Adult health and longevity has seen tremendous improvements in the UK due to economic growth and changes in public policy related in particular to education, sanitation, nutrition, immunisation, screening. However, industrialisation and prosperity has been accompanied by increases in the incidence of a number of chronic diseases. Over three quarters of all deaths in England, London and Hillingdon are due to conditions like cardiovascular disease, cancer, chronic respiratory disease. Advances in medical care has, to some extent, prevented increasing incidence of illness from translating into mortality, which combined with a general increase in longevity has resulted in an increased morbidity in the population. Half of all people aged 60 and over suffer from a long term condition (physical or mental illness). It is estimated that the treatment and care of those with long term conditions accounts for 70 % of the primary and acute care budget in England. This means around one third of the population accounts for over two thirds of this spend. The increased burden of disability, illness and early death due to chronic conditions, and the related cost to society is expected to worsen if lifestyle and the social and environmental factors that influence lifestyles are not improved.

**Lifestyle and the ‘Common Risk Factors’**

Healthy lifestyles can reduce the burden of chronic illness by as much as 75%. In Ireland, almost half of the reduction in CHD mortality rates during 1985-2000 in the age group 25-84 was due to decreases in the number of smokers and in mean cholesterol and blood pressure levels (WHO, 2006). Twenty-five years of efforts to improve the health of adult men in Finland, the North Karelia project, led to a 68% decline in cardiovascular disease mortality, 73% in coronary heart disease, 44% in cancer, 71% in lung cancer, and to a 49% decline in deaths from all causes (Puska et al., 1998). People who lead a physically active life, do not smoke, drink alcohol in moderate quantities, and eat plenty of fruits and vegetables have a risk of death that is less than one fourth of the risk of those who have invariably unhealthy habits (Khaw et al., 2007).

Public Health action works and the current government have taken a bold, measured step by placing public health with local authorities. Healthy Lives, Healthy People (2010) acknowledges that Individual choices are often influenced, and even constrained in some cases, by environmental conditions including social structures, cultural and political conditions, physical and economic environments. Therefore;
“Local authorities are ideally placed to maximise these opportunities by working with the Director of Public Health, who will be ideally placed to embed public health across the work of the authority, acting corporately but exercising the appropriate professional independence where necessary to advocate the health of the local population” (Healthy Lives, Healthy People, 2010)

In this report, the chapters on smoking, obesity and physical activity elaborate on the impact of social and environmental conditions on behaviour. Smoking is responsible for over 86% of all deaths due to lung cancer and 1 in 7 deaths due to cardio-vascular disease. Obesity is the single major risk factor for growing rates of diabetes in the society. In Hillingdon there are around 800 new diabetics each year who will be constantly in touch with the health service and likely to become social care clients later in life.

Inequalities and targeting
It is now widely acknowledged that socio-economic conditions play a key role in shaping human lifestyle and behaviour. Therefore, it is equally important to address social inequalities. A recent report about the public health role of the local government acknowledged:

“Health inequalities operate across complex and interrelated social, economic, behavioural and environmental systems. These do not seem to respond to narrow, targeted, medical, and behavioural or lifestyle interventions and the importance of finding new, more effective ways of meeting the public health challenge must not be underestimated.”

(Local Government Group 2010)

The Marmot Review (Fair Society, Healthier Lives, 2011) referred to chronic illnesses causing early deaths and disability as the ‘Public Health Conditions’. These big causes of premature death (cardiovascular disease and cancer); obesity; and other big public health burdens such as risk taking behaviours in younger adults (alcohol, drugs, violence), mental ill health throughout life, and the threats to wellbeing in older adults are elevated across the social gradient. The social gradient is steepest at ages 45 to 64, with those in routine and semi-routine jobs at this age having illness rates comparable to those aged 65 and over in some of the managerial and professional classes. Disability-free life expectancy (DFLE) has a steeper social gradient; so that people in lower socioeconomic
groups not only have shorter lives but they also spend more of their later years with a disability.

Key to Marmot’s approach to addressing health inequalities is to create the conditions for people to take control of their own lives. This requires action across the social determinants of health and beyond the reach of the NHS. This places renewed emphasis on the role of local government who along with national government departments, the voluntary and private sector have a key role to play.

The Marmot Review sets out a framework for action under two policy goals:

- to create an enabling society that maximizes individual and community potential; and
- to ensure social justice, health and sustainability are at the heart of all policies.

This is reflected in the 6 Policy objectives

1. giving every child the best start in life
2. enabling all children, young people and adults to maximize their capabilities and have control over their lives
3. creating fair employment and good work for all
4. ensuring a healthy standard of living for all
5. creating and developing sustainable places and communities
6. strengthening the role and impact of ill-health prevention.

This report takes a lifecourse approach to tackling inequalities. Therefore, the section on children’s health focuses on policy recommendations for early years, the chapter on sustainability under the Health and Environment section addresses sustainable communities, and within this section, the chapter on ‘Unemployment and its impact on health’ explores the impact of the cold climate on employment and proposes the use of Marmot’s recommendations, particularly to improve the employment conditions for lone parents to tackle that particular issue within Hillingdon along with action to maintain low number of NEETs and other upstream and downstream measures.

Tackling chronic diseases through interventions aimed at modifying lifestyle risk factors like diet, physical activity, smoking, alcohol across different social groups in proportion to the need (‘universal proportionalism’) is possible and cost-effective; and it is likely to decrease health inequalities.
This section also addresses the issues like cancer prevention and survival, dementia and Malnutrition which present challenges for population health in later years. Due to an ageing population, it is important to enhance understanding of the strategies that can be successfully applied at the local level.

**Public Health Works**

Turning the tide of diseases that have assumed epidemic proportions during the course of the 20th century requires fundamental changes in the social norms that regulate individual and collective behaviours present the greatest challenge to the health and social care budgets. Public health teams are trained in skills and techniques that can mitigate these risks; and positioned within local authorities they will have the opportunity to impact on more upstream issues.

A recurrent theme in the discussion of more effective health spending has always been the importance of sustaining support for prevention. Curative care attracts more political attention, and it is tempting for preventive activities to be sacrificed in the face of budgetary pressures. Getting the balance right between maintaining essential curative services and sustaining preventive programmes is essential in managing the health sector at times of economic difficulties. The current government has responded to this challenge by ring fencing public health budgets, which can be applied to tackle local challenges like the number of people with excess weight in the local population, tobacco and substance misusers; and prolong survival by preventing delays in access to information, prevention and treatment.

The estimated number of smokers in Hillingdon is around 40,000 (19.4% of population aged 16 and over). And over 10% of Hillingdon’s women smokers continue to smoke throughout pregnancy. NHS stop smoking service has proven cost effectiveness (cost per QALY between £221 and £9,515–well below the NICE threshold). Hillingdon’s stop smoking service has one of the best quit rates, which is amongst top five in London.

Nearly 61% of the overall adult population is either overweight or obese. In order to prevent excess weight translating into health problems, we are providing MEND (Mind, Exercise, Nutrition, Do-it) programme for children. Which is one of the few programmes with proven cost effectiveness through a randomised control trial (Cost per quality adjusted life year (QALY) based on weight loss among child participants attending MEND was £1,700). One of Hillingdon’s MEND programme won a Quality Assurance Gold Award last year.

It is estimated that 65.6% of the population does not eat healthily and rates of physical activity are lower than in England, London and Northwest
Section 4

London. The Joint Director of Public Health is leading on a Physical Activity Strategy to increase rates.

The chapter on substance misuse and alcohol highlights the local impact of substance misuse on people’s lives as well as the annual social, economic, health and crime costs of tackling these issues are enormous.

The bottom line is that prevention needs to be applied at all levels. As highlighted by the chapter on cancer – effectively applied primary prevention, secondary prevention and tertiary prevention strategies produce savings in the short, medium and long term.

Early detection of illness be it through raising awareness of the population of the signs and symptoms, or enhancing the ability of professionals to diagnose involves an understanding about the barriers, enablers, tools and techniques like the cancer awareness measure described in the cancer prevention chapter. The Public Health Team is committed to increasing cancer survival in Hillingdon and is working with the local Cancer Strategy Board, co-chaired by the Joint Director of Public Health. Last year, Hillingdon Awareness and Early Diagnosis Initiative (HAEDI) were successfully delivered using funds from Department of Health.

The Public health profession has a strong track record of managing population health programmes and delivering improvements in the health of the residents. Some of the recent works on immunisations, smoking cessation, screening, breastfeeding promotion, NHS health checks and teenage conceptions have achieved great success through public health action.

Engagement with patients and the population

The population is ageing. As we age we are more likely to develop chronic illnesses. Long term conditions like dementia, musculo-skeletal disorders, physical and sensory impairment that are associated with ageing as much as due to complication of diseases like diabetes require forward planning. The healthcare budgets are unlikely to increase, if increase at all in proportion with the demand. While it is the role of the NHS to deliver high quality care, free at the point of delivery to those most in need, the local population needs to be supported in actively playing a role in living long productive lives, free of disease. This is what Derek Wanless (The Wanless Report, 2002) described as the ‘fully engaged’ scenario, where individuals and communities take responsibility for their own health and wellbeing and are supported by the system to do so.

Health Promotion is also founded on evidence-based practice. Much is known about how to improve health and being of residents. The local health promotion team, part of the Joint Public Health Directorate, have
been employees of LBH for over a decade. They have already demonstrated evidence of cross cutting work with award winning schemes like their work with Libraries and Yiewsley School.

‘Expert patient programmes’ and ‘self care’ aimed at empowering the patients and carers have demonstrated value and the use of modern technology to provide telemedicine or telecare as promising cost effective and high quality alternatives to traditional management. The Joint Director of Public Health brought together a variety of local partners from NHS and non-NHS disciplines to consider ‘desirable, affordable and sustainable’ (DAS challenge) solutions for local health and social care provision. This process can be strengthened and applied further through the Health and Well Being Board (H&WBB) umbrella to initiate changes that are informed by the Joint Strategic Needs Assessment (JSNA) and involve local clinical leadership in the form of the Clinical Commissioning Group (CCG) as well as the voice of the users and carers in the form of Healthwatch.

To conclude, while the following section broadly focuses on the health of adults and older people; it also explores some challenges that have already been recognised in the JSNA and other needs assessments. More importantly, it demonstrates an appetite and enthusiasm for the forthcoming changes that offer many opportunities for innovation and improvement.
The Smoker Who Came in From the Cold

Alun Lewis

Introduction
Smoking remains the single largest preventable cause of premature death, disease, disability and health inequalities in the UK. England has made substantial progress in reducing smoking prevalence and tobacco related harm. There are 2 million fewer smokers in England than a decade ago although approximately 9 million adults still smoke (Robins and Bulger, 2010) and more than 80,000 of these die each year as a result of their smoking (Peto et al, 2006) Approximately another 10,000 people die each year as a result of second hand smoke (Jamrozik, 2005). Smoking causes more people to die than the next six most common causes of preventable deaths combined: drug use, road accidents, other accidents and falls, preventable diabetes, suicide and alcohol abuse (ASH, 2009). One out of every two long term smokers will die of a smoking related illness, losing on average 10 years of productive life (Doll et al, 2004).

‘Fair Society, Healthy Lives’ (Marmot, 2010) identifies how Government, Public and Private organisations can address the problems of health inequalities. It recommends 6 objectives where smoking can have a substantial impact in terms of:
- giving every child the best start of life by ensuring their families are not pushed over the poverty line by dependence on an expensive tobacco addiction
- enable all children, young people and adults to maximize their capabilities and have control over their lives and be free from the constraints of the addiction.
- create fair employment and good work for all through reduced smoking related absences, sick leave or early retirement.
- ensure a healthy standard of living for all that is smokefree and not blighted by smoking related diseases
- strengthen the role and impact of ill health prevention and avoid 80,000 preventable deaths in England caused by smoking.
- Create and develop healthy and sustainable communities.

The economic case for tobacco control is robust. The most recent study estimates the cost of treating tobacco related illnesses at around 5% of the total NHS expenditure. However, the economic consequences are not confined just to the NHS. Every year, tobacco costs businesses about £2 billion in the form of absenteeism and smoking breaks (known as ‘productivity losses’).
Tobacco related products are a major cause of fires, and in England the cost of smoking related house fires is estimated at £507 million each year.

As smokers die prematurely often at working age, £4 billion is lost each year as ‘employment losses’ to the businesses. In addition, many smokers need payments in the form of sickness and incapacity benefits because they suffer from diseases caused by smoking. There may also be pension and other benefit payments to families of those who die as a result of their smoking. The environmental costs of costs associated with cleaning used tobacco products, such as cigarette butts, are non-negligible and estimated to be £342 million per year.

It is often argued that tobacco is a net contributor to the economy through taxation revenues. However, the recent study from the Policy Exchange dispels this myth, suggesting that taxation generates around £10bn per year whilst the adverse effects of tobacco cost society somewhere in the region of £13bn per year. In short, tobacco use represents a sizeable net economic cost to society (Trapero-Bertran et al, 2011).

There are two primary routes to reducing the avoidable burden of tobacco use:

I. Reduce availability of tobacco products, and
II. Increase the number of current smokers who successfully quit.

There is substantial evidence supporting some very cost-effective interventions to help smokers quit successfully. Stop Smoking Services have the potential to improve quality of life, save lives and save local health, social and business economies a substantial amount. The Heartsaver (Heartsavers, 2010) report estimates that in the year following the implementation of the smokefree legislation, there are 9,600 fewer beds days due to myocardial infarction admissions. This would allow savings to be invested in health care such as cataract or hip replacements – both of which can reduce social care costs.

Hillingdon Stop Smoking Service supports approximately 3,000 people a year to give up smoking. In terms of comparisons to other services in London, Hillingdon is a strong performer and is within the top 6 in London for its conversion to quit rate, which is a good indicator of a quality service.

Public Health team also leads on a number of Tobacco Control priorities and involves multi-agency partners in preventative work with children and families for the Borough under the auspices of a Hillingdon Tobacco Control Network.

Figure 1: Causes of Preventable Death
The use of cigarettes is linked to a number of factors that contribute to socio-economic and personal disadvantage. Smoking has been a significant contributor to the widening gaps in health and health inequalities between those who are most well off compared to the least well off. Smoking prevalence rates have been dropping over the past 20-30 years. However, the rates of smoking cessation rates among disadvantaged groups have lagged behind those who are not. This has created the widening gap in health inequalities. Those residents that live in more deprived areas are more likely to start smoking earlier, become more addicted and find it harder to quit. They tend to die earlier but also spend more of their lives with a disability. This contributes to the gap in life expectancy between the most and least affluent wards in the Borough. For males this is 75 in the most deprived wards and 80 in the least deprived and for females the gap is 6 years (LHO, 2010).

**The true cost of a packet of cigarettes**

Going by industry information the most popular brand of cigarettes can be brought for £6.29. Out of this the production, shipping, retail and profit margins are £1.46. The government takes £4.83 in taxation. From this amount the government needs to recover the costs of treating the illnesses caused by tobacco use, clearing the cigarette butts littering the streets, the loss of productivity caused by cigarette breaks, sick leave absenteeism and the cost of dealing with domestic home fires (Croghan E and Willis N, 2009).
Section 4

Health care Costs
One of the most direct ways in which smoking drains the economy is through the provision of healthcare to patients’ suffering from illnesses caused, or predisposed to by smoking. These costs tend to increase at a rate higher than inflation as expensive new therapies become available, and are estimated to be between £2.7 billion and £5.2 billion. It is worth noting that these costs do not include the treatment of those non-smokers exposed to environmental smoke, which is considered later.

Smoking cessation reduces hospitalization in COPD cases by 43% and it reduces the chance of developing bronchitis and pneumonia compared to continued smoking; If a person quits before the initiation of radiation therapy in lung cancer it is associated with a better response to treatment compared to those who continue to smoke through treatment. Quitting significantly reduces the risk of re-hospitalisation for people with heart disorders.

The ASH Tobacco Control Reckoner estimates the total cost to the local NHS of smoking in Hillingdon is £12.3 million.

Loss of productivity
Direct measurement of worker productivity is difficult. However, a number of studies have investigated workers taking breaks in order to smoke, and have tried to quantify this time at between £915 million and £3.2 billion per annum.

The ASH Reckoner puts the estimated cost of lost productivity from smoking breaks in Hillingdon as £13.2 million.

Absenteeism
Smokers have been demonstrated to have an increased rate of absenteeism from illness. The cost of this is between £1.1 billion and £2.5 billion. This gives a good indication of the amount of money the country loses annually due to smokers’ excess illness causing them to miss work. These costs are borne by businesses, consumers, and the taxpayer.

The ASH Reckoner puts the estimated cost of lost productivity from smoking related sick days in Hillingdon as £11.4 million.

Loss of productive output
A loss of output refers to the loss of economic activity that is caused by smokers of working age dying early. Using the Human Capital Approach to calculate the expected life time output that would have been realised had each death caused by smoking been avoided? Using this methodology the loss of productivity cost is calculated at £4.1 billion.

We should be clear that the human capital approach does not attempt to measure the value of a life; rather, it is purely a means to capture the loss of
The true cost of passive smoking

Smokers are not the only people exposed to the harmful effects of tobacco. Passive smoking – the inhalation of environmental smoke – has, for some time, been recognised to have significant effects on health. It was these effects that led to calls for smokefree legislation.

The productivity loss of lives lost as a result of passive smoking is estimated at £713 million. This value does not, however, include the costs of NHS care and absenteeism due to illness caused by passive smoking. These are likely to be less than the direct costs incurred by active smokers.

The ASH Reckoner puts the estimated cost of passive smoking breaks in Hillingdon (from lost productivity due to early death, not including NHS costs and absenteeism) as £3.2 million.

Environmental costs

Cigarette butts are the most common type of litter found in the UK. According to an Environmental Campaigns (ENCAMS) local environmental quality study, smoking related litter was found in 78% of locations investigated. The cost of clearing these cigarette butts is estimated at £342 million each year.

The ASH Reckoner puts the estimated cost of cleaning smoking materials litter in Hillingdon as £2.3 million.

Fire costs

Smoking is a common cause of fire throughout the world. Within London, 40% of domestic fires are started by cigarettes and smokers are one half times less likely to own a smoke alarm. Notable disasters attributed to smoking materials include the 1988 King’s Cross station fire. We calculate the costs of smoking related fire at £507 million annually. This cost is likely to be conservative as it is based on the 2004 value for costs of fire and completely excludes costs of fires other than those within the dwelling. The ASH Reckoner puts the estimated cost of smoking related fires in Hillingdon as £2.3 million.

The true cost to society of a cigarette

Currently a packet of cigarettes costs £6.29, whereas the true cost underpinned by the analysis should be £7.42. This means that theoretically cigarettes are being under-taxed by £1.13 per packet which amounts to £2.47 billion in lost revenue for HM Treasury. It is therefore welcome news that
there is an emerging political consensus that the taxation of tobacco products should be increased at a greater rate than inflation every year.

Each year, smokers in Hillingdon spend approximately £71.1 million on tobacco products. This contributes roughly £54.2 million to the Exchequer. This means that there is an annual theoretical funding shortfall of £8.6 million in this area.

Public Health Works - The Impact of Public Health Action on Smoking

In 1998 the white paper, Smoking Kills, set out the Public Health strategy and action for tobacco control. The paper recommended the adoption of a number of priorities from the World Bank. Over the next 10 years there were a number of significant developments in tobacco control.

The impact of these actions has led to a fall in adult smoking rates in England from 28% to 21%. Among routine and manual workers this has dropped from 31% to 29%. There are now 2 million fewer smokers than a decade ago.

There has been a significant decline in the smoking rates among young people aged 11-15. In 1998 it was 11% but by 2008 it had dropped to 6%.

The overall impact of reducing prevalence rates, protecting people from second hand smoke and preventing young people from starting has resulted in a reduction in the numbers of people dying of a smoking related illness each year from approximately 120,000 in 1998 to 80,000 in 2010.

Despite these significant developments and achievements, smoking remains the number one Public Health priority in terms of preventable deaths and its contribution to widening the gap in health inequities between the rich and the poor.

The Current Situation

Given the characteristics of the local population we would expect approximately 19.4% of adults to smoke in Hillingdon, lower than the rate for England at 24.1%. However, there is a variation from 11.5% to 31.6% depending on middle layer super output area. Using 19.4% (11.5 – 31.6) for an estimated 16+ resident population of 204,400, it is estimated that 39,576 people smoke in Hillingdon (lower confidence Limit 19.5% and upper confidence Limit 25.5%). These estimates describe the expected prevalence and do not represent an estimate of the actual prevalence.

<table>
<thead>
<tr>
<th>Table 2: Local and National Prevalence Rates</th>
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<tbody>
<tr>
<td>Smoking in adults (95% confidence intervals)</td>
</tr>
</tbody>
</table>
There are differences in smoking prevalence and consumption in the Borough, varying by age, sex, social class, employment status, and ethnicity. People in deprived circumstances are not only more likely to take up smoking but generally start younger, smoke more heavily and are less likely to quit smoking, each of which increases the risk of smoking-related disease. Smoking is highest among those aged 20-34. Smoking prevalence gradually declines with age, through quitting or dying; the lowest smoking rate is among people aged 60 and over.

The Health Survey for England published in 2004 made it possible to estimate the numbers of smokers from various BME communities. For Hillingdon, the Irish and Indian populations would have the higher smoking prevalence rates from all BME groups.

Hillingdon has approximately 4,100 births a year. Nationally, 32% of mothers in England reported smoking in the 12 months before or during pregnancy and 17% of these remained smoking during the pregnancy. Hillingdon's rates of smoking at time of delivery are 10.2%, which is just lower than the National average of 13% but significantly greater than the neighbouring boroughs of Ealing and Harrow (approximately 5%) and slightly higher than Hounslow (approximately 9%).

Hillingdon employs a dedicated midwife service to help pregnant smokers. It sees and supports one of the highest numbers of pregnant smokers across West London.

As previously mentioned, smoking is a significant factor in a number of health related conditions. The London Health Observatory summarises that smoking is highly addictive and harms nearly every organ of the body; causing many diseases and reducing the health of smokers in general. It causes 84% of deaths from lung cancer, and 83% of deaths from chronic obstructive lung disease, including bronchitis (DH, 1998). Three out of ten cancer deaths are caused by smoking. As well as lung cancer, smoking can cause death by cancer of the mouth, larynx, oesophagus, bladder, kidney, stomach and pancreas. One out of every 7 deaths from heart disease is due to smoking, which amounts to 40,300 deaths a year in the UK from all circulatory diseases.
### Table 3: Smoking related deaths by condition 2008/09 from Hillingdon Hospital

<table>
<thead>
<tr>
<th>Types of fatality</th>
<th>Total Hillingdon Numbers</th>
<th>Deaths caused by smoking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbers of lung cancer deaths</td>
<td>20</td>
<td>16</td>
</tr>
<tr>
<td>Numbers of upper respiratory cancer and oesophageal cancer deaths</td>
<td>121</td>
<td>73</td>
</tr>
<tr>
<td>Numbers of deaths COPD</td>
<td>292</td>
<td>239</td>
</tr>
<tr>
<td>Numbers of ischaemic heart disease deaths</td>
<td>135</td>
<td>23</td>
</tr>
<tr>
<td>Number stroke deaths</td>
<td>103</td>
<td>10</td>
</tr>
<tr>
<td>Numbers of Ulcers of the stomach and duodenum deaths</td>
<td>12</td>
<td>6</td>
</tr>
</tbody>
</table>

In 2009/10 Hillingdon delivered 1,630 quitters. The majority of the quits were delivered by the pharmacy service but the GP services produced the highest conversion to quit rate. The main target for the service is to achieve 1640–1650 4 week CO validated quitters each year.

## The Future

The NHS Stop Smoking Service is extremely cost effective as measured by Quality Adjusted Life Years (QALYs). QALYs provide a measure of extra months or years of life of a reasonable quality a person might gain as a result of a particular intervention. Smoking Cessation activities cost up to £985 per QALY (2005-06 prices) which is drastically below the NICE economic criteria of £20,000 per QALY (All Party Parliamentary Group, 2010) Future healthcare savings are equivalent to £438 per life year gained. As the National average cost to treat one smoker by the Stop Smoking Service is £224 (Davies et al. 2009) it represents substantial value for money. For Hillingdon the average cost to treat one smoker is £254 per quitter. This is below the London average of £350.


- **Reduce smoking prevalence among adults in England:** To reduce adult (aged 18 or over) smoking prevalence in England to 18.5 per cent or less by the end of 2015, meaning around 210,000 fewer smokers a year
- **Reduce smoking prevalence among young people in England:** To reduce rates of regular smoking among 15 year olds in England to 12 per cent or less by the end of 2015.
• **Reduce smoking during pregnancy in England:** To reduce rates of smoking throughout pregnancy to 11 per cent or less by the end of 2015 (measured at time of giving birth).

The Local Service leads on the development of Hillingdon’s Tobacco Control Strategy. This includes promotion of Operation Smoke Storm into Secondary Schools and Smokefree Home pledges, where families are protected from the harm of second hand smoke. The Local Authority leads on the enforcement of smokefree legislation and preventing under age sales while the Hillingdon Police Service seeks to prevent the sales of smuggled or illicit supplies.

A key initiative for 2012 is the consultation on Plain Packaging. If this is approved all tobacco products will made generic and drab in colour. It will remove the marketing impact on young people and lead to less younger adults taking up the habit. This initiative will reduce the inflow of available smokers and reduce smoking prevalence further.

The Hillingdon Stop Smoking Service will maintain its focus on supporting vulnerable and at risk smokers and strengthen the impact on reducing the smoking related disease, for example through the use of campaigns to identify COPD early.

**Conclusion**

Smoking is a substantial health risk within Hillingdon; and a major cause of health inequalities. It is important to target services towards those geographical areas and communities that will gain most from an intervention. Due to a strong association between the smoking status of individuals and economic deprivation; the local service prioritises areas with the highest deprivation indicators and routine and manual workers for community clinics.

Given the highly addictive nature of smoking, the stop smoking service needs to ensure it is supporting clients from high smoking prevalence groups, e.g. those with mental health and drug and alcohol issues. The service needs to build on being more accessible to members of key BME communities; but this has to be developed alongside an education programme to inform about the risks/ harms associated with smoking.

Smoking is a contributing factor in the development of respiratory disorders. Early identification can lead to better outcomes and management of the condition with medication. The service will adopt a COPD screening tool to enable identification and referral to spirometry testing.
There is an excellent local programme that targets pregnant smokers, which we are building on so that it delivers year on year reductions in the number of women who continue to smoke throughout pregnancy.

Delivery of smoking cessation interventions can contribute to a 0.5% prevalence drop in adult smoking rates. While there have been substantial reductions in prevalence rates over the previous decade, the onset of the recession has arrested the decline (West R, 2010). People report numerous pressures to smoke, and there is a possibility that due to addictive nature of cigarettes this rate could increase. Therefore investment in smoking prevention, especially targeting young people is important for keeping the prevalence low. The presence of a comprehensive tobacco control programme involving multi-agency partners is known to be an effective way of maintaining pressure on the reduction of smoking norms.

The Public Health Team has been successful in fostering closer working links between the Health services, Local Authority, Police & Fire Service and Education & Youth provision around Tobacco Control. The development of a comprehensive Smokefree Hillingdon Alliance has the potential to bring numerous benefits for Hillingdon in terms of improved commercial outputs, lifting families out of poverty, improved street cleanliness, reduction in domestic fires, and reduced exposure to the harms of second hand smoke.

Tackling smoking rates of smokers entering the Hospital for procedures remains a significant area for potential development. Evidence shows (LHO, 2006) that smoking contributes to reduced wound healing, pulmonary and cardiac complications, an increased in postoperative intensive care and longer periods of hospitalization; it is important to ensure that smoking cessation is supported before the patient is admitted to the Hospital. This can be achieved by supporting the local Hospitals to adopt a Smoking Cessation CQUIN. Hillingdon Public Health Team is leading o this work on the behalf of Northwest London.

**A Vision for a Smokefree Hillingdon**

If Hillingdon sets up an ambition to become a smokefree borough, it would lead to a number of significant improvements in health of the residents, economy and the environment. Some of these can we quantified and measured – others will be intangible but no less important; such as improved mental health. Based on a toolkit produced by Action on Smoking and Health (ASH tobacco control reckoner), by 2015, there would be an estimated 7,035 fewer smokers. Most ex-smokers tend to reinvest the money they would have spent on smoking back into consumer goods as opposed to saving those (Boneski et al, 2010). A 1% reduction in smoking in a year would release £4,182,810 back to smokers. This would lead to £14,638,835 being spent back into the local economy in 2015 alone.
The smoking costs to society would drop from £62.7m to £52.3m this would lead to savings by 2015 of:

- £3.1m reduction in lost output lost from early death in Hillingdon
- £2.2m reduction through reducing loss of productivity in smoking breaks
- £2m saving to local Hospitals
- £1.9m saved through improving productivity from reducing smoking related sick days
- £0.5m saved through reduction in lost productivity caused by passive smoking
- £0.4m saving by a reduction in smoking related fires.
- £0.3m saving in the cost of cleaning up smoking related litter.

These economic benefits relate to numerous human interest related improvements – such as less distress caused by smoking related disease within the family, improvements in wealth and health, a cleaner and greener environment, reduced disruption or disturbance caused by house hold fires and disruption and less complications during child birth. Hospitals would become slightly more efficient and have slightly less complications and the workforce would be more profitable and efficient leading to growth.

Through the adoption and achievement of these ambitions then overall the residents of Hillingdon, by 2015, would be healthier, wealthier, happier, more productive and living in a Borough that was cleaner and greener.
Introduction

Obesity in adults is an established risk factor for diseases such as type 2 diabetes, cardiovascular diseases, and many cancers, adding costs to the NHS and blighting many lives. The UK has the highest obesity rates in Europe and one of the highest rates in the developed world. The majority of England’s adult population (over 61%) is overweight or obese, which is the cause of many disorders and diseases we see in our population; including back pain, breathing problems, infertility, low self-esteem and reduced quality of life (DH, 2011). Excess weight costs the NHS £5bn each year and has a serious impact on broader economic development.

“At a time when our country needs to rebuild our economy, overweight and obesity impair productivity of individuals and increase absenteeism.”

*(DH: Healthy Lives, Healthy People: A call to action on obesity, 2011)*

In 2010/11 there were 11,574 hospital admissions with a primary diagnosis of obesity among people of all ages. Over 1 in every 5 of these admissions were in London. The 2010/11 hospital admissions were over ten times as high as the number in 2000/01 (1,054) and more than double three years earlier (5,018). There were also 1.1 million prescription items for drugs for the treatment of obesity, 7 times higher than 2000. In 2004, research by a House of Commons Select Committee estimated that 34,100 of all deaths in England were attributable to obesity, approximately 6.8% of all deaths that year. The major costs however are not due to the direct spend on obesity but the related burden of chronic diseases such as type 2 diabetes, hypertension (high blood pressure) and hyperlipidaemia (high levels of fat in the blood that can lead to narrowing and blockage of blood vessels), cancer, disability, musculo-skeletal disorders and reduced quality of life. There are further broader productivity losses to society due to sickness absence.

Regular exercise is known to contribute to weight reduction, but its benefits work in many other ways and therefore it is essential for good health. The latest CMO report on physical activity *(DH, 2011)* highlights how promoting active lifestyles can help us address some of the most important challenges related to physical activity...
and mental health. It can save lives by reducing all cause mortality, save costs through easing the burden of chronic disease, and improve productivity through reducing sickness. These are addressed later in the chapter, but initially, it is important to understand the relationship between accumulation of body fat and physical inactivity; both in individual and population terms.

**What makes people fat?**
Understanding what causes a problem usually puts us in a better position to find solutions. In simple terms, overweight and obesity are a direct consequence of eating and drinking more calories than are used by the body. We know that increasing physical activity levels increases the body’s use of calories; which, combined with reducing the number of calorie intake, creates a “calorie deficit” that results in weight loss. Most weight loss occurs because of decreased caloric intake (eating less), although, evidence shows the best way to maintain weight loss is to be engaged in regular physical activity. This advice is as valid and applicable today as ever!

Over 61% of our population is carrying excess body fat. Scientific analysis of the causes of excess weight carried out by Foresight (The Foresight Report, 2007), concluded that human behaviour is influenced by the environment we live in. In modern times, with abundance of energy dense foods and less opportunity to spend calories, it is easy to accumulate excess body fat.

This phenomenon has been further explained through looking at our diet and exercise patterns. As highlighted in the paper ‘Tax the Fat?’ (A. Muriel, 2011), surprisingly, on average, the amount of calories consumed has actually reduced in the UK since 1970s (Figure 1). In 1974, the average consumption in UK was over 2,500 calories per person per day. By 1990 it had fallen as low as 2,050 calories per person per day, but since then we have seen a ‘bounce’. By 2004 this was 2,250 calories; and the latest data for 2010 shows 2,292 calories consumed on average per person per day (NIC 2012).

‘Tax the Fat?’ report has explained this increase in obesity without a substantial rise in calorie consumption through basic economic concepts of costs and benefits.

Consuming calories as well as spending calories have clear costs and benefits. The benefits of consuming food include a) it tastes good, and b) we eat to survive. The costs are made up of the money we spend to buy food (financial cost) and time spent to prepare food (time costs).
Expending calories also have benefits in terms of fitness and optimum body weight; and costs which vary enormously according to the work you do. The report explains this as:

“Coal miners and farm labourers, for example, are paid to do physical work – in a sense they are ‘paid to exercise’. Lawyers and economists, by contrast, are mostly paid to sit behind desks – for them, expending calories may mean forking out money for gym membership, as well as spending time away from their well-paid job (which means a higher ‘opportunity cost’)”

The costs versus benefits balance has been changing over the past century. The cost of expanding calories has been rising as the proportion of people employed in highly active jobs like mining and farming has fallen. Therefore in 1974 in Britain, people managed to consume more calories and maintain less weight due to highly active jobs, where they were paid to be active. Hence we can presume that the difference in the economic situation in 1970s could have contributed to the difference in the average body weight.

However, economic situation has not changed that significantly since 1990 when the average calorie consumption per person per day was still 9% less than now. What has changed is the technology of food preparation. While a huge amount of time and effort went into food preparation (washing, cutting,
peeling, boiling, baking); we now get a huge variety of foods in ready washed, cut and cooked forms which has reduced the ‘time cost’ of eating. Due to this people are likely to eat more often, and the number of calories we get from

To conclude, changes in food technology combined with the changes in work technology (more desk based, computer dependent jobs) has reduced the cost of consuming calories while raising the cost of expending them.

So what’s being done about it?
The government strategy ‘Healthy Lives, Healthy People: A call to action on obesity’ (2011) is informed by the latest evidence on underlying issues and causes; and latest evidence on what works. The national strategy acknowledged that:

- The modern environment makes it much harder for individuals to maintain healthy lifestyles – and that it is for Government, local government and key partners to change the environment to support individuals in changing their behaviour.
- Physical activity is important and will help to improve our overall health but for most of us who are overweight and obese, eating less is key to weight loss.
- To tackle overweight and obesity we need to adopt a life course approach – from pre-conception through pregnancy, infancy, early years, childhood, adolescence and teenage years through to adulthood and preparing for old age. There are specific opportunities and challenges at each stage of life course and action is needed at all ages to avert the short and long term consequences of excess weight and to ensure that health inequalities are addressed.

To achieve this, two new national ambitions have been set to act as a “rallying cry” for us all.

- A sustained downward trend in the level of excess weight in children by 2020
- A downward trend in the level of excess weight averaged across all adults by 2020.

Hillingdon Obesity Strategy is currently being updated to reflect the new ambitions outlined in ‘Healthy Lives, Healthy People: A call to action on obesity’. Hillingdon Public Health Team is also working with multi-agency partners to produce a physical activity strategy for the borough to get the local population more active. This strategy is based on the latest national advice as outlined in ‘Start Active, Stay Active report.'
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Excess weight in Hillingdon

Information from the Joint Strategic Needs Assessment outlines obesity prevalence estimates based on the Department of Health’s ‘ready reckoner’, according to which 23.2% of adults in Hillingdon were obese (table 3); with the highest proportion of obese men and women between 45–74 years age bands.

People aged between 40-74 years are eligible for the NHS ‘Health check’ programme. Data from 4,208 Hillingdon patients attending general practice and measured as part of the NHS Health Check (eligible adults between 40-74 years) found that the average BMI between quarter one and quarter three 2011/12, was 27.1 kg/m², which is in the overweight range. 23.7% of patients measured were classified as obese.

Table 1. Hillingdon obesity prevalence ready reckoner - adults 16 years and over

<table>
<thead>
<tr>
<th>Age</th>
<th>Hillingdon PCT 2010 Population Estimate*</th>
<th>Estimated number of adults who are obese (BMI &gt;30)**</th>
<th>Estimated number of adults with raised waist circumference (men 102cm and above or Women 88 cm and above)**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Wome</td>
<td>Men</td>
</tr>
<tr>
<td>16-24</td>
<td>18,200</td>
<td>17,300</td>
<td>1638</td>
</tr>
<tr>
<td>25-34</td>
<td>19,100</td>
<td>20,900</td>
<td>4011</td>
</tr>
<tr>
<td>35-44</td>
<td>19,700</td>
<td>20,400</td>
<td>4925</td>
</tr>
<tr>
<td>45-54</td>
<td>17,700</td>
<td>17,800</td>
<td>4956</td>
</tr>
<tr>
<td>55-64</td>
<td>12,800</td>
<td>13,100</td>
<td>4224</td>
</tr>
<tr>
<td>65-74</td>
<td>8,200</td>
<td>9,500</td>
<td>2542</td>
</tr>
<tr>
<td>75+</td>
<td>6,800</td>
<td>10,200</td>
<td>1224</td>
</tr>
<tr>
<td>Sub-totals</td>
<td>102,500</td>
<td>109,200</td>
<td>23,520</td>
</tr>
<tr>
<td>Totals (M&amp;W)</td>
<td>211,700</td>
<td>49,069</td>
<td>23.2%</td>
</tr>
</tbody>
</table>

Source: Faculty of Public Health
*ONS 2010 mid-year population estimates
**The formulae for both obesity and waist circumference are based on the Health Survey for England 2006

After hypertension, obesity is the most prevalent chronic condition in Hillingdon recorded in general practice ‘Quality and Outcomes Framework’ (QOF) data.

Hillingdon’s adult obesity rates are similar to the estimates for England, where 23% adults are obese and overall 61.3% are either overweight or obese. The national trend has been upward over the past decade and there is little evidence of sustained decline. There are far too many people in the population
with excess weight and there are clear links to lifestyle and behaviour as demonstrated through the Health Survey for England findings:

- There has been a significant upward trend in household expenditure on eggs, butter, beverages, sugar and preserves in the UK in 2010.
- Household purchases of fruit fell by 0.9% in 2010 and are now 11.6% lower than 2007 in the UK. Purchases of vegetables increased by 0.4% but are 2.9% lower than in 2007.
- In 2010, 25% of men and 27% of women consumed the recommended five or more portions of fruit and vegetables daily. These results are similar to those reported in 2009 and are slightly lower than in 2006 when 28% of men and 32% of women consumed at least five portions daily.
- Between 2009 and 2010, the percentage of 5-15 year old boys consuming 5 or more portions of fruit and vegetables decreased from 21% to 19%. For 5-15 year old girls the corresponding percentages showed a similar decrease from 22% to 20%.
- Total energy intake per person however fell slightly (0.5%) in 2010 in the UK to 2,292 kcal per person per day from 2,303 in 2009. Although there is downward movement since 2007, it is not statistically significant.

Physical activity levels in Hillingdon

Physical activity is defined as ‘Any force exerted by skeletal muscles that results in energy expenditure above resting level’. This includes a variety of activities, from walking or cycling for transport, gardening, housework, play and dance as well as sport or deliberate ‘exercise’.

Physical activity is a critical public health issue due to three inter-related factors:

- Lack of physical activity is associated with significant risks to many aspects of health.
- There is a high prevalence of physical inactivity.
- Physical activity increases people’s wellbeing i.e. people feel better.

According to 2007/08 Sport England figures (Active People Survey) from the LHO Hillingdon Profile only 9.1% of adults (aged 16+) meet the national recommendation of 30 minutes of moderate intensity activity at least 5 times per week

Recent data from Hillingdon Active People Survey (APS 5) National Indicator 8 (NI8), which measures participation in moderate intensity sport and active recreation for adults aged 16 and over found that the percentage of adults participating in moderate intensity physical activity, for 30 minutes or more on at
least three days a week in Hillingdon was only 16.2% (2009-11). Hillingdon’s rates were worse than the England, London and West London averages; and this was a significant decrease (of 3.4%) from the 2005/6 baseline of 20.8%. The Active People Survey also found that less than half of the adult population get at least 30 minutes of moderate intensity physical activity on at least one day of the week. Hillingdon performs worse than the London average on this measure, although better than the West London average. A recent needs assessment (Oyinlola A, 2011) elaborates further on activity rates, but the underlying message is clear;

“Over 4 out of 5 adults in Hillingdon do not meet the physical activity levels of 3 times a week active for 30 minutes. Men are more likely to be active than women, and younger age groups are more likely to be active than older ones. Those with disabilities and with a BMI in the overweight or obese category are less likely to be active, as are adults in lower socio-economic groups”.

Cost of inactivity
Low levels of physical activity are linked with increased risk of many health conditions which place a substantial burden on health services, through treatment of long term conditions and associated acute events such as heart attack, strokes, falls and fractures.

The direct cost of physical inactivity to NHS is estimated at £1.06 billion for the UK. This is based upon five conditions specifically linked to inactivity, namely coronary heart disease, stroke, diabetes, stroke, diabetes, colorectal cancer and breast cancer; and excludes other conditions like osteoporosis and falls, hence is a conservative estimate. Social care costs and productivity losses due to sickness add a further £6.5 billion to the above mentioned costs.

Hillingdon has a higher estimated prevalence of diabetes than London and England, and this is predicted to rise over the next ten years. CVD is the most common cause of death in Hillingdon. Among cancers, digestive system and breast cancer account for a large proportion of cancer deaths in Hillingdon.

Based on 2003 figures, total spend on chronic illness attributed to physical inactivity in Hillingdon was estimated at £3,699,890. This cost would be higher now. As shown below (Table 2) physical activity protects against diabetes, CVD, breast and bowel cancer and other conditions.
### Table 2: Health benefits of physical activity

<table>
<thead>
<tr>
<th>Disease</th>
<th>Risk reduction</th>
<th>Strength of evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death</td>
<td>20-35%</td>
<td>Strong</td>
</tr>
<tr>
<td>CHD and Stroke</td>
<td>20-35%</td>
<td>Strong</td>
</tr>
<tr>
<td>Type 2 Diabetes</td>
<td>35-50%</td>
<td>Strong</td>
</tr>
<tr>
<td>Colon Cancer</td>
<td>30-50%</td>
<td>Strong</td>
</tr>
<tr>
<td>Breast Cancer</td>
<td>20%</td>
<td>Strong</td>
</tr>
<tr>
<td>Hip Fracture</td>
<td>36-68%</td>
<td>Moderate</td>
</tr>
<tr>
<td>Depression</td>
<td>20-30%</td>
<td>Strong</td>
</tr>
<tr>
<td>Alzheimer’s Disease</td>
<td>60%</td>
<td>Moderate</td>
</tr>
</tbody>
</table>


In addition to medically defined health gains, physical activity also enhances social well-being. Physical activity can play a key role in increasing social capital and addressing social exclusion such as through initiatives focusing on reducing levels of crime, increasing family play, building a sense of community, improving the physical environment and creating respite opportunities (Coggins et al, 1999). Being active also helps at other stages of life, including coping with pregnancy, reducing falls among the elderly, overcoming social isolation and maintaining independence.

In 2009 the National Institute of Clinical Excellence reported on the basis of available evidence that the urgently required improvements in health will only be achieved through the social engagement of people in a range of everyday activities that are integrated within a culture of active involvement (NICE, 2008). The ‘Healthy Lives Healthy People’ Public Health White Paper (2010) affirms the importance of ‘physical activity becoming the norm in communities’.

**Sedentary Behaviour**

The CMO guidelines on physical activity have specifically highlighted the risks of sedentary behaviour. Sedentary behaviour is not merely the absence of physical activity; rather it is a class of behaviours that involve low levels of energy expenditure. Sedentary behaviours are associated with increased risk of overweight, obesity and cardiovascular disease independently of moderate to vigorous activity levels (Stamatakis et al, 2009). Emerging evidence (Hardman AE and Stensel DJ) also shows similar association between sedentary behaviours and type 2 diabetes, obesity, certain types of cancers as well as with all cause mortality. These relationships are independent of the level of overall physical
activity, i.e. even if you meet recommended levels of physical activity but spend large amount of time being sedentary, your risk of adverse health outcomes would be increased.

“In the UK, self-reported estimates as well as studies using objective measures indicate that majority of adults are largely sedentary, and spend substantial proportions of the day sitting or lying. Sedentary behaviours occur in numerous settings; including work, home, during transport and leisure time and include TV viewing, computer use, motorized transport, sitting to read, talk or listen to music. Many adults spend in excess of 7 hours per day sedentary and it increases with age”

- (Start Active, Stay Active, DH 2011)

There is evidence that sedentary behaviours in adults are associated with age, gender, socioeconomic conditions in general and occupation in particular. It is also associated with weight status (BMI) and some characteristics of physical environment, independent of physical activity. Many professions result into adults spending a large proportion of their working time as sedentary. Older adults spend more time in sedentary behaviours than middle aged adults.

TV viewing in adults appears to be positively associated with an increased frequency of consumption of energy dense snacks, soft drinks and fast foods, and an increased energy intake. Recommendations to reduce sedentary behaviour and TV viewing in particular, are warranted on the basis of associations with unhealthy dietary practices.

A study commissioned by Department of Health to review scientific evidence around sedentary behaviour and obesity (DH, 2010) concluded that work and leisure have become increasingly ‘technologised’ and remote for both adults and children. Activities that were once done in an external environment (e.g. socializing, cinema, games, and meetings) can be done at home or workplace without leaving your chair. Increasing multi-media integration in working lives for adults where they are spending longer working hours interacting with technology e.g. cell phones, emails, remote access, Blackberry use has led to ‘cocooning’. For teenagers, leisure often includes low energy activities. Furthermore, screen based ‘asocial’ activity can also be used for ‘social’ pursuits like chatting to friends, playing games, interacting via Twitter or Facebook without much need for movement. Such sedentary interactions might have long term implications for obesity and physical health in general for the UK population.
Physical activity guidelines for adults
The latest government guidelines for adults and older adults are summarised in Box 1. Intensity of activity required for health benefit needs be of at least moderate intensity. A person who is doing moderate intensity activity will usually experience an increase in breathing rate and an increase in heart rate, will feel warmer and may sweat on hot or humid days. Vigorous intensity activity can bring health benefits over and above that of moderate intensity activity. Someone undertaking vigorous intensity activity will usually be breathing very hard, be short of breath, have a rapid heartbeat and be unable to carry on a conversation.

BOX 1: Physical Activity Guidelines for Adults and Older Adults

**Adults (19–64 years)**

1. Adults should aim to be active daily. Over a week, activity should add up to at least 150 minutes (2½ hours) of moderate intensity activity in bouts of 10 minutes or more – one way to approach this is to do 30 minutes on at least 5 days a week.
2. Alternatively, comparable benefits can be achieved through 75 minutes of vigorous intensity activity spread across the week or a combination of moderate and vigorous intensity activity.
3. Adults should also undertake physical activity to improve muscle strength on at least two days a week.
4. All adults should minimise the amount of time spent being sedentary (sitting) for extended periods.

**Older Adults (65+ years)**

1. Older adults who participate in any amount of physical activity gain some health benefits, including maintenance of good physical and cognitive function. Some physical activity is better than none, and more physical activity provides greater health benefits.
2. Older adults should aim to be active daily. Over a week, activity should add up to at least 150 minutes (2½ hours) of moderate intensity activity in bouts of 10 minutes or more – one way to approach this is to do 30 minutes on at least 5 days a week.
3. For those who are already regularly active at moderate intensity, comparable benefits can be achieved through 75 minutes of vigorous intensity activity spread across the week or a combination of moderate and vigorous activity.
4. Older adults should also undertake physical activity to improve muscle strength on at least two days a week.
5. Older adults at risk of falls should incorporate physical activity to improve balance and co-ordination on at least two days a week.
6. All older adults should minimise the amount of time spent being sedentary (sitting) for extended periods.

(Start Active, Stay Active, 2011)
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Policy considerations for reducing overweight and obesity

The current rates of overweight and obesity in the local population present a significant public health challenge due to the associated predicted increase in the proportion of people with type 2 diabetes, hypertension, cardiovascular disease, other long term illnesses, and the associated health and social care costs.

Most population-based prevention programmes that have been scientifically assessed have not shown any favourable effect on the prevalence of obesity (Ostman J et al 2004). However, examples exist of programmes for both adults and children that have been successful, at least in the short term. New strategies to disseminate knowledge about the causes and risks of obesity, to change dietary habits and motivate people to increase physical activity need to be developed and assessed. Concurrently, there is a need for policy interventions at the societal level to reduce the prevalence of obesity.

The risks related to obesity can be reduced through weight reduction, regardless of the methods used. Even if weight reduction is not successful, the risks associated with obesity can be reduced by increased physical activity, smoking cessation, and improved control of diabetes, high blood pressure and elevated blood lipids.

Public Health Commissioning Network has published the following information on return of investment for public health interventions.

**Weight-watchers**

The cost effectiveness of a 12 week Weight Watchers programme in terms of weight loss as compared to no treatment is £1,022 per QALY. Costs of anti-obesity medication ranges from £3,200 to £24,431 per QALY.

**Local Exercise Action Pilot findings**

The Local Exercise Action Pilots (LEAP) were pilot projects funded by the DH at ten sites designed to improve the intervention evidence base for physical activity. The projects were located in both PCTs and local authorities and classified under seven categories: exercise referral; motivational interviews; classes and groups; training leaders and coordinators; campaigns and directories and outdoors and transport.

Each intervention targeted priority groups: those who are sedentary; those at risk of chronic health problems; those on low incomes; young people; older people; women and people from black and ethnic minorities. The findings of the interventions were positive, however it should be noted that the majority of
participants (60.2%) who took part were already meeting the physical activity guidelines.

- The future cost saving for the NHS per participant ranged from £770 per participant to £4,900.
- The cost per participant of LEAP interventions ranged from £50 to £3,400.
- The cost per Quality Adjusted Life Year (QALY) from LEAP interventions ranged from £50 to £510.
- The cost per participant improving their physical activity category ranged from £260 to £2,790.

**Brief Intervention**

NICE established that brief intervention for physical activity in primary care costs between £20 and £440 per quality adjusted life year (QALY) (when compared with no intervention) with net costs saved per QALY gained of between £750 and £3,150.

The service provided by the Phase IV Cardiac Rehab is developed along a similar model. A programme of training, to support the delivery of physical activity brief intervention in primary care is provided. In comparison, the cost of statins is at between £10,000 and £17,000 per QALY; smoking cessation costs between £221 and £9,515 per QALY – a common and well accepted NHS service.

Feasibility of “Let’s Get Moving” programme based on NICE public health guidance and the Let’s Get Moving feasibility study, the indicative costs for the implementation of the pathway are: Cost per QALY gain: £288/QALY (GP) £101/QALY (PN) £91/QALY (HCA)

Behavioural therapy in conjunction with changes in diet and exercise can improve results if the supportive interventions are continued for a longer period.

**Further strategies**

VLCD (or very low calorie diet, achieved through use of a protein-rich formula) for 6 to 12 weeks yields a greater weight loss than a conventional low-energy diet. In studies of VLCD for one to two years, during which treatment is often periodic, researchers have noted that maintained weight loss was a few kilograms more than in treatment with a balanced diet alone.
Pharmacological treatment with orlistat or sibutramine yielded an average 2 kg to 5 kg weight loss beyond that achieved with diet and exercise counselling alone. In clinical trials, one fourth to one fifth of those who started pharmacological treatment lost at least 10% weight, compared to half as many in the group receiving placebos. However, the licence for sibutramine has been withdrawn in the UK.

Surgical treatment, which can be appropriate for patients with severe obesity, lowers weight on average by more than 25% (e.g. from 125 kg to 90 kg) up to 5 years after surgery. After 10 years, the retained weight loss is approximately 16%, or on average somewhat more than 20 kg. Surgical intervention carries some risk for complications.

Alternative medicines have shown no reliable evidence of having any effect on obesity.

Physical Activity helps with weight reduction, and has health benefits beyond weight loss. However, levels of inactivity have been increasing due to advances in technology and increasingly sedentary lifestyles.

Time pressure is the most common reason for people failing to be physically active. This must be considered within any initiative to increase physical activity and opportunities to be active that meet residents other priorities is likely to be more effective than advertising health benefits.

Increasing opportunities for people to be physically active at work, during daily life and during their leisure time requires some thinking outside the box. Community action should seek to change social norms making physically active lifestyles mainstream. NICE guidance (NICE, 2006) considered the reviews of the evidence and an economic appraisal before developing recommendations on four commonly used physical activity methods: brief interventions in primary care, exercise referral schemes, pedometers, and community-based cycling and walking schemes.

Providing information to workplaces to encourage them to increase opportunities for employees to be active at work will benefit the employer and the employees. This could be done through Active Travel planning or a Physical Activity champion. Promotion of Active Travel is well researched and recommendations come tried and tested. These include: making car use unattractive and promoting active commutes to school and work.

The Olympics have the potential to inspire people to be more active if promoted as a festival of community participation events and the
demonstration effect is harnessed to boost the local range and availability of new sporting activities.

Pathways of referral to increase physical activity in those whose lack of activity is contributing to high risk of disease have been shown to be effective. Active Care through primary care screening, education and referral can motivate individuals to become more active.

**Use of Technology**

Technological advances have resulted into a decrease in the cost for energy intake and an increase in the cost of energy expenditure. There is some emerging evidence that technology can be used to provide solutions as well.

The development of computer games that involve sports, dance and other physical activities (e.g. Nintendo’s Wii console with Wii Sports, Wii Fit, Rock Band and Guitar Hero) are an important advance in increasing physical activity levels. There have been a small number of trials that suggest some health benefits from these, but many of the studies are small; moreover the energy costs of playing real sports are substantially larger.

Bringing the traditional behaviour change techniques into the ‘iPhone generation needs to happen, if we are to make a difference at the population level. The current lack of evidence should not be a deterrent from trying out new approaches to contribute to evidence base. Recently, a prospective randomized trial (Burke LE, 2012) conducted on 210 adults (mainly women, white) showed how the use of electronic diaries to record diet intake and exercise goals was significantly more likely (p<0.0001) to help people achieve the aims of their weight-loss programme as compared with those participants who used traditional, hand written diaries. The trial was conducted in 2005 when technology wasn’t as user friendly as it is now, participant attitudes to the personal devices varied due to difficulty of use. Researchers feel results could be better if the same intervention is tried in modern times.

**Conclusions**

**At the individual level**

Excess weight in children and adults is a significant public health issue for Hillingdon. Even if the overweight and obesity rates stabilize, the current burden in the population is at a level where it could wipe out any gains in the life expectancy made through bringing down smoking prevalence.
For those who are already overweight and obese, a reduction in the intake of calories is essential for weight reduction or maintenance.

Physical Activity has an important role in maintaining good overall health irrespective of your weight. Although an optimum level of physical activity may not result into a lot of weight loss, it has protective effect against a number of causes of ill health. People with excess weight may find that increasing physical activity levels builds muscle strength, improves bone health and cardiovascular fitness. In the long term, it helps to prevent and manage over 20 chronic conditions.

For adults, the national guidelines recommend doing 150 minutes of at least moderate intensity physical activity in bouts of 10 minutes or more – or 30 minutes on at least 5 days a week – or 75 minutes of vigorous activity spread across the week. Adults should also undertake physical activity to improve muscle strength and minimize the amount of time spent sitting (sedentary) for extended periods.

**At the population level**

Hillingdon’s overweight and obesity rates are estimated to be similar to national rates. Considering the proportion of the adult population which is inactive, overweight or obese, there is a need for a wider population based approach to deal with these issues. Evidence supports the following strategies:

- Target adults through multiple settings: workplace, schools, community and the NHS.
- Cascade consistent messages, advice and support about increasing activity levels, improving diets and changing lifestyles.
- Integrate advice about diet and physical activity in care pathways for chronic illnesses like diabetes, CVD and cancers.
- Involve local clinicians; frontline health and social care staff in referring people to local programmes.
- Using local assets like parks, libraries, children’s centres, workplaces for providing advice and information on physical activity, healthy eating, smoking cessation and sensible drinking
- Take a lifecourse approach as recommended in the national strategies like Healthy weight, healthy lives.
- Involve local businesses in improving food availability, healthier eating options on menus
- Increase opportunities for walking and cycling in the borough. Continue to promote the use of local parks, green spaces and allotments.
- Use modern information technology, web based advice using Hillingdon Council website. Link advice via social network sites: facebook and twitter.
Reducing personal harm from substance misuse and the associated costs to the community

Jill Downey and Sharon Daye

Introduction
Substance (both drugs and alcohol) misuse is an important public health issue. It is complex in nature and can have a significant impact not only on the lives of those directly involved but also on those close to them - their families, friends, as well as the communities within which they live.

The terms ‘substance misuse’ and ‘alcohol misuse’ refer to the use of legal or illegal drugs, solvents or other substances and alcohol, in an excessive, habitual or harmful way or in other ways that results in an impairment to the user’s health.

Legal drugs
Under British law, most drugs are illegal. Some drugs, however, are legal, including: caffeine, alcohol, cigarettes, prescription and over-the-counter medications, inhalants and solvents. If a drug is legal, that does not mean it is harmless – for example in England each year, cigarettes and alcohol kill more people than all illegal drugs put together. Prescription medication, such as strong painkillers or tranquillisers, is often misused by people who have no clinical need for it but use it for its mood-altering effects” (NHS Direct Wales)

Alcohol: With specific reference to alcohol, the vast majority of people enjoy alcohol without causing harm to themselves or to others. However, alcohol misuse contributes to a wide range of serious health problems and accidents which require health care (See box 1)

Box 1: Alcohol misuse contributes to a wide range of serious health problems and accidents

- Physical and mental health harms: The physical problems include liver diseases (hepatitis and cirrhosis), heart diseases and stroke and psychological problems include depression, loss of memory and impaired judgment. Misuse of alcohol can be fatal, contributing to sudden deaths through acute alcoholic poisoning or accidents while people are intoxicated, as well as deaths due to long-term abuse of alcohol.
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- Crime/public disorders: Alcohol misuse has close links to crime, disorder, anti-social behavior, and other crime types such as domestic and sexual violence and drink driving.

- Loss of workplace productivity: Working days lost due to alcohol related sickness and reduced employment.


The 2007 National Alcohol Strategy and Department’s guidance identifies four main categories of “alcohol misusers”:

- **Hazardous drinkers:** those who drink at levels over the sensible drinking limits, either regularly or through less frequent sessions of heavy drinking, but have so far avoided significant alcohol related problems;

- **Harmful drinkers:** those who drink above sensible levels, usually more than hazardous drinkers and show clear evidence of some alcohol-related health problems;

- **Moderately dependent drinkers:** are likely to have increased tolerance of alcohol, suffer withdrawal symptoms, and have lost some degree of control over their drinking. They may recognise they have a problem with drinking but do not have severe dependence;

- **Severely dependent drinkers:** may have withdrawal fits (delirium tremens: e.g. confusion or hallucinations usually starting between two or three days after the last drink); and may drink to escape from or avoid these symptoms.

**Khat:** Khat is a natural stimulant from the Catha Edulis plant that is cultivated in most of the countries of East Africa. Its buds and leaves are chewed as a stimulant. Although cathinone and cathine, the major active constituents of Khat, are classified as class C drugs, khat itself is not a prohibited substance (Glenice C and Rampes H, 2003. The khat chewer experiences a sense of increased energy levels, increased alertness and ability to concentrate, improvement in self-esteem and an increase in libido.

Migration of people from East Africa has spread the practice of khat chewing to the West including the UK. As highlighted in a recent report produced by the London Borough of Hillingdon the main users of khat come from Somalia, Kenya,
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Ethiopia and Yemen (London Borough of Hillingdon – The Hillingdon Khat Report: A call for action (May 2011)). Occasional users normally chew khat in their own homes but heavy users meet with other Khat users in various types of settings referred to called Khat houses or Mafreshi (Patel SL et al 2007). Some can be described as cafes and others are private homes. Many heavy users spend most of their days and nights at khat houses.

There are a range of social problems associated with the use of khat, particularly by male heavy users. These problems include:

- A detrimental effect on family life – including family breakdown
- Unemployment
- Domestic violence

Changing usages of khat are being reported, including the use of khat as a tea, which produces a stronger effect in the user, the combination of khat with cannabis and other substances, and local providers have reported the increasing use of khat outside the Somali community (London Borough of Hillingdon – The Hillingdon Khat Report: a call for action (May 2011)). Case studies from the Somali community highlight the barriers of social isolation, lack of access to many mainstream services, and an over-reliance on acute services, suggesting that a more holistic response is needed in response to this need.

The most recent recorded data (Advisory Council on the Misuse of Drugs, ACMD, 2005, Khat (Qat), 2011) states that there are an estimated 50,000 users in London and approximately 10,000 in Hillingdon.

**Steroids:** Recent snapshot monitoring of tier two services suggested that there is a cohort of steroid users who use the needle exchange scheme, but who are not known elsewhere in the treatment system. This demonstrates the effectiveness of tier two services in offering harm minimisation options to clients who would otherwise be hidden.

**Illegal Drugs**

There are many different types of illegal drugs. They include: heroin, cocaine, crack, marijuana, ecstasy, and amphetamines. Drug misuse can be experimental, recreational, problematic or dependent (Bolland W, 2008):

- **‘Experimental’ drug use** refers to sporadic, non-sustained use, often seen among adolescents seeking out new experiences.

- **‘Recreational’ drug use** is the use of drugs for pleasure or leisure. It implies that the drug use has become part of someone’s lifestyle, even though the
use may be very occasional. ‘Problematic’ drug misuse is a pattern of misuse analogous to hazardous or harmful alcohol use – the risk of harm, or actual harm is implicit in the term.

- ‘Drug dependence’ refers to addiction and, like alcohol dependence, is a specific disease classification based on the presence of cognitive, behavioural and physiological symptoms, including craving, tolerance, compulsive drug seeking behaviour and physiological withdrawal state.

NICE guidance on opioid misuse (ie. Heroin, Cocaine and Crack Cocaine) states that misuse of these drugs is often characterised as a long-term, chronic condition with periods of remission and relapse. Although abstinence may be one of the long-term goals of treatment, it is not always achieved. In contrast the patterns of cannabis and stimulant misuse vary considerably and are less well understood (National Institute of Clinical Excellence 2007).

Substance Misuse and Health Inequalities
Conditions most strongly related to health inequalities, such as cancer and cardiovascular disease, are associated with smoking, alcohol, drug use and obesity.

Health Inequalities and Alcohol Misuse: According to the General Household Survey 2000/01, generally men and women in non-manual households are slightly more likely to exceed sensible levels than men in manual households and the higher the level of income the more likely both men and women were to exceed the limits10. In the review of health inequalities in England - ‘Fair Society, Healthy Lives – The Marmot Review’ (2010), Marmot addresses the issue of the inverse social gradient regarding alcohol consumption:

“In particular, as the level of gross weekly household income rises, so does consumption. In 2007, in households with a gross weekly income of over £1,000, 78 per cent drank in the previous week and 21 per cent drank on five or more days, compared with 47 per cent and 13 per cent in households with a gross weekly income under £200. The proportions of people exceeding the daily benchmark (four units a day for men and three for women) and the proportions of people drinking heavily (more than eight units and six units, respectively) also rises as gross weekly household income rises. However, while people with lower socioeconomic status are more likely to abstain altogether, if they do consume alcohol, they are more likely to have
Health Inequalities and Drug Misuse: Drug misuse is a problem across England but there are variations in its patterns. The Marmot Review (2010) (Ibid) clearly makes the case for there being a significant positive correlation between the prevalence of problematic drug users aged 15–64 years and the deprivation indices of a local authority. Correspondingly, it highlights that:

- Admission rates for drug specific conditions for both males and females show a strong positive association with deprivation.
- At local authority level in England, there is a significant positive association between the number of individuals in contact with structured drug treatment services per 1,000 population and the level of deprivation of each local authority.

Economic challenges of substance misuse

Drug Misuse: Drug misuse is not only a public health problem it is also a criminal justice problem and an economic problem. In 2003/04 the social, economic, health and crime costs of class A drug use were estimated to be approximately £15.4 billion, with problematic drug users (PDUs)\(^1\) accounting for 99 per cent of total costs. In addition, drug-related crime was said to account for 90 per cent of costs associated with PDUs (Gordon et al, 2006) The economic and social costs of class A drug use in England and Wales, 2003/02, in Drugs value for Money Review – July 2007 Report (Drugs Strategy Working Document) ). The average number of acquisitive crimes reported by drug-misusing offenders is almost six times higher than for non drug-users (Bennet & Holloway, 2004). The most recent published estimate suggests that there were 327,466 PDUs in England in 2004/05 (Hay, G., et al, 2006).

The illicit drug market is estimated to be worth £4.6 billion in England and Wales and £5.3bn in the UK as a whole. This is roughly 33% and 41% of the size of the tobacco and alcohol markets respectively (Pudney, S.et al., 2006) –

Alcohol Misuse: In 2003 the Cabinet Office quantified the annual cost of alcohol misuse to the NHS in England at £1.4bn - £1.7billion per annum at 2001 prices. Many categories of cost – from inpatient costs to ambulance costs and GP consultation costs – were included in the comprehensive estimate. More

\(^1\) I.e. Those defined as those who use opiates and/or crack cocaine.
recently the Department of Health (July 2008) updated this estimate taking account of increases in unit costs that have occurred since 2003, as well as more recent and more accurate data on alcohol consumption and harm. It is estimated that the annual cost of alcohol harm to the NHS in England is £2.7 billion at 2006/7 prices. This is broken down as follows:

Table 1: Estimated Cost of annual cost of alcohol harm to the NHS in England

<table>
<thead>
<tr>
<th>Cost Estimate (£m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital inpatient &amp; day visits</td>
</tr>
<tr>
<td>• Directly attributable to alcohol misuse</td>
</tr>
<tr>
<td>• Partly attributable to alcohol misuse</td>
</tr>
<tr>
<td>Hospital Outpatient visits</td>
</tr>
<tr>
<td>Accident and Emergency visits</td>
</tr>
<tr>
<td>Ambulance services</td>
</tr>
<tr>
<td>NHS GP consultations</td>
</tr>
<tr>
<td>Practice nurse consultations</td>
</tr>
<tr>
<td>Laboratory test</td>
</tr>
<tr>
<td>Dependency prescribed drugs</td>
</tr>
<tr>
<td>Specialist treatment services</td>
</tr>
<tr>
<td>Other health care costs</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>


Table 2 details the number of hospital bed days used for both alcohol specific and alcohol related hospital admissions for the period 2008/09. The cost of alcohol attributable admissions for 2008/09 was £39.3 per capita.

Table 2: Hospital Bed days Activity (2008/09) - Hillingdon

<table>
<thead>
<tr>
<th>Cost Estimate (£m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of bed days used for alcohol specific hospital admissions (2008/09)</td>
</tr>
<tr>
<td>Number of bed days used for alcohol related hospital admissions (2008/09)</td>
</tr>
<tr>
<td>Bed days used per 1,000 of population for alcohol-attributable hospital admissions</td>
</tr>
<tr>
<td>Per capita cost of alcohol attributable hospital admissions (2008/09)</td>
</tr>
</tbody>
</table>

Source: Hospital Episode Statistics (HES), NHS Information Centre for Health & Social Care and Office for National Statistics mid year population estimates for 2008.
The current situation in Hillingdon

Needs of those who misuse alcohol
Outreach findings suggest that there is a cohort of substance misusers who are not known to any services, who commonly have problems of homelessness, alcohol dependency, inability to claim benefits, loss of employment, lack of access to a GP and a consequent inability to access prescribed medication.

Compared to other London boroughs, Hillingdon has very high rates of alcohol misuse and a relatively high number of alcohol-related hospital admissions. Just over a fifth of these admissions are patients with alcohol-specific conditions, who are most likely to be dependent drinkers. They form the cohort who can most feasibly be diverted from hospital into community-based treatment services. In addition there is local anecdotal evidence to suggest that there are hidden needs related to alcohol misuse, particularly when combined with polydrug usage.

Most alcohol misusers enter treatment via self-referrals or referrals from mental health services. The profile of primary alcohol misusers is different to that of the drug clients, as they tend to be older: over a fifth are aged between 40 and 44 years of age. Both national and local trends suggest that the number of alcohol clients presenting to treatment services is increasing.

Needs of those who misuse drugs
The key needs of those who misuse drugs can be summarized as follows:

- Hillingdon’s treatment system is successful at engaging clients who use opiates, but less able to serve the needs of stimulant users. Clients with opiates as their primary drug are by far the largest group accessing treatment or known to treatment providers.

- Problematic drug users, aged 35 and above, engage better with the existing treatment services than younger people, aged 15 to 24, who are under-represented in treatment.

- Clients are most likely to present opiates as their primary drug, even when they have polydrug use. Of the three groupings of PDUs, primary users of crack are least likely to be in treatment.

- Criminal justice clients have significantly lower incidence of opiate use and much higher incidences of stimulant and cannabis use than the wider treatment population. Particular risks of relapse and overdose were highlighted in relation to prisoners who are discharged early.
• Townfield, Barnhill, Yeading, Botwell, West Drayton – the five most deprived wards in the borough – all have high proportions of drug offences in Hillingdon. These are the wards where the greatest proportions of trigger offenders live. A very significant proportion of trigger offences are committed by under 18s and the 18-25 age group, who are also most likely to be arrested for trigger offences.

• Hidden needs and shifting trends in drug use among women and young people in BME communities have also been raised. The Somali community, in particular, faces significant barriers to accessing services, including treatment.

Substance misuse and crime in Hillingdon

Drug misuse and crime: The National Treatment (NTA) in its 2009 publication – ‘Breaking the Link: The role of drug treatment in tackling crime’ states that the relationship between problem drug use and crime is complex. The report highlights that evidence indicates that problem drug users are responsible for a large percentage of acquisitive crime, such as shoplifting and burglary. As a direct consequence of the crime they commit, these problem drug users are highly likely to end up in the criminal justice system at some point. Some of these drug users will serve community sentences, others are sent to prison (The National Treatment, 2009)

In line with the findings of last year’s substance misuse needs assessment, criminal justice clients tend to have a different profile to the treatment population. Drug Intervention Programme (DIP) clients are more likely to be from BME communities and first time trigger offenders are more likely to be aged between 18 and 24. Shoplifting and burglary are the most common first trigger offences, while drug-specific offences most commonly relate to possession. Because of its presence in custody suites and links with prisons, the DIP has the potential to act as the gateway to the treatment system for criminal justice clients, particularly for non-Class A drug users and other groups who are currently under-represented in treatment.

Alcohol misuse and crime: ‘Alcohol-related crime’ is normally used to refer to two main categories of offences:

• Alcohol-defined offences such as drunkenness offences or driving with excess alcohol.
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- Offences in which the consumption of alcohol is thought to have played a role of some kind in the committing of the offence, usually in the sense that the offender was under the influence of alcohol at the time. Examples of offences that are often committed by people under the influence are assault, domestic violence and sexual violence, breach of the peace, criminal damage and other public order offences.

There is a clear correlation between alcohol misuse and offending, amounting to over 1,700 alcohol-related arrests in Hillingdon per annum. Actual bodily harm and common assault are the top two alcohol-related offences. Forty four per cent of probation clients are reported as having an alcohol problem.

Managing risks and needs in Hillingdon

Trends indicate that there are more clients entering treatment and fewer exiting than in previous years, creating a potential capacity problem. There are a number of options that could help speed up throughput and create capacity within the treatment system, but they have associated risks, which will need to be monitored and managed through a treatment system risk register.

Evidence from Treatment Outcome Profiles (TOPs) suggest a clear correlation between the length of time spent in treatment and a reduction in substance misuse. The longer clients remain in treatment, the better their outcomes. If throughput is speeded up, there is a risk that clients will not sustain their recovery outcomes and simply re-present to treatment at a later date.

Around half of the 93 clients in treatment for more than four years are stable clients receiving substitute prescribing through the Shared Care Scheme. They have typically already made progress towards longer term recovery, having stabilised their usage and entered employment in many cases. Where appropriate, some of this cohort could be moved towards abstinence and offered other recovery options. The other half are much more complex clients with mental health needs, who will be more difficult to move on.

Public Health Works

Enabling substance misusers to move towards recovery

“To deliver the best outcomes for drug misusers, their families and communities it is important that work already underway to build effective recovery systems is accelerated. Planning is key.”
Hillingdon’s substance misuse treatment service/system (ie. HDAS a part of CNWL and the voluntary centre – ie. HAGAM, Blenheim CDP and EACH) is well-placed to evidence and deliver recovery outcomes. Fifty two percent of clients leaving treatment have care-planned exits and there is a high rate of TOPs (Treatment Outcome Profiles) compliance, which means that local services are in a strong position to demonstrate clients’ progress towards their recovery goals. The health economy is currently piloting a number of recovery models which include:

- Intuitive recovery
- Smart Recovery
- Increased mutual aid/peer mentoring
- Increased wrap-around after care options (eg. OT, volunteering, group work)
- Increased training for volunteers and carers

These pilots will be evaluated over the coming year and the outcomes used to inform the future commissioning of substance misuse treatment services

**Care Plans:** Over half of alcohol clients in treatment successfully completed their treatment journeys in a care-planned way in 2009-10. This is a strong proxy indicator for good treatment outcomes for this client group.

**Outreach Services:** Street drinkers have been engaged through outreach services have typically faced a number of other barriers to services, including homelessness, social isolation, language barriers and a lack of access to primary healthcare.

The treatment system contains a number of externally funded projects, including HDAS’s employment specialist worker and HAGAM’s Project Aspire, which offer clients opportunities to gain skills through volunteering and access job search support, adding significant value to local services.

**Shared Clinical Governance Approach:** Hillingdon’s treatment providers each respond to different client groups and levels of needs, each delivering a specific function within the local substance misuse treatment system. Providers work together, each playing to their strengths in order to contribute to the treatment
system as a whole. Shared clinical governance has been critical in enabling providers to jointly plan, share expertise and exchange learning points. All of this has improved our use limited resources and promoted good joint working.

**Alcohol Nurse Specialist and Brief Intervention and Advice**

The evidence base suggests that a specialist resource, based in Accident and Emergency (A&E), can be most effective in making brief interventions and diverting patients from future presentations at hospital (Coulter S, 2009). In line with this evidence base the Hillingdon Hospital NHS Foundation Trust (the Hillingdon Hospital) commenced at the end of 2011, a 12 month pilot of an Alcohol Nurse Specialist in their A&E department.

The initial purpose of the Alcohol Nurse Specialist post is to undertake a 12-month pilot, making interventions that will divert dependent drinkers from acute services into community-based treatment in order to avert future hospital admissions and readmissions. It is intended that the post will add value and contribute to the delivery of Hillingdon PCT’s Unscheduled Care work stream and the Hospital’s Readmissions Plan. During the 12-month pilot, the remit of the post will broaden to encompass early interventions and preventative work in primary care settings. This will support both primary care and community-based detoxifications, and add value to the alcohol screening being undertaken by many Hillingdon GPs under their Directly Enhanced Service.

Evaluation and Performance Monitoring: Evaluation of the pilot will focus on the following areas:

- To collect and collate evidence of patient outcomes in order to evidence averted hospital presentations and / or admissions.

- Make performance quarterly reports, including numbers of interventions delivered, referrals received and made, patient outcomes and estimated averted hospital presentations / admissions.

Early indications are that the pilot is progressing well with increasing numbers of clients being supported to enter treatment by the alcohol nurse specialist. In the first three months of the pilot, thirty-four clients were referred to the project by A&E clinicians, thirty-three of whom received a full assessment and brief intervention, including motivational interviewing. Eight clients were referred into the treatment system for specialist services, half of whom commenced treatment within the first quarter of the project being in place.
Harm Reduction
The following harm reduction interventions are available in Hillingdon as a core part of the treatment system:

- Needle exchange scheme, involving both specialist providers and community pharmacists
- Testing and vaccination for blood borne viruses
- Risk assessments and risk management of all clients in treatment
- Relapse prevention training for staff
- Harm minimisation advice for clients and their families
- Slow detox and managed drinking options

In addition to the above, wrap-around health services are being piloted this year, including dental, midwifery and sexual health sessions within treatment settings.

The Future: Delivery plans, evidence-based care, cost-effectiveness, targets / outcomes, recommendations

Alcohol Misusers
Commissioning intentions in 2012-13 will include re-specifying the current service portfolio in order to divert resources from other parts of the treatment system to increase capacity for alcohol clients. We will seek to further develop, strengthen and / or formalise pathways into treatment, including options to roll out screening in primary care and increase GPs’ awareness of treatment providers. It is anticipated that this workstream will increase our capacity for making preventative and early interventions.

It is recognised that tier two services have the potential to uncover evidence of hidden needs and barriers to mainstream services. Therefore, tier two services have the opportunity to screen and deliver brief interventions with harmful and hazardous drinkers, who would not otherwise have been identified as having a treatment need. These types of services also have the capacity to reach cohorts who are under-represented in the treatment population, including misusers of stimulants, cannabis and other non-Class A drugs. A number of outreach and satellite services were successfully piloted during 2010-11 and will continue to be prioritised in the future.

Drug Users
A pathway for non-problematic drug users has already been piloted during 2010-11. The intention is to continue to work with Probation Services and treatment providers to sustain and strengthen these types of pathways.
may be a window of opportunity to engage younger substance-misusing clients at the point of their first arrest. We will work with the police to raise awareness and seek to generate more referrals and signposting to treatment services. In response to a significant reduction in Home Office DIP funding, a more flexible approach will be necessary in order to make the best possible use of the DIP’s existing coverage of the custody suites and existing links with the Prison Health Service.

Commissioning intentions for the year ahead will focus on achieving and evidencing recovery outcomes for clients in or leaving the treatment system. We will do so by increasing the numbers and rate of clients leaving treatment as a care-planned exit, maintaining the current high level of compliance for TOPs (treatment outcome profiles) reporting requirements, and using TOPs data to measure clients’ progress towards recovery.

User and carers’ groups will play a key role in boosting clients’ recovery chances by engaging their families and carers, where appropriate, in care-planning. Mutual aid, family support, social care support, housing and employment support, volunteering and other wrap-around services will play a more significant role in play in enabling clients to move on from treatment and sustain their recovery outcomes. Assertive outreach, peer support and peer mentoring will continue to be important tools in re-engaging clients who drop out of treatment in the future.

We intend to make best use of existing peer support resources, including the CADS user forum and carers’ committee, in order to strengthen mutual aid support, particularly for clients completing their formal treatment journeys and needing additional support to achieve longer term recovery goals. We are increasingly seeking ways to train and empower user representatives to take on leadership roles and pass on recovery skills and support to others. This included the continued use of wellness and recovery tools, such as WRAP, as well as accredited training for representatives.

In order to manage increased throughput within limited capacity, less complex clients will be offered briefer interventions and long-standing clients will be reviewed and moved on.

**Conclusions**

The Hillingdon local health economy is responding to the challenges of limited funding and changing national funding formula. In order to meet these challenges consideration is being given to the following:
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- Creating some treatment capacity by offering less complex clients briefer interventions. However, the evidence suggests that clients who remain in treatment longer tend to have the best outcomes in reducing their substance misuse. Therefore, clients who are discharged too quickly may end up re-presenting at treatment at a later date. The challenge for local services will be to see if briefer ‘tailored’ interventions can be effective and meet the needs of local users.

- Of the long-standing clients, around half are stable on substitute prescriptions and half have complex mental health problems. It may be possible to review and offer alternative recovery options to the most stable and least complex clients, but there will be a cohort who cannot safely be transferred out of treatment.

- A range of support, including social care, family support, employment and housing support, volunteering opportunities and wrap-around services, will be central to enabling clients to sustain their recovery outcomes. Mutual aid groups will play an important role in involving carers and family members in care-planning.

- Although Hillingdon’s treatment system has achieved a good rate of planned exits, some cohorts - including BME clients, crack users and younger clients - remain more likely to drop out. Therefore, pro-active responses, such as assertive outreach and peer mentoring, will be needed to retain and re-engage these clients.

- Alcohol clients in treatment tend to have good outcomes and, therefore, it would be useful to develop and / or formalise pathways into treatment from both acute settings and primary care.

- There is a clear correlation between alcohol misuse and violent offences and, therefore, it will be important to formalise and strengthen pathways into treatment from Probation Services. There may be a window of opportunity to engage younger clients, particularly those misusing alcohol or non-Class A drugs, at the point of their first arrest.

- The DIP is well-placed to act as the single point of contact for criminal justice clients and as a conduit from the criminal justice system into treatment.

- Tier two services have the potential to uncover evidence of hidden needs and barriers to mainstream services and, therefore, the
capacity to reach cohorts who are not otherwise represented in the treatment population.

- A whole systems, multi-agency approach is needed to address the needs of the Somali community, for whom khat misuse is a particular issue.

Finally, as commissioners of substance misuse health care our aim will be to continue local implementation of an evidence-based programme of substance misuse preventive interventions that are effective across the social gradient.
Introduction
The current global financial crisis that started in 2007 is continuing. The latest figures show that unemployment figures now stand at 8.1% with just under a quarter of 16-24 year olds unemployed. About 1 in 3 unemployed have been without work for over a year. With the financial market predicted to remain weak and cuts in the public spending, it is likely that unemployment figures will remain high. International studies on the impact of economic depression on health of the population indicate that effects on health vary from country to country depending on the health and social care and welfare systems.

Epidemiology of Unemployment related ill health
The Office of Population Censuses and Surveys’ longitudinal study was used to follow-up men classified as ‘seeking work’ after the 1971 and 1981 censuses. Over the following decade, those ‘seeking work’ and their wives had a higher mortality rate than employed men and their wives. These studies were executed 10 years apart, with extensive changes in the labour force occurring during the decade; however the findings from the two studies were similar. This epidemiological work demonstrated that unemployment is robustly correlated with ill-health (Moser K et al, 1987).

A growing body of work demonstrates that the unemployed and/or those with job insecurity experience more general ill health, cardiovascular disease and mental illness (Beagle, N and Nethercott S, 1985; Gallo WT et al 2006; Mclean et al, 2005; Thomas C et al 2005; Hammer T, 1993; Molarius et al 2009). Factory closure studies, in which cohorts are followed before and after job loss and compared against cohorts who do not experience job loss, established that this relationship can be causal.

A 1980s UK sausage factory closure study demonstrated a significant increase in the number of GP consultations in those subjected to compulsory redundancy. This increase was also shown by their spouses and family units. The number of new episodes of illness increased, as well as consultations per episode of illness. Referrals and attendances at hospital and the number of hospital outpatient attendances per referral also all increased. Chronic vascular conditions
increased in redundant male workers in this study, as did chronic mental illness (Beale N and Nethercott S, 1985, 1988).

A study (Stuckler et al, 2009) on 26 EU countries found that every 1% increase in unemployment was associated with a 0.79% rise in suicides at ages younger than 65 years. A more than 3% increase in unemployment had a greater effect on suicides and deaths from alcohol abuse.

A variety of models (Janlert U and Hammarström A, 2009) have been used to try to explain the connection between unemployment and health outcomes:

1. **The economic deprivation model**: Unemployed people have less money which directly or indirectly worsens the prerequisites for good health.

2. **The stress model**: Social stimuli affect health through physiological mechanisms. Unemployment increases stress through multiple pathways.

3. **The social support model**: The presence of human contact through work is a fundamental need.

4. **The model of latent functions**: The imposition of a time structure on the day; regularly shared experiences; the linking of an individual to goals and purposes which transcend their own; the donation of personal status and identity; the enforcement of activity all contribute to better health in the employed.

It may be that risky health behaviours increase in the unemployed. For example, several studies indicate that smoking is associated with unemployment, perhaps mediated by psychosocial stress (De Vogli R and Santinello M, 2005). Older workers who experience involuntary job loss have been found to have more than twice the odds of smoking relapse compared to those who did not (Falba et al 2005). Further, those who smoked before job loss and did not obtain new employment, were found to be smoking more cigarettes, on average, post-job loss. There is evidence that both alcohol consumption and poor diet are associated with unemployment (Brenner MH and Mooney A, 1983; Mattiasson et al 1990).

As well as negative health effects, other consequences of job-loss have implications for health service use. Studies suggest that there is an increased tendency to start a family in recently unemployed married women (Beale N and Nethercott, S 1986; Kelaher et al, 2007).
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Successful interventions
With the health problems associated with unemployment being well described, research evaluating interventions must follow. There are two points of intervention:

Downstream: Interventions at the health care level for those who have become unemployed.
The evidence shows that unemployed people are more likely to experience cardiovascular disease and mental illness than employed people. However, there are a number of effective interventions for these conditions, particularly when they are identified early in the pathological process.

A review of articles on strategies to improve health among the unemployed, delivered in primary health care, found the most common interventions involved increasing GP awareness about the health problems of unemployed people, providing GPs with local information on levels and characteristics of unemployment, and supporting GPs to act as referrers to employment and welfare services (Harris E and Harris MF, 2009). There was some evidence of increases in GP knowledge and confidence, change in their practice and increased referral to non-health agencies. However there was no demonstrable impact on health and social care outcomes. The authors of this review conclude that initiatives which could form the basis for future interventions and related research include:

- Health checks offered by GPs for people who become unemployed, with a focus on preventative care and management of conditions that may hamper return to work.
- A designated broker or referral model (as used in shared mental health care initiatives) to create pathways to employment and welfare services.

Upstream: Active Labour Market Policies to try and increase employment
Employment is recognised as important by policy-makers, mainly for economic reasons, therefore many government initiatives have aimed to reduce unemployment. Evaluation of these initiatives has concentrated on labour market outcomes (e.g. earnings and re-employment). However, if an intervention can be shown to improve basic skills and education, thereby increasing a person’s potential for entering the labour market and securing employment, it is likely that some may have significant indirect health benefits. In an analysis of unemployment and mortality in Europe- for every US$10 invested in active labour market programmes there was 0.038% decrease in the effect of unemployment on suicide (Stuckler D et al, 2009).
The Marmot Report: A Vision of Health

The Marmot report recognises that the relationship between employment and health is “close, enduring and multi-dimensional”. The report finds that patterns of employment reflect and reinforce the social gradient with inequality of access to labour market opportunities. Those in lower socioeconomic positions are at higher risk of unemployment and this contributes to health inequalities.

It follows that increasing employment should improve health. However, Marmot goes further to say that not all work is protective of health. People’s health can be damaged at work by exposure to physical hazards, physically demanding or dangerous work, long or irregular working hours, shift work, health-adverse posture, repetitive injury and extended sedentary work. Good work is characterised by a living wage, having control over work, in-work development, flexibility, protection from adverse working conditions, ill health prevention and stress management strategies and support for sick and disabled people that facilitates a return to work.

One of the Report’s policy objectives is to create fair employment and good work for all. The aim of this policy is to improve access to good jobs and reduce long term unemployment across all socio-economic groups, to make it easier for people who are disadvantaged in the labour market to obtain and keep work and to improve the quality of jobs across the social gradient.

The current situation

The Economy in Hillingdon

Hillingdon is in a relatively strong position, with a much higher average job density than London or UK. Hillingdon has a large economy by national standards, ranked 14 of 408 UK Local Authority districts and 5th in London. The number of jobs exceeds the working age population; however, although 50% of residents live and work within the borough, approximately 2/3 of Hillingdon jobs are occupied by non-residents commuting in.

There are over 8,435 VAT registered businesses in Hillingdon, providing around 200,000 jobs. Although many are small-to-medium enterprises, Hillingdon has one of the highest numbers of major international and European headquarters outside of the City/Canary Wharf/West End. This includes Heathrow Airport, the busiest international airport in the world and the largest single employment site within the U.K.

35% of jobs are in transport and communications (London average 7.4%), 21% in distribution, hotels and restaurants and 14% are in public administration, education & health. 41.5% of jobs are in knowledge industries.
Hillingdon’s knowledge economy is the 6th largest in England (Local Futures, 2007). This is attributed to a biotech cluster (Amgen, GlaxoSmithKline, Nobel Biocare, Otsuka Pharmaceuticals, Parexcel) concentrated within Stockley Park/Uxbridge, as well as Brunel University. Entry level jobs in this sector require qualification at degree level. A significant proportion of our resident workforce is not qualified for them.

The London Office Policy Review, 2009 identified four key centres in London for a strong and strategic office market, two of which are within Hillingdon: Uxbridge and Stockley Park. The review noted that proximity to Heathrow Airport is a major attraction for many companies and concluded that land values for office space will out-price other uses at these sites in all but the most negative economic conditions.

Hillingdon’s office-based employment is forecast by the GLA to rise from 201,000 in 2011 to 217,000 in 2031. Hillingdon, part of the Outer London economy and the strategically important West London sub-region, is forecast to have the largest growth of any outer London borough.

In an analysis carried out by Oxford Economics, the story of the last decade is positive, with Hillingdon one of six boroughs leading the way for employment growth from 1998 to 2008. The future described by the Oxford Economics analysis is more uncertain. Across London, 9 boroughs are predicted to have employment rates below 65% by 2020, with Hillingdon on 67% and unemployment rates are predicted at 7-8%. This is based on the assumption of no major labour market and skills interventions, or significant change in commuting patterns.

**Hillingdon’s Workforce**

Hillingdon’s workforce is relatively under-qualified. The Annual Population Survey shows only 31.7% of the resident workforce has attained NVQ4+ qualifications (equivalent to a degree or higher degree). This is behind the London average (39.7%) and behind neighbours in our functional economic area. Although these figures have improved since 2006, being behind our nearest neighbours may mean Hillingdon residents are less able to secure high-level jobs, particularly in the sectors forecast for economic growth, i.e. knowledge economy, technical and creative industries. Currently 21,100 (12.6%) of Hillingdon residents have ‘no qualifications’; this is more than the London (11.8%) and national (12.3%) averages.

Hillingdon’s young people Not in Education, Employment or Training (NEETs) live mainly in the South of the borough with the majority from White British (74.8%) followed by Asian (6%) and Black Caribbean (6%) ethnic backgrounds. Young
people with learning difficulties, those who are pregnant or caring for their own child/children continually feature disproportionately in the NEET cohort.

As a Borough, Hillingdon currently has lower rates of NEETs than London and England, reduced from 465 (7.2%) in August 2008 to 339 (5.3%) in August 2010 [Table 1]. In the same period participation in learning has risen from 79.6% to 86.4%. However, reduction in educational opportunities coupled with high unemployment in younger age groups may cause the number of young people becoming NEETs in Hillingdon to rise.

The abolition of the Education Maintenance Allowance (EMA) to support full time study could have a negative impact in Hillingdon on encouraging access to education for 16-18 year olds. 45% of students at Uxbridge College currently receive an EMA of £10-£30 per week, 508 Hillingdon residents plus 743 from the surrounding area. 95% of Uxbridge College students in receipt of EMA successfully complete their courses compared with 86% overall.

EMA will be replaced by funds available from the enhanced discretionary learner support or ‘hardship’ fund. The national annual budget for EMA was £560m; the ‘hardship’ fund (administered by individual colleges) will be expanded to £78m nationally by 2014.

Train to Gain will also be abolished and the Skills Funding Agency will no longer fund training in the Workplace. This may limit individual opportunity to remain and progress into higher skilled employment.

The Adult Learning Grant will be discontinued. 93 Hillingdon residents studying at Uxbridge College currently receive this, enabling them to attend their courses. This may impact on skill levels for older learners.

Table 1: Number of young people aged 16-18 who are not in employment, education or training (NEET)

<table>
<thead>
<tr>
<th></th>
<th>Aug-08</th>
<th>Aug-09</th>
<th>Dec-09</th>
<th>Jan-10</th>
<th>Mar-10</th>
<th>Aug-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hillingdon</td>
<td>465</td>
<td>431</td>
<td>430</td>
<td>439</td>
<td>398</td>
<td>339</td>
</tr>
<tr>
<td>London</td>
<td>11,302</td>
<td>11,099</td>
<td>10,495</td>
<td>9,974</td>
<td>9,753</td>
<td>9,351</td>
</tr>
<tr>
<td>England</td>
<td>99,626</td>
<td>105,294</td>
<td>101,804</td>
<td>96,163</td>
<td>93,847</td>
<td>91,467</td>
</tr>
</tbody>
</table>

Proportion of 16-18 year olds who are NEET (%)

<table>
<thead>
<tr>
<th></th>
<th>Aug-08</th>
<th>Aug-09</th>
<th>Dec-09</th>
<th>Jan-10</th>
<th>Mar-10</th>
<th>Aug-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hillingdon</td>
<td>7.2</td>
<td>6.5</td>
<td>5.2</td>
<td>5.5</td>
<td>5.4</td>
<td>5.3</td>
</tr>
<tr>
<td>London</td>
<td>7.3</td>
<td>7.3</td>
<td>5.3</td>
<td>5.2</td>
<td>5.4</td>
<td>6.2</td>
</tr>
<tr>
<td>England</td>
<td>8.4</td>
<td>8.7</td>
<td>6.4</td>
<td>6.2</td>
<td>6.5</td>
<td>7.8</td>
</tr>
</tbody>
</table>

Source: London Skills & Employment Observatory

Data for young people ‘Not in Education Employment or Training’ (NEET) include both the number of young people who are known to be NEET and the proportion of those young people whose current situation is not known.
Section 4

Unemployment
Historically Hillingdon has seen comparatively high levels of employment. The boroughs employment rate stood at 74% in March 2010 higher than the London and UK rates. The number of people claiming out of work benefits in the borough is 22,440, 12.8% of the working age population (job seekers, ESA and incapacity benefits, lone parents and others on income related benefits). This is below the London and national average.

Job Seekers Allowance claims have increased significantly in recent years from a low base [Figure 1]. In August 2010, 5,443 people in Hillingdon were claiming JSA. This compares with a ‘pre-downturn’ low of 2,843 in Jan 2008. Of the claimant count in Aug 2010, 25% were from within elementary occupations. Using the standard definition of an unemployment hotspot, current ward unemployment hotspots are Botwell and Townfield with Yeading, Barnhill, Yiewsley, West Drayton & Pinkwell approaching this status.

Figure 1: Jobseekers’ Allowance claims Hillingdon 2006-2010

Long-term unemployment has more than doubled over the last year. 40% of long-term unemployed claimants are aged 50+ and many are from within elementary occupations.

There are above national average levels of Employment Support Allowance and Incapacity Benefit claimants within wards in the South of the borough, particularly Botwell, Townfield, West Drayton, Yiewsley and Yeading.

Hillingdon’s Lone Parent Claimant Rate (2.3%) is above the national average but on par with the London average. Lone Parent claimants are chiefly located in
Yeading, Yiewsley, West Drayton and Pinkwell, with growing numbers within Charville, Hillingdon East and Brunel.

Table 2: Working-age client group - key benefit claimants (May 2010)

<table>
<thead>
<tr>
<th>By statistical group</th>
<th>Hillingdon (numbers)</th>
<th>Hillingdon (%)</th>
<th>London (%)</th>
<th>Great Britain (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total claimants</td>
<td>21,780</td>
<td>12.5</td>
<td>14.4</td>
<td>14.7</td>
</tr>
<tr>
<td>Job seekers</td>
<td>5,340</td>
<td>3.1</td>
<td>3.8</td>
<td>3.5</td>
</tr>
<tr>
<td>ESA and incapacity benefits</td>
<td>8,540</td>
<td>4.9</td>
<td>5.9</td>
<td>6.7</td>
</tr>
<tr>
<td>Lone parents</td>
<td>3,900</td>
<td>2.2</td>
<td>2.4</td>
<td>1.7</td>
</tr>
<tr>
<td>Carers</td>
<td>1,470</td>
<td>0.8</td>
<td>0.8</td>
<td>1.1</td>
</tr>
<tr>
<td>Others on income related benefits</td>
<td>850</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Disability-related benefits</td>
<td>1,290</td>
<td>0.7</td>
<td>0.8</td>
<td>1.0</td>
</tr>
<tr>
<td>Bereavement benefits</td>
<td>380</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Key out-of-work benefits†</td>
<td>18,630</td>
<td>10.7</td>
<td>12.7</td>
<td>12.4</td>
</tr>
</tbody>
</table>

† Key out-of-work benefits includes the groups: job seekers, ESA and incapacity benefits, lone parents and others on income related benefits.

Note: % is a proportion of resident population of area aged 16-64

Source: DWP benefit claimants - working age client group

The Future

Going into the future, in the cold climate, Hillingdon starts from a good position with prime sites for business and employment opportunities. The biggest threat appears to be to young people in the Borough who may be at increasing risk of NEET status. The other challenges will be to tackle unemployment in our hotspots and to improve educational attainment so our resident population can compete for the local jobs.

Marmot’s recommendations, which should be implemented appropriately, are:

- Encourage, incentivise and where appropriate, enforce the implementation of measures to improve the quality of work across the social gradient by:
  - ensuring public and private sector employers adhere to equality guidance and legislation
  - implementing guidance on stress management and the effective promotion of well-being and physical and mental health at work.

- Develop greater security and flexibility in employment by:
  - Prioritising greater flexibility of retirement age
Section 4

- Encouraging and incentivising employers to create or adapt jobs that are suitable for lone parents, carers and people with mental and physical health problems.

- The final recommendation is particularly relevant where there are larger numbers of Lone Parent claimants, in Yeading, Yiewsley, West Drayton and Pinkwell.

In view of the higher numbers of NEETs in the South of the Borough and the possibility of this number rising all over the Borough from next year, alternative opportunities for young people must be explored. The expansion of the Apprenticeship programme announced in the National Skills Strategy should support skills development in Hillingdon. Uxbridge College has a large contract. The College is also running an Apprenticeship Training Agency to enable local retailers to hire a customer services apprentice from them. This will help small businesses to grow without incurring additional employee commitments and gives them the chance to employ the apprentice when they come to the end of their course. This model could be expanded if successful. Employers will need to be encouraged to expand their workforce through the Apprenticeship route. This is particularly important given the withdrawal of other ways to finance further education and may be crucial in maintaining or lowering NEET levels.

Targeted action both upstream, promoting active labour market strategies and downstream, educating GPs and tackling those health problems known to be associated with unemployment could be directed to areas identified as unemployment hotspots; Botwell and Townfield.

In the current cold climate, it is important that Public Health professionals ensure that health consequences are not ignored when decisions are made that affect employment or job-stability. We must explain to those who make policy affecting employment that alongside the economic measures of success and cost-effectiveness, health outcomes should be evaluated and treated as important.

Further Information
For more information on the situation in Hillingdon, please see the JSNA or the local economic assessment.
Section 4

The role of cancer prevention in augmenting cost savings essential for improvements in cancer care and outcomes

Modupe Omonijo

Introduction
Cancer is the world’s second leading cause of death after cardiovascular disease, and one of the most preventable non-communicable diseases. In addition to the immense suffering, physical and emotional pain caused to cancer patients and their families; society and individuals have to bear huge financial costs when economically active members of society develop cancer. The rising trend of lifestyle risk factors, the number of new cases and the increasing burden of mortality and morbidity make tackling cancer an important priority. Technology for cancer diagnosis and treatment has come a long way, and many cancers can be cured if detected early.

“Winning the war against cancer...are we even fighting it?”
- Samuel Epstein, M.D.

An effective measure of the cancer burden in any population is the total number of new cases and deaths that occur in a given year. These counts reflect the absolute numbers of affected individuals and patients who require medical care and social services. The total number of cancer registrations for Hillingdon from 2001 to 2010 was 10,222 comprising of 882 new cases registered in 2001 and rising to 1079 by 2010. Cancer is still one of the main causes of death in Hillingdon. 27% of total deaths in the borough in 2008 were attributable to the disease and nearly half (46%) of these deaths were amongst people aged under 75 years. In spite of routine and special data collection processes, data limitations exist and often preclude accurate estimation of the economic costs of cancer. Public health through local teams, regional observatories, cancer registries, and networks has been actively supporting providers in accurately collecting, collating and analysing cancer health data. This has been crucial to planning and delivering effective services for a sustainable health economy.

It is estimated that in 2008 the crude cost of cancer to NHS Hillingdon was approximately £21 million and in England, £18.33 billion was spent with an
expected increase to £24.72 billion by 2020. These are solely health service costs, irrespective of direct and indirect costs to patients and communities. The healthcare costs of cancer care encompasses all the elements of cancer control and this remains a controversial, often hotly debated topic; especially the aspect of drug approval by the National Institute for Clinical Excellence (NICE) and regional variations in cancer spend (Cancer Research UK, 2008). The UK is deemed as historically spending less on healthcare as a whole than many other European countries and proportionally less on cancer care than many of our European Union counterparts. There are many reasons why we are lagging behind our European neighbours: late diagnosis, poor outcomes for older people, the perennial issue of poor survival in deprived communities, and the UK’s relatively poor uptake of new treatments and technologies. There is a clear need for effective strategies for maximising budgets through reducing the demand for costly cancer treatments. Consequently, an auxiliary budget may accrue for the purpose of supporting sufferers, carers and research for improving survival and quality of life amongst other outcomes.

**Risk factors for developing cancer: Hillingdon Picture**

In Hillingdon, the highest proportions of registered cancer patients are in the 40-74 years age category for men and women. Thames Cancer Registry (Thames Cancer Registry, 2008) indicates that Hillingdon had the highest crude rate of all cancer registrations during 1999-2008 in North West London, with 37 persons registered with cancer per 1000 population. There are many causes of cancer, and the origin of the disease as well as the site (body part) in each person may vary. Genetic, environmental and lifestyle factors interact in many cases leading to a change in single cells.

Contributory factors to higher cancer risk include physical inactivity or leading sedentary lifestyles, unhealthy diets, obesity, certain infections as well as the use of addictive substances such as tobacco, alcohol and illicit drugs (World Health Organisation, 2003). These risk factors have emerged through vast lifestyle changes with the rise of capitalism and development. The incidence of cancer rises dramatically with age, presumably due to a build up of risks for specific cancers increasing with age. Poverty, unemployment and other broader causes of ill-health are also associated factors and a multisectoral approach to tackle health inequalities will in time have an impact on cancer. However, for many of the common forms of cancer, smoking and poor diet are by far the most important avoidable risk factors which in the immediate term we can do something about (Department of Health, 2000).
Tobacco use is a major risk factor with significant effects on cancer mortality and morbidity. The prevalence of tobacco use in Hillingdon is outlined in an earlier chapter in this section. The Hillingdon Joint Strategic Needs Assessment (2011) found that the estimated prevalence of smoking in Hillingdon is lower than the England average. However, within Hillingdon, smoking related mortality is highest in Hayes and Harlington at 21%.

There is an increasing trend of overweight and obesity in adults and children. Healthy eating patterns are similar to that of England. Children and adults in Hillingdon achieve lower levels of physically activity than the rest of South East England. Binge drinking is lower as compared to the England average. There are indications for improvements in overall lifestyle choices and gaps in acceptance are evident across the borough (APHO, 2010).

Risk factors for cancer as outlined above, are similar for circulatory diseases and are elevated along the social gradient. The burden of disease falls disproportionately on people living in deprived conditions and for some health conditions falls particularly heavily on certain ethnic groups (Marmot, 2010). This is contributing to widening health gaps between communities, however as noncommunicable diseases are largely preventable; the number of premature deaths can be greatly reduced.
Modifiable and avoidable risk factors

Up to 40% of all cancer deaths could be prevented by modifying or avoiding key risk factors. Cancer prevention encompasses the avoidance of the first occurrence (primary prevention) of any cancer attributable to exposure risk factors as well as reducing the risk of recurrence for cancer survivors (secondary prevention). Cancer prevention and early detection by screening are key components for cancer control which, in turn, lead to a decrease in cancer incidence and mortality in the population. Public Health interventions seek to improve public awareness of cancer thereby encouraging people with or without symptoms to seek help early.

Table 1. Modifiable risk factors for cancer

<table>
<thead>
<tr>
<th>RISK FACTOR</th>
<th>FACTORS TO MINIMISE/ MODIFY RISK</th>
<th>ASSOCIATED CANCER TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobacco</td>
<td>Reduce tobacco use or forms of exposure</td>
<td>lung, oesophagus, larynx, oral, bladder, kidney, stomach, cervical and colon, rectal</td>
</tr>
<tr>
<td>Being overweight or obese, physical inactivity and unhealthy diets</td>
<td>Improve diets and increase physical activity, increase fruit and vegetable intake</td>
<td>oesophagus, breast, rectal endometrial, kidney, colon</td>
</tr>
<tr>
<td>Alcohol</td>
<td>lower alcohol consumption</td>
<td>oral, pharynx, oesophagus, larynx</td>
</tr>
<tr>
<td>Sexually transmitted infection</td>
<td>Immunise against hepatitis B virus(HBV) and the human papillomavirus(HPV)</td>
<td>liver, cervical, anal, external genitalia, oral, pharynx,</td>
</tr>
<tr>
<td>Environmental pollution including indoor smoke from household use of solid fuels.</td>
<td>Eliminate workplace carcinogens, eliminate release of carcinogenic chemicals in the environment especially through drinking water or indoor air. Control occupational hazards. Reduce contamination of food by chemicals such as aflatoxins or dioxins</td>
<td>Lung, bladder, larynx, skin, leukaemia, nasopharyngeal</td>
</tr>
<tr>
<td>Reproductive factors</td>
<td>Mother’s age when she first gives birth and number of births affect cancer risk. Breastfeeding for longer periods</td>
<td>breast</td>
</tr>
<tr>
<td>Radiation</td>
<td>Reduce exposure to ionising radiation such as x-rays and radioactive materials. Reduce exposure to non-ionizing radiation e.g. electromagnetic fields (from mobile phones and power lines) and ultraviolet radiation (from sunlight).</td>
<td>leukaemia, lung, thyroid, breast, skin, malignant melanoma</td>
</tr>
</tbody>
</table>

Hillingdon has made considerable progress in delivering public health prevention and awareness activities which deliver effective measures for modifying these risk factors through health surveillance and the use of timely, and evidence based interventions. These include well performing programmes on smoking cessation, cancer screening, immunisation/vaccination, lifestyle/health promotion (e.g. physical activity, diet, sexual health promotion) and the
Hillingdon Awareness and Early Diagnosis Initiative (HAEDI). Furthermore, brief intervention and effective treatment exist for hazardous and harmful drinkers or people with alcohol dependence. There is need to measure the impact of modifying risk factors on cancer incidence rates and this will only become apparent over the medium to long term with more accurate systematic data collection and analysis.

Impact of Cancer on the population: Worldwide, National and Local

Caring for a family member with cancer is a psychologically demanding experience (Lutgendorf S and Laudenslager M, 2009). Many cancer sufferers and their families face not only emotional devastation, but serious financial problems as well. Often there is a need to cut down on work during the illness resulting sometimes in severe income loss. It is not primarily the type of cancer and duration of illness, but socio-economic factors such as age, education, employment, and deprivation which are key determinants of hardship levels experienced.

The human toll

It is estimated that one in three people will develop cancer during their lives, with over one in four people eventually dying from the disease and in England, cancer accounts for 30% of male deaths and 25% of female deaths (Office for National Statistics, 2009). In 2008, 15% of all male deaths and 12% of all female deaths in Hillingdon were due to cancer. Premature mortality in the productive adult years is a true cause for concern, with almost half, 46%, of cancer deaths occurring amongst people under 75 years. In North West London, Hillingdon is one of the boroughs with the highest proportion of deaths from lung cancer and the second highest proportion of deaths from breast cancer. Overall cancer of the digestive system was the major cause of cancer deaths, followed by lung, breast and prostate cancers.

Cancer is a substantial contributor to variations in death rates, particular among women in Hillingdon, accounting for 24% of the gap in life expectancy between the most deprived quintile of the borough and the England average. Research between 2003 and 2005 showed that in Hillingdon, 1 and 5 year survival rates for cancers across multiple sites were among the lowest across the whole of NW London (National Cancer intelligence Network, National cancer e-atlas, 2009).

The Hillingdon Joint Strategic Needs Assessment (JSNA) identified the decline in cancer mortality from 1993 to 2008; however there are inequalities across the borough with some wards showing limited rates of mortality reduction while others in fact exhibit an increase in mortality. Although cancer deaths in Hillingdon are reducing overall, it is still one of the main causes of death and some wards recorded a general increase in cancer deaths from 1999-2003
period to 2003-07; namely Townfield, Uxbridge South, Botwell, Yiewsley Cavendish, Manor, Eastcote and East Ruislip. With changes in population, and more elderly people, the cancer burden of all European counties can be expected to increase substantially. The costs of cancer are staggering, and with population growth and ageing, prevention efforts are important for avoiding new cancer cases, human suffering, and economic costs (American Cancer Society, 2011).

The financial toll
In addition to the human toll, the financial cost of cancer is substantial. Direct costs include payments and resources used for treatment, as well as the costs of care and rehabilitation related to the illness. Indirect costs include the loss of economic output due to days missed from work (morbidity costs) and premature death (mortality costs).

There are also hidden costs of cancer, such as health insurance premiums and non-medical expenses (e.g. transportation, care of dependents e.g. children or older people, housekeeping assistance, wigs, etc.) (Mackay et al, 2006). The cost of cancer to patients, households, organisations and communities due to direct medical costs, out of pocket expenses, loss of earnings, travel costs, unemployment, sick pay/leave, related benefits/allowances, disability, household bills and long-term financial consequences are extremely difficult to measure.

All cancer patients, regardless of socio-economic status are vulnerable to levels of emotional and financial turmoil dependent on individual circumstances and their wider support networks (e.g. family and friends). Those in employment or with dependants at the time of diagnosis appear to be the most vulnerable (national Cancer Registry/Irish Cancer Society, 2010). Hillingdon spends relatively less on cancer compared with national and similar PCTs subject to age, sex and need. However, this expenditure produces slightly better outcomes however compared to similar PCTs (NHS IC, 2010).

Clearly there is a demand to increase cancer spend nationally and more importantly locally; particularly when the demographics and new advances in cancer drugs are taken into account. As the population ages, cancer is becoming more common. New cases (cancer incidence) are increasing at a rate of around 1.5 per cent each year. Inevitably, there will be more demand for cancer care services and as cancer research advances; new drugs and diagnostic tests offer new hope to people touched by cancer, but at a price. Furthermore, costs of follow up care for cancer survivors (‘survivorship care’) will rise steeply as more and more people survive cancer.
Table 2. Estimated NHS spending on elements of cancer care

<table>
<thead>
<tr>
<th>Elements of NHS spending on cancer care</th>
<th>% of total NHS cost*</th>
<th>Estimated cost in 2008-09 (£ million)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient costs</td>
<td>27</td>
<td>1,386</td>
</tr>
<tr>
<td>Surgery</td>
<td>22</td>
<td>1,129</td>
</tr>
<tr>
<td>Drugs</td>
<td>18</td>
<td>924</td>
</tr>
<tr>
<td>Outpatients</td>
<td>8</td>
<td>410</td>
</tr>
<tr>
<td>Screening</td>
<td>5</td>
<td>256</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>5</td>
<td>256</td>
</tr>
<tr>
<td>Specialist Palliative Care</td>
<td>5</td>
<td>256</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>513</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5,134</td>
</tr>
</tbody>
</table>


The 2008 Thames Cancer Registry Report indicates that Hillingdon Primary Care Trust spent around £8 million per 100,000 population on cancer treatment and service activity, each year from 2005 to 2007. This equates to about £80 per head and overall in South East England, higher deprivation was associated with lower spending. Recent research has shown that cancer has the most devastating economic impact of any cause of death in the world (American Cancer Society, 2010). The Department of Health calculated the total cost of treating cancers and tumours at £5.13 billion, which accounts for 5.3% of total NHS spending in 2008-09 (Department of Health, 2010). This equates to around £76 per head each year in England and is still only around £90-£100 per head when care by private and voluntary organisations is included. In comparison, France and Germany spend over £120 per head on cancer care. Overall, cancer care costs continue to rise and these budgets will need to be met through boosting spending and efficiency in Health and Social Care. Some cost savings can be made by reducing in-patient costs through minimising inefficiencies and delays in hospitals. Despite these measures, some tough and inevitably controversial, decisions will always have to be made on how and where to spend money. The public health role of quantitative and qualitative analysis for cost and clinical benefits of different treatments and interventions could prove invaluable for aiding rational evidence-based decision making.

How can the burden of cancer be reduced?
Cancer is avoidable to a large extent, and at least one-third of all cancer cases are preventable. There are opportunities for improved prevention and early detection through implementing evidence-based strategies. There are two broad, alternative approaches to reducing the risk of cancer:

- Focus interventions on the people most likely to benefit from them because they are at highest risk;
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- Reduce risks across the entire population, regardless of each individual’s risk or potential benefit

In the overall population, people at high risk for any given condition, including cancer, are in the minority. They do not form a distinct group, but are rather part of a continuum across which risk increases. A large number of people exposed to a small risk may generate many more cancer cases than a small number exposed to a high risk. For these reasons, population wide interventions have the greatest potential for prevention (Rose, 1992). Effective interventions for individuals at high risk exist for certain risk factors, and these can be combined with population-based interventions to achieve maximum risk reduction.

What is Cancer Prevention?

**Primary Prevention:** The goal of primary prevention is to reduce or eliminate exposure to cancer-causing factors. Primary prevention offers the greatest public health potential and the most cost-effective, long-term method of cancer control. Approaches to primary prevention include immunisation against, or treatment of, infectious agents that cause certain cancers; application of effective tobacco control measures; reduction of excessive alcohol consumption; maintenance of healthy body weight and physically active lifestyles; dietary intervention; avoidance of excess sun exposure; reduction in occupational exposure to carcinogens; and pharmacological intervention.

**Early detection and secondary prevention:** The main objective of early detection or secondary prevention through screening is to detect precancerous changes or early stage cancers when they can be treated most effectively. Early detection is only valuable if it leads to timely diagnostic follow-up and effective treatment, which changes the natural history of the disease in a beneficial way. If for example, detecting a disease 2 years earlier did not change survival time, all that would have been achieved was an additional 2 years of worry and unhelpful treatment costs for the individual. For some diseases e.g. prostate cancer it is not yet clear if early detection improves survival chances.

Prevention offers the most cost-effective long-term strategy for the control of cancer. Focusing on increased avoidance of associated risk factors for developing cancer remains the key priority for our local health and social economy. Continued investment in prevention and raising awareness about risk factors is a prudent approach to reducing premature deaths from cancer and arresting the growing incidence of the disease. It is vital both now and in the future to fully implement, raise awareness and support the four basic
components of cancer control namely; prevention, early detection, diagnosis and treatment, and palliative care.

**Figure 2. Trend in cancer registrations in Hillingdon 2001 to 2010**

![Graph showing trend in cancer registrations in Hillingdon 2001 to 2010](image)

**Source:** Thames Cancer Registry 2012

**Delivering effective economical cancer prevention strategies**

There are health visiting outreach teams in the south of the borough who provide advice and support to communities, thereby raising awareness and promoting healthier lifestyles and choices around diet, exercise and uptake of public health awareness programmes. Such teams will need to have their work evaluated and monitored using health surveillance and intelligence analysis to determine the best ways to improve and deliver quality and productivity for the communities served. Surveys can be used determine the level of patient understanding as well as the aspects of services which can be improved upon based on user feedback. Public health can inform and support effective commissioning, and in some cases decommissioning of health services based on strong evidence and information. Establishing and maintaining preventative local networks can help further to drive knowledge and professional support to both clinical and non-clinical personnel involved in patient care.

With the ageing UK population, cancer care is likely to account for an ever increasing proportion of healthcare spending. The economics of cancer care is an area which requires specialist attention, in the UK as well as in our borough, in order to evaluate and monitor the true cost of cancer to our society now and in
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the future. Specifically, direct costs for organising and delivering cancer treatments which include diagnosis, treatment, continuing care, rehabilitation and terminal care costs, as well as indirect costs to individuals and communities (Hodgson, TA and Meiners, MR, 1982). There is overwhelming evidence that changing people’s health-related behaviour can have a major impact on some of the largest causes of mortality and morbidity. The Wanless report (Wanless D 2002) Securing our Future Health: Taking a Long Term View: final report. HM Treasury) outlined a cost effective model of healthcare provision with high levels of public engagement and optimised utilisation of preventive and primary care services, thereby helping people to stay healthy. This ‘fully engaged’ scenario, identified as the best option for future organisation and delivery of health services, requires changes in behaviour embedded within a social, economic and environmental context to be at the heart of all disease prevention strategies.

Sustaining communities through effective cancer prevention strategies

The recent public health white paper “Healthy Lives, Healthy People” sets a clear vision for public health and the need for increased disease prevention and reducing inequalities. It acknowledges that many premature deaths and illnesses could be avoided by improving lifestyles. There is growing evidence that lifestyle changes can reduce the risk of recurrence for cancer survivors, the impact of side effects of treatment and hence the burden of cancer survivors on the NHS and Benefits system (Department of Health, January 2011). We should ensure national and local prevention activities are based on evidence that details the needs of groups at risk and the barriers they face in changing their behaviour.

People with mental ill health are much more likely to smoke, die younger and have alcohol or drug problems (NHS Information Centre for health and social care, 2007). People with severe mental health problems are likely to have poorer diets, smoke more heavily and engage in less physical activity than the general population (M Phelan, 2001). Reducing smoking rates represents a huge opportunity for public health as smoking is the single biggest preventable cause of early death and illness. There is further information on the effects of smoking and the success of the local smoking cessation programme within this report.

Two out of three adults are overweight or obese; only three in ten adults eat the recommended 5 portions of fruit and vegetables a day and only three or four in ten adults say they do the recommended levels of physical activity every week. The JSNA highlights variations across the borough in the adoption of healthy lifestyle choices with recommendations for future service commissioning.
Improving the environment in which people live can make adopting healthy lifestyles easier, and when the immediate environment is unattractive, it is difficult to make physical activity and contact with nature part of everyday life. Unsafe or hostile urban areas that lack green spaces and are dominated by traffic can discourage activity and lower socioeconomic groups and those living in the more deprived areas experience the greatest environmental burden.

**Individual responsibilities**
There is a need to improve self-efficacy (a person’s estimate or personal judgment of his or her own ability to succeed in reaching a specific goal), support interventions that motivate and support people to feel positive about the benefits of health-enhancing behaviours as well as develop and maintain supportive social networks. Consumers may need guidance and education on colour-coded system of food labeling, or portion sizes in order to choose healthier meals. Nutritional health promotion aimed at salt, fat and sugar reduction and an increase in the uptake of fruit and vegetables should be targeted at younger age groups and parents to deliver the best start in life. Supply and access to healthy food can be improved in the borough along with improved skills in households on better food preparation and cooking methods. We also need to continue to support vulnerable people before and during the heat wave. Local champions should be supported fully in sharing their experiences and coping strategies with others and functioning as volunteers or paid members within the interventions delivery groups where necessary.

**Tailored vs. Population-wide Interventions: A strategy for equal access to cancer prevention interventions**
Low income and deprivation are particularly associated with higher levels of obesity, smoking, mental illness and harms arising from drug and alcohol misuse. Most public health and health promotion interventions whether they focus on the individual, community, whole populations or the environment seek in some way to change health behaviour by changing health-related knowledge, attitudes and/or structural barriers. Individuals’ social and economic position is directly linked to health. In Hillingdon, a health inequalities gradient exists, with the least advantaged experiencing the worst health.

Social and economic conditions can prevent people from changing their behaviour to improve their health, and can also reinforce behaviours that damage it. Health inequalities are the result of a set of complex interactions such as the long-term effects of a disadvantaged social position, differences in access to information, services and resources, differences in exposure to risk, lack of control over one’s own life circumstances and a health system that may
reinforce social and economic inequalities. These factors affect people’s ability to withstand the stressors: biological, social, psychological and economic, that can trigger ill health. They also affect the capacity to change behaviour (National Institute for Health and Clinical Excellence, 2007). Interventions to change behaviour have enormous potential to alter current patterns of any disease. A genetic predisposition to disease is difficult to alter; social circumstances can also be difficult to change in the short to medium term, but people’s behaviour as individuals and collectively, may be easier to change. Many attempts to do this have been unsuccessful or only partially successful, often because they fail to take account of the theories and principles of successful planning, delivery and evaluation. Many other factors (such as place of birth, parental income, education and employment opportunities, or the impact of prejudice and discrimination) can have both direct and indirect effects on health, and on people’s ability to change, leading to a cumulative effect over the life course.

Effective strategies are needed for reaching and working with disadvantaged groups. Local health and social care teams require the necessary expertise and facilities to deliver quality outcomes, building upon the existing skills and resources within the community, and ensuring practitioners have the necessary knowledge to support behaviour change. Health professionals can be empowered through the design of effective care pathways and policies which provide up-to-date information to support their freedom to make clinical choices which they feel will benefit their patients the most. They will want to maintain their patients’ confidence and empower the communities they serve through providing appropriate support for patients to make an informed choice and subsequently build community resilience. All behaviour change interventions and programmes will have to be evaluated either locally or as part of a larger project. The 2010 National Cancer Patient Experience Survey revealed significant variations in the proportion of patients saying they completely understood the explanation that they received on their condition. This suggests that cancer is a condition whose complex and varied presentations can bring about a lack of understanding particularly amongst lower socio-economic groups.

**Strategies for quality, innovative, value for money cancer prevention**

Public Health intelligence and surveillance are key elements for delivering cost and clinical benefits in the midst of frugal budgets. The local population demand and expectations for their health and well-being are paramount and health and social care reforms should deliver overall benefits to patients in securing better cancer services and outcomes. The Public Health White Paper *Healthy Lives, Healthy People* (DH, 2010) states that the Public Health department will work closely with GP consortia to help identify, prevent and
manage a range of conditions, and support people to take care of their own health, promoting independence, self-care and self-management. We can use local, regional and national epidemiological data and demographic and risk assessments to identify which groups, behaviours or activities need to be targeted.

**Forming partnerships:**
There is a need for local strategy to support those residents that are unable to make an informed choice and those that lack independence. The most appropriate means for interventions to support attitude and behaviour change at population and community levels are most effective within collaborative partnerships with individuals, communities and stakeholder organisations. A cornerstone of the White Paper is the promotion of joint action by local authorities with business and voluntary groups, to tackle local health inequalities and issues. Local practitioners should continue to deliver low cost, information-related prevention activities to raise awareness of the risks factors and ways of protecting against it. This may include one-to-one and group-based advice as well as local media campaigns. A low cost option could involve integrating lung cancer prevention messages into existing local health promotion campaigns and activities as well as employee wellbeing initiatives.

**Risk Assessment**
Use of a “Cancer High Risk Warning Tool” can support efforts in primary care to reduce inequalities. In the light of evidence that mental ill health disproportionately impacts on people from black and ethnic minority communities, the homeless and other socially excluded groups, this tool will prove invaluable for service planning and risk mitigation. It is important to ensure that planning of services, including preventative interventions takes into account the need to tackle health inequalities.

**Information sharing**
High-quality and innovative information sharing methods can be used to reinforce the improvements which have already been made in the area of cancer detection and early diagnosis. Cultural, religious and group norms in relation to risk factors and delivery preferences (in terms of message format, medium and languages used) should be put into consideration with the aim to reduce social exclusion amongst disadvantaged groups. The health and wellbeing board can provide the leadership to establish a shared local view about the needs of the community and support joint commissioning of NHS, social care and public health services. Data quality of cancer registration is also an important aspect for planning and organising cancer services now and in the future.
Conclusion

Undoubtedly, our local focus to mitigate the demand for expensive cancer care should be to increase primary prevention and thereby cut down on the number of cancer registrations for Hillingdon. Prevention plays an essential role in reducing the cancer burden and comprehensive cancer prevention initiatives require a multifaceted, multiagency approach which addresses the entire population, whilst seeking to respond to the needs of the different subgroups at risk. There is a need for commitment to cancer prevention, which is vital to achieving the strategy objectives for cancer and other non-communicable conditions. Implementation of integrated health promotion and prevention strategies for cancer based on current and projected epidemiological situation need to be prioritised.

Most risk factors for cancer are associated with other long term conditions such as diabetes and cardiovascular disease. It is economical to approach integrate preventative strategies into the care pathways for individuals. Gaps in preventative services or inequalities in the uptake of preventative services which support the adoption of healthier lifestyles should be monitored and mitigated. As described earlier, stronger working partnerships, between health and other sectors such as transport, education, housing, leisure and the commercial sector, are crucial for effective local tobacco control, cancer screening, physical activity uptake and obesity control targeted at all age-groups and communities. Clearly, interventions at the individual and community levels should recognise the importance of changing knowledge and attitudes along with promoting healthy behaviour. As these prevention strategies rely fundamentally on patient compliance, collaboration; partnerships between practitioners and service users on the need for a behavior change strategy is non-negotiable (Jepson et al. 2010). To deliver this function under stricter budgetary conditions will require knowledge of the population, health profiles and the ability to project and implement change through delivery of modern, ground breaking initiatives. Approaches to effective population-wide tobacco control, screening and immunisation are detailed in the respective sections of this report. The overarching aim should be to implement balanced cancer prevention actions across the entire borough, whilst acknowledging that modifying individual choices can produce profound effects on an entire community when implemented in a co-ordinated goal-driven manner.
Implementing the National Dementia Strategy in Hillingdon

Lucy Canning and Tejal Indulkar

Introduction
Dementia presents major challenges for public health and health care services. As a result of increasing life expectancy and future demographics of ageing population, it is predicted that the number of older people with dementia will be one of the major concerns to health and social care over next few decades. The growing demands /needs will require effective planning and adequate resourcing. Previous generations regarded dementia as typically expected part of ageing process, but with research and technological advancements, dementia is increasingly recognized by society as a ‘brain disease’, which represents a collection of symptoms including a decline in memory, reasoning and communication abilities and a gradual loss of skills needed to carry out daily activities.

Dementia is used to describe a number of different symptoms, defined by Healthcare for London as including changes in memory, reasoning and communication skills, with a gradual loss of ability to carry out daily activities. These symptoms are caused by changes to the brain due to physical diseases such as Alzheimer’s Disease (HfL, Dementia Services Guide, 2009).

There are number of different types of dementia, with the most common being Alzheimer’s disease and vascular dementia. There is a possibility that some individuals may have both these forms of disease. Less common types include dementia with Lewy bodies and fronto-temporal dementia. Dementia can affect any sector of society regardless of class, gender and ethnicity. Dementia is progressive and symptoms get worse over time. Although, there is no cure for dementia, there are numbers of effective treatments available today which can help patients and carer’s cope better with the condition thereby improving the quality of life.

The causes of dementia are complex (Alzheimer’s Society, 2010). The choice of lifestyle, genetics, age, gender, environmental factors and medical history play a pivotal role in the continued rising prevalence of dementia. The prevalence of dementia increases with age, which is the known significant risk factor; although early onsets are not uncommon. Typically, dementia is seen in people aged 65 and over, and the likelihood of occurrence increases with age. This increased risk can be attributed to decreased immunity, incidence of cardiovascular disease and changes to nerve cells or DNA structures. Although dementia has no gender barriers and can affect both males and females, Alzheimer’s disease is predominantly observed in females.
due to lack of oestrogen hormone after menopause. On the other hand, vascular dementia is prominent in males. The role of genetics in dementia is still not fully cognisant; nevertheless there is some advancement on the subject. Specific medical conditions can increase a person's chances of developing dementia. These include multiple sclerosis, Huntington's disease, Down's syndrome and HIV. Conditions that affect the heart, arteries or blood circulation can particularly affect a person's chances of developing vascular dementia. Severe head injuries can also increase the risk of developing dementia. Diet, smoking, alcohol consumption and lack of physical exercise can also contribute to risk of developing dementia.

Currently, there are approximately 750,000 people with dementia in the UK. It is estimated that there will be over a million people with dementia by 2021 (Alzheimer’s Society, 2012). The estimated costs of dementia are expected to increase from £15.9 billion in 2009 (of which around £8.2 billion are direct health and social care costs) to £34.8 billion by 2026 (The Kings Fund, 2008).

Most cases of dementia are late-onset and are within the 65+ age group, however Healthcare for London have identified that around 1 in 40 cases in London are early-onset, i.e. before the age of 65 (Healthcare for London, 2009).

It should be noted that those with learning disabilities have a much greater chance of developing early-onset dementia, and at least 55% of people with down’s syndrome aged between 60-69 years have dementia. In addition, it is estimated that up to 10% of dementias are related to alcohol (National Dementia Strategy: Joint commissioning Framework 2009).

The National Dementia Strategy was published in February 2009, and is a five year strategy which works across health and social care, and key aspects of it include a push to ensure effective service integration across health and social care and effective partnership with carers and those that have dementia. It identified three overarching themes:

1) Improved awareness and understanding
2) Early diagnosis and intervention
3) A higher quality of care/living well with dementia

Since the change in government in May 2010, the coalition government have reaffirmed their commitment to the implementation of the Dementia Strategy through two key documents: Revision to the Operating Framework for the NHS 2010/11 published in June 2010 and Quality Outcomes for People with Dementia: building on the work of the National Dementia Strategy published in September 2010.

In ‘Quality Outcomes for People with Dementia’ (Quality Outcomes for People with Dementia: building on the work of the National Dementia
Strategy, September 2010, page 6), there is a revised implementation process for health and social care for delivery of the National Dementia Strategy. It focused on 4 key priorities along with an underpinning improvement in community personal support services. The four priorities were:

- Good quality early diagnosis and intervention for all
- Improved quality of care in general hospitals
- Living well with Dementia in care homes
- Reduced use of anti-psychotic medication

It noted that improvement of community personal support services is “integral to and underpins the four priorities as it supports early intervention, prevents premature admission to care homes and impacts on inappropriate admission to hospital and length of stay.”

It also noted that dementia strategies should fulfil the following outcomes:

- I was diagnosed early
- I understand, so I make good decisions and provide for future decision making
- I get the treatment and support which are best for my dementia and my life
- Those around me and looking after me are well supported
- I am treated with dignity and respect
- I know what I can do to help myself and who else can help me
- I can enjoy life
- I feel part of a community and I’m inspired to give something back
- I am confident my end of life wishes will be respected. I can expect a good death

While the strategy does not prescribe how local areas implement the National Dementia Strategy in keeping with the overall direction of Government policy, specifically highlights Dementia as a core priority for both health and social care, and noted that areas will be accountable to the public on their progress.

Current situation

Descriptive Epidemiology

The highlights of the finding for dementia in the capital

- About 64,000 people in London have dementia and there are about twice as many women than men. Each year there are around 17,600 new cases of dementia in London.
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- Alzheimer is the most common form of dementia affecting around 40,000 people in London.
- If national rates are applied, approximately 35% of Londoners with dementia would be living in care homes. But London only has 12,500 registered care home places for dementia.
- Some 8,000 people from BME groups have dementia and this is projected to double in 12 years time.

The current dementia statistics for the country as produced by Alzheimer’s Society, UK is,

- There are currently 750,000 people with dementia in the UK of which over 16,000 are younger people and 11,500 belong to BME groups
- There will be over a million people with dementia by 2021
- Two thirds of people with dementia are women
- The proportion of people with dementia doubles for every 5 year age group
- One third of people over 95 have dementia
- 60,000 deaths a year are directly attributable to dementia
- Delaying the onset of dementia by 5 years would reduce deaths directly attributable to dementia by 30,000 a year
- The financial cost of dementia to the UK is over £20 billion a year
- Family carer’s of people with dementia save the UK over £6 billion a year
- 64% of people living in care homes have a form of dementia
- Two thirds of people with dementia live in the community while one third live in a care home
- Only 40% of people with dementia receive a diagnosis

Prevalence of Dementia in Hillingdon

The London Dementia Needs Assessment identified that during 2009/10, the estimated prevalence of dementia in Hillingdon was 2,484 or 7.4% of the 65+ age group, of which the majority were late onset.

<table>
<thead>
<tr>
<th>PCT</th>
<th># Early Onset</th>
<th># Late Onset</th>
<th>Total with Dementia</th>
<th>% of 30+ pop with Dementia</th>
<th>% of 65+ pop with late onset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hillingdon</td>
<td>57</td>
<td>2,427</td>
<td>2,484</td>
<td>1.6%</td>
<td>7.4%</td>
</tr>
<tr>
<td>Harrow</td>
<td>50</td>
<td>2,277</td>
<td>2,327</td>
<td>1.7%</td>
<td>7.6%</td>
</tr>
<tr>
<td>Ealing</td>
<td>69</td>
<td>2,639</td>
<td>2,708</td>
<td>1.4%</td>
<td>7.3%</td>
</tr>
<tr>
<td>London wide</td>
<td>1,598</td>
<td>62,979</td>
<td>64,577</td>
<td>1.4%</td>
<td>7.3%</td>
</tr>
</tbody>
</table>
Section 4

Of those with dementia in the 65+ age group, the severity was estimated as follows:

<table>
<thead>
<tr>
<th>PCT</th>
<th>Mild dementia</th>
<th>Moderate</th>
<th>Severe</th>
<th>Total late onset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hillingdon</td>
<td>1,333</td>
<td>783</td>
<td>311</td>
<td>2,427</td>
</tr>
<tr>
<td>Harrow</td>
<td>1,244</td>
<td>735</td>
<td>297</td>
<td>2,277</td>
</tr>
<tr>
<td>Ealing</td>
<td>1,452</td>
<td>850</td>
<td>336</td>
<td>2,639</td>
</tr>
<tr>
<td>London wide</td>
<td>34,635</td>
<td>20,300</td>
<td>8,044</td>
<td>62,979</td>
</tr>
</tbody>
</table>

There was a significant gap between the estimated prevalence of dementia and the actual numbers on GP registers, and Hillingdon compared unfavourably with both the London average and our neighbours, suggesting there were possible issues with diagnosis within Primary Care:

<table>
<thead>
<tr>
<th>PCT</th>
<th># on QoF 2009/10</th>
<th>Est. # of people with dementia 2009</th>
<th>QoF recorded dementia as % of est. prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hillingdon</td>
<td>819</td>
<td>2,484</td>
<td>33.0%</td>
</tr>
<tr>
<td>Harrow</td>
<td>745</td>
<td>2,327</td>
<td>32.0%</td>
</tr>
<tr>
<td>Ealing</td>
<td>1,157</td>
<td>2,708</td>
<td>42.7%</td>
</tr>
<tr>
<td>London wide</td>
<td>26,745</td>
<td>64,577</td>
<td>41.4%</td>
</tr>
</tbody>
</table>

Although there was a gap between estimated prevalence and the numbers recorded on GP registers, the prescribing information demonstrated that Hillingdon had a higher rate of prescribing for dementia drugs than our neighbours, but lower than the London average.

<table>
<thead>
<tr>
<th>PCT</th>
<th># of prescriptions for dementia drugs</th>
<th>Est. prevalence of dementia</th>
<th>Prescriptions per 1000 of population with dementia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hillingdon</td>
<td>4,276</td>
<td>2,484</td>
<td>1,721.41</td>
</tr>
<tr>
<td>Harrow</td>
<td>2,912</td>
<td>2,327</td>
<td>1,251.39</td>
</tr>
<tr>
<td>Ealing</td>
<td>957</td>
<td>2,708</td>
<td>353.39</td>
</tr>
<tr>
<td>London wide</td>
<td>139,390</td>
<td>64,577</td>
<td>2,158.50</td>
</tr>
</tbody>
</table>

Hillingdon specific BUPA need assessment information (NHS Hillingdon, 2011) Dementia Care Pathway Analysis. BUPA Health Dialog)

While Healthcare for London and the Hillingdon JSNA provided a level of dementia needs assessment information, due to coding issues and the lack of dementia specific services within Hillingdon, it was not possible to build an accurate picture of the current demand and identify ways in which a local pathway could be validated in terms of improving patient quality of care and increasing efficiency.
Therefore, in 2010 the PCT asked BUPA Health Dialog as part of their existing contract to conduct a data modelling and analysis exercise across health and social care data.

The analysis found that the age distribution in Hillingdon was comparable to that of the United Kingdom as a whole, with greatest number of dementia patients within the 70+ age range, but with a small number of patients aged below 65 years with young onset dementia.

The analysis also found that there was a 2:1 ratio in the number of women to men with dementia which is supported by prevalence surveys and population based incidence studies in the medical literature. In percentage terms the breakdown was as follows:

<table>
<thead>
<tr>
<th>Age group</th>
<th>Female %</th>
<th>Male %</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-64</td>
<td>2.0%</td>
<td>2.5%</td>
<td>4.5%</td>
</tr>
<tr>
<td>65-74</td>
<td>6.4%</td>
<td>5.9%</td>
<td>12.3%</td>
</tr>
<tr>
<td>75-84</td>
<td>24.1%</td>
<td>16.7%</td>
<td>40.8%</td>
</tr>
<tr>
<td>85-94</td>
<td>16.7%</td>
<td>11.5%</td>
<td>37.6%</td>
</tr>
<tr>
<td>95+</td>
<td>4.1%</td>
<td>0.8%</td>
<td>4.8%</td>
</tr>
</tbody>
</table>

Secondary User Service (SUS) Information

The SUS data showed that for Hillingdon PCT registered patients, from December 2010 to November 2011 (a one year period), there were 359 spells in hospital with a primary diagnosis of dementia.

<table>
<thead>
<tr>
<th>Row Labels</th>
<th>Count of Primary Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>F019</td>
<td>F019 Vascular Dementia, unspecified 21</td>
</tr>
<tr>
<td>F03X</td>
<td>F03X Unspecified Dementia 37</td>
</tr>
<tr>
<td>F051</td>
<td>F051 Delirium superimposed on dementia *</td>
</tr>
<tr>
<td>F067</td>
<td>F067 Mild Cognitive Disorder *</td>
</tr>
<tr>
<td>G309</td>
<td>G309 Alzheimer's Disease, Unspecified 12</td>
</tr>
<tr>
<td>R54X</td>
<td>R54X Senility 283</td>
</tr>
</tbody>
</table>

Research evidence

Key research findings which are relevant to the consideration of the implementation of the National Dementia Strategy include:

- Healthcare for London noted that in 2006/7 64% of admissions for dementia patients were via A&E, thus increasing unscheduled care costs (Dementia Services Guide, Healthcare for London, 2009)
- Healthcare for London calculated that if the National Dementia Strategy was correct that up to 70% of acute beds were occupied by older people and up to half may have cognitive impairment,
then during 2007/8 this would have equated to 370,560 of all London acute hospital admissions (Ibid).

- A recent Alzheimer’s Society report has provided research findings that indicate that patients with dementia have longer lengths of stay for the same conditions than patients without dementia. E.g. Fracture of femur, 14 days extra with 34% staying one month or more extra; urinary tract infection, 3 days extra with 53% staying two weeks or more extra and 30% staying one month or more extra; TIA, seven days extra with 73% staying one week or more, 57% staying two weeks or more and 35% staying one month or more (Counting the cost: caring for people with dementia on hospital wards: Alzheimer’s Society 2009).

- The National Audit Office estimated that dementia patients represented an annual excess cost of £6 million for an average general hospital (Improving services and support for people with dementia, National Audit Office 2007).

- Research indicates that over a third of people with dementia who go into hospital from living in their own homes are discharged to a care home setting (Counting the cost: caring for people with dementia on hospital wards: Alzheimer’s Society 2009).

- Early intervention and diagnosis are critical for patient quality of care and preventing costs down the line, however the National Audit Office found that only 47% of GPs said they had sufficient training in dementia management and almost a third were not very confident in diagnosing dementia Improving Dementia Services in England – an Interim Report, National Audit Office, 2010).

- An independent review reported that up to 150,000 people with dementia are inappropriately prescribed anti-psychotic drugs, contrary to clinical guidelines which may contribute to 1,800 additional deaths per year (Ibid).

- Those living with a family carer are 20 times less likely to be admitted to long term care (Banerjee S et al. Predictors of institutionalisation in people with dementia, Journal of Neurology Neurosurgery and Psychiatry. 74:1315-1316, 2003 (quoted in LCDC).

- Banerjee and Wittenberg conducted a research into the clinical and cost effectiveness of services for early diagnosis and intervention in 2009 and concluded that there was significant clinical evidence for ensuring early diagnosis, as well as delaying or preventing transitions into care homes (Banerjee, S and Wittenberg, R. Clinical and cost effectiveness of services for early diagnosis and intervention in dementia, International Journal of Geriatric Psychiatry, 2009).

- The same research found that a brief programme of carer support and counselling at diagnosis has been demonstrated to reduce care home placements by 28% (Ibid).

- According to the Healthcare for London guidance around specifying Memory Services, a gain of between 0.01 and 0.02
Quality Adjusted Life Years (QALYs) per person per year would be sufficient to render the service cost-effective and these relatively small improvements are likely to be achievable (Healthcare for London, Dementia Services Guide 2009).

It should also be noted that in general research has indicated that those with dementia and their carers prefer to remain in their own homes; and that patients with dementia admitted to hospital have worse outcomes in terms of length of stay, mortality and institutionalisation. Also, the socio-economic situation of people aged 65 and over fluctuates across the country with immoderations of poverty and wealth. Inequalities in socio-economic conditions affect all aspects of health and well-being and are pivotal in people diagnosed with progressive health conditions such as dementia. But there is a limited coverage and guidance around this indicator.

**Future**

The BUPA data analysis identified that in Hillingdon:

- The overall costs to health for identified Dementia patients within the analysis for 2008/9 was £2,170,845 and for 2009/10 was £2,712,800 - which was a 25% increase year on year
- The number of patients identified through social care data was small (241) compared to the 1055 identified dementia patients. Social care cost for this cohort (241 clients) was £2,131,291
- Therefore, in 2009/10, the total identified cost for the cohort across health and social care was £4,844,091
- 45% of dementia patients accessed A&E and there has been a 20.9% increase in the number of dementia patients accessing A&E between 2008/9 and 2009/10 which has generated a 50% increase in costs
- If patients with dementia attended A&E they had a very high chance of being admitted, and the majority of admissions were for 0-48 hours. It is clinical opinion that some of these can be avoided
- 36% of emergency admissions were due to infections (with urinary tract being the highest) for a cost of £518,518 over two years
- The potential size of the opportunity to prevent admissions and use of A&E is £900,275 over two years, but effective community services would need to be in place to ensure that a significant proportion of this opportunity could be realised
- The analysis validated that the main interventions suggested within the ideal pathway would be effective
- The analysis identified that 22.3% of the health cost of dementia was generated by only 5% of the patients, and 20% of patients accounted for 58.8% of the cost
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- 30 day readmission rates generated circa. £450,000 in additional cost over two years

Therefore, the focus within Hillingdon has been the development of a joint Dementia strategy by the PCT and Local Authority to implement the National Dementia strategy. This has been developed by a whole economy working group comprised of local GPs, hospital and mental health clinicians and managers, community services, the voluntary sector, social care, commissioners from the PCT and Local Authority, and a carer representative.

The strategy has included a Hillingdon specific whole economy evidence-based pathway and the focus for 2010/11 and 2011/12 will be around the specification of the different services within the pathway and a phased implementation. Suggested services within the pathway include:

- **Dementia specific services**
  - A single Dementia diagnosis point (Memory Service) called the Dementia Gateway which would include Dementia Advisors (to provide counselling and signposting post diagnosis)
  - Day care services for people with Dementia
  - Intermediate Care (step up and step down beds)
  - Interim assessment bed (residential and nursing dementia)
  - Admiral Nurses for carer support

- **Services which could be generic, treating not just Dementia patients**
  - Multi-agency Active Case Management team to hold patients in the community through developing integrated care plans with access to relevant services, operating with close links with Community Mental Health Teams to support those with behavioural problems associated with Dementia. This team would include a Dementia Specialist Nurse to provide specialist advice
  - Mental Health Liaison
  - Single point of access Rapid Response Team with Mental Health input that would provide support to people with Dementia in crisis
  - Early supported discharge
  - Rehabilitation/Reablement
  - Acute Nursing Home Care
  - Older People Floating Support
  - Voluntary Sector and Community Services for Socialising, Mental/physical stimulation, befriending, education/training, carers support
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Health Projections

Whilst it is difficult to project future costs of dementia due to lack of historical trend information, changes in future tariffs including the implementation of Payment by Result into Mental Health, and a changing population, if at a crude level the rate of increase were applied to future years using current financials, the cost increase would be as detailed below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Cost</th>
<th>% Increase</th>
<th>Increase</th>
<th>Actual/Indicative</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008/09</td>
<td>£2,107,845</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>2009/10</td>
<td>£2,712,800</td>
<td>25%</td>
<td>£541,955</td>
<td>Actual</td>
</tr>
<tr>
<td>2010/11</td>
<td>£3,391,000</td>
<td>25%</td>
<td>£678,200</td>
<td>Indicative</td>
</tr>
<tr>
<td>2011/12</td>
<td>£4,238,750</td>
<td>25%</td>
<td>£847,750</td>
<td>Indicative</td>
</tr>
</tbody>
</table>

If this rate of increase were sustained, it would suggest a potential 56% increase in additional dementia costs over two years.

The potential opportunity identified by BUPA across a two year period was £900,000, which represented 20% of the potential additional cost of dementia over the same time period. On that basis, we can reasonably assume that 20% of the potential increase in dementia costs for 2010/11 and 2011/12 could also be realised.

Enhancing quality, productivity and cost effectiveness

Hillingdon’s Public Health Directorate has commissioned an analysis for enhancing quality and productivity of local services. A draft report (Lang N, 2012) Draft QIPP Plan. Hillingdon Public Health has identified the following areas so far:

- **Delivering services to care homes including the reduction in antipsychotic prescribing**
  
  The cost savings from reduced antipsychotic prescribing cannot yet be quantified. There are currently no dementia specific care homes within-reach in Hillingdon. The cost savings from care homes in-reach cannot be clearly quantified as we do not have data on inpatient dementia admissions from care homes.

- **Mental health liaison services in acute hospitals**
  
  There is a pilot underway (funded by NHS London) to provide acute Psychiatric liaison services to HillingdonHospital patients. The cost savings from acute hospital liaison for dementia patients may be £315k per year provided the pilot funding from NHS continues.

- **Provision of specialist older people’s crisis resolution home treatment (CHRT) services**
  
  Hillingdon does not have an older person’s crisis resolution home treatment service. Anderson et al (2009) suggested that “Provision of
specialist older people’s CHRT services can reduce hospital admission rates by up to 31%, as well as reducing length of stay and admission to care homes”. By application of this theory, there would be cost savings of £210k per year.

✔ Memory Services
Hillingdon has a memory service, but not to the levels recommended by Department of Health Dementia Toolkit. Hence the cost savings from memory services may take 6 years to realise unless the service is provided at the level expected by DH to realise full benefits.

Conclusion
The work to date on Dementia in Hillingdon has demonstrated both a local commitment to the improvement of services for this cohort to improve the quality of patient care and carer support. It has also identified that there is a strong business case to move forward with the work. Therefore the focus for future will be the phased implementation of the evidence-based pathway.
Malnutrition, an indicator of care of the elderly

Heema Shukla,

"Because of Mum’s injuries she struggled to manoeuvre herself around her bed, and wasn’t strong enough to properly feed herself to the completion of a meal. The team on the ward were aware of this, but still put Mum’s food trays out of her reach, and didn’t offer to assist her with her feeding. If we were not there then she didn’t eat, and it was really distressing watching her fade away

A statement by elderly patient’s relatives on the Patients Association website

Introduction

Good nutritional care is one of the essential components of good quality care and an essential standard of the Care Quality Commission (CQC). The Public enquiry into the Mid Staffordshire Hospital deaths found major failings in care, including poor care of nutrition and fluids intake. An October 2011 report from CQC found that 17 of the 100 hospitals it inspected in England last year were not meeting this essential standard. A CQC review of 3500 establishments found that about 14% of care homes with nursing care were non-compliant with essential standard for nutrition care whilst 7% of care homes without nursing were non-compliant (CQC, Sept 2011)

Good nutritional care also makes sound financial sense. The British Association of Parenteral and Enteral Nutrition (BAPEN), a charity on medical nutrition, estimated that public expenditure on malnutrition in the UK in 2007 was over £13 billion. Hence, improved nutritional care could result in substantial financial returns; with even a 1% saving amounting to about £130 million per year. NICE has identified better nutritional care as potential source of cost saving to the NHS.

Nutrition and hydration were identified as one of the eight ‘high impact’ clinical areas that yield ‘huge cost savings’ if performance is improved. (NHS Institute for innovation and improvement, 2009)

The size of the problem
The term malnutrition can refer to both overnutrition and undernutrition. For this chapter, malnutrition refers to undernutrition; a deficiency of energy, protein and other nutrients that cause adverse effects on the body (shape, size and composition), the way it functions and clinical outcomes. In adults in this country, most malnutrition is disease related, although some social and mechanical (dentition) factors can also have an impact.

At any point in time, three million people are living at a high risk of malnutrition, with the vast majority (93%) living in the community including 2-3% in sheltered housing, and the remainder in either hospitals or care homes.

The annual survey (Russell C A and Elia, M, 2012) on malnutrition conducted by the BAPEN found that malnutrition affected,

- One in four adults admitted to the hospital
- One in three adults recently admitted to care homes
- One in five patients on admission to mental health units and attending hospital outpatients department
- 10% of people at GP practices

Most of those affected were in the high-risk category.

Malnutrition is common in all types of care homes and hospitals, all types of wards and diagnostic categories, and all ages. Though malnutrition is common in all types of care homes and hospitals, all types of wards and diagnostic categories, the survey found that in hospitals malnutrition varied significantly according to type and source of admission. Malnutrition was higher (27%) in emergency admissions compared with planned admissions (20%). About 41% of patients admitted from care homes were malnourished compared with 23% from their own homes. About 34% of cancer patients were malnourished compared with 23% of other patients. Malnourishment was higher in certain diagnostic categories (gastrointestinal-38% and respiratory -31%) compared with other diagnostic groups (cardiovascular 16% and musculoskeletal 18%). About 41% of those surveyed in care homes were malnourished. The prevalence of ‘malnutrition’ was greater in residents admitted from other care homes (44%) compared with hospitals (40%) and from their own homes (40%). The prevalence was also greater in nursing homes (46%) than residential homes (41%).

**Causes of malnutrition**

Malnutrition can occur due to a number of reasons. Disease related malnutrition occurs in cancers, strokes, COPD, and conditions such as cystic fibrosis.
Age related malnutrition could result from problems with dentures and poor oral health, frailty, and isolation.

Malnutrition is associated with a range of socio-economic factors, and the condition potentially exacerbates health inequalities. Socio-economic reasons when household food security is low can lead to malnutrition – both obesity and undernutrition depending on choice of food. Energy dense foods are usually cheaper to buy than nutrient dense foods. These risk factors are shown in the table below.

**Risk factors for malnutrition**

<table>
<thead>
<tr>
<th>Chronic disease</th>
<th>COPD, inflammatory bowel disease, gastrointestinal disease, renal or liver disease, dementia, neurological conditions-Parkinsons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute illness</td>
<td>Where food is not being consumed (more than 5 days), occurs mainly in hospital settings</td>
</tr>
<tr>
<td>Debility</td>
<td>frail, immobile, old age, depression, recent discharge from hospital</td>
</tr>
<tr>
<td>Social issues</td>
<td>poor support, housebound, inability to shop and cook, poverty</td>
</tr>
</tbody>
</table>

**Consequences of malnutrition**

The consequences of malnutrition are twofold: it puts the person at higher risk of disease and for those with disease; it prolongs recovery or exacerbates the condition. Malnutrition is a leading cause of neck of the femur fracture and the outcomes for these patients is poor. It is estimated that compared with well-nourished patients, malnourished patients are likely to have 65% more GP visits, 82% more hospital admissions and 30% longer hospital stays.

<table>
<thead>
<tr>
<th>The Clinical Consequences of malnutrition</th>
<th>Healthcare implications of malnutrition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impaired immune response</td>
<td>More hospital admissions and readmissions</td>
</tr>
<tr>
<td>Reduced muscle strength</td>
<td>Longer length of stay in hospital</td>
</tr>
<tr>
<td>Impaired psycho-social function</td>
<td>Greater healthcare needs in the community- GP visits, antibiotic prescription</td>
</tr>
<tr>
<td>Impaired recovery from illness</td>
<td></td>
</tr>
<tr>
<td>Poorer clinical outcomes</td>
<td></td>
</tr>
</tbody>
</table>
Good nutritional care is an essential quality indicator

Good nutritional care is one of the essential indicators of good care. People have a right to adequate food and malnourished patients should not be seen as passive recipients, but as rights holders, and active claimants of their right to food. The staff should have sufficient knowledge of nutrition and be able to recognise and identify patients that are at risk of malnutrition. If catering is contracted, the contract should include minimum nutritional standards and care.

CQC Essential Standards for nutritional care

**Outcome 5: Meeting nutritional needs**  
Food and drink should meet people’s individual dietary needs

**Outcome 4: Care and welfare of people who use services**  
People should get safe and appropriate care that meets their needs and supports their rights.

**Outcome 7: Safeguarding people who use services from abuse**  
People should be protected from abuse and staff should respect their human rights

**Outcome 12: Requirements relating to workers**  
People should be cared for by staff properly qualified and able to do their job.

**Outcome 16: Assessing and monitoring the quality of service provision**  
The service should have quality checking systems to manage risks and assure the health, welfare, and safety of people who receive care.

**Outcome 22: Requirements where the service provider is an individual or partnership**  
People have their needs met because services are provided by people who are of good character, fit for their role, and have the necessary qualifications, skills, and experience.

**Outcome 23: Requirement where the service provider is a body other than a partnership**  
People have their needs met because services are managed by people who are of good character, fit for their role, and have the necessary qualifications, skills, and experience.
Clinical guidelines for nutritional management and care

NICE guidelines (CG32) provide clinical guidelines on nutritional support for adults. It includes clinical and organisational guidelines for nutritional care of patients. A key recommendation is nutritional screening on admission as inpatient, outpatient appointment and admission to care home. BAPEN annual survey found that although institutions have a nutritional policy, not all of them undertook annual audits of practice and most organisations were unaware of the Department of health standard for weighing scales. Staff directly involved in patient should be appropriately trained in nutrition and there should be a nutritional steering committee.

Current Issues and Challenges

Although nutritional screening is a simple and inexpensive method of identifying patients at risk of malnutrition in any settings, it is not universally applied and when applied, not followed up by appropriate care pathway. With nurses ever busy and patients staying for shorter periods, good nutritional care is compromised many a time. In the community, there is little awareness and with an ageing population, there will more demands on the health and care system. As more providers enter the market, inspection for quality may be stretched. The economic crises have already seen a sharp increase in food poverty with demands for foodbanks increasing by 20%.

Prevention and promotion of good nutritional care

There are some good examples from community to prevent the scale of malnutrition. Examples from the patient perspective on strategic aspects, a voluntary sector hospital action plan and local authority democratic scrutiny are described below that can be adopted by health and care economy to develop a strategy on improving and achieving good nutritional care.

The patients perspective on good nutritional care strategy

The Patient Association, a national healthcare charity undertook a survey of over 5000 patients in conjunction with YouGov. It found that there is a lack of awareness amongst patients regarding the issue of malnutrition, whether they are at risk, how they can prevent malnutrition from developing, and where to seek help and advice.

Based on the finding of this survey the following recommendations were made.

The Patient Association- Call to Action
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1. The Department of Health must provide information on basic nutrition and the importance of monitoring weight loss as an early warning sign of malnutrition to patients and healthcare professionals.

2. GP consortia need to ensure information on malnutrition is tailored to local services and covers the whole ‘malnutrition journey’ from diagnosis to nutritional treatments that can be prescribed by the GP and also following up and monitoring in the community.

3. GP consortia and Local Authorities must ring-fence funding for community-based dietetics services and treatment options if clinically required.

4. GPs and GP consortia need to be educated as to the cost benefits of treating malnutrition.

5. The Department of Health must make nutritional screening across all health and social care settings mandatory and healthcare professionals must be educated and trained to use a nutritional guide to the social risk factors associated with malnutrition and nutritional screening questions to ask on these factors.

6. The new Public Health Directors who will sit within the Local Authority must have a role in promoting prevention of malnutrition and must see this as one of their public health duties.

7. The role of the community pharmacist in promoting good nutrition and screening for malnutrition must be considered by the Public Health Director.

8. The Patients Association’s leaflet ‘Malnutrition – signs and symptoms, where to go for help and what to expect from treatment’ should be provided by GP surgeries and healthcare professionals to patients and carers who may be vulnerable or at risk of malnutrition.

AgeUK seven steps to end malnutrition in hospital

AgeUK has seven simple steps that every ward in every hospital can implement.

Step 1
Listen to us
We must be consulted about hospital menus, our meal requirements and our preferences, and hospital staff must respond to what we tell them.
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Step 2
All ward staff must become 'food aware'
Ward staff need to take responsibility for our food needs in hospital.

Step 3
Hospital staff must follow professional codes
Hospital staff must follow their own professional codes and guidance from other bodies.

Step 4
Assess us for malnourishment
As many of us are malnourished on admission to hospital, we should all be weighed and our height measured on admission.

Step 5
Introduce protected mealtimes
Protected mealtimes will ensure we are given appropriate assistance to eat meals when needed and sufficient time to eat our meals.

Step 6
Use a red tray system
Those of us who need help with eating should be identified on admission and our meal placed on a red tray to signal the need for help.

Step 7
Use mealtime volunteers
Where appropriate, hospitals should use trained volunteers to provide additional help and support to us at mealtimes.

A Local authority's view on malnutrition

Staffordshire Council Overview and Scrutiny recommendations

Staffordshire Council overview and scrutiny committee undertook scrutiny of malnutrition because of concern regarding malnutrition in the community. The final report made recommendations across four broad themes.

- Strategic ownership and raising the profile
- Cabinet member ownership –malnutrition champion’ to ensure it has high profile to increase awareness of all stakeholders-professionals, older people and their carers.
- That local needs are assessed through the JSNA,
- To establish a new ‘first contact’ scheme to raise awareness and provide information
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- Care home commissioning and capacity building for improving the nutritional care standards
  - Include nutritional care in the ‘Caring for Health’ awards for care homes
  - Using good practice from one Care Home, Council to support a joint procurement framework for smaller care home to purchase fresh food produce to enable moving from contracted meals to in-house catering
  - Facilitate provision of nutritional training for care home staff from a local provider
  - Develop further a monitoring tool that can be used to assess the quality of care in residential care homes with whom the Council has commissioning arrangements
  - Review local intelligence gathering about concerns of care and complaints and develop a formal mechanism to share this with CQC
  - Include nutritional needs in personalisation and independent living assessments

- Role of GP
  - Raise the awareness of malnutrition in the community and its costs among GP
  - Influence GPs to do more on prevention of malnutrition in the community by undertaking nutritional screening

- Role of community and voluntary sector
  - Increase awareness of malnutrition among organisations providing lower level support
  - Improve capacity within the sector to undertake projects relating to increasing awareness of malnutrition and improving nutritional care.

Hillingdon

Hillingdon Hospital launched a Nutrition Screening Tool on 1 November 2011. The trust prioritises nutrition and the provision of appropriate food and drinks to all patients, with support as needed, monitoring patients during their stay. All patients are screened within 24 hours of hospital admission and then weekly thereafter. A clear and practical set of management guidelines is followed according to each patient’s nutrition screening tool score. Dietitians are involved for the high risk patients and those that need support and advice on nutrition. The CQC report for the hospital (2011) found that the hospital met the standard.

‘Outcome 5: Food and drink should meet people’s individual dietary needs
Peoples nutritional and hydration needs are assessed and monitored and audit
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records demonstrated that this is regularly checked. There are suitable processes in place to support people who use its services to have adequate nutrition and hydration.

Hillingdon Hospital and Age Concern are working together on the seven steps. The hospital and Age UK encourage family and friends to help at meal times, as patients are more comfortable with familiar faces and more likely to finish their food.

Age UK is also recruiting local people to volunteer at the hospital during meal times. This may simply involve sitting and talking to patients while they eat.

The Hillingdon adult safeguarding policy states includes malnutrition as an indicator of physical abuse and neglect.

Recommendations
Malnutrition has not featured previously in any APHR or JSNA in Hillingdon. It is recommended that the next JSNA includes malnutrition in Hillingdon so that the extent of malnutrition and the issues in Hillingdon can be better understood and recommendations to address it can be made across the health and care economy to realise the health and financial gains from preventing and managing malnutrition among the elderly population.

Conclusions
Good nutritional care improves the health of the population and can significantly reduce the costs associated with malnutrition. Most malnutrition in the elderly occurs in the community, although hospital malnutrition can lead to longer stay and even worse health outcomes. Without action, the burden of malnutrition is set to rise because of, for example, an ageing population, and an increase in long-term conditions. There is a pressure on health and social care budgets and tackling malnutrition is cost-saving that can be realised in the short term and improves the patient experience and health. Good nutritional care is also an indicator of how we care for our senior citizens in our society.
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