December 2014

Cancer Research UK Briefing: The Impact of Tobacco Use on Health Inequalities

Smoking is a greater source of health inequality than social position, underlining that without reducing smoking prevalence in the most deprived groups (as well as reducing the number of smokers overall), policies designed to reduce health inequalities will have limited success[1].

Incidence of lung cancer, the second most common cancer in the UK, is strongly related to deprivation and there is a clear trend of increasing rates with increasing levels of deprivation in the UK[2]. Smoking accounts for 86% of lung cancer cases in the UK[3].

This briefing addresses health inequalities by age, sex, geography, ethnicity and socioeconomic deprivation; however we're also concerned by other factors which represent smoking related health inequalities. These include mental health[4,5], sexual orientation[6], level of education[7] and other substance abuse issues[8].

Key recommendations

Tackling health inequalities in the UK requires a comprehensive tobacco control strategy, based on an aspiration toward a tobacco-free UK, which should comprise of action to address tobacco marketing, the affordability of tobacco and the availability of tobacco; including tackling the illicit supply. To address the issue, we advocate the following policies:

- Introducing an annual tobacco tax escalator on cigarettes of 5% above inflation and a tax escalator on hand rolling tobacco of 10% above inflation. A minimum consumption tax of tobacco should also be introduced.
- Ensuring that the specific tax component on manufactured tobacco is set at the maximum allowed within the European Union, currently 76.5%[9].
- Continued investment in local authorities' tobacco control programmes, to enable a long-term commitment to proving 'gold standard' NHS Stop Smoking Services. This should be funded in-part through a levy on tobacco companies.
- Increased funding for HM Revenue & Customs, Border Force and Trading Standards in particular, to continue to drive down the supply of illicit tobacco, and to enable the UK to meet the requirement of the *Illicit Trade Protocol*[10], which should be ratified without delay.
- Introduce a register of tobacco retailers, to inform what impact the availability of tobacco and of tobacco retailers, has on the associated inequalities in an area

Background

Tobacco use is the UK's single greatest cause of preventable illness and avoidable death, with 100,000 people dying each year from smoking-related diseases, including cancer[11]. It is estimated that smoking causes nearly a fifth of all cancer cases in the UK, and more than a quarter of all cancer deaths[12,13].

Tobacco control must be a central part of any strategy that aims to tackle the inequalities in health outcomes. As a Department of Health report states, "...premature death is the most extreme form of social exclusion"[14]. Inequalities in health outcomes between the most affluent and the most disadvantaged members of society are longstanding, deep-seated and have proven difficult to change; tobacco is the leading risk factor in terms of the causes of health inequalities[15].

A study looking at smoking and socioeconomic status in England concluded, "Smoking and disadvantage may increasingly coexist"[16]. In this respect, it's vital that the inequalities that exist are recognised with the goal of achieving equity in outcomes, acknowledging that an approach in which resources are distributed evenly could in fact result in less being achieved overall.

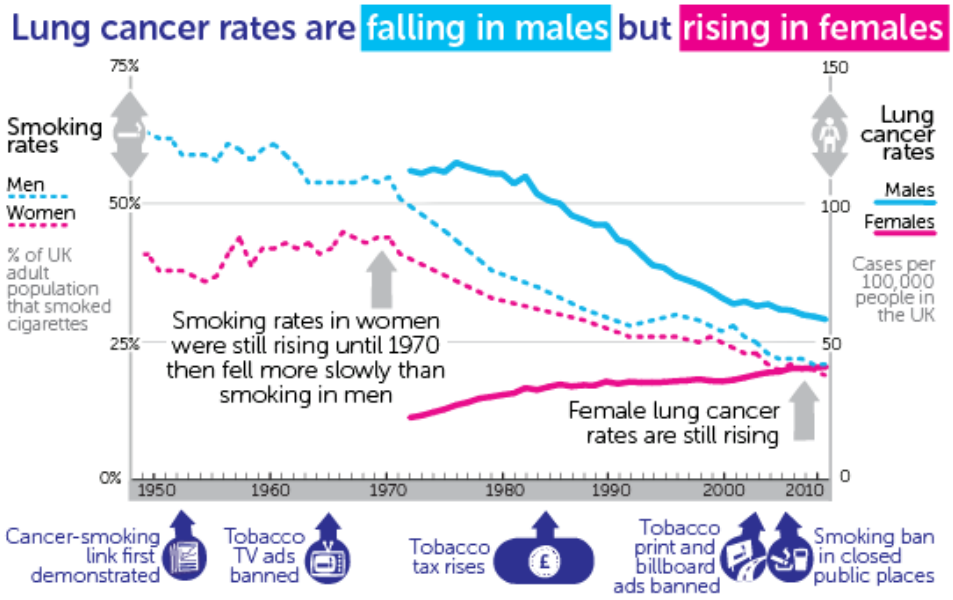
Tobacco use and lung cancer incidence in men and women

In 1948, 82% of men and 41% of women in Great Britain smoked, but the difference in smoking rates between genders has shrunk considerably, as population-wide smoking prevalence has also steadily declined over the decades[17,18,19]. However smoking rates are still significantly higher in men than women, with 21% of men (aged 18+) and 16% of women smoking cigarettes in 2013[20].

Trends in lung cancer incidence reflect past smoking prevalence; smoking rates peaked later in females so where lung cancer rates in males are now falling, rates are continuing to rise in females although, overall, the disease is

still more common in men. In 1975, the male to female ratio for lung cancer cases was around 38:10, but has fallen sharply since then to around 12:10, in 2011[21]. Lung cancer incidence rates in women increased by 73% between 1975-1977 and 2009-2011, while male incidence rates fell by 47% during the same period[22].

Fig 1(below): the association between historic smoking patterns and lung cancer rates in the UK



Variation in smoking rates across the UK

In 2013, less than one in five UK adults (18.7%) smoked cigarettes. This equates to an estimated 9.4 million UK adult cigarette smokers. Cigarette smoking varies markedly across the four nations of the UK, being higher in Scotland (compared with England and Northern Ireland) and Wales (compared with England).[23] Glasgow remains as a striking example of regional inequality, where a boy in the deprived Calton area of the city had a life expectancy of 54, compared with a boy from the Lenzie area (just 12km away) who could expect to live to live to 82[24]. While reasons are not entirely understood, numerous studies note both the significantly higher smoking rates and rates of 'heavy smoking' in Glasgow as a major contributory factor to the poor health outcomes in the area[25,26].

Data from the Office of National Statistics (ONS) shows that in 2013, there was marked regional variation in the average weekly household expenditure on cigarettes. Households in the South West of England spent £2.40 while those in Northern Ireland spent £6.60[27].

Variation in smoking rates amongst ethnic minorities

There is deviation in smoking prevalence amongst different minority ethnic groups in the UK, and further between men and women within them[28,29]. Guidance by the National Institute for Health and Care Excellence (NICE) states that reducing tobacco consumption amongst minority groups would reduce health inequalities more than any other measure[30]. Cessation services do appear to be making some inroads: between 2001/2 and 2010/11, the number of people from ethnic minorities using NHS Stop Smoking Services in England increased from 4% to 7% of all visits[31].

Variation in smoking rates by socioeconomic status

Smoking prevalence among adults in Great Britain who are unemployed is 39% compared with 21% among adults who are in employment. This variation is most striking in the 25-34 year old age range, where smoking prevalence is 54% in unemployed people, compared with 25% in those in employment[32]. Among those in employment, type of occupation is also a key factor in determining smoking prevalence. In 2012, only 14% of adults employed in 'Managerial & Professional' roles smoked - compared with 33% in 'Routine & Manual' roles[33]. In England in 2012, smoking rates varied from 33% of men and 26% of women in the most deprived quintile of the population, compared to 14% and 10% respectively in the least deprived quintile[34].

An analysis by the National Cancer Intelligence Network undertaken with Cancer Research UK demonstrated that economic inequality is linked to around 15,000 extra cases of cancer and around 19,000 extra cancer deaths every year in England[35]. Over half of those deaths, 11,000 each year were linked to lung cancer. 86% of lung cancer cases in the UK are attributable to smoking[36]. Lung cancer risk is more dependent on smoking duration (i.e. the number of years) than amount smoked (number of cigarettes smoked each day)[37,38,39]. Smokers who quit - even well into middle age - avoid most of their subsequent risk of lung cancer. Quitting before middle age avoids more than 90% of the risk attributable to smoking[40].

The intergenerational cycle of tobacco use

Smoking remains one of the few modifiable risk factors in pregnancy. In 2012/13 around 13% of mothers in England were smoking at delivery[41]. Babies from deprived backgrounds are more likely to be born to mothers who smoke, and to have much greater exposure to second-hand smoke in childhood[42]. The Marmot Review, a strategic review of health inequalities in England, reported that, "Socially graded inequalities are present prenatally and increase through early childhood. Maternal Health, including...tobacco use during pregnancy, has significant influence on foetal and early brain development"[43].

Breaking the intergenerational cycle of tobacco use is vital to tackling smoking-related inequalities. Children with three or more smokers in their household are two-and-a-half times more likely to smoke themselves, compared with children from non-smoking households[44]. If both their parents smoke, children may be three times more likely to smoke themselves[45]. Since exposure to family smoking is more common in relatively socioeconomically disadvantaged households, this effect is likely to compound the association between smoking and disadvantage[46].

A report from the British Medical Association noted that parental smoking perpetuates and exacerbates child poverty[47], by taking up a substantial proportion of disposable income and replacing expenditure on basic necessities such as food and clothing[48].

Tobacco industry pricing strategies and inequalities

Raising tobacco taxes is one of the most effective ways of reducing tobacco consumption, something the tobacco industry itself admits[49]. There is strong evidence that increase in the price of tobacco products have a pro-equity effect on smoking behaviour in adults[50]. A similar observation has been made in regard to interventions to create positive equity impact among young people[51].

Research suggests that increasing the unit price of tobacco may have the potential to reduce smoking related health inequalities[52]. However tobacco industry pricing strategies undermine such policies. By choosing to absorb tax increases so that the cost of a pack on the shelf does not change (a practice known as 'undershifting') tobacco companies are adversely affecting the impact price can have on motivating smokers to quit.

In recent years 'Ultra Low Price' (ULP) cigarette brands have proliferated in the UK market[53]. Examining the real price of individual ULP brands shows that some have fallen by as much as 5%[54] giving smokers access to cheaper tobacco. Research shows that between 2006 and 2009 the ULP market doubled[55]. There has been an increase in the sales volumes of economy brand cigarettes and the use of hand rolling tobacco which is undermining efforts to reduce smoking rates[56].

There is evidence that the tobacco industry, as well as their influence on price, is also attempting to shift the argument about tobacco related health inequalities away from their product, "…tobacco companies are appropriating the language of social determinants to divert responsibility for smoking inequalities onto the state". The study noted that by placing emphasis on other factors of deprivation, "Tobacco manufacturers are seeking to create a false dichotomy between the goals of reducing inequalities in individual smoking behaviours and reducing social inequality"[57].

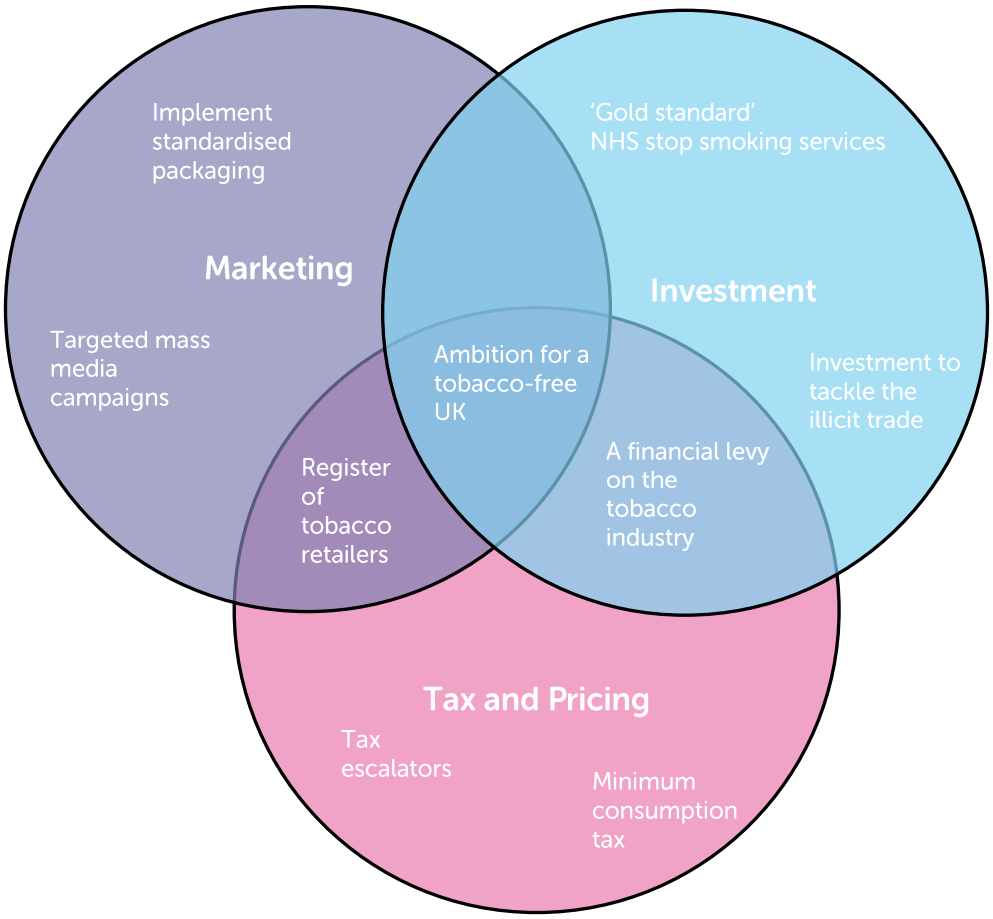
A comprehensive range of policies to tackle smoking related health inequalities

Smoking is a greater source of health inequality than social position, underlining that without reducing inequality in smoking rates (as well as reducing the number of smokers overall), policies designed to reduce health inequalities may meet limited success[58]. Policies should be designed to address targeted socioeconomic groups; simply reducing smoking rates evenly across the population will not impact upon existing inequalities[59].

A quit smoking attempt with NHS Stop Smoking Services is more than three times likelier to be successful than attempting to stop unassisted[60]. Local and unitary authorities who took responsibility for commissioning of public health services in April 2013 must ensure that there is a commitment to continued long term investment in 'gold standard' NHS Stop Smoking Services. Around half of NHS Stop Smoking Services users in England in 2010/11 were in receipt of free prescriptions (an indicator of relative disadvantage)[61]. Research shows that NHS smoking cessation services in England have made some - albeit limited - progress in reducing health inequalities[62].

Tobacco control strategies which also incorporate targeted mass media campaigns have been shown to be more effective in increasing smoking cessation[63] particularly among relatively deprived socioeconomic groups[64]. Research suggests that mass media campaigns which focus on the negative effects of smoking may have a greater impact[65].

Fig 2 (below): a comprehensive range of tobacco control policies is required to tackle the associated inequality



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