IS PREVENTION BETTER THAN THE CURE?

5-10 year options for prevention in Suffolk

“Apparently they’re better than The Cure.”
This is my 4th Annual Public Health Report for Suffolk and by far the most challenging. Often in public health we take a long term view advising on actions that will have an impact in 20 or 30 years’ time. Here we set a challenge of examining what would work in the shorter term, a 5-10 year period. Here the public health team has pulled together the evidence that could drive a real change for people in Suffolk; helping us live longer in good health. This is in preparation for Suffolk’s first prevention strategy, under the watchful eye of the Health & Wellbeing Board.

In a recent article in the Local Government Chronicle, Graeme Gordon talks about how policy is driven by different kinds of evidence. He describes scientific evidence, the evidence of our own eyes and ears, and political belief systems which he likens to faith, ‘the substance of things hoped for: the evidence of things not seen’.

I hope that this report will drive change in policy in Suffolk. The content of this report speaks in some way to all three kinds of evidence. Being a public health report, the scientific evidence takes centre stage. It is patchy in places but nonetheless compelling. It reminds us that we have all seen friends and family and strangers who are unable to live the life they want to live because of ill health that was potentially preventable. I am yet to meet anyone who wants people to be less well or to direct scarce resources to avoidable treatments for preventable illness.

Compiling the evidence is only the start, the real challenge is putting evidence into action. The Health & Wellbeing Board is committed to preventing ill health. This report illustrates what can we do now, that will impact soon, to narrow the gap between healthy life expectancy and overall life expectancy.

Tessa Lindfield, Director of Public Health and Protection

ACKNOWLEDGEMENTS

Thank you to everyone who assisted me in writing and producing this report. It would not have been possible without you.

Caroline Angus
Natacha Bines
Dan Chapelle
Anna Crispe
Tom Fowler
Sally Hogg
Elsbeth Gibson
Maija Huttunen-Lenz
Amanda Jones
David Kanka

Tanya Kimber
Peter Knight
Charlotte Lee
Mashbileg Maidrag
Wendy Marsh
Mary Orhewere
Michelle Paterson
Stephen Patterson
Jeptekenyon Ronoh
Alex Weatherley

FOREWORD
PREVENTABLE DISEASE IS NEEDLESSLY CAUSING EARLY DEATH AND DISABILITY IN SUFFOLK.

Introduction

It is tempting to think that prevention is not relevant in a healthy place like Suffolk. Suffolk babies can expect to live into their 80s and longevity is continuing to rise. However, there is another pattern running alongside the possible trend of increasing lifespans which may be less welcome. The number of years we can expect to live in good health, healthy life expectancy, is actually falling, which means the number of years living with disability is rising.

Not only is this a worrying trend from an individual’s point of view, it is leading to increasing pressure on health and care services, which adds a particular urgency and focus to the prevention of ill health and disability.

Table 1: Male and female life expectancy summary, Suffolk 2009-2013

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th></th>
<th>Females</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Life expectancy 60.3</td>
<td>Healthy life expectancy 65.6</td>
<td>Years of disability 14.7</td>
<td>Life expectancy 84.0</td>
</tr>
<tr>
<td>2009-11</td>
<td>80.3</td>
<td>65.6</td>
<td>14.7</td>
<td>84.0</td>
</tr>
<tr>
<td>2010-12</td>
<td>80.6</td>
<td>66.1</td>
<td>14.5</td>
<td>84.1</td>
</tr>
<tr>
<td>2011-13</td>
<td>80.7</td>
<td>64.8</td>
<td>15.9</td>
<td>84.1</td>
</tr>
</tbody>
</table>

Healthy life expectancy difference could be chance Healthy life expectancy significant difference


This report identifies actions that have the potential to drive down demand through maximising healthy life expectancy. It estimates the potential impact on the system, particularly hospital care and social care. It looks at actions that have worked elsewhere to prevent illness, and actions to prevent progression of illness. The actions are not just for health and care services but for the whole Suffolk system to take note.

Why is this important now?

We are running out of time. We are on our way to becoming less healthy now than our predecessors, and if we want this to change, we need to change as individuals, families, communities and professionals.
Defining the problem

Who uses health and care services?

The information on who needs high cost health and care services in Suffolk is patchy. Social care datasets do not contain detailed information on the reasons why people need care, only the care they need. Demographic information is incomplete and neither of these data sources can be matched with NHS records, although work to resolve this is in the pipeline. However, using the local and national data that we do have, we can piece together a picture of who uses health and care services.

In the preparation of this report we considered NHS and social care spending in Suffolk by age group, and by type of disease. People aged 65 and over in Suffolk used significant health and social care resources, accounting for 48% of all emergency admissions to hospital, and 40% of publically funded social care spending on adults. We then examined the reasons for this health and social care need, paying particular attention to conditions which may be prevented or delayed in the medium term (i.e. 5-10 years), if rapid action is taken.

Examination of emergency admissions to hospital revealed that the most common reasons were respiratory disease, circulatory disease, injury and poisoning, and a category called other signs and symptoms, frequently linked to frailty and ageing. When Clinical Commissioning Group (CCG) spending data is analysed, circulatory disease (including diabetes) and respiratory disease are areas of high cost, alongside conditions relating to the muscles and bones, some of which are due to falls and fractures.

There is good evidence that complications of cardiovascular disease, such as strokes and heart attacks, can be prevented in the short to medium term by finding the people with risk factors, such as high blood pressure or irregular heart rhythms, and treating them effectively. Some respiratory conditions, such as chronic obstructive pulmonary disease (COPD), can also be prevented or delayed by reducing the relevant risk factors and by effective diagnosis and treatment. Our local data on health and social care activity and spending therefore suggest that, in order to reduce the burden of disease for Suffolk in the short to medium term, we should focus our efforts on preventing, diagnosing and managing the following risk factors and diseases:
The keen reader will be wondering where mental ill health features. The interaction between common mental illness and physical ill health is complex and receives some consideration in this report. However specific actions to prevent severe and enduring mental illness have been excluded. Services for acute mental illness are often discrete from physical illness and the prevention opportunities are different from those for physical ill health. We plan to examine this in detail in the 2016 report.

Children were also excluded from our analysis. Last year we focused on children and the prevention opportunity in early years to lay down foundations for a healthy life. Chapter 7 looks back at the impact of last year’s report and the actions taken against each of the recommendations.

This report therefore concentrates on adults and older people, and the actions we can take to prevent need for services through improving health in the next 5-10 years.
We have identified a number of key conditions amenable to prevention in the short to medium term (3-5 years) and the underlying risk factors which contribute to the development of these conditions and subsequently lead to high cost demand.

Figure 1: Underlying risk factors leading to disease associated with admission

- High blood pressure (also known as hypertension)
- Atrial fibrillation
- Smoking
- Alcohol use
- Failure to maintain a healthy weight
- Failure to be physically active
- Being lonely or socially isolated
- Patients from high risk groups not being vaccinated against flu and pneumonia
- Having diabetes which significantly increases your risk of developing other diseases
- Being a carer for someone else increases your risk of ill health, (if the care then stops this often results in the one being cared for either being admitted to hospital or residential care)

Cardiovascular disease
Diabetes
Respiratory disease
Frailty
Falls
Dementia
Multiple conditions

We know that matching statistics on illness to people is an inexact science, as individuals frequently have more than one illness at the same time. Patterns of combinations of ill health are of interest here because they may arise from common causes, some of which may be preventable.

Research on the patterns of illness that co-exist shows three distinct patterns. In the first category, the most common conditions occurring together were diabetes, high blood pressure, heart disease, high cholesterol and obesity. The second group had at least one mental health condition, the commonest being depression and anxiety. These diagnoses were associated with thyroid problems, neurological disorders like dementia, pain, asthma or chronic obstructive pulmonary disease (COPD), musculoskeletal disorders, obesity and severe dyspepsia or gastro-oesophageal reflux disease (GORD). In the third group, at least one musculoskeletal problem was identified such as arthritis, back or neck pain and osteoporosis. These were associated with obesity, prostatic hypertrophy and GORD.

Taking action to find and reduce or manage these individual risk factors will therefore have a positive impact on a number of different conditions which can lead to high cost health and social care demand.

Many of these (and other) modifiable risk factors have an impact on more than one preventable disease, as illustrated opposite.

---

**Table 2: Risk factors and preventable disease links**

<table>
<thead>
<tr>
<th>Preventable diseases causing highest health care and demand</th>
<th>Modifiable risk factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular disease</td>
<td>Smoking reduction</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Alcohol consumption</td>
</tr>
<tr>
<td>Respiratory</td>
<td>Healthy weight</td>
</tr>
<tr>
<td>Frailty</td>
<td>Physical activity</td>
</tr>
<tr>
<td>Dementia</td>
<td>Social isolation and loneliness</td>
</tr>
<tr>
<td>Falls</td>
<td>Vaccination</td>
</tr>
<tr>
<td></td>
<td>Support for carers</td>
</tr>
<tr>
<td></td>
<td>Blood Pressure Control</td>
</tr>
<tr>
<td></td>
<td>AF detection and management</td>
</tr>
<tr>
<td></td>
<td>Diabetes detection and management</td>
</tr>
</tbody>
</table>

| Linked factor and disease | Not applicable | Currently unlinked |

---
**Preventable disease and modifiable risk**

STOP PRESS!!! One measure of the amount of time people spend living in poor health as result of preventable disease is called the ‘number of years lived with disability’. Public Health England (PHE) have very recently published a tool based on the Global Burden of Disease Study, 2013 which estimates the impact of various diseases and risk factors on the number of years lived with a disability in different areas of England. Using these estimates it is possible to estimate how many years of poor health are being lived by the Suffolk population each year caused by the major modifiable risk factors. In total, this is equivalent to 22,665 people in Suffolk living each year in poor health; the underlying factors causing these years of poor health are shown in the figure. PHE’s analysis reinforces our local findings on the key areas for prevention focus in Suffolk.
Identifying and managing existing conditions

This chapter focuses on the opportunities to prevent the conditions identified earlier as major contributors to ill health resulting in high cost demand, through improved detection and management. The following conditions are amenable to this approach:

- Cardiovascular disease (CVD) with a focus on heart attack and stroke
- Respiratory disease with a focus on COPD
- Frailty and related conditions with a focus on falls and dementia

Cardiovascular disease

Cardiovascular disease (CVD) includes all the diseases of the heart and circulation including heart attack and stroke. CVD account for one in ten of all emergency admissions and is one of the highest causes of emergency hospital admission in Suffolk, with over 7,300 hospital admissions during 2013/14. It is estimated that the health and social care costs of people having strokes or heart attacks in Suffolk will be £75 million each year over the following 5 years. In addition the cost of informal care and lost economic productivity due to cardiovascular illness and the premature deaths of workers in Suffolk may be in the order of £227 million each year.

Some people have a genetic predisposition to CVD, but the risk of CVD is also increased with some lifestyle behaviours and the coexistence of other conditions. There are opportunities to prevent CVD changes in lifestyle behaviours and better management of the condition, which is explored in chapter 5. In addition, increasing early identification and improving the treatment of the conditions that increase the risk of CVD, can reduce the numbers of people developing CVD.

This next section focuses on three of the most important conditions increasing the risk of CVD:

- High blood pressure (hypertension)
- Atrial fibrillation
- Diabetes
High blood pressure (hypertension)

High blood pressure affects more than a quarter of adults in Suffolk. Finding and treating people with high blood pressure is arguably the most effective way to prevent heart attacks, strokes, cognitive decline and premature death and disability.

Where are we now?

Improvements in tackling blood pressure in the last decade have prevented or postponed many deaths. Standards are in place that describe good control of hypertension, however it is estimated that only four in ten adults in Suffolk with high blood pressure are both aware of their condition and are managing it properly.

The majority of people in Suffolk already diagnosed with high blood pressure are managing their condition well. However, over 25,000 people are not managing it to the levels recommended. Public Health England has considered that a 15% increase in the number of Suffolk people managing their high blood pressure well is feasible.

What more could we do?

If Suffolk were to reach Public Health England’s suggested 15% increase in high blood pressure diagnosis rates an additional 17,000 people would be diagnosed. Over five years it is estimated that up to 136 deaths, 255 strokes and 171 heart attacks, together with £7.2 million of health and social care costs (illustrated below in Figure 3), could be avoided as a result. There is no evidence that population-wide screening for high blood pressure is clinically or cost effective, but actions that may be effective include:

- More opportunistic testing in primary care, achieved through use of the wider primary care team and integrating blood pressure testing into the management of long term conditions
- Improving uptake of the NHS Health Check for 40-74 year olds
- Targeting high risk populations

Figure 3: Financial impact over 5 years of increasing high blood pressure diagnosis rates in Suffolk by 15%


If Suffolk were to achieve the suggested 15% increase in the number of people managing their high blood pressure well this would increase the number of local people achieving good blood pressure control by nearly 4,000. This would offer significant clinical and cost benefits to Suffolk, including the prevention of an estimated 31 deaths, 58 strokes and 39 heart attacks, together with the avoidance of nearly £2 million of health and social care costs over 5 years.
A programme of call and recall in primary care with a stepwise approach to increasing medicines as required to meet treatment targets, supported by strong clinical decision systems

Supporting adherence to drug therapy and lifestyle change, particularly through self-monitoring of blood pressure

Atrial fibrillation

Atrial Fibrillation (AF) is one of the most common forms of abnormal heart rhythm affecting over 13,500 people in Suffolk. AF increases with age and is present in nearly a fifth of those aged 85 years and above; AF is a major cause of stroke - the annual risk of a stroke is five to six times greater for people with AF. Early detection of AF followed by appropriate treatment can reduce the likelihood of a stroke by two-thirds and alleviate symptoms.

Where are we now?

Over five years ago, Suffolk took part in an innovative NHS Stroke Improvement Programme Scheme which focused on opportunistic screening by pulse palpation of people aged over 65, to improve the detection of AF. Diagnosis rates in Suffolk are currently similar to the national average and over 13,500 people in Suffolk are recorded on GP registers as having AF. However, AF may have no symptoms and remain undiagnosed. Public Health England estimates that there may be approximately 8,000 people with undiagnosed AF in Suffolk.

Once diagnosed it is important that all people with AF have their risk of stroke assessed. With appropriate treatment the risk of a stroke can be substantially reduced. While all three Suffolk CCGs are achieving close to 90% of their population having their risk assessed, this performance is in the lowest ranking of CCGs nationally. The highest performing CCG in England risk assessed 99.4% of its AF population, suggesting opportunities for further improvement in Suffolk.

Anticoagulant (blood thinning) drugs are the most effective treatment to reduce the risk of stroke in people with AF. National data suggests that 38% of the people who could benefit from anticoagulation are not receiving it. Although the picture in Suffolk is better with 30% of the eligible population not treated, there remains some scope for improvement. Whilst some people cannot be treated for clinical reasons, it is estimated that over 1,200 of the Suffolk population might benefit from treatment.

What more could we do?

There are a number of initiatives under active consideration by Suffolk CCGs which aim to improve the treatment of people with AF. If the diagnosis of AF in Suffolk CCGs could be increased to the highest level that similar CCGs are already achieving, approximately 2,000 additional people could be diagnosed. Over five years it is estimated that up to 160 deaths, 267 strokes and £4 million of health and social care costs could be avoided if this could be achieved as illustrated below in Figure 4.

Figure 4: Estimated net financial impact of increasing AF diagnoses in Suffolk over 5 years, £m

If all of the diagnosed AF population who are eligible for treatment with an anticoagulant drug were treated optimally it is estimated that over 5 years up to 107 deaths, 180 strokes and £2.8 million of health and social care costs (the majority, 2.2 million, are social care costs) could be avoided in Suffolk.
It is of note that for both improved detection and management the net savings for the NHS appear small as the NHS has to meet all of the additional treatment costs. However, the benefits to the health and social care system as a whole are substantial.

Actions that have been effective elsewhere include:

- Continued work to maintain the uptake of the NHS Health Check, including a pulse rhythm check. Any person found to have an irregular pulse rhythm should be referred to their GP, as this may be due to AF
- Encourage all local GPs to use the available stroke risk assessment tools consistently
- A focus on identifying individuals who are not anticoagulated but who would benefit from this, and ensure that appropriate treatment is offered

**Cardiac rehabilitation**

While improving the detection and management of people with hypertension and atrial fibrillation in Suffolk is important, it will not prevent every stroke or heart attack. Following a heart attack or surgery for heart disease, cardiac rehabilitation is recommended by the National Institute for Health and Care Excellence (NICE). This is a comprehensive, long-term programme involving medical assessment, exercise, the provision of lifestyle advice to reduce the risk of further disease (for example, support to stop smoking), education, and counselling. There is evidence that exercise-based cardiac rehabilitation:

- Reduces the total number of deaths and hospital admissions in people with coronary heart disease
- Reduces the number of deaths in people who have suffered a heart attack, compared with usual care
- Improves peoples quality of life, reducing depression and anxiety
- Is safe for people to participate in, once they have had a clinical review and risk assessment

**Where are we now?**

Across the UK, many people who might benefit do not receive adequate cardiac rehabilitation. A 2013 national audit showed that the number of people participating in cardiac rehabilitation programmes is increasing, but that only 43% of the eligible population is receiving cardiac rehabilitation overall. A 2015 audit of East Anglian cardiac rehabilitation services concluded that:

“Suffolk services were innovative, flexible and able to contact people very quickly following referral. No overall figures for uptake were presented, and outcomes were not reported by all units, however there was evidence that cardiac rehabilitation improved levels of exercise and anxiety, reduced smoking, and was highly valued by the population in Suffolk.”

**What more could we do?**

There is potential to increase the uptake of cardiac rehabilitation in the eligible population in Suffolk. Actions that have been effective elsewhere include:

- Raising awareness of the local cardiac rehabilitation service amongst clinicians, so that they can make people aware of the service while they are still recovering in hospital
- Ensuring that the local cardiac rehabilitation service continues to be offered in flexible and innovative ways that people find convenient and easy to access, potentially including from the persons home as well as through organised groups, on via online programmes in the future.

**Diabetes**

Diabetes currently affects 6% of adults in England. The health and care outcomes for people with, or at risk of, diabetes have improved over recent years as the quality of NHS services has improved. However, more remains to be done.

**Where are we now?**

There are nearly 38,000 people already diagnosed with diabetes in Suffolk, a number which is increasing by 5% each year:

- Diabetes is a major cause of premature mortality
- Diabetes doubles the risk of cardiovascular disease (heart attacks, heart failure, angina, strokes)
Ensuring that the uptake of the NHS health check is as high as possible. The health check can detect those already with diabetes, and those at high risk of developing it, and support people to change their lifestyles and reduce their risk.

An increased focus on improving performance in relation to the coverage of care processes and the achievement of treatment targets

Complications of diabetes are disability and are potentially life threatening. There is a significant opportunity to reduce the complications of diabetes, through both identifying and treating the undiagnosed diabetics in Suffolk, together with optimising the management of existing diabetics. Although it is difficult to quantify the potential clinical and financial impact of this, it is likely to be significant - treatment is very effective at preventing complications. The following factors should be considered when examining the local potential to improve clinical outcomes and reduce costs:

The substantial numbers of additional people who could be diagnosed

Suffolk’s current low performance in achieving all three treatment targets

The estimate that 1 in 5 of Suffolk’s diabetics may also have anxiety and depression, and therefore considerably increased associated healthcare costs

Maintaining uptake coverage of the diabetic retinopathy screening programme

Respiratory conditions

This chapter focuses on COPD, which is the name used to describe a number of lung diseases including chronic bronchitis and emphysema. The main cause of COPD is smoking, which accounts for about 75% of cases. The likelihood of developing COPD increases with the duration of smoking and the number of cigarettes smoked. Over many years, the inflammation caused by smoking or other irritants leads to permanent changes in the lung. People with COPD may experience exacerbations (‘flare-ups’), which are a sudden worsening of symptoms, frequently leading to emergency admission to hospital. COPD, together with pneumonia and chest infections, accounts for nearly 60% of all...
unplanned admissions for respiratory disease. As the majority of diagnoses of COPD are caused by smoking, the most effective way to prevent the disease is to discourage people from starting to smoke, or supporting them to quit if they already smoke, as this halts the progression of the disease.

**Where are we now?**

There were nearly 14,000 people on GP registers with a diagnosis of COPD in Suffolk in 2013/14, an increase of over 3% on the previous year. Nationally, it is estimated that only one third of those with COPD have been diagnosed, but analysis by Public Health England suggests that we are doing better than average in Suffolk and have diagnosed an estimated two thirds of those with COPD. However, the Suffolk CCGs are in the lowest ranking of CCGs in England for the recording of NICE recommended standards for confirming the diagnosis of COPD.

Suffolk CCGs have led the recent development of respiratory clinical networks to support the best management of COPD. Benchmarking indicates that in many areas Suffolk is performing above average.

**What more could we do?**

Although Suffolk compares favourably with the England average, there remains potential to diagnose more people, to ensure that they receive NICE recommended management which slows or prevents progression of the disease. However, although there is no evidence that population-wide screening for COPD is clinically or cost-effective, late diagnosis increases costs as the NHS spends nearly ten times more in treating a person with severe COPD, than treating a person with mild disease. Nationally, 10% of people who are currently admitted to hospital with an exacerbation of COPD have no prior COPD diagnosis. In Suffolk this number is likely to be lower, reflecting our higher than average diagnosis rate.

There also appears to be scope for further improvement in the accuracy of COPD diagnoses currently made in Suffolk. National studies have suggested that a proportion of people with COPD may have been misdiagnosed and therefore treated unnecessarily, which is both expensive and potentially harmful. While further analysis is needed to determine the extent to which these findings may be replicated in Suffolk, there could be the potential to improve clinical outcomes for local people with COPD by ensuring accurate diagnosis and avoiding unnecessary treatment.

However, actions that may be effective in improving the prevention of death and disability from COPD include:

- Supporting people to stop smoking, particularly after a diagnosis of COPD, is the most effective action that people can take to improve their health. All three CCGs in Suffolk are currently in the lowest 25% of CCGs in England for recording peoples' smoking status and offering smoking cessation support to those continuing to smoke.

- Improve the coverage of the flu vaccination for people with COPD to reduce risk of exacerbation, on average, nearly 1 in 5 people with COPD in Suffolk did not receive a flu vaccine.

- Ensure sufficient capacity in the local pulmonary rehabilitation services. The East of England Strategic Clinical Network for Respiratory Disease recently reported that pulmonary rehabilitation services in Suffolk were achieving high levels of uptake and completion (both exceeding 70%) and that people in the Suffolk service were reporting the highest quality of life scores in the East of England. However, the Network also reported that the level of places in Suffolk was only 47% of the estimated required places, indicating that there may be potential to offer pulmonary rehabilitation to more people.

**Frailty**

Frailty is a condition of increased vulnerability in older people who are less able to cope with events that would not pose a serious health threat in others e.g. an infection or changes to medication. Following such an episode frail older people may then experience a dramatic deterioration in their physical and mental wellbeing. The conditions that suggest an individual has frailty include falls, immobility, delirium, incontinence and susceptibility to the side-effects of medicines.

**Where are we now?**

Suffolk’s population is ageing and we expect a rise in the number of people living with frailty. Frailty is a relatively new concept and accurate measurement methods are still in development. Frailty is also often present in people with multiple long term conditions such as heart disease or diabetes and may be overlooked due to a focus on these other conditions.
Ensuring that all frail people have a written plan, shared with all services, for treatment, including the steps to take if their condition worsens.

Ensuring that community hospitals and health and social care teams work together as effectively as possible, reducing duplication and inefficiency and ensuring that care reflects the individual’s needs.

Other important considerations include the need for a timely response by multidisciplinary teams which can help in preventing crises or hospital admissions; the provision of a single contact point (for patients, carers, and professionals); additional support for those with many complex needs to ensure that their care is well co-ordinated; making people aware of the community and voluntary services that could help them; identification and support for carers; and the provision of real and safe alternatives to hospital. Where hospital admission is appropriate, pathways should be designed to make sure frail people leave hospital safely when they are well enough to do so.

Providing reablement, which is a short and intensive service usually delivered in the home, for people with disabilities and for those who are frail or recovering from an illness or injury. It helps people who have experienced deterioration in their health and/or have increased support needs to relearn the skills required to keep them safe and independent at home. Evidence suggests that whilst reablement requires significant initial investment, it reduces the need for ongoing home care and improves outcomes for people who use services. Reablement is an important preventative intervention for people with frailty.

Falls and fragility fractures

As people become older, they become increasingly likely to fall. About 1 in 3 people aged over 65 and 1 in 2 people aged over 80 will fall at least once a year. Women are more likely to fall than men. Falls can cause serious physical injury, for example, a fractured hip, and they can also make people fearful and anxious, which means that they restrict their activities and lose their independence.

Falls and fall-related injuries therefore have serious consequences for individuals and the health and care system. Between 10% and 25% of fallers will be injured by their fall. Some of these falls can be fatal - 20% of people with a hip fracture die within four months, and 30% within a year. Following a hip fracture, half of those who were previously independent become partly dependent, and a third

Nationally, about 10% of people aged over 65 are thought to be frail. This rises with age to between 25% and 50% in those aged over 85 years. It is estimated that there are at least 15,300 frail individuals in Suffolk and this is expected to rise to about 25,700 by 2037.

The Health and Wellbeing Board in Suffolk has agreed a vision for healthy ageing in Suffolk, and the Suffolk Joint Health and Wellbeing Strategy highlights the need to establish a model for the active management of health and social care for older people. Priority areas have been identified as ensuring health and social care services are more joined up; a focus on prevention including the promotion of healthy lifestyles and self-care; and a focus on reducing loneliness and social isolation among older people. A single team approach with health and social care services working together is vital and this process is already underway in Sudbury and East Ipswich. The delivery of social care has also been enhanced through the implementation of the Supporting Lives Connecting Communities (SLCC) programme. CCGs in Suffolk are also leading work with partners to improve the identification and management of frailty.

What more could we do?

Ensuring people remain fit, strong and healthy as they get older is crucial as this could potentially delay the onset of frailty, and reduce subsequent need for costly health and care services. New NICE guidance highlights the importance of behaviour change in mid-life in preventing frailty. Important actions that people can take to prevent or delay frailty include stopping smoking, being more physically active, improving their diet, losing weight where appropriate and maintaining a healthy weight, and reducing alcohol intake.

As people get older the evidence suggests that there are some important approaches that can improve the detection of frailty and prevent further deterioration in frail people.

Actions that may been effective include:

- Making sure health and care professionals use every contact with older people to assess their level of frailty and to take this into account in the support and advice they provide.
- Providing holistic and detailed assessments for people who need additional support which have been demonstrated to increase independence after hospitalisation. Key elements include an assessment of functioning and medical, psychological, social and environmental assessments.

Falls and fragility fractures

As people become older, they become increasingly likely to fall. About 1 in 3 people aged over 65 and 1 in 2 people aged over 80 will fall at least once a year. Women are more likely to fall than men. Falls can cause serious physical injury, for example, a fractured hip, and they can also make people fearful and anxious, which means that they restrict their activities and lose their independence.

Falls and fall-related injuries therefore have serious consequences for individuals and the health and care system. Between 10% and 25% of fallers will be injured by their fall. Some of these falls can be fatal - 20% of people with a hip fracture die within four months, and 30% within a year. Following a hip fracture, half of those who were previously independent become partly dependent, and a third
Offer specialist care to people who experienced a non-hip fragility fracture, with the aim of preventing future fractures

Improve the care and outcomes of those people who do still suffer a hip fracture

Suffolk has made significant progress towards these aims and work continues to achieve the aims of the strategy.

What more could we do?

Given our ageing population and the predictions of increasing numbers of people who are likely to fall, we should do more to prevent falls and fragility fractures for older people. Having one fall means you are more likely to fall again. The evidence suggests that up to half of all hip fractures can be prevented by interventions for people at high risk. This would suggest that nearly 500 hip fractures are preventable in Suffolk each year. Preventing these fractures would lead to a gross saving of £3.4m per year to the NHS (including hospital, community and intermediate care services), and a further saving of £0.9m per year to social services.

Actions that have been effective elsewhere include:

- Ensuring that all older people are asked whether they have fallen in the past year whenever they see a health or care professional to target prevention actions at high risk people
- Ensuring that we have mechanisms in place to offer falls and osteoporosis risk assessments and appropriate services, including the prescription of bone sparing agents and the provision of strength and balance training to those people who have had a fall
- Encouraging physical activity and healthy eating to promote bone health
- Removing unnecessary environmental hazards, for example, trip hazards in the home

Where are we now?

As our population continues to age, we will have a large cohort of people in Suffolk who are at high risk of falls and serious injury. It is predicted that the number of older people in Suffolk who fall will increase from just over 44,300 in 2015, to almost 64,000 by 2030. Projections for hospital related falls admissions in people aged over 65 are also predicted to rise by 50% over the same period.

Emergency admissions for people aged 50 or over with a hip fracture cost the NHS in Suffolk over £15 million between 2011/12 and 2013/14. Close to half (49%) of the hip fracture costs during this period were attributable to the over 85’s. Almost three quarters (74%) of the hip fractures were in females, the majority of whom (62%) were aged over 75. Non-hip fragility fracture rates are estimated to be about five times the hip fracture rate, although not all these people will require admission to hospital. This suggests that the number of non-hip fragility fractures in Suffolk over this time period could have been close to 14,700.

GP practices in Suffolk are required to establish and maintain registers of their population with osteoporosis. Local data would suggest that osteoporosis prevalence in Suffolk is quite low (less than 1 in 100 people), but this is probably due to the registers being incomplete. If the national estimates that 1 in 3 women and 1 in 12 men aged over 50 are affected by osteoporosis were applied locally, we would expect 1 in 5 people to have osteoporosis.

In early 2014, partner agencies in Suffolk agreed a strategy designed to:

- Prevent frailty and falls in the majority of healthy older people through encouraging healthy lifestyles and physical activity
- Support individuals at high risk of either falling or of a first fragility fracture by the introduction of a Falls Care Pathway, linking falls prevention services with local hospital services

become totally dependent. Fractures which occur as a result of a simple/minor fall are known as ‘fragility fractures’ and are caused by osteoporosis. This is a condition where bone tissue deteriorates and weakens, making it fragile and more likely to break. Osteoporosis affects 1 in 3 women and 1 in 12 men aged over 50. It develops over time and quite often goes unnoticed until a fragility fracture occurs. Because osteoporosis progresses gradually, if it is found either before a fragility fracture, or as a result of an initial minor fragility fracture, there may be opportunities to prevent further falls and reduce the risks of further and more serious fractures.
Dementia

Dementia is a common condition with symptoms that may include memory loss and difficulties with thinking, problem-solving or language. The risk of developing dementia increases with age and the condition usually occurs in people over the age of 65. Although some memory loss is common with age, dementia is not a normal part of ageing and the majority of older people will therefore never develop the condition. Common types of dementia include Alzheimer’s disease, which accounts for 50% to 70% of cases, and vascular dementia, which accounts for a quarter of cases.

Quite often, older people with frailty have dementia. Older people with dementia are often also frail. The two conditions overlap - dementia contributes to frailty and physical frailty contributes to dementia.

Nationally, there has been a 48% rise in emergency admissions involving people with dementia since 2008/09. A fifth of these admissions are for potentially preventable conditions and about a quarter of those admitted are in hospital for a day or less with various injuries. These reasons for admission are strikingly similar to those identified as leading causes of admission in older people in Suffolk. More proactive care in the community could potentially prevent these emergency admissions, which are quite often traumatic and cause distress in people with dementia.

Where are we now?

In 2012/13, the estimated number of people with dementia in Suffolk was 11,000, and this is projected to rise to about 16,000 by 2024 and to over 24,000 by 2037. It is anticipated that there will approximately 435 people diagnosed with dementia per year in Suffolk.

Although it is known that age and genetic makeup play a role in determining a person’s risk of developing dementia, little is known about the risk factors for most types of dementia. An exception to this is vascular dementia, which is potentially preventable by helping people to change their lifestyles and behaviours, for example by reducing their blood pressure or stopping smoking. A smaller number of people with dementia are also associated with other preventable risk factors such as excessive alcohol intake.

It is thought that, currently, half of the people with dementia in Suffolk have not been diagnosed. Early diagnosis of dementia is important - it allows people living with dementia, and their carers, to connect with appropriate services that can support them to make choices about their care and their future. CCGs in Suffolk are currently actively working on improving dementia diagnosis rates.

There is a wide range of services to support people with dementia and their carers across Suffolk. However, a recent dementia needs assessment found that the services were fragmented and access was variable. In response, partners from the statutory and voluntary sectors in Suffolk are currently working together to provide a more joined up service for people living with dementia and their carers -from diagnosis through to more advanced stages of the illness. In addition, Suffolk has endorsed the national Dementia Friendly Communities programme and partner agencies are working together to develop local resources within our communities, and to raise dementia awareness.

What more could we do?

Given the overlap between frailty and dementia, the interventions outlined in the information on frailty may also be relevant to dementia and could reduce emergency admissions for both conditions. It is therefore important that there are close links between dementia and frailty services.

Actions that have been effective elsewhere include:

- Adopting a case-management approach
- Crisis resolution teams
- Making intermediate care available
- Telehealth
- Team-based interventions in A&E
- Ensuring that long term conditions are managed proactively
- Falls prevention initiatives targeted at older people with dementia
- Home accident prevention interventions
- Providing support for carers to prevent people with dementia being permanently admitted into residential care.
Preventing conditions from developing in the first place

The risk factors identified so far include the top five risk factors that contribute to early death and reduced quality of life in the UK. These are: smoking tobacco; having high blood pressure; being overweight or obese; lack of physical activity and excessive alcohol consumption. The top four alone are underlying causes of 40% of disability life years lost through their contribution to heart disease, stroke and lung cancer among other types of illness. All are well known causes of premature death and disability and yet the most recent figures suggest that in Suffolk 18.5% of adults still smoke, 67% of men and 57% of women are overweight or obese, 27% of residents are physically inactive, with many more not taking enough exercise, and almost 20% of adults have alcohol drinking patterns which may be harmful.

The evidence base for prevention interventions is growing and a 2012 NICE review of 200 public health interventions found 30 to be cost-saving, 141 were good value for money (costing less than £20,000 per quality-adjusted life-year (QALY)) and seven fell into the £20,000 to £30,000 per QALY range. The remaining 22 were deemed not to provide value for money or to actually cost more than they saved. This highlights that we need to ensure what we do is evidence based or well evaluated - what we think should work may not have the effect we want.

Smoking

Where are we now?

Smoking remains Suffolk’s number one cause of premature death and disability. 18.5% of over 18s in Suffolk smoke and those in more deprived areas are more than twice as likely to smoke. Smoking accounts for about half of the difference in life expectancy seen between our lowest and highest income groups. The proportion of adults that smoke in Suffolk varies from 1 in 10 in Babergh District to almost 1 in 3 in Waveney District.
Stop smoking services and GPs in Suffolk have supported 5-6,000 people each year to quit smoking, but over the past few years this approach has been less successful with the numbers who quit reducing by about 40%. This is a picture seen across England and is thought to be due to a combination of: the effect of people moving to e-cigarettes as a way of decreasing tobacco use; that many of those who are still smoking have used services previously and not succeeded; and recent changes in the NHS which separated the public health function from that of commissioning and monitoring GP services. However despite this services have managed to support those most at risk. There has been an increase in the proportion of those who successfully quit locally from routine and manual workers and those who qualify for free prescriptions.
Stopping smoking has proven short and medium term benefits which include:

1 year after quitting: circulation improves and lung function increases within three months of stopping smoking. The risk of coronary heart disease is halved compared with a person who continues smoking.

5 years after quitting: The risk of cancer of the mouth, throat, oesophagus, and bladder is halved. Cervical cancer risk falls to that of a non-smoker. Stroke risk can fall to that of a non-smoker after 2-5 years.

10 years after quitting: half the risk of dying from lung cancer than that of a person who is still smoking. The risk of cancer of the larynx (voice box) and pancreas decreases.

What more could we do?

Although the prevalence of smoking is now decreasing after a period of stagnation, the decreased effectiveness of current services means that we need to change how we support individuals to stop smoking. A wide range of personal, social and environmental factors influence who starts smoking, who continues to smoke and who gives up. The changing social landscape around smoking, particularly e-cigarettes and smoke free public places, means other approaches need to be tried, many of which need a multiagency approach. The Suffolk Health and Wellbeing Board have recognised this and agreed to support the aim of “working towards a tobacco free Suffolk” with three themes:

- Prevention - creating an environment where people choose not to smoke
- Protection - protecting people from second-hand smoke and supporting tobacco control interventions
- Cessation – supporting and enabling people to stop smoking

We know that these “wider” approaches can show effects in short time frames. For example the first year after the smoke free legislation saw 1,200 fewer emergency admissions for heart attacks across England equating to a saving to the NHS of £10.5 million.

This was a significant but small reduction of 3% which may be an underestimate as it was lower than the 17% reduction found in Scotland after they introduced similar legislation.

It is important that whilst we reshape the way we try to reduce tobacco consumption we do not lose the focus on health inequalities and ensure that our efforts are targeted at those with greatest need.

Healthy weight

Where are we now?

Being obese or overweight is becoming the social norm and individuals often do not recognise that they or other members of their family, including children, are not of a healthy weight. Excess weight is associated with increased risk of cardiovascular disease, diabetes and some cancers. In Suffolk 21.8% of adults (approximately 131,100) are obese (BMI >30 kg/m2) and 43.5% (261,500) are overweight (BMI >25 kg/m2) which is similar to the national picture. Morbid obesity (BMI >40 kg/m2) is of greater risk to health and levels are continuing to increase, particularly in women.

A whole system approach is needed to tackle obesity. Healthy diet, healthy physical activity to burn calories and appropriate calorie intake is essential. Much of this requires a national approach as the large food producers and supermarkets have a huge influence on the nation’s diet. Locally we ensure our health improvement campaigns mirror national ones to maximise their impact. Where adults are overweight there are a variety of services available. There are private companies offering support and the County Council commissions an adult weight management service for those who are in higher risk groups. Higher risk groups are those with long term conditions; carers; those from a Black, Asian and Minority Ethnic (BAME) group; those with mental health conditions or learning disability and those living in the 20% most deprived communities. The public health funded programmes aim to achieve initial weight loss of 5% and 1 in 4 of those using the service achieved this.

What more could we do?

A more comprehensive weight management service will be available in Suffolk from April 2016 with the introduction of the new integrated healthy lifestyle service across the county. The service will still be targeted towards those at greatest risk but we also need to reach more of those needing to reduce their weight. We need to increase the use of new technologies to encourage self-management such as wearable technology and ‘apps’, and evaluate their impact. A multiagency group is currently working towards a Suffolk Food Charter which will help to improve diet. This will include encouraging restaurants and cafés in Suffolk to provide information on the calories in each portion of food sold so that people can make informed choices on what they decide to eat.
Currently there is limited access to the more intensive “tier 3” weight management support in Suffolk. A fully integrated comprehensive weight management pathway would result in significant cost saving through preventing unnecessary weight loss surgeries. It is estimated that more than 3,000 adults in Suffolk are eligible for surgery at a potential cost £6,000. Tier 3 services that have been evaluated cost between £450 and £1,200 per success and the tiers 1 and 2 programmes, which are available in Suffolk, cost around £100 per person.

Obesity is an epidemic which is driving increasing rates of diabetes and other illnesses. However, the specific interventions currently available for weight reduction are likely to have a limited impact as their uptake is limited and the environment in which we live is not conducive to weight loss. The return on investment for weight management programmes in terms of health care cost savings takes 10 years, which highlights the importance of taking a whole system approach. National approaches such as “sugar taxes” and more healthy processed food containing less salt, sugar and fats have been shown in other countries to be successful on a large population scale.

Physical activity including active travel

Where are we now?

Physical activity has a positive effect on health independent from diet, weight and other factors. It should not be confused with exercise or sport and should be part of everyday activity. Physical activity (at least four 30 minute sessions of at least moderate intensity per week) can improve quality of life at all ages by enhancing physical and cognitive function and reducing the risk of falls and accidents. Active travelling (cycling and walking) has been shown to reduce risk factors for heart disease and achieve the health benefits of physical activity. In Suffolk 59.4% of adults are physically active compared to 55.6% for England.

Physical inactivity, particularly in youth, is known to be associated with increased cardiovascular risk factors, obesity, diabetes type II and hypertension. The definition of inactive is “less than 30 equivalent minutes of at least moderate intensity physical activity per week in bouts of 10 minutes or more in the previous 28 days” and in Suffolk 26.8% of the population is inactive compared to 28.9% in England. Physical inactivity is estimated to cost the Suffolk health service in excess of £14 million each year and is considered an important underlying cause of a quarter of breast and colon cancers and diabetes and 30% of ischaemic heart disease.

Within Suffolk, the Health and Wellbeing Board and “Most Active County” partnership has led the development of a number of initiatives to increase activity as part of daily life. The development of the Suffolk Walking Strategy, Suffolk Cycling Strategy, Suffolk Nature Strategy and Suffolk Disability and Physical Activity Strategy in the last two years shows the commitment to physical activity. A wide variety of short to medium term projects are being supported including the current Year of Cycling, to be followed by a Year of Walking with relevant activities, events and opportunities for the public to engage with these campaigns.

Programmes need to focus on long term behaviour change and therefore self-management opportunities and integrated pathways for maintaining physical activity as part of any sustained healthy lifestyle behaviour change are important. Examples in Suffolk include the Get Healthy Get Into Sport programme and Beat the Streets currently being evaluated in Waveney.

What more could we do?

Physical activity and exercise need to be “rebranded” so that the population recognises the significant health benefits that can be achieved by making small changes to incorporate physical activity in their daily routines. There are many opportunities to tackle sedentary behaviour, for example promoting opportunities within the workplace to avoid extended periods of sitting and promoting the active choice as the default option within planning and design of both indoor and outdoor environments. However it is important to ensure interventions are either evidence based or evaluated and are cost effective. For example a popular myth is the long term benefit for exercise referral schemes. However, evidence suggests that they are only marginally more effective than the much cheaper “brief intervention”.

There is a direct dose-response relationship between the amount of physical activity and the associated health benefits; the most significant gains can be made by those who are least active. Therefore, the biggest gains with respect to return on investment will be to move inactive individuals to low to moderate activity levels. There are large gains to the system for incorporated targeted programmes to increase physical activity. After 2 years potential savings are £3.6 million for a targeted programme for 3,000 individuals a year at £300 per programme with 50% effectiveness.
The work in Ipswich on “Reducing the Strength” has been adopted by many other local authorities and has led to voluntary agreements with convenience stores, supermarkets and other premises, to remove cheap “super strength” alcohol from sale. The Purple Flag scheme in Suffolk bars has also been externally assessed and been suggested as a model of best practice. Local schemes have multiple foci: responsible drinking, preventing underage drinking, education of alcohol harms, training of responsible bar staff, promoting healthy lifestyles and creating safer town centres.

What more could we do?
Some effective alcohol interventions, such as pricing, need to be led nationally but many local interventions have a return on investment. The NICE Return on Investment Tool shows that if alcohol screening and brief intervention were given where required at a GP appointment, across Suffolk the return on investment (ROI) would be 1:199 over the 5 years (suggesting that for every £1 invested the ROI would be £199 over the 5 years), although health care benefits would accrue over a much longer period. If 30% of A&E attenders with alcohol related issues receive screening and brief intervention then the ROI would be 1:356 over 5 years, although again the health care benefits would only be 1:4.2 over a lifetime. Currently there is limited provision of both of these interventions.

Making Every Contact Count
Where are we now?
Making Every Contact Count (MECC) is a national programme which started in the NHS in 2012/13. Staff are trained to give consistent, evidence based, brief and informal lifestyle advice on an opportunistic basis. The programme focuses on smoking, physical activity, excess weight and excessive alcohol intake and the “intervention” takes 3 to 5 minutes to deliver. MECC will support the delivery of the benefits outlined above.

In Suffolk training is available for staff as part of the services commissioned by public health. When the programme was implemented in 2012/13 both numbers of staff trained and subsequent referrals to lifestyle services were higher than subsequent years. The Health and Wellbeing Board has agreed that embedding MECC within health care delivery is now a priority and once embedded it will roll out to social care and the voluntary sector.
What more could we do?

National estimates suggest that if all NHS front line staff in Suffolk gave brief advice ten times a year, which would take less than one hour in that whole year, there would be almost 130,000 opportunities to change lifestyle behaviour. This number could be substantially increased by extending the programme to social care and the voluntary sector.

MECC has considerable potential for changing staff behaviour in relation to promoting health but it has been shown to work best if there is senior commitment and leadership and when it forms part of a wider workforce strategy rather than being “another project”.

Health checks

Where are we now?
The NHS Health Check Programme offers checks to people once every 5 years between the ages of 40 and 74. The programme aims to decrease heart disease, stroke, diabetes and kidney disease and excludes those already identified with these or associated conditions. The check assesses an individual’s risk by measuring blood pressure and cholesterol and having discussions about smoking, being overweight, lack of regular exercise and poor diet. The individual’s risk is assessed after which lifestyle interventions are given and, if required, the individual is seen by their GP for further assessment, tests and treatment.

In Suffolk invitations are sent out to 20% of people in the target age range each year. 90% of checks are offered through GP practices with the other 10% offered through outreach. The numbers attending are increasing with 59% of people offered a check in 2014/15 attending, this is higher than the average for England. 27,674 checks were completed in 2014/15. We know that people from deprived communities are at higher risk. It is important that those most at risk come for health checks and yet in 2013/14 only 17% of checks were for people from the most deprived 20% of our population. This increased to 19% in 2014/15 but we need to continue to target people through the outreach programme.

What more could we do?
The NHS Health Check Programme will only produce the predicted health improvement and cost savings if coverage is over 60% and the check itself follows the national specification. We therefore need to continue to expand the coverage of the programme and also ensure high quality checks are conducted. We are planning to audit the quality of the programme in 2015/16 and support primary care and the outreach providers to improve if needed.

At the inception of the programme the modelling suggested that with appropriate coverage and quality there is health gain in the first year of £1976 per Quality Adjusted Life Year (QALY). However the cost savings to health (NHS and Public Health costs) were not seen until 15 years. National estimates are being reviewed as it is considered that cost savings may occur earlier as new evidence has emerged that the early detection of hypertension and diabetes, may not have been taken fully into account.

Flu vaccine

Where are we now?
Flu vaccination reduces the risk of seasonal flu and decreases hospital admissions for influenza, respiratory conditions and exacerbations of other conditions. The national flu vaccination programme for adults is targeted at people most at risk of harm from this; people aged 65 years and over, people under 65 in specific clinical risk groups, and pregnant women. The majority of vaccination is given between September and January each year by the GP practice with many pharmacists also offering the service.

What more could we do?
Currently there is a uniform approach to commissioning the adult flu programme from primary care and data shows that the more deprived an area, the smaller the proportion of people vaccinated. 22% of the variation in influenza vaccine uptake by area can be explained by deprivation, rising to 26% for pregnant women. Residents in these localities are at greater risk of poor health compared with the county as a whole. This suggests that targeting areas of deprivation could contribute to increased vaccination uptake and improved health protection for residents.
Loneliness and social isolation
Where are we now?

The recognition of the importance of loneliness and social isolation as a risk factor for health has been developing over the past two decades. In Suffolk it is estimated that in 2015 there will be almost 78,000 people living alone and these individuals are at greater risk of social isolation and loneliness. Published data would suggest that in Suffolk between 7,900 and 23,000 older people are likely to feel lonely and 19,000 will feel socially isolated.

Loneliness and social isolation is considered a factor contributing to older people reaching a tipping point and needing admission to hospital or external care. Interventions to decrease loneliness have been shown to decrease hospital bed days, doctors’ visits and outpatient appointments. A large meta-analysis in 2015 reviewed published literature and suggested loneliness and isolation was a risk for increased mortality, comparable with well-established risk factors such as physical activity, obesity, substance abuse, responsible sexual behaviour, mental health, injury and violence, environmental quality, immunisation, and access to health care. However the size of impact is not clear and there is debate as to whether loneliness is a cause or consequence of depression.

There are many activities within Suffolk that aim to reduce loneliness and social isolation, many of which are provided by the voluntary sector. However there is limited information on the models that interventions are based on and whether the outcomes achieved specifically alleviate loneliness. The voluntary sector has recognised this as an issue and are working together to try and ensure they make the most of opportunities to improve health and wellbeing for those who are lonely and/or isolated.

Although the impact of loneliness and social isolation on health and care services may not be clear, there is substantial evidence that interventions can reduce loneliness and social isolation. These include:

- One-to-one interventions: these include befriending, mentoring, and gatekeeping (Community Navigator or Wayfinder initiatives - usually volunteers who provide various support, acting as a ‘gatekeeper’ between the community and public services)
- Group services: include day centre-type services (such as lunch clubs), and social group schemes which aim to help people widen their social circles. The number and extent of services is thus broad.

Pneumococcal vaccination
Where are we now?

Pneumococcal disease can cause septicaemia, pneumonia and meningitis, particularly affecting the very young, the elderly, people with a non-functioning or absent spleen and people with a combination of impaired immunity and certain chronic medical conditions. Influenza and pneumonia account for 13.4% of emergency admissions in the UK (2009/10), at a cost of £286 million per year.

The current national vaccination programme includes the year round offer of pneumococcal vaccination to people aged 65 years and over not previously vaccinated. Vaccine coverage in Suffolk is 70% and similar to that of the rest of England but below the World Health Organisation (WHO) target of 75%.

What more could we do?

Opportunities for increased vaccination remain, however there is some concern that the vaccination programme as it currently stands is not cost effective.

EAcH yEAR INfluENzA ANd PNEuMONIA cOSTS THE uK £286 MILLION

It is recommended that health and care workers should also be vaccinated to prevent them from infecting vulnerable patients/clients. Vaccination of healthcare workers with direct patient contact has been shown to significantly lower rates of flu-like illness, hospitalisation and mortality in the elderly in long-term healthcare settings. The offer of vaccination by employers is an organisation’s occupational health responsibility and not part of the nationally funded flu programme. The national target for health care workers is 100% offer and 75% uptake rate. More could be done to both identify those who need the vaccination and monitor uptake of the vaccination amongst relevant workers. There are no national targets for vaccination levels for care workers but the benefits to their clients will be the same.

Pneumococcal vaccination
Where are we now?

EACH YEAR INFLUENZA AND PNEUMONIA COSTS THE UK £286 MILLION
What more could we do?

In order to understand what is being provided and identify the gaps, the public and voluntary sector need to understand the interventions currently available and the outcomes they achieve. Some interventions have been shown not to work such as computer and/or internet based services and time limited topic focused “closed groups”. Others suggest a return on investment for example befriending schemes can provide a return of up to £4 for £1 invested and community navigator schemes such as the one being piloted in Suffolk can produce an ROI of between 1.2 and 1.65. This shows the importance of ensuring interventions have been demonstrated to deliver the required outcomes and if not, that appropriate evaluation frameworks are put in place.

Support for carers

Where are we now?

Carers help and support the person or people they care for to remain independent and live the life they choose. We do not know the true numbers of carers in Suffolk, however the 2011 Census identified more than 77,000 people providing unpaid care in Suffolk. Over half of all carers provide under 19 hours of care per week, but about a quarter of carers provide 50 hours or more of care per week.

Keeping carers fit and healthy is important if they are to continue their caring role. Many of the 17,000 providing 50 hours per week are likely to be delaying or preventing the “tipping point” occurring where the individual being cared for either needs hospital admission or an intensive care package. There is evidence to suggest that carers are more likely to have poorer health and emotional wellbeing compared to non-carers.

MORE THAN

77,000

PEOPLE PROVIDE UNPAID CARE IN SUFFOLK

Current support for carers includes:

- Help to help yourself: including an information line, carer advisors and carers centre
- Help when you need it: which are time-limited interventions to help people return to or maintain independence including “respite on prescription” and
- Ongoing support for those who need it: which assists carers with substantial and sustained needs and includes carer breaks and respite care.

What more could we do?

Work to co-design a system wide approach to support carers has already started. A gap analysis suggests that the Waveney area has the highest proportion of carers delivering more than 50 hours of unpaid care per week but fewer services supporting them. Evidence suggests the efficacy of certain interventions such as Carer Support Workers in GP surgeries, which can improve identification of carers who can then be offered support. Access to breaks has been shown to delay permanent admission into residential care.

The Royal College of General Practitioners (RCGP) estimates suggest that in Suffolk unpaid carers potentially contribute voluntary care worth in excess of £277 million. It also suggested that the social return on investment for services which support carers is almost £4 for every £1 invested.
A summary table of modifiable factors, local actions and the estimated benefits to health and social care, or the wider public purse, is included below:

<table>
<thead>
<tr>
<th>Modifiable factors</th>
<th>Action we can take in Suffolk</th>
<th>Major illness prevented over 5 years</th>
<th>Net costs prevented over 5 years - health care (£m)</th>
<th>Net costs prevented over 5 years - social care (£m)</th>
<th>Return on Investment (ROI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hypertension detection &amp; management</strong></td>
<td>Improve the number of people diagnosed with hypertension by 15%.</td>
<td>255 strokes, 171 heart attacks</td>
<td>4</td>
<td>3</td>
<td>1:2.4 at five years</td>
</tr>
<tr>
<td></td>
<td>Improve the care of those already diagnosed to achieve good blood pressure control (equal to or lower than 150/90 mmHg).</td>
<td>58 strokes, 39 heart attacks</td>
<td>1.1</td>
<td>0.7</td>
<td>1:3 at five years</td>
</tr>
<tr>
<td><strong>Atrial fibrillation detection &amp; management</strong></td>
<td>Improve the number of people diagnosed to the highest level already being achieved by similar CCGs</td>
<td>267 strokes</td>
<td>0.8</td>
<td>3.3</td>
<td>1:1.6 at five years</td>
</tr>
<tr>
<td></td>
<td>Improve the care of those already diagnosed so that all people clinically suitable for anti-coagulation are treated optimally.</td>
<td>180 strokes</td>
<td>0.6</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td><strong>Weight management</strong></td>
<td>Increase scale of intervention - support 6,000 people with weight loss programmes (per year) ROI seems low but interventions do not result in large weight loss (i.e. 3%).</td>
<td>Reduce the significant contribution of excess weight to diabetes, heart disease and some cancers.</td>
<td>Cost savings do not materialise until year 10.</td>
<td>Specific cost savings not identified</td>
<td>At 10 years 1:1 At 25 years 1:1.9 for obese and 1:2.8 for overweight.</td>
</tr>
</tbody>
</table>

Table continues overleaf
### Smoking reduction

Implement the wider actions agreed by the Health and Wellbeing Board which focus on prevention, protection and support for smoking cessation.

<table>
<thead>
<tr>
<th>Modifiable factors</th>
<th>Action we can take in Suffolk</th>
<th>Major illness prevented over 5 years</th>
<th>Net costs prevented over 5 years – health care (£m)</th>
<th>Net costs prevented over 5 years – social care (£m)</th>
<th>Return on Investment (ROI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk of cancer of the mouth, throat, oesophagus and bladder is halved.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk of cervical cancer falls to that of a non-smoker.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk of stroke falls to that of a non-smoker.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Physical activity

Increase the proportion of those physically active in the population by offering programme for 3000 most at risk per year. This calculation does not take into account those broader strategies that increase activity as part of daily living such as the cycling strategy.

<table>
<thead>
<tr>
<th>Modifiable factors</th>
<th>Action we can take in Suffolk</th>
<th>Major illness prevented over 5 years</th>
<th>Net costs prevented over 5 years – health care (£m)</th>
<th>Net costs prevented over 5 years – social care (£m)</th>
<th>Return on Investment (ROI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce the significant contribution of physical inactivity to cancer, heart disease and diabetes.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact across society is evident in 2 years (£3.6milion) however only 0.7% of these savings accrue directly to health and social care, the rest being productivity and transport benefits.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The NICE ROI tool at 2 years suggests returns of 1.8:84 for cost savings, and 1:115.8:5 for benefits including personal wellbeing. However returns for health and social care are minimal in comparison to productivity and transport savings. Transport calculations may be based on an urban area.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### NHS health checks

<table>
<thead>
<tr>
<th>Modifiable factors</th>
<th>Action we can take in Suffolk</th>
<th>Major illness prevented over 5 years</th>
<th>Net costs prevented over 5 years – health care (£m)</th>
<th>Net costs prevented over 5 years – social care (£m)</th>
<th>Return on Investment (ROI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase coverage to over 60% (currently 59%) and complete over 20% of the health checks in the most deprived areas of the county.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 heart attacks/strokes prevented each year.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56 people each year prevented from getting diabetes.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The estimated savings to the NHS budget nationally are around £57 million over four years, rising to £176 million over a fifteen-year period. However costs to SCC are £3.6 million over four years.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Alcohol reduction

<table>
<thead>
<tr>
<th>Modifiable factors</th>
<th>Action we can take in Suffolk</th>
<th>Major illness prevented over 5 years</th>
<th>Net costs prevented over 5 years – health care (£m)</th>
<th>Net costs prevented over 5 years – social care (£m)</th>
<th>Return on Investment (ROI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce the number of people who use alcohol by 1034 individuals as a result of intervention.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROI of 1:4.22 healthcare costs over lifetime</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loneliness has an impact estimated to be equivalent to smoking and obesity.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific cost savings not identified.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loneliness is prevented over a 10% of the population.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific cost savings not identified.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social impact assessment suggests ROI of 1:4 with benefits to health and social care.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Loneliness & Social isolation

<table>
<thead>
<tr>
<th>Modifiable factors</th>
<th>Action we can take in Suffolk</th>
<th>Major illness prevented over 5 years</th>
<th>Net costs prevented over 5 years – health care (£m)</th>
<th>Net costs prevented over 5 years – social care (£m)</th>
<th>Return on Investment (ROI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce the estimated 23,000 older people who feel lonely, and 19,000 older people who feel isolated in Suffolk.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROI of 1:355.95 over 5 years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refraining schemes estimated to have a ROI of 1:4. Community Navigator Schemes have an ROI of 1:2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Being a carer / requiring support from a carer

<table>
<thead>
<tr>
<th>Modifiable factors</th>
<th>Action we can take in Suffolk</th>
<th>Major illness prevented over 5 years</th>
<th>Net costs prevented over 5 years – health care (£m)</th>
<th>Net costs prevented over 5 years – social care (£m)</th>
<th>Return on Investment (ROI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support the estimated 77,000 people in Suffolk who provide unpaid care, worth £277m each year.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carers are likely to have poorer health and wellbeing than non-carers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific cost savings not identified.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social impact assessment suggests ROI of 1:4 with benefits to health and social care.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table continues overleaf
<table>
<thead>
<tr>
<th>Modifiable factors</th>
<th>Action we can take in Suffolk</th>
<th>Major illness prevented over 5 years</th>
<th>Net costs prevented over 5 years - health care (£m)</th>
<th>Net costs prevented over 5 years - social care (£m)</th>
<th>Return on Investment (ROI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Make Every Contact Count</strong></td>
<td>MECC is an opportunity for interactions between health and care staff and those from other organisations to increase referral to HLS and deliver brief interventions.</td>
<td>Increases opportunity to realise all the above.</td>
<td>Increases opportunity to realise all of the above.</td>
<td>Increases opportunity to realise all of the above.</td>
<td>Modifiable factors</td>
</tr>
<tr>
<td><strong>Acute respiratory conditions prevention &amp; management</strong></td>
<td>Ensure vaccine coverage is as high as possible. Improve the number of people diagnosed to the highest level already being achieved by similar CCGs. Ensure that COPD diagnoses are accurate and confirmed with spirometry, and that resulting prescribing is optimal.</td>
<td>Prevent a quarter of current hospital admissions for COPD in patients previously undiagnosed.</td>
<td>Specific cost savings not identified.</td>
<td>Not possible to estimate at present, but likely to realise significant savings across health and social care.</td>
<td>Modifiable factors</td>
</tr>
<tr>
<td><strong>Diabetes prevention &amp; management</strong></td>
<td>Reduce the number of people diagnosed with Type 2 diabetes in Suffolk each year by 750 -1500 through adoption of the national diabetes prevention programme.</td>
<td>Prevent 750-1500 people in Suffolk from developing diabetes.</td>
<td>0.7 - 1.3, only considering costs of avoided medication and assuming the prevention programme starts in year 3.</td>
<td>0.2 from reduction in late stage admissions for COPD in previously undiagnosed people.</td>
<td>Modifiable factors</td>
</tr>
</tbody>
</table>

Table continues overleaf
WHAT HAVE WE DONE SINCE LAST YEAR?

Up, up and away! 5 public health early years ambitions for Suffolk
An update on the recommendations from the 2014 Annual Public Health Report

The early years are critical to the development and future health and outcomes for all children. The 2014 Annual Public Health Report outlined the importance of an early years focus and early intervention. Giving children a strong foundation in the early years enhances the key components of growth and development - communication, physical skills and coordination, learning skills, emotional health and wellbeing, and resilience, and thus enables them to perform better at school, develop good social skills and grow into healthy adults.

Under the Raising Bar initiative we are focusing on school readiness, and the proportion of five year olds in Suffolk considered to be making a “good level of development” rose across the Early Years Foundation Stage from 49% in 2013 to 67.6% in 2015. In addition, take up of Early Years entitlement for 2 year olds is 68%, and for 3 and 4 year olds 95%. This will bring positive outcomes to our children in years to come.

Clearly parents play a key role in setting this path and several initiatives and interventions have been developed since last year to support parents in this responsible journey. With our partners we have developed a ‘Common Childhood Illness and Wellbeing’ booklet with an online version and an app to raise awareness among parents/carers and offering advice on what to do and who to approach.

Last year we set 5 challenges for Suffolk:

A smoke free environment for children from conception onwards

In March 2015, the Suffolk Health and Wellbeing Board recognised that the impressive decline in smoking prevalence over recent years is slowing. In response the Board committed to developing a new approach to reducing the harm from tobacco in our county. The Aspiring to a Tobacco Free Suffolk strategy aims to create an environment where people choose not to smoke; protecting people from second-hand smoke and supporting tobacco control interventions; and supporting and enabling people to stop smoking. The Board has also re energised the tobacco control partnership to oversee delivery of the strategy with engagement from all Health and Wellbeing Board partners. Importantly
The Suffolk Food Charter is being developed with a wide range of organisations that represent schools, farmers, the retail and environmental sectors. The charter identifies key priorities for Suffolk that will make sure residents enjoy and benefit from locally produced, healthy produce that considers the environmental impact of food production, maintaining a sustainable local food system. Organisations will be able to pledge support for the charter and identify and work towards achieving their own pledges that support the charter. (This is still in development and is planned to go to the HWB in January 2016).

Hidden harm is no longer hidden but addressed

Addressing the toxic three of domestic abuse, parental mental ill health and parental drug and alcohol misuse has been an area of focus.

Suffolk County Council children and young people’s services have introduced Signs of Safety as the underpinning approach to work with children, young people and families. This is an evidence based child centred approach that works with the child and family to identify concerns and build on the strengths within the family to manage risk and develop resilience.

A refreshed Suffolk Children’s Emotional Wellbeing Strategy and 5 year Transformational Plan is underway through collaborative work with all partners, most importantly children, young people and families. This is an evidence based child centred approach that works with the child and family to identify concerns and build on the strengths within the family to manage risk and develop resilience.

There is commitment to drive this work on and achieve the desired transformation across senior leaders in all the organisations represented at the Health and Wellbeing Board, with the Strategy due to be signed off in December 2015.

The Police and Crime Commissioner commissioned an independent report exploring the experience of people using domestic abuse services in the county and hosted a partnership conference on the topic. The report revealed several areas for action. In response the PCC is planning a formal independent review. The Suffolk Domestic Abuse Forum published its strategic direction and all parties have committed to working together to improve their work on prevention and support for families to free themselves from the harm which accompanies domestic abuse.

Adults and children are physically active as part of their daily routine

There has been considerable progress in supporting and enabling local families to be physically active and appreciate health and wellbeing benefits.

The annual Suffolk Walking Festival provided the forum for the launch of the Suffolk Walking Strategy. This strategy is part of a suite of Health and Wellbeing Board plans to increase physical activity in Suffolk. Targeting families in Lowestoft, one of our most deprived areas, a Beat the Street programme run through local schools exceeded all expectations with around a fifth of the population walking an estimated 150,000 miles in just four weeks. A further positive effect was the increase in other activity, with a reported 30% increase in cycling. The subsequent “Golden Mile” programme pilot is running in 5 schools in Lowestoft to support children to embed new active habits of swimming, walking, jogging and cycling. A formal evaluation will continue to provide data on the continuing impact of these programmes over the next 12 months.

Suffolk children eat healthy and nutritious food

There have been examples of joint working between agencies to promote healthy eating in schools and in communities.

The Suffolk Healthier Food Awards have been developed with environmental health teams, trading standards, local businesses, dietitians and districts and boroughs to encourage food businesses such as restaurants, cafes, work canteens and takeaways to improve the quality and variety of healthier options available to customers. This will allow customers to make an informed and, if they wish, healthier choice when eating food away from the home. Food businesses will be awarded a Healthier Food Award if they meet the standard. (We are in the final stages of the awards development with an official launch in 2016).
The Health and Wellbeing Board has improving mental health as one of its four priorities. A new Joint Commissioning Group has sponsored a needs assessment and subsequent evidence based strategy to strengthen our work on prevention, treatment and support.

The Public Health Team has retendered its substance misuse services in 2014/15 with a strengthened offer for adults and young people with drug and/or alcohol problems and for their families. A comprehensive Hidden Harm Needs Assessment will be completed in 2015 and will be used to identify where and how we can further strengthen our identification and response to these Toxic Three factors.

**Breastfeeding becomes the norm for all communities in Suffolk**

To supplement the existing breastfeeding support services, the Public Health Team has commissioned the Families and Babies service to provide additional support in areas of the county where there are fewer breastfed babies. Our provider of breastfeeding support in the north of the county, East Coast Community Healthcare, continues to shine, with impressive improvement in breastfeeding in challenging communities and the development of innovative support approaches including a new app. They achieved level 3 WHO baby friendly accreditation in 2014.
Recommendations

<table>
<thead>
<tr>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>
**ACRONYMS**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AF</td>
<td>Atrial fibrillation</td>
</tr>
<tr>
<td>A&amp;E</td>
<td>Accident and emergency</td>
</tr>
<tr>
<td>BAME</td>
<td>Black, Asian and Minority Ethnic</td>
</tr>
<tr>
<td>CCG</td>
<td>Clinical Commissioning Group</td>
</tr>
<tr>
<td>COPD</td>
<td>Chronic obstructive pulmonary disease</td>
</tr>
<tr>
<td>CVD</td>
<td>Cardiovascular disease</td>
</tr>
<tr>
<td>DALY</td>
<td>Disability-adjusted life year</td>
</tr>
<tr>
<td>GORD</td>
<td>Gastro-oesophageal reflux disease</td>
</tr>
<tr>
<td>GP</td>
<td>General Practitioner</td>
</tr>
<tr>
<td>HLE</td>
<td>Healthy life expectancy</td>
</tr>
<tr>
<td>MECC</td>
<td>Making Every Contact Count</td>
</tr>
<tr>
<td>LE</td>
<td>Life expectancy</td>
</tr>
<tr>
<td>NHS</td>
<td>National Health Service</td>
</tr>
<tr>
<td>NICE</td>
<td>National Institute for Health and Care Excellence</td>
</tr>
<tr>
<td>PHE</td>
<td>Public Health England</td>
</tr>
<tr>
<td>QALY</td>
<td>Quality-adjusted life-year</td>
</tr>
<tr>
<td>ROI</td>
<td>Return on investment</td>
</tr>
<tr>
<td>RCGP</td>
<td>Royal College of General Practitioners</td>
</tr>
<tr>
<td>SLCC</td>
<td>Supporting Lives Connecting Communities</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organisation</td>
</tr>
</tbody>
</table>

**GLOSSARY**

**Atrial Fibrillation** - A heart condition that causes an irregular and often abnormally fast heart rate.

**Call and recall** - A cyclical pattern of call and recall invitations that have been designed to ensure that the maximum number of those deemed to be at risk - i.e. those in a specified age group - receive screening (i.e. cervical).

**Cardiac rehabilitation** - A medically supervised program that helps improve the health and well-being of people who have heart problems - most programmes include: exercise, education, relaxation and emotional support.

**Cardiovascular disease** - A general term that describes a disease of the heart or blood vessels.

**Chronic obstructive pulmonary disease** - The name for a collection of lung diseases including chronic bronchitis, emphysema and chronic obstructive airways disease.

**Disability life years lost, Disability-adjusted life year (DALY)** - A way of quantifying the burden of disease from both early mortality and morbidity. One DALY can be thought of as one lost year of “healthy” life.

**Dose-response relationship** - This the relationship between the quantity of a substance given (the dose) and its overall effect (the response) in a person.

**Dyspepsia** - Indigestion, pain or discomfort in the upper abdomen.

**Gatekeeping** - In this instance this refers to people (usually volunteers) who provide support to the wider community, including by acting as a ‘gatekeeper’ in helping people to access relevant public services.

**Gastro-oesophageal reflux disease (GORD)** - A common condition where acid from the stomach leaks out of the stomach and up into the oesophagus (gullet).

**Ischaemic heart disease (also known as coronary heart disease)** - When the heart’s blood supply is blocked or interrupted by a build-up of fatty substances in the coronary arteries, resulting in a decreased blood supply to the heart.

**Musculoskeletal disorders** - Any injury, disease or problem relating to the muscles, bones or joints.

**National Institute for Health and Care Excellence** - Provides national guidance and advice to improve health and social care.

**Pulse palpation** - A way of checking a person’s heart rate, by feeling the pulse in a place where an artery passes close to skin, such as the wrist or neck.

**Quality Adjusted Life Year (QALY)** - A measure of disease burden, including both the quality and the quantity of life lived. It is used in assessing the value for money of health interventions. One QALY is equivalent to one year of life lived in perfect health.

**Return on Investment (ROI)** - A general term encompassing the techniques for comparing the costs and benefits generated by an investment.

**Social marketing** - An approach that seeks to influence social behaviours for the benefit of individuals and the general population as a whole.

**Supporting Lives Connecting Communities (SLCC)** - A way of working which aims to promote independence and recovery, develop local solutions in supportive communities, promote working in partnership, build on people’s capacity and strengths, and provide support to individuals tailored to their situation.

**Weight management support tiers** - Tier 1 services have a focus on prevention and early intervention. Tier 2 services involve multi-component programmes but with a balance between intervention and maintenance. Tier 3 services are multidisciplinary specialist weight management services delivered in appropriate professional settings.