Habit or Addiction?

Annual Report of the Director of Public Health for Cardiff and Vale of Glamorgan 2015-2016

CARING FOR PEOPLE
KEEPING PEOPLE WELL

GIG CYMRU NHS WALES
Bwrdd Iechyd Prifysgol Caerdydd a'r Fro
Cardiff and Vale University Health Board

Contents

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Foreword

For the last forty years our life expectancy has increased but for many these extra years are spent in poor health. We don't choose poor health but the decisions we make can result in us increasing our risk of disease and ill health.

In previous reports I have highlighted obesity as a major public health concern. In this report I focus on two of our common 'addictions' which people sometimes consider simply habits. These are sugar and smoking tobacco which are two big risk factors for preventable diseases.

In the report I discuss why we are addicted and whether our approach to reducing the risks associated with smoking and eating foods containing high sugar, is the right one. Exploring the evidence on addictive behaviours, the report discusses how the 'addiction' cycle can be broken.

There is a common understanding amongst us all that smoking is harmful and that the addiction to nicotine is what makes it so difficult for people to stop. Sugar on the other hand, is thought of as a normal part of everyday life, and something that it is not only acceptable to consume but something which is a treat. Within our society sugar is not generally thought of as an addictive substance which leads to significant health problems.

The societal norm of smoking has seen a cultural shift towards being increasingly socially unacceptable and tobacco control policies have played a major part in this shift (1). The introduction of the smoking ban in public places, pictorial health warnings on packaging, increasing the age of purchasing, banning of vending machines selling cigarettes, plain packaging and the changes in 'point of sale' advertising - covering of cigarettes for sale in retail outlets - have all played a part in smoking becoming more socially unacceptable.

In contrast, sugar is socially acceptable and is in so many foods and drinks that it is difficult to avoid it. So many processed foods on the market are high in sugar. Awareness of the health dangers of high sugar consumption is rising, but it is still viewed as more than reasonable to eat it, drink it and include it in daily life.

This report includes links to web-based resources, examples of conversations on social media and the interactive tools used to promote reducing sugar intake and quitting smoking. Our challenge together is to continue a lively conversation about healthy lifestyles and to advocate and support practical actions for us all.

Dr Sharon Hopkins
Executive Director of Public Health

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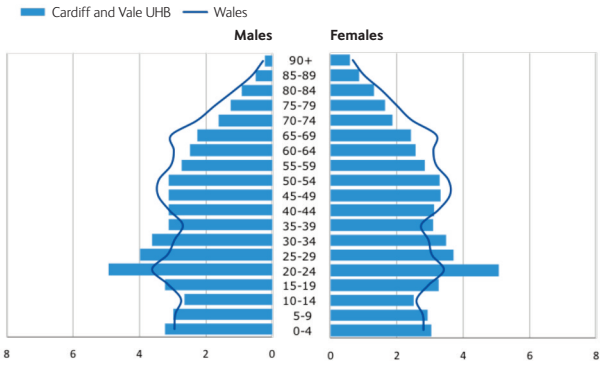
1. Our population

There are about **482,000** of us living in Cardiff and Vale of Glamorgan – making up 16% of the population of Wales. Over the past 10 years, our local population has increased by 8.6% (1).

The population pyramid (figure 1) illustrates our age and sex profile which is different to that of Wales. There is a substantially higher percentage of young people (aged 20-34 years) living in Cardiff and Vale of Glamorgan, making it a young and vibrant place to live in. Compared to the rest of Wales, we have a comparatively lower percentage of people aged over 50 (1).

Figure 1: Percentage of population by age and sex, Cardiff and Vale UHB and Wales, 2014



Produced by Public Health Wales Observatory, using MYE (ONS)

In Cardiff, we have the most ethnically diverse population in Wales. According to the latest annual population survey, 16.8% of Cardiff residents are from black and minority ethnic groups compared to 2.8% and 4.5% in the Vale of Glamorgan and Wales respectively (2).

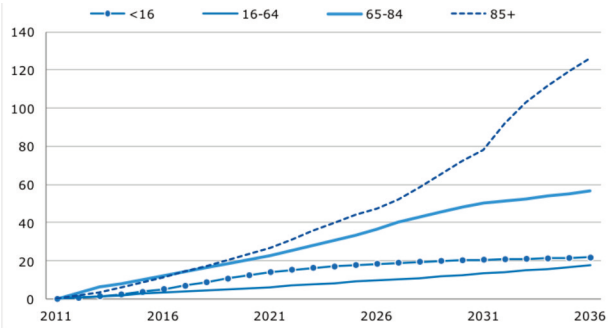
Did you know?

By 2036 the population in Cardiff and Vale of Glamorgan is projected to grow by 25% (compared to 8% for Wales). The increase for those aged 65 - 84 years is 57%; over 85, 125% and under 16, is 22% (1).

Current population projections – an ageing population and a growing younger population too

Population projections give an indication of the future size and age structure of our population (based on assumptions about future fertility, mortality and migration). Figure 2 shows the population is expected to rise across all age groups; however significant increases are expected in the 65-84, 85+ age groups and under 16's age groups (1).

Figure 2: Population projections by age group, percentage change since 2011, Cardiff and Vale UHB, 2011-2036



Produced by Public Health Wales Observatory, using 2011-based population projections (WG)

Do we live longer in Cardiff and Vale of Glamorgan compared to the rest of Wales?

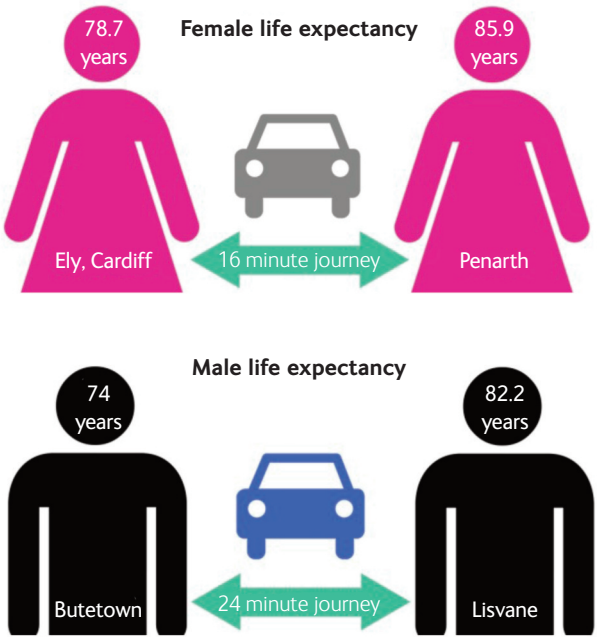
Our health is similar to the Welsh average. Our life expectancy has been improving over recent decades. In the past 20 years life expectancy at birth has increased:

- from 74 to 80 years for men, and from 79 to 83 years for women in the Vale of Glamorgan
- from 74 to 78 years for men, and from 79 to 83 years for women in Cardiff (3).

But today we are living more years in poor health. A man living in Cardiff and Vale of Glamorgan can expect to live to over 78 but will spend about 13 years in declining health. A woman living in Cardiff and Vale of Glamorgan can expect to live to over 82 having spent 15 years in poor health (4).

Does where we live influence how long we live?

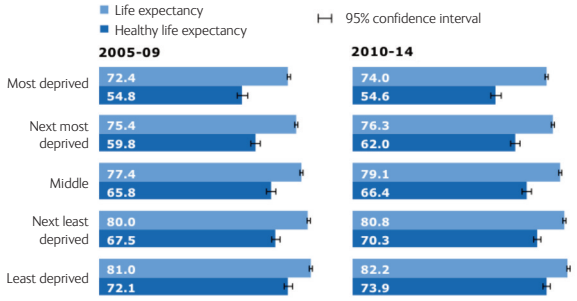
Yes! Life expectancy is not experienced equally across all areas and not everyone can expect the same length of life. If you live in a disadvantaged community, your life expectancy will be lower than someone living in an affluent area. Areas in Cardiff and Vale which are just a short drive away can have very different life expectancies. For example a woman living in Ely can expect to live 7 less years than a woman living in Penarth (4).



Similarly, a man living in Butetown can expect to live 8 less years than a man living in Lisvane (4). Where people live and how they live is important for health outcomes.

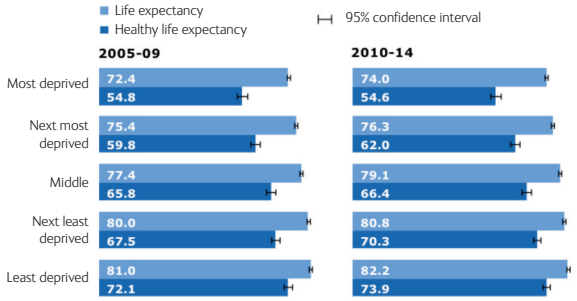
When we look at 'Healthy Life Expectancy', the period of life, which can be expected to be lived in good health, the gap is even wider. There is a difference of 19 years for men (figure 3) and 17 years for women and this is continuing to widen (figure 4) (4).

Figure 3: Life expectancy and healthy life expectancy at birth by deprivation fifth, males, Cardiff and Vale UHB, 2005-09 and 2010-14



Produced by Public Health Wales Observatory, using PHM & MYE (ONS), WHS & WIMD 2014 (4)

Figure 4: Life expectancy and healthy life expectancy at birth by deprivation fifth, females, Cardiff and Vale UHB, 2005-09 and 2010-14



Produced by Public Health Wales Observatory, using PHM & MYE (ONS), WHS & WIMD 2014 (4)

What influences our state of health? Risk factors for disease

We are living longer in Cardiff and the Vale of Glamorgan. However, unhealthy behaviours are threatening our quality of life.

Unhealthy behaviours which increase the risk of disease are endemic among **adults** in Cardiff and Vale of Glamorgan. The latest results of the Welsh Health Survey reveal that for adults:

- 4 in 10 of us (42%) still drink above alcohol guidelines
- 24% report binge drinking – 1 in 4 of us
- two thirds (65%) of us don't eat sufficient fruit and vegetables
- over half (54%) of us are overweight or obese
- almost one in five of us are obese (19%)
- around three quarters (73%) of us don't get enough physical activity – 7 in 10
- 34% of us report not doing any physical activity – 3 in 10 of us
- almost one in five (18%) of us still smoke
- almost one in five (18%) of us rate our general health status as fair or poor (5)

There is **considerable variation** in rates of unhealthy behaviours depending on where you live in Cardiff and Vale of Glamorgan:

- smoking levels vary between 14% and 33%
- physical inactivity levels vary between 29% and 45%
- obesity levels vary between 14% and 26% (6)

Most importantly some of our **children** are developing unhealthy behaviours:

- only a third of our young people aged 11-16 years eat fruit (33%) and vegetables (32%) once a day or more
- 15% of 11-16 are overweight/obese
- only 15% of 11-16 are active for 60 minutes every day (7)
- about one in five (20.9%) of our 4/5 year olds are overweight or obese, however 3 in 4 of our children are a healthy weight (77.4%) (8)

So our challenge is to narrow this gap so that more and more of us are becoming healthier and healthier.

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2. Habit or addiction - why are we addicted?

A habit is usually considered harmless to health where as an addiction is usually associated with harm.

Addiction is not simply a choice

Addiction is characterised by compulsive behaviours that result in some form of reward despite negative consequences. It can be a psychological state often with an accompanying biological process. All addictive rewards are reinforcing so that a person is likely to repeat them. These rewards result in a feeling or reaction that is felt to be positive or desirable – certainly at the beginning.

The use of the word addiction is often used to describe both habits and an addiction and has developed over time as a cultural reference. For example, it can often be used to describe compulsive behaviours (such as being "addicted to exercise") without having the harmful consequences commonly associated with addictions.

Many people feel that they don't have the ability to change behaviours such as smoking or unhealthy eating simply because they are addictions. They feel that because their behaviour is an addiction this puts the behaviour outside of their control. In this way, having 'an addiction' can often be the justification for continuing and not trying to stop the behaviour.

The initial biological, rather than psychological, part of addiction is centred on rewarding stimuli. A substance called serotonin (which transmits impulses between nerve cells in the brain) is released causing pleasure or the relaxation and elimination of uncomfortable cravings, all of which are rewarding for the person.

But there are also physical dependencies associated with some addictions where the absence of the stimulus has a negative biological effect often referred to as withdrawal symptoms. Physical withdrawal symptoms are most common with alcohol and opiates. Alcohol has particularly severe consequences; for this reason, many individuals waiting to undergo alcohol detoxification have to continue drinking for their own safety until the process of withdrawal can be managed and supervised in a safe manner. At the other end of the spectrum, people addicted to food and even nicotine will suffer discomfort through withdrawal in their absence but these effects are not life threatening as they can be with alcohol.

Physical addiction often sees increasing tolerance to a substance so that it no longer has the same effect. Another form of physical addiction is the phenomenon of overreaction by the brain to substances (or to cues associated with the substance). For example someone who is alcohol dependent walking into a bar, for instance, will feel an extra pull to have a drink because of these cues.

The negative consequences of addictive behaviours are felt in all walks of life and can have significant impacts on individuals, their families, communities and public services. Alcohol is as damaging to the family, social connections and mental wellbeing of people addicted to drink, as it is to their own physical health. For a gambler, the financial and social consequences of a gambling addiction are often catastrophic to the gambler and their loved ones.

Reducing harm for individuals, their contacts and their communities is why talking about addiction and finding more effective ways to enable people to tackle their own addictions is such an important public health priority.

Why do people get addicted – can habits become addictions?

The simple answer to this question is the resulting "rewarding stimuli". Many of the behaviours that are addictive include a pleasurable experience or remove an unpleasant experience. Most addictions will start as a result of experiencing the pleasures from a behaviour as something new and novel. Some of those forms of pleasure are more obvious

than others, such as the taste and satisfaction associated with sweet foods, the relaxing effect of alcohol and the euphoria and reduction of pain that characterises the effects of many drugs. Others are less apparent such as smoking where the initial experience is often distasteful and unpleasant. However, the rewards can be found in perhaps feeling a sense of achievement or affinity in young people who are smoking under peer pressure, or a sense of euphoria as a result of an activity that is perceived to increase status, self-esteem, or the "thrill" of engaging in a behaviour that is known to be harmful.

Whilst most physical addictions are reinforced and sustained by developing tolerance or as a result of cues, many addictive behaviours that we may often describe as habits are not related to either physical tolerance or exposure to cues. People compulsively eat, use drugs, gamble or shop nearly always in reaction to being emotionally stressed, whether or not they have a physical addiction. Since these psychological addictions are not based on biological dependency they can account for why people frequently switch addictive actions from one substance or behaviour to a completely different kind of substance or addictive behaviour. The specific nature of the addiction isn't what matters; it's the need to take action under certain kinds of stress. Treating this kind of addiction requires an understanding of how it works psychologically.

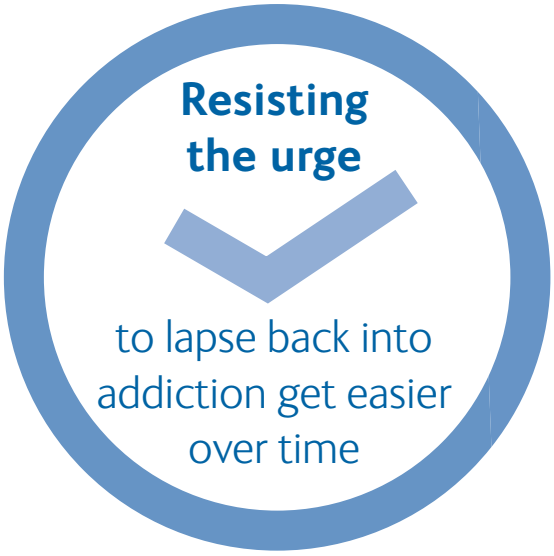
Willingness to understand what we do

The first barrier to overcome in managing, controlling, and ultimately ending an addiction is recognising that it exists. To start people will deny their addiction (1), (2). At this point people with an addiction will frequently not accept that their current behaviours are problematic, will be resistant to change, or will maintain a belief that their behaviour can be stopped at any time but that they simply choose not to.

The acceptance of an addiction will most often be a result of the unavoidable negative consequences of the addictive behaviour. Examples include significant weight gain from excessive food consumption and an inability to lose weight, a failed attempt to stop smoking or experiencing withdrawal symptoms as a result of not drinking alcohol.

Willingness to alter behaviour

Once the presence of an addictive behaviour is accepted, there are a number of steps to successfully managing and ending the addiction. Motivation and determination are critical ingredients and services designed to support people through the process of ending an addiction will be trained to identify, promote and enhance motivation to change. It is fair to say that attempts to end an addiction are largely unsuccessful in cases where the individual does not have sufficient motivation or determination to succeed. It is also true that the majority of lapses or relapses back into an addictive behaviour are the consequences of a decline in motivation – often as a result of unforeseen bad experiences, stresses or as a result of the psychological pull from craving or withdrawal process proving stronger than the motivation to resist.



Motivation can be enhanced and supported through learning and applying different behaviours, and the provision of substitute substances or activities. Learning new behaviours, for example through cognitive behavioural therapy, enables people to

identify the situations, circumstances and thought processes that have triggered the addictive behaviour and to spot these in advance. They can then implement new behaviours as a "work-around" to avoid the sequence of events that would have previously led to the addictive behaviour. Support services are also trained to help people respond in a more positive and healthy way to unforeseen stresses and unexpected life events.

The provision of substitute substances or activities is also an evidence-based support mechanism. This works most effectively with the behavioural change processes previously mentioned as the use of nicotine replacement therapies, substitute drug medication, medication to alleviate cravings, nutritional alternatives to unhealthy foods or alternative healthier diversionary activities to avoid gambling etc., can assist in the process of building new behaviours and responses to the situations that previously resulted in the behaviour now being avoided.

There is a strong evidence base to support the conclusion that behavioural change and the provision of substitution provide a more effective solution to breaking an addiction when used in combination, than either does separately, and on their own (3), (4).

The many thousands of individuals who have broken free of an addiction are evidence that no addiction is untreatable. The evidence also shows us that resisting the urge to lapse back into an addiction gets much easier over time. The human brain is wired to favour behaviours that it is used to and comfortable with – breaking free of an addiction is all about getting the brain to be more familiar and comfortable with a new way of thinking and avoiding the addiction. Once a smoker or someone who eats too much unhealthy food has spent enough time healthy eating, or not smoking, then the chances of success are much greater.

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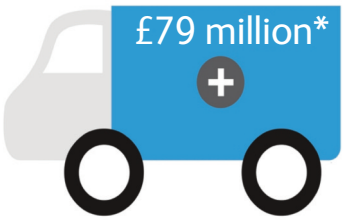
3. What are we addicted to? Our common 'addictions'

Smoking and Sugar



*estimated annual cost of smoking to NHS in Wales

Smoking – 'No smoke without nicotine'!

Smoking tobacco is highly addictive and accounts for half of all deaths for lifelong smokers in the UK (1). It amounts to a total loss of around 10 years of life (2). Unlike other addictions, tobacco smoking harms others through passive exposure to exhaled smoke. Smoking is preventable but more than one billion worldwide continue to smoke.

Evidence shows that smoking reduces economic productivity and social engagement, causes fires, increases littering and poverty (3). Smoking is responsible for more loss of quality and quantity of life in the UK than any other avoidable risk factor. As the burden of ill health caused by smoking falls on those individuals living in our most disadvantaged communities, smoking is the largest cause of inequalities in health in the UK (4).

Why is smoking addictive?

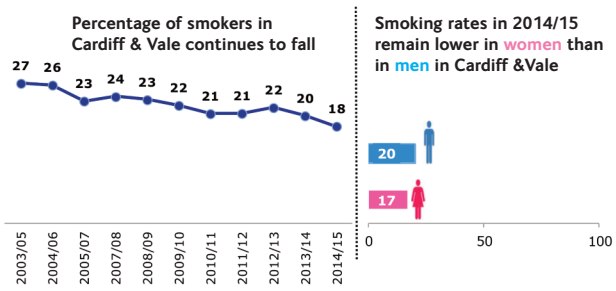
Smoking is highly addictive – due to the nicotine (6). Nicotine creates an initial sensation of reward which over time is required in increasing and regular quantities to relive the symptoms of nicotine withdrawal (7). Regular smokers also enjoy physical routines that are integral to smoking – for example, unwrapping, sharing or handling cigarettes. Smokers associate certain behaviours (for example, alcohol consumption, tea/coffee drinking and social interaction) as triggers to smoking.

Nicotine is not the primary cause of mortality from smoking. This results from direct exposure of the lungs to carcinogens in tobacco smoke. Attempt to reduce emissions and absorption of toxins from cigarettes such as increased use of filters or 'low tar' products to reduce harm have been adopted with limited effect. Low tar products have been widely accepted as a marketing device for the tobacco industry rather than a reduction in harm potential (8).

Reducing the numbers of us who smoke

Legislation ranges from banning smoking inside public places (2007), increased pictorial health warnings on tobacco packaging (2008), removal of vending machines selling tobacco products (2011), raising the age of sale of cigarettes to 18 (2007), banning the advertising of cigarettes at point of sale (2012) to banning smoking in cars carrying children (2015). All of these have helped reduce the overall smoking prevalence rates from 27% to 18% in Cardiff and Vale of Glamorgan over the past 10 years as illustrated in Figure 5 below.

Figure 5: Smoking prevalence rates 2003-2016



Source: Welsh Health Survey, Welsh Government

Support for people to quit smoking has contributed with national and local programmes offering community and hospital based support. However today, less that than 1.5% of Cardiff and Vale of Glamorgan smokers access support with evidence suggesting that 47% of smokers are likely to attempt to quit smoking with no support at all - 'cold turkey'. But we know that smokers who use support services are more likely to successfully quit (9) - 37% of those setting a firm quit date in Cardiff and Vale of Glamorgan, have successfully quit and are still not smoking at 4 weeks (10).

Policies to stop smoking at work and in public outdoor spaces have been introduced. No Smoking Policies at work reduce smoking within their workforce by 5% supported by legislation and raises in cigarette prices. Initiatives such as smoke free playgrounds', 'smoke free beaches' and 'smoke free homes' have helped to raise awareness of the dangers of passive smoking.

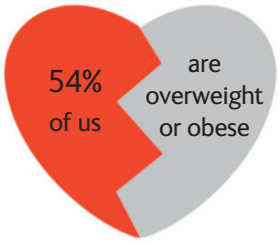
Why is sugar so bad?

Too much sugar is bad for our health. It can cause tooth decay, weight gain and obesity. Obesity may lead to: type 2 diabetes, joint problems, cardiovascular disease and some cancers (11).

We also know that the calories we get from sugar provide us with little or no nutritional value, and

Did you know?

In 2014 there was 2.3 million tonnes of refined sugar supplied to the UK market? (14).



eating too many sugary foods means people eat less 'healthy' foods such as fruit and vegetables (12). This is of particular concern as we know that the diets of our more deprived communities contain more sugar and less fruit and vegetables compared to our more affluent communities (12, 13). We like the taste of sweet foods. We often reward ourselves and our families with sugary food as a treat (13).

The food and drinks industry adds sugar to make many foods and drinks more acceptable to us. We, the public, are often unaware of the sugar being added. As a result of this, sugar has never been so readily available in our diet.

Did you know?

Free sugars are any sugars added to food or drinks, or found naturally in honey, syrups and unsweetened fruit juices.

Why is sugar 'addictive'?

It is thought that foods high in sugar may trigger the reward system in our brain, in a similar way to the reward you would get from taking addictive drugs (15). The high levels of sugar are very quickly absorbed into our bloodstream, giving us a 'sugar high'. This gives a feeling of pleasure and can cause us to 'crave' these sugary foods (16).

Some situations can make us turn to sweet foods for comfort. We often eat when we are not hungry or when we feel upset, stressed or angry. Eating in response to emotions can lead to feelings of guilt, shame, failure and frustration especially when we are trying to lose weight. This in turn can lead to low mood and low self-esteem which can drive us to food again, and so the cycle continues (17).

Cutting out sugar

We are becoming more aware of the importance of reducing the amount of sugar we eat and drink. In Wales people want to make changes to the amount of sugar they eat and drink and we are beginning to buy less (18). Experts say that we need to do more, and recommend that free sugars should not make up more than 5% of the total energy in our diets (19). Unfortunately, current levels are more than double this so there is a long way to go (20, 21).

Did you know?

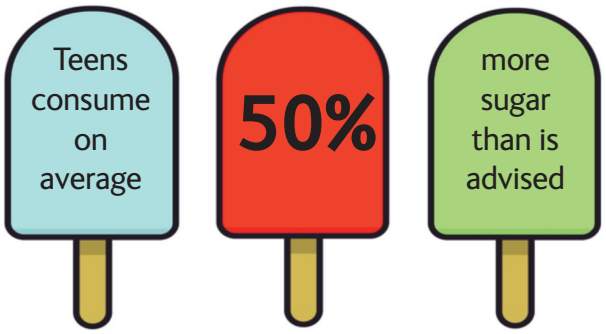
In the UK in 2001-03, 14.8% of the calories from our diets were made up of added or processed sugars? By 2013 it had reduced to 13.6%. At this rate, it will take us over 100 years to get down to 5% that experts recommend! (22).

There are measures in place to restrict viewing of junk food advertisements to children, such as the 9pm watershed on television. However, this doesn't cover all forms of advertising such as via social media or online gaming and on demand catch up TV.

Addiction and young people

Smoking habits start at a young age. 4% of young people aged 11-16 years say that they smoke at least once a week in Wales (2014) (23). It is difficult to know whether prevention programmes aimed at young people are effective in terms of delaying the take up of smoking - although peer led interventions have shown a 2% reduction in smoking prevalence (24).

Out of all age groups in society, young people (aged 11-18 years) eat/drink the most sugar and treble the recommended amount of no more than 7 sugar cubes a day (23). Twenty nine percent of this sugar comes from sugar-sweetened drinks, compared to 16% in adults (22). We also know that in Cardiff and the Vale of Glamorgan, over one in five 11-16 year olds drink sugary drinks once a day or more (25). Sugary drinks are often consumed outside meal times which can cause tooth decay (12).



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4. Breaking the addiction

Quitting smoking

Our highest numbers of smokers live within our most deprived communities. Reducing inequality and providing support in community settings is crucial to reducing smoking.

The availability of tobacco – including illegal or illicit tobacco products is available everywhere in our communities. However, it is accepted that accessibility is easier and more widely known amongst populations in our most deprived communities. Smokers are motivated to quit by cost, health concerns or both. Those countries where smoking prevalence is lowest is where the price of tobacco is highest.

Smoking prevalence is lowest in countries

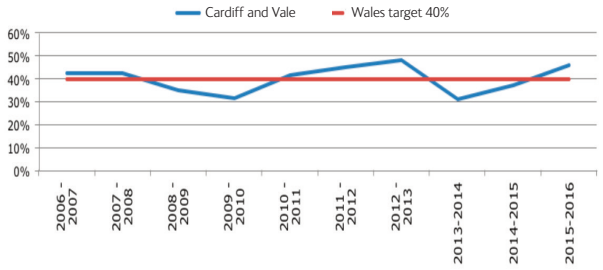
Where the price of tobacco is highest

Most of our population do not smoke. Our attitude to smoking is changing. Smoking around children or in locations where smoking is banned is now widely considered unacceptable. Increasing numbers of 'smoke-free' areas will help change people's behaviour and is supporting long term culture change.

One in three smokers in the UK makes a quit attempt in a year – but only around one in every 6 smokers is successful. Increasing the cost of cigarettes, media campaigns and health professional's advice increases the numbers of smokers trying to quit. Persuading smokers to get support with their quit attempt increases their chances of success greatly.

Figure 6 below illustrates the percentage of treated smokers quitting smoking at 4 weeks in Cardiff and Vale of Glamorgan.

Figure 6: The percentage of treated smokers quitting smoking at 4 weeks, Cardiff and Vale of Glamorgan 2006-2016



Source: Stop Smoking Wales. Cardiff and Vale UHB

An alternative to tobacco – the rise of 'E-Cigarettes'

Nicotine Replacement Therapy (NRT), developed and licensed as medicines to aid smoking cessation remains the main substitute nicotine product. The range includes patches, chewing gum, lozenges, nasal spray, oral pouch, oral spray, oral strips and 'inhalators (also known as 'E-Cigarettes')'. There is strong evidence that NRT can be an effective tobacco smoking cessation therapy (1). However, the use specifically of 'E-Cigarettes' has not been widely adopted by public health professionals across the UK. Originally developed in China in 2003, in 2015 over 20% of smokers in England reported using e-cigarettes – either as a substitute for smoking cigarettes or in addition to regular smoking (2).

As these products contain nicotine (via a 'cartomiser' a section of the device that contains a nicotine solution, flavouring and a vaporiser) - nicotine addiction is possible. Early evidence suggests that addiction potential of e-cigarettes is likely to be low (3). The emerging evidence also suggests that e-cigarettes may satisfy smokers. However, they have little appeal for never-smokers (3).

Since 2013, the proportion of young people who have tried e-cigarettes has increased from 5% to 13%. However, the 2014 Welsh Health Survey showed that young people aged 11-15 who have

ever used an e-cigarette are 20 times more likely than never-users to have ever smoked suggesting the use of e-cigarettes is limited almost entirely to those who are already smoking tobacco.

Quitting sugar

Quitting sugar can be difficult as it is often hidden in processed food. There is lots of information and support available to us to help take steps to reduce the amount of sugar we eat and drink. The Change4Life website and Sugar Smart app have practical tips to help us to keep below seven sugar cubes per day.

There is also more to be done with the food and drinks industry to reduce the amount of hidden sugars. Further restrictions on advertising and promotions will also help to make the healthy choice the easy choice. The UK Government is one of the first to bring in a 'sugar tax' on soft drinks, which will come into force in 2018. Based on the same sugar tax introduced in Mexico, it is hoped this will reduce the amount of sugary-soft drinks we buy, particularly in our more deprived communities (4). We know that foods and drinks high in sugar appear to be eaten instead of other foods; therefore efforts to reduce sugar intake should be linked to efforts to increase the intake of fruit, vegetables, pulses and wholegrain cereals (5).

Habits or Addiction – both can be cracked! The easier the healthy option is, the more likely we are to take it!

So habit or addiction, it is quite possible for us to crack either. It is quite possible for us to become healthier. It is clear that the easier healthier choices are for us the more likely we are to take that choice.

It is also a truism that none of us want poor health, so why don't we automatically reject behaviours that damage our health? We know that the more we recognise and understand our actions, the more we talk about our actions and their consequences the more likely we are to alter behaviour. Seeking support as we try to alter our habits and addictions gives us the greatest opportunity of success.

We all have a role, come on, take up the challenge ..... a really healthy Cardiff and Vale of Glamorgan!

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Notes