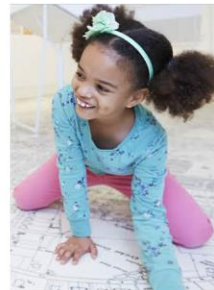
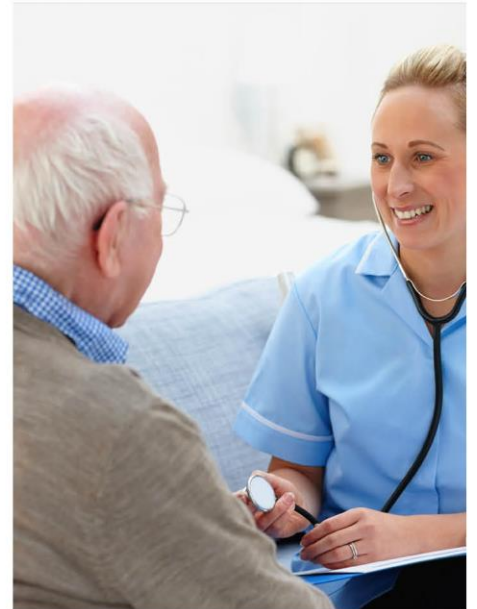


# Public Health Annual Report 2014



**Full Report from the Public Health Director for Southampton**

**Healthy Southampton** 



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## Finding out more about the health of Southampton

As well as publishing an Annual Report and a Joint Strategic Needs Assessment (JSNA), we also produce a number of other resources that help build up a more detailed picture of health in Southampton. The back catalogue of annual reports is available on our website; these give an in-depth analysis of a range of topics that remain current in our City. We also publish briefing notes which are a comprehensive look at topics such as child growth, inequalities and sexual health. We produce profiles of the sixteen electoral wards in the city; these are available as an interactive mapping tool on our website.

Please visit our website to access any of these resources:

[www.publichealth.southampton.gov.uk](http://www.publichealth.southampton.gov.uk)

## Acknowledgements

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Special thanks also to guest contributors Helen Cruickshank, Steve Guppy, Liz Taylor and Lee Tillyer.

## Preface

This is my second report since Public Health leadership and responsibilities transferred from the NHS back to Councils on 1<sup>st</sup> April 2013. In it I report on the state of Southampton's health, underlying trends and some of the future challenges that we face, and make recommendations for how health can be improved.

The health of people living in Southampton continues to improve. We are living longer, deaths from heart disease and stroke are falling and cancer survival rates are improving. However, not all of these extra years of life are lived in good health or free from disability. Some health indicators in childhood show that we are not yet succeeding in our aim to give every young person the best possible start in life. There has also been limited progress in narrowing the health gap between the wealthy and those who are on low incomes, and many challenges remain or have increased in significance.

In this report we look again at the extent of the health differences between those who are well-off and those on low incomes, and the limited progress that has been made in reducing the gap. More can and must be done, based on good evidence of what works.

We also explore a range of issues that will help to lay the foundations for better health for future generations. Improving the public's health and tackling these challenges can only be done by working in partnership across our City, and my recommendations aim to show how together we can make Southampton *"a healthier city - a place which is safe and healthy and where people thrive"*.



**Dr Andrew Mortimore**  
**Director of Public Health**  
**Southampton City Council**  
**March 2015**

## Introduction

If Southampton is to become a healthier City, we need to know what our current health outcomes are, trends over time, how we compare with similar cities and what the evidence suggests will make the biggest difference if we want to improve.

There is a wide range of information in our Joint Strategic Needs Assessment (JSNA) that helps us understand the health of people in Southampton. This resource is regularly updated and paints a picture of what life is like in Southampton and what the health challenges are. The full JSNA is a web-based resource and can be found at [www.publichealth.southampton.gov.uk/jsna](http://www.publichealth.southampton.gov.uk/jsna). As well as data and analysis, there are mapping tools and summaries which enable a detailed picture to be built up on a wide range of topics.

The Public Health Annual Report highlights a number of key issues facing the City and aims to help set the agenda and accelerate progress in improving health. This year we are making the online version of the Report a more useful resource; Full technical briefings on the this year's selected topics are published along with links to further information in the JSNA and elsewhere, as well as topic summaries, city profiles and other resources. We are aiming to engage more widely and ensure that everyone who can make a contribution to improving health is able to do so.

We are becoming less physically active as a society, and the risks of a sedentary lifestyle affect our young people as it is in childhood that behaviours begin to be established. Most young people are not as active as they need to be for good health, and we look at why this is and what can be done to improve fitness levels.

One in ten children have a mental health problem at some point, and half of all adult mental ill health starts before the age of 15. Children from the poorest households are three times more likely to have a mental health problem. There are many challenges that young people face by the time they get into their teens, and building mental resilience – the ability to 'bounce back' - helps to reduce the risks and increase life chances. The second chapter looks at how this can happen and the specific opportunities that the City has with its Big Lottery funded HeadStart programme.

Environmental factors have a major impact on health. Accidents cause injuries that can have a devastating impact on mobility and on physical and mental wellbeing. The third chapter looks at the wide range of accidents and injuries that can occur across the life-course, and what can be done to prevent many of them and reduce their impact.

We can easily take the air that we breathe for granted. Poor air quality can be the cause of significant health problems affecting people of all ages. Recent reports have highlighted that this is a problem in Southampton, where expected improvements in air quality have not yet been achieved. The fourth chapter of this year's report explains the ways in which poor air quality causes disease and worsens health problems, particularly in those who are vulnerable, with long term

exposure contributing to over 100 deaths in adults every year. Measures to reduce exposure to vehicle emissions lie at the heart of improving the situation – technology and innovation can only go so far, and we need fewer car journeys and to encourage more people to walk and cycle.

Dementia is less common in people with healthy lifestyles. The risk of dementia, however, increases with age, and it is estimated that only half of those with the condition are currently diagnosed. Most people with dementia will have other long term conditions such as high blood pressure, heart disease, diabetes and depression. There is limited scope for effective treatment, so the main focus remains on early diagnosis, care and support.

Hypertension (high blood pressure) is a major public health challenge as it is a risk factor for disease, particularly heart disease and stroke, and contributes to 13% of all deaths. Just over 25,000 adults in Southampton are known to have hypertension, but almost as many are estimated to have high blood pressure that have not yet been diagnosed. The issue is explored in detail in a chapter that emphasises the importance of managing lifestyle factors and encourages opportunistic testing, increasing the uptake of NHS Health Checks and raising public awareness.

The final section of the Report looks again at the health inequalities that exist in Southampton. We reported on this topic in 2009, but despite a focus over the last decade on reducing these inequalities, the health gap between those who are well off and those who are the poorest has not significantly reduced. The chapter explores the reasons for this, and what more can be done to tackle the issue. A prioritised plan of evidence-based actions that will make the biggest contribution at the local level is needed. The Health and Wellbeing Board has a key role to play in providing strategic leadership and coordination if we are to make a real difference.

## 1. Fitness in young people

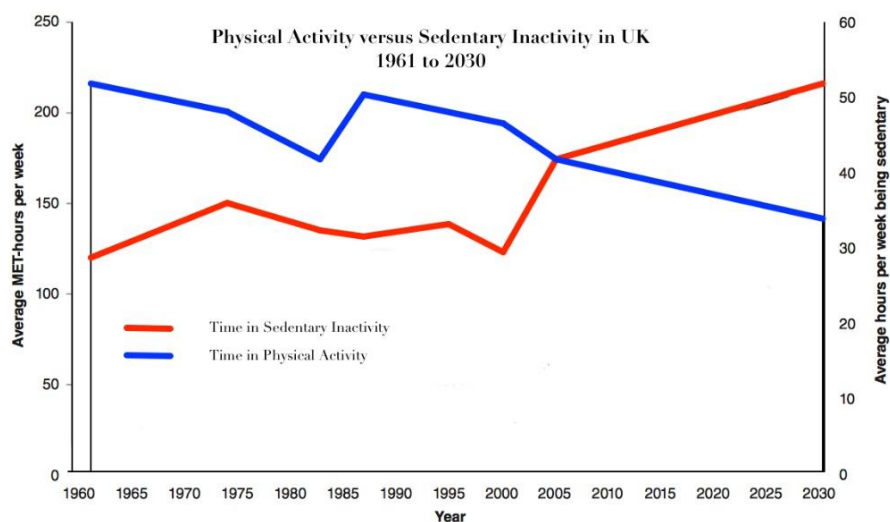
### 1.1 Why is this issue important?

Regular physical activity can reduce the risk of many chronic conditions including coronary heart disease, stroke, type 2 diabetes, cancer, obesity, mental health problems and musculoskeletal conditions. Even relatively small increases in physical activity are associated with some protection against chronic diseases and an improved quality of life. These benefits can deliver cost savings for health and social care services. However, the benefits of physical activity extend further to improved productivity in the workplace, reduced congestion and pollution through active travel, and healthy development of children and young people<sup>1</sup>.

In addition, evidence indicates that there are risks of sedentary behaviour for all age groups, with associations being observed between sedentary behaviour and overweight and obesity, and some research also suggesting that sedentary behaviour is independently associated with all-cause mortality, type 2 diabetes, some types of cancer and metabolic dysfunction. These relationships are independent of the level of overall physical activity. For example, spending large amounts of time being sedentary may increase the risk of some health outcomes, even among people who are active at the recommended levels.

Although humans evolved to move, it has taken less than a hundred years for our behaviours to change to such an extent that physical activity is no longer something that most of us do on a daily basis. Thanks to modern society, the invention of the motorcar and screen based leisure and working activities, we no longer perceive or perform physical activity as a necessity, which poses many health related risks.

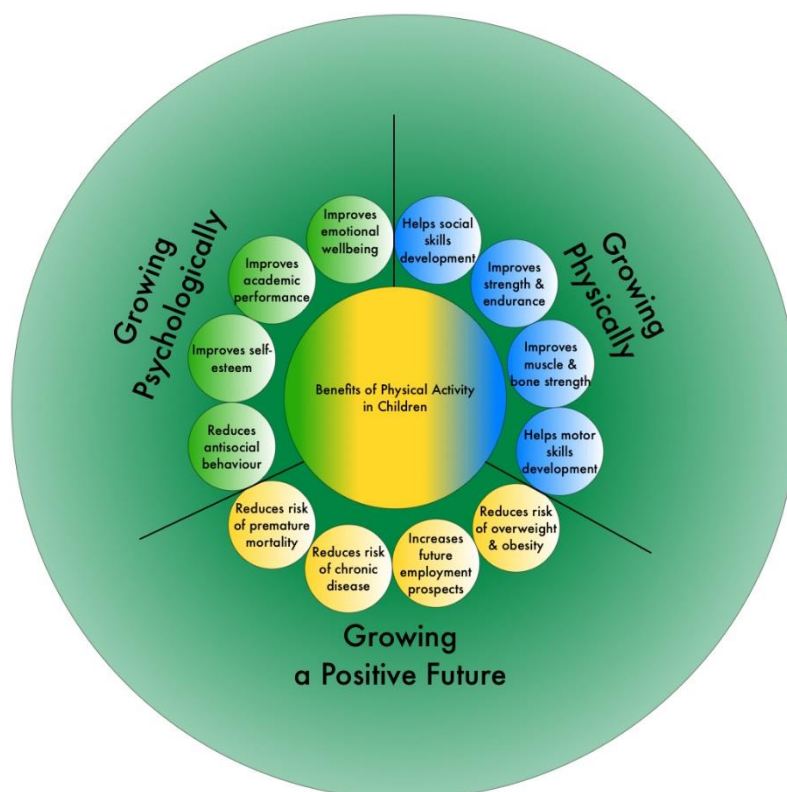
Figure 1: Physical Activity versus Sedentary Inactivity UK (actual to 2005, modelled to 2030)<sup>2</sup>



Physical activity data, collected in the UK as part of the Health Survey for England, Active People Survey, National Travel Survey, General Household Survey and National Diet and Nutrition Survey was compiled to show trends in how we have become less physically active and more sedentary<sup>2</sup>. The study modelled the likely future trends up to 2030, which are illustrated in figure 1. The physical activity is shown as average MET-hours per week. A MET is a 'Metabolic Equivalent' or a universal unit of physical activity energy expenditure allowing different activities to be compared. In figure 1 the MET-hours is a composite measure of active leisure, active transport, occupational and domestic physical activity. This evidence highlights there has been a shift from physical activity to a more sedentary existence in the UK and is likely to continue.

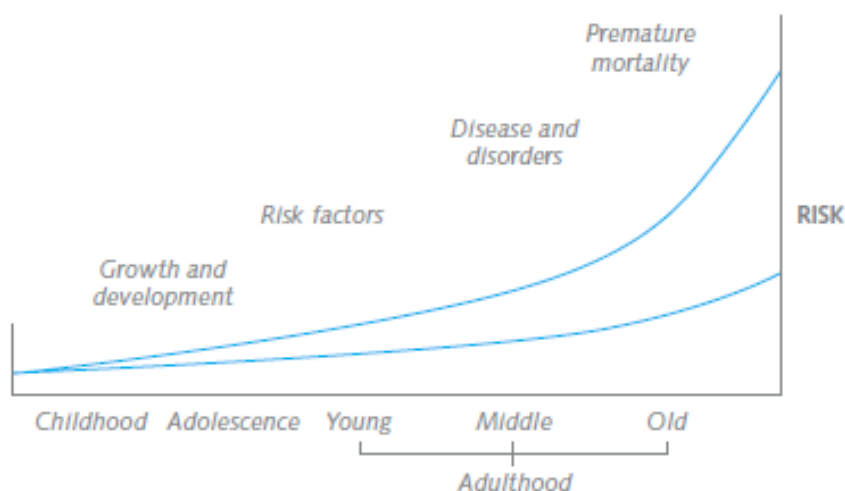
The estimated direct cost of physical inactivity to the NHS across the UK is £1.06 billion<sup>1</sup>. Inactivity also creates costs for the wider economy, through sickness absence and through the premature death of productive individuals. It also increases costs for individuals and for their carers. In England, the costs of lost productivity have been estimated at £5.5 billion per year from sickness absence and £1 billion per year from the premature death of people of working age. Children and young people who become more active will *immediately* benefit from enhanced physical strength and endurance, improvement in mental wellbeing, enhanced academic performance and reduced absenteeism through ill health from school and college. They develop better social skills through active play and can use physical activity as a displacement for anti-social and criminal behaviour. In the medium to longer term, more physically active children are less likely to become overweight or obese. Benefits of physical activity in children are shown in figure 2 below.

Figure 2: Benefits of physical activity in children



Although it is not until adulthood and older age that the increase in morbidity and premature mortality is seen, the exposure to risk through inactivity begins in childhood and behaviours established in the early years are predictive of patterns of behaviour in adulthood. Indeed, the strength of the relationship between physical activity and health outcomes persists throughout people's lives, highlighting the potential health gains that could be achieved if more people become more active throughout the life-course. Figure 3 below shows a hypothetical model showing the difference in risk with the top line representing those who are inactive and bottom line those who are active<sup>1</sup>.

Figure 3: Key stages of disease development throughout the life course



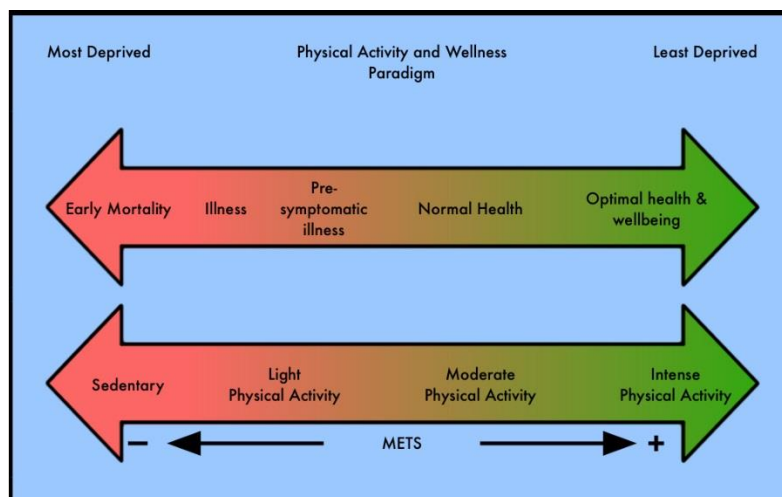
For our children and young people being physically active is an investment in their own and future generations since a cultural shift to a more active society will be passed onto their offspring and it will become embedded in the very fabric of life. Future generations can also benefit from inheriting a more sustainable existence where a more active society has reduced health and social care costs, a significantly reduced carbon footprint and greater social cohesion.

Long-term, active children will grow into adults with improved bone strength and cardiovascular health and the enhanced achievements at school lead to better jobs and houses. They will on average live longer than children who are not physically active. In the UK, physical inactivity is the fourth leading risk factor for death after tobacco use, high blood pressure, and obesity<sup>3</sup>. There is a three year life-expectancy difference between people who are physically inactive and those that do even a small amount of physical activity demonstrating that any shift away from sedentary behaviour is advantageous. Figure 4 below shows a conceptual continuum between sedentary behaviour and physical activity and how this can also link to a gradient between early mortality and optimal health and wellbeing.

Although any reduction in inactivity can be beneficial, for optimising health benefits, the Chief Medical Officer currently recommends that once children can walk they are encouraged to have 180 minutes or more of activity every day up until the age of 5 years, after which being active for a minimum of 60 minutes every day is recommended until adulthood.

Data from the Health Survey for England 2012 suggests that approximately only 10% of under 5 year olds meet the current recommendations for physical activity whilst 21% boys and 16% girls aged 5-15 achieved one hour or more of moderately intensive exercise each day. Older children are less active than younger children, with 24% of 5-7 year olds achieving the recommendations, but only 14% in 13-15 year olds.

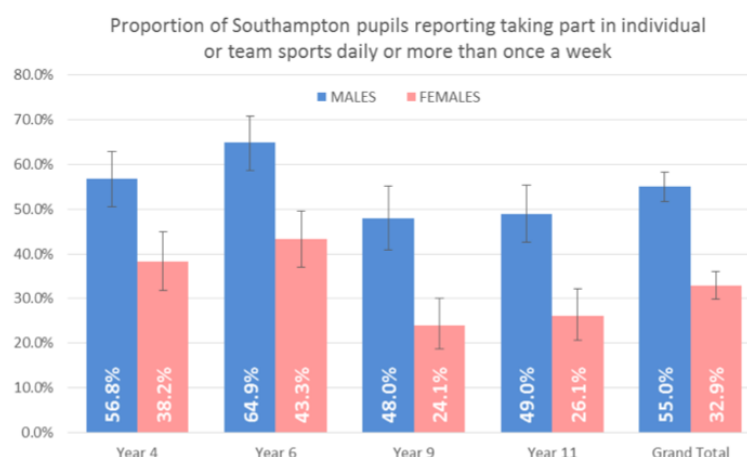
Figure 4



Currently data is not routinely collected in Southampton. It was last collected as part of the discontinued 'PE and Sport Survey' in 2009/10, where 57% of children self-reported achievement of three hours or more physical activity each week (based on previous national recommendations), whether as part of PE or outside school.

A school pupil attitude survey was undertaken in December 2012 amongst children in Years 4, 6, 9 and 11 across the City. The response rate was about 24% of all pupils and was underrepresented by children living in the most deprived areas. A number of measures of physical activity and sedentary behaviour were recorded including method of getting to school, enjoyment of physical activity and number of days taking part in individual or team sports. The bar graph in figure 5 below shows data from children involved in some sort of sport on two or more days per week by age and gender.

Figure 5

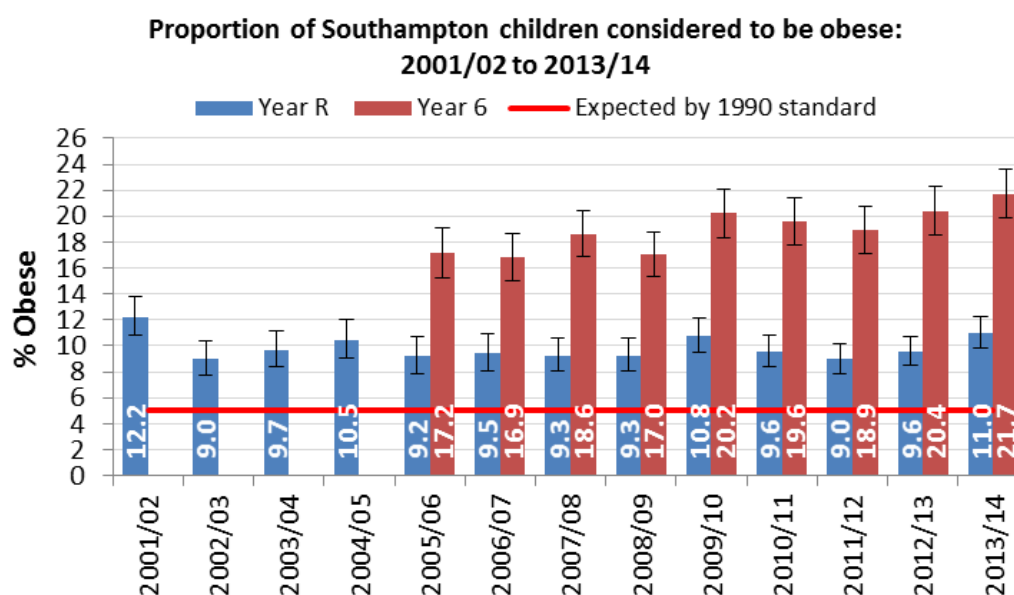


The drop off in sport participation between Years 4/6 and Years 9/11 is evident for both boys and girls. However, a statistically significant higher proportion of boys take part in sport (at least twice a week) compared to girls in all year groups, with almost twice as many boys taking part compared to girls in Years 9 and 11. The full report on the pupil survey can be found at the following link (<http://www.publichealth.southampton.gov.uk/HealthIntelligence/Briefings.aspx>).

It is apparent that children in Southampton, just as in the rest of the country, are not meeting the current recommendations for physical activity, and as a result, are not fulfilling their potential to live long and healthy lives. There is also likely to be significant health inequalities in relation to physical inactivity according to income, gender, age, ethnicity and disability.

Whilst physical activity is not the whole answer to addressing the high prevalence of overweight and obesity in children, it is an important component of the energy balance between calories consumed and calories expended. Studies have shown that children who are more active are more likely to have a healthy body weight. In England, children have been measured at reception age (4-5 year olds) and year 6 (10-11 year olds) since 2005 as part of the National Childhood Measurement Programme. Figure 6 below shows the proportion of children considered to be obese in Southampton and how this has changed with time.

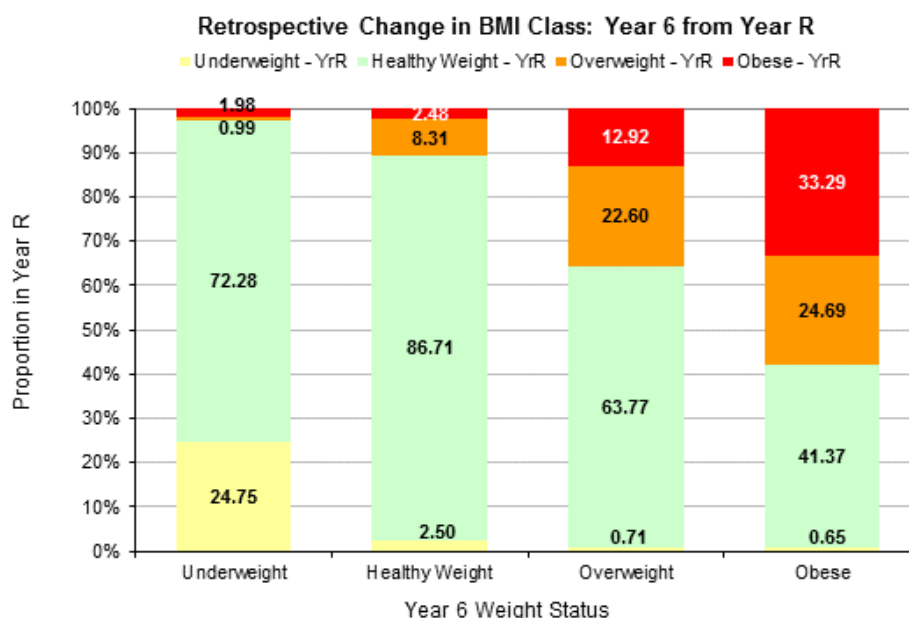
Figure 6



In Southampton in 2013/14, approximately 1 in 4 reception aged children were measured as being overweight and 1 in 10 obese. In year 6 children, 1 in 3 were overweight and 1 in 5 obese. Body mass changes between reception age and year 6 are not exclusively in the direction of weight gain but the majority are as can be seen from figure 7 below. This bar chart shows that around 40% of children who are obese by year 6 were previously a healthy weight in reception year, and that the majority of healthy weight children in year 6 were those having been healthy weight in reception year with less than 3% having transitioned from obesity to healthy weight during that time. Clearly there is an

opportunity to do something to change the momentum of this weight gain as children begin to go to school. Becoming more physically active may represent part of the answer.

Figure 7: Change in BMI classification in the same children between Year R and Year 6



Children from the most deprived areas are significantly more likely to be overweight or obese compared to children from the least deprived areas. This may offer an opportunity to target physical activity interventions towards those most in need in order to reduce health inequalities, although as the work of Marmot suggests, addressing issues across the entire socioeconomic gradient is important albeit in a proportionate way<sup>4</sup>.

## 1.2 What can be done?

It is clear we need to do something *now* to reverse the current trend in physical inactivity as the potential benefits to the individual and society are significant. To achieve this does not necessarily mean encouraging people to join gyms or start playing a sport. Physical activity encompasses everyday activities such as active travel, occupational activity, housework; recreation activities such as walking, cycling, active play, dance; and sport through formal and informal activities. It is therefore about *everybody being active, everyday, doing everyday things*. The aim is to create a normality where we combine all these different forms of physical activity and reduce the length of time we spend being inactive. This includes designing our physical environments including cities, parks & open spaces and buildings to make being active easier.

'Everybody Active, Every Day' provides the evidence base of what works and hence a framework for action to address physical activity in both adults and children<sup>5</sup>. A good example of what can be achieved comes from Finland, which when faced with the highest incidence of heart disease forty years ago invested in physical activity across the entire life-course. Deaths from cardiovascular

disease were reduced by 65% by addressing nutrition, tobacco use and physical activity simultaneously. *Persistence* and *collaboration* were believed to be key ingredients to effective change and should form the principles of work we do to address the issue in Southampton.

Before children are old enough to attend school, encouraging unstructured active play is an essential element of activity becoming an everyday part of life. Research in Southampton has highlighted the importance of maternal physical activity in getting children more active and the importance of this activity being fairly vigorous in under five year olds in order to maintain healthy weight<sup>6</sup>. Ensuring good advice for parents during pregnancy and in the early years of their children's lives can help them to form good activity habits.

Parents of school-aged children have a responsibility to encourage them to be physically active in the evenings and at weekends and to limit the length of time spent having small screen recreation such as watching television, playing computer games, browsing the internet or using their smart phones. A rule of thumb is that limiting this sedentary behaviour to two hours maximum each day can help to encourage children to reach the recommended levels of physical activity. National programmes such as the 'Change4life' campaigns can help to deliver messages to parents of school aged children<sup>7</sup>. Active parents are associated with active children and to be effective campaigns should be targeted at whole families.

Schools themselves represent an excellent opportunity for a holistic approach to becoming physically active and evidence supports this. This can include physical education, classroom activities, afterschool sports, and promoting active travel for their school commute.

Transitions between schools or on leaving school sometimes act as barriers to continuing participation in sport. Ensuring whole school approaches to physical activity can also help children during these transitions. The National Institute for Health and Care Excellence (NICE) also recommends school physical activity facilities as being available for extended hours during the days and at weekends<sup>8</sup>.

Afterschool clubs and youth clubs can offer children and young people wonderful opportunities for being physically active in an enjoyable, socially supportive environment. Additionally, ensuring good access to safe outdoor spaces such as parks and play areas is an important part of optimising the built environment to make everyday activity easy for children. Evidence suggests that living close to parks and play areas can increase the amount of physical activity in children<sup>9</sup>. Guidance from NICE on interventions to promote physical activity in children includes recommendations to actively promote public parks and facilities and ensure they are safe. Actively promoting the many good park facilities we have within the city should be considered to help get more children more active<sup>8</sup>.

*Collaborative* working across council sectors to ensure that every transport, planning and development decision considers the impact on physical activity for children and young people, building environments that are safe for cyclists and make walking easier are further key ingredients to making everybody active, every day. This also means continuing to build partnerships with

community organisations and other stakeholders who share a common vision and can contribute towards making activity the norm.

### **What is currently being done in the city?**

In order to achieve and sustain behaviour change, the evidence suggests that there is a need to target interventions at an individual/family, organisational and community level.

#### **Individual level interventions**

At an individual level there are a wide range of activities and services operating across the city that engage children and young people in active play and physical activity. These are promoted on the Active Southampton website through directories of services.

Active Southampton is Southampton's Sport and Physical Activity Alliance (SPAA) and is a partnership of organisations who promote sport and physical activity across the whole city. The Partnership acts as a single voice and 'one stop shop' for the planning and co-ordination of sport and physical activity within Southampton. The forum facilitates and supports a wide range of different activities and schemes for children locally (see website for details <http://activesouthampton.co.uk/>). These include Street Sport, Hampshire Games and Sportivate in addition to those listed in the directories.

Skyrides also come to Southampton, allowing children and their parents to ride in traffic free routes to gain valuable experience and have fun cycling. Parkrun takes place every week in Southampton common. This is a timed 5 kilometre run with hundreds of people taking part each week including many older children and teenagers.

The new Public Health School Nursing Service has a remit of addressing the wider health improvement agenda through both individual level support as well supporting schools in a whole school approach to a range of lifestyle issues.

#### **Organisational level interventions**

The city council's 'My Journey' initiative, in collaboration with the cycling charity Sustrans, works closely with schools to promote active travel during the journey to school in a programme called 'Bike It' as well as a STARS programme that works with schools taking a whole school approach to physical activity.

A piece of work was undertaken in conjunction with Southampton Solent University during 2013-14 to better understand the extent and nature of physical activity-specific interventions within the city's schools with a particular focus on priority areas, to identify what is currently being done and what works. This highlighted a lack of programmes designed specifically to increase physical activity over and above existing PE lessons.

In the previous Fit4Life (tackling obesity) Strategy (2009-13), Southampton schools were tasked with having a comprehensive physical activity policy and ensuring two hours per week of structured physical education within existing funding from the School Sports Partnership. This specific funding stream has since ended in conjunction with the end of data collection on physical activity within schools. It is not clear locally whether schools have developed physical activity policies. However, schools do have to teach physical education as part of the national curriculum and the minimum two hours structured physical activity is one of the requirements for schools meeting National Healthy School Status.

Schools continue to be supported to work towards the Healthy Schools Enhanced Model (Pioneer) and those choosing to focus on physical activity and/or obesity work closely with the Healthy Schools team to achieve measureable changes in children's behaviours and patterns of activity and/or diet.

Sure Start Children Centres in Southampton continue to be a valuable resource for parents and carers with young children and hence are a key setting for intervention. As such Children Centres as well as other providers of early years care are encouraged to engage with the city-wide Healthy Early Years Award which sets recommended standards for settings in terms of both physical activity/play and nutrition. Many of the city's children centres are either working towards or have already achieved these standards.

### **Community level interventions**

'Making Every Contact Count' (MECC) is a programme being rolled out to the workforce from various sectors of the city. It is an evidence-based healthy conversation skills teaching that allows staff to make more impact in enabling change in people's behaviours. The key is that people already have the solution towards making positive changes in their own lives or the lives of their children and MECC can help them to unlock their own resources. It has great potential to deliver behaviour change around physical activity by widening the workforce trained in using it.

The physical environment is important in enabling and supporting behaviour change, whether this is the quality and quantity of open and green spaces, cycle lanes, walkability of the environment, transport infrastructure, leisure facilities, play areas/equipment etc. There is joint working across the council to integrate the evidence base in terms of promotion of physical activity within transport and planning programmes and policies.

### 1.3 Recommendations

The Health and Wellbeing Board should create a social movement through encouraging a whole city collaborative cross-sector approach to physical activity.

In line with the recent Public Health England publication, 'Everybody Active, Every Day' (2014), the key recommendations for action from the Director of Public Health are:

1. To create a social movement through encouraging a whole city *collaborative* cross-sector approach to physical activity through the Health and Wellbeing Board.
2. Commissioners and those planning services to ensure *persistence* and consistence of key messages by rolling out 'Making Every Contact Count' to the wider health workforce and beyond.
3. The Council to ensure good quality physical activity data is collected locally in school-aged children in order to monitor and evaluate the success of any work done.
4. The Health and Wellbeing Board to ensure physical activity is considered as part of the planning process for the city through championing the continued development of active environments and use of existing green spaces.

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## 2. Building mental resilience in young people

### 2.1 Why is this issue important?

There are just over 58,000 children and young people living in Southampton, with over one quarter living in poverty. We know that the physical and mental health of children and their life chances are strongly linked to deprivation. Within our child health profile, Southampton is significantly worse than England for 11 of the 32 indicators, this includes a high rate of looked after children, teenage pregnancy and hospital admissions for mental health conditions (see appendix 1).

We also know that it is important to prevent the development and accumulation of ill-health at the earliest stage possible. Some 50% of adult mental illness (excluding dementia) starts before age 15, and 75% by age 18<sup>1</sup>. Children and young people from the poorest households are three times more likely to have a mental health problem than those growing up in better-off homes. Furthermore, mental health problems in childhood and adolescence in the UK result in increased costs of between £11,030 and £59,130 per child annually<sup>1</sup>.

Building mental resilience can help reduce the risk of future mental health problems and support young people in making important life choices. Adolescence is a time of life-changing decision-making. Choices about education, occupation and childbearing during the teenage years can have profound impacts on subsequent life chances, while behaviours that predicate future health; such as diet, exercise, sexual activity and psychoactive substance use, develop during adolescence.

#### What is mental resilience and what is the link with health?

Mental resilience is the capability to 'bounce back' from adverse experiences, and succeed despite adversity. Although resilience reflects individual personality traits, it is also shaped by experiences, opportunities and relationships. Exposure to risk factors is more likely to lead to vulnerability, whereas protective factors lead to increased resilience. Protective factors include achievement and attainment at school, successful transitions, good relationships with parents, teachers and peers, a supportive school environment, and community social capital, resources, services and connectedness. Conversely, risk factors are the opposite of many of these features e.g. low achievement at school or neglectful or unsupportive family relationships<sup>2</sup>.

Resilience is dynamic, it can accumulate and develop (or reduce) over time. Changes in resilience over the life course are likely to be related to the experiences of individuals, families and communities and wider social, economic and political factors. Even highly resilient individuals cannot overcome all adversity, such as severe abuse and neglect or living with multiple adversities such as poverty, parental mental illness and having little social support<sup>2</sup>.

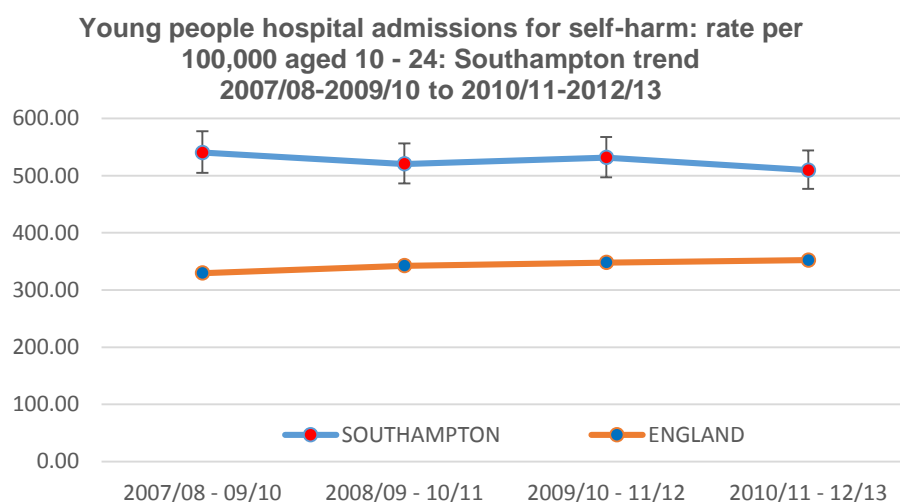
Evidence suggests that mental resilience in early life helps to protect against risky health behaviour, improve academic results, develop skills to increase employability, increase mental wellbeing and enable quicker and better recovery from illness<sup>2</sup>.

### What is the situation in our City?

Our City's Joint Strategic Needs Assessment shows that nearly 5,500 of our children and young people have mental health problems, two thirds with conduct disorders. The estimated need for children with moderately severe problems requiring attention from professionals trained in mental health (Tier 2) is 3,590 children and young people.

The directly standardised hospital admission rate as a result of self-harm for children aged 10 to 24 years in Southampton is 400.9 per 100,000 (2012/13). Our rate is significantly higher than England, and has remained similar from 2007/08 to 2012/13. Crude rates of hospital admissions are shown in figure 1 below.

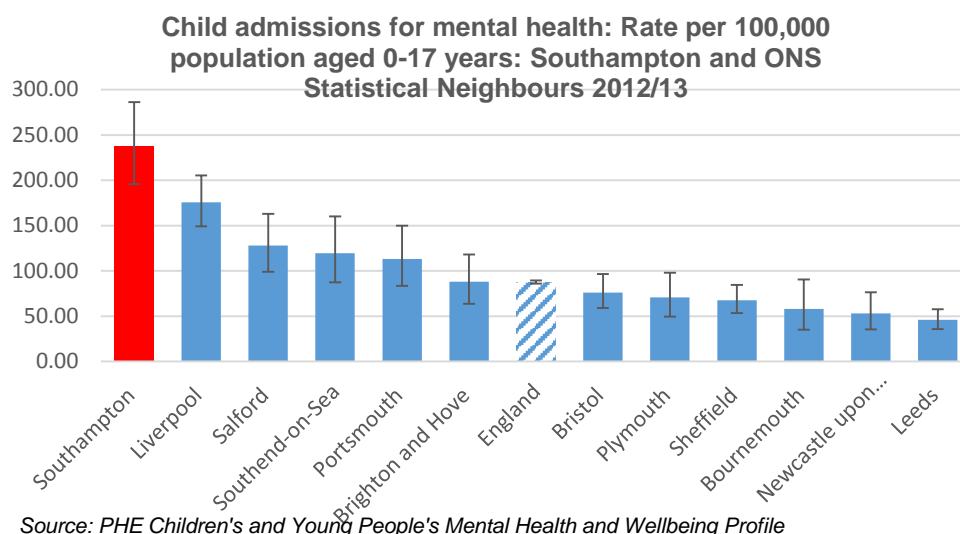
Figure 1:



Source: PHE Children's and Young People's Mental Health and Wellbeing Profile

Similarly, Southampton City has a significantly higher rate for mental health hospital admissions, with a crude rate of 238 per 100,000 (aged 0-17 years) in 2012/13. As can be seen from figure 2, Southampton had a higher rate of mental health admissions in 2012/13 than all our statistical neighbours. It is important to note that this higher rate has been attributed to variations in hospital admission policies between acute trusts.

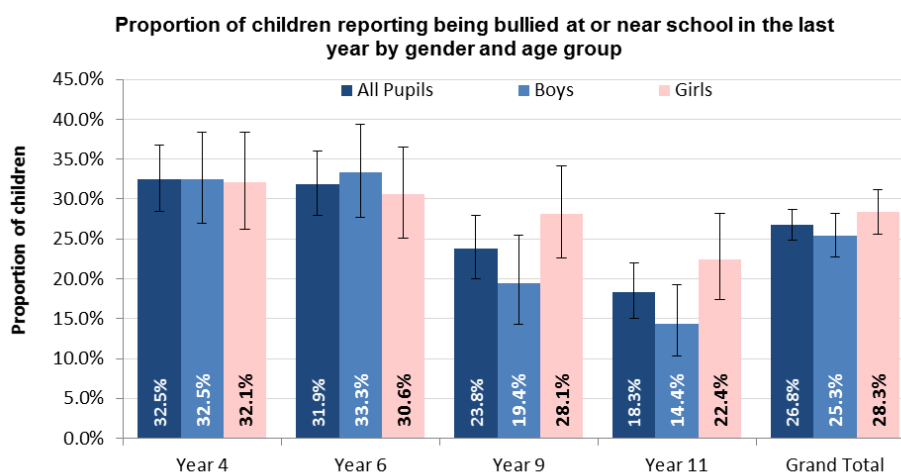
Figure 2:



Information and data from Southampton schools, voluntary services and our Child and Adolescent Mental Health Service (CAMHS) describes a lack of support at lower levels of mental health need. Emotional and mental health need accounts for 37% of school nursing referrals. Most importantly, these issues are also echoed by young people themselves within local workshops and focus groups.

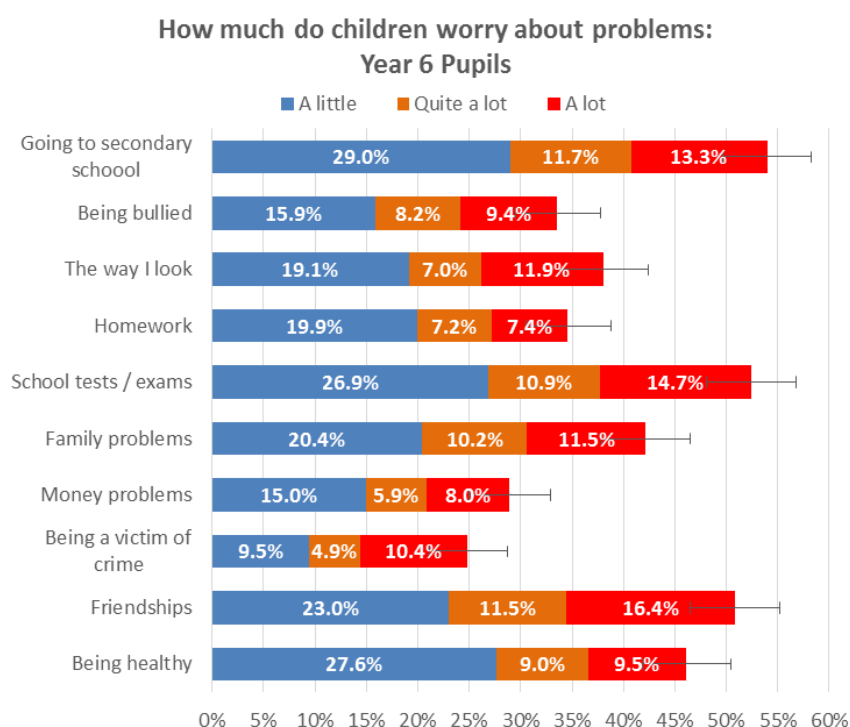
Our latest school pupil attitude survey was undertaken in December 2012 amongst children in Years 4, 6, 9 and 11 across the City. The response rate was about 24% of all pupils, although a low response, the characteristics of pupils completing the survey were similar to age specific demographics. However, there was an underrepresentation of responses from pupils living in the most deprived areas of Southampton (particularly for Year 4). Survey responses suggested that 1 in 4 pupils (26.8%) had been bullied in the past 12 months and this declined with age (from 32.5% in Year 4 to 18.3% in Year 11). Figure 3 shows the proportion of children being bullied at or near school in the last year by gender and age group.

Figure 3:



The proportion of pupils reporting being afraid of going to school due to bullying was slightly higher (28.3%), this might suggest that perceptions of potential bullying may further raise anxieties. Pupils were also asked about where they felt safe; sadly 2.3% (43 students surveyed) reported feeling unsafe or very unsafe in their own homes, with the highest being in the Year 4 cohort (3.7%). Children were also asked about their 'worries'. Figure 4 below shows the 'worries' identified by pupils in Year 6. The highest proportion of children expressed 'worries' on going to secondary school, school tests/exams and friendships.

Figure 4



In general, the proportion of pupils worrying about most problems increased with age, the exception being bullying. The largest increase in 'worries' from Year 4 to Year 11 were in relation to school tests/exams (36% vs 71.3%), the way they look (32.2% vs 58.8%) and being healthy (40.7% vs 64.1%).

## 2.2 What can be done?

There is good evidence about what works to build protective factors and reduce risk factors to promote wellbeing, and some evidence on building resilience<sup>2</sup>. Some examples at different levels of intervention are highlighted in the table below. Of note, research consistently emphasises that, in nearly all cases, children cannot build resilience without love, support and positive relationships, most crucially with their family.

Level of intervention	Examples
Individual	Seattle social development project, SEAL (UK) (whole school approach), social and emotional learning programmes (US), building emotional resilience in schools, Deny Scotland (transition programme), strengthening families programme
Interpersonal	Effective parenting and good parent-child relationships Links between parents and schools e.g. Families and Schools Together, Place2Be Teachers support in schools e.g. YoungMinds in schools, skills for life programme Friends e.g. peer mentoring in schools
School and community	Whole school approach - Health Promoting schools

NICE has modelled the cost-effectiveness of whole school approaches to prevent bullying and victimisation and found that where these interventions were successful, the cost per QALY was £9,600. However, there was a significant range in the efficacy of programmes<sup>2</sup>.

Taking action on resilience can reduce costs in other areas e.g. reducing truancy can produce a saving of £1,318 per year per child, and reducing exclusion can save £9,748 in public value benefits, 89% of which goes to local authorities<sup>1</sup>.

### What have we done locally?

In 2014/15, through a £500,000 award from the Big Lottery HeadStart Programme, children and young people aged 10-14 years in specific areas across the City will have access to a range of skills development opportunities and fun activities to help raise their mental resilience.

The purpose of the programme is to raise young people's aspirations through a 'whole school' approach to building mental resilience; making sure that the child/young person, and everyone around that child/young person, is skilled up to deal with life's challenges at the earliest stage possible. The programme also provides additional support for those with higher level mental health needs (but not at the level of referral to the child and adolescent mental health service).

The Southampton HeadStart programme has a number of components:

- Emotional First Aid training for professionals, parents and peers in secondary schools
- Mindfulness in primary schools
- Counselling in secondary schools for children/young people at higher levels of risk
- A transition programme from primary to secondary schools
- Community based arts, drama and music activities
- Digital champions to support safer social media use
- Youth leadership programme
- Targeted support programmes for young carers and children/young people exposed to domestic violence

In addition, two young apprentices have been appointed to lead on youth engagement within the programme.

This programme supports the City's strategic aim; to be an early intervention City. The HeadStart Programme offers a key opportunity to develop the foundations of commissioning to raise children and young peoples' resilience and that of their families through a community of practice approach. The learning will also inform the ongoing development of our BeWell Strategy and commissioning priorities for a range of children and young people's services. The Big Lottery have offered an opportunity for funding over an additional 5 years to further develop this programme and make it sustainable.

Alongside this programme, the local Youth Offending Team are leading a restorative practice project. This project aims to prevent and solve conflict at an early stage. Over Spring/Summer 2015, the team will be working with a small number of Southampton's secondary schools, and feeder primary schools, not included within the HeadStart programme. This project offers the potential to not only build resilience in children and young people at higher risk but also reduce school exclusions and criminal activity.

### **What more can we do?**

The Local Authority is currently responsible for commissioning leadership of the Healthy Child Programme 5-19 years via the school nursing service. This service has very recently been re-commissioned (now known as the Public Health Nursing Programme) with an emphasis on raising mental resilience and taking a community based approach. The service will begin in April 2015. Furthermore, responsibility for the healthy child programme pre-birth-5 years (excluding maternity services) will become a local authority responsibility from October 2015. This offers both opportunities to better align the whole programme from pre-birth to 19 years and put an emphasis on raising mental resilience at a family and community level at an earlier stage.

Strong evidence from the Early Years Foundation suggests that resilience development should begin with parenting programmes for families with children under the age of 3 years, and indeed support at time of pregnancy, to have the greatest impact on life chances. A parenting offer is currently being developed that builds on current assets within the City.

## 2.3 Recommendations:

1. The HeadStart Strategy Group should make the whole school approach a central component of the HeadStart bid for 5 year funding, strengthening the community of practice and making it sustainable.
2. Building mental resilience should be a component of family and child health strategic plans and commissioning intentions from pregnancy to 19 years to raise health and wellbeing via the Children's Transformation Board.
3. Building mental resilience should form part of a wider approach to strengthen community resilience, health and well-being via the Be Well (mental health promotion) strategy.

## 2.4 References:

1. Department of Health (2013) *Chief Medical Officers Annual report 2013*. [Online] Available from:  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/351629/Annual\\_report\\_2013\\_1.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/351629/Annual_report_2013_1.pdf)
2. Public Health England (2014) *Local Action to Reduce Health Inequalities - Building Children and Young People's resilience in schools*. [Online] Available from:  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/355770/Briefing2\\_Resilience\\_in\\_schools\\_health\\_inequalities.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/355770/Briefing2_Resilience_in_schools_health_inequalities.pdf)
3. Public Health England (2014) *Children and Young People's Mental Health Profile*. [Online] Available from: <http://fingertips.phe.org.uk/profile-group/mental-health/profile/cypmh>

## Appendix 1

## Southampton Child Health Profile

March 2014

The chart below shows how children's health and wellbeing in this area compares with the rest of England. The local result for each indicator is shown as a circle, against the range of results for England which are shown as a grey bar. The red line indicates the England average. The key to the colour of the circles is shown below.

- Significantly worse than England average
- Significantly better than England average

- Not significantly different
- ◆ Regional average

25th percentile      England average      75th percentile

	Indicator	Local no.	Local value	Eng. ave.	Eng. worst		Eng. best
Premature mortality	1 Infant mortality	14	4.1	4.3	7.7		1.3
	2 Child mortality rate (1-17 years)	4	7.8	12.5	21.7		4.0
Health protection	3 MMR vaccination for one dose (2 years)	3,320	94.1	92.3	77.4		98.4
	4 Dtap / IPV / Hib vaccination (2 years)	3,422	97.0	96.3	81.9		99.4
	5 Children in care immunisations	255	85.0	83.2	0.0		100.0
	6 Acute sexually transmitted infections (including chlamydia)	1,459	30.2	34.4	89.1		14.1
Wider determinants of ill health	7 Children achieving a good level of development at the end of reception	1,512	50.8	51.7	27.7		69.0
	8 GCSEs achieved (5 A*-C inc. English and maths)	1,210	58.1	60.8	43.7		80.2
	9 GCSEs achieved (5 A*-C inc. English and maths) for children in care	-	-	15.3	0.0		41.7
	10 16-18 year olds not in education, employment or training	430	6.3	5.8	10.5		2.0
	11 First time entrants to the youth justice system	182	968.2	537.0	1,426.6		150.7
	12 Children in poverty (under 16 years)	10,640	25.9	20.6	43.6		6.9
	13 Family homelessness	173	1.7	1.7	9.5		0.1
	14 Children in care	480	104	60	166		20
Health improvement	15 Children killed or seriously injured in road traffic accidents	15	35.5	20.7	45.6		6.3
	16 Low birthweight of all babies	230	6.7	7.3	10.2		4.2
	17 Obese children (4-5 years)	266	9.5	9.3	14.8		5.7
	18 Obese children (10-11 years)	403	20.3	18.9	27.5		12.3
	19 Children with one or more decayed, missing or filled teeth	-	29.9	27.9	53.2		12.5
	20 Under 18 conceptions	170	47.4	30.7	58.1		9.4
	21 Teenage mothers	51	1.6	1.2	3.1		0.2
	22 Hospital admissions due to alcohol specific conditions	35	75.8	42.7	113.5		14.6
Prevention of ill health	23 Hospital admissions due to substance misuse (15-24 years)	35	78.9	75.2	218.4		25.4
	24 Smoking status at time of delivery	512	15.2	12.7	30.8		2.3
	25 Breastfeeding initiation	2,505	74.6	73.9	40.8		94.7
	26 Breastfeeding prevalence at 6-8 weeks after birth	1,441	43.5	47.2	17.5		83.3
	27 A&E attendances (0-4 years)	6,209	400.2	510.8	1,861.3		214.4
	28 Hospital admissions caused by injuries in children (0-14 years)	514	130.0	103.8	191.3		61.7
	29 Hospital admissions caused by injuries in young people (15-24 years)	682	141.2	130.7	277.3		63.8
	30 Hospital admissions for asthma (under 19 years)	111	221.4	221.4	591.9		63.4
	31 Hospital admissions for mental health conditions	112	238.0	87.6	434.8		28.7
	32 Hospital admissions as a result of self-harm (10-24 years)	271	400.9	346.3	1,152.4		82.4

Notes and definitions - Where data is not available or figures have been suppressed, this is indicated by a dash in the appropriate box.

1 Mortality rate per 1,000 live births (age under 1 year), 2010-2012  
 2 Directly standardised rate per 100,000 children age 1-17 years, 2010-2012  
 3 % children immunised against measles, mumps and rubella (first dose by age 2 years), 2012/13  
 4 % children completing a course of immunisation against diphtheria, tetanus, polio, pertussis and Hib by age 2 years, 2012/13  
 5 % children in care with up-to-date immunisations, 2013  
 6 Acute STI diagnoses per 1,000 population aged 15-24 years, 2012  
 7 % children achieving a good level of development within Early Years Foundation Stage Profile, 2012/13  
 8 % pupils achieving 5 or more GCSEs or equivalent including maths and English, 2012/13  
 9 % children looked after achieving 5 or more GCSEs or equivalent including maths and English, 2013 (provisional)  
 10 % not in education, employment or training as a proportion of total age 16-18 year olds known to local authority, 2012  
 11 Rate per 100,000 of 10-17 year olds receiving their first reprimand, warning or conviction, 2012

12 % of children aged under 16 living in families in receipt of out of work benefits or tax credits where their reported income is less than 60% median income, 2011  
 13 Statutory homeless households with dependent children or pregnant women per 1,000 households, 2012/13  
 14 Rate of children looked after at 31 March per 10,000 population aged under 18, 2013  
 15 Crude rate of children age 0-15 years who were killed or seriously injured in road traffic accidents per 100,000 population, 2010-2012  
 16 Percentage of live and stillbirths weighing less than 2,500 grams, 2012  
 17 % school children in Reception year classified as obese, 2012/13  
 18 % school children in Year 6 classified as obese, 2012/13  
 19 % children aged 5 years with one or more decayed, missing or filled teeth, 2011/12  
 20 Under 18 conception rate per 1,000 females age 15-17 years, 2011  
 21 % of delivery episodes where the mother is aged less than 18 years, 2012/13

22 Crude rate per 100,000 under 18 year olds for alcohol specific hospital admissions, 2010/11-2012/13  
 23 Directly standardised rate per 100,000 (age 15-24 years) for hospital admissions for substance misuse, 2010/11-2012/13  
 24 % of mothers smoking at time of delivery, 2012/13  
 25 % of mothers initiating breastfeeding, 2012/13  
 26 % of mothers breastfeeding at 6-8 weeks, 2012/13  
 27 Crude rate per 1,000 (age 0-4 years) of A&E attendances, 2011/12  
 28 Crude rate per 10,000 (age 0-14 years) for emergency hospital admissions following injury, 2012/13  
 29 Crude rate per 10,000 (age 15-24 years) for emergency hospital admissions following injury, 2012/13  
 30 Crude rate per 100,000 (age 0-18 years) for emergency hospital admissions for asthma, 2012/13  
 31 Crude rate per 100,000 (age 0-17 years) for hospital admissions for mental health, 2012/13  
 32 Directly standardised rate per 100,000 (age 10-24 years) for hospital admissions for self-harm, 2012/13

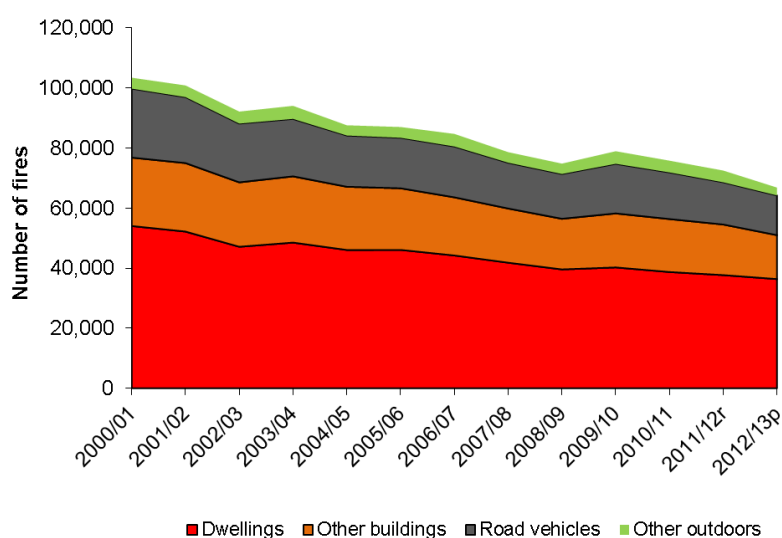
### 3. Accident prevention

#### 3.1 Why is this issue important?

Accidents cause injuries that impact on population health, affecting people throughout the life course. The frequency of accidents is variable, and the extent of injury (morbidity and mortality) is significant. Prevention of accidents remains a priority for health and social care organisations, who otherwise have to provide rehabilitation and care services for people who may have enduring problems caused by accidents. Injury compensation schemes cost society £billions, and NHS clinical compensation claims continue to increase in value, in some cases costing £millions for a single claim.

Accident prevention can be cost effective whilst also improving health and tackling health inequalities. Health and social care agencies need to ensure effective action targeting accident prevention, by working with a range of agencies and in different community settings. The Fire Service is an agency that has effectively reduced the number of fires and the injuries (death and disability) that occurs as a result. Figure 1 shows how the number of fires in different settings have reduced between 2000 and 2013. This level of preventative action is sufficient for the fire service to re-model its operational systems, investing more in prevention activities and less on firefighting and damage limitation. The NHS and social care, by contrast, are reacting to ever increasing demands on care, and in terms of accidents and injuries, the need is increasing, not falling, suggesting an even more important role for prevention.

Figure 1 – The number of fires by setting 2000 to 2013



(Source: Fire Statistics for Great Britain 2014. DCLG)

This reduction in fires has accompanied a fall in mortality. In 2012-13, there were 350 fire-related deaths in Britain, 47 fewer than in 2011-12 and lower than in any year in the last fifty years. The highest number of fatalities recorded was 967 in 1985-86. There were 10,300 non-fatal casualties in fires in Britain in 2012-13, 10 per cent and 32 per cent lower compared to the previous year and ten years before respectively.

## Impact on health

The spine chart shown in figure 2 below provides a dashboard of information on accidents and injury as it impacts on the population of Southampton. The red circles indicate where the city is significantly worse than the England average.

Figure 2 – Mortality and admissions caused by injury

Indicator	Number	Rate or %	England A...	England Lowest	Current Performance	England Highest
<b>General Injuries</b>						
Deaths from unintentional injury, 2008-2010 (co...)	127	13.3	15.2	4.9		29
Years of life lost (under 75s) from unintentional inj...	1497	21.8	35.0	0		95.6
Hospital admissions due to unintentional injury ca...	3583	1,312.8	1007.7	494.2		1,742.5
Hospital admissions due to unintentional injury (in...	2817	1,085	888.6	418.4		1,628.6
Hospital stays over 3 days due to unintentional inj...	910	316.2	326.3	222.8		513.2
'Serious' unintentional injuries likely to require ho...	527	168	148.3	105.7		232.5
Children (under 18) hospital admissions due to inj...	679	156.8	124.3	69.7		235.1
Infants (under 5) hospital admissions due to injury...	281	194	143.2	57.6		353.3
Older people (75s and over) hospital admissions d...	844	528.1	480.8	213.6		844.7

With 127 deaths over 3 years, Southampton has a relatively low death rate compared to the England average, and fewer potential years of life lost from injuries. Almost all the other measures in this chart indicate activities that are higher (worse) than the England average, suggesting a higher rate of moderate to severe injuries requiring a hospital stay. This is also true for the under 5's and over 75's. The resource implications of this are significant; falls amongst the over 75's cost the NHS approximately £2.3 billion. The fragility of bones in older people gives rise to an increased fracture risk, and this translates into a higher rate of fractures, even when a fall is only low impact. Figure 3 shows the gradual but significant increase in hospital admissions due to a fall resulting in injury for Southampton CCG patients between 2008-09 and 2012-13.

Figure 3

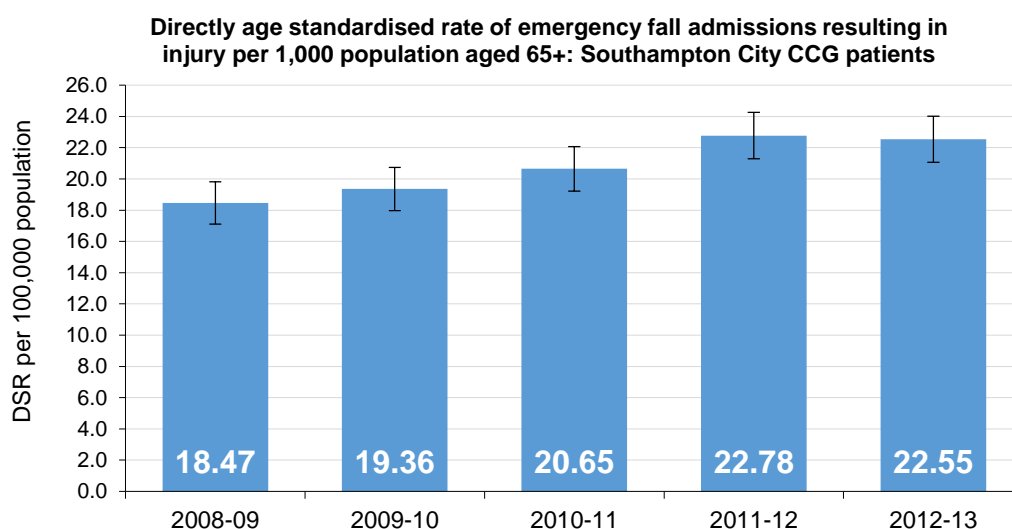
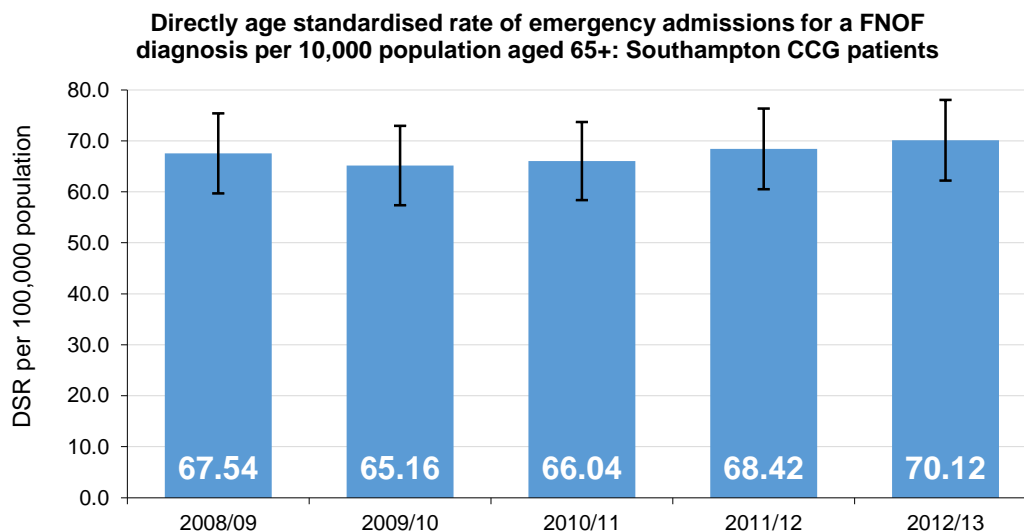
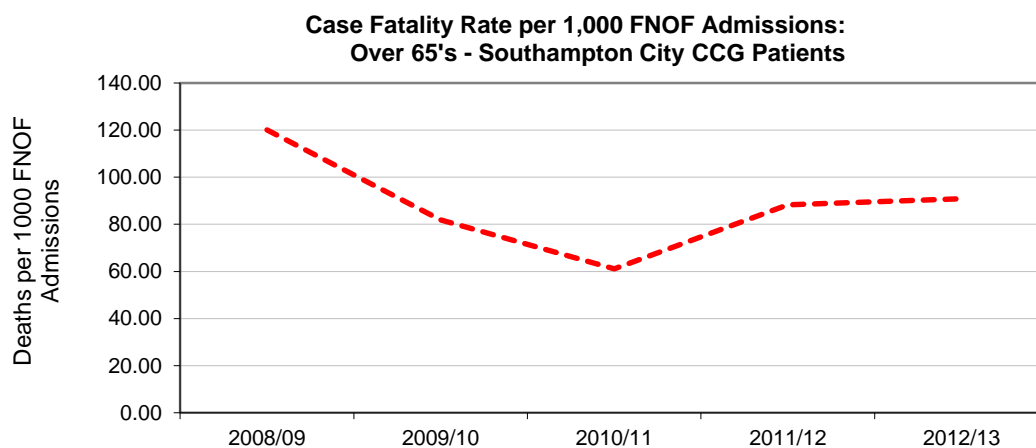


Figure 4



Treatment involves an orthopaedic pin and plate, or a hip joint replacement, followed by early mobilisation. Mortality among older patients following a FNOF can be high, illustrating the frailty of the patients who experience these types of injury. The trend in mortality caused by FNOF amongst Southampton CCG patients has been variable. In 2012/13, the case fatality rate for Southampton CCG patients was 90.9 per 1,000 admissions (approximately 9%), but has varied from 6% to 12% since 2008/09 (see figure 5).

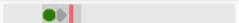



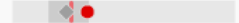
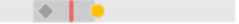
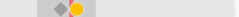
Figure 5



Subsequent fear of falling may lead to loss of confidence and significant anxiety in older people. Full recovery from a fall complicated by a fracture can take many months, and confidence may take longer to restore. Prompt diagnosis, hospital admission and emergency surgery can secure the best clinical outcome. Missed fractures and surgical delays beyond 24 hours are associated with poorer outcomes following fractured NOF, and higher use of residential and nursing homes.

Risk factors for injury relate to the extremes of age, risk taking behaviours, and the environment in which we live. Socio-economic deprivation and poor housing increases risk of accidents and injury. This is especially the case among homeless children and adults. Design features can play a major part in reducing accidents, for example in the provision of safer play areas in parks, and careful design and repair of pavements and road crossings, care safety features, and home adaptations.

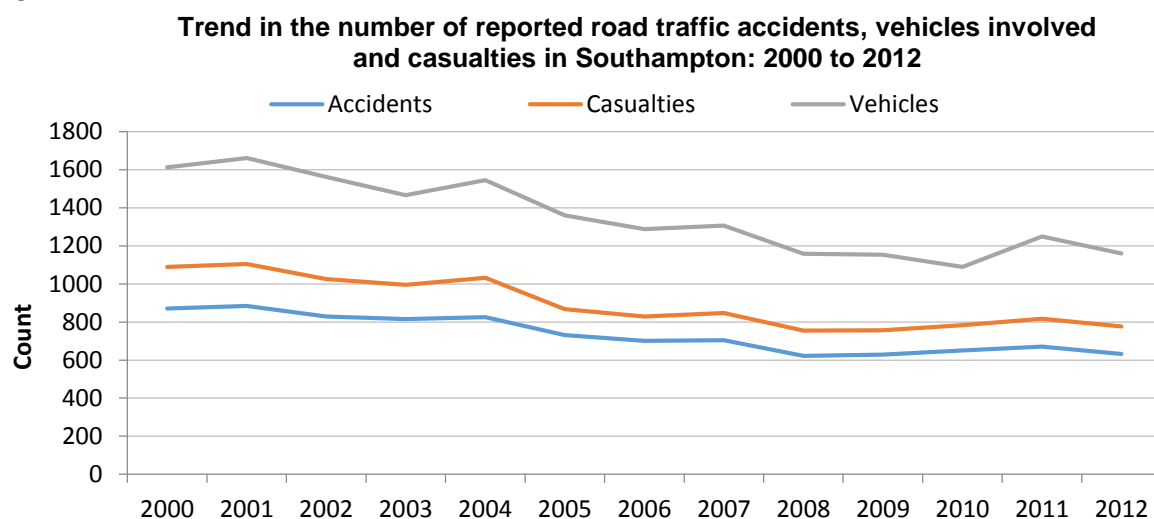
*Figure 6 – Deaths and admissions resulting from falls*

Indicator	Number	Rate or %	England A...	England Lowest	Current Performance	England Highest
<b>Falls</b>						
Deaths from unintentional fall, 2008-2010 (combi...	22	2.6	3.8	0		13.1
Hospital admissions due to fall injuries, 2010/11	1602	567.5	498.3	265.3		928.6
65s and over hospital admissions due to falls, 20...	1453	3,344.4	2475.3	1,259.4		4,844.4
65s and over hospital admissions due to fall injuri...	822	1,899.9	1641.6	899.7		3,126.8
Infant (under 5) hospital admissions due to fall inj...	269	64	54.8	23.1		144.9
Fall injuries on/from different height hospital admis...	251	101.8	89.3	42.9		165.9
Infant (under 5) fall injuries on/from height hospita...	55	13.1	12.4	3.3		30.8

This spine chart in figure 6 benchmarks injury from falls for Southampton residents against the national average. Infant admissions (under 5 years) following falls are approximately 20% higher locally than the national average, but overall mortality is below the national mean. Falls can cause fractures, but bones are resilient in childhood, and can withstand more trauma than osteoporotic bones in the older patient. “Greenstick” fractures can result from injury in children and tend to heal rapidly.

Other causes of injury in childhood include burns, scalds and head injuries, and these are relatively common. Severe injuries, such as those resulting from road traffic accidents, fires and severe burns, or head trauma, can cause death or very serious disability (such as head injury with marked cognitive and behavioural problems). However, this is less common than the frequent but less serious minor injuries. Trends in road traffic accidents are illustrated in figure 7 below, illustrating a convincing reduction in the number of collisions, casualties and vehicles involved. This charts another success story and show-cases variability of accidental injury and how effective prevention can be. However, one disappointment in these statistics is the growing proportion of more serious injuries resulting from road traffic accidents, which has risen from 10% in 2000-02 to 16% in 2010-12; a statistically significant increase.

Figure 7

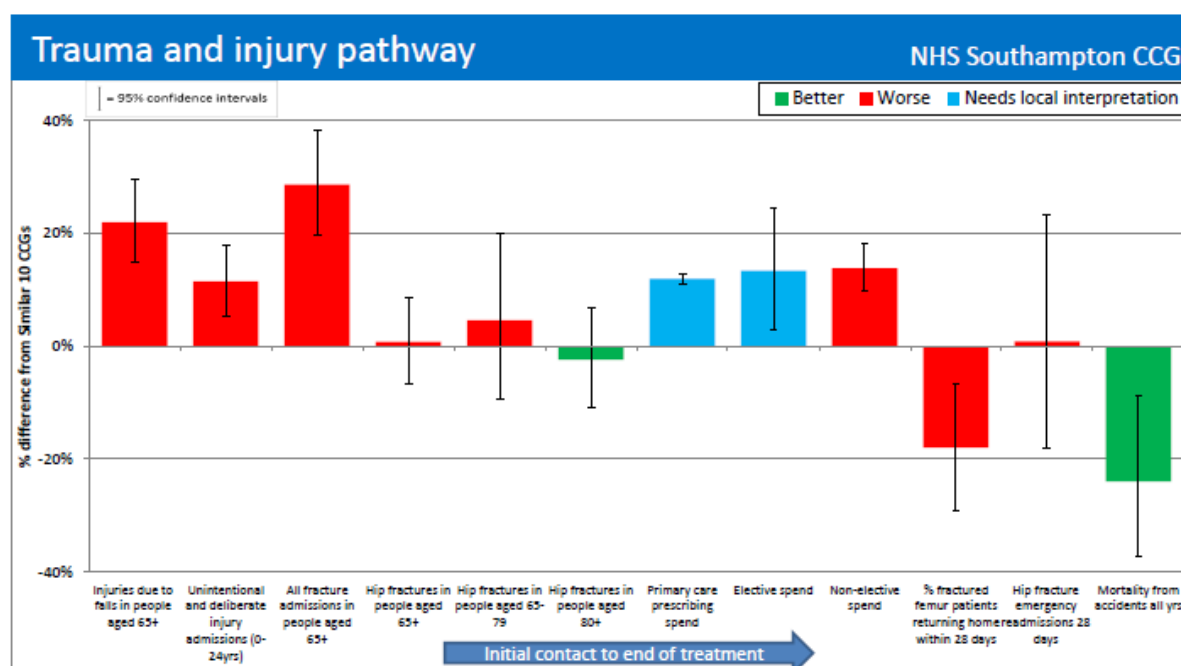


*Note:* This analysis is based on the standard STATS19 dataset supplied by the Police. This dataset includes all road accidents where human death or personal injury has occurred on the Highway and has been notified to the police within 30 days of occurrence, and in which one or more vehicles have been involved. The data relates to accidents occurring within the Southampton City boundary.

### 3.2 What can be done?

A selection of indicators are presented following the course of a trauma and injury pathway. This has been analysed for the local clinical commissioning group (CCG) in Southampton. Each indicator is shown as the percentage difference from the average of 10 most similar CCGs. The indicators are colour coded as 'better' (green) or 'worse' (red) values than the peers' districts and shown in figure 8 below.

Figure 8



Our comparator CCGs for the injury pathway are:

- NHS Portsmouth CCG
- NHS Leeds West CCG
- NHS Norwich CCG
- NHS Bristol CCG
- NHS South Manchester CCG
- NHS Brighton & Hove CCG
- NHS Hull CCG
- NHS Nottingham City CCG
- NHS Canterbury and Coastal CCG
- NHS North Durham CCG

The pathway chart summarises information on accidents and injuries. The overview shows a higher rate of injuries due to falls in people 65+ (22% higher than other “comparator” areas), and a 10% rise in unintentional and deliberate injuries in people 0-24 years. The raised injury rate is reflected by a 30% higher spend on fracture admissions to hospital for the over 65’s. One positive indicator is a slightly lower fracture rate in people over 80 yrs. The higher activity in hospital is, not surprisingly, associated with higher emergency and non-emergency spending. GP spending on medicines used in this area is also higher. This may be a positive indicator suggesting use of protective medication such as treatments for osteoporosis, for example.

From a preventative perspective, these indicators suggest we are dealing with high demand, and the population is experiencing a higher than average rate of accidents and injury. A high spend on fractures in older people and intentional and unintentional injuries in younger people is the consequence. This summary agrees with the other data presented in this report, and points to the need for greater efforts to prevent accidental injury.

### **What more can we do?**

Injuries are preventable and injury prevention should be an important public health concern. However, efforts can be hampered both by the will to make injury prevention a priority at local level and lack of access to useful data. Efforts to understand prevention and programmes of care in Southampton have been intensified this year, by creation of an injury prevention advisory committee (IPAC). The work has started by mapping activities across different local agencies, and inviting input and members from different agencies in the city. This is work in progress, but expert advice from the group should underpin and help formulate a city wide injury prevention programme. The group aim to reduce the morbidity and mortality caused by injuries, through an approach which encompasses both the creation of safer environments and improved awareness, knowledge and skills within the population and agencies.

The “Better Care” programme is a joint programme combining resources and aligning efforts to integrate health and social care. Part of this comprehensive programme will target fallers’ services and drive to reduce injury and related hospital admissions. The programme aims to reduce demands on the emergency department and make a much needed reduction in hospital admissions for older people. For this to succeed, the rising trend in accidental injury and hospital admissions will have to be reversed. A first step in pursuing this programme involves auditing the faller’s service as part of a national initiative lead by PH England. Another approach to evaluation and research into this area is beginning with two new PhD research initiatives in our area. These complementary studies should provide us with more detailed analyses of faller’s services and the systems of care in the city.

Finally, another initiative is just beginning with Hampshire Fire services to develop new ways of working together to create safe, healthy and active communities across Hampshire. This will take the form of a compact across all of Hampshire to enable us to work more effectively together to deliver services to the people in our community. If we can capitalise on the methods and systems used by the fire service to move from fire-fighting to prevention, and apply that to a wider injury prevention agenda, then both health and social care could start to turn the rising tide of injuries, reduce demand on the emergency care system and improve health and social care outcomes and inequalities in this area.

### 3.3 Recommendations:

1. The Injury Prevention Advisory Committee (IPAC) should continue its work and produce a prioritised plan so more effective approaches to injury prevention across the city can be commissioned.
2. Injury prevention should be embedded into the Better Care Programme by creating better intelligence to improve understanding of accidents and injury prevention across the city, through service audits and research studies.
3. The Council is encouraged to sign up to the compact with Hampshire Fire & Rescue, to enable closer working and collaboration with fire services, which could help boost efforts to prevent injuries.

### 3.4 References:

DCLG (2014) *Fire Statistics for Britain*. [Online] Available from:

<https://www.gov.uk/government/organisations/department-for-communities-and-local-government/about/statistics>

NICE (2011) *NICE Clinical Guideline 124: The management of hip fracture in adults*. [Online] Available from: <https://www.nice.org.uk/guidance/cg124>

ROSPA & PHE (2014) *Delivering accident prevention at the local level in the new public health system. A joint ROSPA and Public Health England publication*. [Online] Available from: <http://www.rospace.com/about/currentcampaigns/publichealth/delivering-accident-prevention.aspx>

## 4. Air quality in Southampton

### 4.1 Why is this issue important?

Air pollution is a significant health issue for Southampton City, disproportionately affecting our most vulnerable members of society. European legislation sets out a number of requirements to control outdoor levels of pollutants. Local Authorities have a responsibility under Local Air Quality Management legislation to review air quality. Southampton currently has ten Air Quality Management Areas declared, each one as a result of the annual mean for nitrogen dioxide (NO<sub>2</sub>) exceeding the limit value of 40 µg/m<sup>3</sup>.

#### What is air pollution and what is its effect on health?

In the UK, air pollutants are mainly products of motor vehicle traffic combustion especially from diesel vehicles. Pollutants known to have effects on health are particles, sulphur dioxide, oxides of nitrogen, carbon monoxide and ozone. In a good state of health, short term exposure to moderate levels of air pollution is unlikely to have any serious short term effects. Short term exposure to high levels of air pollutants can cause a range of adverse effects such as exacerbations of asthma, effects on lung function and consequent increases in hospital admissions for respiratory and cardiovascular conditions<sup>1</sup>.

Long term exposure to air pollution does increase the risk of deaths from cardiovascular and respiratory conditions, including lung cancer and existing lung and heart conditions. Chronic effects can be triggers of new disease, worsen severity of disease through increase in symptoms or accelerate progression of disease over time. Children, the elderly and people with lung or heart conditions are more susceptible to the health effects of air pollution. People with coronary artery disease are at greater risk of being affected by air pollution, especially particles, than people without such disease. Coronary artery disease, which can remain undetected, is common in older people<sup>1</sup>.

Evidence of the long term effects of air pollution are most closely associated with levels of fine particulate matter (PM<sub>2.5</sub>). Just 18 µg/m<sup>3</sup> PM<sub>2.5</sub> could be responsible for an average loss of life expectancy from birth of around 2-20 months (average of 7-8 months). This compares to an estimate of around 7 years if all the population were smokers (Department of Health, 2001). There is no evidence for a threshold below which health effects would not be expected. For NO<sub>2</sub>, studies have shown that both day to day variations and long term exposure to NO<sub>2</sub> are associated with mortality and morbidity.

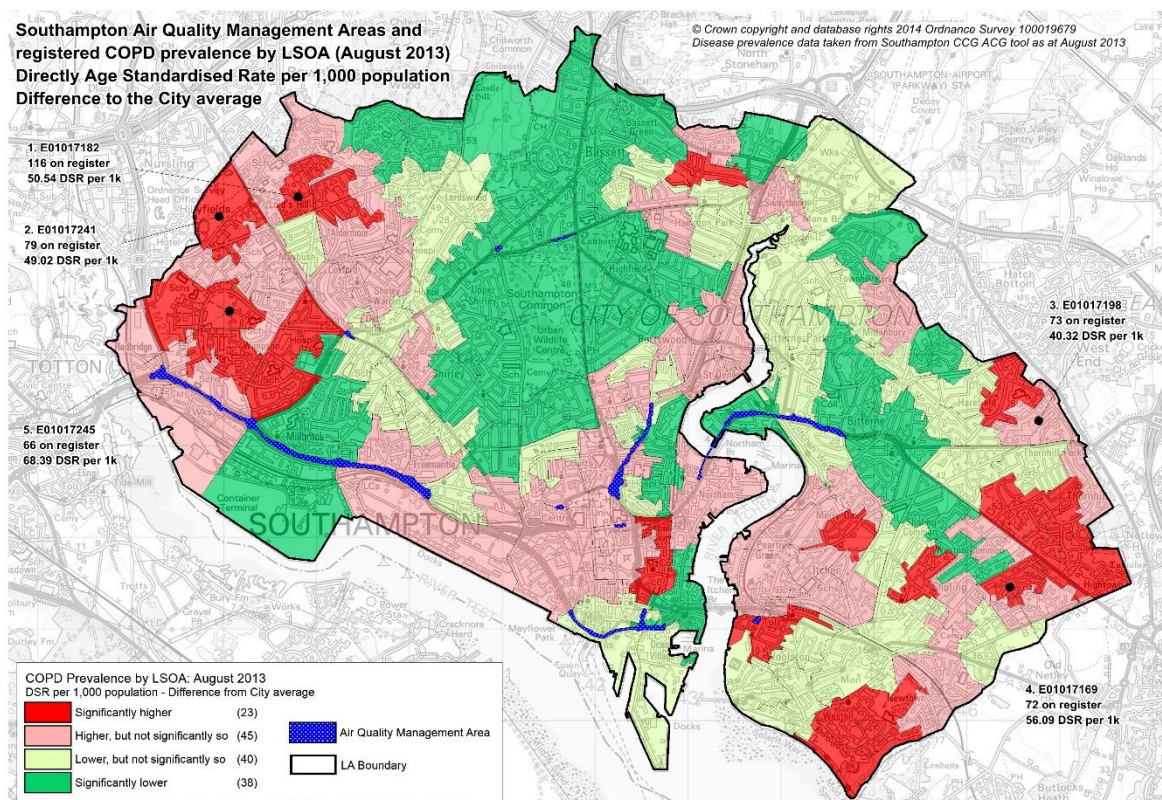
The public health benefit of a 1µg/m<sup>3</sup> reduction in national average PM<sub>2.5</sub> concentration is estimated as being an increase in average life-expectancy of around 20 days (range 3 to 40 days)<sup>2</sup>. It is likely that, compared with factors affecting individuals such as smoking, diet and lack of exercise, air pollution has a health impact similar to that of passive smoking. Department of Transport estimate that health impact from motorised transport for the UK is estimated at £10 billion. The cost to Southampton is estimated at £50 million.

## What is the situation in our City?

Modelled estimates of mortality attributable to long term exposure to air pollution i.e. annual average concentrations of fine particulate matter (PM<sub>2.5</sub>) have been published by Public Health England<sup>3</sup>. These suggests that 6.2% of deaths in 2010 were attributable to air pollution, with long-term exposure contributing 110 deaths amongst those aged 25 years and over and 1,280 life years lost.

Since 2010, Southampton's estimated fraction of mortality attributable to particulate air pollution has declined, from 6.2% to 5.7%. This is in line with a national decrease. 2012 figures show that Southampton's fraction of mortality attributable to particulate air pollution is worse than both the England and South East average of 5.1%. Local cities are also rated better than Southampton, for example Portsmouth 5.3%, Brighton and Hove 5.0%, Oxfordshire 5.1%, Bristol 5.2% and Bournemouth 4.1%.

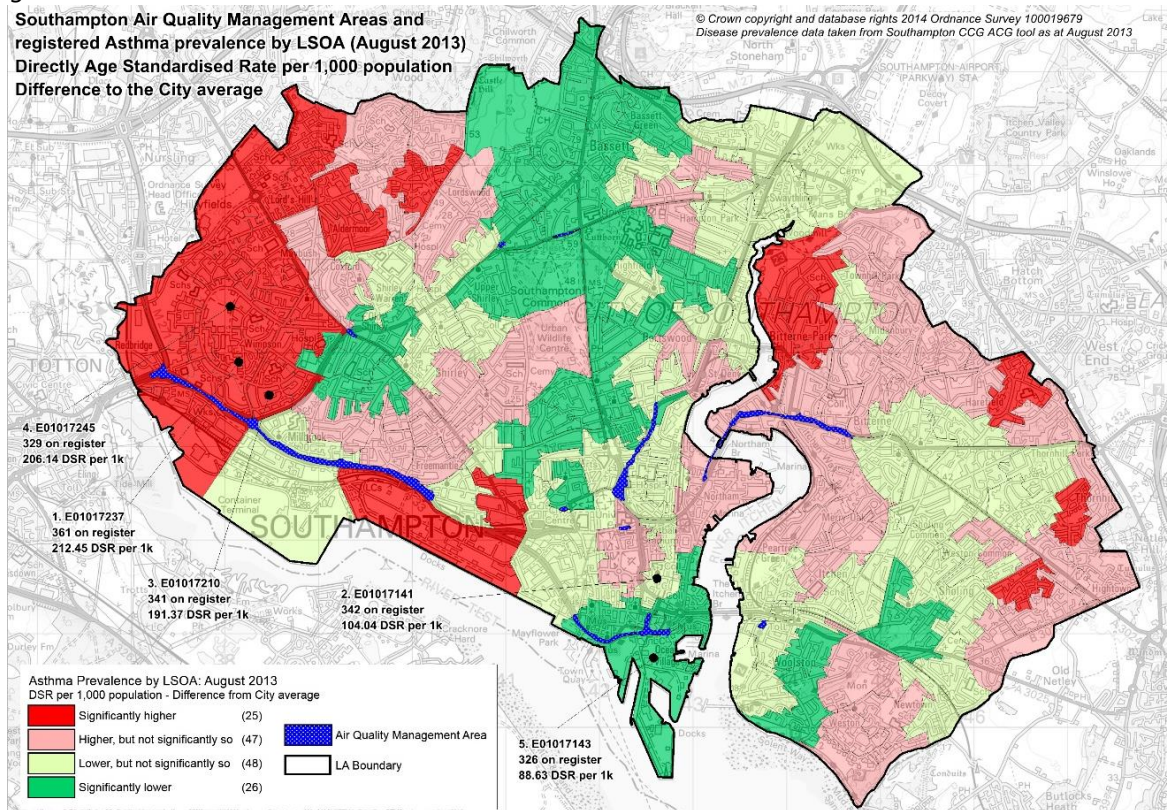
Figure 1



Mapping of Chronic Obstructive Pulmonary Disease hospital admissions, asthma hospital admissions and cardiovascular hospital admissions against air quality management areas in Southampton City show close correlation. Those areas in Southampton with the highest pollution levels are also areas where hospital admissions for these indications are highest. These are also areas of significant deprivation and where we would expect health outcomes to be worse. As previously described, air pollution exacerbates pre-existing conditions. Mapping of Chronic Obstructive Pulmonary Disease and asthma prevalence against air quality management areas also shows some degree of correlation

(see figures 1 & 2). Opportunities to monitor air quality in areas where respiratory disease prevalence is high would be of benefit.

**Figure 2**



## 4.2 What can be done?

Public Health England has offered proposals on ways that Local Authorities can improve air quality<sup>1</sup>, these are:

- Encouraging schemes like ECOSTARS that recognises excellent levels of environmental and energy saving performance for vehicles that operate within their area
- Introducing intelligent transport systems that maximise efficiency of the highway network and also provide real time information to enable better informed travel choices
- Incorporating air quality into planning considerations for new developments and refurbishments
- Promoting energy efficient and sustainable transport to residents and businesses

### **What have we done locally?**

Work has already been undertaken within the City to raise awareness when air pollution levels are high. The air alert service enables people who are more vulnerable to air pollution to manage the health impact in the event of high pollution levels. This service is free and open to all. There are currently 277 subscribers and 126 air alerts have been issued since June 2010. City air quality actions have focused on transport related projects to improve the efficiency of the road network and reduce congestion.

Recent findings from a study of the City's Western approach suggest that emissions from road transport are the most significant contributor, however emissions from the Port are far more significant than previously understood. A City wide Low Emission Strategy (LES) is being developed. A working group from departments across the council has been established to promote the delivery of existing initiatives and identify new ones. A City-wide emission reduction strategy will be developed for passenger cars, freight, buses and taxis.

### **What more can we do?**

Air pollution is one of a number of risks for heart and lung disease. Stopping smoking has the largest impact on preventing risk and nearly one quarter of people within Southampton still smoke. Increased walking and cycling, and consequent reduced car travel, would not only reduce risk through reduction in air pollution, it would also benefit health through people being more physically active. Reducing road traffic would also reduce the number of road traffic accidents. There were 387 people 'killed and seriously injured on roads' from 2010-2012 (an average of 129 per year) in Southampton City.

### ***Active travel***

Southampton has adopted recommendations from the national Active Travel Strategy published by the Department for Transport and Department of Health through its 'My Journey' initiatives. As an example, 100% of schools in Southampton have school travel plans in place, aided by 'My Journey' including the development of STARS and Bike It programmes. This enables schools to encourage children and their parents to cycle or walk to school instead of driving.

The council's 'Cycle to Prosperity' scheme hopes to increase cycling levels in the population from 3% to 18% within 10 years. A 10 year cycling strategy has been produced in association with Sustrans to increase the provisions for cyclists throughout the city and make it safer to cycle. Cleaner buses are being introduced into Southampton and the city was awarded £632,700 from the Clean Bus Technology Fund to fund 37 buses with Flywheel technology, which will reduce pollution levels coming from buses.

### ***Air Quality Scrutiny Inquiry – Port and planning***

A local Air Quality Scrutiny Inquiry is currently ongoing. Council led approaches and public health impact described above were highlighted as an important part of the Inquiry. In addition, representatives from the Port described the benefits of their vehicle booking system in reducing the number of vehicles entering the Port at unspecified times, the increasing number of containers carried by rail rather than road and trailing of new compressed gas powered straddle carriers. DP world emission targets are driving these initiatives.

Planning decisions have also been considered. Local Plan Review policy states that planning permission will be refused: (i) where the effect of the proposal would contribute significantly to the exceedance of the National Air Quality Strategy Standards; or (ii) where the proposal would be materially affected by existing and continuous poor air quality. This only applies in AQMAs. A Local Plan Review has been initiated to re-evaluate the air quality policy. This could potentially include landscaping and transport issues; further mitigating against air pollution health risk.

### ***Air Quality Scrutiny Inquiry – resident's views***

A residents survey undertaken in August 2014 on air quality showed that air quality is important to Southampton residents (298 responses from across the City). 44% of respondents felt that cars are the main contributor to air quality, with HGVs (20%) second most common response and industry (10%) and shipping/ ports (10%) third most common. 59% of the 294 respondents felt air quality in the city has worsened in recent years, whereas in contrast, 4% felt it had improved. Suggestions for improvement included better public transport, park and ride, improving cycling routes, lowering speed limits, planting more trees, having a low emission zone and redirecting and restricting HGVs.

### ***Individual responsibility for health***

Individuals must take responsibility for their own health and that of their families and communities to mitigate against the health risk of air pollution. By ensuring that young children are active, walking and cycling to school, we can set the norm for a lifetime of making healthy choices that not only benefit individual's health but also that of the community at large. It is important that, as adults, we act as role models to the younger generations in taking this responsibility. We need to reduce the number of journeys we make by car to make this happen.

### 4.3 Recommendations:

1. There is a need for joined up strategic intent on combating air pollution, sustainable development and encouraging people to walk and cycle. The Low Emission Strategy should provide the direction for this vision and be governed by the Health & Wellbeing Board.
2. To improve public awareness, a clearer Council webpage should inform on progress since the last Air Quality Action Plan; Stronger promotion of Council's efforts is needed in a more 'public friendly' way to tackle air pollution.
3. Stronger links with planning should be developed to ensure public health implications are considered in decision-making.

### 4.4 References

1. Department for Environment, Food and Rural Affairs briefing. *Air quality: Public Health Impacts and Local Actions*. [Online] Available from: [http://laqm.defra.gov.uk/documents/air\\_quality\\_note\\_v7a-\(3\).pdf](http://laqm.defra.gov.uk/documents/air_quality_note_v7a-(3).pdf)
2. Committee on Medical Effects of Air Pollutants (2010) *The mortality effects of long-term exposure to particulate air pollution in the United Kingdom. A report by the Committee on Medical Effects of Air Pollutants*. [Online] Available from: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/304641/COMEAP\\_mortality\\_effects\\_of\\_long\\_term\\_exposure.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/304641/COMEAP_mortality_effects_of_long_term_exposure.pdf)
3. Public Health England (2014) *Report on local mortality associated with particulate air pollution*. [Online] Available from: <https://www.gov.uk/government/news/estimates-of-mortality-in-local-authority-areas-associated-with-air-pollution>

## 5. Dementia and long term conditions

### 5.1 Why is this issue important?

Dementia covers a number of different conditions. Alzheimer's disease (AD) is the most common form, increasing in prevalence during retirement years, affecting women in their 90's five times more than men. Some types of AD have a strong genetic component, and onset may occur in middle age in affected families. Vascular dementia (VD) occurs in 10-15% of demented patients, and is equally distributed between men and women. Dementia with Lewy body changes (a change in brain structure) is less common, and it is associated with Parkinson's disease and some distinctive changes to sleep patterns. Chronic alcohol abuse can be associated with memory loss and dementia, the effects on the brain being partly due to alcohol poisoning and partly mediated by abnormal thiamine metabolism. Dementia is a progressive condition that may deteriorate gradually or in sudden steps (especially where a vascular cause is present). In many people, the type of dementia may be a mixture of AD and VD.

Mild cognitive impairment (MCI) is more common than dementia in older people, and in a significant proportion of people, this condition does not progress. Some clinicians are reluctant to make an early diagnosis of dementia, fearing that it may be confused with MCI, which has a better prognosis. The importance of making an accurate diagnosis and planning health and social care to meet the needs of people with dementia has been stressed over the past two years in a drive to improve the quality of care for people affected by dementia.

The risk of dementia increases with age and so does the risk of other long term conditions. Therefore, it is no surprise to see patterns of multi-morbidity (the presence of multiple chronic conditions) in people with dementia. Indeed, some dementias develop as a result of other conditions, for example vascular dementia following on from vascular disease (i.e. after a stroke). Hypertension is present in over half of people with a diagnosis of dementia. Due to the nature of dementia and the way it can affect memory, thinking and communication, and the way that specialist services are often set up to address only one condition, there may be particular challenges in delivering appropriate, holistic care for someone with dementia and multi-morbid conditions.

Some of the potential challenges that occur include:

- People with dementia may not be able to clearly report and describe symptoms
- Getting a diagnosis for a multi-morbid condition may take longer when dementia is already present
- New symptoms may be attributed to dementia with other conditions remaining undiagnosed (diagnostic overshadowing).
- The interplay of conditions may exacerbate symptoms – for example hearing or visual impairment might increase confusion and disorientation for someone with dementia

- Hospital stays may be longer for people with dementia and some admissions may be avoided. Our understanding of the number of people living with dementia in Southampton is limited by the rate of diagnosis; it is thought that currently only about half of all people with dementia are diagnosed. Figure 1 shows the difference between the recorded number of people with dementia in Southampton (from primary care databases) and the best estimate of the true number (from expert opinion).<sup>1 2</sup>

Figure 1

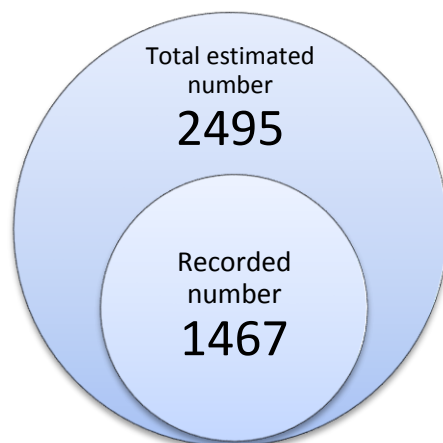
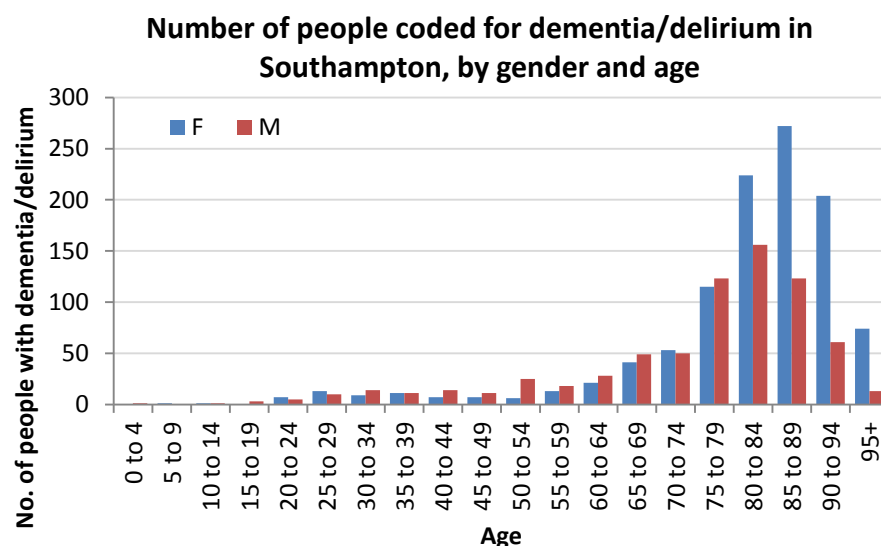


Figure 2 shows the age profile of people diagnosed with dementia and delirium in Southampton, with numbers peaking in men in the 80 to 84 age group, and women in the 85 to 89 age group. The increased prevalence of dementia in older women is clearly illustrated.

Figure 2



Source: ACG dataset, Southampton City CCG (2014)

<sup>1</sup> Alzheimer's Society (2014). Dementia UK: Update.

[http://alzheimers.org.uk/site/scripts/download\\_info.php?downloadID=1490](http://alzheimers.org.uk/site/scripts/download_info.php?downloadID=1490)

<sup>2</sup> Quality Outcomes Framework, (2013/14)

<http://www.hscic.gov.uk/searchcatalogue?productid=16273&pubdate=OCT%2c2014&sort=Relevance&size=10&page=1#top>

The conventional data sources which are used to estimate the prevalence of dementia do not provide us with any information about the other conditions which may be present. For this, we need to look to other data sources. One of the sources we have used in Southampton to try and understand multi-morbidity in dementia is the Adjusted Clinical Groups (ACG) tool<sup>3</sup>. Although the ACG tool is not specific to dementia, as the clinical grouping also includes delirium (as can be seen by the presence of the diagnostic group in younger age groups in Figure 2), this tool can give us a useful insight into the other conditions that people with dementia also live with.

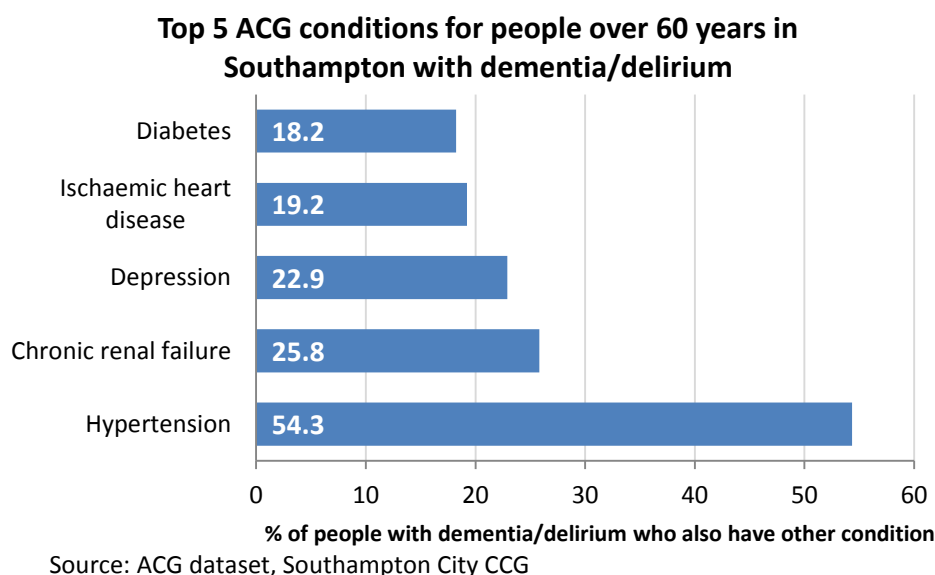
In Southampton, people with dementia are more likely to have at least one other ACG condition than have dementia alone. In fact, 83% of people with dementia also have at least one other long term condition (Figure 3).

Figure 3

<b>Dementia and co-existing ACG conditions</b>	
Dementia only	17%
Dementia plus one other condition	22%
Dementia plus two other conditions	21%
Dementia plus 3 or more conditions	40%

Figure 4 shows the most common comorbidities for people diagnosed with dementia in Southampton. The most common is hypertension, affecting over half of all individuals, followed by chronic renal failure (25.8%) and depression (22.9%).

Figure 4



<sup>3</sup> ACG is a risk stratification tool which uses primary and secondary care data to build datasets around 20 long term conditions: rheumatoid arthritis, low back pain, persistent asthma, chronic renal failure, congestive heart failure, COPD, depression, diabetes, disorders of lipid metabolism, hypertension, ischaemic heart disease, age related macular degeneration, bipolar disorder, glaucoma, hyperthyroidism, immunosuppression, osteoporosis, Parkinson's disease, schizophrenia, seizure disorder.

## 5.2 What can be done?

Making a diagnosis of dementia can take time, and distinguishing from MCI and a progressive dementia may take a number of months or even years. GPs and experts in memory clinics are responsible for diagnosis and longer term management of diagnosed cases. With only limited scope for effective treatment, there are a few drugs that have some impact on the disease. Cholinesterase inhibitors and, to a lesser extent, memantine, are used in the early stages of disease to manage symptoms but there is limited evidence of an effect on the natural history of the disease. Many other medications, including sedatives and mood stabilisers tend to worsen cognitive functioning or in the case of major tranquillisers, may cause major problems. The main focus still remains on diagnosis, care, and support, for both the person affected and their carer, and managing co-morbidities that are present (including anxiety, depression, or agitation, alongside physical conditions such as diabetes, hypertension or incontinence).

### Dementia developments in recent years

The local Council and Clinical Commissioning Group (CCG) have made commitments to supporting residents to live well with dementia. Additional funding was allocated in 2014/15 to support interventions, aimed at improving the health and wellbeing of people living with dementia, and reducing loneliness and social isolation by encouraging participation in a range of activities:

- **Volunteer led walking group:** aimed at younger people, with meeting points at local cafes to help normalise dementia within our communities and provide opportunities for regular physical activity.
- **Art classes led by teaching staff:** resulting in an exhibition of art work created which will also have a positive impact on raising awareness and reducing stigma across the city.
- **Seafaring memories group:** which will provide individuals with an opportunity to talk about their working lives and hobbies; men are often more comfortable reminiscing about things they have experienced in the past.
- **Partnership with the Community Farm** in Southampton. Regular opportunities for individuals to enjoy the outdoors, connect with the natural environment and take part in a range of supported practical tasks and activities; this also provides opportunities for individuals to obtain healthy home grown food.
- **Ethnic Minority awareness raising project:** Working with community leaders, faith groups, health and wellbeing professionals and other agencies about cultural differences and attitudes to memory loss held by some ethnic minority communities.

It is estimated that between 2012 and 2020, there will be an increase of almost 20% in people aged over 65 years with dementia in Southampton<sup>4</sup>. With an ageing population projected to increase the number of people with dementia, health and social care services need to be responsive to the changing demographics in order to meet the needs of local people. This means not only

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<sup>4</sup> Projecting Older People Population Information System (POPPI) [www.poppi.org.uk](http://www.poppi.org.uk)

preparedness for treating and caring for people with dementia, but also considering co-existing conditions which may add extra complexity. The quality standards for dementia published by the National Institute for Health and Care Excellence (NICE) support a personalised approach that enables people with dementia to access services that help maintain their physical and mental health and wellbeing<sup>5</sup>. It is important that people with dementia have equitable access to services which care for their physical health. If dementia and co-existing conditions are managed effectively and according to individual needs, there are clear benefits for improving the quality of life for people with dementia and their carers, and also potential cost savings from preventing hospital or residential admissions or shortening the stay.

### 5.3 Recommendations:

1. NHS providers should ensure that people with dementia have appropriate physical health checks to manage the many health problems that are often present.
2. All service providers should aim to create dementia friendly services to enable people with dementia and their carers to feel confident about accessing support for all their physical health needs.
3. Commissioners should work with service providers to minimise the number of different services that people with dementia need to access to receive care for their physical and mental health.
4. GPs and primary care teams are encouraged to increase awareness of early signs of dementia, to manage risk factors that exacerbate dementia symptoms, and to exclude other diseases that may mimic dementia (such as hypothyroidism or depression in older people, for example). Early referral to specialist memory clinics helps refine the diagnostic subgroups, plan management and optimise care for dementia patients and their carers.

### 5.4 References:

Alzheimer's Society (2014). *Dementia UK: Update*. [Online] Available from: [http://alzheimers.org.uk/site/scripts/download\\_info.php?downloadID=1490](http://alzheimers.org.uk/site/scripts/download_info.php?downloadID=1490)

HSCIC (2014) *Quality Outcomes Framework, (2013/14)*. [Online] Available from: <http://www.hscic.gov.uk/searchcatalogue?productid=16273&pubdate=OCT%2c2014&sort=Relevance&size=10&page=1#top>

NICE (2010) *Dementia quality standard (June 2010)*. [Online] Available from: [www.nice.org.uk](http://www.nice.org.uk)

NICE (2013) *Quality standard for supporting people to live well with dementia (April 2013)*. [Online] Available from: [www.nice.org.uk](http://www.nice.org.uk)

Oxford Brookes University (2014) *Projecting Older People Population Information System (POPPI)*. [Online] Available from: [www.poppi.org.uk](http://www.poppi.org.uk)

<sup>5</sup> Dementia quality standard (June 2010) and Quality standard for supporting people to live well with dementia (April 2013). Available at [www.nice.org.uk](http://www.nice.org.uk)

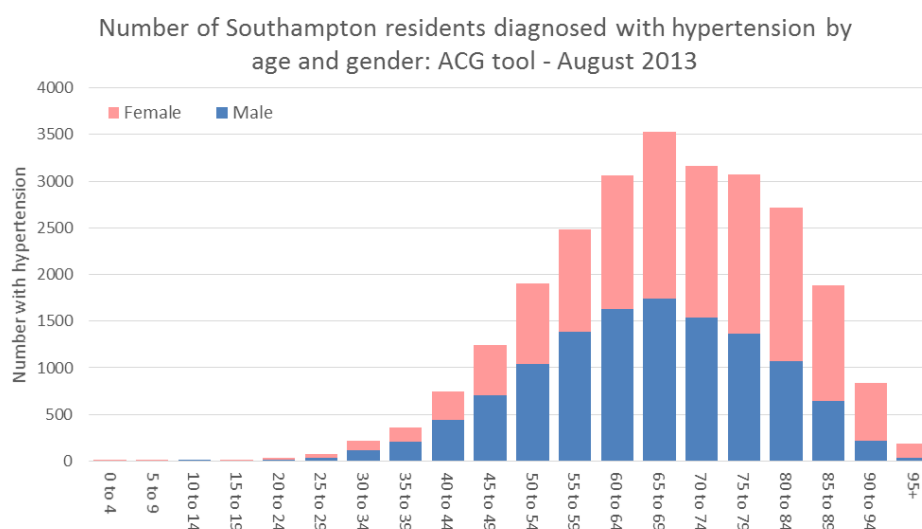
## 6. High blood pressure (hypertension): A local and global health threat

### 6.1 Why is this issue important?

Hypertension (or raised blood pressure) is a major public health challenge. It is a key factor in living longer and healthier lives. Mild or moderately raised blood pressure (BP) is very common, especially in retirement age, causes few symptoms, and can easily go unnoticed. It is simple to measure, and can be diagnosed in pharmacies and GP surgeries. Low cost automated BP equipment is widely available and used by some patients, while more sophisticated 24 hour BP monitoring helps us understand BP variability through the day and night. Despite ready access to BP measuring equipment, and the widespread nature of the problem, a significant proportion of people with raised BP remain undiagnosed. The distribution of blood pressure across any population is a continuum, with no sharp cut-off between those who have normal and those with raised blood pressure. Blood pressure is measured as systolic and diastolic pressure. The unit of blood pressure measurement is the height of a column of mercury used in old fashioned blood pressure machines. Average blood pressure for an adult is in the region of 120/80 mmHg. High blood pressure is usually diagnosed as measurements above 140/90 mmHg. A lower threshold for diagnosing high blood pressure is needed for children and younger people.

Hypertension prevalence rises with age: 7.4% in ages 19-24, rising to 44% in those aged 55 to 64, and 72% over 75 years. It is more common in socio-economically deprived areas, prevalence reaching 34% compared to 26% in the least deprived communities. Men are affected more than women, while black African and black Caribbean ethnic groups are also at high risk. Public Health England (PHE) estimates we have 7,660,010 people in England (2012/13) with recorded high blood pressure. Local GP data identify 25,532 people in Southampton with Hypertension, 10.4% of registered patients. Figure 1 below illustrates the distribution of these patients by age and gender. More men have high blood pressure up to retirement age, then women predominate due to their longer life expectancy.

Figure 1:

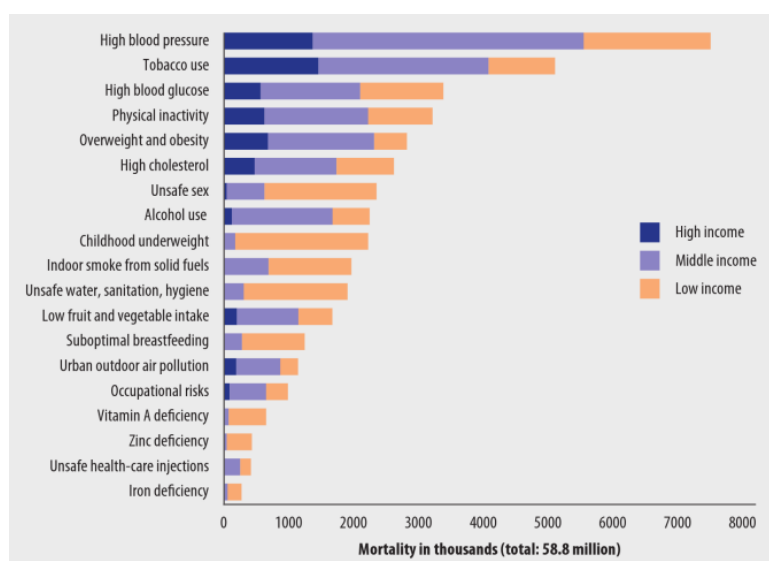


Blood pressure depends on factors such as cardiac output, elasticity of blood vessels and circulating volume of blood. Hormones and autonomic nerves also modulate BP, which has a circadian rhythm (low readings in the night, higher in the day). A rise in BP occurs just before waking, and increases occur in the daytime as a response to stress, or strenuous exercise, for example lifting heavy loads. People live with mild or moderate hypertension for many years, but if untreated, the cumulative risk of complications increases with time.

### Effects on health

The Global Burden of Disease Study charts 235 causes of death, and examined the effects of 67 risk factors. Hypertension now stands out clearly as the leading global risk factor for disease; it causes death, major challenges to healthcare, and costs millions in prescribing costs and lost productivity. Hypertension is a risk factor for ischaemic heart disease and stroke. Estimates suggest 7.5 million deaths are caused by raised BP (13% of all deaths). Hypertension was thought to be a greater problem in developed countries, but this has changed recently, with increased impact recognised on low and medium income countries (see figure 2). Estimates in England suggest 4,458 deaths in England (2010) were caused by hypertension. This is probably an underestimate because hypertension is often classified as a “contributing factor” rather than underlying cause of death.

Figure 2: Risk factors vs global mortality

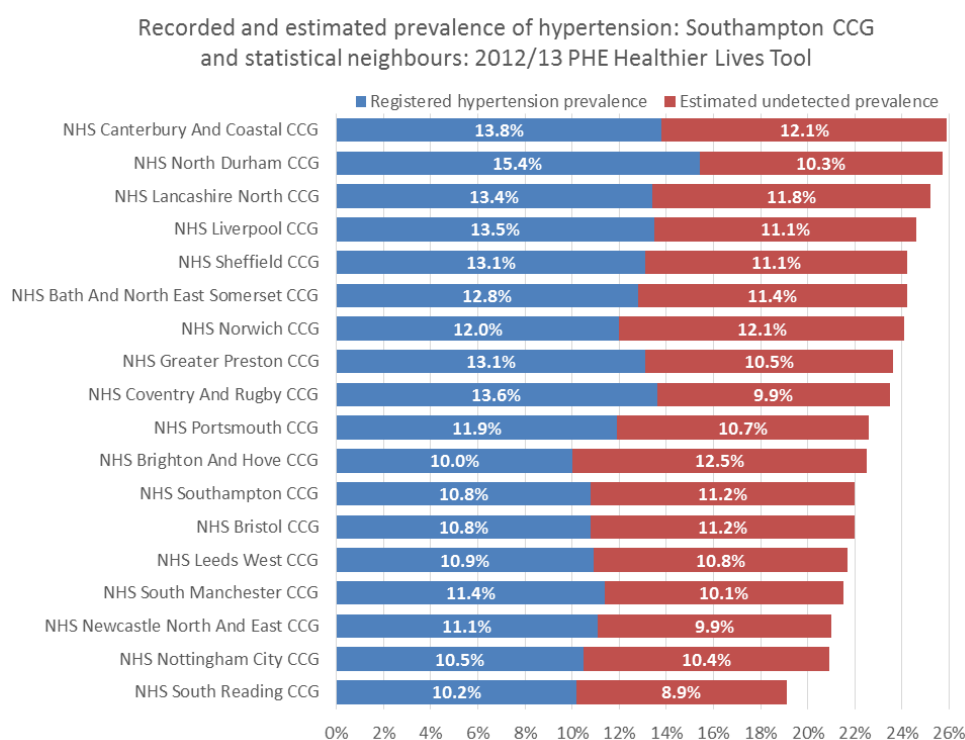


The vascular health effects (risk) of high blood pressure can be estimated using a simple formula: The risk doubles for each increase of 20/10 mmHg of BP, starting as low as 115/75 mmHg. In addition to coronary heart diseases and stroke, complications of raised blood pressure include heart failure, peripheral vascular disease, kidney damage, and visual impairment. Vascular risk increases as multiple risk factors become combined. In this case, it is the combined risk of raised cholesterol, high blood sugar, smoking, obesity, and physical inactivity that interact with raised blood pressure to create high cardiovascular risk. These all feature in the risk factors that contribute to the highest global mortality statistics.

Prevention of high blood pressure and avoidance of other vascular risk factors can reduce the burden of cardiovascular disease (CVD). In this respect population health trends in the UK are encouraging, with good progress made over recent decades, with significant falls in CVD mortality. The UK had some of the highest levels of CVD in the world, and the rate of reduction is among the fastest improvement in developed countries. This improvement was driven by changes in lifestyle, less tobacco use, and lower cholesterol intake. Lower population salt intake and increased use of potassium rich food can also have a direct effect on reducing BP at population level, while reducing or stopping alcohol intake can improve an individual's BP. Challenges remain, with early diagnosis, monitoring, and effective management of high BP being far from optimal, with a large number of people undiagnosed or unable to attain BP control effectively.

Prevalence of high blood pressure is measurable at the level of GP practices. Figure 3 shows the GP records alongside the estimated prevalence of hypertension. This suggests that only 48.5% of the estimated number of people with hypertension are on GP practice registers in Southampton. Approximately half the people with hypertension in the city are yet to be diagnosed and effectively treated. Similar challenges exist across the country, as can be seen in figure 3.

Figure 3:

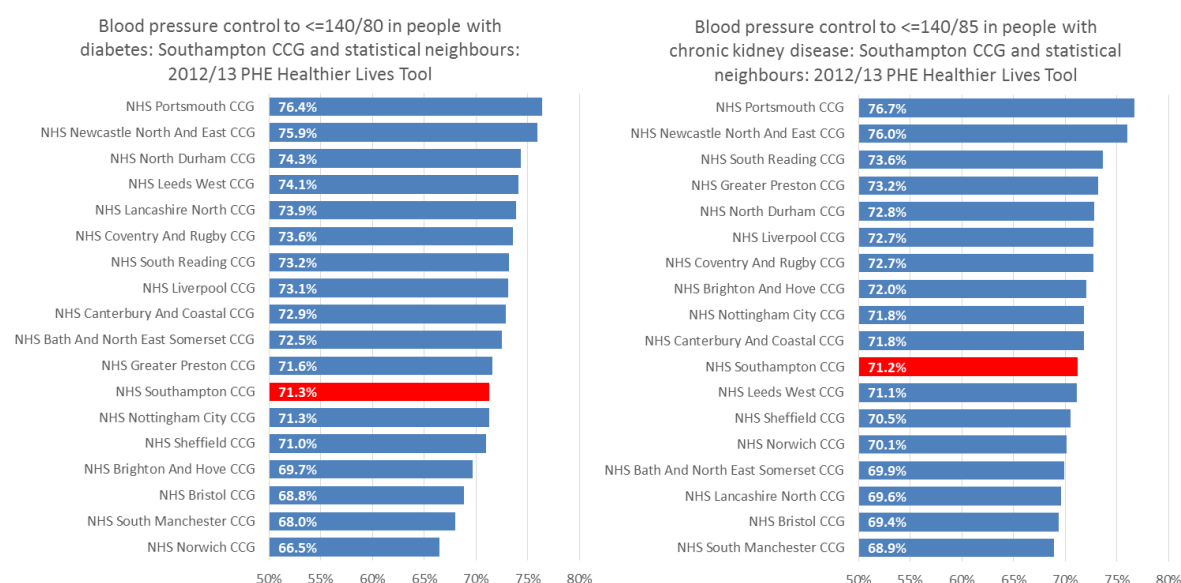


The estimated prevalence of high blood pressure varies from 7.9 to 29.7 % across the GP practices in Southampton, with the low prevalence recorded in university practices that cater for younger persons. Monitoring of BP compares well with national data, with all but one local practice displaying BP records within the last 9 months at or above 82% of patients with known high BP. Vascular health checks have been achieved in between 60% and 100%. This is a wide range of performance, but is consistent with the national standard.

Managing hypertension effectively is especially important in people with diabetes or chronic kidney disease, because both conditions worsen rapidly if BP is poorly controlled, and vascular risk increases disproportionately. Malignant hypertension, a rare form of hypertension, rapidly leads to end organ damage, causing a medical emergency or death. A sudden rise in pressures to 180/110 or more can occur in malignant or accelerated hypertension.

Figure 4 shows the blood pressure control for diabetes and chronic kidney disease patients for Southampton and similar CCGs. BP control  $\leq 140/80$  is important in diabetes because the kidneys and eyes can be especially sensitive to raised BP. Good control is recorded in just over 70% of patients on the local diabetes registers. A similar level of BP control is achieved in people with chronic kidney disease. The best performance across Clinical Commissioning Groups (CCGs) achieved control in approximately 77%, a target we should aspire to across Southampton.

*Figure 4: % patients with BP controlled (diabetes and chronic kidney disease)*



Hypertension causes a lot of long lasting disability, in the form of stroke survivors, chronic heart failure, and other forms of vascular disease, including vascular dementia in which the brain function deteriorates due to loss of blood supply. Without a concerted effort addressing the prevention, diagnosis, treatment, and control of hypertension, the global pandemic of cardiovascular disease will continue. Southampton's population is affected by hypertension as much as any other developed region in Europe, and still faces the same challenges when we set out to reduce the negative impact on health outcomes.

## 6.2 What can be done?

Under diagnosis of hypertension remains a problem, so opportunistic test and re-testing is required to find as much undiagnosed hypertension in the population as possible. There is no population screening programme for hypertension, so opportunistic tests and active case finding has to be encouraged. GP datasets and patient registers provide intelligence on the distribution of hypertension among their patients, as well as information on the effect of treatment on BP control, and should continue to be used to drive up case ascertainment and entry on to GP registers.

In 2013, there were 7.5 million people on GP lists in England alone with hypertension. An estimated 5 million probably have undiagnosed hypertension. Health surveys suggest that the prevalence of hypertension has been stable between 2005 and 2011, but as the GP registers have increased numbers with diagnosed hypertension from 11.3 to 13.7% of the population, it is reasonable to assume there are fewer undiagnosed cases these days.

Most patients with hypertension are diagnosed and managed by GPs and practice nurses. A smaller number have more severe or drug resistant hypertension, and may have care from both GPs and hospital teams. High blood pressure is an especially difficult challenge on kidney units, where the majority of patients have moderate to severe high blood pressure which may be hard to control.

At diagnosis, lifestyle factors are usually managed carefully, especially weight management, smoking cessation, reducing salt intake, avoiding excess alcohol (which elevates blood pressure) and diabetes tests are done. Anti-hypertensive medications are usually required in moderate or severe high blood pressure, but in milder cases, monitoring and lifestyle change is usually tried first. Long term monitoring is needed because BP may rise over time, and other risk factors, such as diabetes may become obvious later on. Some patients respond to a single drug to lower BP, while others may have to take two, three or more types of BP lowering drug to gain control. Some find the side effects of BP tablets hard to cope with, and given the asymptomatic nature of raised BP, this can give rise to treatment failure. Fortunately, the range of BP lowering agents is quite broad, and they have different side effect profiles so most doctors and pharmacists can devise a treatment regimen patients can accept.

Clearly, the progress made with improving the detection of high BP needs to continue by encouraging the population to access BP checks when offered, and to make use of the many opportunities to have BP measured in pharmacies and GP practices. Similarly, testing of BP in health checks and visits to the GP or hospital should be systematically undertaken and recorded by clinicians.

### 6.3 Recommendations:

1. GP practices and other providers of health checks need to use every opportunity to improve the diagnosis of hypertension in the general population, reducing any delay before effective treatment is initiated.
2. General Practices are encouraged to take action to increase the proportion of patients that achieve target BP control on their chronic disease registers.
3. The Health Services and other partners should take every opportunity to raise public awareness of the high prevalence of high blood pressure, where to access BP measurements, and how modification of lifestyle can reduce the risk of cardiovascular complications.
4. Low cost home BP monitoring is widely available and affordable, it provides useful information, and helps reassure people that their BP is under control. Steps should be taken to ensure accurate measurement technique and regular recalibration of the equipment used. This option may not suit all individuals, and can cause undue anxiety, so we recommend people discuss this option with their GP. Useful online information can be found at: <http://www.bloodpressureuk.org/BloodPressureandyou/Homemonitoring>

#### 6.4 References:

WHO, DCO & WHD (2013) *A Global Brief on Hypertension. Silent killer, global public health crisis.*

WHO (2014) *Global Health Risks: Mortality and Burden of Disease attributable to selected major risks.*

## 7. Tackling health inequalities in Southampton

### 7.1 Why is this issue important?

People enjoy different levels of health and have always done so. The fact that health is distributed unequally in society and that those who are less well-off tend to have poorer health is a challenge for all those who are concerned about fairness and social justice. Health inequalities exist and are persisting in Southampton, as elsewhere, despite a focus over the last decade on reducing them. This chapter explores the reasons for this, and what more can be done to tackle this issue.

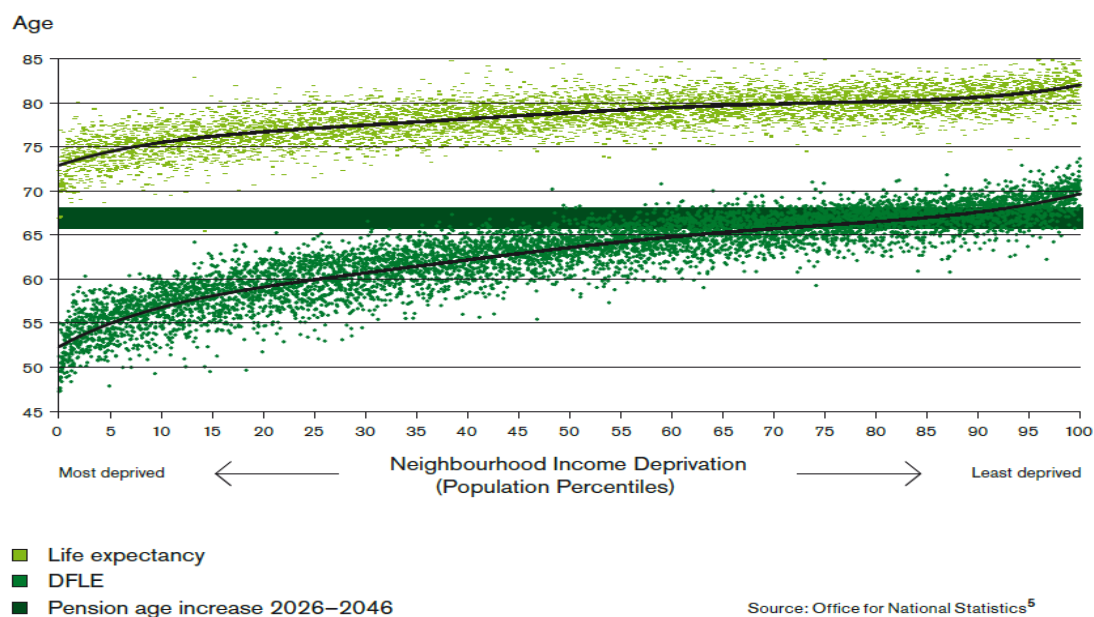
#### What causes health inequalities?

The Acheson Report published in 1998<sup>1</sup> provided the focus for action on health inequalities in England for more than a decade, and underpinned the national inequalities strategy. The Marmot Review in 2010 set out to reassess the extent of health inequalities and the evidence to underpin future policy and action, and to advise on objectives and measures for tackling the issue. The review team's work continues and subsequent reports provide guidance and tools for both national and local level planning.

The Review Team's key findings and recommendations were:

- People living in the poorest neighbourhoods in England will on average die seven years earlier than people living in the richest neighbourhoods.
- People living in poorer areas not only die sooner, but spend more of their lives with disability - an average total difference of 17 years (see figure 1).
- The Review highlights the social gradient of health inequalities - put simply, the lower a person's social and economic status, the poorer their health is likely to be.
- Health inequalities arise from a complex interaction of many factors - housing, income, education, social isolation, disability - all of which are strongly affected by economic and social status.
- Health inequalities are largely preventable. Not only is there a strong social justice case for addressing health inequalities, there is also a pressing economic case. It is estimated that the annual cost of health inequalities is between £36 billion to £40 billion through lost taxes, welfare payments and costs to the NHS.
- Action on health inequalities requires action across all the social determinants of health, including education, occupation, income, home and community.

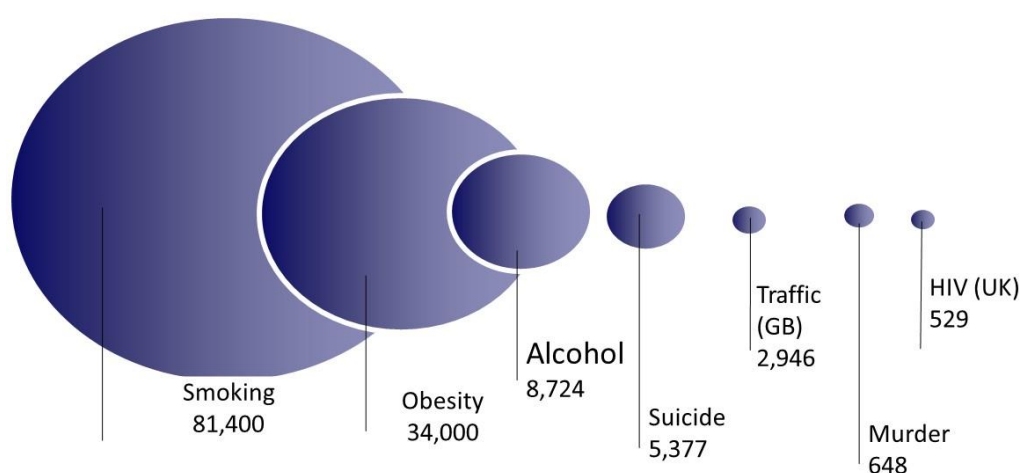
Figure 1: Life expectancy and disability-free life expectancy at birth by neighbourhood income level, England (1999-2003)



Lifestyle risk factors such as smoking, obesity, excess alcohol consumption, unhealthy diets and lack of exercise are well understood as key contributors to the major disease burden in England. Smoking is still by far the biggest contributor to premature death in England and, as smoking is more common among those on lower incomes, it continues to be a major factor underlying health inequalities (see figure 2).

Figure 2: Causes of preventable deaths in England (ASH, 2012)<sup>2</sup>

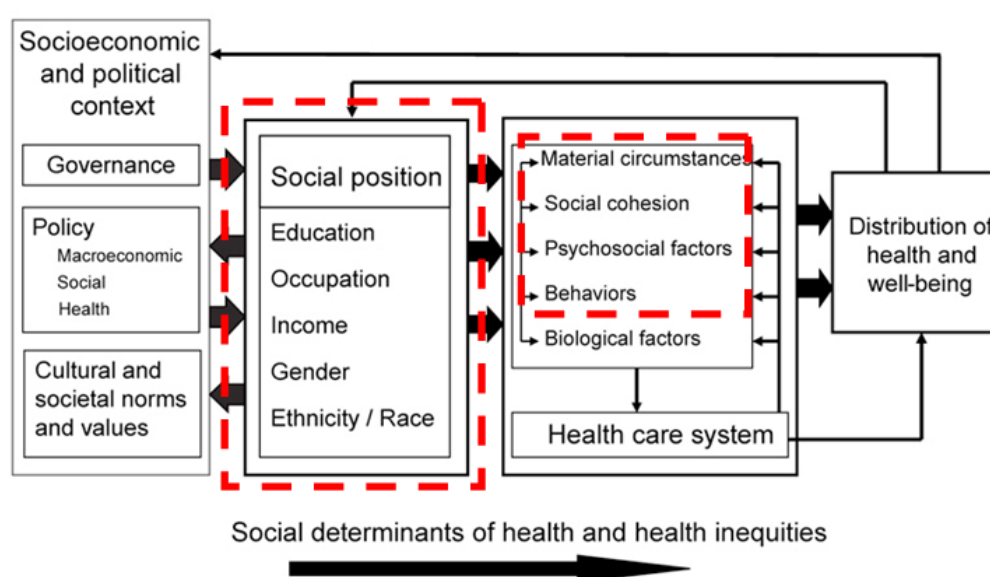
### Causes of preventable deaths in England (ASH 2012)



References:  
1. ASH Factsheet, Smoking Statistics: Illness & death, June 2011 ([http://www.ash.org.uk/files/documents/ASH\\_107.pdf](http://www.ash.org.uk/files/documents/ASH_107.pdf)) NB area represents value

Social determinants of health are also recognised as exerting a key impact on health outcomes. The Marmot Review reinforces a social determinants model of health inequalities and endorses a conceptual framework of health proposed by the World Health Organisation (WHO) shown in figure 3 below. The WHO commission on the social determinants of health proposes that the distribution of health and wellbeing is caused by material circumstances, social cohesion, psychosocial factors, behaviours and biological factors.

Figure 3: Commission on Social Determinants of Health Conceptual Framework (WHO 2008)<sup>3</sup>

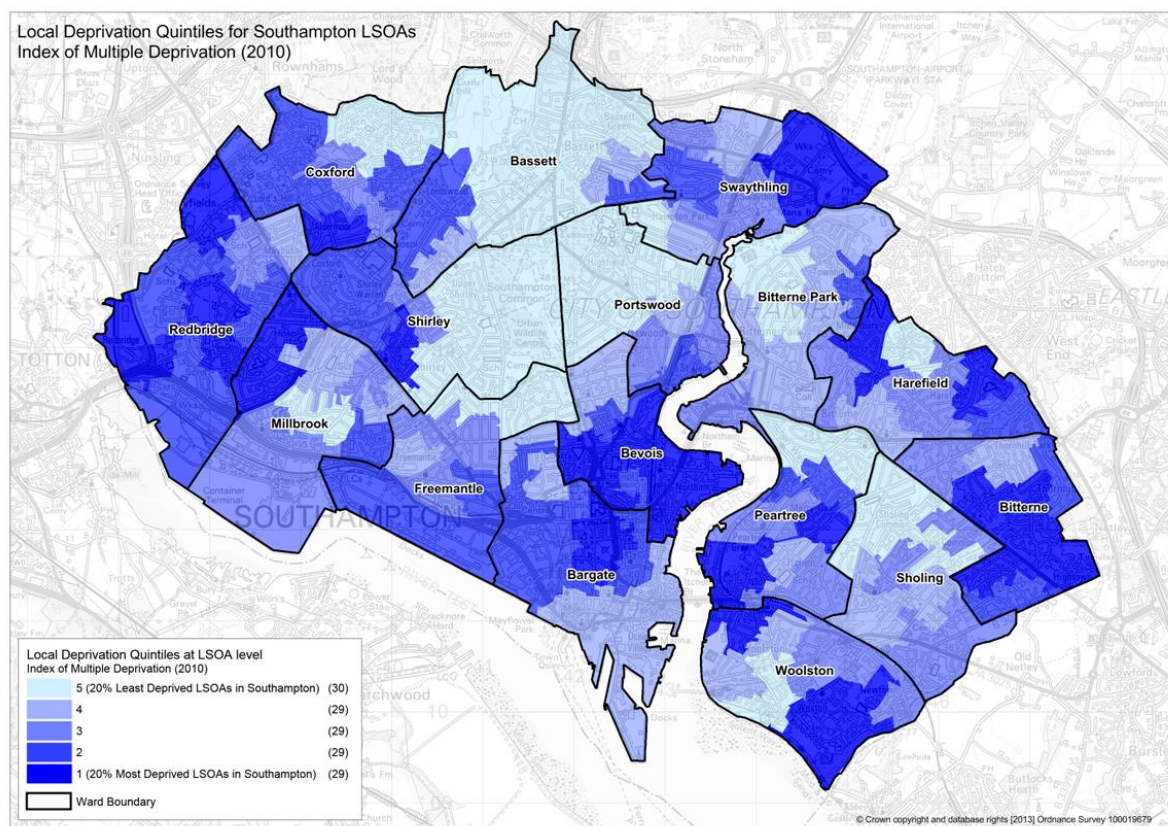


### What is the situation in our City?

In the past we have based our analysis of inequalities in Southampton on comparisons of the health of people living in eleven areas defined as “priority for action” in the City’s Neighbourhood Renewal Strategy. These were described in the 2009 Report of the Director of Public Health. The Report showed that up until 2007 there had been little progress in reducing the gap between the 40% of Southampton people living in relatively disadvantaged circumstances and those who were better off, despite overall health improving.

Recognising that all our neighbourhoods have a mix of communities and living circumstances, we now compare and contrast the health inequalities that exist between the 20% most deprived neighbourhoods in Southampton and the 20% least deprived. These neighbourhoods have been defined in terms of Lower Super Output Areas (LSOAs). The 20% most and least deprived LSOAs (referred to as the most and least deprived quintiles) were identified using the Index of Deprivation 2010 (ID2010)<sup>4</sup>. Figure 4 shows a map of deprivation quintiles in the city against geographical boundaries.

Figure 4: Local deprivation quintiles for Southampton LSOAs



A separate Briefing Note, *Health Inequalities in Southampton City: Analysis of Trends (November 2014)*<sup>5</sup>, provides a detailed assessment of a range of measures of health, examines the differences and gradients that exist and the changes that have taken place over the past five years. It also gives details of the methods that have been used. The key findings are summarised in figure 5 below. The tables show three things: the size of the difference in health between the worst-off 20% and the most affluent; whether the health indicator is improving for those who are worst-off; and, whether the gap in health is narrowing.

Figure 5: Summary: Progress towards narrowing the gap

Please note that although this table provides a summary of the inequalities in the city, it only provides a snapshot in time. Readers are advised to refer to the graphs contained throughout this report for a more thorough representation of whether the inequalities gap is narrowing or not.

Current Gap Key	Improving Key	Narrowing Key
Most deprived significantly worse	Significantly worse than baseline	Gap has widened (significance not measured)
Most deprived worse but not significantly so	Worse than baseline but not significantly so	Gap has narrowed (significance not measured)
Most deprived better but not significantly so	Better than baseline but not significantly so	
Most deprived significantly better	Significantly better than baseline	

Life Expectancy and Mortality Indicators			
Measure	Current Gap - Most deprived vs. least (2011-13)	Have the most deprived areas improved between 2006-08 and 2011-13?	Has the inequality gap narrowed between 2006-08 and 2011-13?
Life expectancy for males	6.7 yrs lower	↑ 0.6 yrs	0.5 yrs ↔
Life expectancy for females	3.2 yrs lower	↓ 0.1 yrs	1.6 yrs ↔
All cause, all age mortality	1.36 x higher	↓ 1.4%	9.5% ↔
Male All cause, all age mortality	1.50 x higher	↓ 3.4%	10.0% ↔
Female All cause, all age mortality	1.23 x higher	↑ 0.8%	11.8% ↔
Premature (u75) all cause mortality	1.95 x higher	↓ 8.4%	1.8% →←
Male Premature (u75) all cause mortality	2.10 x higher	↓ 10.7%	27.0% →←
Female Premature (u75) all cause mortality	1.77 x higher	↓ 3.8%	23.6% ↔
All circulatory disease mortality	1.26 x higher	↓ 10.6%	4.2% ↔
Male All circulatory disease mortality	1.42 x higher	↓ 12.8%	7.0% ↔
Female All circulatory disease mortality	1.10 x higher	↓ 7.6%	5.6% ↔
Premature (u75) circulatory disease mortality	2.20 x higher	↓ 28.0%	20.7% →←
Male Premature (u75) circulatory disease mortality	2.30 x higher	↓ 28.7%	75.8% →←
Female Premature (u75) circulatory disease mortality	2.10 x higher	↓ 23.4%	46.1% ↔
All cancer mortality	1.42 x higher	↑ 6.0%	12.9% ↔
Male All cancer mortality	1.43 x higher	↓ 2.3%	13.8% ↔
Female All cancer mortality	1.39 x higher	↑ 13.8%	15.3% ↔
Premature (u75) cancer mortality	1.57 x higher	↑ 4.9%	14.8% ↔
Male Premature (u75) cancer mortality	1.63 x higher	↑ 1.2%	4.5% ↔
Female Premature (u75) cancer mortality	1.50 x higher	↑ 9.6%	24.3% ↔
COPD mortality	2.25 x higher	↑ 3.7%	42.2% →←
Male COPD mortality	2.23 x higher	↓ 4.2%	20.4% →←
Female COPD mortality	2.57 x higher	↑ 23.9%	43.9% →←

Hospital Procedure Indicators			
Measure	Current Gap - Most deprived vs. least (2012)	Have the most deprived areas improved between 2007 and 2012?	Has the inequality gap narrowed between 2007 and 2012?
Ratio of CHD Invasive Procedures to U75 CHD Mortality	2.16 x lower	↓ 18.64%	62.7% ↔

Maternity and Child Health Indicators			
Measure	Current Gap - Most deprived vs. least (2013/14)	Have the most deprived areas improved between 2008/09 and 2013/14?	Has the inequality gap narrowed between 2008/09 and 2013/14?
Proportion of mothers smoking at midwifery booking	3.85 x higher	↓ 2.1%	0.2% ↔
Proportion of mothers breastfeeding at initial feed	1.36 x lower	↑ 0.9%	0.1% →←

Measure	Current Gap - Most deprived vs. least (2011-13)	Have the most deprived areas improved between 2006-08 and 2011-13?	Has the inequality gap narrowed between 2006-08 and 2011-13?
Proportion of births weighing less than 2500g	1.33 x higher	↑ 0.4%	0.5% ↔

Measure	Current Gap - Most deprived vs. least (11/12-13/14)	Have the most deprived areas improved between 06/07-08/09 and 11/12-13/14?	Has the inequality gap narrowed between 06/07-08/09 and 11/12-13/14?
Proportion of reception children classified as obese	1.57 x higher	↑ 1.7%	2.2% ↔
Proportion of year 6 children classified as obese	1.53 x higher	↑ 2.0%	1.0% ↔

Access to Smoking Cessation Services			
Measure	Current Gap - Most deprived vs. least (2013/14)	Have the most deprived areas improved between 2009/10 and 2013/14?	Has the inequality gap narrowed between 2009/10 and 2013/14?
Crude rate of smoking quit attempts per 10k pop (18+)	4.36 x higher	↓ 54.2%	136.5% ↔ *
Proportion of smokers successfully quitting at 4 weeks	1.26 x higher	↓ 20.8%	16.7% →←

Cancer Incidence Indicators			
Measure	Current Gap - Most deprived vs. least (2010-12)	Are the most deprived areas improving compared to baseline (2002-04)?	Has the inequality gap narrowed from baseline (2002-04)?
All cancer incidence DSR	1.16 x higher	↑ 3.9%	6.3% →←
Male all cancer incidence DSR	1.15 x higher	↓ 4.5%	11.4% →←
Female all cancer incidence DSR	1.17 x higher	↑ 10.3%	3.5% →←
Measure	Current Gap - Most deprived vs. least (2008-12)	Are the most deprived areas improving compared to baseline (2002-06)?	Has the inequality gap narrowed from baseline (2002-06)?
Colorectal cancer incidence DSR	1.27 x higher	↑ 21.0%	24.3% ↔
Lung cancer incidence DSR	2.12 x higher	↑ 8.1%	2.1% ↔
Male lung cancer incidence DSR	1.99 x higher	↑ 8.1%	23.4% ↔
Female lung cancer incidence DSR	2.21 x higher	↑ 3.0%	36.3% →←
Breast cancer incidence DSR	0.93 x lower	↓ 2.0%	10.6% →←

The key messages from this detailed analysis are:

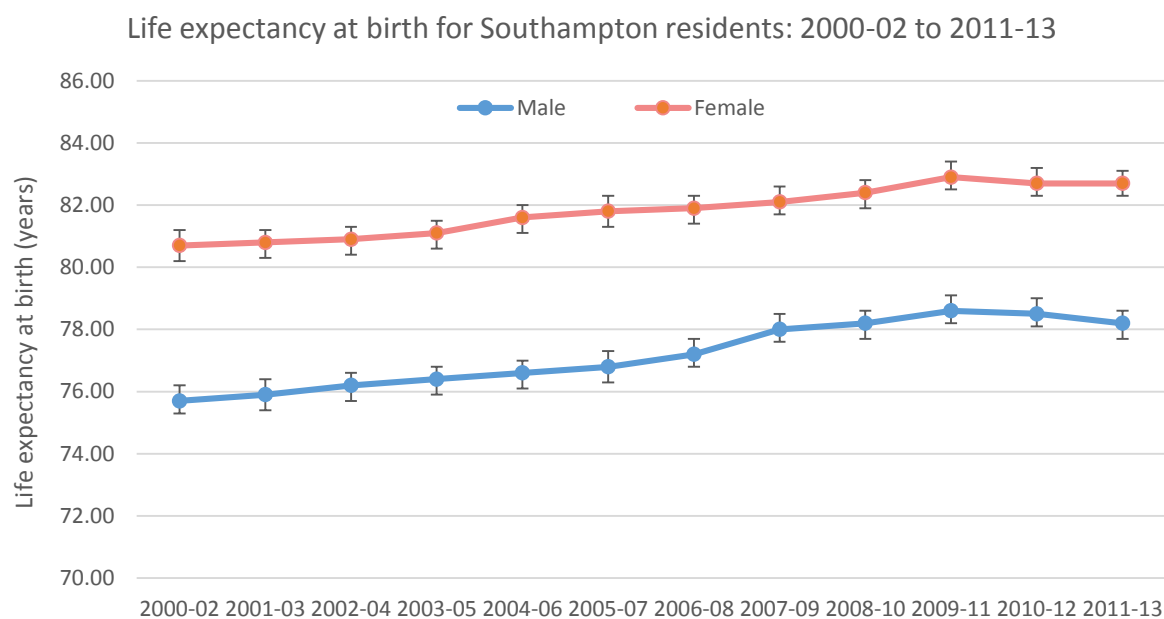
- *If you are in the 20% less well-off areas, you are twice as likely to die before reaching 75*
- *... and more than twice as likely to die from heart disease or a stroke*
- *Early deaths from cancer and lung disease are also much more common*
- *For men in particular it seems that, even if you are less well-off, life expectancy is improving*
- *BUT ... for most of the things we are tracking, we are not showing that the gap is reducing*

It is important to recognise that overall health has improved over the last decade, and this was described in some detail in the 2011 Annual Report<sup>6</sup>. Life expectancy has increased, deaths from heart disease and stroke have continued to fall and cancer survival has improved. Our new analysis confirms this overall trend.

Life expectancy is a good overall measure, and this has increased for both men and women, as illustrated in figure 6.

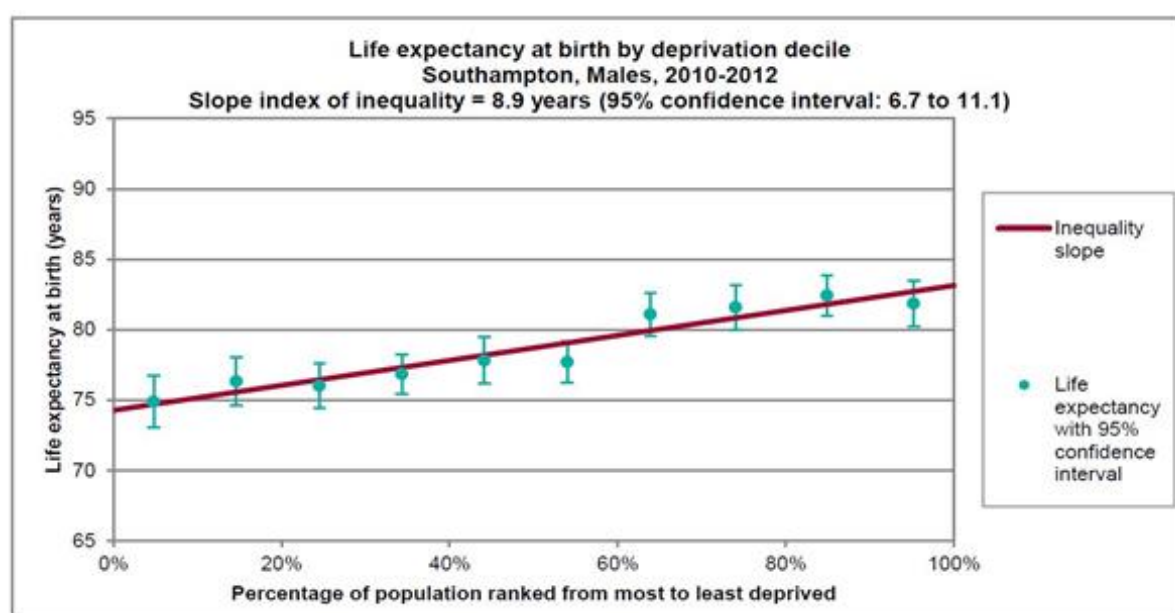
However, a significant life expectancy gradient remains. Figure 7 shows how, for men, there is nearly a ten year difference accounted for by deprivation.

Figure 6: Life expectancy at birth in Southampton



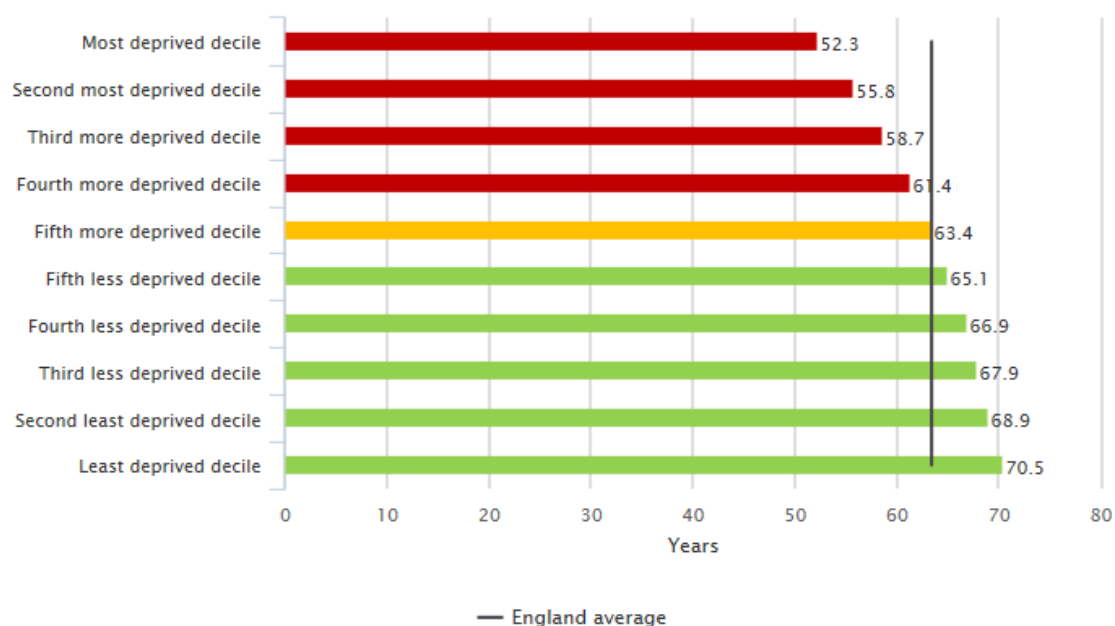
Source: PHE Public Health Outcomes Framework

Figure 7: Slope Index of Inequality



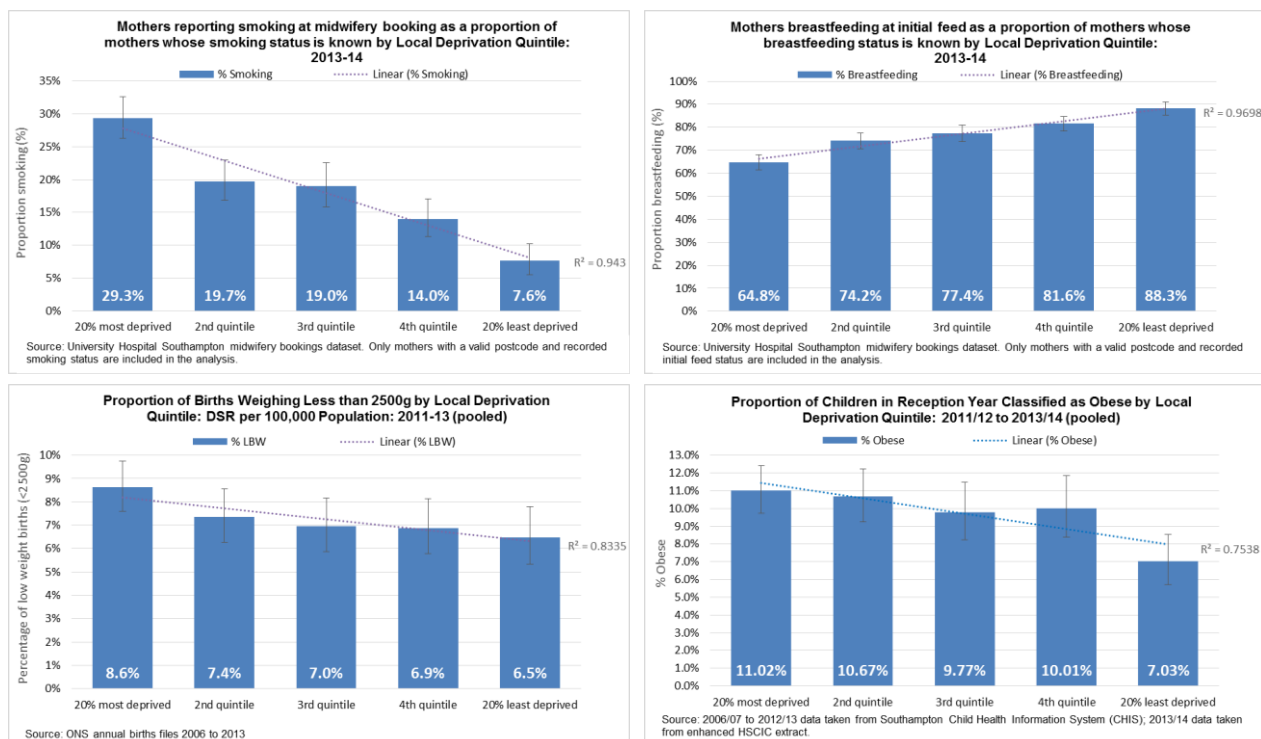
Healthy life expectancy (HLE) is an estimate of how many years people might live in a 'healthy' state. HLE is a key summary measure of a population's health. Men in Southampton have the second lowest HLE in the South East (61.3 years), and there is a very marked difference depending on socio-economic circumstances. Figure 8 shows that the most affluent 10% can expect to enjoy more than 18 extra years of healthy life than the 10% least well-off.

Figure 8: Male Healthy Life Expectancy by deprivation decile (IMD 2010), Southampton (2010-12)



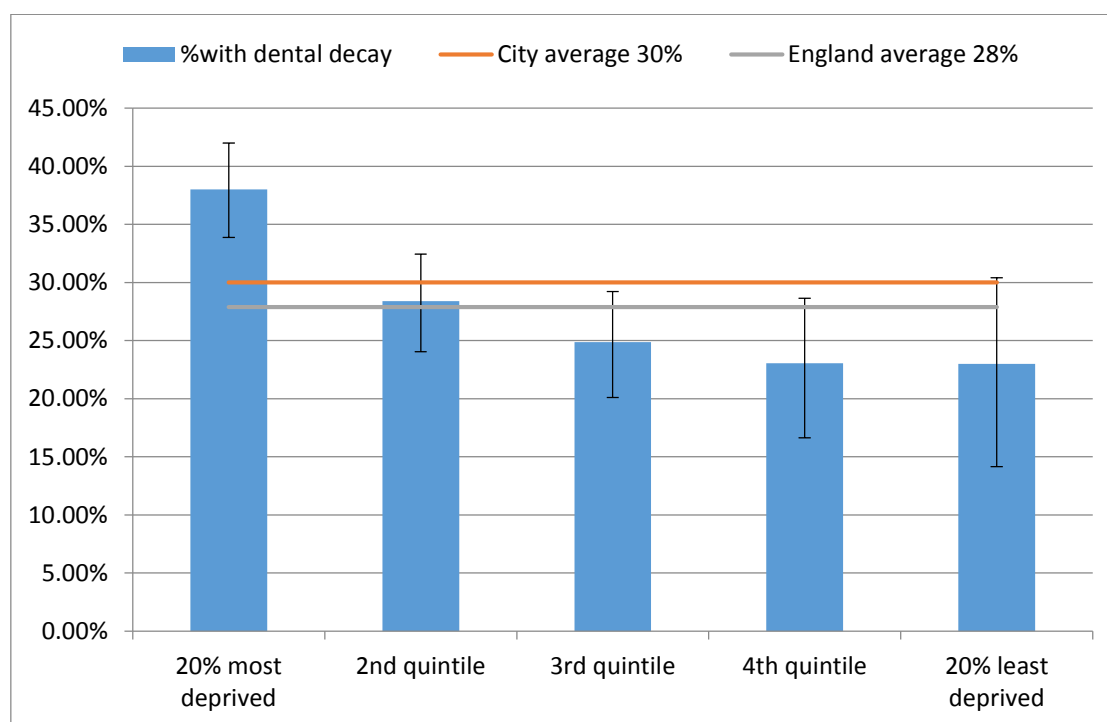
The Briefing Note explored a range of health data for the city and demonstrates a number of very striking differences that relate to deprivation. Figure 9 shows some important indicators of children's start in life. A smoke-free pregnancy reduces the risk of low birth weight, and breast feeding contributes benefits throughout early childhood, including setting the course for being a healthy weight.

Figure 9



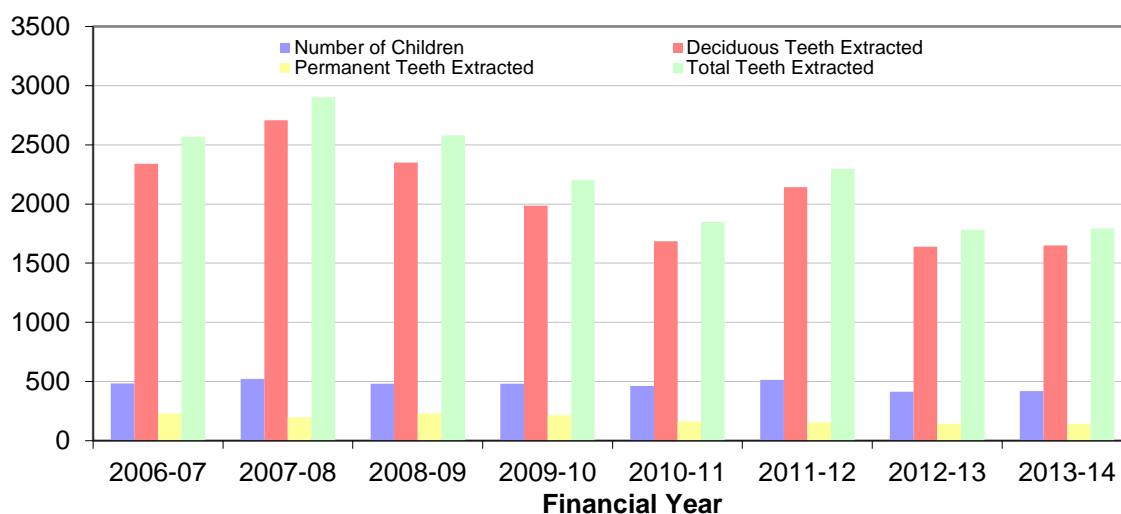
In addition, good oral health is particularly important for young children as they are just learning to speak and socialise, and a varied healthy diet is essential for development and achievement of their potential. Poor oral health results in pain and distress, which is undesirable particularly in early childhood. Child dental health surveys indicate that children in Southampton have poorer oral health than many other areas in the country. In the last survey of five-year-old children, around 30% of Southampton children had experience of dental decay (England = 27.9%). Figure 10 below shows the distribution of dental decay experience by deprivation quintile, with 38% of children in the most deprived quintile experiencing dental decay compared to 23% in the least deprived – an inequality gap of 15%.

*Figure 10: Proportion of 5-year old children resident in Southampton with experience of dental decay by IMD (2010) deprivation quintile: 2011/12*



Dental treatment can sometimes involve removing badly decayed teeth under a general anaesthesia (GA). Dental GAs are the main reason for children being admitted to hospital. Over 400 children are admitted each year in Southampton. Most of these children will be from the most disadvantaged backgrounds. Figure 11 indicates the trend over the last seven years. On average this would involve two to three visits which accounts for around 1,000 days off school, not taking account of the impact on parents'/ carers' time off work, sleepless nights and pain and distress to the child.

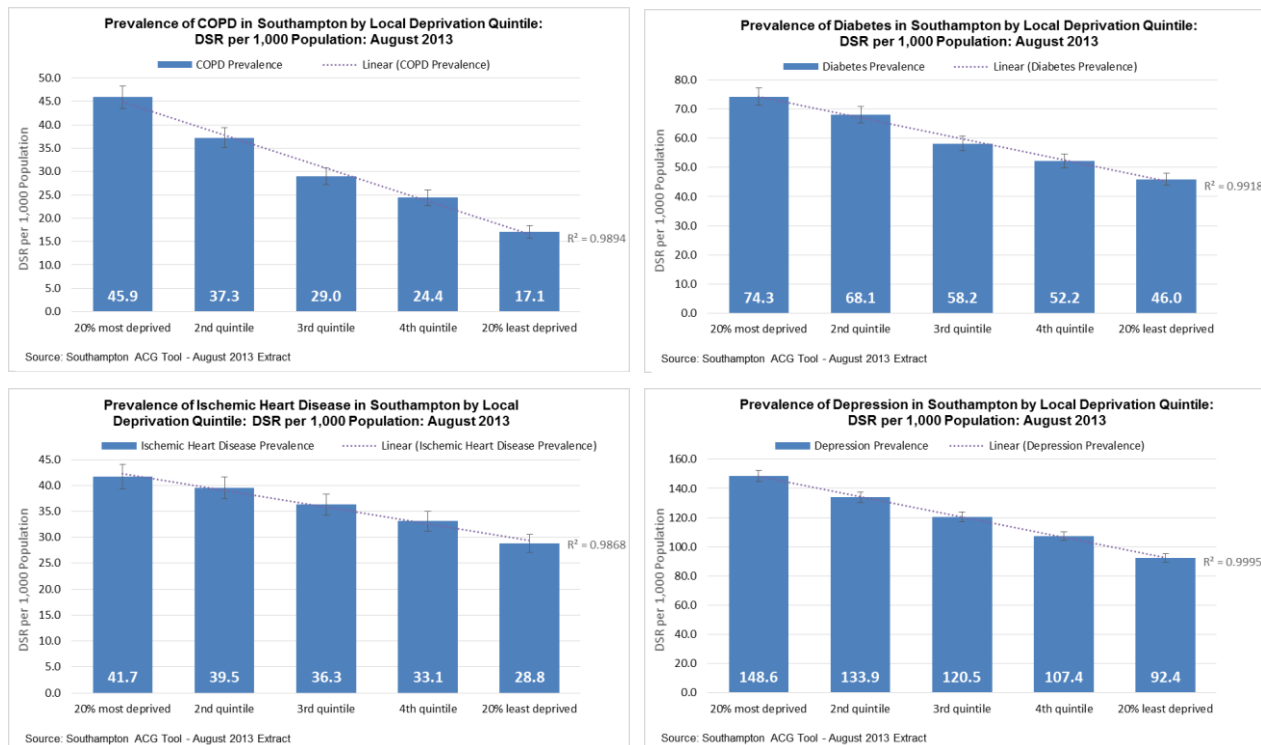
Figure 11: GA Extractions for Children in Southampton: 2006/07 - 2013/14



Sources: ONS Mid-Year Population Forecasts, Extraction data from NHS Solent Trust.

Amongst adults, even more striking gradients exist when looking at a number of chronic illness, such as lung disease (COPD), diabetes, heart disease and depression, as illustrated in Figure 12.

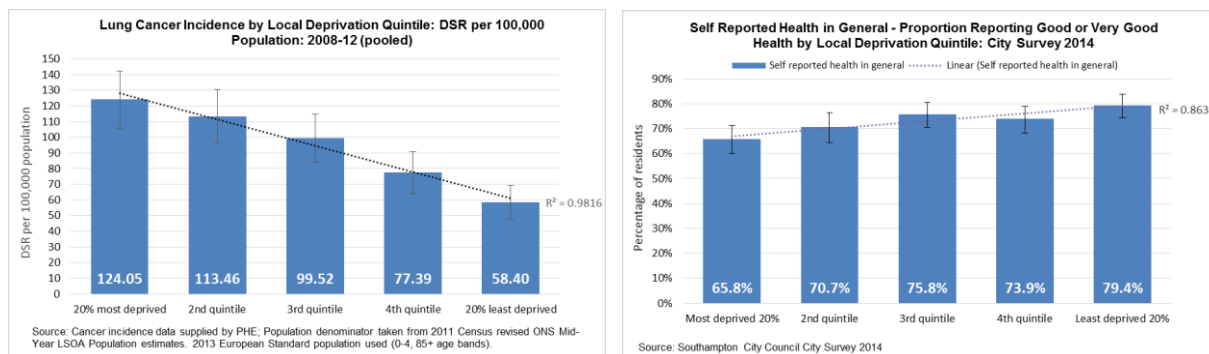
Figure 12



People in the least well-off group are over four times more likely to have one or more long term health conditions.

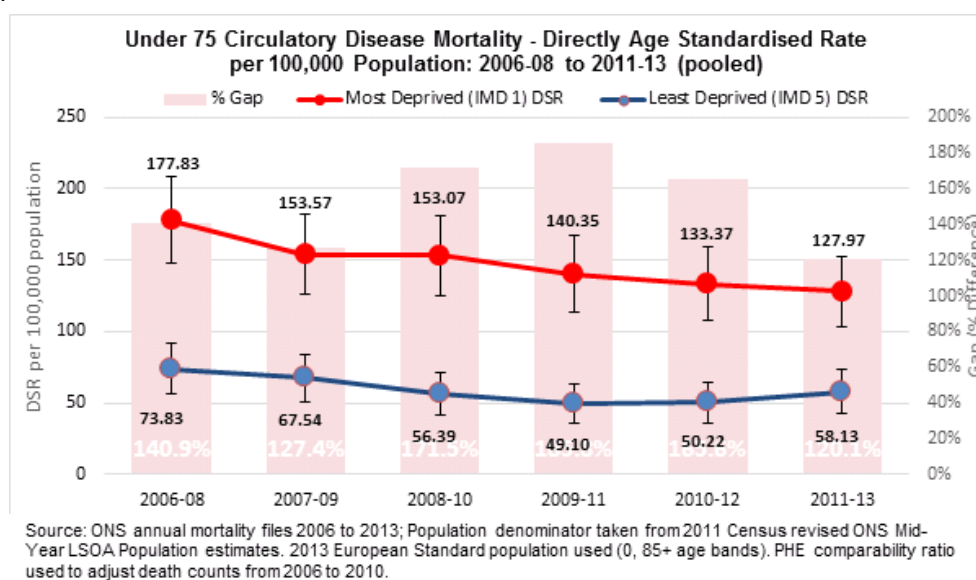
The Briefing Note shows how cancer is more common in those who are less well off, with the exception of breast cancer. Lung cancer is markedly more common, and data from the 2014 City Survey also illustrates how the reduction of smoking rates is lagging behind, with the smoking rates double those of the 20% least deprived. Unless smoking and other unhealthy lifestyles reduce among those less well-off, health inequalities will persist for a future generation.

Figure 13



As the trend data in Figure 5 illustrated, there is no clear pattern of gap narrowing from the measures that have been analysed. For many indicators the trend is an improving one for both the least well-off and the best-off, but the gap is persisting. For example, early deaths from heart disease and stroke have been falling for several decades. The recent local data shows that this trend is continuing, but the rate remains over twice as high in the 20% most deprived (Figure 14).

Figure 14



## 7.2 What can be done?

The opportunity to make changes and adopt healthier lifestyles is in itself affected by a broader set of circumstances, most importantly the amount of control people have in their lives. The Marmot Review team carried out a comprehensive review of the evidence and an assessment of what actions are likely to be most effective in reducing health inequalities in the short, medium and long term. Six key policy areas were proposed, with a set of actions for each.

### **Policy objective A – Give every child the best start in life**

- Reduce inequalities in the early development of physical and emotional health, and cognitive, linguistic, and social skills.
- Ensure high quality maternity services, parenting programmes, childcare and early years education to meet need across the social gradient.
- Build the resilience and wellbeing of young children across the social gradient.

### **Policy objective B – Enable all children, young people and adults to maximise their capabilities and have control over their lives**

- Reduce the social gradient in skills and qualifications.
- Ensure that schools, families and communities work in partnership to reduce the gradient in health, well-being and resilience of children and young people.
- Improve the access and use of quality life-long learning across the social gradient.

### **Policy objective C – Create fair employment and good work for all**

- Improve access to good jobs and reduce long-term unemployment across the social gradient.
- Make it easier for people who are disadvantaged in the labour market to obtain and keep work.
- Improve quality of jobs across the social gradient.

### **Policy objective D – Ensure a healthy standard of living for all**

- Establish a minimum income for health.
- Reduce the social gradient in the standard of living through progressive taxation and other fiscal policies.
- Reduce the cliff edges faced by people moving between benefits and work.

### **Policy objective E - Create and develop healthy and sustainable places and communities**

- Develop common policies to reduce the scale and impact of climate change and health inequalities.
- Improve community capital and reduce social isolation across the social gradient.

### **Policy objective F – Strengthen the role and impact of ill-health prevention**

- Prioritise prevention and early detection of those conditions most strongly related to health inequalities.
- Increase availability of long-term and sustainable funding in ill health prevention across the social gradient.

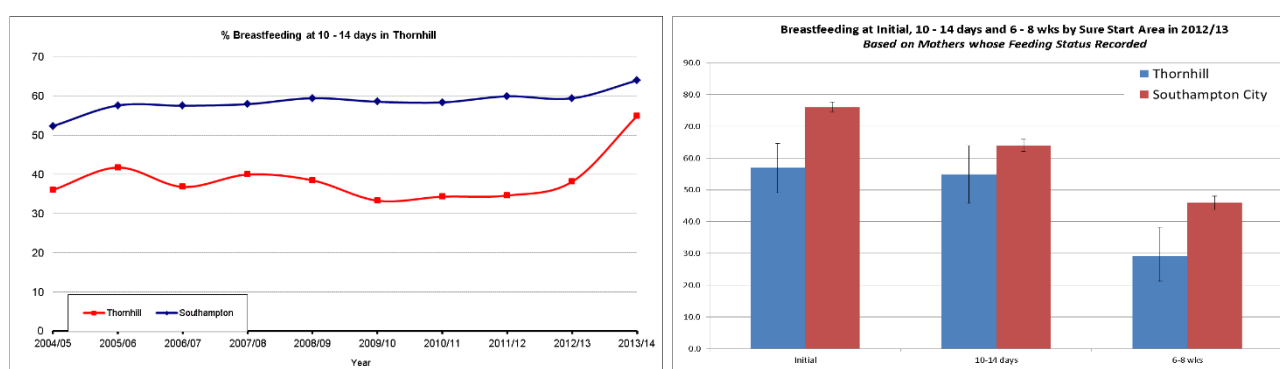
Policy objective F focuses on the key role of prevention in reducing health inequalities. It recommends that investment in prevention and health promotion is prioritised across government departments to reduce the social gradient. It proposes the implementation of evidence-based programmes of preventative interventions that are effective across the social gradient and cites in particular the need for sustained action on smoking, alcohol and obesity.

### What have we done locally?

Local health improvements, particularly those in disadvantaged groups, have come as a result of a range of local and national initiatives. Adult smoking rates have fallen from 36% to 22% over a decade, in part due to the provision of local stop smoking services, increasingly targeted to reach people on low incomes. But national campaigns and Smoke Free legislation have helped to de-normalise smoking. The number of children smoking (8%) is half the rate five years ago, and efforts to prevent young people being recruited as the next generation of nicotine addict need to be stepped up. The ban on smoking in cars carrying children and plain packaging will be the national next steps towards a Smoke Free future.

The rise in childhood obesity has slowed, in part due to local initiatives to raise awareness of the problem, promote healthy eating in childcare and school settings, and increase opportunities for physical activity. Through the work of Southampton's Children's centres and the local Health Trainers programme these initiatives have targeted higher needs groups and taken increasingly holistic approaches to supporting individuals and families to make changes. More recently, intensive work by the midwives and health visitors in the East of the City has enabled more mothers in Thornhill to breastfeed, an area with traditionally low rates (see Figure 15).

Figure 15: Breast feeding in Thornhill Sure Start area, 2012/13



As shown previously in figure 11, the number of GA dental extractions amongst children in Southampton is very high. Data from Dudley (Southampton's closest equivalent fluoridated area) indicates that in 2008-9 there were 40 children in Dudley requiring this procedure, compared to 481 in Southampton. This gives an indication of the impact of water fluoridation on the oral health of

children and why, from a public health perspective, this intervention continues to be recommended as both effective and safe, and to protect the most vulnerable of the City's children.

The water fluoridation scheme for Southampton is currently not being implemented as it does not have the support of the Council. Efforts to improve children's oral health continue, following best practice. There are currently around 800 children in 15 school settings participating in supervised tooth-brushing programmes. These are being expanded to include all Early Year's settings over the next year. The programme also includes recommendations for health eating and encouraging parents to take children to a dentist regularly.

Drugs and alcohol services have been enabling more people to tackle problematic use, while developing innovative approaches to prevent use and misuse in the first place, some of which have been described in previous Public Health Annual Reports.

Cancer and other screening programmes run by the NHS help detect health problems earlier, when treatment is likely to be more successful. Immunisation has reduced the burden of infectious diseases, particularly in childhood, and the national programme continues to offer new vaccinations as evidence for cost-effectiveness emerges. While immunisation rates have been good in recent years, variations in coverage need further evaluation, as more of those from high needs areas or groups are likely to be missing out. Screening uptakes need to be similarly reviewed.

Better management of long-term conditions, and ensuring that those least well-off are accessing the services they need, will improve outcomes and add life to years as well as years to life. Each year, the Public Health Annual Report focuses on different groups of illnesses and makes recommendations on how population outcomes can be improved. This year's report looks at hypertension and dementia.

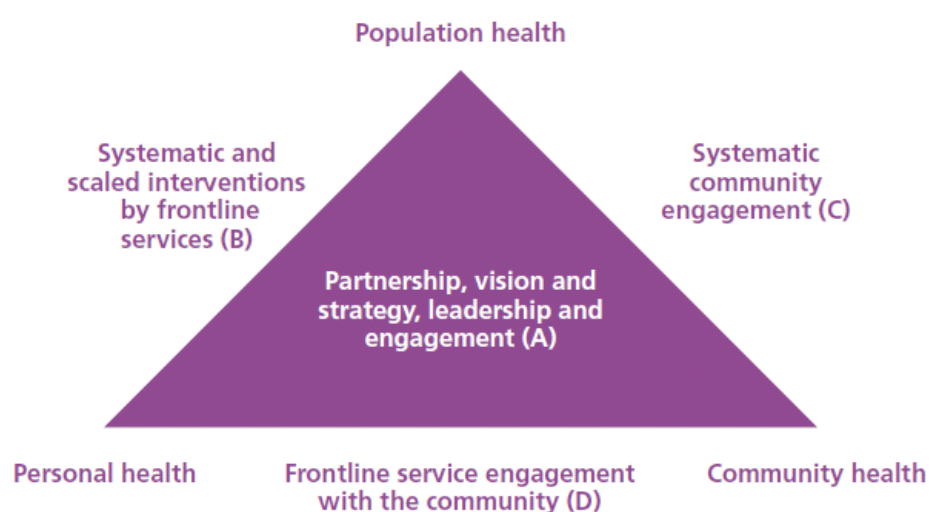
Actions on wider determinants such as improving housing conditions, community safety, skills development and employment opportunities, neighbourhood regeneration, and improved transport infrastructure have undoubtedly improved the lives of many people. While we have many successes to celebrate, many of which have been described in previous reports, the City would benefit from a more systematic and better co-ordinated approach.

### **What more can we do?**

The final report of the Strategic Review of Health Inequalities in England post-2010 has provided best evidence to support both national and local action. It is informing the direction of national strategy. At a local level the recommendations provide the opportunity for Southampton City Council and its partners to review commissioning of health and wellbeing activity across the city to ensure best evidence is implemented and best outcomes secured to reduce health inequalities.

Unless a more systematic and consistent approach is adopted across the city, the inequalities in health that are described in this report are likely to continue. The local focus has to be on those measures for which there is strong evidence that they will make the most difference. The 2009 Public Health Annual Report set out advice developed by the National Support Team for Health Inequalities. A whole systems approach was recommended, with interventions at whole population, community and personal health level. Success, based on experience in deprived areas in England, depends on four key factors, summarised in Figure 16:

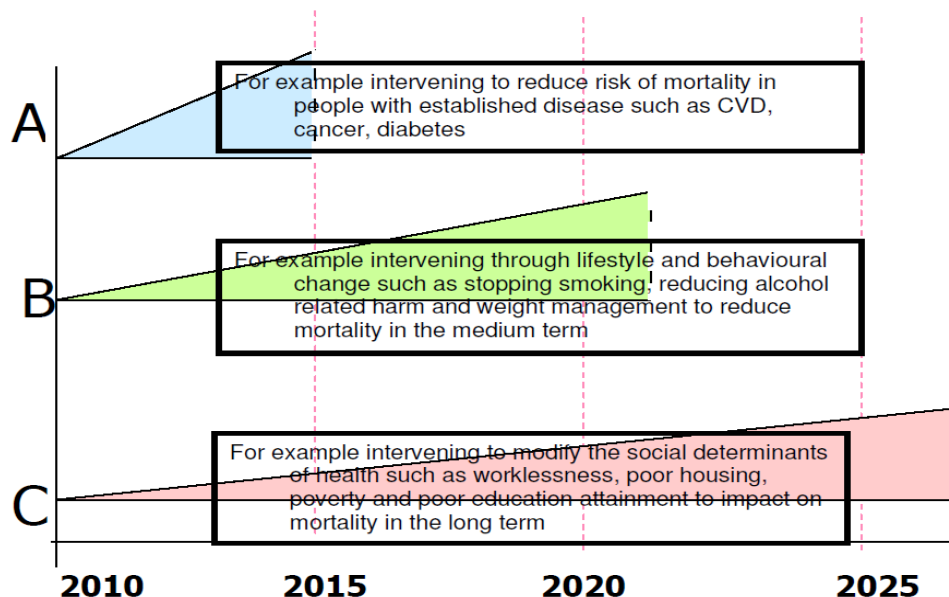
Figure 16: Producing percentage change at population level



(Source: Chris Bentley, Health Inequalities Support Team)

- A. The whole system must be driven by committed leadership fostering engagement, effective local strategic partnership and a locally owned, coherent vision and strategy.
- B. Interventions must be provided effectively with system and scale by frontline services proactively pursuing health outcomes.
- C. Community development should be addressed in a systematic way, rather than ad hoc, targeting engagement and support to the weakest and least capable of responding alone.
- D. A range of processes should connect frontline services into the heart of communities, reaching out to “seldom seen, seldom heard” groups and individuals.

This approach can succeed, but not overnight. It is important to recognise that different interventions take different lengths of time to have their impact on a populations health and their gap-narrowing effect, as illustrated in Figure 17.

Figure 17: Health inequalities –different gestation times for interventions<sup>7</sup>

However, tackling key public health challenges with a broad range of approaches over many years can bring a range of benefits to society as a whole. For example, obesity reduces life expectancy by three years, on average, and severe obesity by eight to ten years. It is more common in those living in deprived areas and, like many public health challenges, there is no silver bullet that will halt its rise and reduce the multiple health harms it causes. The evidence shows that a whole system, partnership approach is required, and the benefits of tackling this societal challenge will have wide-reaching impacts, as illustrated in Figure 18.

Figure 18: Impact of actions to reduce obesity<sup>8</sup>

In the new, post-2013 health and social care system, Health and Wellbeing Boards are well placed to lead on developing a local vision and a determined whole-system approach to narrowing the health gap.

In developing such an approach local areas such as Southampton can benefit from newly published evidence reviews and equity briefings from Public Health England and the UCL Institute of Health Equity. These include evidence, practical points and case studies on approaches and actions that can be taken by local authorities on a range of issues to reduce health inequalities, and cover 9 topic areas as summarised in figure 19 below<sup>9</sup>:

Figure 19

	Health equity evidence reviews	Health equity briefings
<b>Early intervention</b>	1. Good quality parenting programmes and the home to school transition	1a. Good quality parenting programmes 1b. Improving the home to school transition.
<b>Education</b>	2. Building children and young people's resilience in schools	2. Building children and young people's resilience in schools
	3. Reducing the number of young people not in employment, education or training (NEET)	3. Reducing the number of young people not in employment, education or training (NEET)
	4. Adult learning services	4. Adult learning services
<b>Employment</b>	5. Increasing employment opportunities and improving workplace health	5a. Workplace interventions to improve health and wellbeing
		5b. Working with local employers to promote good quality work
		5c. Increasing employment opportunities and retention for people with a long-term health condition or disability
		5d. Increasing employment opportunities and retention for older people
<b>Ensuring a healthy living standard for all</b>	6. Health inequalities and the living wage	6. Health inequalities and the living wage
<b>Healthy environment</b>	7. Fuel poverty and cold home-related health problems	7. Fuel poverty and cold home-related health problems
	8. Improving access to green spaces	8. Improving access to green spaces
	<b>Implementation and impact: health equity briefings</b>	
	9. Understanding the economics of investments in the social determinants of health	10. Tackling health inequalities through action on the social determinants of health: lessons from experience

Southampton City Council has established a Fairness Commission to investigate and report on what can be done to create a fairer City. Issues of social justice will be highlighted and the Commission's recommendations, due in early 2015, will create a springboard for the Health and Wellbeing to launch a fresh approach to narrowing the health gap.

Elsewhere in England, some councils and their partners are looking at how obligations under the Social Value Act (2012) can contribute to this agenda. The Act requires public sector organisations to consider how to increase local economic, social and environmental benefits when spending money on goods and services. Other councils are looking at ways of ensuring that health and reducing health inequalities are included as objectives in all their policies.

Despite the challenging financial situation faced by all public sector organisations, there are many opportunities and approaches that should be explored to tackle the health inequalities that persist in Southampton.

### **7.3 Recommendations:**

1. Based on the best evidence available, the City's Health and Wellbeing Board should develop a city-wide targeted programme of actions to tackle health inequalities due to wider social and environmental factors affecting the public's health.
2. The Health and Wellbeing Board should make specific recommendations on urgent, high priority actions to be taken by the Council and the local NHS that will have the most impact in the short to medium term, based on findings in this report.
3. The local NHS, led by the Clinical Commissioning Group, should assess health inequalities that could be reduced by health service interventions, and develop deliverable plans to reduce these.
4. The Health and Wellbeing Board should use the opportunity of its next five-year strategy to prioritise actions that will reduce inequalities, improve overall health and create a fairer Southampton.

## 7.4 References

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3. Commission on Social Determinants of Health, World Health Organisation (2008) *Closing the gap in a generation: Health equity through action on the social determinants of health – Final Report*
4. Department for Communities & Local Government (2011) *English Indices of Deprivation 2010*. [Online] Available from: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2010>
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7. Department of Health (2011) *Health Inequalities National Support Team: Priority actions based upon best practice that could impact inequalities in mortality and life expectancy in the short term*. [Online] Available from: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/215329/dh\\_130949.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/215329/dh_130949.pdf)
8. Public Health England (2015) *Making the case for tackling obesity – why invest?* [Online] Available from: [http://www.noo.org.uk/slide\\_sets](http://www.noo.org.uk/slide_sets)
9. UCL Institute of Health Equity & Public Health England (2014) *Local Action on Health Inequalities: Introduction to a series of evidence papers* [Online] Available from: <http://www.instituteofhealthequity.org/projects/local-action-on-health-inequalities-series-overview>

## RESIDENT POPULATION, 2013

Population resident in Southampton City

Age band	Male	Female	Persons	%
0-4	8,342	7,865	16,207	6.7%
5-14	12,486	11,879	24,365	10.1%
15-24	25,253	23,038	48,291	19.9%
25-49	44,673	41,077	85,750	35.4%
50-64	17,833	17,501	35,334	14.6%
65-74	8,117	8,650	16,767	6.9%
75-84	4,521	6,125	10,646	4.4%
85+	1,583	3,198	4,781	2.0%
<b>Total</b>	<b>122,808</b>	<b>119,333</b>	<b>242,141</b>	<b>100%</b>

Source: Office for National Statistics Mid-Year Population Estimates 2013, © Crown Copyright.

## REGISTERED POPULATION, 2014

Population registered with Southampton City GPs

Age band	Male	Female	Persons	%
0-4	8,791	8,063	16,854	6.3%
5-14	13,978	13,306	27,284	10.1%
15-24	22,856	23,447	46,303	17.2%
25-49	53,987	46,843	100,830	37.5%
50-64	21,661	19,778	41,439	15.4%
65-74	9,519	9,850	19,369	7.2%
75-84	5,150	6,451	11,601	4.3%
85+	1,813	3,460	5,273	2.0%
<b>Total</b>	<b>137,755</b>	<b>131,198</b>	<b>268,953</b>	<b>100%</b>

Source: Health & Social Care Information Centre (HSCIC), October 2014

## BIRTHS

### General Fertility Rate and Number of Births

	2010	2011	2012	2013
<b>Live births per 1,000 women aged 15-44</b>				
Southampton	57.0	63.4	60.2	57.5
South East	64.4	63.8	64.5	61.3
England	65.5	64.2	64.9	62.2
<b>Number of live births</b>				
Southampton	3,448	3,550	3,420	3,284

Source: Office for National Statistics, Mid-year population estimates and Vital Statistics table VS1. © Crown Copyright.

## TEENAGE CONCEPTIONS

	2009	2010	2011	2012
<b>No. of conceptions to girls aged under 18</b>				
Southampton	188	181	170	129
<b>Under 18 conception rate per 1,000 girls aged 15-17</b>				
Southampton	54.3	51.7	47.4	34.3
South East	29.9	28.0	26.1	23.2
England	37.1	34.2	30.7	27.7

Source: Office for National Statistics, © Crown Copyright.

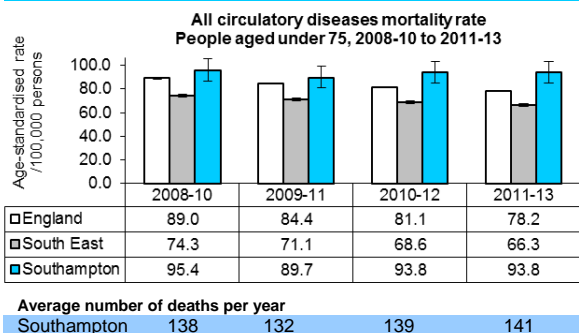
## INFANT MORTALITY\*

	2008-10	2009-11	2010-12
<b>Number of deaths (in 3 year period)</b>			
Southampton	54	44	43
South East	1,171	1,137	1,103
England	9,001	8,771	8,505
<b>Mortality per 1,000 live births</b>			
Southampton	5.4	4.3	4.1
South East	3.7	3.6	3.4
England	4.4	4.3	4.1

\* Deaths of infants aged under 1 year

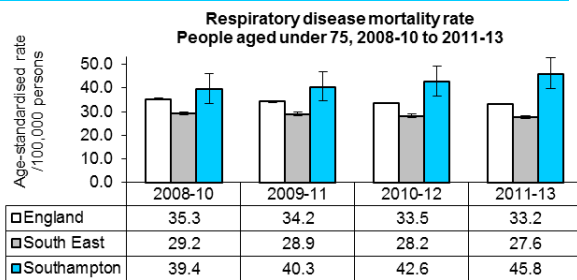
Source: Office for National Statistics. © Crown Copyright.

## CIRCULATORY DISEASE



Source: Public Health England PHOF. © Crown Copyright.

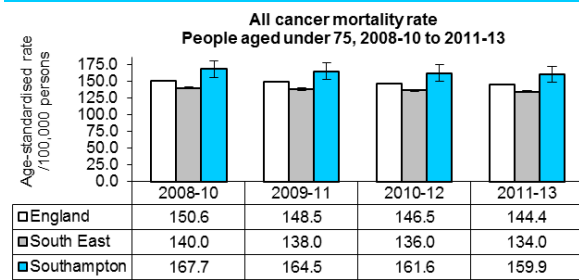
## RESPIRATORY DISEASE



<b>Average number of deaths per year</b>				
Southampton	55	57	61	68

Source: Public Health England PHOF. © Crown Copyright.

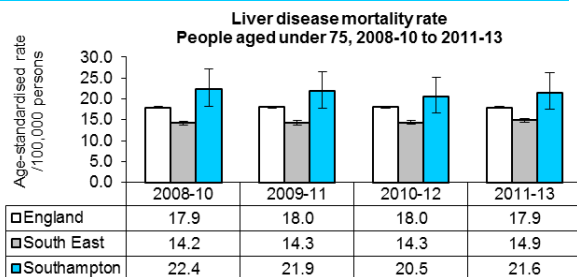
## CANCER



<b>Average number of deaths per year</b>				
Southampton	244	244	240	241

Source: Public Health England PHOF. © Crown Copyright.

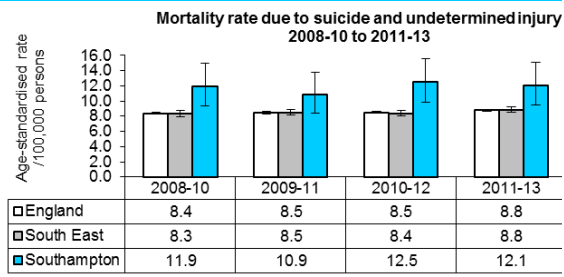
## LIVER DISEASE



<b>Average number of deaths per year</b>				
Southampton	35	35	32	35

Source: Public Health England PHOF. © Crown Copyright.

## SUICIDE



<b>Average number of deaths per year</b>				
Southampton	26	23	28	27

Source: Public Health England PHOF. © Crown Copyright.

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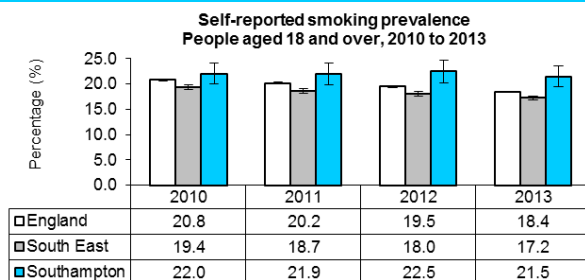
## Contact

## The Health of the People of Southampton City 2014



## A Pocket Profile

### SMOKING



Integrated Household Survey. Analysed by Department of Health and published by Public Health England (PHOF). © Crown Copyright.

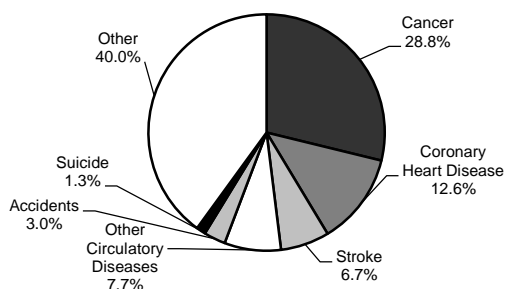
### LIFE EXPECTANCY

Life Expectancy at Birth (years) 2010-12		Males	Females
	Southampton	78.5	82.7
	South East	80.3	83.8
	England	79.2	83.0
Healthy Life Expectancy at Birth (years) 2010-12		Males	Females
	Southampton	61.3	63.6
	South East	65.8	67.1
	England	63.4	64.1

Life expectancy is an estimate of the number of years a new-born baby could expect to live if they experienced that area's mortality rates throughout their life. Healthy life expectancy is the number of years they could expect to live in good health based on current morbidity and mortality rates. Public Health England (PHOF). © Crown Copyright.

### MAJOR CAUSES OF DEATH

Southampton Residents 2013 (No. of deaths = 1,888)



Source: Office for National Statistics, Vital Statistics VS3 © Crown

### JOBS AND UNEMPLOYMENT

**Job Seekers Claimant count** (as % of 16-64 resident population)

	Southampton	South East	England
Dec 2014	1.5	1.2	1.9
Sep 2014	1.7	1.3	2.1
Jun 2014	1.9	1.4	2.4
Mar 2014	2.4	1.8	2.8
Dec 2013	2.7	1.8	2.8

**Jobs Density** (no. of filled jobs per working age resident)

	Southampton	South East	England
2012	0.73	0.81	0.79

Source: National Statistics ([www.nomisweb.co.uk](http://www.nomisweb.co.uk))

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### INDEX OF DEPRIVATION 2010

Ranking of the worst 5 Super Output Areas (SOAs) out of 146 SOAs in Southampton for overall score and each domain

Also within the 10% most deprived SOAs in England

	Overall IMD Score	Income	Employment	Health	Education	Housing/Access	Crime	Environment
E01017167/Bitterne	1	2	3	4	5			
E01017154/Bvois	2	3	1	4	5			
E01017284/Woolston	3	4	2	5				
E01017207/Millbrook	4	5						
E01017163/Bitterne	5							
E01017240/Redbridge			4	5				
E01017280/Woolston								
E01017161/Bvois				2	4	5		
E01017140/Bargate								
E01017137/Bargate								
E01017210/Millbrook					2	3		
E01017237/Redbridge								
E01017274/Woolston								
E01017143/Bassett						1	2	3
E01017140/Bassett								
E01017142/Bargate								
E01017257/Sholing								
E01017140/Bassett								
E01017139/Bargate								
E01017222/Portsmouth								
E01017218/Pearlree								
E01017189/Freemantle								
E01017223/Pearlree								
E01017160/Bvois								

Source: Index of Deprivation 2010. Department for Communities and Local Government.

### EDUCATIONAL ATTAINMENT

	10/11	11/12	12/13	13/14
<b>Southampton</b>				
KS2 English	79	83	86	89
KS2 Mathematics	80	83	85	87
5+ GCSEs A*-C	51.7	54.4	58.1	49.8
<b>England</b>				
KS2 English	82	85	87	88
KS2 Mathematics	80	84	85	86
5+ GCSEs A*-C	59.0	59.4	59.2	52.6

KS2 = % of children gaining at least level 4 at Key Stage 2

GCSEs = % of 15 yr olds gaining 5+ GCSE/GNVQ grades A\*-C inc English and Maths

Source: Dept. for Education [www.education.gov.uk](http://www.education.gov.uk). © Crown copyright

### HEALTH IN SOUTHAMPTON CITY

This Pocket Profile summarises the most recent comparative indicators of the health of residents of Southampton.

We have compared Southampton to the South East Region and with the England average.

We hope you find this profile useful and welcome your comments.

Dan King  
Head of Public Health Intelligence

Andrew Mortimore  
Director of Public Health



Healthy Southampton♥

