Thrive PLYMOUTH

Building wellbeing and resilience in a time of austerity

Thrive Plymouth Year 4

Director of Public Health Annual Report 2019

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Foreword

This year, my report is in two very distinct sections: part 1 reviews the progress made in Year 4 of Thrive Plymouth, where we focussed on wellbeing. The Five Ways to Wellbeing is an evidence-based but simple tool to help people to consider and take positive steps to improving their wellbeing; often, these steps are the things that we miss out from our lives when we start to feel under pressure and yet they can make a massive difference to the way we feel. They can also help to divert us from some of the unhealthy behaviours that we tend to turn to.

Part 2 of my report is, unfortunately, very different in tone. I, along with colleagues, have become increasingly concerned about the national picture, where data shows that life expectancy rises have not only stalled, but have started to reduce, particularly for women in more deprived communities. This has produced a widening of the health inequality gap. We know that the causes of poor health are complex, and so it is no surprise that the causes of this widening are also likely to be complex.

These early indications are easiest to detect when there are large numbers; if we try to compare national trends to local, we can see that we *may* be following similar trends but it is too soon to be certain. Though I am naturally an optimist, I want to highlight to you the risk that Plymouth will follow national trends, discuss some of the drivers of that, and question whether there is more that we, as a city, can do.

Ruth Harrell

Director of Public Health

Plymouth City Council

Recommendations

Recommendation 1

Reduce stigma and discrimination by increasing mental health and wellbeing literacy across the whole population.

Recommendation 2

Work to improve understanding of the impact stigma and discrimination have on the lives of people with mental health problems.[1]

Recommendation 3

Make it easier for people to seek support around mental health problems.

Recommendation 4

Adopt a life course approach. The foundations of mental health are laid down in infancy in the context of family relationships. Place-based intervention in settings such as schools, workplaces and communities complement the life course approach and makes the most of existing opportunities.

Recommendation 5

Help the population to build resilience through initiatives to build self-esteem and connection with others.

Recommendation 6

Create an environment where people can be their best self and be resilient to setbacks

Recommendation 7

Close monitoring of emerging evidence base around reducing life expectancy and increasing infant mortality, both nationally and within Plymouth, to detect any intelligence that can lead to actions

Recommendation 8

Embed the approach that we are taking in Plymouth, working together as partners to deliver the Plymouth Plan, including our approach to the wider determinants of health as well as integrated health and wellbeing. Whilst we have made good progress, we need to increase the speed that services are transformed.

Recommendation 9

Continued lobbying for appropriate funding for public sector services for the residents of Plymouth, to enable the services that they need to be accessible and effective, and tailored to their needs.

Recommendation 10

Use this additional funding to support and develop the interventions that we have in place, scaling them up, refining them and spreading good practice, and continue to develop new ways to get people the support that they need.

Part one: Thrive Plymouth Year 4

Mental Wellbeing

1. Why is Mental Wellbeing Important?

Mental illness is responsible for a large portion of disease within the UK – an even larger burden than both cancer and heart disease. People with mental illness die on average 20 years earlier than the mentally healthy. Affecting one in four people, mental health is estimated to cost the UK economy £105 billion a year.[1] It, therefore, stands to reason that as a society we need to do more to help identify, prevent and reduce the impact of mental health issues. One way of doing this is to promote overall wellbeing.

The UK Government Foresight report on mental capital and wellbeing describes mental wellbeing as "a dynamic state, in which the individual is able to develop their potential, work productively and creatively, build strong and positive relationships with others, and contribute to their community. It is enhanced when an individual is able to fulfil their personal and social goals and achieve a sense of purpose in society."[2]

Mental wellbeing and mental capital, therefore, can be considered as an important underpinning for a healthy life. Improving mental wellbeing can lead to a healthier lifestyle and leading a healthier lifestyle can improve mental wellbeing, in turn improving mental capital. Thrive Plymouth, therefore, took Year 4 to promote better mental wellbeing through various channels and interventions and using the engagement framework of the Five Ways to Wellbeing. The year was to demonstrate that Thrive Plymouth is as much about those with mental illness as any other resident. It was important to ensure that mental wellbeing was as well integrated into Thrive Plymouth as were the behaviours of Smoking, Eating, Drinking and Moving that were emphasised in the previous year.

The Prevention Concordat for Better Mental Health

The Prevention Concordat for Better Mental Health is a cross-sector, signatory agreement that aims to facilitate local and national action around preventing mental health problems and promoting good mental health. It is based on evidence and a preventative approach, it has been shown to improve population level mental health and lessen the financial burden on the health care system, with the aim of creating a fairer and more equitable society.[3]The consensus statement for the concordat has seven key commitments all based around partnership, promotion and the prevention of mental health.

Reduce Stigma and Loneliness

The Equality Act 2010 makes it illegal to discriminate directly or indirectly against people with mental health problems in public services and functions, access to premises, work, education, associations and transport. However, nearly nine out of ten people with mental health problems say that stigma and discrimination have a negative effect on their lives.[4] Reducing the negative views and connotations attached to mental illness is a key goal of the concordat. The government and supporting bodies recognise that this needs to be a joint effort across sectors and disciplines with early education playing a key role. Over three quarters of mental health problems emerge before the age of twenty; this makes childhood determinants an important factor for future mental health and wellbeing.[5] Therefore, focus should be given to early intervention such as school physical activity schemes[6], universal parenting support interventions[7] [8]and school educational intervention programmes.[9] That said, it is also important for partners to continue implementing recommendations from NICE guidelines in order to continue supporting and improving mental well-being across the life course.

This includes addressing social isolation and loneliness, a valuable approach to preventing common mental disorders especially in older people.[10] Loneliness can have a negative effect on our health, with studies reporting an association with higher blood pressures, compromised immune system function and increased stress hormones. The cumulative effect means that being lonely can be as bad for your health as being a smoker. [11] [12] Loneliness can lead to a higher risk of developing dementia and experiencing depression.[13] [14] Many people will avoid seeking help due to the stigma they expect to face and the self-stigma of feeling a burden, and believing they have undesirable attributes[15]

Recommendation 1

Reduce stigma and discrimination by increasing mental health and wellbeing literacy across the whole population.

Recommendation 2

Work to improve understanding of the impact stigma and discrimination have on the lives of people with mental health problems.[16]

Recommendation 3

Make it easier for people to seek support around mental health problems.

Recognise Symptoms

A life course approach provides a framework for understanding the development of mental health across the population and aims to identify points in the life course when there are opportunities to promote wellbeing and intervene when appropriate. Such times could include school years/education, times of ill health/hospitalisation and targeting pregnant women and new parents. It is estimated that 10-20% of women develop a mental health problem during pregnancy or within the first-year post childbirth.

Recommendation 4

Adopt a life course approach. The foundations of mental health are laid down in infancy in the context of family relationships. Place-based intervention in settings such as schools, workplaces and communities complement the life course approach and makes the most of existing opportunities.

Recognising the signs of mental health is important in order to enable early intervention and to prevent people moving into illness. This can be done by providing health and mental health literacy training to frontline organisations and individuals to provide them with the tools to support and recognise poor mental health.

Symptoms can include, but are not limited to, the following:

- Unexplained high emotional states; fear, worries, guilt
- Confused thinking and lack of concentration
- Inability to cope with daily problems
- Social withdrawal, mood swings and a change in sleep patterns
- Change in eating habits
- Abuse of drugs/alcohol

Building Resilience

Resilience is the capacity of people and societies to confront and cope with life's challenges; to maintain their wellbeing in the face of adversity. Encouraging people with mental illness to build resilience is key to supporting overall health and preventing physical illness and disease states.

Mental wellbeing and resilience are protective factors for physical health as they reduce the prevalence of risky behaviours such as heavy drinking, illegal drug use, smoking and unhealthy food choices which are often used as coping and management mechanisms in the absence of other support.

Recommendation 5

Help the population to build resilience through initiatives to build self-esteem and connection with others.

Figure 1: Simple model illustrating the two-way relationship between mental wellbeing and the Thrive Plymouth four key behaviours

Crucially it is important to identify that the determinants of poor mental health and mental wellbeing are the same as the determinants of physical health and illness. The following six principals are particularly relevant to mental health and wellbeing

1. Interventions which focus on the positive have added value over those which focus on finding or preventing the negative. Promoting mental wellbeing moves the focus away from illness and is central to an individual's resilience, social purpose, autonomy and ability to make life choices.
2. The social, economic, cultural and environmental determinants of mental health need to be considered and addressed. Different interventions can potentiate (increase power/effect) each other.
3. A proportionate universalism approach, which addresses whole population mental wellbeing promotion and provides additional support for high risk groups, is the optimum approach.
4. Engagement, both community and individual, are central to public mental health. The former is concerned with building on assets and involving communities in framing the issues and the solutions, the latter with developing individual strengths and resilience.

5. Since personal risk and protective factors are determined in early childhood, primarily in the context of family relationships, a life course approach is essential.

6. A truly multidisciplinary and inter-sectoral approach must be adopted, as no one discipline has all the knowledge or power to affect the required level of change.

The Sustainable Development Commission recognise that empowering people through self-care reduces health inequalities. Peer to peer support is an effective and cost saving tool that can be used to build confidence and autonomy within at-risk populations. The following four points are focused on services that should be provided to increase self-directed recovery.

1. Increasing people's capacity to use psychological treatment methods can prevent the development of mental health problems, particularly if used during periods of transition and pressure, such as redundancy, after birth or after a bereavement. Simple interventions and promoting available services such as cognitive behavioural therapy, have been successful in this way, particularly with those at increased risk of mental health problems, such as those with long term conditions and those who are isolated[17,18]
2. Provide bereavement counselling [19] and relationship support.[20]
3. Support unemployed working age adults into high quality work, ensure those who are unable to work have access to a reasonable standard of resources, and are supported to lead fulfilling lives, moving towards employment as appropriate.
4. Increase mental health literacy,[21] especially for people with limited financial and social resources, including older people, people with long term health conditions, refugees, people from Black and Minority Ethnic communities and people living with disabilities. Low mental health literacy limits opportunities for vulnerable groups to be actively involved in decisions about their health[22] and increases delays in help-seeking and access to appropriate treatment.

Everybody will at some point suffer a setback, for example, bereavement, job loss, relationship breakdown or something similar. Having a reasonable level of personal resilience will make it easier to cope in these circumstances and make it easier to bounce back.

Recommendation 6

Create an environment where people can be their best self and be resilient to setbacks

Five Ways to Wellbeing – Connect, Learn, Be Active, Notice, Give [CLANG]

The Five Ways to Wellbeing provide a way to create an environment where people can build their own resilience and improve their wellbeing. It was adopted during Thrive Year 4 as an engagement tool. NHS Bristol had previously used the Five Ways to Wellbeing successfully as an engagement tool and the evidence is summarised in *The Happy City Initiative (2012) Five Ways to Wellbeing: Report on research into the best practice in successfully marketing the five ways to wellbeing to the general public and specific target groups*.

http://www.happycity.org.uk/wp-content/uploads/2016/10/Happy-City-NHS-5-ways-to-Wellbeing-Messaging-Report.pdf

For Thrive Plymouth Year 4, partners were asked to use the Five Ways to Wellbeing as a communications and engagement tool in the following two ways

1. Directly: by embedding the Five Ways to Wellbeing resources across communications with staff and clients
2. Indirectly: by increasing the opportunities across the city for people to connect, learn, be active, notice and give.

Figure 2: The Five Ways to Wellbeing

While the Five Ways to Wellbeing has been shown as an effective guide and tool, it is important to acknowledge it does have limitations in that it is a theoretical framework and therefore should be used alongside evidence-based interventions.

Wellbeing is a broad concept that has different meanings depending on the context. The term mental wellbeing is frequently used interchangeably with other terms around positive mental or emotional health. The World Health Organisation (2007) defines mental wellbeing as a state 'in which the individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community'. By this definition, mental wellbeing has an important part to play in an individual being able to lead a healthy lifestyle.

Subjective wellbeing has a two-way relationship with health. Health influences wellbeing, and wellbeing itself influences health, possibly through increasing the likelihood that an individual will lead a healthy lifestyle. It is important to take into account mental and emotional wellbeing as part of a holistic approach to encouraging healthy lifestyle behaviour change, and further to take into account the social and wider determinants of health that affect psychosocial pathways and health outcomes. There are a number of evidence-based guidelines and interventions that are recommended to improve mental wellbeing at population level and in specific target groups.

The Five Ways to Well-being were created as the mental health equivalent of 'Five a Day' for fruit and vegetables. The Five Ways can be used effectively as a communications and engagement tool. It should be used alongside, but not instead of, evidence-based interventions. All mental wellbeing interventions undertaken during Thrive year 4 were evaluated, wherever possible, using the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS).

2. Prevalence of Mental Wellbeing in Plymouth

The Office for National Statistics measures personal wellbeing through the collection of data based on 4 questions in the Annual Population Survey. The questions are;

Table 1 : Four measures of personal well-being (answers on scale 0-10)

Measure	Question
Life Satisfaction	Overall, how satisfied are you with your life nowadays?
Worthwhile	Overall, to what extent do you feel the things you do in your life are worthwhile?
Happiness	Overall, how happy did you feel yesterday?
Anxiety	On a scale where 0 is "not at all anxious" and 10 is "completely anxious", overall, how anxious did you feel yesterday?

Source: ONS

The following data is reported through the Public Health Outcomes Framework relates to Plymouth. It focuses on the percentage of the local population reporting poor scores across the questions. Comparison is made to the regional and national average scores.

Table 2 : % of people with a low life satisfaction score

Year	Plymouth	South West	England
2011/12	5.3	5.8	6.5
2012/13	4.7	5.3	5.7
2013/14	5.8	5.3	5.6
2014/15	5.8	4.7	4.7
2015/16	4.2	3.7	4.6
2016/17	3.8	4.1	4.5
2017/18	4.1	3.8	4.4

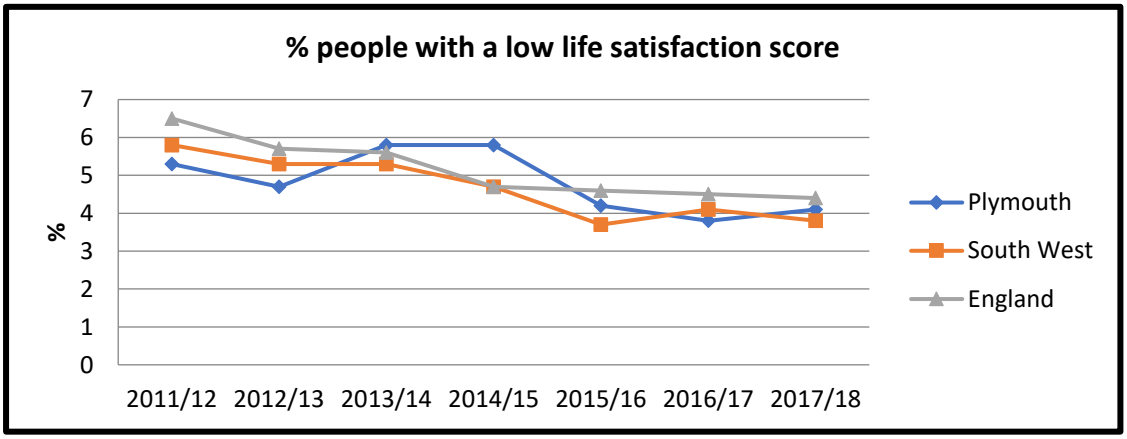


Figure 2: Graph showing the % of people with low life satisfaction score (ONS)

Table 3 Showing % of people with a low worthwhile score

Year	Plymouth	South West	England
2011/12	5.1	4.1	4.8
2012/13	5.5	3.9	4.3
2013/14	6.0	4.4	4.2
2014/15	4.5	3.9	3.8
2015/16	5.6	3.3	3.6
2016/17	3.9	3.7	3.6
2017/18		3.4	3.6

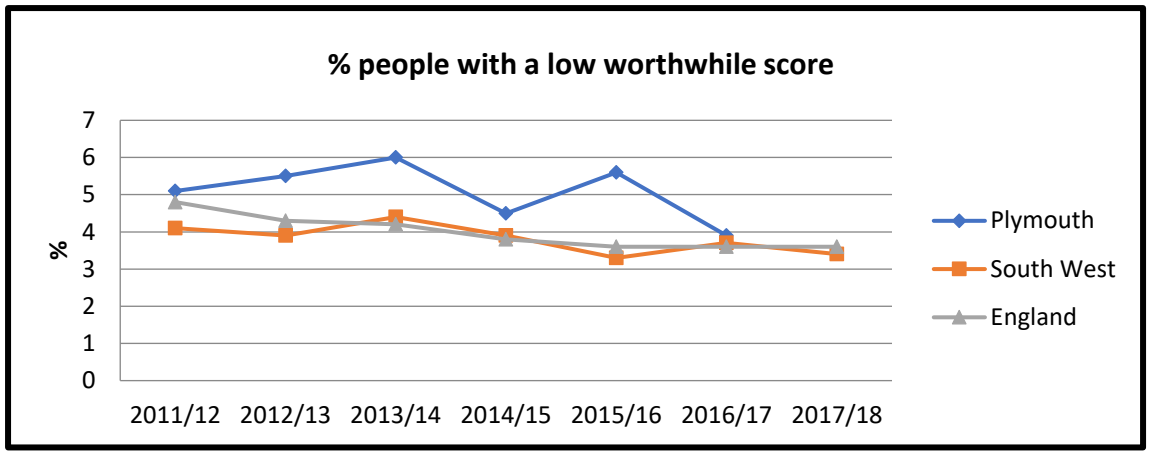


Figure 3: Showing % people with a low worthwhile score

Table 4 : % of people with a low happiness score

Year	Plymouth	South West	England
2011/12	11.5	10.0	10.7
2012/13	10.8	10.0	10.3
2013/14	11.0	9.6	9.6
2014/15	13.0	8.8	8.9
2015/16	9.4	8.4	8.9
2016/17	9.5	8.6	8.5
2017/18	7.9	7.4	8.2

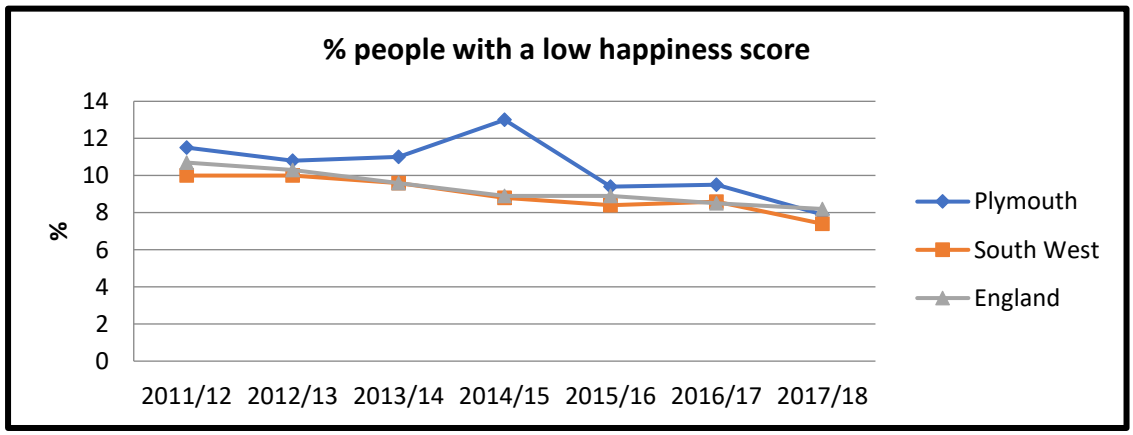
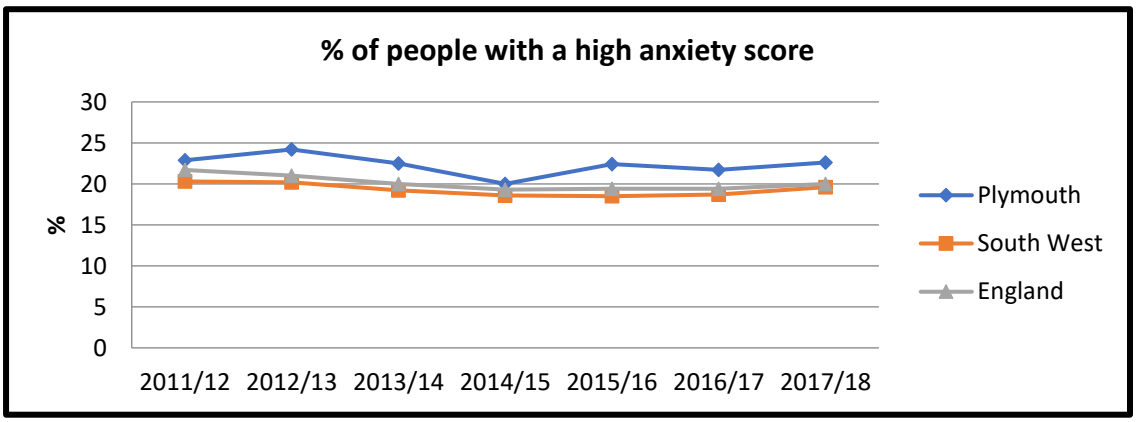


Table 5 : % of people with a high anxiety score

Year	Plymouth	South West	England
2011/12	22.9	20.3	21.7
2012/13	24.2	20.2	21.0
2013/14	22.5	19.2	20.0
2014/15	20.0	18.6	19.3
2015/16	22.4	18.5	19.4
2016/17	21.7	18.7	19.4
2017/18	22.6	19.6	20.0



The data shows that whilst people surveyed in Plymouth have slightly worse scores across the wellbeing measures, these are not generally statistically different from the national or regional average scores.

3. Thrive Plymouth Year 4 – What we did and why

Year 4 of Thrive Plymouth was co-designed with the people who know the most about wellbeing in the city; the Plymouth Mental Health Network. We circulated a questionnaire to our partners asking for their knowledge of what was already happening in the city and how we could support and encourage better wellbeing through the year. We got a lot of great recommendations from partners experience and knowledge and we agreed collectively that a year focusing on the Five Ways to Wellbeing was a great idea. We then held a summer away day with the Thrive Plymouth Network where we collected ideas about how the Five ways to Wellbeing were already being used in the city and how they could be used in the future.

Launch Event

We held our launch event to coincide with World Mental Health Day in October 2018. At the launch we had 172 delegates representing 71 organisations attend.

We were pleased to have videos from Duncan Selby CEx Public Health England, Johnny Mercer MP, Luke Pollard MP and Carole Burgoyne MBE, Ruth Harrell DPH talking about how they use the Five Ways to Wellbeing – how they Clang'ed

The event had a great cast of speakers, including the creator of the Warwick Edinburgh Mental Wellbeing Scale, who also gave a seminar on the tool after the launch event.

During the event we had a marketplace demonstrating some of the schemes and activities available to support mental wellbeing in the city.

At the end of the launch event we encouraged attendees to sample some of the activities intended to support mental wellbeing.

- Knitting activity
- Mindfulness activity
- Wellbeing History Walk around the campus
- Planetarium activity
- Sports Taster sessions in the University Gym

Offer and Ask

At the launch event we used our Offer and Ask approach to attendees:

We offered:

- A local authority signed up to the Mental Health Challenge and committed to supporting positive mental wellbeing in the city
- Training resources from Livewell Southwest to support the understanding and promotion of mental health and wellbeing
- One You Plymouth support for improving healthy lifestyles
- Membership of the Thrive Plymouth Network – support, advice, events
- Resources on the Five Ways to Wellbeing

We asked:

- Spread the word about the Five Ways to Wellbeing and use the available resources
- Create opportunities for people to engage in the Five Ways to Wellbeing
- Signpost to One You Plymouth – Sleep Well and Stress Less
- Consider your own wellbeing and try the Five Ways to Wellbeing
- Participate in the Thrive Plymouth Network

Membership of the Thrive Plymouth Network increased from 52 to 105 members representing 78 teams/organisations throughout the year.

Events/Campaigns

There were a number of wellbeing related events that happened across the city during Year 4.

Yarn Bombing Smeaton's Tower

Colebrook SW's Opportunity Knocks project worked hard to encourage people in the city to knit or crochet 10 x 10 squares as part of their outreach to isolated and vulnerable adults in the city. Throughout the project an amazing number of squares were created and this allowed us to Yarn Bomb Smeaton's Tower. The squares were then sewn into blankets and donated to two projects in the city, a nursing home and a charity working with victims of sexual and domestic violence.

Picture of Yarn Bomb

Social Prescribing and Wellbeing Hubs launches

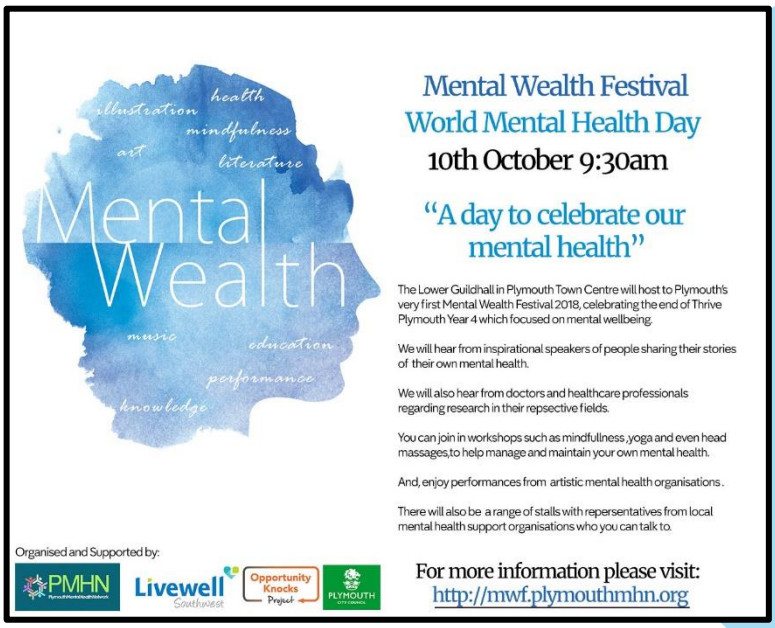
During Year 4 of Thrive the first of the new Wellbeing Hubs was launched at Jan Cutting Centre in Keyham, Four Greens Centre in Whitleigh and the Improving Lives Centre in Mannamead. There will be twelve of these centres before the end of 2020 and they are designed to support the social prescription programme to progress. All centres allow for drop in and run numerous groups designed to reduce social isolation and tackle low level depression, anxiety and stress.

Headspace Peer to Peer Mental Health Support Café launch within Wellbeing Hub

We were pleased to see the new Crisis Café launched within the Jan Cutting Centre. This provides a place for Blue Light responders to bring people who are in a mental health crisis. The café is manned by volunteers with expertise in counselling and befriending. Since they opened in they have provided hospitality to people who would otherwise have been taken to the Police Station or A&E. This has reduced pressure on these services. The Crisis Café is managed by Heads Count a mental health charity based in the city.

Street Factory Graffiti

During our launch event we were delighted to have a local graffiti artist who spent the event creating art based on the event. He is a magnificent success story for one of our partner organisations, Street Factory, who work with disaffected youth and children in the city around urban dance to give them a hope for their future, build their aspirations and find and support their motivation so they can become their best selves. We have been privileged to witness this organisations amazing rise to national reputation during the past year. A highlight of the launch event was Toby G getting everyone in the room to do 'the move' during his presentation



Mental Wealth Festival

We celebrated the end of Thrive Plymouth Year 4 with The Mental Wealth Festival, a joint event organised by Thrive Plymouth, One You Plymouth and Colebrook SW –at the Plymouth Guild Hall. This event coincided with World Mental Health Day 2018 and was attended by over 120 people. The day was organised around a series of workshops, creative activities, practical seminars and speeches. The purpose of the event was to raise the profile of the incredible work being done in the city around creativity and mental wellbeing. There was music, art, mindfulness, yoga, sharing of lived experience. We hope to make this annual event.

Resources

In support for Thrive Plymouth Year 4 we created a series of resources for use by organisations when talking about the Five Ways to Wellbeing.

HEADLINES FOR YEAR

We received end of year reports from some of our Thrive Plymouth network organisations and they told us this year:

Part Two: National trends in life expectancy

Every year, the Office of National Statistics (ONS) publish new figures estimating life expectancy; an estimate of how long a newborn baby might expect to live, on average. This is calculated by looking at the age that people die, and taking into account factors such as their age and the profile of the population so that it can be compared between areas, even between countries. Because all births and deaths have to be recorded, it is a very accurate and robust measurement.

In September 2018 there was a release of data from ONS[23] that caused concern, as it reported that;

Life expectancy at birth in the UK did not improve in 2015 to 2017 and remained at 79.2 years for males and 82.9 years for females.

Life expectancy had been growing in England since records began. There have been a few years where there have been falls, but these have been due to a well-defined cause, for example, the two world wars. Though there is an argument that it cannot continue climbing for ever, other countries such as Japan have shown that we are nowhere near the point where we are reaching a natural limitation on length of life. There was no clear cause for this plateau and it raised alarm bells across the country particularly amongst the public health community.

Since then, there has been much analysis carried out, which has confirmed this trend, but even worse has identified that life expectancy has changed differently for different groups; in the wealthier groups, life expectancy has continued to rise, but in more deprived groups it has reduced (especially for women) meaning that the gap has widened, and inequality has grown.

In addition, the latest data release from the ONS for infant mortality[24] is showing a statistically significant increase in deaths of infants for 2017, which is in line with the small increases seen for the last few years but which had not reached a test for statistical significance. This is the first proven rise for many decades.

As you will be aware, the aim of Thrive Plymouth is to ensure that Plymouth is doing all it can to tackle inequality in health outcomes. Life expectancy is an excellent measure of inequality; but it can take a long time for any change made to show up in changes to life expectancy, and statistically it is hard to measure changes at local level with a high degree of certainty. Though I am not currently able to confirm a worsening of Life Expectancy in Plymouth or a widening of the gap between local areas, the trends observed across England may well be playing out locally – the numbers are just too small to measure with the level of statistical certainty required. We should be very concerned at this national emerging trend, and we should not wait to see this trend in Plymouth before asking ourselves what more we could do.

In Part 2 of my annual report, I want to highlight this emerging trend, summarise some of the analysis and consider what it might mean for Plymouth's population, and the direction of Thrive Plymouth.

As the Director of Public Health for Plymouth I would welcome an open discussion about the following chapters. All research I have referenced is open source and I am keen to have a frank discussion about what I say below.

DEFINING LIFE EXPECTANCY

Life expectancy is an estimate of the length of time that a child born today might be expected to live, if the current circumstances impacting on health are maintained as they are today. It is calculated by looking at the ages of death of people living in that area over a defined time period. Since it has been a legal requirement for almost two centuries to record all births and deaths, it is based on a very robust and complete set of data. It provides a measure that can be compared regardless of the population structure. By comparing the results for different time periods, we can see whether it is changing and therefore whether the circumstances that people are living in are promoting health more or less than during other time periods.

It is not sophisticated enough to take into account people's movements throughout their lives, and would be less meaningful in areas where people moved around considerably compared to areas where people are settled.

1. What has happened to life expectancy historically?

Historically, the improvements in life expectancy have been a triumph for the power of 'the organised efforts of society' to improve the conditions that people live in and to develop ways to prevent and treat disease. We have some measurements for life expectancy going back to the 1700's; these measurements became more accurate from 1837 when registration of all deaths became required. The life expectancy for a baby girl born in England then was 43 years.

What does this mean?

Although the average Life Expectancy was 43, we know that many children died in infancy. There were no vaccinations or antibiotics and many of the illness that we consider to be minor – or that have been eradicated – would have killed many of the children affected. The reduction in childhood deaths has made a massive difference to overall life expectancy. The next high-risk time was for women, many of whom died giving birth; without many of the healthcare treatments that we take for granted today, childbirth was a lottery, but without modern day contraceptives, was also difficult to avoid.

Work tended to be a dangerous place to be, and many men in particular worked in environments where serious accidents and exposure to dangerous materials without adequate protection were the norm. We see the legacy of this still in Plymouth's high rates of mesothelioma caused by asbestos, for example.

If someone survived childhood, then it was not unusual for them to live to their 70s; life expectancy for someone who survived childhood was mid 70's from 1837 up until around 1920's[25]. Of course, this was more likely to happen in wealthier families, who had better living conditions, more choice of work, which tended to be less manual and therefore risky, and the ability to isolate themselves to some extent to avoid the spread of diseases.

This highlights that simply looking at the average life expectancy hides a huge amount of information.

There is a persistent story of improvement since records began. Childhood vaccinations and antibiotics made a huge positive difference, as did improvements in living and working conditions. As healthcare improved, and became accessible to all, we have continued to see improvements.

Though the main trend has been to improve, there have been variations to this, and we can plot key events in our country's history; the two World Wars, and particularly virulent strains of influenza. Others have a more gradual impact, which can be much harder to spot, such as the rise of smoking where the impact can be seen from years to decades after the behaviour starts. It can be difficult to understand how much of a contribution each element makes, because people's lives (and causes of death) are complicated. Different interventions might be having a positive effect, but might be masked by another risk factor appearing.

Frustratingly, as this historical data shows, it can be many years before we can look back and see, or at least estimate, the impact of different factors.

2. Life expectancy in recent years

The earlier indications that improvements in life expectancy had slowed were alarming, and these have now been thoroughly verified by the Office of National Statistics. They identified that the slowdown probably began around 2011, though it cannot be precisely pinpointed, and the effects were too small to measure with any statistical certainty at the time (several data points are needed to identify a trend).

This finding and the concern it created have led to much analysis. In this initial section, I will set out what is factually known, drawing on a PHE report[26].

National and International comparisons

The slowdown has been seen across the UK, at similar rates but with some slight differences in details of trends. Currently it is very difficult to interpret these differences.

The UK is not alone is seeing this slowdown of improvements; many other developed countries have seen this too. However, the UK is second only to the US in terms of severity of the slowdown.

Some countries such as Switzerland continued to improve, despite having the highest life expectancy at birth for males and the third highest for females in 2016. This demonstrates that there is no fundamental reason for this slowdown to have occurred.

Age profiles

Detailed analysis by age shows that improvements in life expectancy continued at a similar rate only in one age group, 5 to 9 years; all other age groups have been impacted by the slowdown.

For the age groups between 10 and 49 years, and over 90 years, life expectancy actually decreased.

Infant mortality, the number of babies who were born alive but died within their first year as a proportion of all live births, is a very important measure. Many improvements in life expectancy have historically been driven by improved chances of babies surviving, and also it is a measure that gives a good indication of inequality, since babies born into more deprived areas are almost twice as likely to die within their first year as babies born into least deprived groups.

National data is published annually. Last year, we were concerned that there seemed to be signs of this measure going in the wrong direction, but the changes did not pass the statistical tests. However, this year's data (from 2017) has confirmed that there has been a statistically significant **increase** in infant mortality since 2014; previously to 2014, rates had been dropping. Current figures are 3.9 deaths per 1,000 live births compared with 3.8 in 2016.

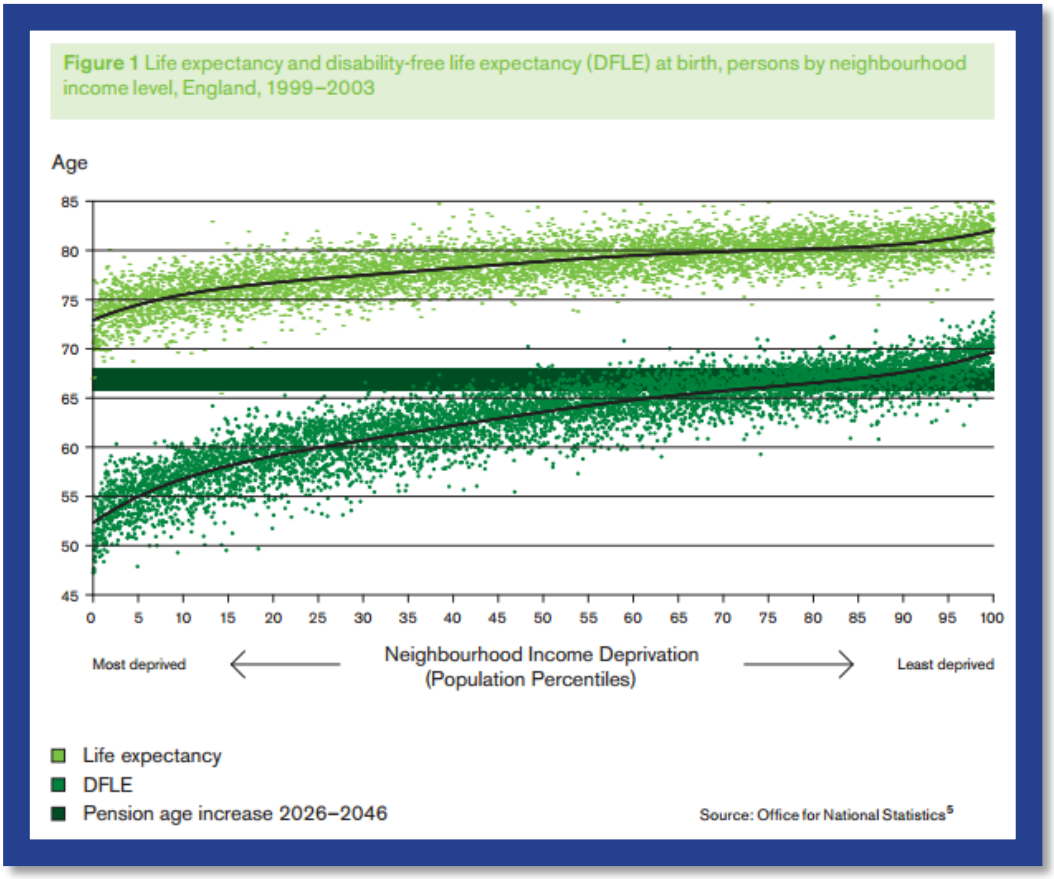
Statisticians will argue that further data is required to be certain that this is trend; however, taking this change in conjunction with the observed plateau in life expectancy (and decrease in life expectancy for more deprived women), there are very clear indicators that we are seeing worsening health.

Inequality

Inequalities relating to deprivation have increased; life expectancy continued to rise for the wealthiest groups, for both men and women, but in the most deprived groups life expectancy dropped for women, and remained the same for men, meaning that the gap increased for both women (by 6 months to 7.4 years) and men (by 4 months to 9.4 years).

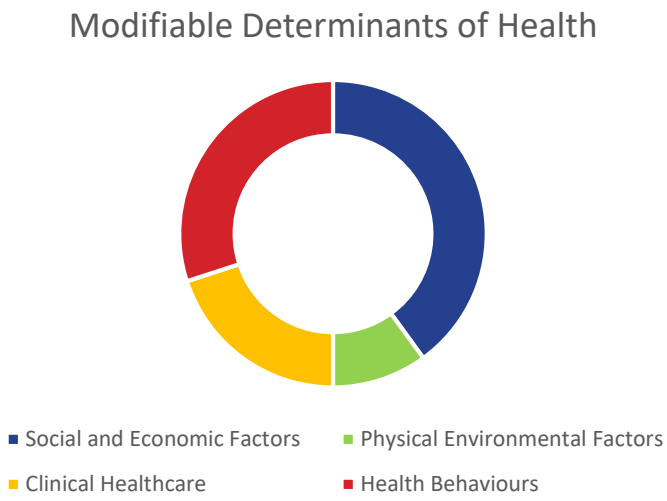
Infant mortality has historically been very high in deprived areas. It remains much higher, rates are still almost twice as high for the most deprived 10% compared to the least deprived, but the gap has narrowed over the last 10 years. It is not clear, with this new release of data, whether the inequality gap has changed, but this may be hidden in the statistical 'noise' (absence of evidence not absence of effect). Low birth weight is associated with social deprivation and so it seems plausible that we may see a widening when further data is available.

Another inequality, that between male and female life expectancy, has actually reduced but it has reduced because LE worsened for women. This is obviously not what we are looking for when we reduce inequality; our goal is always to see overall improvements, with the group with the poorest outcome improving more quickly so that it catches up.



What do we know about the cause of death?

Though there has been much conjecture, and multiple hypotheses, it is worth starting with what is factually known, using the PHE report referenced above (A review of recent trends in mortality 2018). They have been able to articulate three areas of focus which are having an impact on the slowing down of life expectancy improvements; along with insight on why that would be impacting the more vulnerable in our communities. These are reducing 'winter deaths' through controlling influenza and keeping people warm, focussing on heart disease and stroke, and supporting those at risk of death through 'accidental poisoning' (generally substance misuse).



Source: Park,H., Roubal, A.M.Jovaag, A.,Gennuso, K.P. and Catlin, B.B., 2015

Reducing the impact of seasonality on deaths.

We have a growing population of older people, and sadly older people tend to be vulnerable to the kinds of illnesses that circulate in the winter time; influenza being the most dominant of these. We know that the circulating strains of 'flu in 2014/15 were particularly harmful, and strain circulating in the winters of 2016/17 and 2017/18 also caused increases in deaths particularly in older people. Though there is a vaccine available each year, the effectiveness varies both depending on the strain but also based on the individual; in the most vulnerable, the immune system may not be strong enough to fight off the 'flu, despite vaccination. This is why vaccination of staff in care homes and healthcare facilities, as well as carers and family members of vulnerable people is promoted. There have been changes made to the vaccine and work is underway to test the effectiveness of these changes.

Usually as people age they develop chronic illnesses and these can make them more vulnerable to the cold; keeping homes warm can reduce the impact of cardiovascular and respiratory diseases, and reduce the risk of trips and falls.

The trend seen in inequality may be explained through this also; women currently have a longer life expectancy than men but spend more years in poor health, and so it is feasible that they would be more vulnerable to 'flu related deaths. People living in the more deprived areas tend to become ill with chronic conditions at much younger age; their homes may be colder and draughtier with less efficient heating systems; and they will have less disposable income. The shortening of lives that we are seeing may be the combined impact of colder homes and increased vulnerability.

Focus on Heart disease and Stroke

Heart disease and stroke have historically been a key factor in driving the improvements in life expectancy. This is likely to be caused by multiple factors, including reductions in risk factors such as smoking, improvements in early interventions such as statins and anti-hypertensives, and treatment even at advanced stages of the diseases.

Accidental poisoning

There are increasing numbers of middle aged adults who are dying as a result of accidental or deliberate overdoses of substances such as drugs and alcohol. A similar but more severe pattern has been seen in the US where these deaths have been termed 'Deaths of despair'; the combination of deteriorating job prospects, relationship breakdown and social isolation leading to declining physical and mental health and driving substance misuse and suicide.

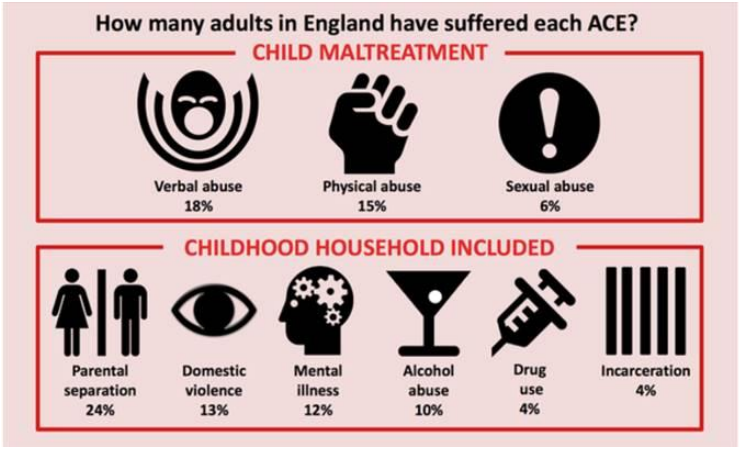
Though the worsening trend and rates are not as pronounced in England, there is little doubt that we are seeing similar patterns and this is very concerning.

The information above comes from looking at the recorded cause of death. To understand more we need to look at the causes of the causes, which is harder than it at first seems. The lives that people lead, and the places in which they live them, all have a bearing on their health and their life expectancy.

3. The causes of the causes of death

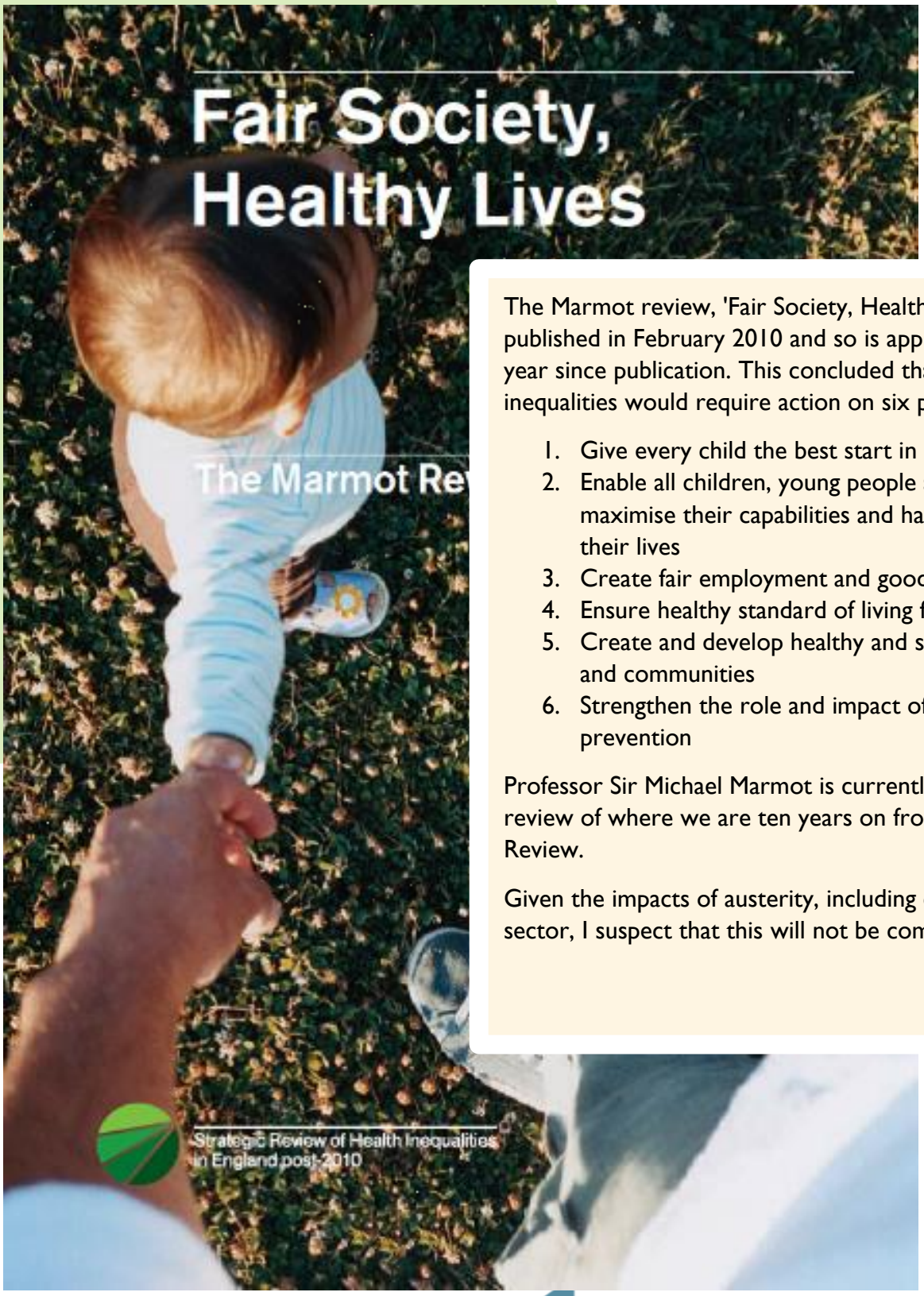
Estimated figures suggest that healthcare contributes somewhere around 15% towards our health, behaviour accounts for around 40% and socio-economic and environmental factors around 45%; and these three factors interact (percentages are approximate, see [6] for references and discussion around these models).

The term 'behaviour' oversimplifies the issues here; whilst this refers to factors that are modifiable, such as smoking, alcohol use, lack of physical activity and poor diet, these factors are heavily influenced by these socio economic and environmental factors referred to above, as well as a wider range of factors, such as adverse childhood experiences, which can change brain chemistry and correlate very highly with a wide range of negative outcomes from imprisonment to health impacts of smoking. [see box] This is why the rhetoric of 'personal responsibility' does not and will not result in a reduction on health inequalities. Some people need additional support at least initially, to overcome some barriers, and to take some steps to regain control over their lives.



An area of emerging research is around what is termed 'adverse childhood experiences'; a range of different events that are likely to be traumatic for children, such as neglect, abuse, or witnessing domestic violence. Evidence shows that children who have been subject to high levels of these types of traumatic events, without the protective resilience factors, are impacted by changes in their brain chemistry from a very early age. This can lead to a wide range of impacts, including that they are more likely to take risks, and childhood traumas correlate with a wide range of behaviours that can be harmful. There are a number of ways in which these impacts can be either prevented or minimised, and Plymouth is developing a trauma-informed approach across the city, working through the Plymouth Trauma Informed Network.

There has been much discussion and published studies on the impact of austerity on life expectancy. Overall, it has not been possible to prove a causal link; though there are a number of hypotheses that seem plausible. Locally, we are not going to be able to reverse the impact of some of these changes; but there are things that we can do to tackle health inequalities.



The Marmot review, 'Fair Society, Healthy Lives', was published in February 2010 and so is approaching its 10th year since publication. This concluded that reducing health inequalities would require action on six policy objectives:

1. Give every child the best start in life
2. Enable all children, young people and adults to maximise their capabilities and have control over their lives
3. Create fair employment and good work for all
4. Ensure healthy standard of living for all
5. Create and develop healthy and sustainable places and communities
6. Strengthen the role and impact of ill-health prevention

Professor Sir Michael Marmot is currently working on a review of where we are ten years on from the Marmot Review.

Given the impacts of austerity, including cuts to the public sector, I suspect that this will not be comfortable reading.

4. What is the situation in Plymouth?

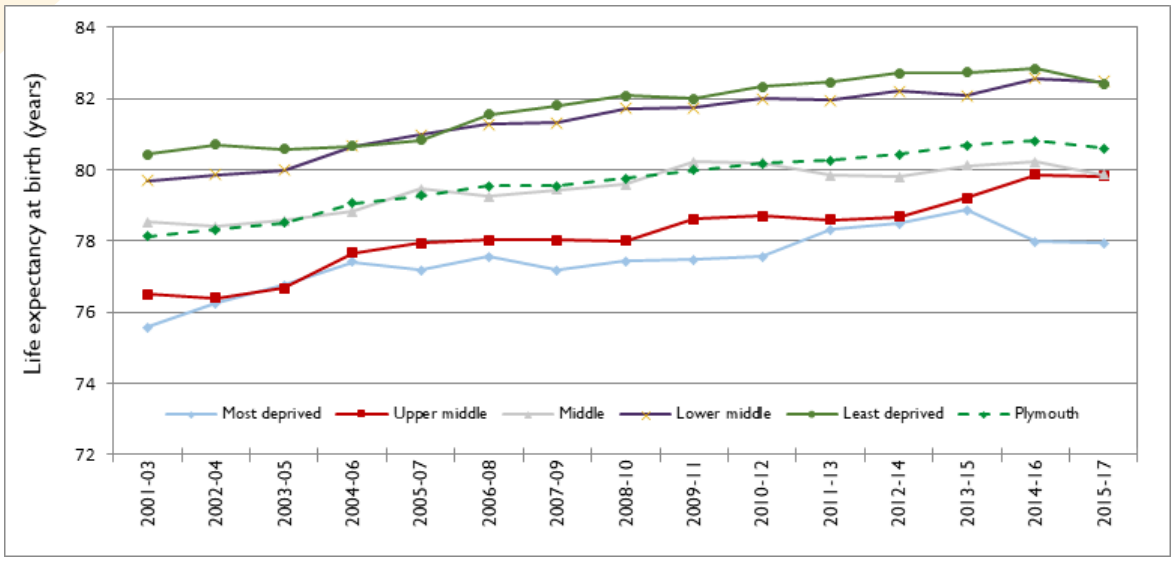
Data on Life Expectancy

Because we have much smaller numbers in Plymouth, it takes longer to prove a trend. We are not able to say with statistical certainty that we are seeing the same reductions in improvements in life expectancy, but the data that we do have suggests that we may be.

Live expectancy for women in Plymouth is below the level for England; historically, we have tended to be very close to the England value but always a little below, which is likely to be due to higher levels of deprivation in Plymouth. The data is showing a reduction in life expectancy over the last two years, but this is within the statistical variation that we would expect to see so it is difficult to interpret. I would suggest that we are likely to be following the same trends described at the England level, of a reducing life expectancy for most deprived groups of women.

For men, the gap we are currently seeing compared to England has remained fairly constant over the years. We are not seeing a decline in life expectancy to date, in fact we are still seeing small improvements, but again this is within the statistical 'noise' and so is difficult to interpret. The graph below shows the latest data for life expectancy by deprivation quintile for the Plymouth population; we can see that the average (green dashed line), which was steadily increasing, has reduced for the last data point. Whilst not conclusive, this does suggests we may be following the national trend.

Infant mortality in Plymouth is currently below the level for England, and appears to have improved over the last few years; but again, this is within the statistical noise and is too early to interpret.



Life expectancy in Plymouth, men and women combined, separated out by deprivation. Each data point is a three-year rolling average. The bottom line (pale blue) shows the most deprived 20% of the population, and then upper (dark green) the least deprived 20%

5. What should we be doing to try to counter this?

It is national as well as a local imperative to tackle inequalities in health. The types of interventions required to make a difference range across the principles cited by the Marmot report given above; whilst many might take the form of national interventions, there is much that can be done in local areas.

As a city, Plymouth has clearly stated its ambition to reduce inequalities in health, and our local response is set out in the Plymouth Plan (and the Joint Local Plan). We are working together as a city to try to improve the context in which people are living their lives, to support healthier lifestyles, to intervene early and effectively to reduce harm, and to provide accessible and appropriate services for people when they do need our health and social care services.

One action we have been taking is to consider how services need to be delivered differently; how do we help people to know when they might benefit from support, how do we help them to access that support when they need it, and how are the services organised such that the person needs are met in the most efficient, effective and cost-effective way?

It is very well evidenced that the poorest in our communities often are less likely to ask for support than others, certainly where it concerns their health. People become used to the norm, and if the people around you and your own family history suggest that you will succumb to serious illness or die young, you tend to have that expectation. The phenomenon is called the 'inverse care law'; those who need it most, seek it least. An example is hip or knee replacements; a recent change to prioritise these based on clinical need has highlighted that people from more deprived areas were only seeking help when their condition was very advanced, and their symptoms were significantly worse. This means they were spending a longer proportion of their lives in considerable pain and disability, probably getting by only by using pain medication. They may have had more emergency attendances to deal with the cause of the problem, or side effects caused by the medication.

Inverse Care Law

"The availability of good medical care tends to vary inversely with the need for it in the population served."

Julian Tudor Hart

Lancet 1970: 405-12

We are working across the health and social care system (including VCSE), to overcome this and to provide the right interventions, at the right time, and in the right way for people; examples include Thrive Plymouth, Plymouth's Alliance contract, Wellbeing Hubs and the work of the Plymouth Trauma Informed Network. We work in a 'systems leadership' way across Plymouth, meaning that we work together, focusing support around the person, patient or client in a way that meets their needs.

An example of a different service delivery model is given below;

Plymouth's Alliance Contract

Plymouth City Council commissions a broad range of statutory and non-statutory interventions for people who have support needs in relation to homelessness and may also have support needs around substance misuse, mental health, offending and risk of exploitation. Traditionally contracts have been commissioned in silos, often resulting in duplication, inefficiencies and poor outcomes for the person using multiple services.

Plymouth had previously adopted the Making Every Adult Matter (MEAM) vision of ensuring that people experiencing multiple needs are supported by effective coordinated services and empowered to tackle their problems, reach their full potential and contribute to their communities. In order to achieve this it was agreed that an Integrated Substance Misuse, Homelessness and Offender System utilising an Alliance approach would be commissioned and Mental Health services would be aligned.

An Alliance is in effect a virtual organisation, where partners work collectively to create an environment without the need for a new organisational form. An Alliance agrees to behave in a certain way to achieve a shared goal and everyone is jointly responsible for implementing the decisions made. By having one alliance contract, all parties are working to the same outcomes and are signed up to the same success measures. It is a relationship based on trust, transparency and collective accountability and the Local Authority is a member of the leadership team, enabling us to have an active role in the development of the Alliance. An Alliance model enables both small and large organisations to work together in an equal way with decisions being made unanimously. This can inevitably mean that there are some decisions which are harder to make, but must ultimately be made through a 'best for user' decision making process.

A recent audit of a part of this approach (the Creative Solutions Forum) found consistent reductions in the use of hospital care, emergency services, evictions, bed and breakfast use and other high cost services. Staff report better risk management, less anxiety over high risk cases and huge improvements in inter-service relationships, trust and co-operation.

Funding

We are subject to financial inequity in Plymouth. Unfortunately, much of the money that the health and social care system current receives is based on historical spend, which is not the same thing as need. This is partly because of payment mechanisms within the system, where providers were paid by the activity carried out; you can see from the information above that a hospital in a less deprived area might carry out more operations and therefore receive more income than one where its population are less likely to ask for the appropriate healthcare support.

This has been recognised locally, across the Devon Clinical Commissioning Group area, and there has been a stated aim to shift that funding back across. This is very welcome; it should be emphasised that the difference in spend has not been driven by any intention to be unfair, and now that it has been highlighted there are steps being put in place to put this right. Exact numbers, and pace of change, are yet to be agreed, but this will be many millions of pounds.

There is a ring-fenced public health grant given to local government; this comes with a number of conditions and defined services to be provided. This includes the commissioning of sexual health services (NHS and community), Health visitors, school nurses, substance misuse treatment, national child measurement programme, health checks and health promotion. This budget has been cut year on year, by around 2.6% each year, and yet demand has grown. Even more importantly, out of the total pot of money available nationally, there is a formula that shows how this should be distributed based on need; obviously places where there are more children and more deprivation should have a higher payment per head because of the types of services required. However, despite a stated intention to move towards this formula, after the first year of changing the allocation, the government changed tack and instead reduced every area by the same amount. This means that Plymouth is 22%, £3 million, underfunded each year.

Imagine what we could do with millions of pounds extra each year?

Some of the things we might like to do include;

- Strengthen primary care, provide outreach services into communities (based around Wellbeing Hubs), improve access to acute services and strengthen our community services.
- Take a trauma-informed approach across the city, recognising the impact of childhood experiences throughout the life course
- Provide wrap-around support for those most vulnerable; support families to give every child the best start in life, support carers and the people they look after, help people with physical and mental illness and disabilities to have lives they control and employment or activities that maximise their capabilities.
- Support those in despair to rebuild their lives, reducing homelessness and reversing the trends in substance misuse and related deaths.

What Would You Do?

Some of these things seem hard to achieve, but don't underestimate the power of people, of communities, and of yourself.

Maybe there are changes that you would like to make for yourself, or maybe you could offer support to others; maybe you would like to get involved in helping us to face these challenges.

Recommendation 7

Close monitoring of emerging evidence base around reducing life expectancy and increasing infant mortality, both nationally and within Plymouth, to detect any intelligence that can lead to actions

Recommendation 8

Embed the approach that we are taking in Plymouth, working together as partners to deliver the Plymouth Plan, including our approach to the wider determinants of health as well as integrated health and wellbeing. Whilst we have made good progress, we need to increase the speed that services are transformed.

Recommendation 9

Continued lobbying for appropriate funding for public sector services for the residents of Plymouth, to enable the services that they need to be accessible and effective, and tailored to their needs.

Recommendation 10

Use this additional funding to support and develop the interventions that we have in place, scaling them up, refining them and spreading good practice, and continue to develop new ways to get people the support that they need.

“Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has.”

Margaret Mead

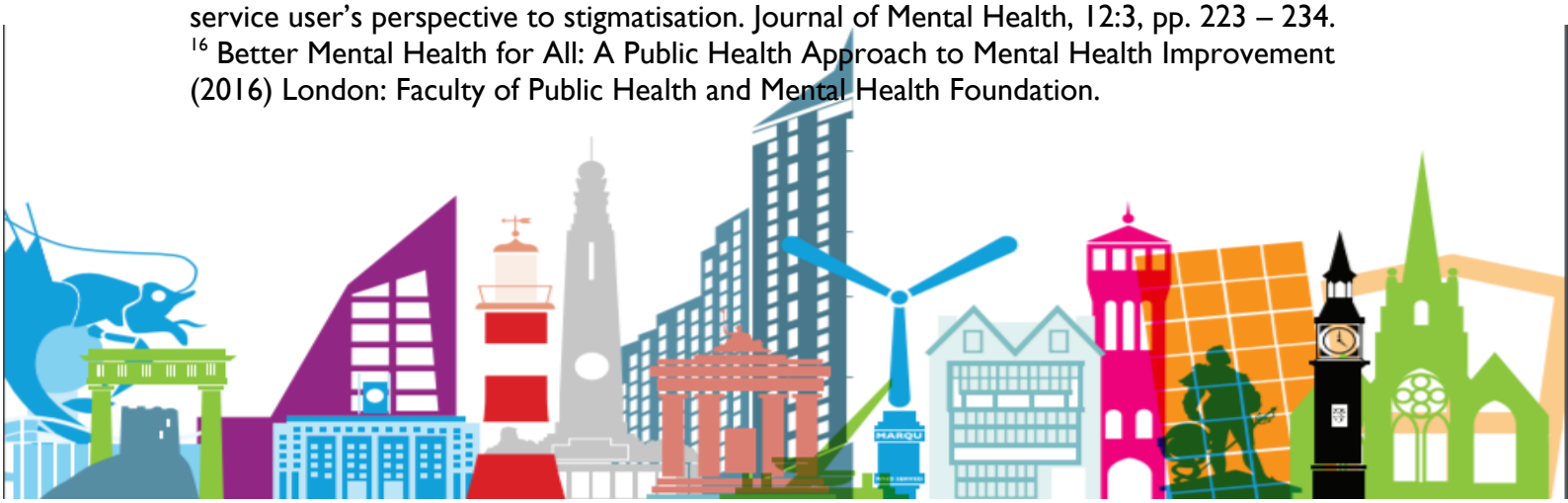
Links
One you Plymouth – https://www.oneyouplymouth.co.uk/ To join the Thrive Plymouth network contact thrive@plymouth.gov.uk

References

[1] Chapter 2 of Davies, S.C. *Annual Report of the Chief Medical Officer 2013, Public Mental Health Priorities: Investing in the Evidence*. London: Department of Health (2014).
[2] *The Foresight Mental Capital and Wellbeing Project. Final Project report.* London The Government Office for Science *(2008)*
[3] UK GOV Policy Paper *Prevention concordat for better mental health*. London: Public Health (2019)
[4]Mental Health Foundation. *Stigma and Discrimination* https://www.mentalhealth.org.uk/a-to-z/s/stigma-and-discrimination
[5] Better Mental Health for All: A Public Health Approach to Mental Health Improvement (2016) London: Faculty of Public Health and Mental Health Foundation.
[6] Lees C, Hopkins j. Effects of Aerobic exercise on cognition, academic achievement, and psychosocial function in children: a systemic review randomised controlled trial. Preventing Chronic Disease 2013; 10: E174,
[7] Stewart-Brown S, Scharder-McMillan A (2011). Parenting for mental health: what does the evidence say we need to do? Report of Work package 2 of the Data Prev project. Health Promotion International 2011;26: i10-i28.
[8]Prinz RJ, Sanders MR, Shapiro CJ, Whitaker DJ, Lutzker JR (2009). Population-based prevention of child maltreatment: The U.S. Triple P system population trial. Prevention Science, 10(1), 1-12
[9] Adi Y, Killoran A, Janmohamed K, Stewart Brown S (2007). Systemic review of the effectiveness of interventions to promote mental wellbeing in children n primary education, Report: Universal approaches: non-violent related outcome. University of Warwick, Coventry, UK 2007. A report to the National Institute of Health and Clinical Excellence (NICE 2009)
[10] Cattan M, White M, Bond J, Learmouth A (2005) Preventing Social Isolation and Loneliness Among Older People: A systemic review of health promotion interventions. Ageing and Society 2005; 25:41-67
[11] Cacioppo J. T. and Patrick, W. (2008). Loneliness: Human Nature and the Need for Social Connection. New York: W. W. Norton.
[12] Cacioppo, J.T., Fowler, J.H. and Christakis, N.A. (2009). Alone in the crowd: The structure and spread of loneliness in a large social network. Journal of Personality and Social Psychology 97 (6), 977-991.

[13] Morgan, E. and Swann, C. (2004). Social capital for health: Issues of definitions, measurement and links to health. London: Health Development agency.

[14] Mental Health Foundation. (2010). The Lonely Society. London: Mental Health Foundation.
[15] Green, G., Hayes, C., Dickson, D., Whittaker, A. and Gilheany, B. (2003). A mental health service user's perspective to stigmatisation. Journal of Mental Health, 12:3, pp. 223 – 234.
[16] Better Mental Health for All: A Public Health Approach to Mental Health Improvement (2016) London: Faculty of Public Health and Mental Health Foundation.



[17] Konnert C; Dobson K; Stelmach L, Aging and Mental Health. (2009). The prevention of depression in nursing home residents.
[18] Hackett ML; Anderson CS; House A; Halteh C, Cochrane Stroke group. (2008). Interventions for preventing depression after stroke.
[19] Cruse Bereavement Care. Available at: http://www.cruse.org.uk/
[20] Relate: the relationship people. Available at: http://www.relate.org.uk/
[21]Jorm, A. F., Korten, A. E., Jacomb, P. A., et al (1997) 'Mental health literacy': a survey of the public's ability to recognise mental disorders and their beliefs about the effectiveness of treatment. Medical Journal of Australia, 166, 182 -186.
[22] IHE. (2015). Local action on health inequalities; promoting health literacy to reduce health inequalities. London: PHE. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/460710/4b_Health_Literacy-Briefing.pdf
[23]ONS Life expectancy reports for example; https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexpectancies/bulletins/nationallifetablesunitedkingdom/2015to2017
[24]ONS Infant Mortality reports for example https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/childhoodinfantandperinatalmortalityinenglandandwales/2017
[25]ONS life expectancy report giving historic data https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/mortalityinenglandandwales/2012-12-17
[26]PHE Report; recent trends in mortality in England, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/786515/Recent_trends_in_mortality_in_England.pdf

Images

https://www.plymouthherald.co.uk/news/plymouth-news/smeatons-tower-covered-knitting-today-719383

https://www.acesconnection.com/blog/england-s-ace-study-48-have-at-least-one-ace-9-have-four-or-more

https://upload.wikimedia.org/wikipedia/commons/thumb/c/c5/Britain_Delivers_the_Goods_in_Wartime-_Dock_Workers_in_Bristol%2C_England%2C_1940_D1224.jpg/756px-Britain_Delivers_the_Goods_in_Wartime-_Dock_Workers_in_Bristol%2C_England%2C_1940_D1224.jpg

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