



Llywodraeth Cymru
Welsh Government

Gambling with our Health



Chief Medical Officer for Wales
Annual Report 2016/17

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Introduction

Dear First Minister,

I am pleased to present this, my second Chief Medical Officer's (CMO) report to be published since I took up post in August 2016.

As CMO I have three roles: to advise Ministers and the Welsh Government on health issues; to act as Medical Director for the NHS in Wales; and to act as an advocate on health for the people of Wales. In this year's report I have tried to capture all these elements in the hope that it will be widely read and that many people in Wales will find within it something of interest.

The health experience of people in Wales is something that we need to track over time. Chapter One provides an overview of this experience using internationally comparable outcomes (for example, life expectancy and the amount of life we spend in good health), behavioural factors which impact on our health (for example our smoking, drinking, and eating habits), and the living conditions which allow us to live healthy, active lives (examples are our financial standing, housing, access to work and educational attainment). There is a good news story to be told in Wales. Many of our health indicators continue to improve. Chapter One is really just a snapshot of our health status as many of these areas have been covered in greater depth in previous CMO reports. Readers who hunger for a more in-depth understanding of recent trends in the health of Wales can find more detailed statistical information in Annex B.

I am intending to use my annual reports to highlight areas of emerging or underestimated public health importance, and so Chapter Two of the report shines a spotlight on the relationship between gambling and health. I returned to the UK last year after four years of working in the Canadian public health system and was immediately struck by the huge

expansion of advertising for gambling products, which has quietly occurred during my absence. My international experience has convinced me that, while it can be a source of national revenue and harmless fun for some people, gambling has great potential to cause harm to individuals, families, and society. We know quite a lot about this issue but there are still big gaps in our understanding and so my report calls for better research and monitoring of the impact of gambling on health, and for greater regulatory control in Wales and the UK.

And to round off this year's report we should not forget the burden of ill health or the risk to health that is posed by infectious diseases, environmental issues and major incidents. Chapter Three gives an overview of the work that is being done in Wales to manage and contain these risks to health of our people and our communities.

Finally, First Minister, I see this report as an important contribution to the delivery of the ambitions which you have laid out in your Government's strategy "Prosperity for All". Providing everyone in Wales with the opportunity to be as healthy as possible is a worthy goal indeed.

Dr Frank Atherton
Chief Medical Officer for Wales



Chapter 1

The health of Wales



1 Our changing population

The population of Wales is currently 3.1 million and continues to grow¹. Over the next 20 years it is anticipated to increase by five percent².

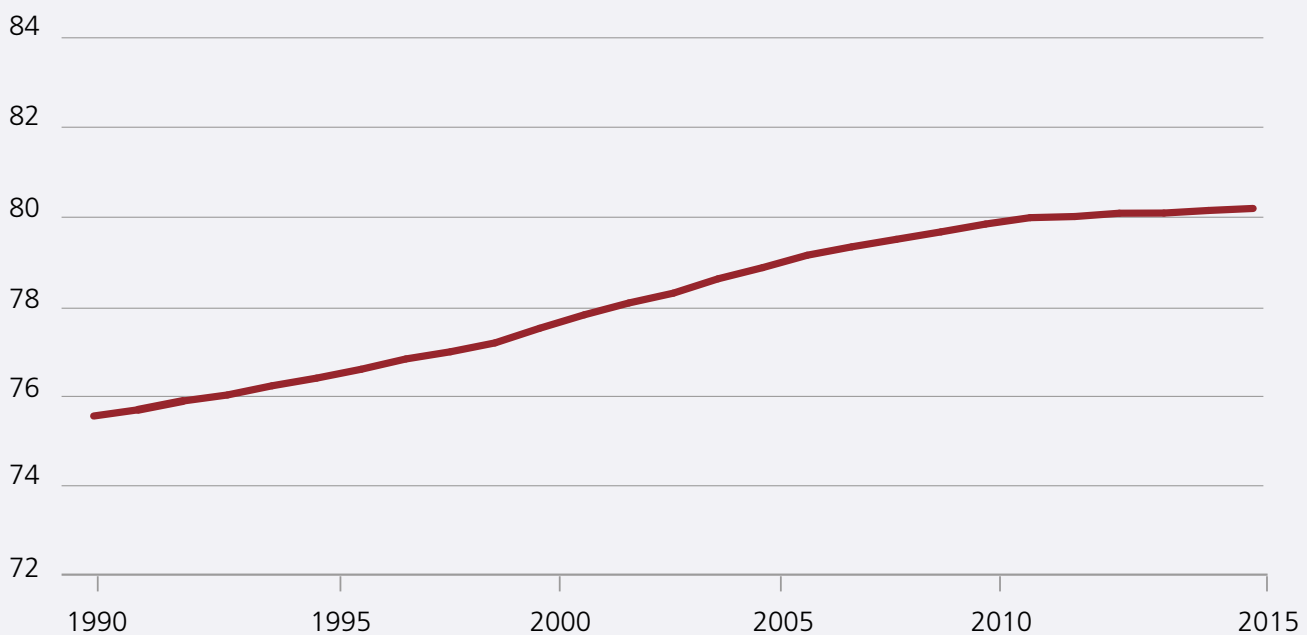
The increase in population will not be spread evenly. During this time period, the percentage of those aged 65 and over is set to increase from 20% to just over 25% of the entire population³. The population of those aged 75 and over in Wales is projected to increase by 50% between 2014 and 2030; increasing from 9% of the population in 2014 to 13% in 2030⁴.

The number of young people is also expected to increase up to the year 2023, then fluctuate slightly over the next 16 years, although it is expected this group will continue to account for around 18% of the population over this period⁵.

There will be geographical variation too. For instance, we expect the local authority of Cardiff to continue its growth trend with a projected growth of 22.3% between 2017 and 2039 (an additional 81,000 people), which would make Cardiff the fastest-growing Welsh local authority in percentage terms compared with the average growth for Wales of 4.6%⁶.

Figure 1: Life expectancy at birth in Wales 1990-2015

Source: Public Health Wales Observatory, using Global Health Data Exchange (IHME).



2 Living longer

Overall life expectancy (at birth) continues to rise, to 78.4 years for males and 82.3 for females (average for 2013 to 2015)⁷.

There are also significant differences in life expectancy and healthy life expectancy between the most and least deprived areas; with around an eight-year gap in life expectancy and around an 18-year gap in healthy life expectancy⁸. These stark differences were the focus of the 2016 CMO report⁹ and show no sign of reducing yet.

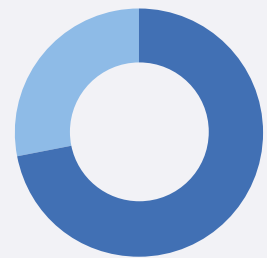
3 Living well

Most adults report good general health. 72% of over 16s reported being in 'good' or 'very good' health¹⁰ in the *National Survey for Wales 2016-17*.

This figure varies across NHS Health Boards in Wales, with the proportion of adults who reported being in good or very good health ranging from 68% in Cwm Taf Health Board to 78% in Powys Teaching Health Board¹¹.

General health

72%
(7 in 10)
reported 'good'
or 'very good'
health



4 The burden of disease

Despite these figures, we know from the same survey that nearly half of adults report having a longstanding illness (with 21% reporting two or more illnesses). The proportion of adults who report having longstanding illnesses increases with age and deprivation. In 2016/17, musculoskeletal disorders (17%) and heart and circulatory-related illnesses (13%) were the most commonly reported complaints.

Overall, the percentage of adults being treated for at least one condition increased slowly between 2004 and 2015. Conditions in which there was some increase include diabetes and mental illness. Others (such as arthritis and heart conditions) showed a slight decrease¹².

When considering the impact of disease at a population level, we often use the construct of ‘disability-adjusted life years’ (DALYs). One DALY can be thought of as one lost year of ‘healthy’ life. The sum of these DALYs across the population can illustrate the gap between current health status and an ideal health status where the entire population lives to an advanced age, free of disease and disability¹³.

Wales has a comparatively high cancer DALY rate compared to most UK nations. It accounts for an estimated 167,000 DALYs a year (19%) and has shown little change since 1990¹⁴.

Cardiovascular disease is associated with an estimated 147,000 DALYs a year (17%); however, over the last 15 years there has been a dramatic fall in the burden of disease due to cardiovascular disease (a fall of 44%) and it is no longer the leading cause of DALYs. In addition to cardiovascular disease, gains have been made in DALYs caused by external causes and neonatal disorders¹⁵.

Communicable diseases contribute 4% of DALYs to the burden of disease. Influenza is responsible for one of the highest burdens of disease of all infections, with 4% of the population of Wales reporting influenza-like illness symptoms at the height of the flu season, accounting for 3,000 DALYs¹⁶.

Hepatitis C and *Clostridium difficile* join influenza as important causes of DALYs for communicable diseases in Wales.

5 The early years

Wales’ infant mortality rate (3.7 per 1,000) remains low in historical terms.¹⁷

There are a number of contributory factors to this, including low birth weight. The percentage of single live births with low birth weight reduced gradually over the last decade.

Immunisation rates for children have risen over the past decade and most children in Wales are fully vaccinated. However, in 2016/17, 15% of children had not received all of their recommended routine vaccinations by their fourth birthday¹⁸, meaning they were not fully protected from vaccine-preventable disease by the time they started school.

In 2015/16, the majority of children in Wales were of a healthy weight. However, 28% of boys and 26% of girls were either overweight or obese.¹⁹

In 2016/17, National Survey for Wales results provided a number of markers of health-related lifestyle factors for children (aged 3 – 17), including:

- 73% ate fruit every day
- 62% ate vegetables every day
- 11% drank sugary soft drinks every day
- 51% were active every day
- 81% spent at least two hours watching television or using a laptop, tablet or other device on a weekday

There are clear inequalities in child health outcomes. Children in the most deprived areas are half as likely to be breast fed²⁰, twice as likely to be of low birth weight²¹, and twice as likely to have decayed, missing or filled teeth (DMFT) than children in the least deprived areas²².

6 Ageing well

Wales has a higher proportion of older people than the rest of the UK. We also know that, as we age, we are more likely to develop chronic conditions and to become frail.

This will invariably lead to a greater demand on our health services over time. For example, if current trends continue, the total number of people in Wales aged 65 and over who are predicted to be admitted to hospital because of a fall, is set to rise from 14,415 in 2015 to around 25,500 by 2035²³.

As well as putting pressure on our health services, the number of those receiving residential services, and who are aged 65 and over, is also set to increase from 11,305 in 2015 to 22,500 by 2035²⁴. In order to be able to respond in an appropriate and proportionate way, we need a coordinated, whole-system approach for older people with care and support needs.

The Programme for Government²⁵ makes clear our ambition to make Wales a dementia-friendly country and to publish a dementia plan for Wales, which will set out the actions to be delivered by the Welsh Government and partners to support people with dementia and their families/carers.

Evidence suggests, by adopting the six steps to a healthier lifestyle, a person can reduce their risk of developing dementia by up to 60%²⁶. Risk reduction and delaying onset will be a key theme within the dementia plan.

7 Health behaviours

Smoking remains a leading risk factor for early death and disability, and one of the main causes of health inequalities, having been identified as a leading cause for the gap in mortality rates between the most and least deprived areas. Public Health Wales estimate that smoking tobacco causes 18% of adult deaths in Wales and incurs costs of £386 million per year to the NHS and £791 million per year to the overall economy²⁷.

A major study²⁸ found that quitting smoking at the age of 60, 50, 40, or 30 years old gained an estimated 3, 6, 9, or 10 years of life expectancy respectively.

Those living in the most deprived areas have smoking rates which are consistently higher than those in the least deprived areas; typically at least twice as high.

Rates of overweight and obesity increased between 2004 and 2015.²⁹ There was little change in physical activity over the same period and a slight decrease in fruit, vegetable and alcohol consumption between 2008 and 2015.³⁰

Inequality gaps appear to be widening, with physical inactivity higher and fruit and vegetable consumption lower in the most deprived areas.³¹

For alcohol consumption, those in the most deprived areas are less likely to be drinking above the alcohol guidelines than those in the least deprived areas; however, harm from alcohol appears to disproportionately affect those in the most deprived areas³².

Chapter 2

Gambling-related harm: An emerging public health issue for Wales



1 Introduction

1.1 What is gambling?

Gambling has been defined as : *“Staking money or something of material value on an event having an uncertain outcome in the hope of winning additional money and/or material goods.”*³³

There are several dimensions to gambling including: the type of gambling activity; where the gambling occurs; how frequently gambling occurs; gambling expenditure; time spent gambling and the type of provider i.e. a commercial provider, a private individual, a charity, community, or not-for-profit group.

Examples of different types of gambling include:

- **Arcades** – often found in seaside resorts, for adults and/or families.
- **Bingo** – either online or at bingo halls.
- **Lotteries** – including local raffles, “Tombolas”, sweepstakes and the National Lottery.
- **Betting** – online or in high street bookmakers on a variety of sports and other activities.
- **Horse racing and dog racing** – at the track, at the bookmakers or online.
- **Casinos** – online or in a casino.
- **Machines** – including ‘fruit machines’ and fixed odds betting terminals. These are categorised in the UK based on the maximum stake and prize available.

1.2 The benefits of gambling

Gambling is a widespread and socially acceptable activity in the UK. It can provide social spaces for people to meet, and is enjoyed as a recreational activity by many. People can experience excitement when placing a bet, heightened pleasure watching a sporting event, and a thrill if they win. The gambling industry also offers employment and leisure opportunities and other social and economic benefits. Perhaps the most important benefit of the gambling industry is the tax revenues, which are considerable in the UK: in 2017 this

amounted to £2.7 billion³⁴. This income is used by the UK government to help fund its programme for government. However, the economic benefits of gambling need to be balanced against the social and health harms to people who gamble, their family, friends and wider society.

While most people who participate in gambling activities do so without any significant problems, for others gambling is problematic; causing damage to their health and to wider society. Gambling-related harm is the focus of this chapter.

2 Why is gambling a public health issue?

The aim of public health is to improve the health and well-being of the whole population. Gambling has the potential to cause harm, to both individuals and to wider society, and it is an issue that cannot be tackled by interventions solely aimed at individuals³⁵. The harm caused by gambling is unequal in distribution, with those who are economically inactive and living in deprived areas suffering the most harm³⁶. This has been understood in many countries across the world, including Canada, New Zealand and Australia, where the harm from gambling is a recognised public health issue. Gambling is an underappreciated public health issue in Wales and the UK.

2.1 A public health approach to gambling

Commercial gambling is now a global corporate industry. The availability of gambling products and platforms to diverse groups, and the developments in the infrastructure of game design, make gambling an immediate and rapidly evolving public health issue³⁷.

The public health approach aims to improve quality of life for all and to achieve health equity. This focus on equity is necessary as people living in areas of deprivation are more likely to experience gambling-related harm.

Public health action to reduce harm from gambling should not focus solely on individuals but should include a wide range of measures including advocacy, information, regulation and appropriate prohibition in a co-ordinated way³⁸.

2.2 Gambling-related harm

The benefits and harms experienced from gambling are variable. For example, a person who has a good income and plays the lottery once a week may experience little harm and some pleasure from playing the lottery. However, a person on a limited income who gambles to try and improve their financial position but experiences significant losses may experience a great deal of harm and little pleasure.

Not all gambling exposes people to the same level of gambling harm. Research has indicated some forms of gambling are associated with higher levels of gambling-related harm^{39,40} but causality has not been proven. The complexity of gambling means that individuals experiencing severe harm from gambling often gamble using several different products and channels⁴¹.

At a population level, there are lots of people experiencing small amounts of harm from gambling, and a small number of people that experience high levels of harm⁴².

Case study

Dean is 40, lives alone and works full time. He began to visit the ‘bookies’ in his twenties, betting primarily on horseracing and football. Eventually he began to play on fixed odds betting terminals located in his regular betting shops, particularly the ‘Roulette’ games. At this point his debts began to spiral out of control.

By the time Dean sought help, he already owed large amounts of money to his friends and family, with very little prospect of ever paying them back. He had rent arrears and owed his landlord thousands of pounds in extra loans; he had not received formal notice to quit, but his tenancy had come to an end and the landlord was in the process of renovating the property. There was a very real possibility that Dean would soon be made homeless.

Dean approached the Citizens Advice Bureau when his debts had left him on the point of homelessness and with an imminent court summons for unpaid council tax. By the time Dean was assessed by a debt caseworker, he had accepted the severity of his gambling addiction and was in the process of receiving support from the national gambling helpline *GamCare*.

The name in this case study from Wales has been changed to protect the identity of this individual. Anonymised case study provided, with permission from the individual, by Cardiff and Vale Citizen’s Advice.

Harm from gambling is found at individual, social (family and friends) and community levels. This includes financial hardship, psychological distress and interpersonal conflict or relationship breakdown. – Adapted from Browne et al. 2016⁴³

2.3 Who is affected by gambling-related harm?

The harms caused by gambling for the individual include anxiety, stress, depression, and alcohol and substance misuse⁴⁴. These factors are likely to have a wider impact on family and friends. Further family problems can include ‘money troubles’ and family breakdown, as well as neglect and violence towards any partner or children. There are higher rates of separation and divorce among problem gamblers compared to the general population⁴⁵.

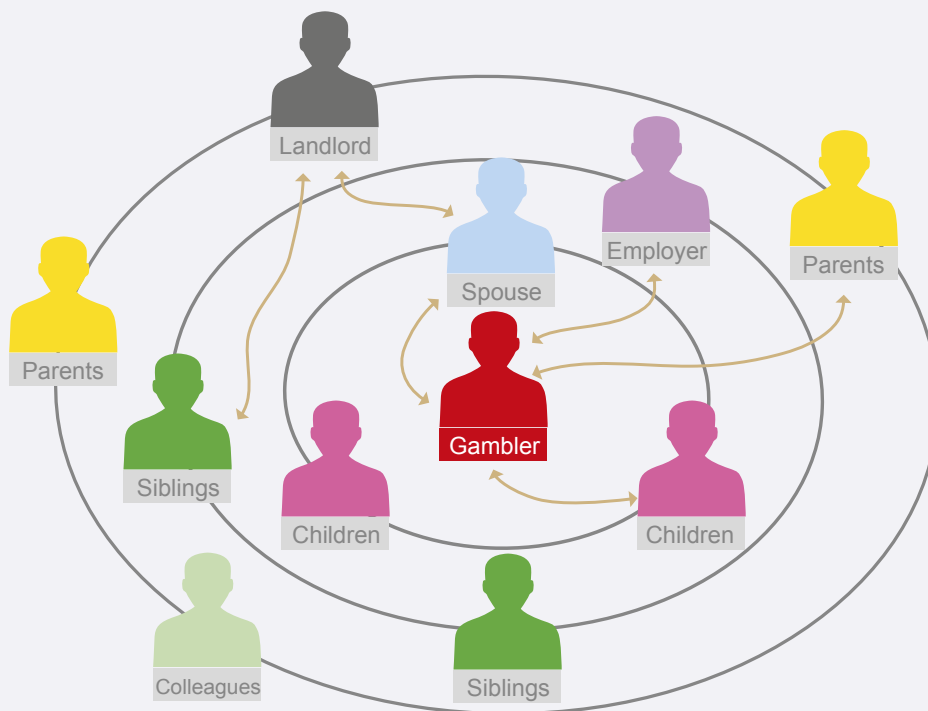
Further impacts of gambling include the inability to function at work, and financial problems which can lead to homelessness⁴⁶. The harms from gambling to wider society include fraud, theft, loss of productivity in the workforce, and the cost of treating this addiction⁴⁷. Gambling harm not only affects

the individual, but the family and wider society as illustrated in Figure 2⁴⁸.

2.4 The costs to society of gambling-related harm

The cost to society of gambling is hotly debated and, while there is no definitive sum which can be attributed to the cost of gambling in the UK, the Institute for Public Policy Research estimated the societal cost of problem gambling in 2016. Due to limitations in the data, these findings should be taken as an illustrative estimate of the excess costs incurred beyond those which are incurred by otherwise similar people. This study does not determine the causality between problem gambling and the incurrance of cost. The estimated excess cost of gambling for Wales is between £40 million and £70 million⁵⁰, which includes

Figure 2: The harm from gambling on family, friends and society



Interviewer: “So what’s the difference when mum’s gambling to when she’s not?”

13 year old boy: “Well now we get shopping whereas when she was gambling we didn’t used to get shopping, and we used to miss out on a lot of things, just normal things ... like in school I needed a jumper, I couldn’t get one of them, and I couldn’t go shopping.”⁴⁹

estimates for primary care (mental health) services, secondary mental health services, hospital inpatient services, Job Seekers Allowance claimant costs, lost labour tax receipts, statutory homelessness applications, and incarcerations. The costs listed represent those where data are available and is not an exhaustive list.

It has been reported that people who identified themselves as problem gamblers are twice as likely to consult their GP for mental health concerns, five times as likely to be hospital inpatients, and eight times as likely to access psychological counselling when compared with people who do not identify as problem gamblers⁵¹.

3 Gambling participation and distribution in Wales

In Wales, 61% of adults (around 1.5 million people) had gambled in the last 12 months. 63% of men and 59% of women report gambling participation in the past 12 months⁵².

In Wales, 1.1% of the population (30,000 people) self-reported as having a problem with gambling, using either the Problem Gambling Severity Index (PGSI) or the Diagnostic and Statistical Manual of American Psychiatric Association (DSM-IV).

A further 3.8% of people in Wales are estimated to be at risk of problem gambling⁵³. The problem gambling rate for men is 1.9%, and the rate for women is 0.2%⁵⁴.

3.1 Gambling harm is not evenly distributed across Wales

The UK has the tenth highest gambling spend per capita in the world⁵⁵ (net spending in the country’s legal forms of betting divided by the number of residents over age 16) and this equates to an average expenditure of approximately £200 per UK adult per year⁵⁶. However, this ‘average’ figure hides the significant expenditure of some individuals.

Figure 3: Participation in gambling and the prevalence of problem gambling in Wales during 2015, Gambling Commission.

(Source: Gambling Commission: participation in gambling and rates of problem gambling – Wales 2015)



The number of casinos in Wales is small and relatively stable. The number of people visiting casinos in the UK has increased significantly in recent years, from 18.2 million visits (2011/12) to 30 million visits (2014/15)⁵⁷.

3.2 Inequity of harm by socio-economic group

Research in England shows that the placement of gambling venues is not random: there are more gambling machines in deprived communities⁵⁸. Research has been commissioned by Public Health Wales to map out all the gambling venues across Wales, such as casinos and bookmakers. This work will include a visual ‘heat map’ showing the density of gambling venues geographically, which will highlight the areas where gambling venues are most heavily concentrated.

Gambling problems and harms impact the poorest in our society the most⁵⁹. Lower income households spend a higher proportion of their income on gambling⁶⁰. Increases in unemployment have been

associated with increased lottery sales; suggesting the very small chance of winning becomes more appealing for those without a regular income⁶¹.

Figure 4 shows people categorised as most deprived are more likely than those in the least deprived category to bet more than they can afford, to have experienced financial problems caused by gambling, and to classify themselves as being problem gamblers.

3.3 Young people

While young people are least likely to gamble, problem and at-risk gamblers make up 2% of people aged 11 to 15⁶², which equates to around 60,000 young people in the UK. Children who experience gambling in the household are four times more likely to gamble themselves than those who do not experience gambling in the household⁶³.

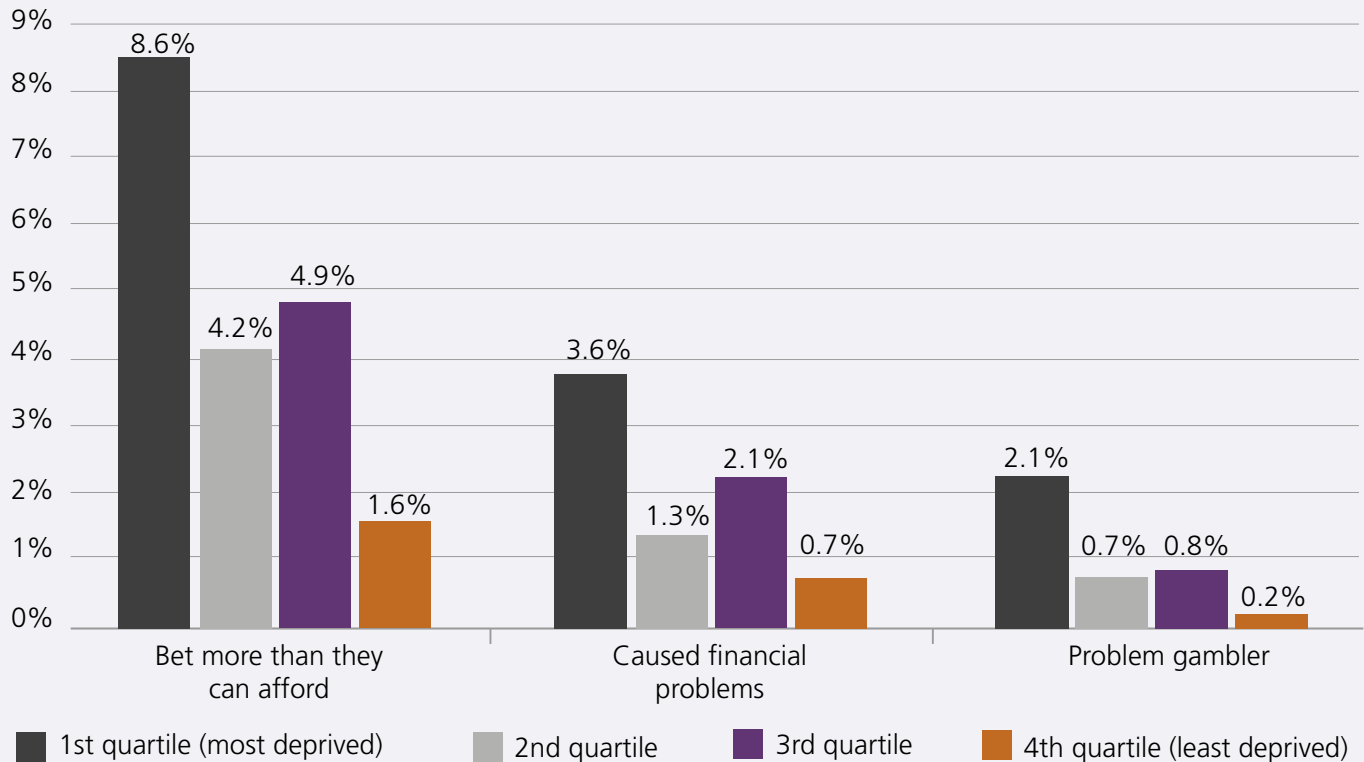
Young people are spending more time online⁶⁴. Indeed, 18-24 year olds report that they are more likely to have been prompted to gamble by adverts and posts on social media⁶⁵. No organisation is

specifically dedicated to building resilience in young people and discussing gambling with them. In Wales, 16% of children aged 11-15 had gambled in the last week⁶⁶. The most popular forms of gambling for children were fruit machines and placing bets with friends⁶⁷.

A number of questions on aspects of gambling behaviours among young people in Wales have been included in the *Health Behaviour in School-Aged Children/School Health Research Network* survey, offering the potential for trends over time to be observed.

Figure 4: Percentage of population in each socio-economic quartile reporting problems from gambling.

Source: Welsh Problem Gambling Survey, 2015 (Gambling Commission Presentation - Gambling and social status, 2016).



Every week, 450,000 children aged 11-15 years old in England and Wales report being involved in gambling. This represents 16% of this age group, compared with 8% consuming alcohol, 6% taking illegal drugs and 5% engaged in smoking⁶⁸. Whilst the harms accrued from each of these behaviours is different, these figures show the scale of gambling being reported in this age group.

3.4 Students

There is some international evidence from the United States of America that college or university students may be at greater risk of problem gambling than the general population⁶⁹. Universities in Wales often offer support for financial problems and addictions including gambling.

3.5 Veterans

International evidence shows higher rates of problem gambling amongst veterans than the general public. A small study in Wales, using data from 2007, indicates that this could also be the case in the UK. This relationship should be explored further with a larger and more recent dataset⁷⁰.

3.6 Gambling and other health issues

People with anxiety or mood-related problems often gamble. The nature of this relationship remains unclear as most studies review these symptoms at one point in time rather than following people over time, this means we do not know which occurs first.

The co-occurrence of alcohol and gambling problems has been well-documented⁷¹. Amongst people with alcohol misuse disorders, rates of problem gambling are eight times higher⁷². In addition, many people in a longitudinal study in Glasgow also documented that alcohol premises were often situated alongside gambling premises; providing an environmental association between the two types of behaviour that moves beyond the level of the individual⁷³.

“The gambling . . . yes the gambling, when I went through the drinking . . . a couple of months after my dad died and I was gambling more because I was in that vicinity, they both go together. There’s a pub, there’s a bookie and they’re right next to each other.” – Male, 30s⁷⁴

4 The development of the gambling industry

There has been an emphasis, since the liberalisation of gambling laws in 2005, by successive UK Governments to work with and encourage the gambling industry to behave responsibly, rather than introduce further legislation. During this period there has been a rapid increase in gambling advertising, the types of gambling products available, and participation in online gambling.

4.1 Gambling advertising

Advertising is designed to target potential customers, drive sales and increase profits for the organisation, whilst also developing the brand. There are some limitations on gambling advertising, including the prevention of the use of children in adverts. Prior to the Gambling Act (2005), gambling advertising was not permitted on television, with the exception of football pools, bingo premises and the National Lottery. Gambling advertising has increased rapidly since changes to the legislation in 2005. Television advertising increased from 152,000 adverts in 2006 to 1.39 million in 2012⁷⁵. Overall, the number of times an advert was seen by a viewer increased from 8 billion in 2006 to nearly 31 billion in 2012⁷⁶. There were 1.8 billion commercial gambling ‘impacts’ on 4-18 year olds in 2012 in the UK⁷⁷.

The gambling industry has voluntarily ended ‘sign-up offers’ on television before 9pm. The issue of

gambling advertising reaching children through social media and online advertising has yet to be addressed. Children are exposed to gambling advertising online, on billboards, through sponsorship of sporting events and teams, and through sporting personalities. There is a need to review exposure to advertising particularly for children. The Football Association has recently ended its relationship with the gambling industry after several high-profile players have been treated for gambling addictions⁷⁸. However, the English Football League and many of the Premier League football clubs are sponsored by gambling providers.

4.2 Gambling products

There is a growing number of gambling products that people can access: new games are developed and marketed by the gambling industry on an ongoing basis. There has been a growth across the world recently of ‘in play’ betting, which is often advertised on television whilst a match is in progress. This has been the focus of much work in New Zealand where they have developed strict criteria around this aspect of gambling.

The ways in which people gamble have also changed with the potential now for people to gamble via their smart phone, tablet or laptop/personal computer. This can be done at home and whilst travelling, in addition to the more traditional betting shops, bingo halls, casinos and amusement arcades. The gambling industry has been at the cutting edge of this technology, by developing new ways to place

bets and improve convenience and accessibility for the consumer. The variety and availability of ways to gamble in the UK has never been greater.

4.3 Fixed odds betting terminals

There has been much concern regarding fixed odds betting terminals placed in betting shops (category B2) where people can gamble up to £100 every turn, meaning they could experience significant losses quickly. The highest use of these machines is in the 16-24 year old age group⁷⁹ (legal age of use of these machines is 18). There are an estimated 1,500 fixed odds betting terminals in Wales⁸⁰. Restrictions on any bets of between £50 and £100 on these machines were introduced in 2015: this requires the individual to register for an account or agree this in person with the cashier. The impact of this is unclear⁸¹. Many of the machines allow users to set their own limits (either amount of time or amount of money) before they start playing but the uptake of this optional function is variable.

The Wales Act 2017 will provide Welsh Ministers and the Assembly with limited new powers in

relation to fixed odds betting terminals to reduce the maximum stake from £100 to £10 for the category B2 machines. The powers will not apply to betting premises licences issued where there is also a horse or dog race track, or any other place at which a race or other sporting event takes place. The new powers will only apply to new licences issued under the 2005 Act.

4.4 Online gambling

The fastest-growing method of gambling is currently online betting. In the UK, nearly 9 million adults gambled online in the last four weeks⁸². Gambling is now more accessible than ever, as it is available online with 24-hour access and is accessible at home, at work and using mobile phones/tablets whilst commuting. Online gambling is giving more people the opportunity to gamble with fewer restrictions. In Wales, the online gambling rate is 5.4% (those who had only played the National Lottery draws are excluded), with this being higher in men (8%) than in women (3%)⁸³. In Wales, 9.2% of online gamblers surveyed (excluding those who play the National Lottery) were identified as problem gamblers⁸⁴.



Laptops are the most popular device for online gambling



3.5 is the average number of online accounts held by respondents



50% of 25-34s who have gambled online have used a tablet or mobile

Source Gambling Commission: participation in gambling and rates of problem gambling – Wales 2015.

5 Who regulates gambling in the UK?

In order to establish what can be done to reduce the harm from gambling, it is important to understand who is responsible for making and enforcing laws in the UK and which other organisations are involved in the regulation of gambling.

5.1 Gambling legislation

Gambling legislation in the UK was liberalised in 2005. Gambling is regulated at the UK Government level, with one notable exception regarding the stakes in fixed odds betting terminals (from April 2018). The Gambling Act 2005 sets out how gambling in the UK is regulated, covering arcades, betting shops, bingo halls, casinos, individual machines, society lotteries and remote gambling operations.

The Gambling (Licensing and Advertising) Act 2014 came into force on 1st November 2014. Under this Act, remote gambling by consumers in the UK is now regulated on a point of consumption basis (i.e. where the gambling occurs). All operators providing gambling services to residents of the UK, whether based in the UK or abroad, are now required to hold a Gambling Commission licence and must pay Gambling Duty on all transactions with UK residents.

5.2 Organisations responsible for gambling in the UK

In addition to the UK Government, there are a number of other organisations in the UK that have responsibilities for gambling. They often work together and some have similar objectives. There is

a mixture of statutory and voluntary organisations that work in this field. This description is not all-inclusive but highlights some of the key stakeholders. The structure of organisations responsible for gambling is shown in Figure 5.

5.3 The Gambling Commission

The Gambling Commission was set up under the Gambling Act 2005 to regulate commercial gambling in partnership with licensing authorities in Great Britain. The Gambling Commission licence and regulate the people and businesses that provide gambling in Great Britain, including the National Lottery. The focus for the National Lottery is to ensure that play is fair and safe and that the money generated for good causes is maximised.

Figure 5: Main Organisations With Responsibilities for Gambling in Wales.



The overall licensing objectives for Great Britain under the Gambling Act 2005 are as follows:

- preventing gambling from being a source of crime or disorder, being associated with crime or disorder, or being used to support crime
- ensuring that gambling is conducted in a fair and open way
- protecting children and other vulnerable persons from being harmed or exploited by gambling

All licences are considered in relation to reasonable consistency with these licensing objectives.

5.4 The Responsible Gambling Strategy Board

The Gambling Commission established a separate 'Responsible Gambling Strategy Board' to set strategy and priority areas for research into problem gambling. The board is led by an independent Chair and has a broad membership, including representatives from academia and the public health field. The current strategy covers the period 2016-2019 and outlines twelve priority actions including: understanding and measuring harm; increasing understanding of the effects of product characteristics and environment; improving methods of identifying harmful play; educating to prevent gambling-related harm; and building quality of, and capacity for, treatment. The Board has no power to implement the recommendations directly but works to persuade and influence others.

5.5 GambleAware

GambleAware is an independent, national charity established by the Gambling Commission to raise money from the gambling industry through a voluntary contribution scheme. It also commissions research, provides education and supports treatment costs from the funding raised. GambleAware aims to raise £10 million each year from these voluntary contributions. This donation based system was proposed under the Gambling Act 2005 and is prescribed by the Gambling Commission in its Licence Conditions and Codes of Practice. GambleAware works closely with the Responsible Gambling Strategy Board. In 2012, a joint

'Statement of Intent' was produced to outline the arrangements for prioritising, commissioning, funding and evaluating services in relation to gambling-related harm. GambleAware fund national and local initiatives to help meet their three objectives:

- that the grant funding is awarded to cost-effective gambling-related harm support services
- that there is a clear understanding and articulation of value for money
- that there are effective 'service-user' focused outcomes

GambleAware has published a Commissioning Plan for the period 2017-2019, which sets out the need to shift the focus beyond the individual to include gambling products and the environment in which gambling occurs.

5.6 Welsh Government

The UK Government devolved the responsibility for health and health services to the Welsh Government. The Welsh Government employs civil servants across several departments that deal with different aspects of gambling, including planning, local government and public health and mental health teams. Gambling, as a policy area, falls within the portfolio of the Cabinet Secretary for Health and Social Services.

5.7 Local authorities

Local authorities in Wales have several responsibilities in relation to gambling. This includes the responsibility of issuing premises licences for gambling venues and permits for gambling operators (which allow low-stakes gambling in venues which are not primarily for gambling, i.e. pubs). Local authorities also register societies thereby allowing them to hold small lotteries, and they are responsible for all compliance and enforcement of the Gambling Act 2005 locally.

Local authorities also have gambling responsibilities in relation to their town planning function. Local authorities help to shape local communities by considering planning applications and applications for change of use of local shops.

5.8 Third sector

There are several third sector organisations that provide support to those experiencing harm from gambling. An example of this is ‘Rethink Gambling’, which aims to enhance the prevention, awareness and treatment of gambling addiction whilst promoting improved education and advocating a public health response to the issue. Further charities that operate in Wales are described later in this chapter.

5.9 The gambling industry

The gambling industry is well organised under several umbrella organisations, such as the Association of British Bookmakers. These umbrella organisations collaborate to represent the joint interests of their staff and shareholders. They have developed codes of practice, such as the ‘Responsible Gambling Code’, to which members must adhere. These umbrella organisations lobby to protect their collective

businesses and retain the jobs of those who work in the gambling industry.

5.10 Who is responsible for managing gambling-related harm in Wales?

Welsh Government, Health Boards, Public Health Wales and Local Authorities are responsible for assessing the needs and protecting the health of the people in Wales. Managing the harm from gambling to individuals, families, friends and society is the joint responsibility of these organisations. To date there has been limited opportunity for the agencies that are responsible for, or interested in, gambling-related harm to come together to assess gambling-related issues in Wales and to develop and improve services. There is a need to develop a forum in Wales at which gambling-related harm can be discussed, ideas and best practice shared, and where opportunities for bids for funding, to GambleAware and other funding bodies, could be initiated.

6 Prevention of harm from gambling

Any public health intervention would aim to reduce gambling harm and the inequalities in gambling harm. This could be achieved primarily by focusing attention on prevention of gambling harm through the adoption of evidence-based policies, at both a national and local level. There is much international evidence, for example, from Australia, New Zealand and Canada to draw upon^{85,86,87,88}.

6.1 Proximity and access

Proximity to gambling facilities has been correlated with increased participation in gambling, and problem gambling⁸⁹. The density of gambling outlets is also linked to greater gambling-related harm⁹⁰. The Public Health (Wales) Act 2017 allows health impact assessments, which could be used to require operators to show how they will mitigate risks and keep vulnerable and young people from experiencing gambling-related harm.

6.2 Primary prevention

Evidence of the effectiveness of primary gambling prevention is scarce⁹¹. Evaluations of school-based prevention programmes conducted in Canada show us that programmes can improve students’ knowledge and understanding of gambling issues⁹². However, the impact on gambling behaviour is uncertain as these children have not been followed over time. There is a need, therefore, to develop and evaluate interventions and monitor subsequent actions to understand the impact that any intervention has on both gambling behaviour and related harm. Longitudinal research is needed on the effectiveness of primary prevention interventions.

6.3 Consumer protection

There are a range of consumer protection measures already in place in Wales and further measures that could be introduced. Environmental conditions, such as the proximity of gambling venues to schools and the availability of alcohol in the venue, are often considered as part of the licensing process. Further environmental issues, such as clustering of venues, proximity to banking machines, and hours of operation could be further considered.

There are different protection measures required for online gambling, including age verification checks; restrictions on direct marketing to consumers; and limit setting tools (to set agreed time and monetary limits). Online gambling is well established in the UK, but in other countries, such as the United States of America, the activity is much more restricted. Further research into effective consumer protection measures suitable for Wales, would be useful to drive evidence-based policy.

6.4 Controls on gambling advertising

The rapid increase in gambling advertising since the liberalisation of gambling legislation in 2005 is designed by the gambling industry to promote new products and drive increased sales. There is a clear research need in this area to determine the effect of increased advertising on the level of gambling-related harm in the UK, and the effect of increased sponsorship of sports on gambling-related harm.

6.5 Self exclusion

'Self exclusion' is where an individual agrees with a gambling provider to be excluded from use of their services/products for a set length of time (usually between six months and five years). By law, this must be provided as an option by gambling operators in the UK. It is a tool used to prevent further harm from gambling and is therefore often described as a form

of harm minimisation. New multi-operator schemes are being introduced across the gambling industry to allow gamblers to exclude themselves from multiple forms of gambling (arcades, betting shops, casinos, online gambling and bingo halls) across the UK. This should mean all forms of marketing to these individuals ceases. It is reasonable to suspect that many of those who elect to exclude themselves are motivated to do so in order to reduce their gambling activity or have reached a breaking point; the 'value added' by the self-exclusion is not known⁹³. Self-excluders show long-term reductions in gambling behaviour, but it is not possible to know how much of this is due to the self-exclusion programme and how much is due to natural recovery or other interventions and support⁹⁴.

6.6 Fixed odds betting terminals

The concerns regarding fixed odds betting terminals include the ability to lose large sums of money in a short space of time and the nature of the experience leading to large individual losses at some point for regular users. There has been pressure from campaigners to reduce the speed of play, to lower the stake, and to increase player protection for users. The gambling industry's counter argument to this is that people can place large bets online without restrictions and that reducing the stakes may impact the number of jobs in the gambling industry.

Case study: New Zealand problem gambling levy

The 'problem gambling levy' is set under the Gambling Act 2003 to reimburse the Government for the costs of the problem gambling integrated strategy to prevent and minimise gambling harm. The levy is collected on the profits of New Zealand's four main gambling operators: gaming machines in pubs and clubs, casinos, the New Zealand Racing Board and the New Zealand Lotteries Commission.

The levy is set every 3 years, with the formula used for calculating the levy rates for each sector specified by the Gambling Act 2003. The levy is calculated using rates of player expenditure (losses) on each gambling subsector and rates of client presentations to problem gambling services attributable to each gambling subsector – so reflects money lost and associated harm. The Levy is reviewed every 3 years. For 2013-16 – the levy ranged from 0.3% for the Lotteries Commission to 1.3% for Gaming Machine operators.

“It is the shame where you can’t share it with other people. Obviously there is a high level of shame with gambling because people in my position, my family, friends and everything else they can’t empathise with it and I don’t want them to empathise with it. But that problem means that you feel shame and you feel guilt and that makes you feel worse”. – *Male, early 30s*⁹⁵

7 Access to support for those experiencing gambling-related harm in Wales

People experiencing harm from gambling should be able to access evidence-based treatment quickly to aid their recovery. This raises questions of which interventions are evidence-based and how accessible they are across the whole of Wales. There is a need to work with the National Institute for Health and Care Excellence (NICE) on producing an evidence-based guide to treatment options for people experiencing gambling-related harm.

7.1 Reducing stigma

There is a great deal of stigma and shame associated with a gambling addiction. This shame has been identified as a reason for people not seeking help and support⁹⁶. The number of people who come forward to seek treatment in the UK is low compared to the numbers of gamblers experiencing harm. Seeking treatment is usually driven by a crisis^{97,98}. Families experiencing harm from gambling may also require help and support⁹⁹. There is a need to reduce stigma associated with the harm from gambling in the UK. This may require reframing the responsible gambling message, which places the onus firmly on the individual, rather than allocating any responsibility for the harm from gambling with the complex environmental factors that influence an individual’s behaviour¹⁰⁰.

7.2 Referrals for treatment

As this is an emerging public health issue in Wales, the services available in Wales for people experiencing harm from gambling are patchy, and the pathways for referrals to services are not yet well developed. A range of professions may come into contact with gamblers, including alcohol and drug treatment providers, social workers, general practitioners, debt counsellors and criminal justice

professionals. They could play a role in identifying individuals who might benefit from support and signpost them on to appropriate services¹⁰¹. An example of how this works in Cheshire is described on page 22.

7.3 Brief intervention advice

Some GPs in Wales offer brief interventions to help support people experiencing gambling-related harm but this is not currently widespread. It is recommended that GPs screen high-risk individuals (those reporting financial problems) and arrange specialist treatment¹⁰². However, there is a clear time constraint for GPs in the 10-minute consultation available. There are examples of brief interventions (less than 15 minutes) that have some evidence of efficacy, for example Petry’s “three step approach”.¹⁰³

7.4 Telephone or face-to-face counselling

GamCare provides free confidential advice for individuals seeking help with gambling-related problems and is available across the whole of the UK. It provides an online chat service, online internet forum and individual telephone counselling from 8am to midnight, seven days a week. For people who are deaf or have hearing problems, there is a text line service, and telephone interpreters are available for those who wish to use languages other than English. The service providers for Wales are based in Liverpool and Bristol for those based in North Wales and South Wales respectively. GamCare offers face-to-face counselling, individually or in groups, in South and North Wales, however there is limited opportunity for face-to-face counselling outside of these areas.

7.5 Local counselling

If people consult their GP for advice and support, this can be provided either by specialist addiction nurses, counsellors or psychiatrists. The criteria for NHS intervention depend on the level of need and the level of impact the behaviour is having on both the individual’s mental health and on broader society. Standard treatment is cognitive behavioural

Case study: Cheshire Constabulary Project Pathway: Breaking the Cycle of Offending

Cheshire Constabulary have identified an academically approved screening tool devised by GambleAware for gambling offender identification and management. The force had identified that cases of fraud were on the rise – with a large number of cases linked to problem gamblers. As a result, a police and prison pathway was developed within Cheshire Custody Suite and HMP Risley.

The integrated treatment pathway involves a full assessment with progression into treatment for individuals where problem gambling has been identified. Screening is undertaken by professional staff in custody and prison. The treatment support framework includes direct access to a counsellor within 48 hours and a face-to-face appointment within a week.

Cheshire Constabulary has proposed within their Criminal Justice processes that persons who are identified as having committed crime to fund their problem gambling will have the opportunity to enter into treatment as part of a Community Resolution and Conditional Caution alternative outcome.

Cheshire Constabulary are currently developing a Self Exclusion mandated referral process, which will be available in the future to persons who have committed low level crime to fund their problem gambling as an additional sanction within the Criminal Justice system, similar to what is available to persons presenting with drug and alcohol problems.

therapy (CBT). There is good evidence that cognitive behavioural treatments can reduce gambling behaviour over the long-term¹⁰⁴. Both one-to-one and group approaches appear to be effective for a range of gambling behaviours¹⁰⁵. Technology may create potential for treatment providers to develop different forms of intervention¹⁰⁶, for example, online CBT. There is also evidence which shows some positive effects from the use of motivational interviewing, either alone or in combination with cognitive-behavioural approaches¹⁰⁷. Treatment should respond to the needs of the person and where there are other co-existing problems, such as alcohol or drug misuse, they should be taken into consideration¹⁰⁸.

7.6 Specialist services

Currently, there is only one specialist service providing treatment in the UK, which is based in London, and can treat approximately 700 people a year. With around 430,000 adult problem gamblers in the UK, there is a clear gap between need and services¹⁰⁹. However, there are also indications of a high level of self-recovery from problem gambling¹¹⁰.

7.7 Pharmaceutical approaches

Drugs are not commonly prescribed for gambling addiction as the evidence of effectiveness is inconclusive¹¹¹. There is conflicting information about the use of drugs in gambling addiction. There is only one systematic review of drug therapies for problem gamblers, which shows that antidepressants, opiate antagonists and mood stabilisers could be an effective treatment for problem gamblers¹¹². Further research on controlling symptoms is underway. There is clearly a research need in this area.

7.8 Third sector provision

There are a number of third sector organisations which provide help, support and advocacy services for gamblers and their families. Some third sector organisations also fund research into gambling and all work tirelessly to reduce the consequences of gambling on families and wider society. Some services are run directly from funding provided by the gambling industry (for example, via GambleAware) whilst others are funded from charitable donations.

Case study: The Living Room – Beat the Odds Initiative

The Living Room, a community based recovery centre, is located in Cardiff. The charity provides services for problem gamblers in Wales through its ‘Beat the Odds’ initiative. This includes: increasing prevention and intervention efforts to reduce gambling-related harm; raising awareness of the help available for excessive gambling problems; and tackling the barriers which may prevent gamblers from seeking help.

‘Beat the Odds’ provides an online self-help programme as an alternative or in addition to face-to-face counselling, working with mental health, alcohol and other drug and harmful behaviours sectors to provide integrated care for excessive gamblers with co-occurring addictions. The aim is to support recovery from excessive gambling in the local community by building greater awareness and providing advice and support to problem gamblers, family members, partners and friends who have been affected by these addictions.

Activities include counselling and debt management advice.

The gambling support group, Gamblers Anonymous, provides further information and support, and has a few groups that meet in South Wales. The Citizens Advice Bureaus across Wales are often the first port of call for people in financial difficulties, and the ability to identify and offer support to people experiencing harm from gambling is variable but improving. Newport Citizens Advice Bureau has been successful in their application to GambleAware to expand the support that they can offer local residents.

The Gordon Moody Association is a registered charity with over 40 years experience of providing residential support and treatment. They have two centres in the UK (West Midlands and Kent) and have recently introduced residential treatment for women.

They also provide halfway houses and online support for ex-residents. They encourage friends and family to establish contact to learn how to best support the process. They accept self referrals and referrals from professionals, friends and family as long as the person being referred agrees.

Other charities, such as the Samaritans provide services for people to talk about problems in a confidential space which may also be of help to people experiencing harm from gambling.

7.9 Help for families

There are a few support groups for the families and friends of problem gamblers that run in Wales, such as ‘GamAnon’. These groups are currently located in South Wales only. However, third sector organisations working in Wales are looking to expand this provision.

Case study: Citizens Advice Bureau Newport

Newport Citizens Advice has been funded by GambleAware to deliver a gambling harm minimisation project in Wales. The project aims to tackle gambling-related harm at its root through education and awareness with young people and other vulnerable groups, as well as via the agencies and statutory bodies who offer help to these groups. In addition, the service provides a range of support services for clients, from information and brief advice to extended one-to-one brief interventions. The service can offer holistic support through the wider Citizens Advice partner network (for example giving debt and housing advice) and making referrals into other established services, should longer term, in-depth support be required.

8 Future trends

It is important not only to understand the issues that face society today, but to consider and identify future issues too. The next generation are spending long periods of time on electronic devices, with most having access to the internet. This section explores this issue in more detail.

8.1 Online gaming and gambling

Online gaming is different from gambling: online gaming is when people play games against other internet users, but crucially there is no opportunity to win or lose money. However, there has recently been a blurring of the lines between online gaming and gambling, as users are able pay money to play games where they can then win online prizes or tokens, which can subsequently be sold online.

Some gambling sites have practice games where no money is wagered. These practice games may have inflated win rates which may lead to unrealistic expectations of the ability to win¹¹³.

The Gambling Commission (2015) identified the following risks with social gaming:

- **Problem gambling type risks** (i.e. similar harms to problem gambling):
 - People, especially young people, spending large amounts of time
 - People, especially young people, spending large amounts of money
- **Transitional risks** – social gaming (through development of positive attitudes, normalisation, development of unrealistic expectations, exposure to advertising) increases:
 - Young people’s participation in real money gambling
 - Adult participation in real money gambling
- **Consumer protection type risks** (e.g. misleading information or scams).

9 Research into gambling

In the UK, the system of funding gambling research that has been established is primarily from money originally sourced from the gambling industry, which is then distributed by GambleAware. Whilst there are new strengthened research governance procedures and a restructured Board with an independent Chair of GambleAware, there are still concerns from some regarding potential conflicts of interest that this may cause.

There are available funding streams open to researchers in Wales, funded by the Welsh Government and others, that could be used to fund research in this area.

9.1 Research strands

The Responsible Gambling Strategy Board has established twelve priorities for research in the UK, including the need to understand and measure harm, and increase understanding of the effects of product characteristics and environment.

In Wales, there are several institutes and researchers with an interest in different aspects of gambling. Public Health Wales has recently commissioned work on gambling, from Bangor University and Swansea University, which, amongst other things, will produce a map of the locations of gambling venues across Wales. Having researchers in Wales who are already working in the area of gambling is an opportunity that could be capitalised upon.

9.2 Longitudinal study

Researchers based in Sweden conducted a longitudinal study of gambling habits, and calculated that about 100,000 new people become problem gamblers each year, though the total number of problem gamblers at any time was fairly static¹¹⁴. This indicates that there was mobility out of this category or ‘churn’. One in five of the new problem gamblers was a relapsed problem gambler indicating that people experience different levels of harm from gambling over time¹¹⁵. There is a need for high-quality, longitudinal research in Wales on gambling to explore this issue further.

9.3 Data collection

Data collection on the number of problem gamblers currently occurs in England and Scotland through national surveys, however the Gambling Commission has produced data for Wales, albeit not through existing national surveys. To date, questions have not been included in the National Survey for Wales or its predecessor surveys. It would be helpful to be able to assess the numbers of problem gamblers in Wales over time using a method that allows comparison

to the other countries of the UK. This data set would also be useful to record changes over time if interventions to reduce the harm from gambling are introduced in Wales. Data on the number of suicides or suicide attempts related to gambling are not recorded and are difficult to determine, as often people are affected by multiple issues. Further routine data sets for Wales on gambling advertising and gambling-related harm may also prove beneficial.

10 Conclusion

Gambling is an emerging public health issue in Wales. The scale and impact on families, friends and wider society warrants further work in this area to agree a framework for action to reduce the harm from gambling.

The initial scoping of services to support people experiencing harm from gambling in Wales has highlighted the likely need for further services to be developed in order to meet current need. In addition, if stigma around the harm caused by gambling is reduced, further individuals and families might come forward for support and increase demand in this area.

The lack of evidence around preventing gambling-related harm in young people shows that further work in this area is needed. This should follow people over time to review the long term impact on gambling behaviours and gambling-related harm. There is a strong research community in Wales with

an interest in various aspects of gambling, which provides an opportunity to further develop high-quality, independent research in this area.

There is much activity being undertaken in Wales, especially by a variety of third sector providers. Currently, the funding drawn down for research, prevention and treatment around gambling is limited. There is an opportunity to expand this through a forum of interested parties to collaborate, share evidence and best practice, and bid for further research funding. The Public Health Improvement Research Network (PHIRN) in Wales may also play a role in bringing research partners together.

There are a number of cultural factors that influence policy development, such as how society views different topics and the amount and type of coverage in the media. There is evidence that public views of gambling have changed over time. This offers an opportunity to reconsider the current policies and whether they are meeting the needs of society as a whole.

Changing attitudes towards gambling from 2010 to 2016

Proportion of people who believe:

- “gamblers should be able to gamble whenever they want to” **DOWN** from 78% to 67%.
- “gambling is dangerous to family life” **UP** from 62% to 69%.
- “gambling should be discouraged” **UP** from 36% to 55%.

– *Gambling Commission Annual Report, 2016/17*¹⁶

11 Recommendations

1. Population approach

- a. Welsh Government and partners such as Public Health Wales should drive a shift in thinking from an individual approach to a population approach to tackle the harm from gambling.
- b. Welsh Government should convene a task and finish group of those involved in tackling gambling-related harm in Wales, free from the influence of the gambling industry.
- c. The task and finish group should agree a strong and ambitious action plan to reduce gambling-related harm across Wales.
- d. The task and finish group should improve the co-ordination and promotion of existing prevention and treatment services.
- e. The research into spatial distribution of gambling venues, currently being undertaken in Wales, should be made available to local authorities to influence planning and licensing decisions.
- f. Local authorities should be supported by Welsh Government and relevant partners to use the Public Health (Wales) Act 2017 to implement a health impact assessment process for all new gambling venues in Wales.
- g. Specific supplementary planning guidance to consider the environmental issues related to gambling should be developed for Wales.

2. Prevention

- a. Welsh Government should make maximum use of all existing powers to minimise the harm from gambling, and should seek to extend these powers where appropriate.
- b. 'Change of use of premises' regulations should be reviewed for gambling venues.
- c. Welsh Government should use the new powers being introduced from April 2018 (under the Wales Act on fixed odds betting terminals) to maximum effect.

- d. Welsh Government should lobby UK Government to introduce all evidence-based player protection options, for example, reviewing the evidence of reduction of the speed of play on fixed odds betting terminals, and putting restrictions on in-play betting promotions.
- e. Consideration should be given to adding gambling-related harm to the current 'Making Every Contact Count' initiative that runs in Wales.
- f. GPs should be offered brief intervention training for gambling-related harm.

3. Treatment

- a. A range of front line staff, including police officers, debt counsellors, the judiciary and others, should be trained to identify gambling-related harm and develop new pathways to help people out of the spiral of debt and crime that can be associated with gambling.
- b. Welsh Government should work directly with UK partners to influence a full review of evidence by the National Institute of Health and Care Excellence (NICE) on treatment options for people experiencing gambling-related harm.
- c. The health service in Wales should improve the treatment options available to those who are experiencing significant harm from gambling including young people, students and veterans.
- d. Clear care pathways for the treatment of gambling-related harm are required with transparent access criteria across Wales, including services for people with multiple health issues.
- e. Treatment services should be convenient and equitable, in terms of location, gender, age and socio-economic status.
- f. Support for families of those experiencing significant harm from gambling should be provided in Wales. The 'ripple effect' of gambling harm can mean friends and family are highly impacted.

4. Research and understanding

- a. Welsh Government should lobby UK Government for a compulsory levy to be introduced in the UK and for funding to be distributed across the UK, based on need, by a fully independent body.
 - b. This compulsory levy should support harm minimisation, prevention, evidence-based treatment options and research into gambling-related harm.
 - c. The Public Health Improvement Research Network should play a role in bringing research partners together across Wales to develop bids to UK research funders to undertake further research in Wales. This should address the need for a high-quality longitudinal study in Wales.
 - d. Wales should develop high-quality surveillance tools on gambling-related harm, for example, by including questions on gambling in the National Survey for Wales to allow comparable data on the prevalence of gambling with the rest of the UK, or for the National Problem Gambling Survey to be repeated in Wales at regular intervals. Questions should also continue to be included in the Health Behaviour in School-aged Children/ School Health Research Network surveys to monitor and understand gambling behaviours among young people.
 - e. Wales should maintain links with other countries that have more advanced public health positions on gambling, and continue to learn from them, implementing best practice wherever possible.
 - f. A review of international evidence on the restrictions that are possible and effective in reducing the harm from online gambling, should be undertaken.
- b. Welsh Government should continue to urge UK Government for stronger action on placing restrictions on gambling advertising (especially online); improving consumer protection, and minimisation of gambling-related harm.
 - c. Welsh Government and partners should work with local and national sporting clubs across Wales to encourage them to consider the impact of gambling advertising and sponsorship on society.
-

5. Protecting people from gambling-related harm

- a. Parents, guardians, and those responsible for the health and wellbeing of children and vulnerable people should be aware of the harms, and potential harms, of both online gaming and gambling, and should take a precautionary approach to this by reducing exposure wherever possible.

Chapter 3

Working together to protect the public from health threats



1 Introduction

In Wales, we respond to a significant number of public health threats each year. For example, these could vary from an outbreak of measles to poor air quality as a result of a fire at an abandoned waste site. Statistics on the wide range of threats are provided by Public Health Wales and are included at **Annex A**.

A world class public health response in Wales cannot be achieved working in isolation. Public bodies, stakeholders, and members of the public, need to take collaborative action to reduce the impact of health protection threats.

*The Well-being of Future Generations (Wales) Act 2015*¹⁷ says public bodies in Wales must think about people now and in the future when they make their decisions. The Act places good health and well being at the centre of the Wales we want to create.

Through the establishment of the Public Services Boards (PSBs), public bodies will come together to make things better. However, to realise the opportunities presented, we need to think beyond traditional health boundaries.

2 Communicable diseases

The public health threat from communicable diseases is constantly changing. Each year sees the development of new treatments, prophylactic medications and vaccines. All of these can improve people's lives and significantly influence the burden of communicable disease in the population. In counterbalance, individuals and the health service are constantly challenged by new or emerging infections. These threats need to be understood and planned for so professionals and services respond in the most effective manner.

3 Blood borne viruses (hepatitis C)

Individuals infected with hepatitis B and C have significantly benefited in recent years from new and improved medicines. Such has been the success of these treatments that the World Health Organization (WHO) has set a target for eliminating hepatitis (B&C) as a significant public health threat by 2030. Wales has officially signed up to this target and has a strong and effective clinical hepatology network which coordinates the treatment of those identified with the hepatitis B and C virus. With the advent of the more effective antiviral medications, the network introduced an All Wales Hepatitis C Treatment Roll-Out Programme in 2014. The success of this has meant that in Wales we have now treated, or are giving treatment to, all of the patients that are known to, and have accepted referral to, hepatology services and are still accessing care.

The challenge now will be to identify and engage with individuals who may not be aware that they have hepatitis B or C. Many of these will have tested positive when the virus was poorly understood or treatments were not available. In addition, there are individuals infected with hepatitis C who are actively engaged in behaviours likely to lead to transmission to others. Many in this cohort do not engage with the traditional model of health care.

4 HIV


Individuals infected with HIV have, for many years, benefited from antiretroviral therapies such that on treatment most live healthy lives, have no virus detectable when tested and pose a very low infectious risk to others. While the number of new diagnoses in any one year is, at last, on a downward trend, and the number of individuals tested annually is increasing¹¹⁸, there are individuals at risk of the virus who do not currently engage with services. Now that pre-exposure prophylaxis (PrEP) will be available to all those for whom it is clinically indicated, it therefore is imperative that HIV testing is normalised, readily available and any fear individuals have of experiencing stigma from healthcare providers is understood and dealt with. Public Health Wales is currently leading a review of Welsh Sexual


Health Services and will make recommendations to the Welsh Government on any actions required in Wales to support this.


5 Immunisation


Two doses of Measles, Mumps and Rubella (MMR) vaccine are recommended to fully protect individuals from measles, mumps and rubella, and levels of population protection against measles of 95% or higher are advised to eliminate measles. In response to a measles outbreak in the Swansea area in 2012/13, nearly 80,000 vaccinations of MMR were administered before the outbreak was declared over and by 2014, for the first time since 1989, the uptake of MMR 1 in two year olds exceeded 95%¹¹⁹. It is concerning that, for the quarter April to June 2017, uptake of the first dose of MMR was less than 95% and uptake of second dose at five years was less than 90%¹²⁰. Many school children are also at risk, with one in ten school-age children not fully protected against measles. The NHS in Wales should ensure that immunisations are provided at the ages recommended by the Joint Committee on Vaccination and Immunisation, and that the recommendations from *WHC(2005)001* are implemented in full. Public Health Wales will provide leadership and support to services as we move towards elimination of measles.

IMMUNISATION
is a lifelong event and is especially important for babies, teenagers and older people, or if you are...

PREGNANT 

ABOUT TO START SCHOOL 

HAVE A LONG TERM HEALTH CONDITION 

ELDERLY 

6 Seasonal influenza

Seasonal influenza is a major burden on public health and causes significant levels of illness, hospitalisation and death. In addition to its impact on individuals, seasonal influenza also impacts significantly on our health service, on workplace absences and on productivity. Vaccination is the most effective means of preventing influenza and its consequences. Each season, the NHS in Wales embarks on an ambitious programme to vaccinate those for whom flu is more likely to cause more severe illness; those over the age of 65, those aged between six months and 65 years with chronic conditions, and pregnant women. Despite all the commitment and hard work, many vulnerable people are left unprotected each season. Last flu season, more than 100,000 individuals with chronic respiratory diseases did not receive the vaccine¹²¹. The NHS in Wales, working with partner agencies and the voluntary sector, should develop strategies to engage both professionals and the public to improve on current uptake rates, particularly in those at risk under the age of 65 years.

In addition, flu vaccine is now offered to children aged two to nine years with the expectation that this will decrease circulating virus in the community. Over the coming two influenza vaccination seasons this will be extended to all children up to the age of 11.

7 International infectious diseases

Against a background of established infections, new and old, infectious diseases periodically emerge with the potential to harm hundreds of thousands. Increased international travel, and increased worldwide trade, means that the public and professionals in Wales must be prepared to respond to emerging and new infections (including drug resistant infections) occurring anywhere in the world.

Although Ebola virus disease was first described in 1976 in two simultaneous outbreaks in South Sudan and Democratic Republic of the Congo, it was the 2014/2015 outbreak in the West African subcontinent that resulted in the World Health Organisation (WHO) declaring an international public health emergency. In response, direct support was provided to the three countries affected, and every nation prepared to identify and manage imported disease.

Towards the end of 2015, and through early 2016, Zika virus dominated the attention of public health systems. Although Zika virus was first identified in Uganda in 1947, its introduction in Brazil in 2015 saw an unprecedented increase in incidence and geographic spread. From January to April 2016, more than 170,000 cases of Zika were reported¹²². Since then, international spread has continued, with some 70 countries and territories in the Americas, Africa, Asia, and the Western Pacific all reporting cases since 2015.

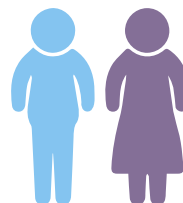
BE SAFE THIS WINTER...



There are around
662,000
people aged 65
& over in Wales



**Vaccination remains
the single best way
to protect against flu**



Older people are
more likely to have
complications from
flu, that's why annual
flu vaccination is

**recommended
for everyone
aged 65 & over**

The WHO has identified a top eight list of diseases likely to cause severe epidemics in the future: Crimean-Congo haemorrhagic fever; Ebola; Marburg; Lassa fever; MERS; SARS; Nipah, and Rift Valley fever. For these eight diseases, few or no medical countermeasures exist and early recognition and appropriate case management will be crucial if local outbreaks are to be avoided. The NHS in Wales was prepared for the possible management of a case of Ebola and remains vigilant for imported cases of MERS. Although Ebola and Zika outbreaks are no longer international public health emergencies, it is crucial that professionals remain alert for imported disease, that training and appropriate personal protective equipment is available for their protection, and that they can provide the best care for patients in a safe environment.

8 Environmental health inequalities

Environmental health inequalities refer to the differences in environmental conditions, which can impact on health. These include local noise pollution, access to parks, green spaces and other natural resources, and flood risk. In Wales, a study was carried out in April 2016¹²³, which showed an association between air pollution and deprivation. This was because some population groups are more susceptible to the effects of air pollution as they tend to suffer from chronic conditions that may be lifestyle-related. In this case, effective interventions to promote and plan/design communities that facilitate active travel (i.e. walking and cycling over car use), can deliver multiple co-benefits of reduced air pollution, improved health and greater resilience.

Whilst environmental health inequalities are well documented internationally, there is a real need to continue to improve our understanding of the scope of problems within and across communities in Wales so that we can target actions and maximise impacts. We know that the public health risks vary across areas of Wales and it is important that an evidence-based approach to interventions is used consistently and fairly so that everyone across Wales has the opportunity to benefit.

It is therefore important that Public Health Wales, as the national public health agency, provides

partners with local level intelligence (the evidence base), advice, and evaluated results of public health interventions. By encouraging and, where appropriate, facilitating discussions between local partners, Public Health Wales can improve and drive a more effective collaborative approach to public health.

Investment in environmental public health surveillance can help shape priorities for future action by helping understand the relationship between the environmental factors and health. This can then help facilitate joined-up working to protect and improve the health of current and future generations.

9 Air pollution

Air pollution is an example of where new policy guidance calls for action to reduce risks and impacts for all, and not just those people living in the most polluted areas.

Exposure to air pollution is a significant determinant of health¹²⁴; it reduces life expectancy by increasing mortality and morbidity risks from heart disease and strokes, respiratory diseases, lung cancer and other effects¹²⁵. The health burden associated with exposure to air pollution is substantial:

- In Wales, around 1,600 deaths and 13,500 lost life-years are attributed annually to PM_{2.5} (particulate matter produced from all kinds of combustion) exposure¹²⁶, and 1,100 deaths and 13,200 lost life-years to nitrite (NO₂) exposure.
- The financial, individual and societal cost of air pollution has been estimated at approximately £20 billion annually in the UK (adding health service costs to those associated with reduced productivity through lost work-days)¹²⁷.

While outdoor air quality in the UK has, on the whole, improved steadily over recent decades (mostly because of industrial emission reductions and cleaner vehicles and fuels), problems persist and pose considerable risks to public health. This is especially evident at the local level where many contemporary problems are the result of road traffic volumes and emissions. It should be noted, however, that other sources may also influence air quality, e.g. industrial, agricultural and residential/domestic sources.

Local authorities are responsible for tackling local air quality, where they undertake regular assessments and focus their monitoring and actions in those areas thought to be at the highest risk of non-compliance with air quality targets. To support local efforts, the Welsh Government has issued new policy guidance to local authorities on local air quality management, and separately to the staff working across the NHS in Wales regarding how they can support collective air quality management efforts.

This shift in approach to joint management creates new opportunities for greater public health integration and collaboration, and should be used to tackle other public health threats. It is important given that the greatest health gains can only be achieved if assessments and management of actions are considered widely. Acting on a limited understanding of the big picture, or ignoring it altogether, could compound problems or even create new ones through ill-informed decisions and poorly-targeted intervention.

10 Food safety

Undertaking food hygiene inspections of food businesses is an important way of protecting the health of the population by reducing the risk of food poisoning and food-related illness in the population. Local authorities undertake this work and the current system has been in place for more than 30 years. The Food Standards Agency (FSA) is responsible for food standards and safety issues, ensuring that food businesses meet their duty to ensure food is safe. The FSA investigates incidents to ensure that consumers are protected from consuming unsafe food. In 2016-17, the FSA and Food Safety Scotland were notified of, investigated, and managed, 2,265 food, feed and environmental contamination incidents in the UK. Of these, 76 incident investigations were led by the FSA in Wales¹²⁸.

The FSA is currently redesigning the way that food regulations and other controls are delivered to improve food business standards to ultimately benefit consumers and, in turn, the health of the public. It is looking to create a modern, risk-based, sustainable and resilient system for the future.

They hope to have this work completed by 2020.

The FSA's proposals to reform the food safety service in Wales, England and Northern Ireland is being delivered via *Regulating our Future*' (RoF)¹²⁹, which was launched in February 2016.

Welsh local authorities are fully engaged in the process and look to ensure the new model will take account of the strong food regulatory system that Wales has established. This is of particular importance given the success of Wales' statutory Food Hygiene Rating Scheme.

In response to initial proposals to RoF, a Welsh Government Position Statement was issued by key Ministers in December 2016¹³⁰. This Statement sets out Wales' expectations and requirements for a new food safety model.

Additionally, as part of this reform programme, the Welsh Government supports the FSA's proposal to explore the approach of introducing a mandatory "permit to trade". This would change the way food business are registered, ensuring that they meet necessary standards before they commence trading.



11 Recommendations

1. Hepatitis treatments

The Viral Hepatitis Subgroup of the Liver Disease Implementation Group should provide leadership and support to the NHS to identify and treat those with historic infection and to implement novel models of delivery, such that testing for, and treatment of, hepatitis infections can be undertaken in community settings, and within pharmacy settings in particular.

2. Welsh Sexual Health Services

NHS should take action on any recommendations from the Public Health Wales-led review of Welsh Sexual Health Services, and to improve access to care for men who have sex with men.

3. Elimination of measles

Public Health Wales should provide leadership and support to services as we move towards elimination of measles.

4. Imported diseases

Health professionals should remain alert for imported disease, to ensure that training and appropriate personal protective equipment is available for their protection, and that they can provide the best care for patients in a safe environment.

5. Health inequalities

Public Health Wales should consider the scope of environmental health surveillance in Wales to inform efforts to target environmental health inequalities.

6. Food licensing before trade

Welsh Government should work with the FSA and local authorities to explore the possibility of introducing an enhanced system of registration or licensing that would require prior approval of food businesses before they commence trading.

Annex A

Environment and health

Incidents responded to by the integrated Environmental Health Protection Team (Public Health Wales, Public Health England and Centre for Radiation, Chemicals and Environmental Hazards Wales collaboration).

Summary of incidents and enquiries

The reactive work of the Environmental Health Protection Team involves responding to acute incidents, chronic enquiries and planning/ environmental permit consultations. This summary shows the numbers of these events dealt with by the team over the past five years.

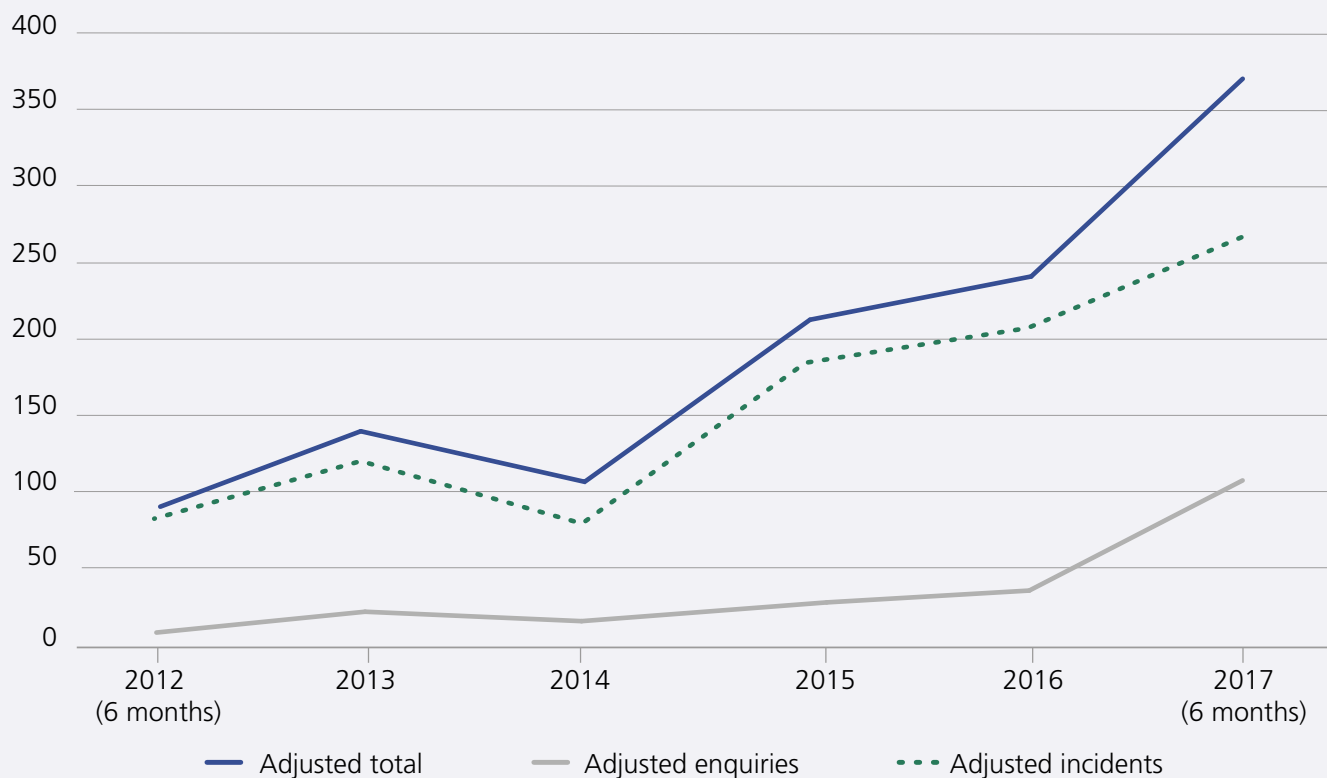
This does not account for any proactive work, including, for example, radon, air quality and injury prevention. It also does not include any meetings

or project work in relation to incident response or emergency planning, for example, meeting to discuss general approaches to air quality monitoring (AQM), rather than AQM in relation to specific incidents.

Incidents and enquiries

From 1 July 2012 to 30 June 2016, the Environmental Health Protection Team dealt with around 800 incidents and 150 enquiries. Actions required range from taking an incident notification to full involvement of the whole team in multi-agency incidents response, risk assessment and management over many weeks. Based on figures adjusted for six month periods at the beginning and end of the period of interest, the demands on the service, in terms of acute response, are increasing (Figure 6).

Figure 6: Summary of number of incidents and enquiries responded to by year.



Breakdown by incident type

The team deals with a wide range of acute response events (Table 1). This is the acute, unplanned response only. There is no accounting for time and resources required to respond to these.

Planning and environmental permit consultations

We have also dealt with around 500 planning and permitting applications during this time and responded to at least 150 consultations.

Table 1: Types of incidents responded to by year.

Incident Type	2012*	2013	2014	2015	2016	2017*	Total	Notes
Asbestos	2	4	2	5	5	4	22	
Bio – blue green algae	0	6	1	3	4	6	20	
Bio – other	4	4	1	10	15	8	42	
Blood lead	0	4	4	4	6	0	18	This only includes those with diagnosed elevated blood lead levels. Properties with elevated lead levels are counted under "water quality"
Cancer clusters query	2	0	5	1	3	2	13	
Chemical – CO	5	4	4	15	17	6	51	
Chemical – other	3	2	5	3	1	0	14	
Chemical – spill / release	17	49	36	40	58	35	235	Includes all air quality related queries
Chemical – intentional	1	2	2	0	0	1	6	
Fire	2	6	8	43	45	31	135	
Fire – waste related	0	9	2	19	11	7	48	Includes all contacts in relation to waste related fires – but also undercounts them
Fire – high risk site – warning	2	1	0	0	1	3	7	
Other	0	4	3	9	2	0	18	Includes noise, flooding
PWS	5	17	8	17	13	3	63	
Radiation	0	2	2	2	3	2	11	
Radon	0	3	0	3	5	8	19	
Warning notice	0	3	0	0	1	3	7	
Water quality	2	2	3	15	17	13	52	
Enquiries	4	24	15	26	33	53	155	
TOTAL	49	146	101	215	240	185	936	
Adjusted TOTAL	98	146	101	215	240	370	1170	
Adjusted total enquiries	8	24	15	26	33	106	212	
Adjusted total incidents	90	122	86	189	207	264	958	

* 6 months

Communicable disease

Notifiable diseases and organisms (Schedule 1 and 2) and outbreaks reported to CDSC, 2016.

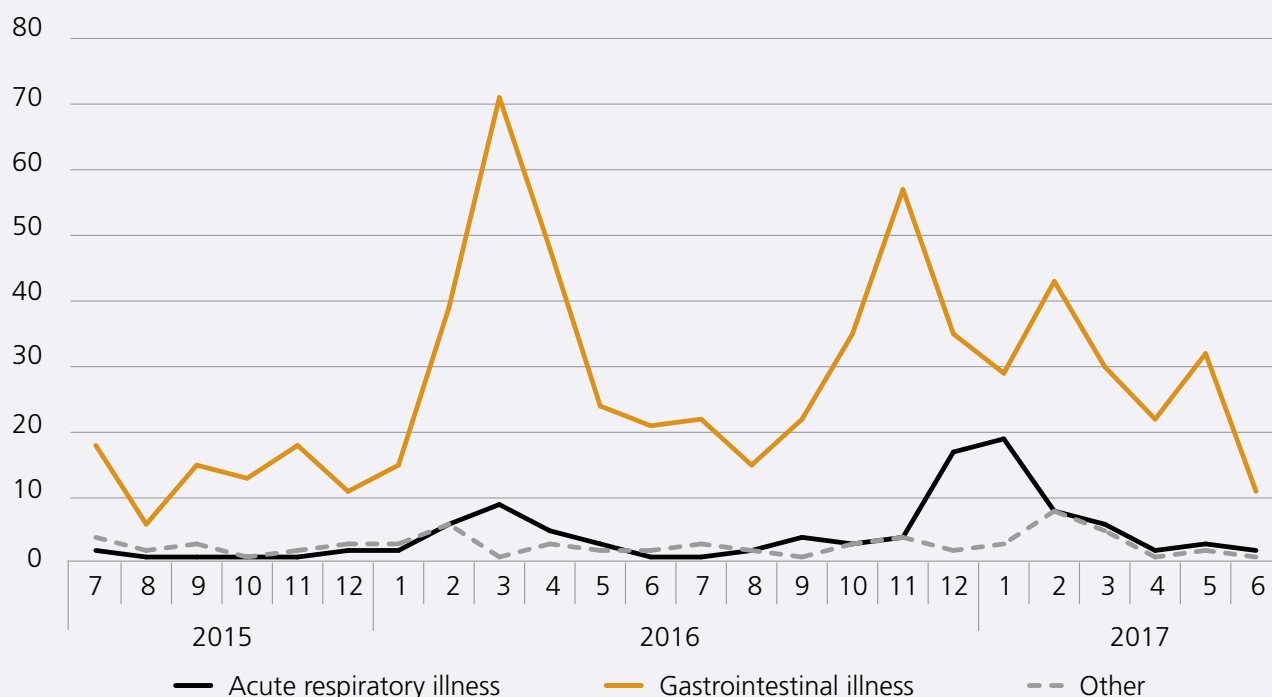
A full list of notifiable diseases can be found on the Public Health Wales website at www.wales.nhs.uk/sites3/page.cfm?orgid=457&pid=48544#a

Outbreaks and incidents in 2016

Table 2: Outbreaks and incidents reported to Communicable Disease Surveillance Centre by setting, 2016

Setting	Outbreak syndrome			TOTAL
	Acute respiratory illness	Gastrointestinal illness	Other	
Residential care or nursing home	13	159	5	177
Hospital	26	111	7	144
School	1	50	4	55
Other setting	2	27	2	31
Nursery	1	17	1	19
Restaurant / hotel / pub / take-away	0	16	0	16
Community / household	1	7	1	9
Prison	0	3	0	3
Farm	0	1	0	1
Travel abroad	0	1	0	1
TOTAL	44	392	20	456

Figure 7: Outbreaks reported by month reported, from July 2015 (when reporting started) to June 2017.



1) Month of report generated using date of report. If date of report was not available, date of onset used. If date of onset was not available then date of report generated using the Monday of the week reported.

Notifiable diseases, 2016

Table 3: Number of diseases notified⁶, 2016.

Notifiable disease	Frequency
Cholera	0
Enteric Fever (typhoid or paratyphoid fever)	9
Food poisoning	4505
Infectious hepatitis (acute) ¹	73
Invasive group A streptococcal disease and scarlet fever ²	1654
Legionnaires' Disease	34
Malaria	14
Measles	157
Meningitis (acute) ³	100
Meningococcal septicaemia ⁴	42
Mumps	500
Rubella	32
Poliomyelitis	0
Tetanus	1
Tuberculosis	136
Viral hemorrhagic fever (VHF) ⁵	2
Whooping cough	424

1) Includes Acute Infectious and Acute Viral Hepatitis

2) Includes scarlet fever and Invasive group A streptococcal disease (IGAS).

3) Includes Acute Meningitis, Meningitis, Meningococcal diseases, Meningococcal meningitis and TB meningitis

4) Includes meningococcal septicaemia and 'meningitis and septicaemia'.

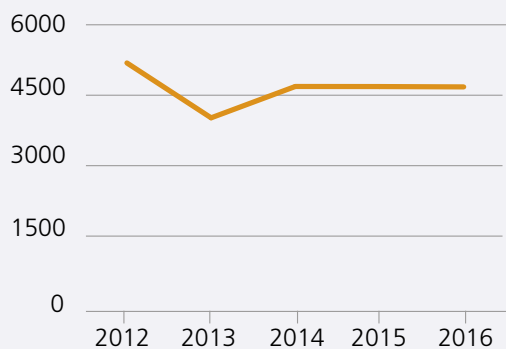
5) Includes Dengue fever, Ebola hemorrhagic fever and Viral hemorrhagic fever

6) Notifications of diseases diagnosed clinically may not correlate to a laboratory confirmed case.

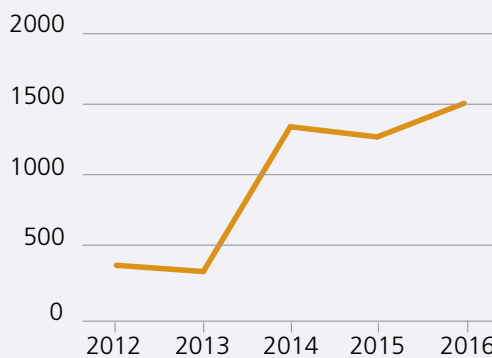
7) There were no reported notifications of Anthrax, Botulism, Brucellosis, Diphtheria, Leprosy, Plague, Rabies, SARS, Typhus or Yellow Fever in 2016.

Table 4: Annual disease notifications (Schedule 1) by year and disease category.

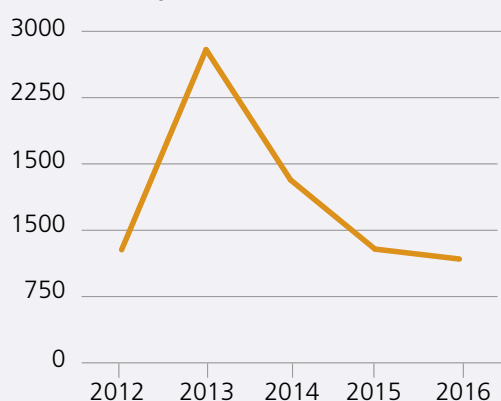
Gastroenteritis¹



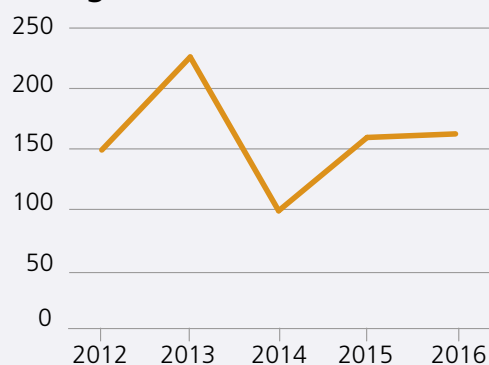
Scarlet fever and iGAS



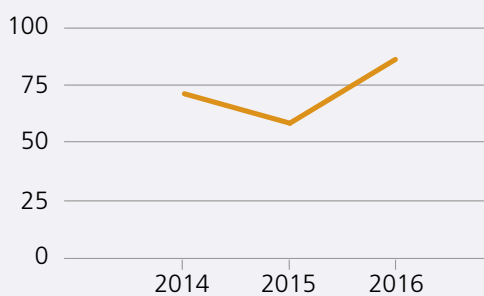
Respiratory²



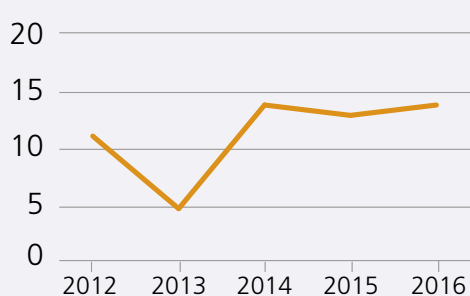
Meningitis, Encephalitis, Invasive Meningococcal Disease



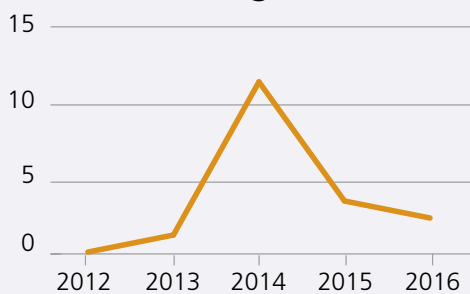
Infectious hepatitis (acute)³



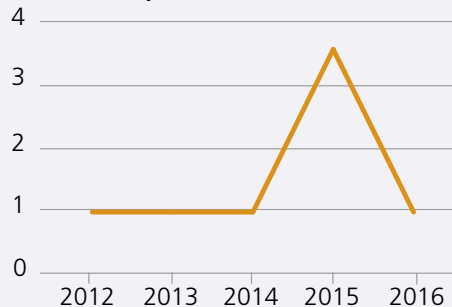
Vector / zoonotic⁴



Viral hemorrhagic fever⁵



Rare / imported⁶



1) Gastroenteritis diseases includes Cholera, Enteric fever, Food poisoning, Haemolytic uraemic syndrome, and Infectious bloody diarrhoea

2) Respiratory diseases include Legionnaires Disease, Measles, Mumps, Rubella, Tuberculosis and Whooping Cough.

3) Methods of reporting of Hepatitis updated in 2014

4) Vector/Zoonotic includes Brucellosis, Malaria, Plague, Rabies, Typhus and Yellow Fever

5) There were no confirmed cases of viral hemorrhagic fever during this period, but cases are notified on suspicion before laboratory testing.

6) Rare/imported includes Anthrax, Botulism, Diphtheria, Leprosy, Poliomyelitis, SARS, Smallpox and Tetanus

Notifiable organisms, 2016

Table 5: Number of notifications of laboratory confirmed organisms (Schedule 2)⁶, 2016

Notifiable organism	Frequency
Bacillus cereus ¹	22
Bordetella pertussis	11
Borrelia spp	55
Campylobacter spp	3498
Clostridium perfringens ¹	52
Cryptosporidium spp	470
Entamoeba histolytica	14
Giardia lamblia	126
Hepatitis A	27
Hepatitis B ²	247
Hepatitis C ²	711
Hepatitis E	21
Influenza virus	1394
Legionella spp ³	28
Listeria monocytogenes	7
Measles virus	18
Mumps virus	4
Mycobacterium tuberculosis complex ⁴	78
Neisseria meningitidis	49
Rubella virus	2
Salmonella spp ⁵	382
Salmonella Typhi or Paratyphi	9
Shigella spp	14
Varicella zoster virus	149
Verocytotoxigenic Escherichia coli (including E.coli O157) ³	46

1) Only if associated with food poisoning.

2) Results may include repeated tests on the same patient with chronic Hepatitis.

3) Results are for tests done in Welsh laboratories and may not have been confirmed by UK national reference laboratories.

4) Includes Mycobacterium africanum, Mycobacterium bovis and Mycobacterium tuberculosis

5) Not including Salmonella typhi or paratyphi.

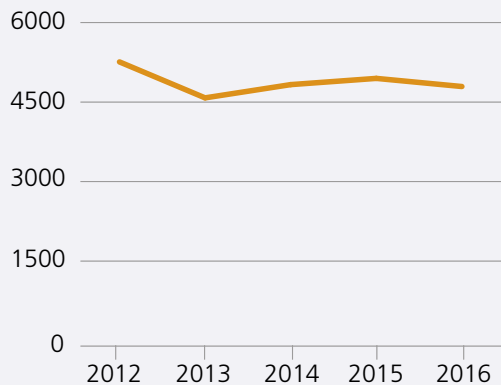
6) Samples tested in non Welsh laboratories may not be included.

7) There were no reported notifications of Chlamydomytila psittaci, Coxiella burnetii, Leptospira interrogans, Brucella, Chikungunya Virus, Clostridium botulinum, Corynebacterium ulcerans, Dengue Virus in 2016

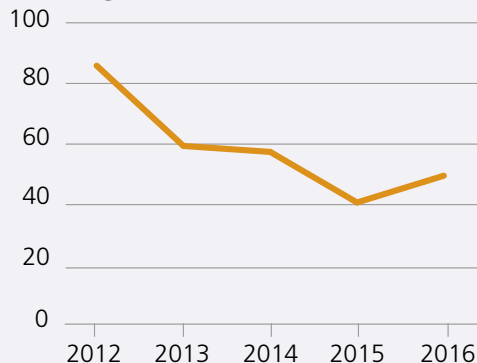
Notifiable organisms by disease category 2012-2016

Table 6: Annual number of notifications of laboratory confirmed organisms, by year and organism category⁵.

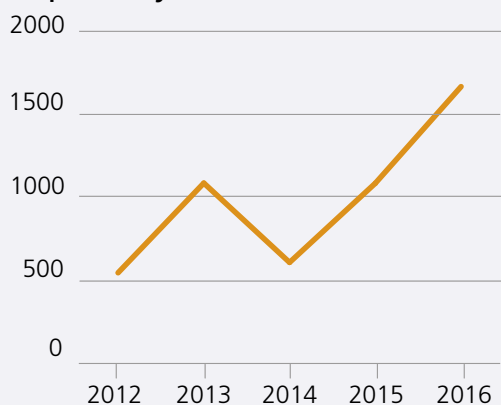
Gastroenteritis¹



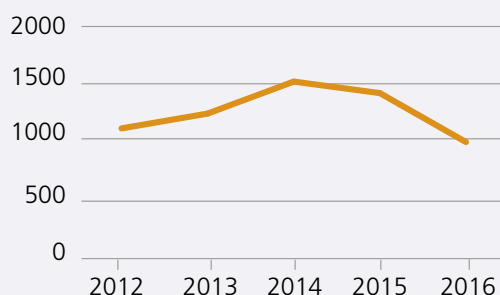
Meningitis, Encephalitis, Invasive Meningococcal Disease



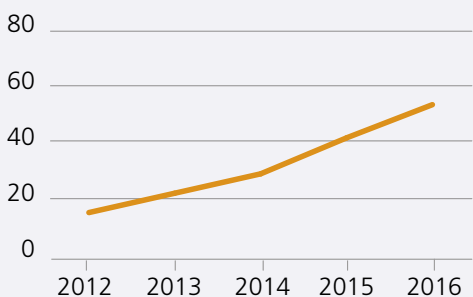
Respiratory²



Hepatitis



Vector / zoonotic³



- 1) Gastroenteritis includes *Entamoeba histolytica*, *Vibrio cholera*, *Bacillus cereus* (food poisoning only), *Campylobacter* spp, *Clostridium perfringens* (food poisoning only), *Cryptosporidium* spp, *Giardia lamblia*, *Listeria monocytogenes*, *Salmonella* Typhi or Paratyphi, *Salmonella* spp, *Shigella* Spp and Verotoxigenic *Escherichia Coli*.
- 2) Respiratory includes *Haemophilus influenzae*, *Streptococcus pneumoniae*, *Bordetella pertussis*, *Influenza virus*, *Legionella* spp, *Measles virus*, *Mumps virus*, *Mycobacterium tuberculosis* complex, *Pubella virus*, *Varicella zoster virus*.
- 3) Vector/Zoonotic includes *Bacillus anthracis*, *Brucella* spp, *Chikungunya virus*, *Dengue virus*, *Francisella tularensis*, *Plasmodium*(*falciparum*, *vivax*, *ovale*,

- malariae*, *knowlesi*), *Rabies virus* (classical rabies) and rabies-related lyssaviruses, *Rift Valley fever virus*, *West Nile Virus*, *Yellow fever virus*, *Yersinia pestis*, *Borrelia* spp, *Chlamydia psittaci*, *Coxiella burnetii*, *Hanta virus*, *Leptospira interrogans* and *Rickettsia* spp
- 4) Rare/imported organisms include *Burkholderia mallei*, *Burkholderia pseudomallei*, *Clostridium botulinum*, *Clostridium tetani*, *Corynebacterium diphtheriae*, *Corynebacterium ulcerans*, *Polio virus* (wild or vaccine types), *SARS coronavirus* and *Variola virus*
- 5) Cases from non Welsh laboratories may not be included.

Methods

Notifiable organisms are identified from the TARIAN case and incident management system (formerly IBID), this links to relevant information in the Wales laboratory information management system.

Notifiable diseases are entered into the same system(s) after being reported to Health Protection Teams.

Outbreaks and incidents are reported via the CDSC Incident and Outbreak surveillance system, started in 2015. The definition of an outbreak is broad and includes:

- Outbreaks formally declared by an Incident Management Team (IMT) under the Wales outbreak plan
 - Incidents where the Health Protection Team (HPT) has convened or participated in an IMT or Outbreak Control Team (OCT)
 - An increase in cases of a particular syndrome or infection above that expected, where the HPT or local authority has investigated and taken public health measures or given advice.
- Institutional outbreaks – to be consistent with current gastroenteritis (GE)/respiratory outbreak surveillance, but extending to hospital settings for GE outbreaks:
 - Active report to a HPT of 2 or more cases of diarrhoea or vomiting occurring in the same institution in the same week, or a report of more cases than would be expected in a given week.
 - Acute Respiratory Illness (ARI) outbreaks – two or more cases of acute respiratory infection with an epidemiological link in a care setting, or an increase in sickness reports of ARI or fever in school or other settings, above that which would be expected (see full surveillance protocol for details).

Settings categories reported have been merged into the smaller number of settings in Table 2.

National (UK) outbreaks are excluded from this table; only 1 was reported in 2016.

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