England – Towards a smokefree nation

A report for Public Health England and the Stoptober 2015 campaign
October 2015
Executive Summary

• Over the past thirty years, the institutional landscape, attitudes and behaviours related to smoking in England have changed dramatically to the point where we are on the path to achieving a smoke free nation in England.

• Since 1985, substantial changes in tobacco-related legislation and cessation campaigns such as Stoptober have dramatically reduced the presence of smoking from our daily lives and helped smokers to quit. Since 2007, smoking has been banned in indoor public places, and since October 2015 it is illegal to smoke in cars with children, helping to reduce the harmful effects to the public of exposure to second-hand smoke.

• Simultaneously there has been a change in the attitudes of England’s population towards smoking. The proportion of individuals smoking in the home has fallen from an estimated 51% in 1985 to just 13% in 2013. The number of children exposed to smoking regularly in cars has fallen from an estimated 4.8 million in 1985 to 1.5 million in 2013.

• Changing attitudes towards smoking have seen large numbers either giving up smoking, or never starting to smoke. In 1985 a third of adults (age 18+) in England smoked, while today it’s 18%. Today, England has 37% fewer smokers compared to 30 years ago.

• Daily consumption has also reduced, with the average smoker having 4 fewer cigarettes per day than in 1985, and tobacco sales volumes falling 54% over the same period.
Executive Summary

• It is widely acknowledged that greater deprivation and lower incomes are correlated with higher smoking levels. People in deprived households are more likely to smoke, and to be classified as a heavy smoker.

• Smoking has been identified as the single biggest cause of inequality in death rates between rich and poor in the UK. This underlines the importance of addressing smoking prevalence rates amongst lower income groups, in order to reduce these health inequalities.

• Smoking-related illnesses impose substantial additional health costs on England’s NHS health budget. It is estimated that smoking was responsible for 455,000 NHS hospital admissions and 80,000 deaths in 2013 (latest data available).

• NHS spending has tripled in real terms over the last 30 years. With smoking prevalence rates falling over the period, England has been able to avoid substantial health costs associated with smoking-related admissions – even as overall health spending has ballooned.

• Cebr estimates that if smoking prevalence rates in England had remained at 1985 levels, smoking-related hospital admission costs would have been £1.5 billion higher than they are currently (£1.95 billion in 2013). This means that progress towards becoming a smokefree nation has delivered substantial financial savings for England, in addition to the important health gains associated with fewer people smoking.
Contents

• Changes in smoking legislation 6

• Locations where people are exposed to second-hand smoke 10

• Changes in smoking behaviour and attitudes since 1985 15

• The link between deprivation and smoking 21

• NHS cost savings from quitting smoking 27

• Appendix: methodology 33
Introduction

This study demonstrates how developments in the institutional landscape, attitudes, behaviours, and socio-economic characteristics in England over the past thirty years have positioned us on a pathway towards becoming a smokefree nation.

This report examines a thirty-year timeframe from 1985 to 2015, to contextualise how the status of smoking in England has fundamentally changed.

In 1985, smoking was ubiquitous and was permitted in most public places. As a result of smoking bans, changes in individual behaviour and shifts in social attitudes over the past thirty years, the status quo has altered to the point where in 2015, we are on the way to achieving a smoke free nation.

This achievement has delivered multiple economic, social and health benefits to England’s citizens, including more disposable income, better health and longer lifespans. The reduction in the number of smokers in England has also delivered billions of pounds of cost savings to the NHS across England’s public health regions (PHE).

For this study, Cebr has specifically examined how a reduction in the number of smokers has reduced the cost burden on England’s NHS, even as overall expenditure on health services has ballooned over the past thirty years. The results of this analysis are set out in the final section of this report.
Changes in smoking legislation
Smoking legislation timeline – prior to 1985

Thanks to a growing body of scientific evidence on the negative effects of smoking, measures were introduced over the period 1965 and 1985 that gradually placed restriction on the sale and advertisement of cigarettes.

<table>
<thead>
<tr>
<th>Year</th>
<th>Legislation</th>
<th>Prevalence rate (%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>Ban on cigarette advertising on television.</td>
<td>48%</td>
</tr>
<tr>
<td>1971</td>
<td>Government health warnings placed on all packets of cigarettes sold in the UK following a voluntary agreement with the tobacco industry.</td>
<td>51%</td>
</tr>
<tr>
<td>1984</td>
<td>Smoking banned on London Underground trains.</td>
<td>34%</td>
</tr>
<tr>
<td>1985</td>
<td>Smoking banned at all train stations that are wholly or partly underground.</td>
<td>33%</td>
</tr>
</tbody>
</table>

Smoking legislation timeline – 1985 to 2002

Between 1985 and 2002, legislation to further restrict the advertisement of smoking was introduced and more widely applied in England and the EU. Meanwhile, the first non-voluntary piece of legislation to provide warning messages on tobacco packaging was enacted.

<table>
<thead>
<tr>
<th>Year</th>
<th>Legislation</th>
<th>Prevalence rate (%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>• New advertising and promotion guidelines agreed, e.g. banning tobacco advertising in cinemas and a range of new health warnings provided to packaging.</td>
<td>33%</td>
</tr>
<tr>
<td>1998</td>
<td>• The EU directive on advertising and sponsorship was adopted.</td>
<td>27%</td>
</tr>
<tr>
<td>2001</td>
<td>• New EU directive requires larger, more prominent health warnings on tobacco packaging.</td>
<td>27%</td>
</tr>
<tr>
<td>2002</td>
<td>• Legislation passed banning tobacco print media and billboard advertising, promotion and sponsorship.</td>
<td>26%</td>
</tr>
</tbody>
</table>

* Smoking prevalence rate for Great Britain. Source: ONS Opinions and Lifestyle Survey, ONS General Lifestyle Survey and ONS General Household Survey
Smoking legislation timeline – 2005 to present

Over the last 10 years, major pieces of legislation designating smoke free public zones have been enacted, strongly restricting smoking in public places across England.

<table>
<thead>
<tr>
<th>Year</th>
<th>Legislation</th>
<th>Prevalence rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>• Smoking banned on all trains</td>
<td>24%</td>
</tr>
<tr>
<td>2007</td>
<td>• England’s ban on smoking in indoor public places comes into force</td>
<td>21%</td>
</tr>
<tr>
<td>2008</td>
<td>• Picture health warnings introduced on cigarette packets</td>
<td>21%</td>
</tr>
<tr>
<td>2012</td>
<td>• Large shops banned from displaying cigarettes</td>
<td>20%</td>
</tr>
<tr>
<td>Oct. 2015</td>
<td>• Ban on smoking in cars when children are present</td>
<td>18%</td>
</tr>
</tbody>
</table>

* Smoking prevalence rate for Great Britain. Source: ONS Opinions and Lifestyle Survey, ONS General Lifestyle Survey and ONS General Household Survey
Locations where people are exposed to second-hand smoke
Pubs & restaurants the most common location where people are exposed to second-hand smoke

- Since 2007, smoking is banned in most indoor spaces where passive smoking is likely to occur, such as the workplace, restaurants and bars, educational and health care facilities, on public transport, and in enclosed public places.

- Locations where people are most likely to be subjected to second-hand smoke today are outdoor smoking areas at pubs, restaurants and other people’s homes.

- Those who live in London, the South East, and the South West are significantly more likely to be exposed to smoke in the outside area of a bar or restaurant than in the home environment. The opposite is true for those living in Yorkshire & the Humber, the West Midlands, and the North East.

Proportion of population regularly exposed to other people’s smoke, by location, England

- Outdoor smoking areas of pubs/restaurant: 11%
- In other people's homes: 10%
- At home: 8%
- At work: 7%
- In other places: 6%
- Travelling by car or van: 3%

Source: Health Survey for England (HSE) 2013, Cebr calculations
In-home smoking has plunged to low levels in 2015

• The proportion of English households with a one or more smokers has fallen from two in five (41%) in 1985 to only 11% of households in 2013.

• Smoking in the home has also fallen substantially over the past 30 years – the proportion of people smoking at home has fallen from 51% in 1985* to 13% in 2013 (latest data available).

• Across England, there are substantial regional differences – the proportion of individuals smoking at home is nearly three times higher in the North East than the South West.

• In 2013, 10% of households with children allowed smoking in the home, indicating low tolerance where children are present. By comparison, in 1985 32.2% of households with children had at least one smoker living in the home*.

* The Health and Lifestyle Survey 1985 does not directly identify households where smoking is permitted in the home. In order to provide a comparable estimate, an alternative definition is used: households where the respondent is a regular smoker and/or other persons in the household smoke.

Source: HSE 2013, Health and Lifestyle Survey 1985, Cebr calculations

Proportion of individuals smoking at home, 1985* and 2013, by PHE region
An estimated 1.5m children regularly exposed to smoke in cars

• Following extensive research, campaigning and strong public support for a ban, legislation came into force on 1st October 2015 which prohibits smoking in cars with child passengers. Children are particularly vulnerable to the effects of second-hand smoke and exposure increases the risk of cot death, asthma and other respiratory diseases.

• In 1985, an estimated 50% of children in England (4.8 million) were routinely exposed to smoke in cars. By 2014, this proportion had fallen to 15% – a level that is still too high given the potential long term risks to the health of the child.

• Based on data from Health Survey for England 2013 (latest data available), Cebr estimates that 1.5 million children across England are regularly exposed to second-hand smoke in cars.

Number of children exposed regularly to second-hand smoke in cars, 1985 and 2013, by PHE region

Source: HSE 2013, Health and Lifestyle Survey 1985, Cebr calculations
## Locations where smoking is permitted: 1985 compared to 2015

<table>
<thead>
<tr>
<th>Location</th>
<th>1985</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private homes</td>
<td>Green</td>
<td>Green</td>
</tr>
<tr>
<td>Outdoor public spaces</td>
<td>Green</td>
<td>Green</td>
</tr>
<tr>
<td>Private vehicles (adult passengers)</td>
<td>Green</td>
<td>Red</td>
</tr>
<tr>
<td>Designated hotel rooms</td>
<td>Green</td>
<td>Green</td>
</tr>
<tr>
<td>Designated rooms in prisons</td>
<td>Green</td>
<td>Red</td>
</tr>
<tr>
<td>Workplaces</td>
<td>Red</td>
<td>Red</td>
</tr>
<tr>
<td>Bars</td>
<td>Green</td>
<td>Red</td>
</tr>
<tr>
<td>Restaurants</td>
<td>Green</td>
<td>Red</td>
</tr>
<tr>
<td>Private members’ clubs</td>
<td>Green</td>
<td>Red</td>
</tr>
<tr>
<td>Public Buildings</td>
<td>Red</td>
<td>Red</td>
</tr>
<tr>
<td>Hospitals</td>
<td>Green</td>
<td>Red</td>
</tr>
<tr>
<td>Private vehicles (child passengers)</td>
<td>Red</td>
<td>Red</td>
</tr>
<tr>
<td>Buses</td>
<td>Green</td>
<td>Red</td>
</tr>
<tr>
<td>Trains</td>
<td>Green</td>
<td>Red</td>
</tr>
<tr>
<td>Taxis</td>
<td>Green</td>
<td>Red</td>
</tr>
<tr>
<td>Underground</td>
<td>Red</td>
<td>Red</td>
</tr>
</tbody>
</table>

**Key**
- Green = Smoking permitted
- Red  = Smoking not permitted
Changes in smoking behaviour and attitudes since 1985
Number of smokers in England has fallen dramatically over past 30 years

- Smoking prevalence rates in all regions of England have fallen dramatically over the last 30 years. In 1985 a third of adults in England smoked, while today it’s around 18%. Today, England has 37% fewer smokers compared to 30 years ago.

- As smoking prevalence rates have fallen across the country, the disparity between the regions with the highest and lowest proportion of smokers has fallen.

- The greatest fall in smoking rates has been in the North West - from 40% in 1985 to 20% in 2014.

- The smallest decline has been in the East of England - from 30% in 1985 to 18% in 2014.

This is due to large numbers quitting, or never starting to smoke

• There are many reasons for why smoking rates have declined – but the primary drivers have been that fewer people have taken up smoking and more people have permanently quit.

• In England, the proportion of people who have never smoked has increased from 40% (1985) to 48% (2013) of the adult population. The proportion who are ex-smokers has increased from 26% in 1985 to 32% in 2013.

• London has seen the most dramatic increase in people who have never smoked – from 38% to 54% of the adult population.

• Meanwhile, in the Midlands and South East, the fall in prevalence rates has been driven by a substantial increase in the number of people who have quit smoking.

Change in proportion of population who are ex-smokers and never-smokers, 1985 to 2013, (percentage points), by PHE region

<table>
<thead>
<tr>
<th>Region</th>
<th>Ex smoker</th>
<th>Never smoked</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td>1.7</td>
<td>16.1</td>
</tr>
<tr>
<td>North East</td>
<td>3.8</td>
<td>11.8</td>
</tr>
<tr>
<td>North West</td>
<td>8.7</td>
<td>11.3</td>
</tr>
<tr>
<td>Yorkshire &amp; the Humber</td>
<td>2.8</td>
<td>8.7</td>
</tr>
<tr>
<td>England</td>
<td>6.1</td>
<td>8.5</td>
</tr>
<tr>
<td>East of England</td>
<td>2.5</td>
<td>7.9</td>
</tr>
<tr>
<td>South West</td>
<td>4.6</td>
<td>7.2</td>
</tr>
<tr>
<td>South East</td>
<td>5.8</td>
<td>7.4</td>
</tr>
<tr>
<td>East Midlands</td>
<td>5.0</td>
<td>9.3</td>
</tr>
<tr>
<td>West Midlands</td>
<td>4.6</td>
<td>9.7</td>
</tr>
</tbody>
</table>

Source: HSE 2013, Health and Lifestyle Survey 1985, Cebr calculations
Smokers have 4 fewer cigarettes per day than they did in 1985

- Not only have smoking prevalence rates decreased in England but the average tobacco consumption per smoker has also fallen over the past 30 years – from 16 to 12 cigarettes per day.

- In 1985, the highest intensity of smoking occurred in the North West, which also had the highest smoking prevalence. In 2013, the North East had the second-highest smoking prevalence rate and the highest intensity of daily consumption.

- The decline is seen in all regions, pointing to a shift in the behaviour of the average smoker towards consuming less cigarettes.

### Average number of cigarettes smoked per day, by PHE region, 1985 and 2013

<table>
<thead>
<tr>
<th>Region</th>
<th>1985</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>North West</td>
<td>11.8</td>
<td>16.8</td>
</tr>
<tr>
<td>East Midlands</td>
<td>12.3</td>
<td>16.6</td>
</tr>
<tr>
<td>Yorks/Humber</td>
<td>13.1</td>
<td>16.5</td>
</tr>
<tr>
<td>South West</td>
<td>11.7</td>
<td>16.4</td>
</tr>
<tr>
<td>England</td>
<td>12.2</td>
<td>16.2</td>
</tr>
<tr>
<td>North East</td>
<td>14.3</td>
<td>16.2</td>
</tr>
<tr>
<td>West Midlands</td>
<td>12.6</td>
<td>15.8</td>
</tr>
<tr>
<td>London</td>
<td>10.9</td>
<td>15.3</td>
</tr>
<tr>
<td>South East</td>
<td>11.2</td>
<td>15.0</td>
</tr>
<tr>
<td>East of England</td>
<td>11.8</td>
<td>14.7</td>
</tr>
</tbody>
</table>

**Source:** HSE 2013, Health and Lifestyle Survey 1985, Cebr calculations
Volume of tobacco sold in the UK is at 100-year low

• In terms of overall consumption of tobacco, volumes have declined substantially over recent decades, thanks to a fall in the number of smokers and the amount that the average smoker consumes.

• In 2015, the volume of cigarettes sold is at its lowest since 1919, and the volume of all tobacco products is at levels last seen pre-1915.

• The volumes of tobacco products sold in the UK are down by two-thirds (67%) since 1961, and down by more than half (54%) since 1985.

• Tobacco sales increased dramatically over the first half of the 20th century to reach a peak in 1961. Since then, tobacco sales volumes have been in long-term decline.

Sources: International Smoking Statistics, Tobacco Manufacturers Association, Cebr calculations
While smoking has declined, the impact on smokers’ pockets has increased

- Despite tobacco sales volumes falling over recent decades, total spending on tobacco has risen from £15.9 billion in 1985, to £19.5 billion in 2014 (after adjusting for inflation). This is due largely to rises in taxes and duties on tobacco: in 2015, approximately 77% of the price of a packet of cigarettes is paid in tax.

- Taxes on tobacco have therefore impacted the disposable incomes of smokers, particularly those on lower incomes.

- However, the rationale for these taxes is to account for the substantial external costs which smoking implies for the health system and society, which must be offset by taxes.

- High taxes also exist to provide a deterrent to people taking up smoking, and to reduce consumption amongst existing smokers.

### Annual tobacco expenditure per smoker (in 2014 prices), by English region

<table>
<thead>
<tr>
<th>Region</th>
<th>1985</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Midlands</td>
<td>£1,040</td>
<td>£1,870</td>
</tr>
<tr>
<td>Yorks &amp; Humber</td>
<td>£1,212</td>
<td>£2,038</td>
</tr>
<tr>
<td>East of England</td>
<td>£1,155</td>
<td>£2,040</td>
</tr>
<tr>
<td>London</td>
<td>£1,150</td>
<td>£2,097</td>
</tr>
<tr>
<td>England</td>
<td>£1,120</td>
<td>£2,212</td>
</tr>
<tr>
<td>South West</td>
<td>£1,183</td>
<td>£2,267</td>
</tr>
<tr>
<td>North East</td>
<td>£1,172</td>
<td>£2,310</td>
</tr>
<tr>
<td>North West</td>
<td>£941</td>
<td>£2,417</td>
</tr>
<tr>
<td>South East</td>
<td>£1,101</td>
<td>£2,429</td>
</tr>
<tr>
<td>East Midlands</td>
<td>£1,332</td>
<td>£2,629</td>
</tr>
</tbody>
</table>

Source: Family expenditure Survey 2014 and 1985 (ONS), Ash Ready Reckoner 2015, Cebr calculations
The link between deprivation and smoking
Smoking is correlated with deprivation

- It is well known that areas with the highest levels of deprivation also have a much higher proportion of residents that are current smokers.
- The chart opposite illustrates, for each Local Authority in England, the correlation between cigarette consumption per resident, and the average Indices of Multiple Deprivation (IMD) 2015 scores in those areas.
- Deprived groups suffer the highest burden of smoking-related illness and death. Smoking is the single biggest cause of inequalities in death rates between the most and least deprived in our communities. For this reason, it is vital that smoking rates are addressed amongst the least well-off.

* A high IMD score indicates high levels of deprivation

**Correlation between cigarette consumption (2013) and IMD deprivation score***

Source: ASH Ready Reckoner 2015, DCLG Indices of Multiple Deprivation 2015, Cebr analysis
The most deprived local authority areas smoke 65% more than the least deprived

- Cigarette consumption per resident in England’s 10% most deprived local authorities is 65% higher than in the 10% least deprived local authorities.
- In deprived areas, household incomes tend to be low. Smoking therefore represents a significant component of a household’s weekly budget.
- Quitting smoking can thus have a positive effect on the disposable income of deprived households.

Source: ASH Ready Reckoner 2015, DCLG Indices of Multiple Deprivation 2015, Cebr analysis
Unskilled occupations have seen the biggest decrease in smoking rates

- Smoking rates tend to be higher amongst skilled and unskilled manual workers, and less prevalent amongst non-manual workers, professionals, and managers.
- Since 1985, smoking rates have fallen across all occupation groups.
- The change is most notable amongst unskilled workers, 50% of which were smokers in 1985. The smoking rate amongst this group has fallen dramatically over the past 30 years.

Source: Health and Well-being Survey 1985, Health Survey for England 2013, Cebr analysis
Better educated individuals are less likely to be smokers

- Individuals with higher educational qualifications tend to be less likely to smoke, and this trend has remained constant over the past 30 years.
- Higher levels of education are also correlated with higher incomes and lower deprivation.
- The biggest drop in smoking rates over the past 30 years has been among those with a GCSE or equivalent qualification (36% of which smoked in 1985 compared to 16% in 2013).

Source: Health and Well-being Survey 1985, Health Survey for England 2013, Cebr analysis
Heavy smoking households tend to fall into lower income groups

- The most recent evidence on smoking behaviour by income band shows that even among smokers, those on high incomes are much less likely to smoke heavily.
- Half (50%) of all smokers in the highest income quintile are classified as ‘light smokers’.
- By contrast, those in the lowest income quintile are less likely to be light smokers. Barely a quarter (26%) are in this category; while 39% are ‘heavy’ smokers.
- These trends underline the fact that poorer smokers are spending a substantial chunk of their income on tobacco: particularly as they are much more likely to be heavy smokers.

Source: Health Survey for England 2013
NHS cost savings from quitting smoking
NHS spending has tripled over the last 30 years

- During the financial year 1985/86, NHS England net expenditure stood at £32bn (2010/11 prices). Since then, this figure has more than trebled, reaching £104bn in 2013/14.
- Over the same period, England’s population has increased by 15% from 47 million in 1985 to reach 54 million in 2014.
- An ageing population combined with the rising cost of individual healthcare treatments (cancer drugs for example), has dramatically increased the cost of providing health care services to England’s population.
- Without the substantial drop in the prevalence of smoking in England over the last 30 years – which is responsible for 48% of cancer hospital admissions – NHS annual spending would have been far higher.

Source: NHS funding and expenditure; House of Commons; Social and General Statistics, 2012
Smoking was responsible for 80,000 deaths in 2013

- In 2013, 80,000 deaths and 455,000 hospital admissions in England were attributable to smoking.
- Smoking is a significant risk factor to the development of cancer. Smoking accounted for 159,000 cancer admissions in 2013 – 48% of total*. Specifically, 80% of all lung cancer admissions can be attributable to smoking.
- However, cancer is not the only illness that can be caused by smoking. A total of 43% of respiratory disease admissions and 18% circulatory disease admissions are attributable to smoking.

Number of admissions attributable to smoking, by major type of illnesses (aged 35+), 2013

- All cancers
- All respiratory diseases
- All circulatory diseases
- All diseases of the digestive system

* Health and Social Care Information Centre (HSCIC) statistics on smoking 2015, Chapter 4

Sources: Health & Social Care Information Centre - Statistics on Smoking, 2015
If smoking rates were the same as in 1985, hospital admissions due to smoking would be around twice current levels

- The prevalence of smoking has declined substantially since 1985. Over a third (34%) of England’s population\(^1\) smoked in 1985. This proportion has nearly halved to 18% in 2014\(^2\).

- In order to understand the savings to the NHS from this decline in smoking, we have carried out an analysis to estimate the number of smoking related hospital admissions we would have now if smoking rates remained the same as in 1985.

- In this scenario, we estimate that there would be approximately 812,000 smoking-related hospital admissions - close to double the 455,000 smoking-related admissions seen in 2013.

\(^1\) Health and Well-being Survey 1985
\(^2\) ONS Integrated Household Survey 2014

Sources: Health & Social Care Information Centre - Statistics on Smoking 2015, Health Survey for England 2013, Cebr analysis
Smoking related admissions would be over 2 times current levels in North West in 2013 if smoking rates stayed at 1985 levels

- The North West region has seen the biggest benefits in terms of avoided hospital admissions as a result of the reduction in smoking prevalence.
- Under the scenario where smoking rates in 2013 remained the same as in 1985, admissions caused by smoking-related illnesses would have been 2.3 times that of existing levels – the biggest difference among PHE regions.
- Under the same scenario the East of England region, admissions caused by smoking-related illnesses would have been 1.3 times that of existing levels.

Sources: HSCIC 2015, Health Survey for England 2013, Health and Wellbeing Survey 1985, Cebr analysis
NHS England saves an estimated £1.5 billion\(^1\) annually due to lower smoking prevalence rates

- As a result of a lower smoking rate in 2013 compared with 1985, there are 340,000 fewer cancer, respiratory, circulatory and digestive system disease admissions due to smoking-related illnesses across England.
- Treating these smoking-related illnesses is estimated to have cost NHS England £1.95 billion\(^2\) in 2013.
- The lower smoking rate in 2013 means that the **NHS in England is estimated to be spending £1.5 billion less across four major disease categories** illustrated in the chart opposite, as a consequence of having 340,000 fewer admissions.

1 This estimate refers to the avoided NHS spending (2013 compared to 1985 smoking prevalence rates) associated with the 434,000 smoking-related admissions from four major disease categories (which represent 95% of all smoking related admissions) that have been avoided due to lower smoking prevalence rates in England.

2 Due to an absence of the necessary data, these estimates were not able to incorporate the additional primary and secondary care costs associated with smoking (e.g. GP visits, diabetes treatment) which are likely to considerably add to estimates of the costs of smoking to NHS England presented here.

Reduction in smoking-related admissions (aged 35+) and the associated cost savings (2013 prices), by major illness type

Sources: Cebr analysis, NHS England expenditure, Health & Social Care Information Centre
Appendix: Methodology
Methodology

To estimate NHS cost savings due to the lower smoking prevalence rate (in 2013 compared with 1985) leading to fewer admissions (aged 35+), the following steps were carried out:

1. We estimated per-admission NHS costs for different types of diseases. This was based on numbers of admissions, by disease (from the European Hospital Morbidity Database); along with NHS England Primary Care Trusts’ total 2013 expenditure on each disease.

2. We then applied information on the total numbers of admissions attributable to smoking, sourced from the Statistics on Smoking 2015 bulletin from the Health & Social Care Information Centre (HSCIC). This enabled us to estimate NHS England’s current expenditure on smoking-related admissions.

3. We estimated the potential English smoking population in 2013, in the scenario where prevalence rates had not declined from their 1985 levels. The 2013 prevalence rate was used as a comparison year in order to be consistent with 2013 NHS expenditure data on smoking-related admissions.

4. Assuming that smoking-related admissions are proportional to the number of smokers, we then estimate how many admissions would have occurred in 2013, based on this ‘counterfactual’ smoking population. These smoking-related admissions were then combined with per-admission expenditures by NHS England, calculated in the Step 2. We calculate smoking-related admissions costs based on 2013 prevalence rates, as well as the costs implied by admissions consistent with 1985-level prevalence rates.

5. This difference between them is defined as the cost saving to NHS England, from lower smoking prevalence rates observed in 2013, relative to the costs which could be expected with 1985 prevalence rates.
Contact

For enquiries on this research please contact:

Colm Sheehy, Managing Economist
+44 (0) 20 7324 2871, csheehy@cebr.com

Shruti Uppala, Economist
+44 (0) 20 7324 2873, suppala@cebr.com