Annual Report of the Chief Medical Officer, 2018

Health 2040 – Better Health Within Reach

Dear Reader

Discussion of health often focuses on the financial cost of healthcare. Far from a cost, our health is our primary asset, as individuals, communities and as a nation. Maintaining 'good health' and preventing 'ill-health' is an investment for the future. This is so important that we need to measure and track health in our society. After all, as Peter Drucker said, "What gets measured gets managed."

I look at the future health of England's population in this, my tenth, annual report. As the NHS has been developing its own 10-year plan, I look further ahead. I wanted this report to take an aspirational view of what health could and should look like in 2040 if we commit to it being our nation's primary asset.

Every part of the health system has a role to play in creating a healthier and fairer future. The fortunate truth is that we already know how to make fantastic improvements and prepare for better health that is 'within our reach'. The green shoots of a brighter future are already visible in some parts of our health system. Now we need to develop, plan and scale, harnessing technology (including wearables and AI) to support this.

We need to develop our environment to make the healthy choice the easy choice, thus promoting our health, our happiness and our economy whilst preventing disease.

I hope this report inspires all readers to understand that we can achieve better health in England in 2040 – this can be our shared vision, with each of us delivering our part, in our different ways.

Sally C Davies

Prof Dame Sally C Davies

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Editors and authors

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01 Introduction – where we are now

The estimated population of the UK in mid-2016 was 65.5 million, 55.3 million of whom were in England.[1] By 2041, the Office for National Statistics (ONS) predicted that this figure would rise to 72.9 million, with England seeing the greatest increase of the four nations. To examine how this population might look, first we will review where are now in terms of life expectancy in England and Wales, compared to other European Union (EU) nations. We will then consider the changes that may be seen in structure of the population in terms of age, life stage, and gender by 2040 in the second section.

1.1 Life expectancy

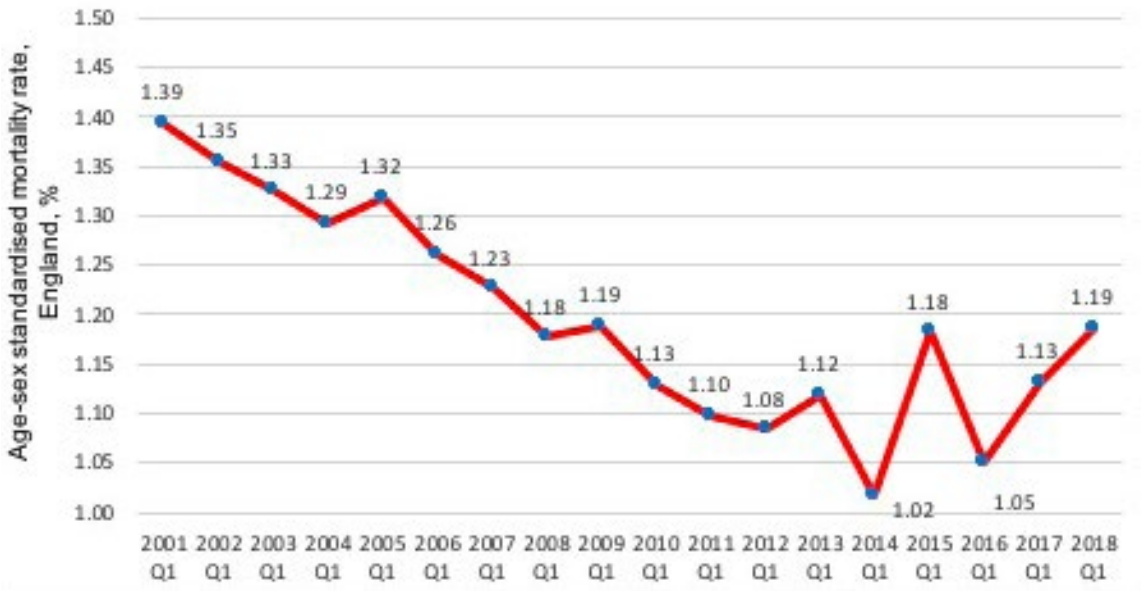
Period life expectancy, derived from age-specific death rates in a given year, is widely used as an indicator of how well a country is performing in improving the health of its people. It has been improving steadily, albeit with some small fluctuations, for decades in high income countries. However, in recent years, these improvements have stalled in England and Wales and, in some older age groups and in some places, it is even declining.[2] There are similar concerns about Scotland and Northern Ireland, but these have been studied less intensively. When the rate of improvement in life expectancy has slowed, stopped, or reversed elsewhere in the past, for example in Eastern Europe in the 1980s, after data artefacts, epidemics, wars, major natural disaster, or mass migration have been excluded, the outcome has often pointed to substantial societal problems.

Figure 6.1 shows the age-sex standardised mortality rate for England from 2001 to 2018, as a percentage.[3] Figure 6.2 shows the resulting trends in life expectancy at birth as reported by the ONS from 1840 to 2016.

After 2010 there is a clear slowdown in the rate of improvement of life expectancy, and increase in age-standardised mortality. The reasons have been the subject of much speculation. Proposed explanations include cohort effects, reflecting influences on health and mortality long ago, or contemporary phenomena such as the lethality of seasonal influenza could play a role. However, several studies have also suggested that the austerity measures, introduced by the coalition government that was elected in that year, could also be playing a role,[4] given the sections of the population most affected and the timing of policy changes, as the long term year on year increases in spending on health and social care slowed dramatically.[5]

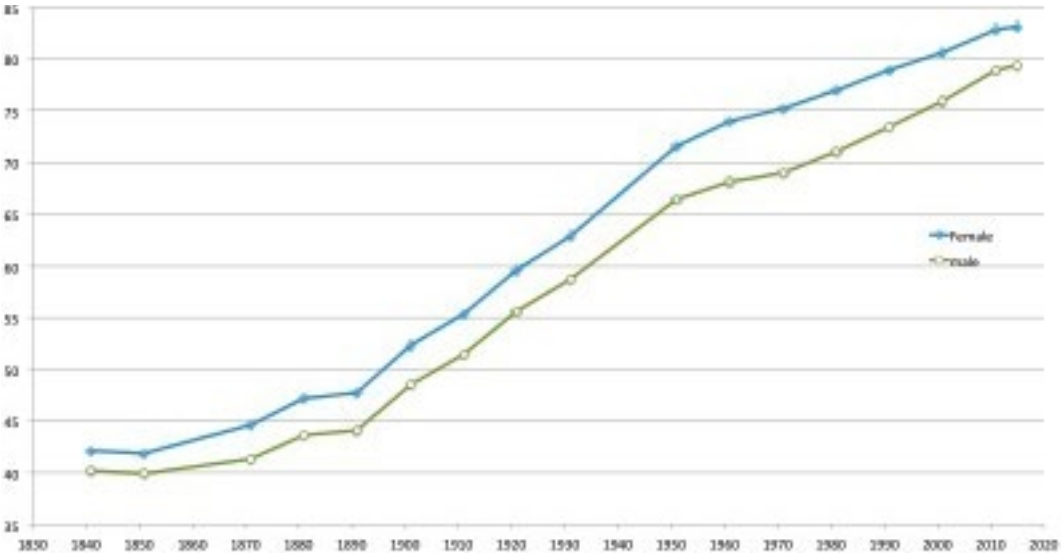
This last explanation finds support in an examination of changes in life expectancy at different ages. Consistent with the general trend, life expectancy at older ages had been rising steadily, if anything with a slight acceleration in the period immediately prior to 2011. Table 6.1 presents the change between consecutive three-year averages (to smooth annual fluctuations). A very similar trend is seen for men and women, and for life expectancy as measured from either age 65, age 75 or age 85. In every case, the size of improvements declined markedly after '2008-2010' and '2009-2011'. What is especially worrying is how the oldest groups have experienced actual declines in the most recent period. The worsening of life expectancy for women over 85 years was first raised as an issue of immediate concern over three years ago,[6] yet it received little attention then and little since, despite becoming much worse year on year.

Figure 6.1 Age-sex standardised mortality rates for England Quarter 1 2001-2018



Source ONS data, 2018

Figure 6.2 Life expectancy at birth in England and Wales, 1840-2016



Source ONS data, 2018

Table 6.1 shows how what started in 2012 worsened dramatically in 2015, when deaths rose by 5.6% – the largest annual percentage increase since at least the 1960s,* a decade that saw both an influenza pandemic and the return of substantial numbers of elderly, often frail British citizens from what had been colonies.[7] While there has been a slight recovery in the most recent data, the improvements are still less than half the size of those observed until 2010/11. So what might have been expected if the earlier trends had continued? We now compare observed life expectancy with what would have been predicted using regression techniques with data for the years centred on 2010, thereby generating an 'expected' life expectancy.

1.2 Trends in life expectancy for those over 65 years of age

As noted earlier, those over 65 have borne the brunt of the deceleration in life expectancy gains, as measured by the crude differences in life expectancies.[8] On the following page we show what would have happened if the favourable trends up to 2009-11 had continued, and compare that to the observed life expectancy, using data reported by the ONS, for people of ages 65, 75, and 85 years.[9] Note the axes in Figures 6.3, 6.4 and 6.5 do not start at zero because it would be misleading to imply that zero was a plausible possibility.

Table 6.1 Change in Life expectancy In England and Wales between overlapping time periods by age/sex (years)

		Age 65		Age 75		Age 85	
From	To	Male	Female	Male	Female	Male	Female
2004-06	2005-07	0.23	0.16	0.16	0.12	0.05	0.06
2005-07	2006-08	0.20	0.14	0.14	0.11	0.05	0.04
2006-08	2007-09	0.22	0.20	0.16	0.15	0.06	0.07
2007-09	2008-10	0.22	0.19	0.18	0.16	0.07	0.08
2008-10	2009-11	0.28	0.28	0.22	0.23	0.12	0.15
2009-11	2010-12	0.15	0.08	0.11	0.05	0.01	-0.01
2010-12	2011-13	0.12	0.06	0.06	0.04	0.01	-0.01
2011-13	2012-14	0.11	0.07	0.07	0.05	0.02	0.01
2012-14	2013-15	0.04	0.00	0.01	-0.02	-0.01	-0.04
2013-15	2014-16	0.08	0.06	0.07	0.06	0.05	0.04

Source ONS, National Life Tables, England & Wales, 2004-06 to 2014-16

The gap between the expected and the observed values varies from 0.49 years in females at age 65 years to 0.20 years in males at age 85 years by 2014-2016. The gap continues to widen with each year that passes.

However, it is not the slowing in improvements that is the most concerning. Although that should be considered an amber warning light, demanding urgent investigation at least, any reversal in life expectancy should be considered a red danger sign. A reversal can now be seen clearly for three groups following the change between 2012-14 and 2013-15. For female life expectancy at 75 years, there was a fall from 13.11 to 13.09 years, for females at age 85 years a fall from 6.85 to 6.80 years, and for male life expectancy at 85 years a fall from 5.85 to 5.84 years.

* In the 1960s there was an influenza epidemic and also the immigration of many elderly frail people from the former British empire who had to arrive quickly before immigration controls began.

Figure 6.3 Life expectancy age 65, England and Wales

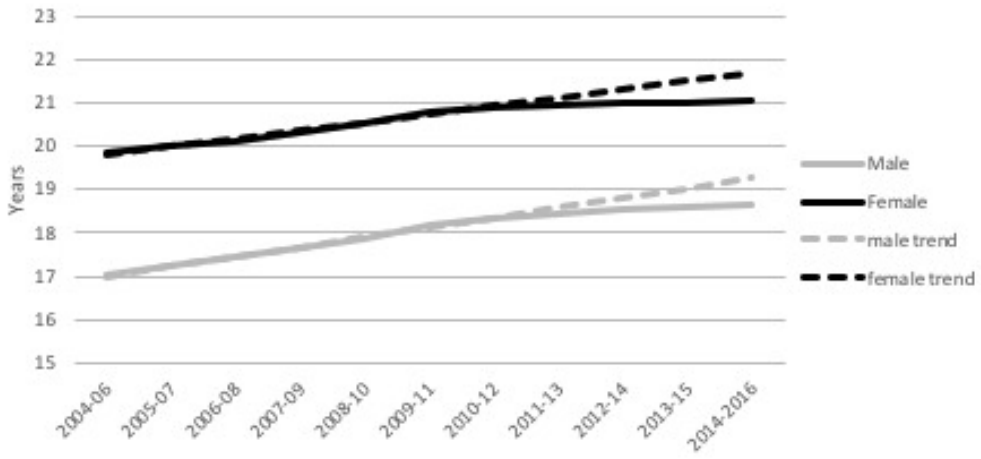


Figure 6.4 Life expectancy age 75, England and Wales

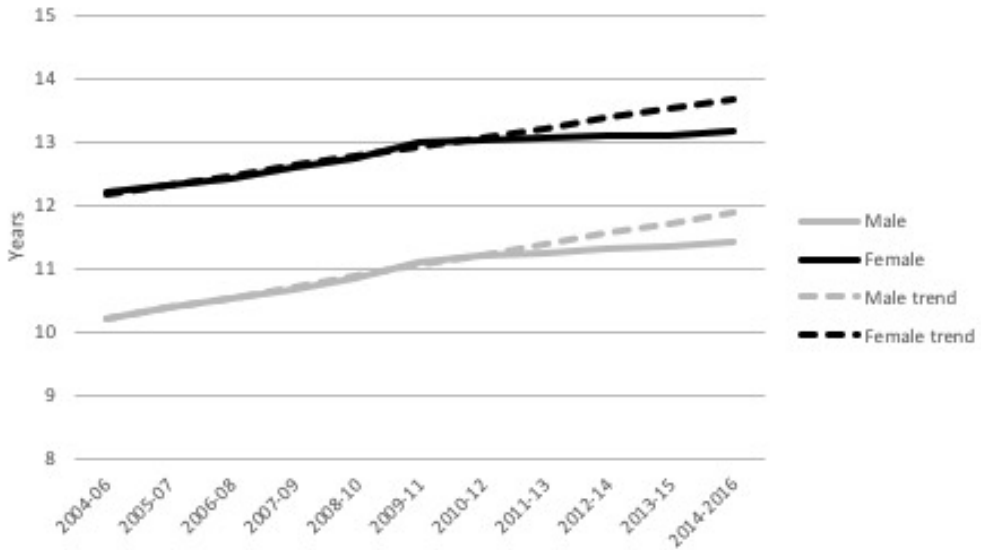
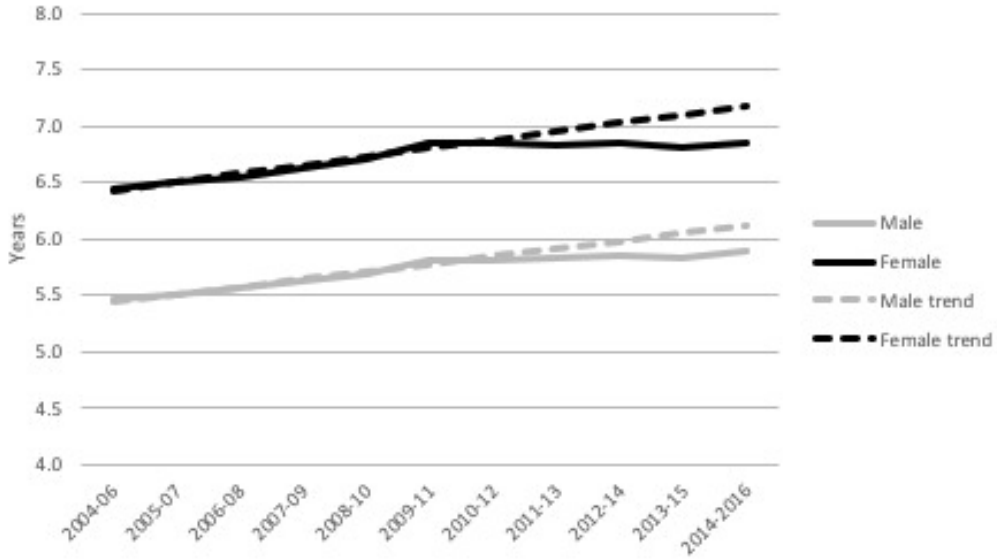


Figure 6.5 Life expectancy age 85, England and Wales



1.3 Comparison to other EU countries

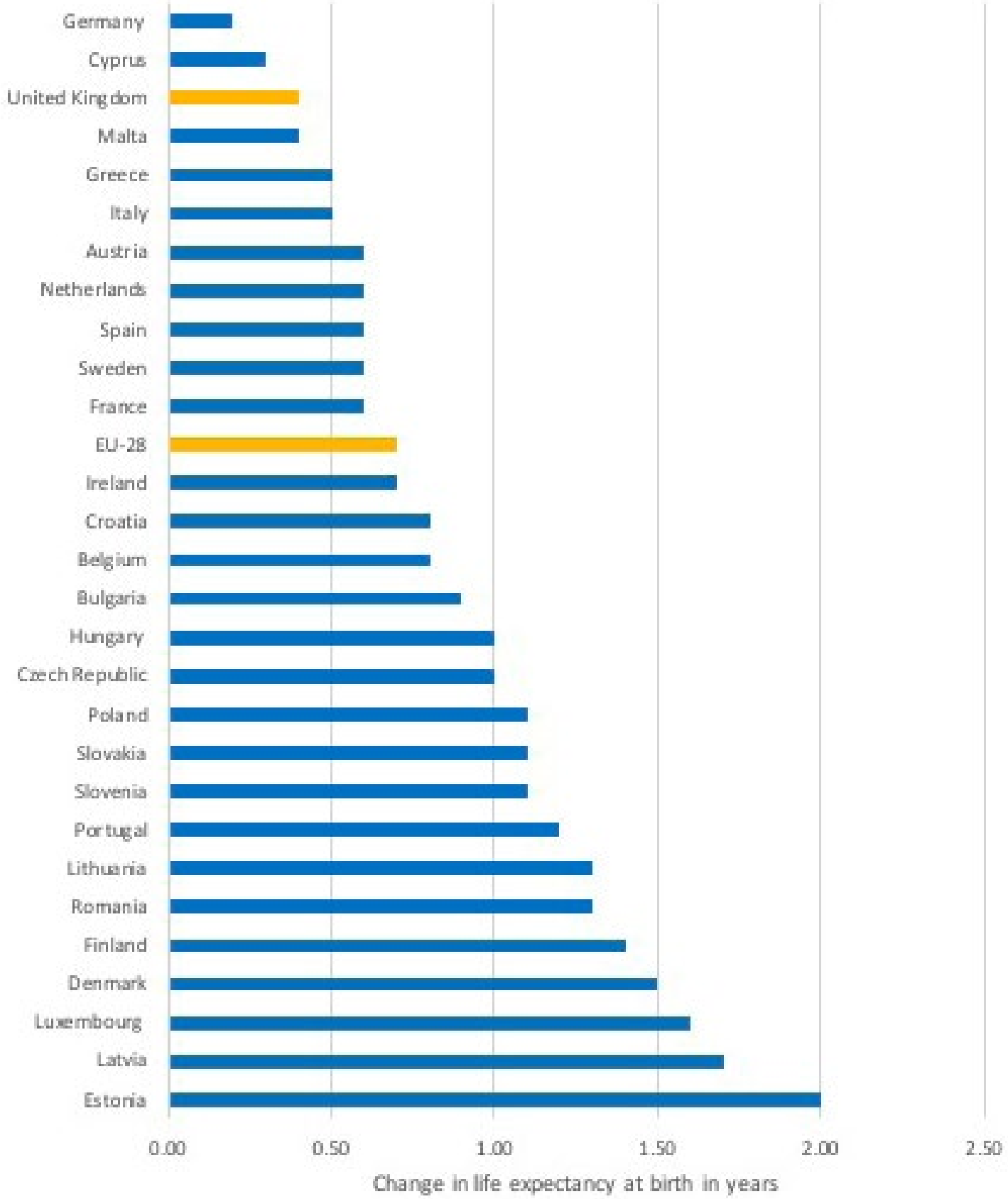
It has been suggested that life expectancy stalling in England and Wales is simply it reaching a natural limit.[10] Data from other countries calls such claims into question.

Using Eurostat data on life expectancy at birth in the EU-28 from 2015, it is clear the UK is performing very poorly.[11] In the short period from 2010 to 2015, the UK fell from 12th in the EU for total life expectancy at birth to 15th. Furthermore, if the changes in life expectancy at birth between 2010 and 2015 are compared, the UK fares even less well. Figure 6.6 shows the UK 3rd from last in life expectancy improvements from 2010 to 2015, and far behind the EU-28 average. It should be noted that both countries performing less well than the UK experienced specific challenges. Germany received well over a million war refugees from Syria in this period and Cyprus suffered an economic crisis in 2012-2013 that was so severe the banks came close to collapse.

For female life expectancy at birth, the UK ranks 17th in the EU-28, well below the average. For males, it ranks 9th. It is very likely that life expectancy in the UK has been improved by the arrival of many young and healthier than average people from the mainland of Europe who are resident in the UK and included in the official mortality statistics. Geographical areas of the UK with fewer such migrants tend to have much higher mortality rates. We do not know to what extent migration might account for the difference between the male and female UK ranking of life expectancy in the EU-28, but it is likely to be an important factor.

A similar pattern can be seen in infant and under-fives mortality. Analysis of WHO and ONS data show that the UK fell down the European child mortality rankings from 7th in 1990 to 19th in 2015, now behind Lithuania and Croatia.[12] For under-fives mortality, the UK fell from 9th in 1990 to 19th in 2015. With infant mortality, the UK has made less progress in 25 years than any of the-now 28 EU countries, apart from Germany and France, and for under-5s, the UK made the least progress except for Malta. The infant mortality trend in Scotland may be better than the UK average.

Figure 6.6 Change in life expectancy at birth in years, total population, EU-28 between 2010 and 2015



Source Eurostat; authors' own calculations

1.4 Conclusion

The UK has fallen down the rankings significantly for infant and under-fives mortality, as well as for life expectancy at birth. In the most recent two years ONS has reported statistically significant increases in infant mortality across England for all infants. This overall deterioration was preceded by data from 2010 onwards showing that infant mortality was even then rising for babies born to the poorest of mothers in England. Life expectancy at older ages in England and Wales has fallen for some, and there is no sign of these trends reversing.

In the next section, given where we are now in 2018, we consider where we can expect to be in 2040 unless things change greatly.

02 Where do we expect to be in 2040?

The simple answer is that we do not know. Population projections are always accompanied with many caveats because of uncertainty about the three things that determine them, births, deaths, and net migration. As we showed in the previous section, the slowing of the improvement in life expectancy after 2010 has already led the ONS to reduce its estimates of future improvements. In due course, if the reasons for these recent trends are fully understood, and especially whether they relate to factors that are transient or sustained, than it will be possible to have more confidence in predictions but, as was noted, there are still many unanswered questions.

There is even greater uncertainty about net migration. The UK's decision to leave the European Union will have a major impact on migration from the remaining 27 Member States (EU27).[13,14] The numbers of migrants from these countries has already fallen sharply. As many have been young adults, this is likely to impact on the birth rate. There is also likely to be an impact on the resident population of older British residents. Loss of existing rights may lead some who have retired to Southern Europe to return, while numbers moving abroad in future is likely to be much less than before. Given, at least at the time of writing, the lack of any clarity, it is impossible to predict what the net effect will be but, overall, it seems likely to accelerate the ageing of the population in the UK while reducing the workforce available to care for the greater than expected number of older people.

With these major caveats, we now use the ONS projections from mid-2016 to examine how the population might look if current trends continue. To illustrate the uncertainty, we also show the mid-2014 projections, which as noted have since been revised.

2.1 Population size

Of the UK nations, England is projected to grow the most quickly, with an increase from 55.3 million in mid-2016 to 62.0 million in mid-2041 – an increase of 12.1%. The percentage increases in the other three nations are somewhat smaller, at between five and six per cent (Table 6.2).[1]

Importantly, these revised estimates do take account, to the extent possible, of the developments discussed above. Thus, the projected UK projected population in mid-2041 is 2.0 million than in the 2014 projections. Table 6.3 shows that all three of the contributors to population numbers have been revised. Thus, net migration is predicted to be just over 10% less while the fertility rate is predicted to fall too, but only slightly. However, the ONS now predicts life expectancy at birth in 2041 for both males and females to be almost a year less that was predicted in 2014. As the ONS notes, the revision is in part due to an 'assumption of a slower rate of increase in life expectancy'.[1]

2.2 More deaths

What do these figures mean in practice? A more detailed inspection of the ONS estimates reveal that the new situation, captured in the 2016 revision, will be associated with over one million extra deaths by 2058.[15] Figure 6.7 compares the mid-2014 and mid-2016 ONS projections, calculating the 'extra in-year deaths' and 'cumulative' deaths.[15] If revisions introduced over just two years make such a difference to projections, it is almost impossible to say what the population will look like in over 20 years, given the scope for a wide and diverse range of potential government policies, as well as events beyond the control of governments, all of which could have significant impacts.

Table 6.2 Estimated and projected population in millions of the UK and constituent countries, mid-2016 to mid-2041

	2016	2021	2026	2031	2036	2041
UK	65.6	67.6	69.2	70.6	71.8	72.9
England	55.3	57.0	58.5	59.8	60.9	62.0
Wales	3.1	3.2	3.2	3.2	3.3	3.3
Scotland	5.4	5.5	5.6	5.6	5.7	5.7
Northern Ireland	1.9	1.9	1.9	2.0	2.0	2.0

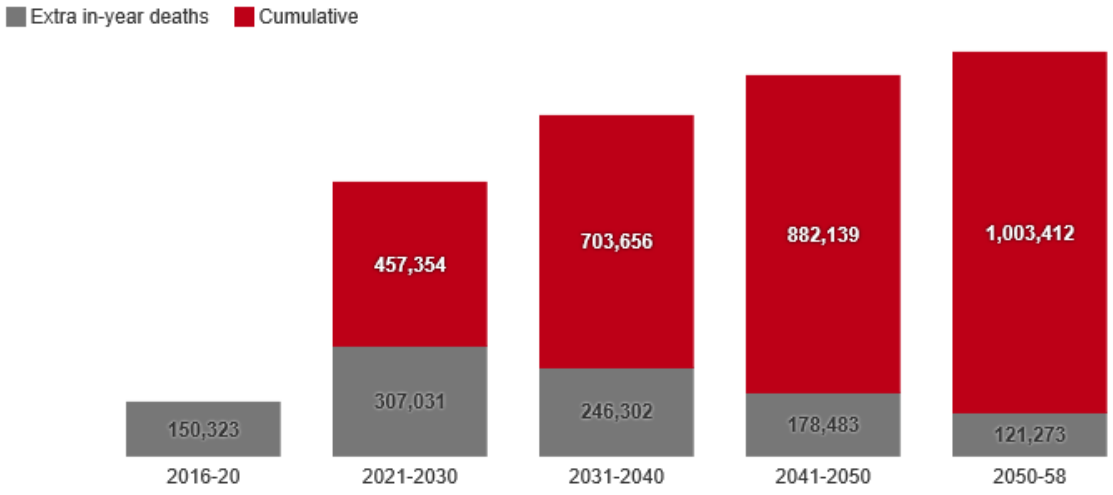
Source ONS data, 2016

Table 6.3 Summary of changes to longer-term assumptions in UK projections, 2014-based and 2016-based

	2014-based	2016-based	Percentage change
Net annual long-term international migration (after mid-2022)	185,000	165,000	-10.8%
Long-term average number of children per woman	1.89	1.84	-2.6%
Life expectancy at birth, males, mid-2041 (years)	84.3	83.4	-1.1%
Life expectancy at birth, females, mid-2041 (years)	87.1	86.2	-1.0%

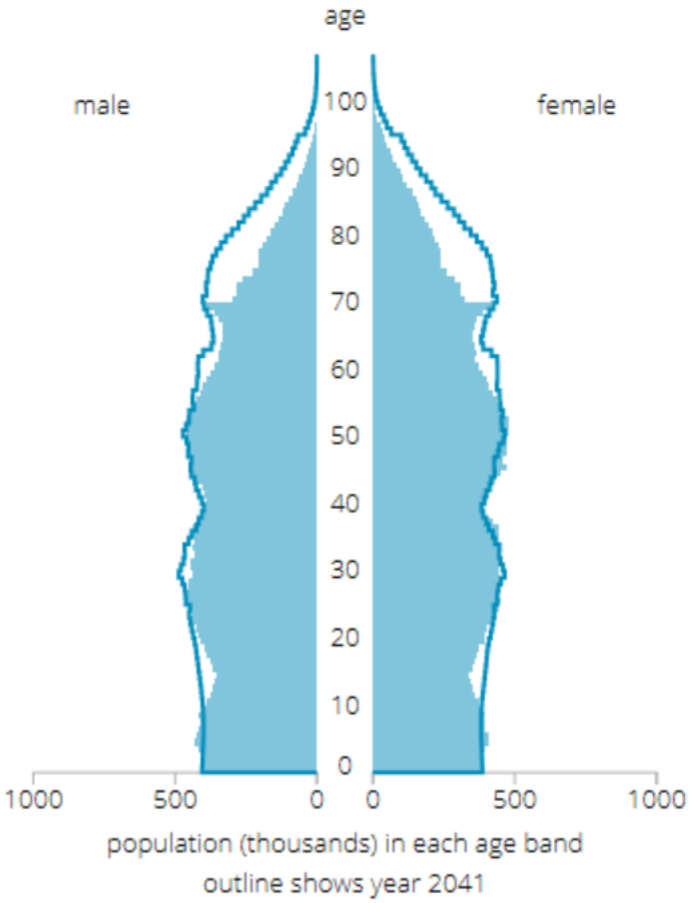
Source ONS data, 2016; percentage change authors' calculations

Figure 6.7 Extra deaths and cumulative deaths comparing the mid-2014 and mid-2016 ONS projections



Source *ONS data; Dorling D; Gietel-Basten S. Life expectancy in Britain has fallen so much that a million years of life could disappear by 2058 – why? 2017 [updated 29 November 2017; cited 2018 13 July].*

Figure 6.8 Age structure of the UK population, mid-2016 and (projected) mid-2041



Source *ONS*

2.3 Older population

What seems certain is that the age structure of the population is likely to change in ways that could not be predicted even a few years ago. Figure 6.8 shows the ONS population pyramid comparing the age structure in mid-2016 with the predicted age structure mid-2041.

In England, the percentage of those aged 60-74 years in mid-2041 is predicted to increase to 16.4%, from 15.1% in mid-2016.[16] The percentage aged 75 years and over is projected to increase from 8.1% in mid-2016 to 13.3% in mid-2041. Figure 6.9 shows the changing percentages in each age group over time. The 30-44 year age group includes the median throughout the period, but by 2040 the median age is almost 44.[16]

2.4 Changes to working age population

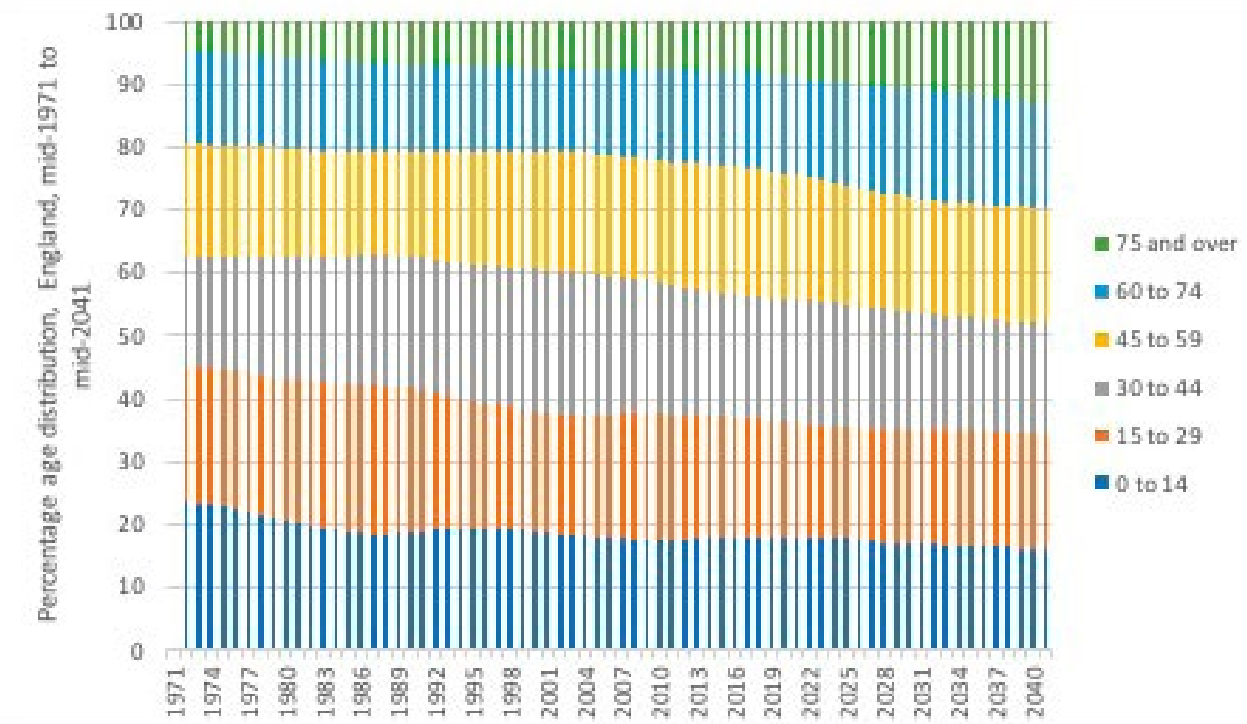
With the increase in population numbers at older ages comes a change in the number of those at different stages in life, and of particular importance, those of working and pension ages. These projections take into account the planned increase of State Pension Age to 67 years by 2028, for both sexes.[1] Figure 6.10 compares the figures for mid-2016 and (projected) mid-2041. There is a 31% increase in those of pensionable age, compared to just an 8% increase in the working age population.

The gender make-up of the UK is also changing. In mid-2016 it was estimated that the population was divided, 50.7% female and 49.3% male; by mid-2041 it is predicted to be 50.3% to 49.7%. This may in part be explained by the stalling and worsening seen in life expectancy, which have disproportionately affected women. However, although a majority of births are always male, during times of high inequality and austerity a slightly higher than usual proportion of babies born in the UK have been female.

2.5 Conclusion

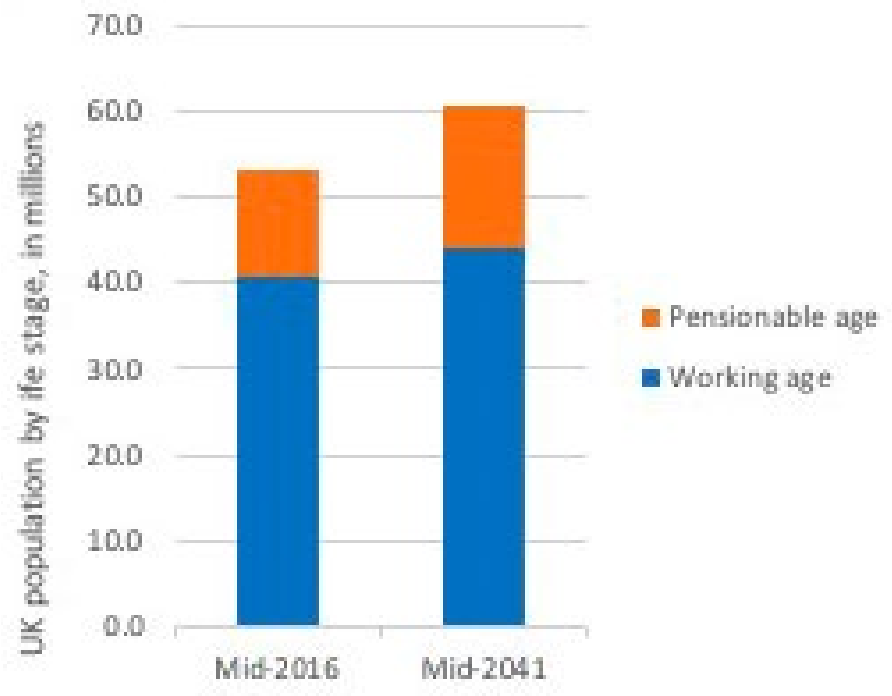
Considering the demographic drivers of migration, births, and deaths, there are clear emerging threats to the population. It is likely there will be a larger, older population, without a substantial increase in the working population. Increasing the birth rate would not alter this very much. Life expectancy could deteriorate further.[17] These predictions are not destiny. They can be used, analysed, and interventions made to improve what has been estimated. How this could be done is considered in the final section. All across Europe the population is aging rapidly, and especially in the countries with the most successful social policies where the old live for the longest. Europe is fortunate to be located near to regions with very large and very young populations.

Figure 6.9 Percentage age distribution, England, mid-1971 to (projected) mid-2041, by age group



Source ONS data; authors' chart

Figure 6.10 UK population by working age and pension age, mid-2016 and (projected) mid-2041



Source ONS data; authors' calculations.

03 What could be achieved in 2040?

The authors of this chapter believe that the outlook for 2040 does not currently look bright. An ageing and not especially healthy older population, with a relatively low share of the population of working age, stagnating or even worsening life expectancy, and the unknown impacts of leaving the European Union, all pose challenges to the overall health of the population. However, identifying these challenges provides an opportunity to respond to them. There are three main areas where action could be taken to improve the current position: migration, funding of health and social care, and a focus on 'healthy ageing'. These will be considered in turn.

3.1 Migration

The authors of this chapter believe that the recent decrease in immigration, and reduced access to healthcare by migrants living in the UK, both pose a threat to population health, as will be outlined below.

Migrants are generally young, healthy individuals, a phenomenon known as 'the healthy migrant effect'.[18] Data from Eurostat from 2008-2014 on the age distribution of foreign country citizen immigrants to the UK (net) show the largest group is between 20 and 24 years, and the vast majority under 40 years.[19] In fact, the inflow of healthy migrants is one of the reasons the UK has not seen a greater slowdown in life expectancy. The only age group in 2015 not to see mortality rates rise was that aged 25-29 – which also benefited from an inflow of 60,000 migrants of those ages.[20] As outlined above, by 2040 the ratio of pensioners to working age population will greatly increase. Migration can remedy this with young, healthy migrants to the UK increasing the working age population, providing a much needed workforce.

The health and social care system is especially in need of migrants, who make up 13% of the total workforce.[21] EU migrants comprise up to 10% of NHS doctors, and 5% of NHS nurses.[22] Yet, government policies to reduce net migration, with schemes such as 'Earn, Learn and Return', which 'bring qualified professionals to this country for a fixed period, to enhance their knowledge and skills and contribute to our health service before returning home' limit the long-term contribution they can make to the NHS.[21] Record numbers of GPs are leaving the profession, along with nurses, midwives, district nurses and learning disability nurses. Without migration, the NHS may struggle to function. Adult social care is a vital part of the system, particularly with an ageing population. 18% of the adult social care (ASC) workforce were born overseas, and ASC has a required growth from 14% to 31% needed by 2030.[21] Without migration, it is hard to see how this could be achieved. While migration cannot be a solution in the long term as fertility is falling rapidly worldwide, for the next two decades it may be essential for the UK.

Access to healthcare for migrants has changed significantly in recent years. Despite being widely disputed, belief in the existence of large scale 'health tourism' persists. In reality, it is estimated to cost the NHS approximately 0.3% of the annual budget,[23] and data collected over 10 years by Doctors of the World UK, who run a clinic for migrants in London, show patients had on average been in the UK for 6 years before even trying to access healthcare, with less than 1% citing health as their reason for migration.[24] Yet a focus on 'health tourism' led to new legislation in 2017: those not immediately able to prove their eligibility for NHS care must now pay the whole cost upfront (at 150% of the tariff), or be refused healthcare.[25] The regulations are complex, time-consuming, and poorly understood, resulting in many cases of patients being wrongly refused urgent healthcare, such as chemotherapy and cardiac surgery.[26] Furthermore, evidence collected by the Department of Health and Social Care on pilot schemes show it has not been successful; eighteen hospitals carried out identification checks over two months, with staff asking patients to show two forms of ID to prove eligibility for NHS care. 8,894 patients were checked, and 50 were identified as 'not eligible' – 0.6%.[27] There is no estimate of the cost of the staff time spent on this, or the deterrent effect this will have had on those unable to promptly provide two forms of identification, such as the elderly, or those who are homeless.

Deterring some individuals from accessing healthcare threatens the health of the whole population.[28] It is well known that timely, preventative care, whether for non-communicable diseases likely hypertension and diabetes, or antenatal care for pregnant women, is more cost-effective and efficient than those cases presenting as an emergency later on. It saves the NHS money to ensure equitable access to healthcare. Although migrants carry a low burden of infectious diseases, leaving those who have infections untreated poses a further threat to all, e.g. tuberculosis.

3.2 Funding health and social care

Recent funding for the NHS, and social care, has failed to keep pace with demand. As we have noted above, although still controversial, there are good reasons to believe that there may be a relationship between austerity and the observed slowing of improvements in life expectancy at birth and the increases in death rates in older people.[2] These reasons have been set out in a series of studies.[4,28-33] However, others reject this argument, citing alternative explanations such as unknown infectious agents,[34] cold weather, and influenza.[35,36] Others have noted the complexity involved in interpreting short-term trends and urged caution in inferring causality from an observed association.[37,38] Despite this, no other plausible cause is forthcoming for the sudden deterioration of the health of people in the UK since 2010/11. This needs to be said clearly while still acknowledging the difficulties of proving causality.[39] There is a need to undertake more detailed examinations of what has been happening in other industrialised countries that have, as noted above, not experienced a slowdown in improvement in life expectancy to anything like the same extent, looking particularly at those that have made different political and funding decisions.

We need to understand these issues in order to inform policy and planning, and a number of pertinent reports have been recently published.[39-46] Even if suggestions that influenza has played a part in the increases in deaths in early 2015 and 2018 were accepted, there would be questions about why the spikes in mortality were so exceptional and whether the NHS would be able to cope with a future pandemic, such as those that occurred in 1951 and 1968.

3.3 Healthy ageing

The evidence presented earlier in this chapter highlights the importance of measures that can reverse the declining life expectancy at older ages. If, as is at least plausible, some of the recent changes can be attributed to austerity, it follows that the most effective measures are likely to be those which restore the services needed by older people. Unfortunately, it seems likely the situation will get worse before it becomes better, given the severe funding squeeze on local authorities, some of which are now implementing policies that would provide the bare legal minimum of social services.

Beyond that, there are a number of measures that could be taken to promote healthy ageing.[47] Several factors predict whether someone is likely to age successfully.[48] They include entering old age with a low level of risk factors for chronic conditions. This points to the need for measures that reduce smoking and obesity, and to a greater extent than is often recognised, the hidden burden of problem drinking among those who are middle-aged. Other factors include engagement, with loneliness increasingly recognised as a major risk factor in its own right, and confidence. Growing numbers of older people are socially isolated, a situation exacerbated by the loss of community facilities, including libraries, as well as by the fragmentation of family structures, with their younger relatives often moving far away in search of employment.

Looking further into the future, it is likely that those who comprise the older generation by 2040 could face a much more precarious situation than their counterparts today.[49] Many fewer will benefit from defined benefit occupational pensions. The state pension in the United Kingdom is among the least generous of any industrialised country. As a consequence, many pensioners are dependent on top ups, such as pension credits. A particular concern is that many fewer people will enter retirement owning their own homes. Although they may have managed to pay what are, in international terms, often very high rents, they will struggle to do so with small pensions.

The challenges facing the ageing population in the UK over the next 20 years are immense, and go far beyond what can be covered in this chapter. In several important respects, they are greater in magnitude than in other comparable countries. However, as exemplified by the continuing but so far inconclusive debate about paying for social care, there has been an inability to grasp the issues and take the necessary measures, in marked contrast to countries such as Germany, Japan, and South Korea that have implemented long-term-care insurance schemes.[50]

3.4 Conclusion

Demography is not destiny.[15] If the UK is to move forward, protecting population health, it must understand why the changes outlined above have occurred. A first step in projecting the future is to understand the present. Reflecting on the demography provides key opportunities to improve the health of the population by 2040, and change the current trajectory. There is no need for the current very troubling ONS projections to become reality – unless we ignore the warning they give us.

04 Authors' suggestions for policy makers

- A first step is to undertake a comprehensive inquiry into the reasons for the slow down and, in some places, reversal in the previous steady improvement in life expectancy. In the medium term we need to learn from other countries.
- Set a target to spend a similar proportion of GDP on health and social care as that in other countries of North West Europe. The UK has the lowest overall levels of public spending in all of this part of Europe and the lowest life expectancy. This is a medium term solution.
- Making housing more affordable makes it easier for health and care staff to live in areas that are otherwise too expensive.
- Quantify the contribution of international migration to England to health, through the health and social care workforce, and through increasing the healthy, working age population.

Box 6.1 What can generational analysis tell us about public health in 2040?

Text kindly supplied by Michael Clemence and Hannah Shrimpton, Ipsos MORI Social Research Institute

While demographic projections can tell us what the population might look like in 2040, they keep us in the dark about the behaviours this population might exhibit, and the health choices they might make. This is where generational analysis – looking at how attitudes shift among cohorts defined by the years of their birth – can help to shed some light.

Ipsos MORI has explored what generational analysis can tell us for the two youngest generations in Britain – Millennials[i] (those born between 1980 and 1995) and Generation Z[ii] (born 1996 onwards). Here we provide a summary of the evidence generational analysis of Health Survey for England data can furnish on the future direction of public health in three core areas – smoking, drinking and obesity.

Any discussion of generational effects must be careful to distinguish between those views and behaviours which are related to a person's *lifestage* – a behaviour that has always been more common among younger people – from those that are due to their *cohort*. The latter are specific to the circumstances of a generations' upbringing; most importantly for predicting future behaviour these are also more likely to stay with them as they age.

Smoking

The long-term data presents a well-known good news story: the number of people smoking is in decline. However, different generations are kicking the habit at different rates and those Millennials who do smoke appear to be doing so for longer. When we compare Millennials in 2013 with members of Generation X (those born 1966 – 1979) in 1999 – years where the average age of these generations matches at 26 – we see different trajectories. The trend for Millennials has been shallower than for Gen X; in fact, between 2009 and 2014 the proportion of Millennial smokers has stayed broadly level.

i https://www.ipsos.com/ipsos-mori/en-uk/millennial-myths-and-realities
ii https://www.ipsos.com/ipsos-mori/en-uk/generation-z-beyond-binary-new-insights-next-generation

Drinking

Regular alcohol consumption is facing a generational decline in England. Every generation has drunk less regularly than the one before it, with only six per cent of Millennials drinking alcohol on five or more days a week, half the proportion we saw among Generation X at an equivalent point (13%).

Looking further forward, we find more evidence of a permanent shift away from the stereotypical 'binge drinking' culture, with our youngest generation hitting teenage life with a very different attitude and behaviour to drinking. For example, in 2000, nearly three quarters of teenage Millennials (then aged 13-15) had tried an alcoholic drink at least once – fast forward to 2016 and the figure for 13-15 year olds (Generation Z) is just 36%.

Obesity

While smoking and drinking may be in decline, our analysis presents a worrying generational trend for obesity: generation on generation, adults are less likely to be a healthy weight. Already, Millennials are distinguished as the first generation where less than half are at a healthy weight in their twenties. Combine this with the fact that the likelihood of being overweight is highly correlated with rising age and we can expect a continued rise in obesity levels from now to 2040 and beyond.

And although childhood obesity isn't growing – after rising during the nineties the prevalence of obesity among secondary school children now is the same as in 2003 (36%) – there is evidence that the odds are already against Generation Z maintaining a healthy weight in adulthood. A longitudinal analysis of UK birth cohort studies suggests that like Millennials, they are two to three times more likely to become obese or overweight compared with older generations in England.[iii]

A generational perspective is of course just one part of the picture. The strongest indicators of obesity in children are socioeconomic, not generational. In England in 2016, a third (32%) of children aged 2-15 in the lowest household income quintile were overweight or obese, compared with just 18% of children living in the highest quintile.[iv] But the generational trend can work with socioeconomic factors to widen health inequalities: in an increasingly unhealthy population, it is likely that divides *within* generations are likely to grow.

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i https://www.ipsos.com/ipsos-mori/en-uk/millennial-myths-and-realities
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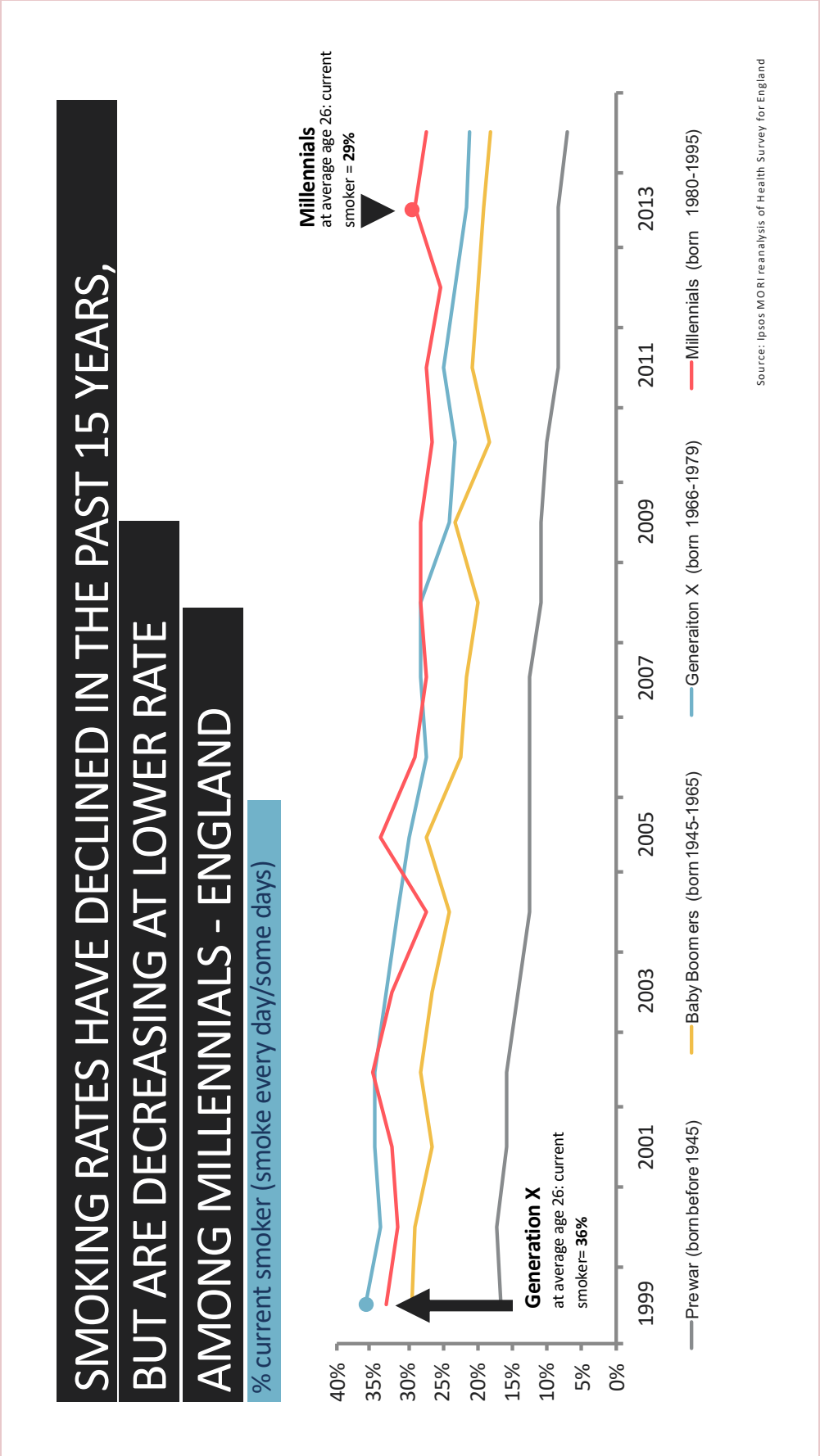
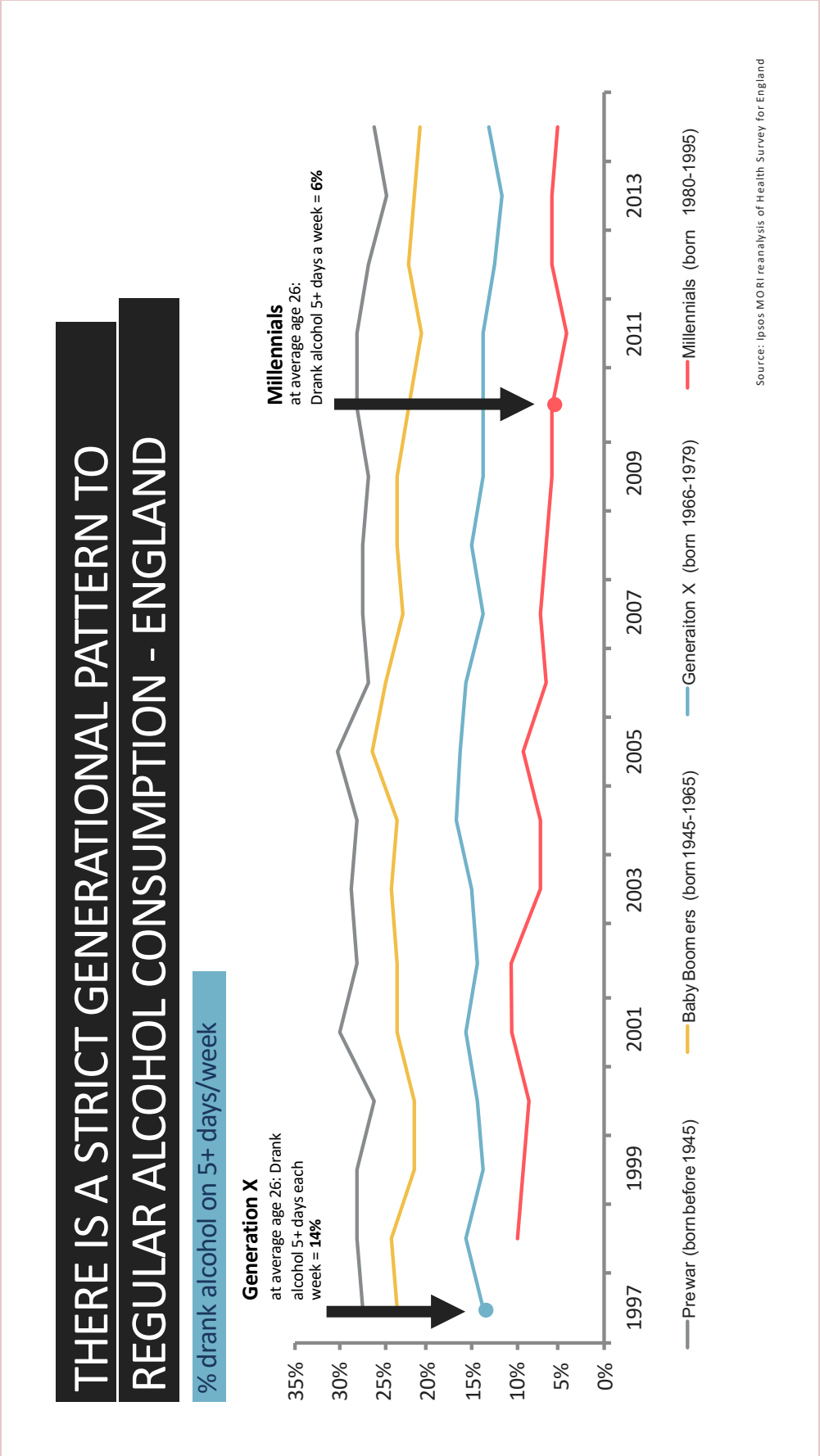
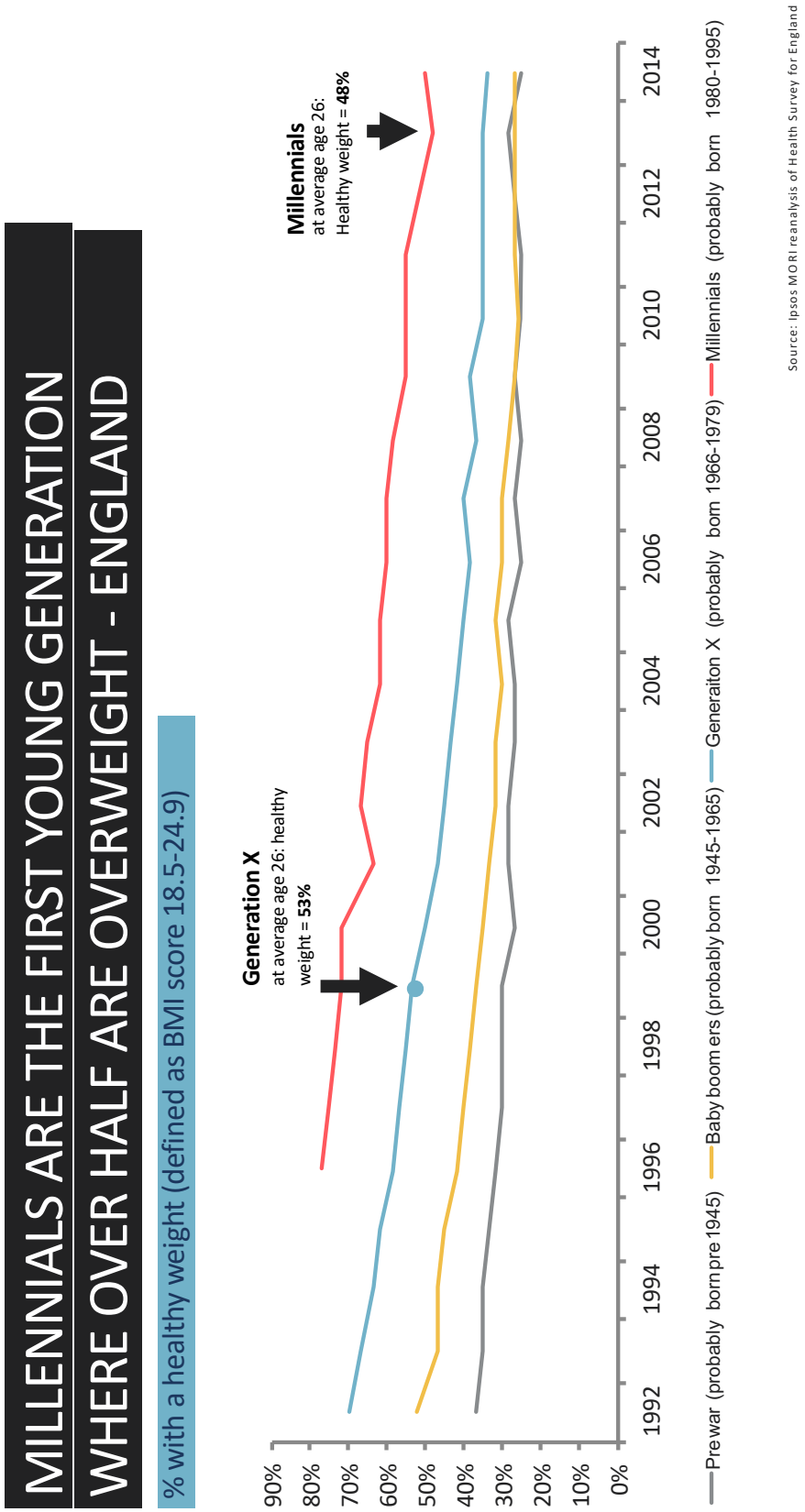

SMOKING RATES HAVE DECLINED IN THE PAST 15 YEARS,
BUT ARE DECREASING AT LOWER RATE
AMONG MILLENNIALS - ENGLAND
% current smoker (smoke every day/some days)
Millennials
at average age 26: current smoker = 29%
Generation X
at average age 26: current smoker= 36%
40%
35%
30%
25%
20%
15%
10%
5%
0%
1999
2001
2003
2005
2007
2009
2011
2013
Pre war (born before 1945)
Baby Boomers (born 1945-1965)
Generaiton X (born 1966-1979)
Millennials (born 1980-1995)
Source: Ipsos MORI reanalysis of Health Survey for England


THERE IS A STRICT GENERATIONAL PATTERN TO
REGULAR ALCOHOL CONSUMPTION - ENGLAND
% drank alcohol on 5+ days/week
Generation X
at average age 26: Drank alcohol 5+ days each week = 14%
Millennials
at average age 26: Drank alcohol 5+ days a week = 6%
35%
30%
25%
20%
15%
10%
5%
0%
1997
1999
2001
2003
2005
2007
2009
2011
2013
Pre war (born before 1945)
Baby Boomers (born 1945-1965)
Generaiton X (born 1966-1979)
Millennials (born 1980-1995)
Source: Ipsos MORI reanalysis of Health Survey for England


MILLENNIALS ARE THE FIRST YOUNG GENERATION
WHERE OVER HALF ARE OVERWEIGHT - ENGLAND
% with a healthy weight (defined as BMI score 18.5-24.9)
Generation X
at average age 26: healthy weight = 53%
Millennials
at average age 26: Healthy weight = 48%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
Prewar (probably born pre 1945)
Baby boomers (probably born 1945-1965)
Generaiton X (probably born 1966-1979)
Millennials (probably born 1980-1995)
Source: Ipsos MORI reanalysis of Health Survey for England

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