

A MATTER OF LIFE AND HEALTHY LIFE

Director of Public Health Report
for Sheffield 2016



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1. Introduction

This is my first Annual Report as the new Director of Public Health for Sheffield and in producing it I am aware that I am continuing a long tradition of annual reports on the health of the population stretching back nearly 150 years.

This year, I have chosen to combine the refresh of the Joint Strategic Needs Assessment (JSNA) with the DPH Annual Report. In this way I can take stock of current and likely future needs and assess some priority themes for the future in one place. I have deliberately chosen to focus the JSNA in a way that reflects the main stages of life - starting out, working age and the ageing population. The JSNA should always be “strategic” and cannot focus on a large number of topics or specific issues. Thus the JSNA is focused on broad themes across the whole population. It will not tell us “what to do in Smith Street next week”, nor should it. What it does tell us is that:

- Sheffield’s population continues to grow, albeit slowly, and is increasingly diverse
- Healthy life expectancy remains a major challenge for our City and we have more preventable deaths per head than England as a whole
- Health inequalities continue to exist in Sheffield, are not improving, and impact on a geographical basis as well as on specific groups of people.

With this and the associated challenges in mind, the transfer of public health from the NHS to local government should be seen in context. It is still relatively fresh in historic terms, and offers incredible opportunities. In all respects local government has always had an important role to play in improving health and wellbeing. What many call “the social determinants of health” are core policy and service roles of local government. This has always been the case. What is new to local authorities though is the transfer of staff with specific skills and competencies around evidence based policy and investments, assessing health need and evaluation as well as a set of responsibilities for public health transferred to local government from the NHS that are additive to local government’s existing duty to promote wellbeing. In historic terms it is worth noting that public health has been a part of local government for considerably longer than it was part of the NHS. This is, in my view, right and reflects where many of the determinants of health can be best influenced.

My report aims to set out how we can build on this opportunity to develop a broad approach focused on prevention, based on a good start in life, living well and ageing well, to deliver health benefits across the life course. This is not just about a narrow view of health, but about how good health and wellbeing contributes to the economy, and vice versa.

continued overleaf ►

The position of public health within the local authority gives us a major opportunity to influence a broad range of policy areas to maximise the health dividend from Council activity, and indeed activity within the wider economy. This report makes some initial recommendations as to how we might take this forward: it will be up to us to do so, and to continue to build on these steps over the coming years.



Greg Fell
Director of Public Health for Sheffield

Acknowledgements

Reports such as this are always the result of many people's work.

I am grateful this year to the following contributors: Amy Buddery, Ruth Granger, Susan Hird, Jason Horsley, Helen Phillips-Jackson, Dan Spicer, Julia Thompson and Alan Walker and to the Editorial Group: Barbara Carlisle, Tom Finnegan-Smith, Mark Gamsu, Judy Robinson and Dawn Walton.

Thanks are also due to Louise Brewins for editing the report, Ian Baxter and Dale Burton for data analysis and infographics and Sarah Stopforth and the SCC Communications Team for the report's design and publication. Final responsibility for the content rests with me.



2.

What the JSNA is telling us

How is the Sheffield population changing?

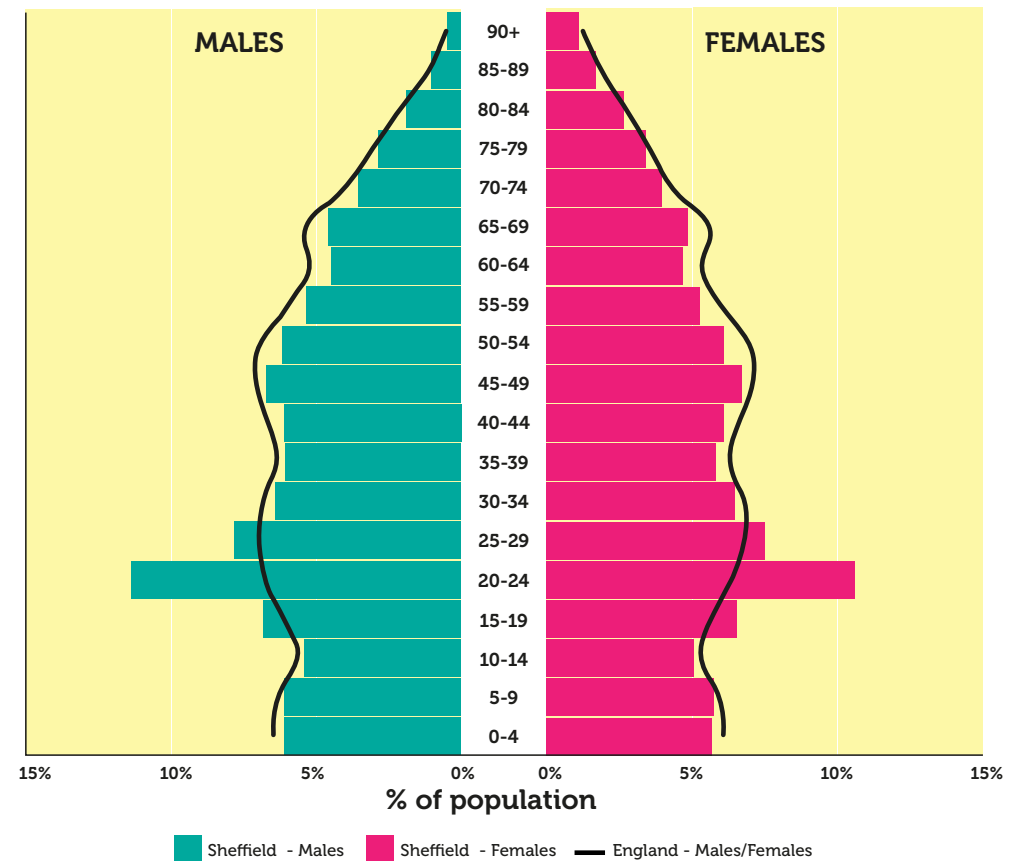
Sheffield is the third largest city in England (outside London) with a total population of 563,750 people. It's fairly typical of any large, urban population in the Country, including the population "bulge" in 20-24 year olds (linked to university students). This means we can be reasonably confident that any national estimates of rates of health or disease (for example from national surveys) will apply to Sheffield.

Sheffield's population is growing very slowly following a long period of decline. The factors that drive population growth are birth rate and international (inward) migration. Sheffield is also a highly diverse population with around 17% of people from black and minority ethnic communities. This is likely to increase further over the coming years.

Changes in population size, age profile and level of ethnic diversity vary from ward to ward and year to year, making it difficult to forecast future population with real accuracy. Following a period of increase, the Sheffield birth rate is beginning to level off - there is a similar trend across Yorkshire and the Humber. The growth in our total population will further slow as a result.

Overall, Sheffield's population is expected to increase by around 1% per year over the next 5 to 10 years.

Figure 1: Population by sex and 5 year age groups (2015) Sheffield and England



Source: ONS Mid 2015 Population Estimates

What's more important - living longer or living healthier?

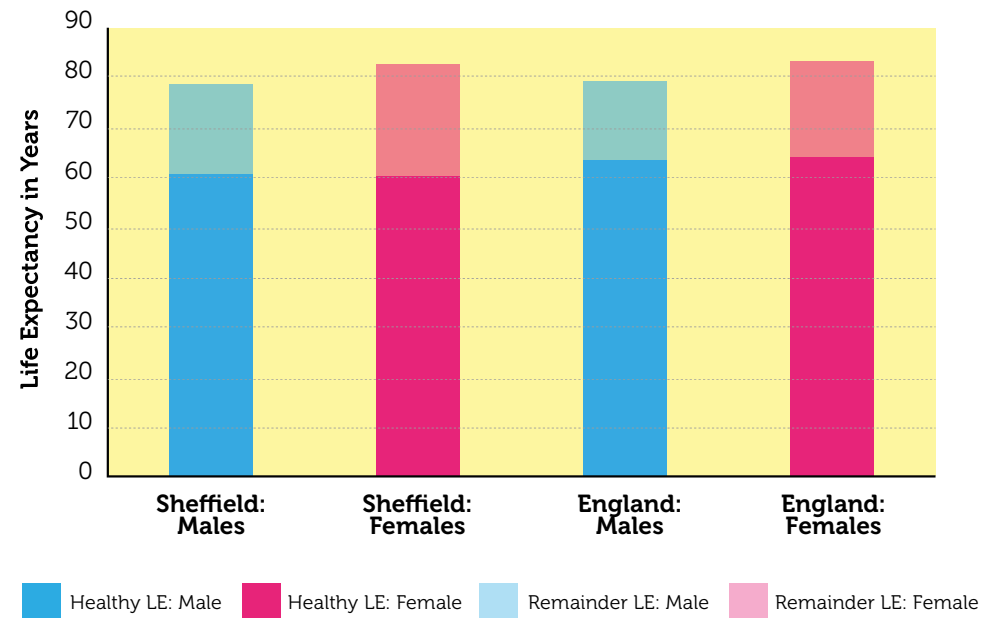
Life expectancy continues to increase in Sheffield and now stands at 78.9 years for men and 82.5 years for women. This compares favourably with the other major English cities but still falls short of the England average of 79.5 years for men and 83.2 years for women.¹ A more important measure of overall health and wellbeing however is "Healthy Life Expectancy". It reflects both the length and quality of life and represents the number of years someone can expect to live in good health. When healthy life expectancy is taken into account, a different picture of health and wellbeing emerges.

For men in Sheffield healthy life expectancy is currently 60.8 years which means around the last 18 years of their life will be spent in poor health. For women it's worse; healthy life expectancy is 60.3 years so the last 22 years of their lives are likely to be spent in poor health. This does not compare well with the other core cities and is significantly worse than the England average. Moreover, whilst life expectancy is increasing, healthy life expectancy is not and this represents a key challenge for the City.

It is this overall level of illness and disability in a population that drives demand for health and social care services rather than whether we're living longer. It's what makes life worth living that counts rather than how long we live.

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Figure 2: Life expectancy and healthy life expectancy, males and females in Sheffield and England (2012-14)



PHOF Indicator s0.1(i) & 0.1 (ii)

Public Health Intelligence Team, SCC

¹ You can view all public health indicators for Sheffield via - <http://www.phoutcomes.info/public-health-outcomes-framework#page/0/gid/1000049/pat/6/par/E1200003/ati/102/are/E0800019>

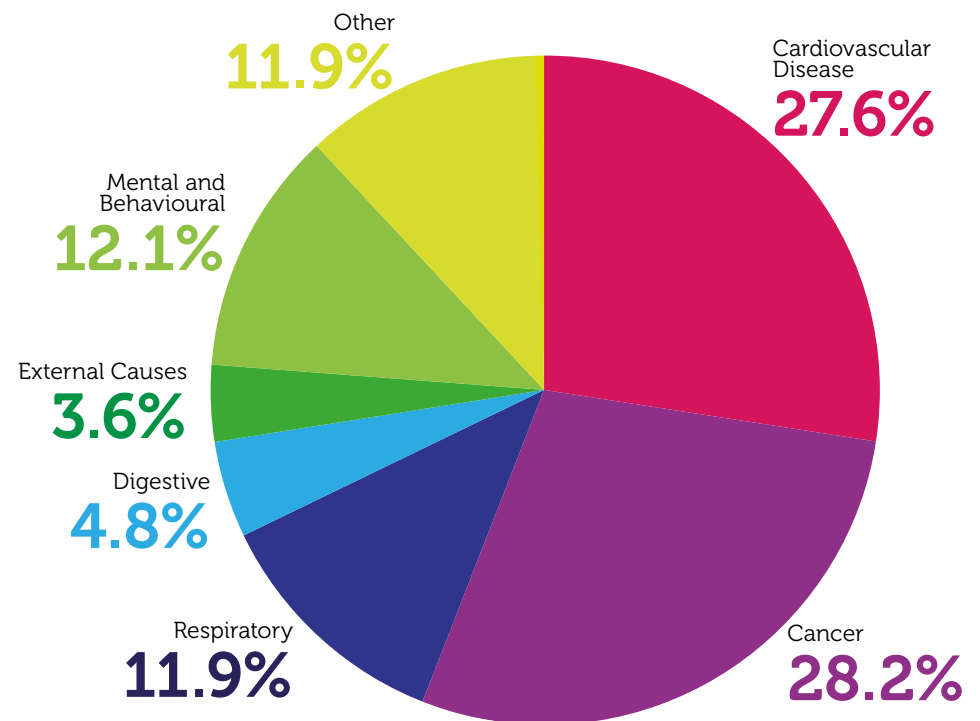
What's killing us?

The two main causes of death in Sheffield people are cancer and cardiovascular disease (heart attacks and strokes) which together account for more than half of all deaths each year. When causes of death in men and women are considered separately, dementia is the third main cause of death in women whilst respiratory disease is the third main cause of death in men.

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Although death rates are reducing in Sheffield they remain higher than England with the exception of deaths from certain infectious and parasitic diseases.

Of greater concern is the number of deaths that are considered preventable. Overall it is estimated that around 20% of all deaths in Sheffield could be prevented each year - that's equivalent to around 900 deaths every year. This is significantly higher than for England. The main direct causes of preventable deaths are high blood pressure, obesity, high cholesterol, smoking, alcohol consumption and lack of physical activity. Addressing these causes saves lives and livelihoods.

Figure 3: Main causes of death in Sheffield (all ages) 2012-2014



Source: Public Health England Segment Tool

What's making us ill?

Figure 4: Causes of years lost to disability (YLD)



Source: World Health Organisation Global Burden of Diseases, Injuries and Risk Factor Study 2010

http://www.who.int/healthinfo/global_burden_disease/gbd/en/

As well as looking at how long we live and what we die of, we also need to examine what causes unhealthy life expectancy. Over half of all the years spent in poor health (both in Sheffield and nationally) can be attributed to musculoskeletal conditions (such as chronic back pain) and mental ill health.

Good mental health and wellbeing protects our overall health and increases our healthy life expectancy. When it's poor it is often seen in combination with long term physical health conditions (such as heart disease) adding to the burden of years spent in poor health.

Diabetes is also an important factor in healthy life expectancy because it can lead to serious complications such as heart disease, kidney disease, blindness or limb amputation. Around 6% of the Sheffield population has diabetes, similar to the national average.

Dementia is an increasingly important factor as we age. Although prevalence of dementia in Sheffield is not significantly different from the national picture, as we have seen, it's a particularly important factor in older women's healthy life expectancy.

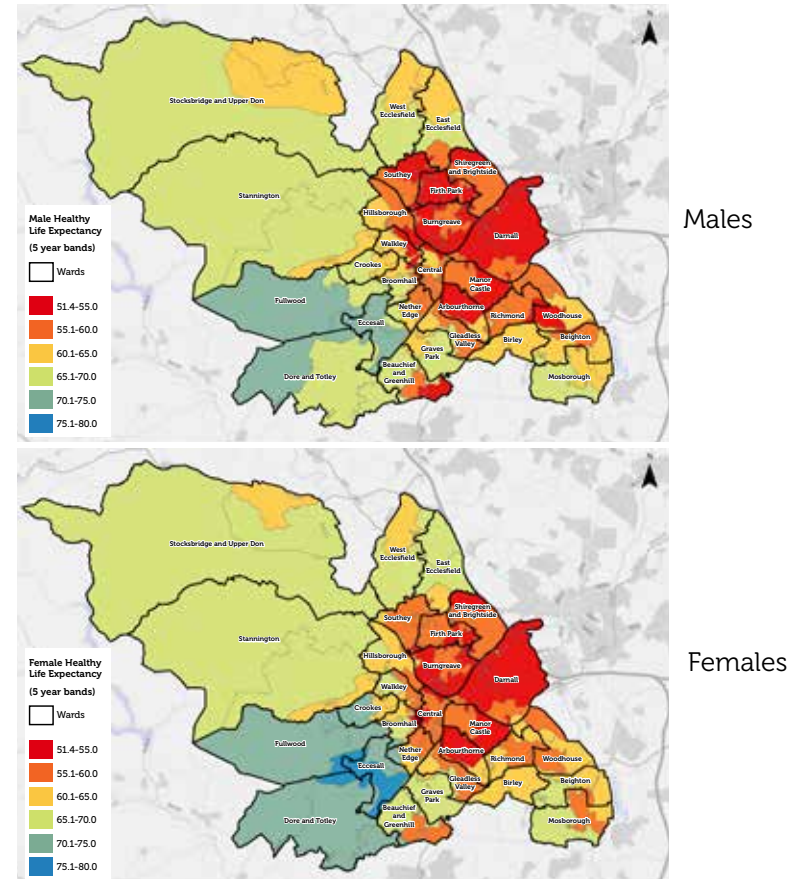
Are we in this together?

Health inequalities continue to blight our City. Recent data on life expectancy and related social causes of poor health and wellbeing show that over the last 10-20 years little has changed in terms of the size of the gap between the most and least deprived people in Sheffield.²

The gap in life expectancy between the most and least deprived people in Sheffield is still around 10 years while it is almost 7 years for women. The gaps are greater when we consider Healthy Life Expectancy: there remains over a 20 year difference between the most and least deprived men (72.1 years versus 50.2 years) and 25 years for women (75.6 years versus 50.8 years). In the context of continuing economic austerity and further cuts to public sector funding, these health inequalities could worsen significantly in the future.

The gap in healthy life expectancy is not just geographically based; there is a similar gap for people with serious mental illness and those with a learning disability. Children and adults in the more deprived parts of the City suffer a greater burden of ill health, disability and early death than those who are born and live in the less deprived areas. We know that a significant proportion of deaths and ill health are preventable. Stepping up our actions to prevent premature death, disability and ill health in our more deprived and vulnerable communities represents economic sense as well as being the right thing to do.

Figure 5: Map of healthy life expectancy by Sheffield MSOA (2009-2013) and deprivation (males and females shown separately)



© Crown copyright and database rights 2016 Ordnance Survey 100018816: Public Health Intelligence Team IB

² Take a look at our summary health and wellbeing neighbourhood and ward quilts. These show the level of variation in health and wellbeing across Sheffield's communities: <https://www.sheffield.gov.uk/caresupport/health/director-of-public-health-report.html>

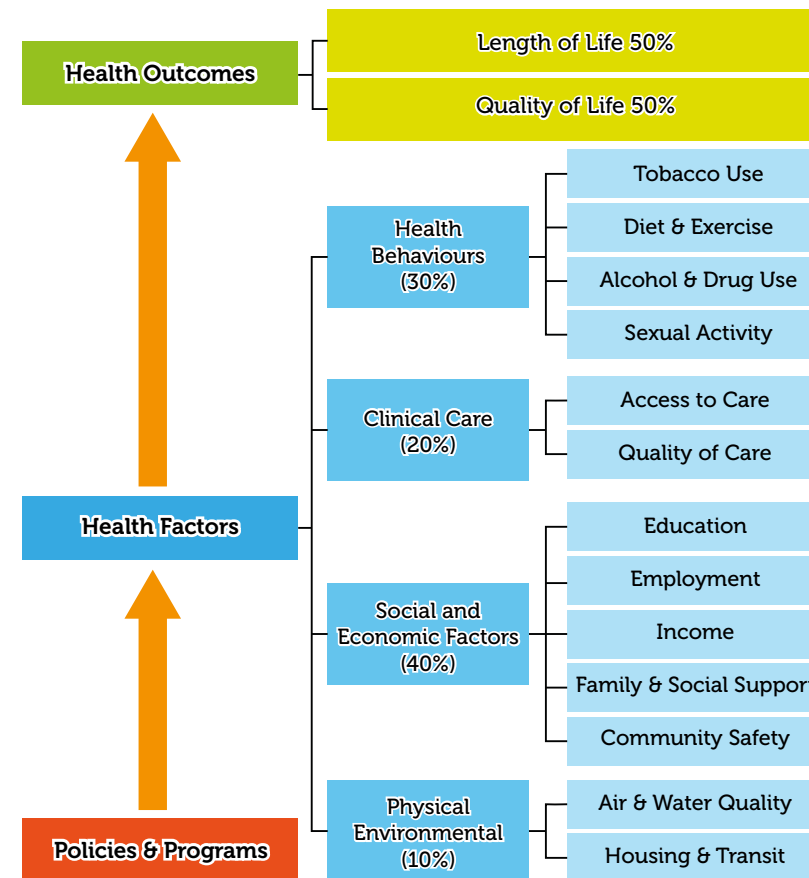
What causes poor health and wellbeing?

The single biggest cause of ill health, early death and health inequalities are socio-economic factors such as unemployment, lack of income, low educational attainment and poor quality housing; but these are not the only factors. Collectively they account for around 40% of health and wellbeing outcomes.

The other 60% is accounted for by: lifestyles (such as smoking, lack of physical exercise, poor diet and alcohol consumption); communicable and infectious diseases (such as HIV/AIDS or tuberculosis); the quality and availability of health care (particularly primary, preventative and early intervention health services such as GP practices); and environmental threats to health (including excess winter deaths from living in a cold home and death and ill health due to pollution from traffic).

Action on just one or two of these factors won't be enough to achieve the improvements in health and wellbeing outcomes or sustainability of our health and social care services that we need to see in Sheffield. That's why our approach must focus on: maximising people's life chances; optimising healthy behaviours throughout the life course; protecting people from communicable and environmental threats to their health; and increasing the health and wellbeing value that health and social care services deliver.

Figure 6: The determinants of health



County Health Rankings model © 2014 UWPHI

<http://www.countyhealthrankings.org/Our-Approach>



3.

The case for a radical upgrade in prevention

Why do we need a radical upgrade in prevention?

Health in Sheffield has improved considerably over the last few decades but there are still significant inequalities. Life expectancy in Sheffield is improving, but healthy life expectancy is not; the gap in life expectancy between vulnerable groups of the population (such as people with learning disabilities or severe mental health problems) and the rest of the population is around 20 years. There is also a 10 to 15 year difference in the age of onset of multi-morbidity: only 8.3% of the most affluent people in Sheffield have developed one or more health conditions by the age of 50-54 compared to 36.8% of the most deprived.

Sixteen years ago, Derek Wanless' health review warned that unless the Country took prevention seriously we would be faced with a sharply rising burden of avoidable illness. That warning has not been heeded - and public services are on the hook for the consequences.³

Only about 5% of the entire healthcare budget is spent on prevention but Local Government Association (LGA) research on a range of local prevention schemes suggests that investment in prevention could yield a net return of 90%.⁴ The current social care and health system will struggle to meet demand unless we re-engineer our planning and service provision to promote healthy choices, protect

health, prevent sickness and intervene early to minimise the need for costly hospital treatment. Trying to fix this by focusing on treatment alone is not the answer. We need preventative strategies that deliver better outcomes for individuals and as a result mitigate or defer the need for costly interventions.

But when considering the cost of that illness it is not just the bill for the treatment and care that should be taken into account. The economic consequences of premature death and preventable illness are considerable too. These can include loss of productivity in the workplace and the cost of crime and antisocial behaviour.

"If the nation fails to get serious about prevention then recent progress in healthy life expectancies will stall, health inequalities will widen, and our ability to fund beneficial new treatments and care will be crowded-out by the need to spend billions of pounds on wholly avoidable illness."

Simon Stevens, Chief Executive of the NHS

³ Five Year Forward View <https://www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf>

⁴ Prevention: a shared commitment. LGA 2015 [http://www.local.gov.uk/documents/10180/6869714/Prevention+-A+Shared+Commitment+\(1\).pdf/06530655-1a4e-495b-b512-c3cbef5654a6](http://www.local.gov.uk/documents/10180/6869714/Prevention+-A+Shared+Commitment+(1).pdf/06530655-1a4e-495b-b512-c3cbef5654a6)

What would a radical upgrade in prevention look like?

So what would a radical upgrade in prevention in Sheffield look like? How would we invest our resources differently, and what would the impact be for Sheffield, public service spend, and the local economy?

Good life chances, healthy lifestyles and easy access to expanded high value health and social care services all play a crucial role in preventing or delaying the onset of avoidable illness. There is significant potential for population-level gain from improvement in these three areas. There is certainly more to do on tobacco control, nutrition and obesity, physical activity and alcohol because these are the main direct causes of the majority of avoidable illness, alongside poor mental health.

It's difficult to be precise about the scale of the impact of a diffuse set of interventions but evidence from the UK⁵ and the USA⁶ is clear that it's the number of people who are ill that's driving cost growth, not the average cost per ill person (which is relatively stable). This underscores the need for prevention. There are some obviously tricky balances between personal responsibility and state intervention. Personal responsibility for health-related choices is a critical element of any programme, as is support and encouragement for individuals to change (e.g. stop smoking services). However there is also a need for population policies that shape our choices, particularly so when considering factors such as price, advertising and availability of unhealthy products. Our so-called free choices are influenced by

commercial, economic, environmental and social cues. For example, choosing what to eat is not an unfettered personal choice. Poor diets have become the default behaviour in a perversely structured society.

Looking overseas, it's worth noting that one of the principal drivers for the initiatives in New York during the 2000s related to economic and productivity concerns rather than health concerns. There are direct health service impacts and also downstream social care consequences of our failure to prevent, such as social care costs of post-stroke disablement. There is huge potential for links to employment and economic regeneration and sustainability agendas such as Green Gym or Green Car-type schemes. Recent analysis in Sheffield has demonstrated that getting to a smoking prevalence of 10% would equate to 45,000 fewer smokers, approximately 50% reduction in associated avoidable illnesses in these smokers, significant improvements in economic productivity, less money (c£150m) being spent on cigarettes and likely more on other local goods and services, with obvious economic impact.

⁶ Farley, T. (2015) *Saving Gotham: A Billionaire Mayor, Activist Doctors and the Fight for Eight Million Lives*. W.W. Norton & Company Inc., New York. In 2002, a dynamic doctor named Thomas Frieden became health commissioner of New York City. With support from the new mayor, billionaire Michael Bloomberg, Frieden and his health department team prohibited smoking in bars, outlawed trans fats in restaurants, and attempted to cap the size of fizzy drinks, among other ground-breaking actions. The initiatives drew heated criticism, but they worked: by 2011, 450,000 people had quit smoking, childhood obesity rates were falling, and life expectancy was growing.

⁵ Centre for Health Economics, University of York. http://www.york.ac.uk/media/che/documents/papers/researchpapers/CHERP127_medical_spending_hospital_inpatient_England.pdf

The upgrade will only happen if we make it happen

Sheffield City Council, NHS Sheffield CCG and other partners in the City are currently developing the 'Shaping Sheffield Plan', a five year strategy for transforming health and social care in Sheffield. The Plan is based on the following prevention priorities:

Improve life chances by

Expanding and developing new supported employment pathways for people furthest from the labour market. These will be focused on mental health and individual placement and support, musculoskeletal conditions and links to the City's Move More programme. Pathways will be simplified, enabling referrals in both directions between employment and health systems

A new Vulnerable Young People's service will be established, providing targeted support focused on early intervention and prevention through integrated, multi-agency teams combining youth and health workers, police officers and a range of advice and support services to improve outcomes and life chances for a cohort of approximately 1,000 teenagers and young adults per year.

A single point of contact for health professionals to make patients' houses warmer by reducing costs, increasing ability to pay or increasing energy efficiency.

Achieve healthier lives by

A 'Heart of Sheffield' programme which will deliver healthy public policies and services at scale including:

- Smoking and alcohol brief intervention at all points in customer interactions, including clinical pathways
- Review of current 'lifestyle services' (e.g. stop smoking service) and develop an affordable level of support to everyone particularly focused on high risk groups
- Implement healthy public policy initiatives around healthy lifestyles making the healthy choice the default and the easiest choice
- Cardiovascular Disease (CVD) clinical risk factor management initially focused on secondary prevention (management of cholesterol and blood pressure, atrial fibrillation and anticoagulation).

Enhance neighbourhood & GP services by

Developing primary care-led urgent care centre(s) to make it easier for people to get urgent care outside a hospital setting, increasing bed provision and home support capacity to support people intensively for short spells and new home care support arrangements that are personalised, flexible, local, and responsive.

Introducing social prescribing so it becomes as easy to prescribe non medical interventions as it is to prescribe a pill and developing community assets based on social prescribing conversations - identifying what's missing and what we can put in place that will make a difference (including for early years and families).

Introducing a key worker approach for people and families in need of more intensive support, a medicines hit squad to drive down unit costs and tackle over-use of medication and secondary care consultant support to primary care to deliver better patient outcomes.

Increasing access to talking therapies, peer support groups and "5 Ways to Wellbeing" to improve mental health.



4. Health and wellbeing for life

Why does getting the right start matter?

The first years of life are crucial for brain development and provide the foundations for the emotional and social skills needed for future success at school and in life. A child's development at 22 months old can give an accurate prediction of their educational outcomes at the age of 26 years.

Where children grow up with secure relationships, safe home and learning environments, adequate housing and have good nutrition, the probability of lasting positive health and wellbeing is high.

Conversely, adverse experiences in the early years such as poverty, child abuse and neglect or parental substance misuse not only impact negatively on children's health and wellbeing at that time, but can effect a wide range of long term outcomes including learning, anti-social behaviour and premature ill-health and death.

Development before birth matters too - a baby's health is vitally affected by the health and wellbeing of its mother. Maternal health, including stress, diet, drug, alcohol and tobacco use during pregnancy has significant impact on foetal and early brain development. Low birth weight in particular is associated with poorer long-term health and educational outcomes.

Getting the right start in life matters for the rest of your life; it has to be our top health and wellbeing priority.



Where is Sheffield doing well and where does it need to improve?

Keep up the good work

- Infant mortality in Sheffield is now on a par with the rest of England and continuing to reduce. In previous years the rate was significantly higher than average.
- Breastfeeding rates in Sheffield at delivery are some of the highest in the Country at around 80% compared with an England average of 74.3%
- Good early access to maternity care is provided in Sheffield providing important benefits for both mother and baby during pregnancy and birth
- The rate of obesity amongst 4-5 year olds in 2014/15 was 8.3% compared to the England average of 9.1%, although 21% are classed as overweight
- 95% of three to four year olds accessed free early learning in line with the national average
- More children in Sheffield than any other major UK city achieve the expected level of development at 5 years (school readiness), and this increased from 51% to 65% between 2013 and 2015
- Overall Sheffield performs well in terms of uptake across the range of childhood vaccination and immunisation programme although there is still a little room for improvement in relation to uptake of DTaP/IPV (diphtheria, tetanus, pertussis and polio) in 5 year olds

Room for improvement

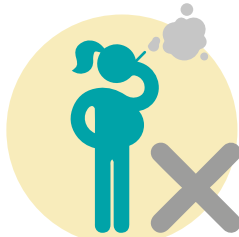
- 23.5% of children in Sheffield are living in poverty and as a result face significant risks of adverse long term health and poor academic outcomes
- Maternal smoking is a cause for local concern and too many women take up smoking again after having their first child
- Excess weight and obesity among 10 and 11 year olds in Sheffield is now similar to the average for England whereas previously it has been lower
- Children in Sheffield have higher levels of decayed or extracted teeth than the national average. 35.8% had one or more decayed, filled or missing teeth in 2014/15 compared to the England average of 27.9%
- Although conceptions in girls under the age of 18 years continue to reduce in Sheffield our rate at 27.9 per 1000 girls aged 15-17 years is still significantly higher than the England average of 22.8 per 1,000.

What does the evidence say we should focus on?



GOOD ANTENATAL CARE

Good early access to maternity care is provided in Sheffield, providing closer monitoring and earlier help during pregnancy. This supports reductions in infant mortality and low birth weight.



NOT SMOKING DURING PREGNANCY

Smoking rates during pregnancy impacts both the mother and the baby for life. Sheffield's rate of smoking at the time of delivery is 15%, which is much higher than the England average of 11.4%.



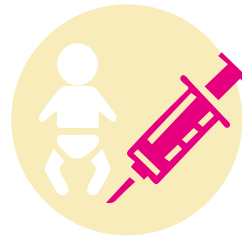
BREASTFEEDING

Breastfeeding provides important health benefits for mum and baby. 80% of Sheffield's women breastfeed at delivery compared to the England average of 74.3% but only 50% are continuing to breastfeed at 6-8 weeks.



SAFE SLEEPING

Access to evidence-based, safer, sleep advice is crucial so that parents can make the best choice for their baby's sleeping arrangements and reduce the risks associated with sudden infant death.



VACCINATION AND IMMUNISATION

Targeted approaches to vaccination and immunisation uptake for mothers, babies and children reduce the spread of childhood infectious diseases such as measles or mumps and the health complications associated with these diseases.



PARENTAL/FAMILY SUPPORT

Good maternal mental health is important for bonding and child development. Health professionals and children's centre teams provide important emotional and social support for families, including early access to specialist services if required.



MAINTAINING A HEALTHY WEIGHT

Parenting styles and eating practices have a big impact on risks of obesity. Community based programmes which promote healthy eating and active lifestyles can help families gain the confidence and skills to adopt effective approaches to maintaining healthy weight



ORAL HEALTH

Good oral health in the early years is important. In Sheffield there are high levels of tooth decay amongst children under 5 years. Parents can help by tooth-brushing with fluoride toothpaste as soon as their child's teeth appear and cutting back on sugary drinks and food.

What should we be doing?

All the available evidence nationally and internationally demonstrates the impact of effective investment in the early years, from pre-conception to school age. It is widely understood that there is a higher return on investment and effort at this stage than at any other point in the life course. In Professor Michael Marmot's 2010 report 'Fair Society, Healthy Lives'⁹ he identified the importance of support in the early years for reducing health inequalities and creating a fairer society. A focus on early intervention and prevention which is targeted to help the most vulnerable families is vital both in terms of improving overall health and wellbeing outcomes and reducing health inequalities.

Sheffield has well established working partnerships amongst professionals and communities including midwives, health visitors, GPs, early learning providers, children's centres, voluntary organisations, parents and carers. These partnership arrangements, working at a community level, must continue to maintain progress and make improvements in some of our most challenging areas (such as maternal smoking). By offering high quality, evidence based support which is targeted to meet the needs of our most vulnerable and disadvantaged families and young children we have the best possible chance of improving outcomes and raising aspirations overall within our City. Not only is this good for Sheffield's potential, there is a high probability that this approach will release significant savings across all sectors in later years.

⁹ <http://www.instituteofhealthequity.org/projects/fair-society-healthy-lives-the-marmot-review>



Why does living well matter?

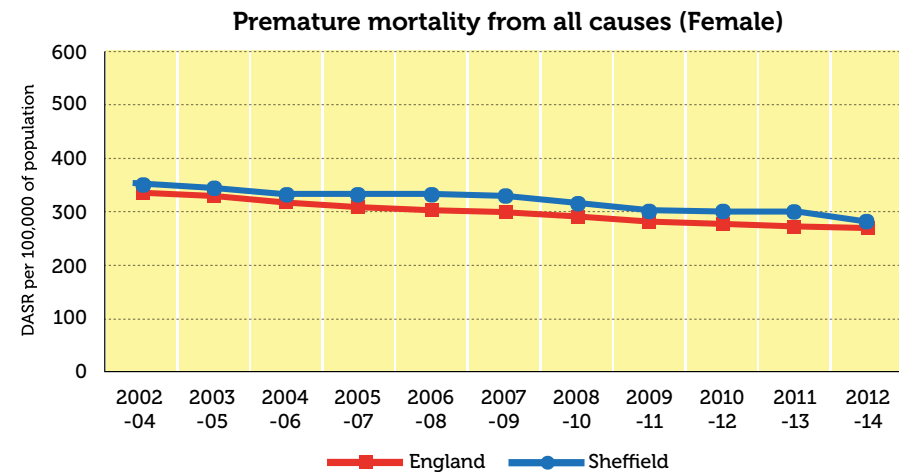
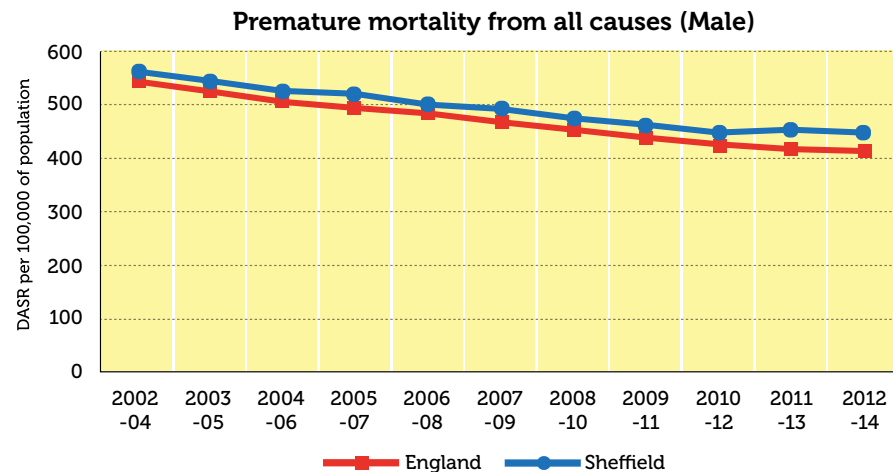
We measure the rate at which people die below the age of 75 as an indicator of the proportion of people who die early. The good news is that this rate has steadily been coming down for both men and women in Sheffield.

The problem is that Sheffield's rate is not coming down as fast as the rest of the Country for men, which suggests we could be doing more. The rate at which men die prematurely is 9% higher than the average for England. For women the rate was drifting away from the national average but has recently improved although it remains 4% higher.

There is no simple solution to reducing premature mortality but some of the most important factors that will help people in Sheffield to live longer, happier and healthier lives are: improving life chances; helping people improve lifestyles; and providing high quality care services, especially primary care.

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Figure 7: Premature mortality from all causes Sheffield and England - Males and Females (2002-04 to 2012-14)



Source: Public Health England <http://fingertips.phe.org.uk/profile/health-profiles>

The healthy choice should be the easy choice

The priority for living well remains the need to provide an environment that supports and enables us to be as healthy as we possibly can be. Before he was the director of the USA Centre for Disease Control, the then DPH for New York City, Dr Tom Frieden, was asked his view of the single most important measure to describe the health of a population. His response was the number of smokers and how quickly this number is changing. His approach was one of scaled up support to help people stop smoking on an individual basis but also bold public policy initiatives to change the environment to increase the incentives to stop, and to not start. As an example, if we were to be similarly aspirational, we would need to reduce the proportion of Sheffield people who smoke from the current level of almost 18% to 10% over the next 5 years.

Using public policy changes to make the healthy choice the easy choice (and maybe the default choice) is the most evidence based, efficient and equitable way to support healthier lifestyles, including

better diet and nutrition, being more physical active, consuming less alcohol, reducing drug misuse and practising safe sex. In doing so, there is a need to balance both policy level interventions and services to support individuals. For example, community engagement and outreach are often a vital component of behaviour change interventions and the support from peers who share similar life experiences can be a powerful tool for improving and maintaining health. There is significant short and medium term health gain here. One way of characterising this approach would be to think about the “commercial determinants of health” rather than “unhealthy lifestyles”, in much the same way as we think about upstream factors as the “social determinants of health”.

Much of the evidence base to support this approach is already well established and four examples, currently being developed in Sheffield, are outlined overleaf.¹⁰

¹⁰ <http://www.kingsfund.org.uk/projects/improving-publics-health>

Creating the environment for living well

Active travel

We are taking forward our Move More strategy, which is based on the principle of active travel¹¹. Although Sheffield is leading the way on this there are still lessons to be learned from other cities as to how they plan transport networks and spatial layout to maximise walking and cycling as part of everyday travel. The benefits of this approach include impacts such as healthier weight, better air quality, lower travel costs and safer streets. The key issue is about broadening the way in which we consider cost and return on our investment in transport and planning to include social and health returns.¹²

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Employment and Health

We are implementing a programme of interventions to help those people who are currently unable to work as a result of ill health to move back into the labour market. We know that by doing so we will not only be able to improve the health and wellbeing of the individuals themselves but we will also be helping the economy of Sheffield. We could extend this concept further by thinking of healthy people as the core infrastructure investment for the economy.

Neighbourhoods

The way in which we plan neighbourhoods can have lasting health impacts. Recent work in Glasgow highlighted the long term impact of social regeneration decisions of the past.¹³ It is important to learn from this social research and apply it to addressing the key drivers of overall poor health - poverty and deprivation, and seek to narrow the widening gaps in income, power, wealth and therefore health. Our approach to neighbourhood development is asset based where the emphasis is placed on strengthening and enhancing the resources and assets individuals and communities already have to support sustainable development.

Self-Care

We have made a great start in terms of beginning to develop a personalised model of care and self-care. One way in which we are seeking to support this shift is through the use of digital technology. For example Sheffield Flourish¹⁴ is a digital well-being community hub designed to help people living with mental health conditions to find the resources and connections they need to build the lives they wish to lead. Both digital and human based approaches are needed however and we should continue to maximise the potential of citizen and service user contacts to improve health through making every contact count¹⁵ and similar approaches.

¹¹ <http://www.movemoresheffield.com/#everyminutecounts>

¹² www.rbkc.gov.uk/pdf/air_quality_cost_effective_actions_full_report.pdf

¹³ <http://www.understandingglasgow.com/indicators/poverty/overview>

¹⁴ <http://sheffieldflourish.co.uk/>

23 ¹⁵ <http://www.makingeverycontactcount.co.uk/>

We're not alone

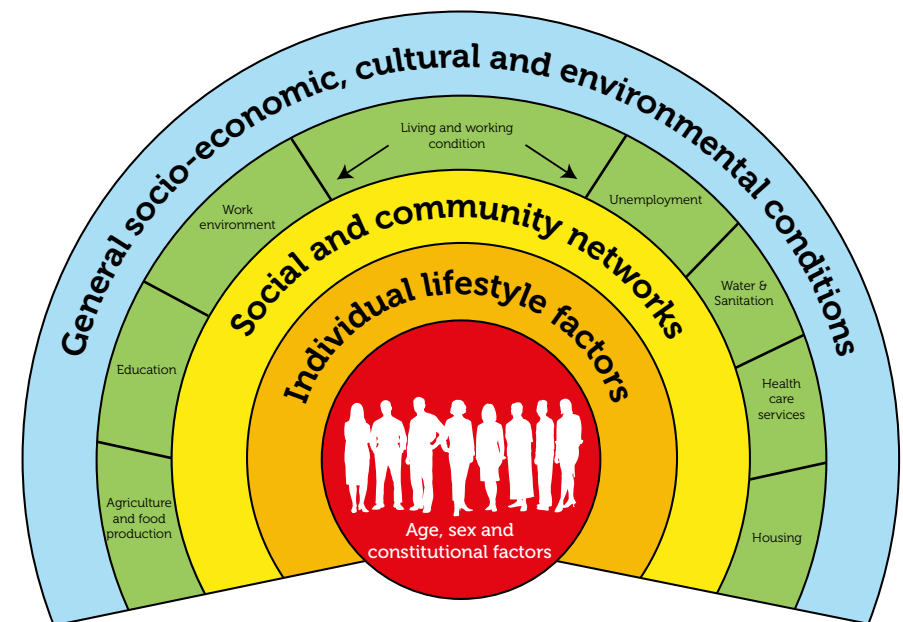
As we have seen, the determinants of health and wellbeing include lifestyles, social and economic factors, access to services and the environment in which we live work and play as well as the genes we are born with. The models of a medically and a socially focused approach to improving health and reducing health inequalities are not mutually exclusive and different stakeholders may put differential emphasis on one approach or the other. Different approaches are not effective for achieving goals over different timeframes. Getting this balance right requires constant attention because there isn't a single intervention that will address the overall challenge.

We need to encourage new partnerships and new stakeholders to be involved in the pursuit of improved health and wellbeing in Sheffield, many of whom may not have been explicitly involved in the past. These include, but are not limited to, the fire service, the police, trade unions, business leaders and incorporating the knowledge that rests within the universities and higher education sector. In Sheffield for example we have world class academic institutions on our doorstep and we should capitalise on this.

For all the above areas, data is an important enabler. We have a great history and reputation in Sheffield for generating and using data across public, private and academic domains. But we haven't yet operationalised the advantages of "big data" to enable deeper insights into social and other problems. One way in which we could

make real progress in this regard would be by linking health and care data into other sources of data to improve our health and wellbeing intelligence.

Figure 8: The determinants of health



Source: Dahlgren, G. and Whitehead, M. (1991)

<http://www.esrc.ac.uk/about-us/50-years-of-esrc/50-achievements/the-dahlgren-whitehead-rainbow/>

Why does ageing well matter?

Sheffield is not ageing well. The City is below the average for all local authorities in England on a number of key indicators for both men and women:

- Life expectancy at birth
- Life expectancy at 65
- Proportion of life spent in 'good' health
- Disability-free life expectancy at 65
- Health related quality of life for those aged 65 and over

In addition Sheffield has a higher than average proportion of those aged 65 and over who are not in good health and of those whose daily activities are limited by ill health or disability. The City ranks in the bottom one-fifth of local authorities for the prevalence of heart failure, stroke and heart attacks.

Sheffield does better than the national average on some indicators, such as people with total hip or knee osteoarthritis, and better than similar authorities with regard to some others, such as the rate of sight loss due to macular degeneration¹⁶, life expectancy at 65 for

men and disability-free life expectancy for men. The overall picture, however, is as the Sheffield Fairness Commission¹⁷ reported 3 years ago: on average people in the City, women in particular, are ageing less well and, for some, this means much less well than would be expected. As we have already seen, the gap in healthy life expectancy between the least and most deprived parts of the City are a staggering 20 years for men and 25 years for women. Preventable deaths follow this pattern of affluence and deprivation and are higher than the national average.

What these figures tell us about ageing is that it is variable across the population. If Sheffield could increase the ageing well rate among the least well-off to that of the better-off, hundreds of lives would be saved and many of the chronic conditions that restrict people in later life and reduce their quality of life would be prevented. In addition, as our own analysis has shown, the biggest cost to the health and care system comes from people who are ill, not people who are old per se. So, increasing the ageing well rate would also save us money.

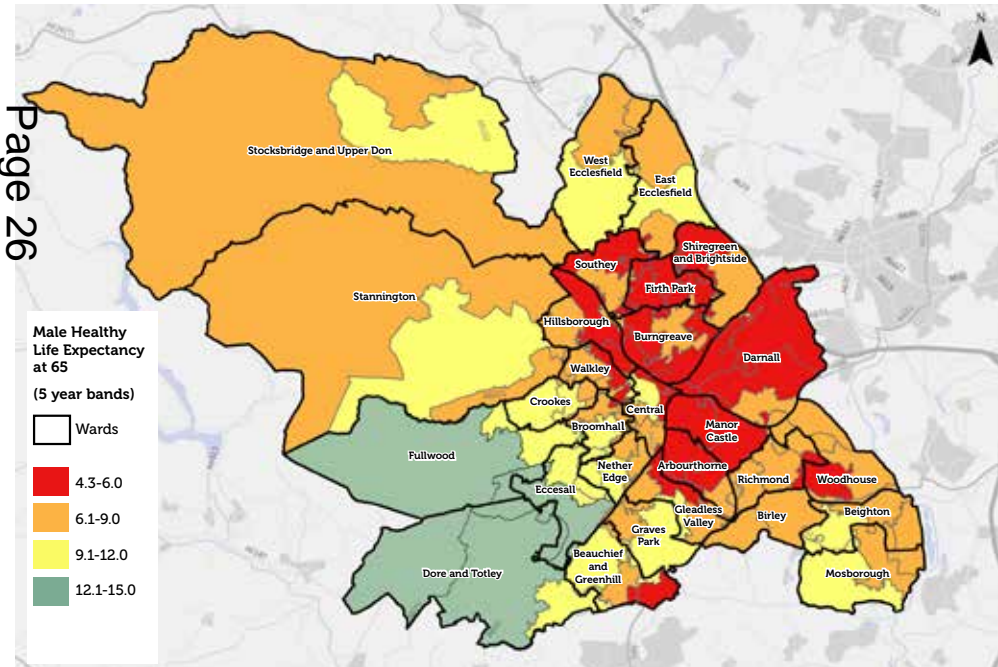
¹⁶The macula is part of the retina at the back of the eye. It is only about 5mm across but is responsible for all of our central vision, most of our colour vision and the fine detail of what we see. Age related macular degeneration usually affects people over 60, but can happen earlier. It is the most common cause of sight loss in the developed world.

¹⁷<https://www.sheffield.gov.uk/your-city-council/policy--performance/fairness-commission.html>

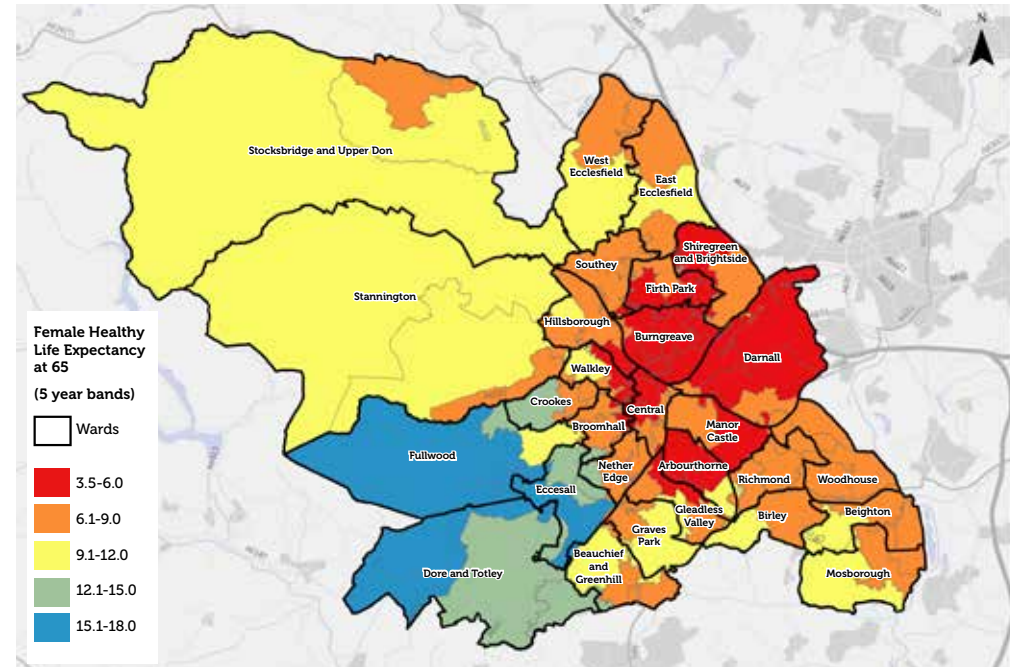
How does ageing well vary across Sheffield?

Figure 9: Map of Healthy Life Expectancy at age 65 years in Sheffield - Males and Females (2009-2013)

Males



Females



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What's the point at my age?

Despite the clear evidence of huge inequalities in life expectancy and healthy life expectancy there is a common tendency to lump all older people together and to regard the ageing process as a game of chance. Indeed fatalism about growing old is deeply ingrained in our culture. Older people themselves often minimise limitations with 'what can you expect at my age?' or 'What's the point of giving up smoking at my age?' Policy makers are not immune to it, and frequently expect later life, especially advanced old age, to be a time of senescence.

The Department for Work and Pensions almost automatically awards the higher rate of attendance allowance to those over 90. But, as famous nonagenarians like the Queen and David Attenborough demonstrate, there are some in the oldest age group who are perfectly able to take care of themselves, while others require round-the-clock care or have already died prematurely.

The logic of fatalistic myths about old age has been blown apart by new research, much of which happens to have been based in Sheffield. *'Together the UK New Dynamics of Ageing Programme'*¹⁸ and the pan-European *'Mobilising the Potential of Active Ageing in Europe'*¹⁹ provide the scientific basis for a new policy approach designed to enable everyone to age well, from birth to death.

What this new research tells us is that, while ageing is inevitable, it is also plastic. Our ageing is governed by a complex set of processes in which genes interact with environmental risk factors which, in various ways, inflict damage on the body's cells and metabolism. It is this damage that causes the impaired functioning that is biological ageing.

Most importantly in these interactions genes play a minor role, probably only about 20%; which means that the environmental risk factors are dominant. The classic causes of ill-health, as we have already discussed, top the list: smoking, poor diet, lack of physical exercise, poverty and deprivation, stress and arduous employment. These risk factors lie behind all of the chronic conditions associated with old age: coronary heart disease, stroke, type 2 diabetes even common cancers. It is these conditions that result in the functional limitations that beset many people in later life but their causes occur earlier in the life course. Income, social class and occupation are key to the variable exposure people have to the risk factors behind these chronic conditions. The result is the huge inequalities in healthy life expectancy that we see in Sheffield and elsewhere.

¹⁸ <http://www.newdynamics.group.shef.ac.uk/>

¹⁹ <http://mopact.group.shef.ac.uk/>

How can we reduce the impact of chronic conditions?

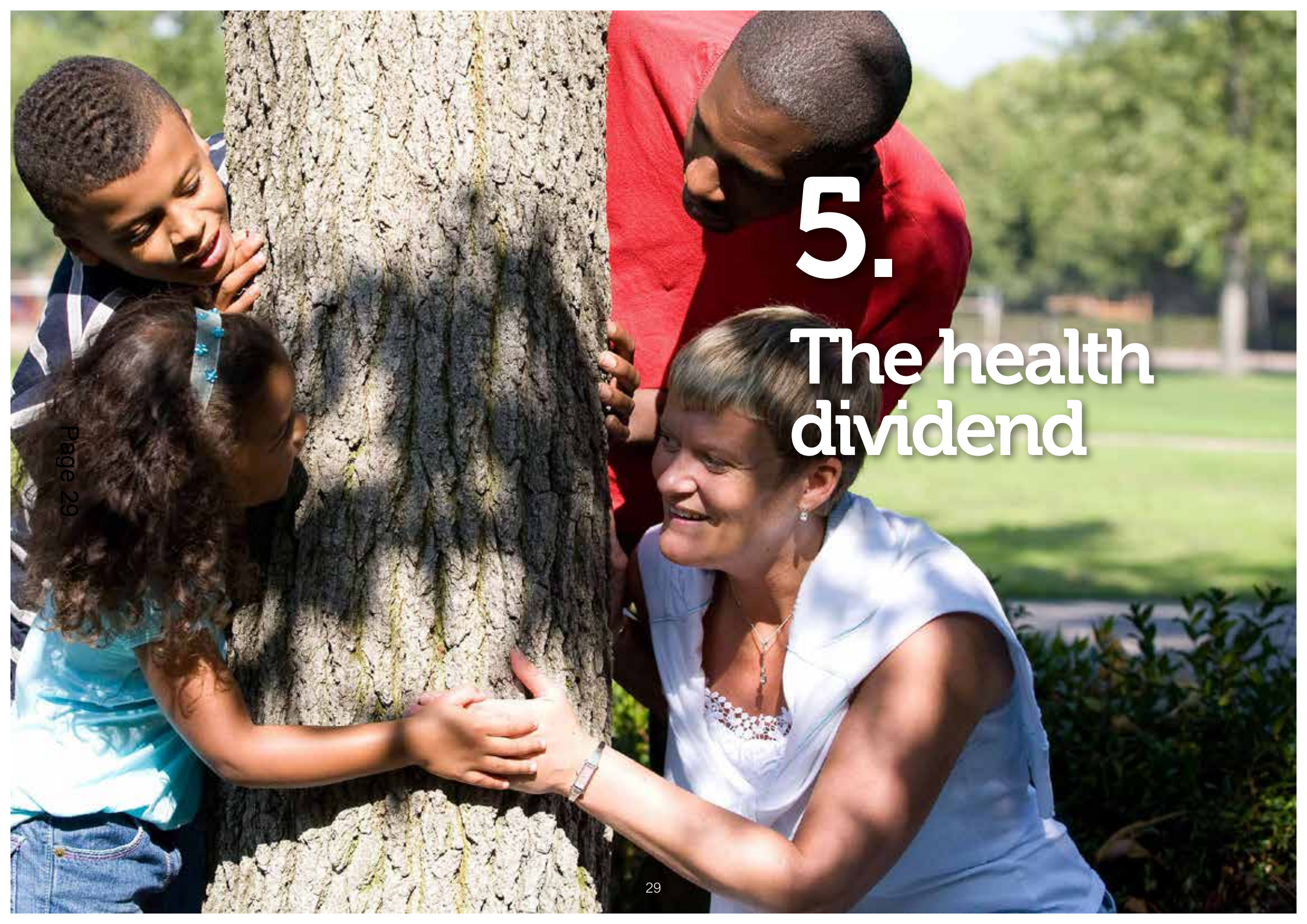
While it is interesting to understand the drivers of ageing, the most powerful and potentially far-reaching lesson from recent research is that it is possible to slow the ageing process and, therefore, reduce the disabling impact of chronic conditions on individuals and society.

There are various interventions with robust research evidence behind them. These include calorie restriction (without malnutrition), which prevents or delays the onset of degenerative chronic diseases, including cancer. Physical exercise, for example aerobic exercise, has proven benefits to the cardiovascular system and is associated with reductions in the incidence of stroke and type 2 diabetes, but recent research also indicates that a programme of moderate exercise can improve cognitive function in those who already have mild cognitive impairment, and mental stimulation which improves brain function. In fact, it appears that the human brain gains protection from mental stimulation in a similar fashion to the prevention of the loss of bone and muscle mass caused by physical exercise.

There are other cognition related factors too such as sleep and meditation or mindfulness. While these modest preventative measures could be easily implemented, the biggest impact on the chronic conditions behind ageing would be a substantial reduction in inequality and the eradication of poverty. Cutting air pollution (a major factor in cancer and heart and lung diseases) is also essential.

In short, there is a range of cheap and easy interventions, as well as some substantially more expensive ones, that could be taken to ensure that many more people reach old age in a fit and healthy condition. In both personal and policy terms the key is to approach ageing as a lifelong process not just something that happens in later life. As well as improved life expectancy and quality of life there are huge potential cost savings for the NHS (over two-thirds of acute and primary care spending goes on chronic conditions).

Of course there is a limit to what Sheffield can do on its own to ensure that its citizens can age well, especially in the context of austerity and low levels of public investment. What it can do, as the Fairness Commission argued, is to target resources on the areas of greatest need, introduce a programme of primary care-based health promotion work (including the promotion of good mental health) and encourage physical activity at all ages. It is crucial too, that as early as possible, children are taught about how to age well.



5.

The health dividend

A prosperous economy depends on healthy people

There are a number of valid perspectives from which to make a case that preventing the preventable is a good thing including the traditional economic case of the health care costs that can be avoided; and the moral and ethical case that health and wellbeing is a basic human right. Increasingly however there is a broader case to be made for prevention focused on the productivity of a society in economic terms. The core emphasis of public health is on reducing avoidable illness and early death and tackling health inequalities. At an absolute minimum 40% of current illness may be preventable or “delay-able” yet, as we have seen, investment in prevention equates to only about 5% of the total healthcare budget.

Following the transfer of responsibility for public health to local government in 2013 the Government cut the budget for public health (known as the Public Health Grant) by 7% in 2015 -16 with further cuts of 3.9% planned each year from 2016-17 up to 2020-21. In 2016-17 the Public Health Grant for Sheffield is worth £34 million. This level of investment in preventative approaches cannot address all the challenges we have in Sheffield around health and wellbeing, so we need to think differently about our approach.

From a macro perspective, the critical question is one of whether the economy as a whole is delivering the health and wellbeing return,

or “dividend” that we would want to see. This is not to suggest that the whole economy is the public health budget. Instead this is about suggesting that most, if not all, activities within the economy have a health and wellbeing impact and that the health and wellbeing of a population is a critical infrastructure investment for the economy - it is a symbiotic relationship.

Economic growth is important and a healthy population helps to achieve this; inclusive growth is important because it helps to redress inequality and a healthy population helps that; and economic growth contributes to a healthy population by providing good quality employment and decent incomes which are the major determinants of health and wellbeing. In terms of the cost of poor health and wellbeing, this is far wider felt than in the NHS. The cost is to society as a whole, to individuals and communities alike and especially the most vulnerable and to the economy, in terms of lost productive time. The Council has set out its ambition to be a public health organisation. The challenge is therefore to optimise the use of its £1.4 billion budget. The more proactive approach we take to capturing the health dividend from all policy areas, the more likely we will be able to help ensure the individuals, families and communities who make up the population of Sheffield can thrive.

The agenda for change

To help meet this challenge we need to change our way of thinking about health and wellbeing in three important ways:

1. Health and wellbeing isn't only about the NHS or even "just" health and social care. We need to start thinking more about the policies and services across the public, private and voluntary sectors that can maximise life chances and create environments that ensure healthy choices are the easiest
2. Good health and wellbeing should be seen as providing the core infrastructure for a prosperous and sustainable economy and broader society. It is a social good such that health and wellbeing should be seen as an investment rather than a cost
3. Maintaining and promoting good health and wellbeing is a key responsibility of local government, not just the NHS

This means there are a number of changes we need to make in our approach, as a City, to improving health and wellbeing and tackling health inequalities. Leadership of this agenda is currently a shared responsibility with a number of individuals and groups playing a part. Sheffield's Health and Wellbeing Board²⁰ is the body best placed to lead the development of the new approach as a whole.

- Realise the potential of including health in all policies and programmes, with a particular emphasis on inequality
- Develop and agree a strategy for public health that allows the Council to realise its aspiration of being a public health organisation, with the support of stakeholders
- Develop a set of measures that allow all parties to identify their tangible commitment to prevention and an upstream approach
- Re-examine health of the public from a complex system perspective, focussing in particular on cross sector investment and return on investment including over long time periods
- Place health and wellbeing outcomes on the same organisational footing as achieving financial balance
- Shift the way we pay for prevention by basing this on value based payments and a slow move of resources from cure to prevention
- A radical upgrade in prevention will not happen unless we collectively make it happen. This may require investment.

²⁰ <https://www.sheffield.gov.uk/caresupport/health/health-wellbeing-board.html>

Recommendations

Overall, the conversation is perhaps better framed as how best to optimise the use of existing commitments and change the nature and shape of those commitments over time rather than how to spend new resources.

Only by maximising the health return on investment of this wider spend will we capture the health dividend and improve the trajectory of health and wellbeing outcomes in Sheffield. Nevertheless, where new resources are available they should be focused unequivocally on what will make most progress on narrowing the health inequalities gap. New resources, as and where they are available, should be focused on where the need is greatest.

There are as many priorities for delivery as there are divergent views as to what those priorities should be. A small number won't solve the problem and there is no magic bullet. There is instead a need for a change in our thinking and our approach. There are some early priorities which we could take over the next 6 -12 months however, to start us on this path.

1. **The Health and Wellbeing Board** should take forward a series of learning events / appreciative enquiry on different approaches to health and wellbeing to explore what optimising “health and wellbeing” could look like in a number of key policy areas.
2. **The Council and other stakeholders**, as part of Public Sector Reform should consider a healthy population and minimising health inequalities as a core infrastructure investment for a prosperous economy.
3. **The Council and the CCG** should explore the development of a ‘Heart of Sheffield’ structural model to coordinate and shape a policy approach to improving living well options (such as increasing physical activity and reducing smoking) in the City.
4. **The Council and the CCG** should develop a joint neighbourhood delivery system with a broad model of primary care as the main delivery mechanism for services.

Where do I get more information from and how do I feedback?

You can view or download this report from our website:

<https://www.sheffield.gov.uk/caresupport/health/director-of-public-health-report.html>

You can read a short progress report on last year's DPH Report (2015) recommendations here:

<https://www.sheffield.gov.uk/caresupport/health/director-of-public-health-report.html>

You will also be able to access various data referred to throughout this report along with more in-depth analyses (health needs assessments) on a range of topics from the links in the report or by visiting our website at

<https://www.sheffield.gov.uk/caresupport/health/health-wellbeing-board/JSNA.html>

We're keen to hear your views on this report and in particular on the themes and issues we've raised. Please complete our online feedback sheet available from our website at

<https://www.sheffield.gov.uk/caresupport/health/director-of-public-health-report.html>

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