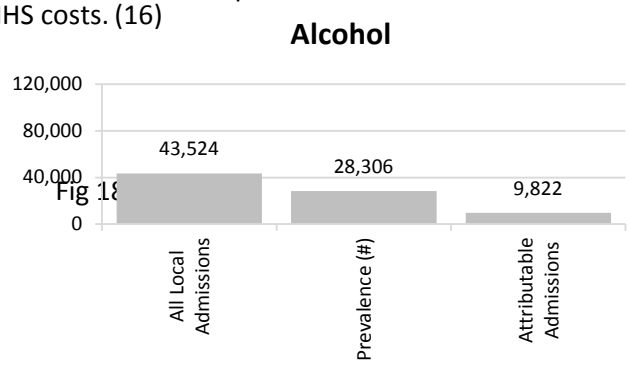


Source: Public Health England (2016); Local Alcohol Profiles for England

Alcohol

And with such an impact on early death and illness alcohol has a significant impact on hospital use. Nationally alcohol related and attributable admissions have been rising: According to the broad measure, admissions for cardiovascular disease account for almost half of all alcohol-related admissions in 2014/15. For the narrow measure, hospital admissions for cancer represent the most common condition for admissions accounting for 23% of all alcohol-related conditions

Within Reading Borough we can that there are over 28,000 at risk drinkers and that there are almost 10,000 admissions annually due to alcohol - not unexpected since alcohol accounts for 3% of all NHS costs. (16)



- Fig 18

The impact of alcohol in our society is driven by limited awareness of health risks from alcohol consumption; addictive nature of alcohol; failure of health professionals to address alcohol as a causal factor in patients' ill health and lack of local system join-up (34,31).

The public health ambition for alcohol is to reduce excessive alcohol consumption and therefore the associated burden on NHS and local authorities and wider society with consequent (31) :

Reduction in alcohol-related hospital admissions, re-admissions, length of stay and ambulance call-outs.

Reduction in the burden on NHS, police and social care services from high volume service users

Reduction in the impact of parental alcohol misuse on children

Much of the work on addressing alcohol needs to be done at a national level: continued media and awareness raising on safe alcohol consumption, national policy changes in minimum pricing, taxation and licensing of alcohol.

However there are key actions that can be taken forward locally:

Brief intervention and advice throughout health care that raise knowledge on safe alcohol levels screening patients and providing brief advice on alcohol consumption to cover potential harm and ways to reduce alcohol intake (21).

Alcohol care teams, which support patients admitted to hospital through alcohol with specialised support , coupled with assertive outreach and case management for patients and residents in whom alcohol is causing repeated hospital admissions or use of other services.

Physical Activity

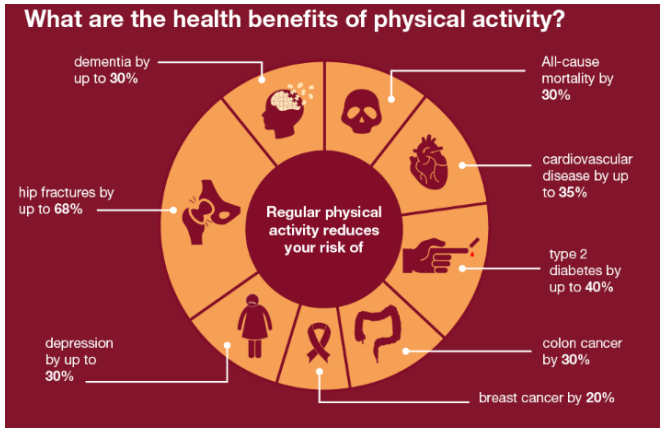
Physical activity is defined as any bodily movement produced by skeletal muscles that requires energy expenditure.

Physical activity levels can be measured either through asking people to report how much exercise they do, or by objectively measuring the amount of exercise a person is doing. Most reports use self reported activity

Physical inactivity is defined as less than 30 minutes of physical activity a week. The Chief medical Officer guidelines for physical activity not only suggest recommended activity levels but also recommend the amount of time in which we are sedentary, and encourage weight bearing exercise (35) .

The link between physical inactivity and obesity is well known, but physical activity is not, just a way of addressing obesity.

Low physical activity is one of the top 10 causes of disease and disability in England.



UK studies have estimated that around 1% of cancers in the UK (around 3,400 cases every year) are linked to people doing less than the recommended 150 minutes of physical activity each week.

1 in 8 women in the UK are at risk of developing breast cancer at some point in their lives By being active every day they could reduce their risk by up to 20% (36)

Physical activity is also important for people diagnosed with cancer and cancer survivors. Not only increasing ability to manage recovery but also reducing rate of recurrence in key cancers. Macmillan has estimated that in the 2 million cancer survivors in the UK - 1.6 million do not meet the recommended levels of physically active (37)

Physical Activity

In in 4 women and 1 in 5 men are inactive : only 24% of women and 34% of men do muscle strengthening exercises twice a week. Men are more likely to be sedentary for more than 6 hours a day(36).

Levels of activity are reducing : people in the UK are around 20% less active now than in the 1960s. This pattern is also seen in children and young people with the proportion who met the weekly physical activity guidelines falling between 2008 and 2012 . (36)

People living in in the least prosperous areas are twice as likely to be physically inactive as those living in more prosperous areas(38)

South East England has the highest proportion of both men and women meeting recommended levels of physical activity, while North West England has the lowest

Age

Physical activity declines with age to the extent that by 75 years only 1 in 10 men and 1 in 20 women are sufficiently active for good health21

Disability

Disabled people are half as likely as non-disabled people to be active

Only 1 in 4 people with learning difficulties take part in physical activity each month, compared to over half of people without a disability23

Race

Only 11% / 26% of Bangladeshi women and men are sufficiently active for good health, compared with 25% / 37% of the general population24

Sex Men are more active than women in virtually every age group, with 6 in 10 women not participating in sport or physical activity (38)

Sexual orientation and Gender Identity

- o Over a third of lesbian, gay, bisexual and transgender youth do not feel they can be open about their gender identity in a sports club26

Lack of physical activity is costing the UK an estimated £7.4 billion a year, including £0.9 billion to the NHS alone (36)

Inactivity causes 9% (range 5·1–12·5) of premature mortality, or more than 5·3 million of the 57 million deaths that occurred worldwide in 2008. (14)

Physical inactivity : developed countries is responsible for :
an estimated 22-23% of CHD,
16-17% of colon cancer,
15% of diabetes,
12-13% of strokes and
11% of breast cancer (16)

It is estimated that physical inactivity contributes to almost one in ten premature deaths (based on life expectancy estimates for world regions) from coronary heart disease (CHD) and one in six deaths from any cause.

Persuading inactive people (those doing less than 30 minutes per week) to become more active could prevent:
one in ten cases of stroke and heart disease in the UK and
one in six deaths from any cause.(38)

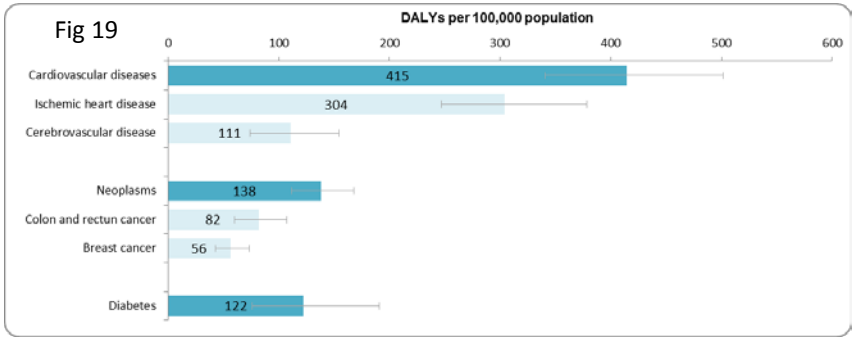
Physical activity: Interventions

In the UK the Global Burden of Diseases found physical inactivity and low physical activity to be the fourth most important risk factor in the UK for limiting illness and early death (x)

In the South East 2.8% of all disability-adjusted life years (DALYs) in the South East Region were attributable to low physical activity in 2013 (675 per 100,000 population).(12)

The largest number of DALYs attributable to low physical activity were for cardiovascular diseases, neoplasms and diabetes

Fig 19



The Health Impact of Physical inactivity (HIPI) tool quantifies the impact of physical inactivity for people aged 40 – 79.

Within Reading BC each year If 100% of this group were active then:

85 / 456 annual deaths could be prevented

15/72 annual cases of breast cancer could be averted

And 684 / 4855 new cases of diabetes could be prevented

A body of evidence now exists that links physical inactivity to increasing risk of hospital admission - emergency and other use of health and social care.. (39)

In Scotland it was shown that minutes of moderate-to-vigorous physical activity (MVPA) per day predicted subsequent numbers of prescriptions: those witgh less than 25 minutes of moderate to vigorous physical activity per day had 50 per cent more prescriptions over the following four to five years

Similarly the number of steps taken per day and MVPA also predicted unplanned hospital admissions. Those in the most active third of the sample were at half the risk of emergency hospital admissions than those in the low active group (40)

The solution is clear: *Everybody needs to become more active, every day*.(36)

Physical activity does not need to be strenuous , it can be a thirty minutes of brisk walking, a swim, gardening or dancing . Each ten-minute bout that gets the heart rate up has a health benefit . Being active is not just about moving more, we need to build our muscle strength and skills.

In addition adults need twice a week improves muscle strength and stability, which helps prevent the development of musculoskeletal disease.

A number of common characteristics are apparent in effective action to increase population levels of physical activity. These include two common factors: persistence and collaboration (40)

Four areas of action are identified by Public Health England, at national and local level.

- active society: changing our attitude to physical activity
- moving professionals: professionals across all sectors promoting activty in their work
- active lives: creating environments that make activity easy
- moving at scale: scaling up interventions that make us active

Obesity

Being overweight or obese is when a person has more body fat than is optimally healthy. Poor diet and physical inactivity are causal factors of obesity with excess weight being caused by an imbalance between energy consumed and energy expended

In the UK that is estimated to affect around one in every four adults and around one in every five children aged 10 to 11.

The annual costs associated with obesity to the NHS and social care systems are estimated to be £6.1 billion a year and £352 million

For most adults, a BMI of:

- 18.5 to 24.9 means you're a healthy weight
- 25 to 29.9 means you're overweight
- 30 to 39.9 means you're obese
- 40 or above means you're severely obese

Another simple measure of excess fat is waist circumference- men waist size of 94cm / 37in) or more
Women waist size of 80cm / 31.5in) or more a
more likely to develop obesity-related health problems

Obesity prevalence increased steeply between 1993 and 2000,. Rates of obesity and overweight were similar in 2013 to recent years.. H*ealth & Social Care Information Centre (2014); Health Survey for England 2013 (41)*

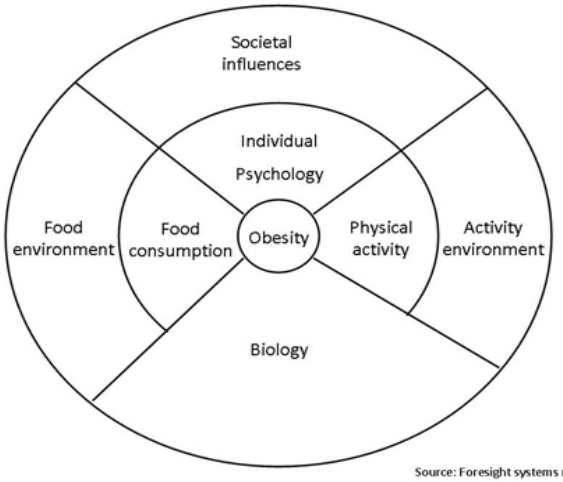
Mortality

9.0% of all deaths in South East England were attributable to a high body-mass index (GBD2013) . This was the 3rd most important risk (smoking and high blood pressure (14)

The impact of weight on life expectancy is linked to levels of excess weight

People with a BMI of 22 – 25 kg/m2 have the best life expectancy:
obese individuals live 2 – 4 years
People with BMI of over 40 - live 8 – 10 years less (42)

Increased mortality is as a result of :
higher rates of cardiovascular disease,
high BP and type 2 diabetes.
Hormone sensitive cancer - e.g breast

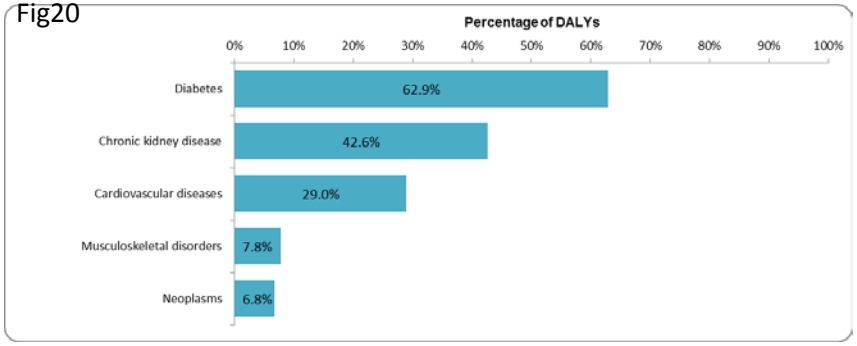


Source: Foresight systems map, 2007

Obesity: Local impact

Obesity causes 9 % of all DALY lost in the South East of England, with most overall impact being seen through cardiovascular disease and diabetes. But its impact as a cause of diabetes (63%), chronic kidney disease and cardiovascular disease due to high BP (56%) is very stark (14)

Fig20



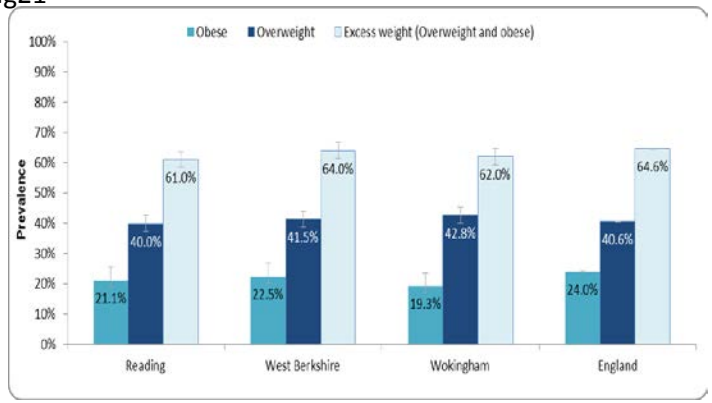
Obesity levels in the community are not uniform : obesity levels increase until late middle age and then reduce in old age. More women in communities with higher deprivation are obese . (NICE guidelines 2014)

Women from the in SEC group 1/ 2 have the lowest prevalence of obesity and those in SEC 4/5 consistently have the highest prevalence of obesity. (42,43). This is not seen in men, though for both men and women obesity is significantly reduced in those with a degree or equivalent.

Prevalence of obesity is highest in women from black African, Black Caribbean and Pakistani ethnic groups.

Locally in Reading we can see that we are below the national average with regards obesity levels . However this is not cause for complacency since this may in part be due to the lower age profile of the population in Reading since we know we have a younger age population and obesity increases with age. (42)

Fig21



In our children the figures are more worrying with 22% of children in reception being overweight or obese and 38% in year 6 (this matches and then exceeds the England average).

We would therefore expect that obesity has less of an impact on our adult hospital admissions - but even with our lower than average obesity levels approximately 1900 admissions in Reading have obesity recorded as part of the record each year , with just over 5,000 admissions being attributable to obesity (16).

Obesity: Interventions

Interventions to reduce obesity are less visible and accepted than others such as smoking cessation. There are a number of ways that can be adopted to reduce the burden of obesity for the individual and the community.

Our environments tend to promote obesity : encouraging high calorie food intake and physical inactivity. Local government partners , employers and communities can work together to change this. Promoting active travel and ensuring healthy food options in work are two examples of work to address our environment.

In addition we can improve weight management services, however the first step is for professionals to raise the issue of weight at every opportunity. There is evidence that professional believe programmes to have no lasting impact. However the evidence from published research is that interventions do work , with community based approaches being more effective than those based in primary care (44). However primary care increases the effectiveness of community approaches through discussion and referral. People referred via primary care had greater weight loss (45) -> 50%, but even just mentioning weight loss as part of a consultation results in weight loss still seen at 2 years.

A brief intervention, resulting in 1.5 kg weight loss, delivered once a year to all eligible people visiting their GP, could halve the prevalence of obesity by 2035

One other reason given for reluctance to refer is the believe that impact is short lived, whilst weight does gradually increase weight loss is still seen at 2 years and crucially even in patients who regain their weight the incidence of diabetes is significantly reduced at 10 years - the impact of the weight loss outlives the actual weight loss (47)

Furthermore Health professionals do not routinely address weight loss issues as some voice concern about the impact of the topic on the clinical relationship. However research shows that patients less than 2% of people found it to be not acceptable or unhelpful (46) and over 40% very helpful. Moreover 77% accepted the referrals to weight management services and nearly 50% completing the course

Recent evidence shows the cost benefits of weight management services even in the short – medium term. The net health and care savings: over a 5 year period, are c£30 p.a. per person enrolled (ie cumulative saving of c£150 per person over 5 years). This intervention could be cost saving to the health and care system by year 2. (21).

But it should be remembered that weight management interventions aim to have lifelong benefits.

Locally in Berkshire the second year of Eat for Health 529 people have attended courses with more than 50% more than 3% of their weight .

Of the 197 people with high BP attending , in 55 (28%) residents losing weight resulted in their BP returning to normal levels with no need for ongoing medication and significant on going health benefits.

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