Rebalancing healthcare
Working in partnership to reduce social inequity
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Context

The Chief Medical Officer (CMO) is the lead health professional in Wales and provides advice to the Welsh Government and the public about matters concerning health and well-being. The CMO’s report is published annually and provides an opportunity to describe the state of health and healthcare in Wales and make recommendations for improvement.

Following the retirement of Dr Ruth Hussey and the formation of a new Welsh Government after the National Assembly elections in May, Dr Frank Atherton, the newly-appointed CMO, and Professor Chris Jones, the former acting CMO, have prepared this annual report.

Who is this report for?

This report is written for Welsh Ministers and for the people of Wales. It contains messages for everyone working in the NHS in Wales, who we hope will find it to be both interesting and helpful.

Acknowledgements

We would like to thank colleagues from the Welsh Government for contributing to the development and editing of this report. Special thanks to Cathy Weatherup, Pat Vernon, Jill Nicholas and Andrew Privett for managing the production of the report, and also to Cath Roberts, Sara Thomas at UCL Institute of Health Equity, Mark Bellis, Suzanne Moore Osley and Jessica Hughes. We would also like to acknowledge the contribution made by colleagues in Public Health Wales in providing material and assisting with the reviewing of this report.
Introduction
Dr Frank Atherton and Professor Chris Jones

Previous chief medical officer’s reports have focused on the health and well-being of the people of Wales; identifying shifts in the extent and distribution of health and illness. This report continues this approach but seeks to consider what this means for the healthcare system; how those working to improve health and provide healthcare services should best respond, both now and in the longer term.

One major theme which has emerged throughout the world is the realisation that so many health problems demonstrate a strong social gradient – by that we mean there is a higher prevalence of lifestyle-related and social harms; illness and early death in more economically dis-advantaged groups.

This report seeks to explore the social gradient further, considering how it affects people in Wales and what we need to do to address it. It builds on the Welsh Government’s strategic action plan for reducing inequities in health, *Fairer Health Outcomes for All*, in particular by reconsidering its action area of making health and social services more equitable. This includes consideration of the prudent healthcare principle of equity – where healthcare services and professionals work in partnership with individuals to respond to their needs and circumstances and are focused on those with greatest need first.
This report sets out:

- What we understand by the social gradient and how it affects health inequalities in Wales;
- What this means in terms of how we use NHS resource in Wales; how the NHS must be rebalanced to enable it to reduce and not increase, the social gradient;
- How local communities are a vital resource for the NHS, increasing its ability to improve health and well-being and to reach everyone who needs care or support;
- The wider need for the NHS to manage demand for healthcare services;
- What the social gradient means for health professionals and the NHS as the largest employer in Wales.

We will show that the social gradient matters to everyone. It impacts on the risks and outcomes we all face in our lives. It is also vital for health services to address the gradient as it impacts on the health service’s ability to ensure it makes best value of the public funding it receives and reduces demand for services in the long run.

If we are serious about improving and strengthening the health and well-being of the Welsh population while building a sustainable Wales, we must think and act differently in several ways. Two landmark Welsh laws – the Social Services and Well-being (Wales) Act 2014² and the Well-being of Future Generations (Wales) Act 2015³ require public bodies, including NHS organisations, to work together for the long-term benefit of the people of Wales. We hope this report, the first since these laws came into effect, will make an important contribution in stimulating new ways of thinking and change in the NHS.

When we refer to the NHS in this report, we include all its wide-ranging activities and responsibilities relating to health and well-being, not just its role in providing healthcare services when illness occurs. As it is the single largest area of spending for the Welsh Government and the largest employer in Wales, its actions and impact matter greatly to us all.

**Fact box**

Prudent healthcare is based on four key principles – co-production; care for those with the greatest need first; do only what is needed and do no harm; reduce inappropriate variation – and the related idea of only-do-what-only-you-can-do, which means that healthcare professionals should be working at the maximum of their clinical competency.
Chapter 1
The social gradient in Wales

The social gradient in health refers to the fact that inequalities in population health outcomes are associated with the socioeconomic status of individuals. Put simply, the higher one’s social position the better one’s health is likely to be (figure 1). Figure 2 shows how it relates to level of occupation. The social gradient is not unique to Wales – it is evident in every country in the world.

Health inequalities have been reported in Fairer Health Outcomes For Wales as costing the country £3-4 billion annually through additional illness, productivity loses, lost taxes and higher welfare payments.

Good health depends on much more than the provision of good health services. The way a society is organised; its economic prosperity; a person’s early life chances; their education and employment opportunities; community support and cohesion; the food we eat; the homes in which we live and many more factors make up the wider social determinants which impact on the health of both an individual and the nation. All these factors are more important in determining a person’s health and wellbeing than the health services which prevent and treat ill health. Many reports have suggested that healthcare services contribute relatively little to overall health and wellbeing – a surprising fact for many given the large amount we spend on treatments – and one we will consider later in this report.

In general, the higher a person’s position in socioeconomic terms, the greater access they have
Figure 1: Percentage of life expectancy in good health by deprivation fifth, Wales, 2005-09 and 2010-14

<table>
<thead>
<tr>
<th>Deprivation</th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most deprived</td>
<td>73%</td>
<td>75%</td>
</tr>
<tr>
<td>Next most deprived</td>
<td>77%</td>
<td>77%</td>
</tr>
<tr>
<td>Middle</td>
<td>81%</td>
<td>84%</td>
</tr>
<tr>
<td>Next least deprived</td>
<td>83%</td>
<td>84%</td>
</tr>
<tr>
<td>Least deprived</td>
<td>86%</td>
<td>84%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-09</td>
<td>75%</td>
<td>77%</td>
</tr>
<tr>
<td>2010-14</td>
<td>95%</td>
<td>95%</td>
</tr>
</tbody>
</table>

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

Figure 2: Age-standardised mortality rates for males aged 25-64: by National Statistics Socio-economic Classification, England and Wales, 2001-03 to 2008-10

Source: Office for National Statistics

Figure 3: Contribution to Public Health Outcomes

Source: The King’s Fund and Local Government Association

to health improving factors, such as good quality education and employment, and the less they’re faced with health damaging factors such as child poverty and insecure housing. The result is that they tend to have better health. The social gradient affects every part of our lives, from birth, through education and employment, eventually to our time of death. Every one of us is on this gradient, which means that no one can be excluded from our efforts to address it.

As individuals we are governed by a combination of our genetics, ethnic diversity and lifestyle behaviours, which are usually closely related to our life circumstances and experiences. All of these will positively or negatively influence our overall health outcomes.

These influencing factors are not equal for all in our society. This means that health and wellbeing and health needs are not equally distributed within and between communities. This raises the question of how public services, including the NHS, can identify differing needs and respond to them.

We make the point now, and will return to it, that at every stage in this unequal journey there are opportunities for people and public services working together to address these inequalities, which give rise to poor health. To assume the gradient is an unavoidable fact of life would be unjust for those involved but also would miss a real and ongoing chance to improve health and wellbeing and ultimately to manage the growing demand for healthcare services as this develops progressively through life.

In this report we make the case that one-size-fits-all health and care services in the traditional sense may not always be the best approach, as they can maintain, and sometimes increase, health inequalities. Instead we argue for an approach which is proportionate to the level of disadvantage which is often referred to as proportionate universalism.

The social gradient and life expectancy

Perhaps the most obvious and disturbing result of the social gradient is the difference in life expectancy between those who live in a relatively advantaged area and those who live in a less well off area, which may often be just a short distance away. It may not be the physical area itself which has such an impact on longevity – although external factors such as pollution can be relevant – but other life-long socio-economic factors specific to the people living in that area, such as education, occupation, income and housing quality, which are responsible.

In the period 2012-14, average life expectancy for a man in Wales was 78.5 years and 82.3 years for a woman – life expectancy has been steadily increasing for both men and women since 1991-93, up 5.3 years for men and 3.5 years for women.

However, despite these welcome gains, there continues to be a persistent and growing gap in life expectancy between those living in our most and least deprived communities – a gap of as much as 9-11 years in some areas within Cardiff. Unfortunately, there is no sign it is decreasing. We have a measure of deprivation status that can be used to separate small areas in Wales into five equal sized groups (or “fifths” or “quintiles”), each with differing levels of deprivation. It is important to note that each group, from most to least advantaged, differs from the next so the gradient affects everyone, it does not apply just to the most or least advantaged.

The social gradient over the life course

The large differences in life expectancy between different local authority areas and different

**Fact box**

When looking at larger populations, there is a tendency for deprivation to “average out” and become less extreme. Therefore, Wales has developed the Welsh Index of Multiple Deprivation (WIMD) to compare deprivation between small areas. Deprivation is more than poverty and financial measures but includes other domains such as education, housing, crime, and living environment. When local areas are compared, we see large differences in life expectancy between the most and least deprived areas.
communities across Wales are the result of many small influences in and on people’s lives and their local environment. These small influences incrementally add up to affect their health and wellbeing throughout their lifetime (figure 4).

The following sections explain how the gradient manifests itself from before birth, through childhood and into adult life. Although the magnitude of each change across the social strata may be quite small, all these effects are additive to each other and accumulate, so they have a powerful effect on the distribution of disease and ultimately the need for healthcare services in society. Simply by growing up in a poor area in Wales, a child is more likely to have poorer health that will impact the rest of their lives. Figure 5 shows how outcomes for cognition (thinking skill) in children with high and low socio-economic status diverge over time. The different colour lines show that wherever on the scale of cognition one starts at birth, the outcome at 10 years strongly depends upon socio-economic status.

Figure 4: Effects of the social and economic determinants on health throughout the life course

Figure 5: Outcomes for cognition in children with high and low socio-economic status diverge over time

Source: 1970 British Cohort Study

Source: UCL Institute of Health Equity
The first 1,000 days

It is vital children have the best possible start to their lives – the first 1,000 days of their lives is therefore a crucial time. This period covers pregnancy, birth and life until a child’s second birthday – a period of time when a child’s brain develops rapidly (a baby’s brain grows from 25% of its adult size at birth to about 75% of its adult size by the end of second year) and the essential social, behavioural and cognitive skills and emotional intelligence a child will need in later life are developed.

There is good evidence to show that parenting, the family and the wider environment are important influences at this early development stage and have a long-lasting impact on a child’s health and wellbeing and through to adulthood. Every effort should therefore be made to ensure that effective interventions are available to ensure a healthy mother; a healthy pregnancy and a healthy early childhood.

Infant mortality has declined in recent years in Wales as a result of improvements in healthcare, but neonatal and infant mortality rates are still highest in the most deprived areas of the country – almost 50% more than in the least deprived areas (figure 6) – an unacceptable difference that demands further and earlier intervention.

Similarly, children born in the poorest areas of the UK weigh, on average, 200 grams less at birth than those born in the most affluent areas and this has a long term impact on health. While in the womb, there is a complex and vital interplay between genetic makeup and nutrition leading to better organ development in babies with higher birth weight, something that matters over the longer term. There is now overwhelming evidence that a relatively lower birth weight is related to a relatively higher long term risk of developing diseases of the blood vessels or heart, or diabetes.

Social gradients are also apparent for growth and height, language and learning skills throughout childhood. One important example is childhood obesity, tracked through our Child Measurement Programme. This shows a clear correlation between levels of deprivation and rates of overweight or obesity, ranging from 28.4% of children living in the most deprived areas being either overweight ...
or obese to 20.9% in the least deprived. One in seven children (14.7%) living in Merthyr Tydfil is obese, compared with just 1 in 14 children (7.3%) living in the Vale of Glamorgan. Similar gradients exist for childhood injuries and tooth decay.

These examples do make the separate point though that poverty or low socio-economic status does not necessarily mean ill health. Despite the clear socio-economic gradient for risk of obesity, most children in the most deprived areas are not obese. This shows that deprivation is not a certain path; we need to understand better why it affects some people and not others.

Interventions to address diet, physical activity or any lifestyle behaviours should be designed to take into account the complex social and environmental factors which may predispose people to behave in a certain way, such as adopting a sedentary lifestyle due to unsafe or unappealing surroundings. Wherever possible, interventions targeted at the early years should seek to address negative parental circumstances, such as a lack of income which can make it difficult to afford healthier food and a decent standard of accommodation for the family. For example, data from England show a strong association between deprivation and the density of fast food outlets, with more deprived areas having a higher proportion of fast food outlets per head of population than others. Whilst the link between food availability and obesity is still debated, a US study has found evidence of elevated levels of obesity in communities with high concentrations of fast food outlets. Healthier foods can also be harder to afford.

Our early life circumstances and experiences shape our physical, social, mental, cognitive and emotional development and have a lifelong impact on our health, learning and behaviour. As a consequence, there are strong social gradients for educational attainment, which in turn manifest themselves in employment opportunities – or lack of – for many young adults, impacting, ultimately, on wealth. This provides the setting for adverse lifestyle behaviours and underscores the prevalence of various common chronic conditions, as well as determining the life chances of the next generation.
Adverse Childhood Experiences

The importance of early childhood experiences is clearly demonstrated in recent research\textsuperscript{17} by Public Health Wales, which examines the long-term effects of adverse childhood experiences (ACEs), such as domestic or sexual abuse and violence.

Early childhood exposure to adverse experiences, particularly while the brain is rapidly developing in the first two to three years of life, can set people on a disadvantaged life course, increasing their long-term risks of adopting risky, health-harming lifestyle behaviours, such as smoking, problem drinking, poor diet, low levels of exercise and early sexual behaviour. In turn, such behaviours can lead to premature ill health by increasing risks of diseases, such as diabetes, heart disease and cancer.

ACEs can also lead to children and young people adopting anti-social behaviours, including a propensity for aggressive, violent and even criminal behaviour.

While no communities can be considered free from ACEs, people living in areas of deprivation are at

Fact box

According to the World Health Organisation, adverse childhood experiences (ACEs) refer to some of the most intensive and frequently occurring sources of stress that children may suffer early in life. Such experiences include multiple types of abuse; neglect; violence between parents or caregivers; other kinds of serious household dysfunction such as alcohol and substance abuse; and peer, community and collective violence.
greater risk of experiencing multiple ACEs – another form of social gradient we must seek to influence.

Research from Public Health Wales shows the potential health and societal gains if childhood experiences are improved. In population terms, if there were no adverse childhood experiences, there could be 125,000 fewer smokers across Wales and some 55,000 fewer people who have ever used heroin and crack cocaine. This is cost-effective; the evidence shows that just over £100 invested in prevention of ACEs will result in over £6000 of savings when measured across all public services over the next five years18!

There are a number of ways in which ACEs can be prevented or their impact lessened, including raising awareness of their importance, providing appropriate services for all families and reliable access to additional support for those who need it most. The benefits from this work points to the value of joint investments and partnerships between the NHS, local authorities and other services and agencies to effectively prevent ACEs in the future.

The social gradient has an impact over the course of our lifetime on a range of health and wellbeing outcomes and ultimately on our life expectancy. To reduce this, the NHS and other public services must focus on those people with a higher level of baseline risk as these are the ones who stand to gain the most from upstream evidence-based interventions.

Providing universal support to all families during the first 1,000 days of life should be our aim, coupled with tailored additional support to higher-risk individuals and families – this is the aim of the Healthy Child Wales programme, for example.

Reaching those communities, which are at greatest disadvantage, presents the health and social care sector a cultural and practical challenge but it also presents us with a major prudent opportunity to improve outcomes and prevent ill health in the future, with the greatest potential for health gain.

Fact box

The Healthy Child Wales programme provides an all-Wales approach to early years interventions for children from pregnancy and birth to the age of seven. It delivers, mainly through the work of midwives and health visitors, a minimum set of universal interventions to all families with pre-school children, irrespective of need, with additional support provided when required. Its key priorities are to deliver key public health messages; promote bonding and attachment and positive maternal and family emotional health and resilience; empower families to make informed choices to help children to meet all growth and developmental milestones and achieve school readiness. All health boards in Wales started to introduce the programme in October 2016.
### Figure 7: Long-term effects of adverse childhood experiences (ACEs)

<table>
<thead>
<tr>
<th>People with 4+ ACEs are:</th>
<th>Preventing ACEs in the future generations could reduce levels of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 times more likely to be a high-risk drinker</td>
<td>High-risk drinking by (current)</td>
</tr>
<tr>
<td>6 times more likely to have had or caused unintended teenage pregnancy</td>
<td>Unintended teen pregnancy by</td>
</tr>
<tr>
<td>6 times more likely to smoke e-cigarettes or tobacco</td>
<td>Smoking tobacco or e-cigarettes by (current)</td>
</tr>
<tr>
<td>6 times more likely to have had sex under the age of 16 years</td>
<td>Early sex by (before age 16)</td>
</tr>
<tr>
<td>11 times more likely to have smoked cannabis</td>
<td>Cannabis use by (lifetime)</td>
</tr>
<tr>
<td>14 times more likely to have been a victim of violence over the last 12 months</td>
<td>Violence victimisation by (past year)</td>
</tr>
<tr>
<td>15 times more likely to have committed violence against another person in the last 12 months</td>
<td>Violence perpetration by (past year)</td>
</tr>
<tr>
<td>16 times more likely to have crack cocaine or heroin</td>
<td>Heroin / crack cocaine use by (lifetime)</td>
</tr>
<tr>
<td>20 times more likely to have been incarcerated at any point in their lifetime</td>
<td>Incarceration by (lifetime)</td>
</tr>
<tr>
<td></td>
<td>Poor diet by (current; &lt;2 fruit &amp; veg portions daily)</td>
</tr>
</tbody>
</table>

Source: Public Health Wales NHS Trust 19
Chapter 2
What does the social gradient mean for the NHS?

The Green Paper *Our Health, Our Health Service* said,

“Our aim in Wales is to develop a model of health which promotes physical, mental and social wellbeing. This approach draws in all relevant organisations, services and people to ensure the root causes of poor health are addressed. The NHS, social services, housing, education, transport, environment and leisure services, the third sector, the independent sector, carers and people themselves must all collaborate to meet local need. A huge shift is needed towards preventative and primary care, which can keep more of us well for longer.”

If we are to achieve this and sustain services in the future we need to work differently by harnessing the energies of all public services.
The NHS currently tends to treat many vulnerable people at or near the point of crisis – it is an illness service more than a health service – a system that still deals with problems and deficits rather than individual and community strengths and assets.

To truly become a health service it must work to address inequality and the social gradient and to improve health and wellbeing. Health and social care services must in the future identify and work with people to address their needs on a planned and preventative basis, intervening much earlier.

We need also to recognise the possibility that benefits or services themselves can impact unhelpfully on the social gradient. This might happen when we provide them in a uniform way to those that access them, without regard to individuals’ wider personal circumstance or to those that have not accessed them at all. One example might be to provide everyone with information about healthy eating without understanding that those with poor health literacy will not be able to use it, so increasing their relative disadvantage. There is likely to be merit in a more targeted approach, which is appropriate and proportionate to need and reaches everyone. This is different from unjustifiable clinical variation which we need to decrease.

According to the World Health Organisation, healthcare systems can most improve health equality when the same provision and quality of care is provided to everyone regardless of ability to pay. Our ‘free at the point of use’ NHS, with its’ world wide reputation for excellence, has done much to prevent health inequalities, as in many other countries, a need to pay for care will serve as a significant additional barrier for those who most need support.

Nevertheless, it is acknowledged that a relatively standardised approach to service provision exists because our services have developed in so-called provider organisations. We recognise also, that despite everybody’s best efforts, our systems and services can still inadvertently demonstrate an unconscious bias against the vulnerable and disadvantaged, which is both difficult to detect and eradicate. This unconscious bias means that not everyone has an equal chance of achieving the best outcome despite the universal availability of services. The application of evidence based medicine should happen consistently to achieve the required benefits but might not be appropriate if extended to patients outside the evidence base and without regard to individual circumstances. A clinical approach sensitive to individuals’ lives and wishes is being enhanced in Wales through the focus on recognising the individual’s wishes and expectations within the prudent healthcare philosophy.

Let us consider the important matter of health protection in the community. If we do not identify and protect those who are at the greatest risk, we can find ourselves protecting only a limited, more affluent and educated, section of society, so increasing the gap between best and worst outcomes. This is a concern for certain health services, such as smoking cessation, population screening and flu immunisation programmes, where there is evidence that those who are most at risk are not being reached by these clinically effective services.

One challenge for such programmes is they really need to reach everyone, wherever they on the social gradient. Staff working in the NHS may not be aware their services may not reach those facing the greatest risk. Another challenge is they should be linked to efforts made to ameliorate the impact of other societal harms including family breakup, domestic abuse, suicide and crime. The NHS must work with its partners to reach the people most at risk in communities. By failing to address these issues, health need still develops in the more disadvantaged and healthcare services will continue to be under pressure, treating people when the damage has been done, and we will not be using NHS resources to their best effect.

This will require a close, ongoing relationship between organisations, communities and, most importantly, individuals to create a collaborative and co-productive approach towards health and wellbeing. This does not just apply to people living in the most deprived areas of Wales – it applies to everyone including all hard-to-reach groups, such as people with mental health problems or learning disabilities and those from travelling communities and ethnic minority groups.
The need to look at and do things differently

The population of Wales is growing – there were 3.1 million people in 2015\textsuperscript{20} and the population is projected to increase to 3.3 million by 2039\textsuperscript{21}. The number of people aged 65 and over and 85 and over is expected to increase – the over-85 population is projected to grow from 79,000 in 2014 to 183,000 in 2039.

An ageing population is good news but as people age we are also likely to see an increase in the number of people living with one or more chronic conditions, which in turn presents new challenges for the NHS and social care services in the way to plan and develop responsive, dignified and sustainable services.

Fact box

The recently published Public Health Wales report *Making a Difference*\textsuperscript{22}, describes 10 key evidence-based ways to make a difference to levels of ill health and inequalities.

1. Ensuring a good start in life for all.
2. Promoting mental wellbeing and preventing mental ill health.
3. Preventing violence and abuse.
4. Reducing prevalence of smoking.
5. Reducing prevalence of alcohol misuse.
6. Promoting physical activity.
7. Promoting healthy diet and preventing obesity.
10. Ensuring a safe and health-promoting natural and built environment.

Case study

**Speakeasy** is a Cardiff-based charity which gives free, expert advice about welfare benefits, debts, housing and energy. It has recently secured funding from the British Gas Energy Trust to take on two new advisers to run the Holistic Money Advice project, which partners with local healthcare professionals, looking at the close links between fuel poverty, debt and ill health. Advice is provided to clients with mental and physical ill-health at drop-in sessions in Butetown Medical Centre and Brynderwen Surgery, and is available over the telephone to clients across Wales. Advice is given on a range of domestic, energy related issues, including dealing with fuel debt, payment options, budgeting and saving energy at home. The staff also make applications to energy Trust Funds to clear clients’ energy arrears and to secure white goods and boilers.

Tel: 02921 66796
Email: jigsaw@speakeasyadvice.co.uk
The duty to flatten the social gradient

The social gradient can be reduced by public services working together throughout the life course. The NHS is a key player and has a major interest in this purpose as reducing the gradient will help reduce overall demand for healthcare services. The Well Being of Future Generations Act also now places a duty of equity on all public services.

There is overwhelming international evidence that a reduced social gradient goes hand-in-hand with good health and that both improve together in the face of good public policy and delivery, especially when countries have a strong strategic framework for such actions in the community.

Recent changes in the law in Wales requiring public bodies to work together, with an understanding of the social determinants of health, will help create a wider understanding that good health is not simply a result of good healthcare.

The NHS must work closely with communities and other public sector bodies to directly influence the social, environmental and economic factors which underpin the social gradient, using a common language and measurement which enables those working in different sectors to understand their potential contribution to the general good.

Recent legislation in Wales

The Social Services and Well-being (Wales) Act 2014

The Social Services and Well-being Act provides a new framework which brings together and modernises the law governing social care in Wales. It aims to give people greater voice and control over their lives, their care and their support. Key elements of the Act have particular relevance to the provision of healthcare services, for example:

- Population assessment of needs
- Preventative services
- Provision of information, advice and assistance
- Safeguarding matters and duty to report adults or children at risk
- Co-operation, integration of care and support and partnership arrangements.

As one of the partners in the wider health and care system, the NHS will have to work collaboratively to achieve improved health and wellbeing outcomes for the population.

Working through seven regional partnership boards (supported by a code of practice and statutory guidance) the regional partnership boards will consider how the improvement and efficiency of service delivery will have a direct impact on improving outcomes. These boards have the discretion to establish pooled funds, particularly in relation to joint population assessments, family support functions and provision of residential care for adults.

Well-being of Future Generations (Wales) Act 2015

The Well-being of Future Generations (Wales) Act sets similar expectations for public bodies, including the NHS, to work together to deliver real improvements in outcomes, including reducing inequality. It requires a new and bold approach to collective action through public service boards as well as creating an individual duty for some statutory organisations to identify their contribution to the wellbeing goals – a prosperous Wales; an equal Wales; a resilient Wales; a Wales of cohesive communities; a globally responsible Wales and a Wales of vibrant culture and thriving Welsh language.

The public service boards will be uniquely placed to tackle the social gradient in a meaningful way using the collective resources of the NHS and social services together with those of housing, education, environment, transport, leisure and the voluntary and private sectors and ensuring they are used for a common purpose in improving the wellbeing of communities. The requirements in the legislation for the creation of a wellbeing assessment and the planning and delivering of services based on both a deficit and asset-based approach will create the best opportunities to tackle inequalities in health outcomes while avoiding duplication, inefficiency and gaps.
The health service is well positioned to facilitate and empower this discussion, going beyond information sharing to facilitating joint planning, commissioning and delivery. A report about reducing inequity emphasised these as important factors with the NHS working collaboratively with local authorities, the police and fire service, third sector, places of work and communities and schools to intervene in ways that were holistic and recognising the wider context and interactions that shape our lives. New partnerships with energy providers, tourism, consumer protection, justice, immigration, finance may well contribute to reduced health inequalities and should be encouraged.

**The NHS should not make the social gradient worse**

We have said some of the most cost-effective interventions in clinical practice and public health are in the field of health protection. However, if these interventions only reach those living in the more advantaged communities and higher socioeconomic groups the less-advantaged will fall further behind and the social gradient will increase.

Every year the NHS seasonal flu vaccination reaches about 50% of people who are under 65 and are considered to be at risk of complications. Flu vaccine uptake is highest in the more affluent local authority areas. This inequity in flu vaccine uptake adds another small contribution to a health inequality gap. We need to reach out to those people who do not access the free flu vaccination service so we understand who and where they are and how to gain their trust and acceptance. A more detailed knowledge of our communities will enable us to improve access and the acceptability of our services.

There is a similar risk of increased inequity in our national population screening programmes, which are pro-actively looking for potentially serious health issues in our population, such as signs of cancer. We already know there is significant difference in uptake between the least and most deprived communities in a number of these important preventative programmes. Again, we must engage with those most at risk to achieve the greatest benefit for the whole population.

Tackling smoking is another good example. Smoking is often regarded as a personal choice but is also heavily influenced by family and friends, communities and the wider cultural and economic environment. Smoking prevalence and lung cancer incidence go hand in hand across the social gradient so our efforts to support smoking cessation must mirror this. Are NHS smoking
cessation services targeted, proportionate to need and provided and located in ways that will enable an equal chance of success for all smokers? If they are not, smoking cessation services could be contributing to the social gradient for lung cancer and life expectancy.

In addition to ensuring we understand the needs of communities where health need is greatest and reach out to provide services where they will have most effect, it is important we ensure interventions are effective. This can relate to the method of delivery, for example it is unlikely individuals facing challenging life circumstances will welcome a succession of visitors, each bringing with them a new form of intervention and intrusion into their home life. The NHS must therefore work with other public services – fire prevention, financial advice and housing support – to integrate its approach. There are examples of health services being integrated with other public services and focused along the social gradient but this must now happen across all effective preventive services.

It is also important individuals are treated as equal partners in their own health – particularly for people with life-long and chronic conditions who best understand their own conditions and their impact – and are actively involved in decisions about their healthcare rather than treated as passive recipients, a central point in a prudent healthcare system.

In a later section we will consider how decision making and access to effective interventions in healthcare may favour the less deprived. Understanding the impact on equity needs to be a fundamental responsibility for those managing all NHS services and organisations.

Figure 8: Smoking is the main risk factor for lung cancer and lung cancer has a very poor prognosis

Smoking is the main risk factor for lung cancer and lung cancer has a very poor prognosis, with only 5.1% of patients surviving five years. Smoking rates are much higher in more deprived areas of Wales, the difference is around 19 percentage points and this relates to the difference in the rate of lung cancer, which is 77.5 per 100,000 people in 2010-2014. Smoking rates have decreased in all deprivation fifths whereas lung cancer incidence rates show little change in most deprivation fifths apart from a small decrease in the least deprived fifth. Figure 8 shows the deprivation gap [between least and most deprived] has increased for lung cancer incidence but is only slightly decreased for smoking over a seven year period. In order to make meaningful improvement to the different rates of lung cancer across the social gradient, smoking rates in the more deprived areas need to fall significantly faster than the fall in the less deprived areas. In essence, our efforts to target smoking cessation at the areas of greatest need is underlined by the large difference in lung cancer rates – the rate being two and half times higher in the most deprived areas than the least deprived areas in 2010-2014.
Services sensitive to the distribution of health need

The social gradient causes variation in health from street to street; from town to town and community to community. Healthcare services are unlikely to deliver the best population outcomes unless they reflect this variation. Universal or single-size and shape services or benefits run the significant risk of increasing inequity as the more educated and affluent members of the population are more likely to take them up. But simply providing services only for those with the highest need will also fail as there is health need across all sectors of society. A middle ground, in which services are provided to all but with an emphasis on need is the most likely to lead to the greatest overall population benefit and is most closely aligned to the principles of prudent healthcare.

Co-producing with communities

Co-production with communities is a potentially powerful way in which public sector staff can respond to the social gradient of health need. It is not sufficient to know the geography of need; we must know how people within communities can work to support themselves and each other to ensure an appropriate response for individuals in all circumstances.
Case study

The **Ffordd Gwynedd** health and care service in North West Wales is a multi-disciplinary and organisational model of care for older people, which is designed to deliver patient-centred care in the community. The integrated team includes social workers, district nurses, occupational therapists and third sector organisations. It focuses on finding out what matters to the individual; streamlining processes, paperwork, addressing the root causes of a person’s situation and focusing on outcomes and the right kind of support, enabling people to live independently for longer and avoid emergency hospital admissions and costly long-term care packages.26

This ‘core economy’ comprises the informal support systems and networks that make populations work as functioning societies or communities and operates alongside the monetary economy. We know many of those with the greatest need do not readily access services other than in an emergency; the NHS therefore needs to work with and proactively support the community’s efforts to ‘create’ good health.

The New NHS Alliance in England is working to address health inequalities through the concept of Health Creation.

The conclusion is that people need three things to be healthy – the **3Cs of Health Creation** – Control over the circumstances of our lives; Contact with other people that is meaningful and constructive and Confidence to see themselves as an asset, to take actions and responsibility and to have a positive impact on those around them.

It has been said the greatest untapped resource in healthcare is the people receiving it and that everyone has something special to give. If the collective asset of the core economy can be identified and used positively, individual feelings of personal value and motivation improve. If non-professional members of the public can help with the design, planning and delivery of healthcare it is more likely the NHS will be truly aligned to the needs of the community.

The optimal arrangement of primary and community care services may be best understood through co-production. The challenges of an increasing workload for GPs and public perceptions of limited access require a collective solution. Involving the public can solve seemingly intractable problems which professionals cannot solve alone.

Understanding community assets and co-productive working seems vital for GP practices, primary care resource centres and primary care clusters. It is likely also that the service changes needed in response to changing evidence of best practice can be most smoothly affected if the public are fully engaged and informed in a relationship of trust with their health care organisations.
We believe an NHS working closely with its population can support and strengthen the core economy to improve local health and wellbeing and reduce demands on services. The Social Services and Well Being Act requires public bodies, including those in the NHS, to produce population needs assessments. Previously these might have been rather academic exercises based on measurements of disease, but will now have to include the mapping of assets such as community groups and centres and employers and will require co-production for their development.

Case study

**Time Together Gorseinon** encourages people to take part in their community by joining a wellbeing network, which promotes healthier lifestyles. Members take part in activities and groups including walking, cycling, healthy eating, cooking, cinema and music. For every hour spent participating, members earn time credits, which they can use to access social and cultural events.29

Fact box

**Social prescribing**

This is a non-medical health and well-being based approach that expands the range of options available to primary care clinicians and patients to improve healthy life behaviours.

Local social prescribing facilitators can be of value to maintain knowledge of available resources, provide personal support where needed and to identify gaps in ‘wellbeing’ services such as choirs, gardening and walking clubs, debt advice, volunteering networks and time banking, heating and insulation for cold homes and befriending.

The social prescribing approach can improve self-esteem, mood and self efficacy, social contact and the development of transferable skills to help the management of chronic conditions. Demand for health services can be decreased where the medical model of care is not the most effective solution.

**Time credits**

This is when time helping others is rewarded by a time credit that could in turn purchase time for help, entertainment or leisure. This non-monetary currency values much more than the standard definition of work and can thus engage people to contribute to community, so improving health and wellbeing and self and community led care.

The use of time credits could strengthen the link between social prescribing in primary care and community engagement and development. Prescribed time credits could be spent in the setting up of well being services in the primary care environment, helping the shift in focus from illness to wellbeing.
Chapter 4
Managing the demand for services

**Challenging the status quo**

Addressing the social gradient throughout a person’s life will not only help to improve an individual’s health and wellbeing, it will also help to reduce the overall demand for healthcare services in Wales.

The NHS is the largest of Wales’ public services and is the single largest area of Welsh Government expenditure, accounting for nearly 50% of spending in 2015-16, up from 40% in 2010 (figure 9). Demand for healthcare will continue to increase as Wales’ population grows, particularly its over-65 and over-85 populations.

The NHS in Wales provides healthcare on an industrial scale – for a population of just over three million people, every year there are 18m primary care contacts; 400,000 emergency admissions; around 500,000 ambulance calls, and, on average, every person in Wales is issued 26 prescriptions.

**Primary and community care**

Every day, over 50,000 people in Wales see their GP but in many cases people may need care from a healthcare professional other than a doctor – they could need to be seen by a physiotherapist or occupational therapist or they may need eye care or
advice about medicines. It has been estimated up to 40% of a GP workload could be dealt with by other healthcare professionals. Increasingly, a wider range of primary care professionals are working with GPs to see and treat patients in Wales.

Primary care provision varies across the socio-economic gradient. Professor Julian Tudor Hart first described what he termed the ‘inverse care law’ – more care is provided to those with least need – in 1971. Consultation time is one example, showing a social gradient, lessening in those with socio-economic disadvantage, so shortening time for discussion of the wider determinants of health in those that would most benefit.

Perhaps it is encouraging that the recent Welsh Health Survey showed those from more deprived areas were more likely to have talked to a GP, attended A&E, been a hospital inpatient and have had regular prescribed medication, which could suggest that medical care is associated with need (figure 10). However, adults from the same areas were less likely to have seen a dentist, or optician. We need to understand whether this apparent inequity is cultural, reflecting peoples’ preference to see a doctor, or persistent evidence of the inverse care law in the form of less multi-disciplinary models of care in more deprived areas.

The greater amount of prescribed medication in more deprived areas is a concern. Poly-pharmacy – the prescription of several drugs for one individual – is more common among people living in more disadvantaged areas and can lead to avoidable harm. The number of medicines prescribed per head of population in Wales increased by a quarter between 2005 and 2014. The chance of receiving 10 or more medicines more than doubles from the least to most deprived populations and there is a strong relationship between the number of dispensed medicines and potential drug interactions, especially those which are potentially serious. Drug-related side effects are the leading cause of avoidable hospital admissions and can be minimised by regular medication reviews, so these must be provided in more disadvantaged areas.

Some side-effects or interactions might be acceptable if the risks of the drugs are significantly outweighed by their benefits. However, drugs are evaluated singly in clinical trials with carefully selected populations, yet people with multiple co-morbidities tend to be elderly, more likely to experience an adverse event and are not similar to those in the trials. There is no direct evidence of outcome benefit from poly-pharmacy. So because it can cause harm, poly-pharmacy might at least limit...
Figure 10: Adults’ reported health service use, by most and least deprived quintiles

<table>
<thead>
<tr>
<th>service</th>
<th>least deprived</th>
<th>most deprived</th>
<th>most:least deprived</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In past 2 weeks:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family doctor (GP)</td>
<td>14</td>
<td>20</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>In past 12 months:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attended casualty department</td>
<td>15</td>
<td>20</td>
<td>1.3</td>
</tr>
<tr>
<td>Outpatient department</td>
<td>32</td>
<td>33</td>
<td>1.0</td>
</tr>
<tr>
<td>In hospital as an inpatient</td>
<td>7</td>
<td>11</td>
<td>1.6</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>72</td>
<td>70</td>
<td>1.0</td>
</tr>
<tr>
<td>Dentist</td>
<td>78</td>
<td>60</td>
<td>0.8</td>
</tr>
<tr>
<td>Optician</td>
<td>56</td>
<td>45</td>
<td>0.8</td>
</tr>
<tr>
<td><strong>On regular prescribed medication</strong></td>
<td>54</td>
<td>60</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Source: Welsh Health Survey 2015

our ability to reduce the social gradient, if it does not actually increase it, particularly if medicines are not regularly reviewed.

**Planned or preventative care**

The traditional means by which a GP might seek a specialist’s advice has been by referring a patient to a hospital clinic. More than a million such referrals are made every year in Wales and should demonstrate a social gradient reflecting the distribution of need. Given the substantial variation in health need, a lack of social gradient for hospital referral would be surprising and would deserve local consideration. It may indicate a lack of planned or preventative care in more deprived populations or over-referral for the less deprived.

The numbers of GP referrals to hospital has changed little in recent years but a growing source of hospital activity are related to referral from alternative services, such as hospital specialists, optometrists, community dental services – some 30% of patient referrals are from sources other than GPs. This reflects a pattern of complex specialist-led care, which usually has no one doctor in overall charge of an individual patient’s care and can result in multiple appointments, which can eventually come to dominate the lives of particularly frail and elderly people. Such a pattern of care incurs significant costs for the NHS and transport services, as well as patients and families, and can result in busy and late running outpatient departments.

Previous CMO reports have discussed the need to provide more streamlined care to people with multiple conditions and to radically shake up the way outpatient departments are organised. The current demand for services is caused in part by clinical custom and practice, which can be modified – NHS Wales’ planned care programme, which is focusing on orthopaedics, ophthalmology, ENT and urology, has recommended more care is provided out of hospital and a transformation of outpatient practice. Questions posed by GPs should increasingly be answered promptly by telephone, email and direct access to investigations, as well as timely clinic reviews. Eventually a shift towards greater public and community engagement should support a greater personal contribution to health maintenance and less dependence on services.
Emergency care

There is a strong link between the social gradient and access to emergency care. This reflects the long-term challenges of health prevention and early intervention over the life course, which in turn may be indicative of a social gradient in access to planned healthcare. It also reflects higher levels of health illiteracy among deprived communities – there is some evidence to suggest people living in more deprived areas are more likely to access hospital-based emergency care for conditions which could be more appropriately treated in primary care.36

Every year there are a million attendances in Wales’ emergency departments – equivalent to one in three of the population. Demand for emergency care is growing, particularly as the population ages – people over 85 consistently have the highest A&E attendance rate per 1,000 population throughout the year, peaking during the winter months. Older people, who often have multiple and complex conditions spend more time in emergency departments – a 2014 Nuffield Trust37 analysis of English emergency department admissions calculated people over 75 spent an average of 213 minutes in A&E compared to 149 minutes for those under 75 in 2012-13 – which can impact on an individual hospital’s performance and ability to continue to manage demand in a timely way.

Evidence of the social gradient for emergency care demands a twin-track focus on prevention of inequitable health need and demand. We propose that a successful and sustainable healthcare system which enables better health and wellbeing will show a flattening of this relationship.

One practically advantageous aspect of these social gradients is that they show the NHS where to concentrate its efforts to reduce emergency care demand. There is evidence from across Wales that emergency care demand can be reduced if community resources are targeted to those areas where there is greatest likelihood of emergency admission to hospital – for example work with individual nursing homes to prevent unnecessary admissions; intervention and additional support for individuals who repeatedly call the Welsh Ambulance Service and new community-based
services, including some funded by the Intermediate Care Fund, to assess and help older people remain independent at home.

We have already made the point that primary and community care healthcare professionals must work closely with their local communities, particularly the most deprived communities which depend so heavily on emergency healthcare. Such proactive work will have a significant impact on emergency department safety, flow and handover and will help to reduce the wider community impact of ambulances delayed outside hospitals waiting to offload patients into emergency departments struggling to manage high levels of demand.

This work does not have to be complicated or expensive. Partnership working to reduce smoking will have an almost immediate impact on both emergency admissions and mortality. We have said previously that smoking cessation services should focus on areas of relatively high deprivation and there are clear social gradients for smoking-related admissions. Hospital admissions for childhood illnesses attributable to smoking, such as asthma, middle ear infections and meningitis, are all significantly higher in children from the most deprived areas compared to the least deprived\(^{38}\).

Age-specific rates for meningitis are estimated to be more than three times higher in the most deprived group compared to the least deprived.

A final reason to tackle the social gradient in hospital based care is to ensure that everyone receives the same, high-quality care. Delivering a large volume of care in hospital is hard to do consistently, safely and with a good user experience. People from more deprived areas may be more likely to suffer the greatest harm, as they may have the most illnesses and the most complex care. In Scottish hospitals, clostridium difficile – a healthcare-acquired infection – is more likely to affect the less advantaged, yet another health inequity. It seems likely other harms from care may be similarly distributed, although this has been little studied.

Case study

The North Wales public health team collaborated with Betsi Cadwaladr University Health Board’s information team to analyse the link between deprivation and emergency admissions in North Wales. This found that there was a higher rate of emergency admissions among North Wales’ more deprived communities, after adjusting for age\(^{39}\). The mix of medical conditions for those living in the more deprived areas explains, in part, the higher rate of admissions to emergency care. For example, there were more issues relating to mental health, use of alcohol and drugs and complications in pregnancy and childbirth. A larger proportion of admissions for these conditions are not planned in advance. Differences in the way more deprived communities use hospital care are also known.

A tendency to access hospital care via emergency channels is suggested by the finding that people in more deprived areas are more likely to present at emergency department with symptoms and conditions, which could more appropriately be managed in primary care.
Overall, healthcare-related harm matters as, in Wales, the HARM-2 study, which is soon to be published, has very recently shown an overall 10% risk of harm due to healthcare in each hospital admission, which is similar to other countries. For people over 85, the risk increases to 16%, suggesting that for each such admission to be justified there has to be a substantial benefit from treatment that exceeds this risk. These figures emphasise the benefits of a preventive approach aimed at reducing demand.

Planning for public health

The seven integrated health boards in the Welsh NHS are designed to take a population-based approach to healthcare and wellbeing, which is based on the needs of the communities within its boundaries. They should be planning, organising and providing appropriate preventative and treatment services to meet those needs.

This report makes a case for this work to be increasingly collaborative with other public sector professionals as needed, including those from the 3rd sector. Over a 4 year period it has been shown to reduce and sustain lower emergency admissions. For example, in Ystradgynlais, a relatively deprived community, emergency admissions to hospital were 17% lower in 2015/16 than they were in 2012/13.

Case study

The Powys Community Resource Team, operating a Virtual Ward model, works to help keep people independent in their own homes by providing a co-ordinated care approach. The team is led by a GP and involves district nurse, therapist, social services and other health and social care professionals as needed, including those from the 3rd sector. Over a 4 year period it has been shown to reduce and sustain lower emergency admissions. For example, in Ystradgynlais, a relatively deprived community, emergency admissions to hospital were 17% lower in 2015/16 than they were in 2012/13.
partners and those communities so services influence the whole life course, improving outcomes, health and wellbeing, reducing health inequalities and ultimately reducing demand on statutory services.

Getting to grips with the day-to-day challenges of health service delivery in Wales may have deflected attention from innovation but there is evidence that health boards are starting to think and behave in new ways which deliver better patient outcomes at a lower cost. Encouraging local needs assessments and planning through primary care clusters – groups of GP practices working with other primary care professionals and organisations – supports the development of appropriate local solutions and encourages collaboration across services to meet shared objectives.

The introduction of an integrated planning system in 2014 has placed a greater emphasis on improving the experience of patients and service users and the health outcomes for the population through clearly defined evidence-based approaches. For this evidence to be gathered, costs and outcomes must be measured at population level. Health boards should assure themselves that they are not spending most where need is least.

Health boards and NHS trusts must produce integrated medium term plans every year, which demonstrate how they will work together with their communities to deliver high-quality, targeted and appropriate care, which meets defined outcomes for quality, cost and benefit. These plans should, in the future, be produced with significant co-production with local communities.

The 64 primary care clusters in Wales are developing as local mechanisms to assess the health and wellbeing needs of individuals, families and local communities. As they evolve and mature they will become increasingly accountable for the health and wellbeing of the communities they serve, with much greater influence over the use of available financial, workforce and other resources.

Through their plans, health boards and NHS trusts must present health needs analyses which clearly show how communities differ and how unequal social factors impact on need and inequality of health. Some health boards are tackling this through innovative schemes but these initiatives are scattered and this work needs to become business as usual for all.

Case study

An inverse care law had been evident for some time in Wales in relation to access to cardiac procedures, but this is diminishing as a result of better health service planning.

In 2010-11, there was evidence that people in the most deprived quintile were 20% less likely to receive an angioplasty or bypass operation in the six months following admission for a heart attack. A change in the service arrangements in South Wales eliminated the inequity between deprivation quintiles and by 2012-13 there was no significant difference in the likelihood of revascularisation at any time during the six months follow-up for people in the most deprived quintile compared to the least deprived.

This shows the value of measuring the social gradient for actions the NHS takes. In this case the inequity was addressed by additional access for people from poorer communities.
Chapter 5

The role of health professionals

Working in a population-based health system

The central theme of this CMO report is that the NHS needs to be sensitive to the life circumstances of the people it serves. This requirement must start with the tens of thousands of individual consultations which happen every day between NHS staff and the people of Wales. The evidence that our approach needs to change comes from data showing more intervention being delivered to and accessed by people in the upper socio-economic quintiles.

Patient outcomes depend not just on the clinical care and treatment offered to people but on the wider aspects of a person’s life – for example, whether they work; what job they have; their living conditions and finances; their family life – these factors should be of interest to every professional seeking to maximise the impact of their work as clinical outcomes are likely to be improved by attention to these other pressures.

A wider awareness also should influence treatment decisions to ensure the best clinical outcome. Health services can have lesser impact on those who come from adversity, even when they receive the same treatment. Having a history of childhood abuse appears to result in a lower likelihood that drugs for depression will work in adult life. People in poorer areas or with adverse experiences might need more or even different interventions to achieve the same outcomes.

With unique access to the population, a variety of healthcare professionals see large numbers of the public every day and at key points during their lifetime. Midwives see women both before and after they give birth; health visitors see babies in their first weeks and years of life; school nurses, dentists and GPs have close contact with children throughout their childhood and the wider primary care team will maintain contact with many of us over the course of our lives.
At all key junctures and transitions in an individual’s life, healthcare professionals are uniquely placed to take action – in partnership with the individual – in a way which can positively affect people’s health and wellbeing. Highly-trusted, with established and well recognised positions in local communities, there are real opportunities to understand and support people within their social context and, in some cases, improve both their social and economic situation.

**Pursuing health equity on the frontline**

So how can healthcare professionals help ensure a fair approach to all those they encounter? The UCL Institute of Health Equity headed by Professor Sir Michael Marmot has outlined the following ways everyone can take action:

- **Education and training of healthcare professionals** should include a greater focus on the social determinants of health and health equity. Student placements in areas of deprivation should be encouraged. Students from all socio-economic backgrounds should have fair access to healthcare careers. These issues are under active discussion in Wales at present and we strongly support this work.

- **We should all build relationships of trust with individuals and communities.** Everyone should know how to take a social history and to feel confident about how to respond constructively to information received.

- **NHS organisations and other public bodies need to ensure – as major employers – they place equity at the heart of their work.**

- **Strengthen the NHS working in partnership.**

- **The NHS workforce needs to be a powerful advocate for individuals, communities, staff and general population.** The NHS must be an effective voice for equitable health outcomes in all its partnership working. A good example is advice from the Royal College of General Practitioners that doctors should be interpreters and advisers as well as diagnosticians.

Health professionals have a key role in trying to break the link between deprivation and poor health. They may not feel able to affect poverty itself but they can act to ensure poverty does not necessarily mean ill health, while inequity is hopefully addressed on a wider level. This is what health workers can do about inequity of health outcomes.

**Being open about risks and benefits**

Over the lifetime of the NHS, in common with many other health systems and countries across the world – particularly the western world – we have an estimated $5bn of medicines are thrown away unused every year and 30% of all medical spending is unnecessary and does not add value in care. Closer to home, Italy has adopted the principles in its Slow Medicine movement.

The National Institute for Health and Care Excellence (NICE) has compiled its list of “do not dos” for England and Wales and a Choosing Wisely campaign has now been launched in Wales.

Prudent healthcare has at its heart the principle that we should do the minimum necessary to get the desired – and the best – outcomes for patients, and for the health service, in terms of costs and sustainability.

**Fact box**

Over-diagnosis occurs when someone is diagnosed and treated for a condition which is unlikely to ever cause them harm. The *BMJ* describes over-diagnosis as “posing a significant threat to human health by labelling healthy people as sick and wasting resources on unnecessary care.” This is the very opposite of the prudent healthcare principle of harm avoidance because it leads to “too many people... being overdosed, over-treated and over-diagnosed”. The *BMJ* launched its *Too Much Medicine* campaign in response to the phenomenon; across the world there have been other responses, including the Choosing Wisely movement, which began in the US, where
witnessed a creeping medicalisation of everyday life; the idea that there really is a pill for every ill and the very sadness of the human condition can be made amenable to treatment. This phenomenon has in recent years given way to a debate about over-diagnosis and over-treatment.

As part of the work to embed prudent healthcare into the way our public services, including the NHS, plan and provide services, it is important that healthcare professionals help people be fully informed and aware of all the treatment options available to them and the real risks and benefits to them of each approach. This will enable people to make informed decisions about their care and make their own plan of care.

People from different backgrounds, who are facing very different personal and family pressures, may have different expectations about a successful outcome from their care – it is vital this is recognised. A successful outcome may not be a cure or, in the case of a terminal disease, more months’ survival; it may be the ability to walk the dog, to play bowls, to visit a parent or to hold a grandchild. Assisting a patient to identify and compile their health and wellbeing goals, setting achievable targets for progress towards these and putting in place the support and resources to get there which often involve support in the community is often referred to as care planning.

We also need to recognise there are reasons healthcare professionals might influence patients to make the wrong decisions. Healthcare professionals often hold a view about what is best and this can be affected by a range of different factors, including unconscious bias against those from different socio-economic backgrounds. We know a doctor’s view about what a patient wants can differ greatly from what a patient says they want when they are asked. Such a failure to recognise a patient’s true preference has been called silent misdiagnosis. Patients make different decisions when they are well informed and often opt for less invasive or interventional treatment than a doctor may advise.

Patients’ preferences matter: stop the silent misdiagnosis, highlights these examples of the impact well-informed patients can have for themselves and on the NHS:

- Men with urinary symptoms chose prostate surgery much less when advised of the risk of later sexual dysfunction;
- Women with abnormal uterine bleeding opted less for surgical removal of the uterus when reassured they can safely wait for menopause;
- Following a heart attack, people were less likely to choose bypass surgery or an angioplasty procedure when they were told these procedures do not reduce the risk of further heart attack;

The report made a series of recommendations designed to widen participation in medical school and increase the diversity in medicine, including the need for medical schools work with schools in disadvantaged areas to ensure students have a more equal opportunity to train to work in medicine.

The Welsh Government is supporting work with Wales’ two medical schools to make medical training more widely accessible. This will help to improve diversity and retain newly-qualified doctors in Wales.

Fact Box

The Selecting for Excellence report published last year by the Medical Schools’ Council revealed that 80% of medical students come from just 20% of schools and half of all secondary schools in the UK have never sent anyone to medical school.

The report concluded: “Available data on the demographics of medical students in the UK confirm that students from a lower socio-economic background are underrepresented in medical schools “The proportion of students from these backgrounds is lower than the equivalent proportion of people from these backgrounds in the UK population as a whole.”
• People with back pain due to a herniated disc are less likely to opt for surgery when told the problem usually settles itself but those with spinal stenosis were more likely to opt for surgery when told their pain would not settle without it.

We have discussed the risks associated with complex healthcare, particularly for frail and elderly people, earlier in this report – these must be considered and discussed before each outpatient referral or hospital admission. While we have come to accept a certain level of risk in these apparently routine actions over the years this does not lessen our responsibility to be open about them.

The wider role of the NHS in Wales

Finally, we must not underestimate the wider social importance of the NHS as the largest employer in Wales. The NHS should be supporting people to enter or re-enter the workforce and stay in employment, but we don’t routinely measure this. The NHS’ responsibility to help its own workforce get back to work after a period of ill health is identical to that to the wider population.

Healthcare workers are exposed to a number of risks, such as musculoskeletal disorders and sharp injuries.

To promote a culture of care for patients, carers and the public and a culture of care for all staff, NHS Wales developed and adopted a Health and Well-being Charter in May 2013. The charter encourages the health and well being of all its staff and recognises that staff act as role models to the community they serve in promoting and preventing ill health.

It is the joint responsibility of managers and individual employees to work together to encourage healthier lifestyles and life choices, support each other in the work place, and promote the effective management of sickness when staff are prevented from attending work through ill health or are at risk of having to take time off due to sickness.
The nature of their work, which for some includes shift work, also has health impacts. Healthcare professionals have a relatively high rate of stress and anxiety. The NHS has an important role in reducing these risks.

The NHS can help tackle the social gradient by providing employment opportunities and by promoting good employee health and wellbeing, reducing sickness rates, leading the way on pay equality and providing good-quality and stimulating work.

The NHS should be supporting employers to help people realise that being in work is good for their health and well-being. Targeted work with employers, including the business community, to reduce obesity rates; smoking; alcohol and drug use among their workforces can help keep people in work, preserving their livelihoods and improving wellbeing.

Acting on the social determinants of health requires a different way of funding programmes – instead of looking at the short-term, service-related gains of investment we should be investing in those programmes and initiatives which are likely to show returns years down the line. Work by the King’s Fund has demonstrated the NHS can tackle poverty and inequality by the way it spends its budget – through employment, commissioning and benefits-in-kind.

The greater the level of poverty in an area, the greater the role the NHS plays and therefore the more opportunity there is for the health service to use its spending power to benefit those communities.

Work by Public Health England and the UCL Institute of Health Equity suggests the NHS can increase social value and improve the social determinants of health through a broad range of actions, including training in family interventions to raise their aspirations; actions to support individual skills; resilience and mental health protection; local economic regeneration; parity in income between employees; investing in programmes which reduce fuel poverty and supporting people to live independently. The NHS has much to contribute.

The Welsh Government’s LIFT programme works with people who have spent more than six months out of work or training and who face the greatest barriers to getting a job, such as young people, single parents and people with weak employment records.

NHS Wales health boards are working in partnership with Communities First Clusters to match programme applicants to work and training opportunities that provide invaluable employment experience and have greatly assisted candidates in finding permanent employment.

Through a collaborative approach whereby new opportunities are identified in NHS Wales every month, a growing number of people have been able secure permanent employment within NHS Wales, thanks to the experience and insight gained through a work placement in NHS Wales.

To date, over 20% of the Lift candidates who have taken a work or training placement in NHS Wales have gone on to secure permanent employment, either in the organisation or elsewhere, which is a conversion rate higher than the overall programme average. Many more individual have benefitted from training or work placements which will improve their employment prospects, either within the health service or elsewhere.
Conclusions

The social gradient for health over a lifetime creates a hugely uneven distribution of health need and has real relevance to everyone working in the NHS. However, it is amenable to ongoing relevant intervention. Long-term action to decrease the social gradient will limit the demand for healthcare services. Health interventions that do not reach those at greatest risk are likely to increase the inequity of health outcomes. To prevent this, the NHS needs to work much more closely with the people and populations it serves to understand, plan and deliver effective care to everyone including those that need it most. A more balanced relationship between the NHS and the people it serves, which results in their greater sense of ownership and influence, must be a fundamental requirement for the future sustainability of healthcare services.

All NHS services provided without regard to the social gradient have the potential to increase inequity. To improve clinical outcomes for everyone, health professionals have a responsibility to identify and help those at greatest risk and facilitate shared decision making by the public and patients. A range of NHS organisations, as employers, educators and trainers, have important roles to play in reducing economic and health inequity.

The duty in our legislation to reduce inequity in Wales has many implications for the way the NHS works. A renewed focus on tackling inequity could improve health and wellbeing and reduce the demand for healthcare services.
Recommendations

1. NHS organisations must ensure they are working effectively with their public sector partners to reduce the social gradient by upstream effective interventions throughout the life course; but with a particular focus on early years
   a. the first 1000 days
   b. adverse childhood experiences
   c. active lifestyles and healthy ageing

2. NHS organisations, especially Public Health Wales and health boards, should ensure health protection interventions are delivered consistently across the social gradient
   a. Vaccination
   b. Cancer screening
   c. Smoking cessation

3. Primary and community care services should work co-productively with their local communities to manage demand on GP services and ensure an appropriate response to those with the greatest needs
   a. Co-produce primary care
   b. Social prescribing
   c. Time banking

4. NHS organisations should ensure clinical costs, activity and outcomes are, wherever possible, monitored against socio-economic status to ensure positive impact on equity of outcome
   a. Cluster level data
   b. Activity and performance data
   c. Programme budgets

5. Welsh Government should ensure the revised planning framework requires organisations to plan for equitable health outcomes for their populations and to focus on reducing demand.
   a. Co-production
   b. Life course intervention
   c. Health and wellbeing services
   d. Targeted community services
   e. Timely hospital responses

6. A programme of health services delivery research should be established to evaluate new models of care designed to minimise the impact of the social gradient on health outcomes.
   a. Co-production for health protection
   b. Co-production and primary care demand
   c. Time banking and communities

7. Providers of healthcare education and training programmes should ensure their courses include a focus on health equity and their intake reflects socio-economic demographics.
   a. Undergraduate and postgraduate curricula
   b. Disadvantaged backgrounds

8. NHS organisations should have policies and monitoring and reporting processes in place that ensure they fulfil their social responsibility to the health and wellbeing of the populations they serve.
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