

Key points:

- there are strong and persistent associations between socioeconomic disadvantage, smoking prevalence and rates of tobacco-attributable disease
- disadvantaged areas have the highest rates of smoking and lowest quit rates
- smoking has a greater effect on mortality than social class - non-smokers from poorer backgrounds live longer than smokers from well-off backgrounds
- smoking decreases income available to low income families and incurs a range of other personal and societal economic costs
- supporting people to quit is a cost-effective intervention, cessation services in Scotland can be effective in helping disadvantaged smokers to quit
- tobacco control interventions are vital in any strategy to reduce inequality.

Introduction

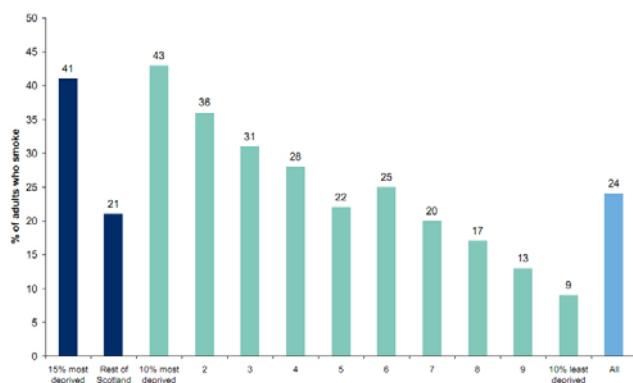
The relationship between tobacco and health inequality is well-established and consistent. This briefing paper discusses patterns of smoking and deprivation in Scotland, the resulting health outcomes, and effective interventions to reduce the health and wellbeing gap between the most well-off and least well-off in society.

Smoking prevalence

Tobacco use in Scotland - as is the case with most other developed nations in the latter stages of the tobacco epidemic - is strongly patterned by deprivation. Data on smoking prevalence in Scotland is obtained from the annual Scottish Household Survey, the most recent year's data on smoking prevalence by deprivation category is presented in the graph below.

Percentage of survey participants who smoke by Scottish Index of Multiple Deprivation¹

2009 data, Adults (base: 12,498)



Source: Graph reproduced from the 2009 Annual report of the Scottish Household Survey². Crown copyright © 2010.

While adult (16+) smoking prevalence amongst the least deprived tenth of the population is 9%, well below the national average of 24%, the prevalence amongst the most deprived tenth of the population is 43%, far above the average. In the most

disadvantaged communities in Scotland, smoking prevalence rates are more similar to those seen nationally in the 1970s than they are to the rest of Scotland as it is presently.

Health consequences

Because many of the diseases smoking causes occur several decades after initiation of tobacco use, there is a time-lag between the smoking prevalence of a population, and the rates of smoking-attributable disease. In the UK in 1961 there was no difference in lung cancer mortality between social classes. But by the 1980s a man in an unskilled manual occupation was more than four times as likely to die of lung cancer as a professional and twice as likely to die from coronary heart disease³.

In Scotland, smoking-attributable deaths account for around a quarter of all deaths⁴. However, amongst the most well-off it drops to around 15% of deaths, whilst for the least well-off it rises to 32%⁵. Amongst the 35 - 69 age group an average of 22 years of life are lost per death from smoking⁶.

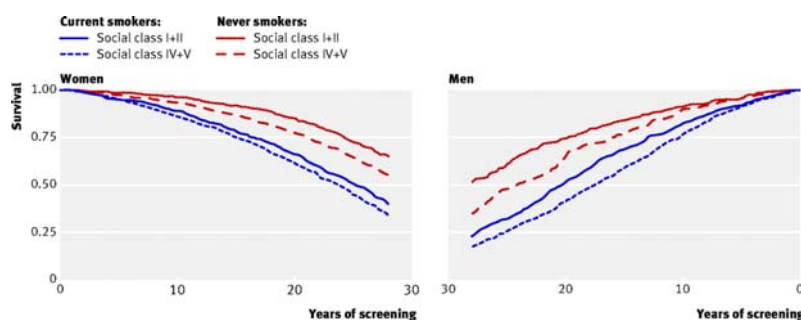
Routine health service statistics for Scotland's big three killers, heart disease, cancer and strokes (all of which smoking significantly raises the risk of) demonstrate a strong patterning by deprivation.

- the standardised mortality rates for coronary heart disease in those under 65 is 4.5 times higher in the most disadvantaged 10% of the population compared to the most advantaged 10%⁷ - time trends show that mortality rates among all population groups have dropped over the last ten years, but the mortality difference between most and least deprived groups persists
- there is a strong positive relationship between deprivation and mortality rates for stroke: in under 65s the standardised mortality ratio is nearly 4 times higher for the most deprived 10% compared to the least deprived 10%⁸
- looking at all cancers combined, the most deprived areas in Scotland have incidence rates nearly 31% higher than the least deprived rates and mortality rates 68% higher - for cancers associated with smoking (such as cancers of the lung, trachea, and larynx) there is a very strong correlation with deprivation⁹

The strong association between smoking, socioeconomic deprivation and poor health outcomes has raised questions as to what precise contribution smoking makes in comparison to other lifestyle factors. A recently published large prospective cohort study¹⁰ of 15,000 people over nearly 30 years in Paisley and Renfrewshire goes some way towards answering this question using Scottish data.

The key findings from the study are shown in the graph, below.

Age adjusted survival curves for men and women in the highest and lowest social classes



Source: Graph reproduced from Gruer et al. *BMJ* 2009; 338:b480.

The data from the study shows the survival of never smokers in the lowest social classes was better than survival of smokers in the highest social classes (of the same sex). Being a smoker also negated the survival advantage women normally have when compared to men. From this study, smoking appears to be a greater source of health inequality than social position.

This type of finding, along with other studies¹¹ led Professor Sir Michael Marmot, in his recent independent review of evidence to effectively reduce health inequalities in England to conclude that '*[t]obacco control is central to any strategy to tackle health inequalities as smoking accounts for approximately half the difference in life expectancy between the lowest and highest income groups.*'¹²

The economic cost of tobacco use

Tobacco use incurs a variety of economic costs, both to the individual and to society at large that can serve to increase inequality. A person who smokes 20 cigarettes per day at an average price of £6.29 per pack will spend nearly £2,300 a year on tobacco. As well as the overt cost of smoking there are also hidden costs such as increased insurance premiums and more rapid loss of value in vehicles where smoking occurs.

According to national surveys of household expenditure, poorer income households spend a greater proportion of their total household income on tobacco. In 2008, the poorest 10% of households spent £3.40 on average per week on tobacco products. While the best-off 10% of households spent slightly more (£3.70) per week, this equates to a much lesser proportion of average weekly total household expenditure (around 0.4% for the richest compared to 2.1% of the poorest).

Smoking also incurs a range of costs to society, including direct healthcare costs, productivity losses, and excess fire damage and cleaning costs. In Scotland this has been conservatively estimated to amount to nearly £1.1 billion¹³.

Quitting

Most smokers say they would like to give up smoking altogether (63%¹⁴). Smokers in disadvantaged areas perceive a lack of support to help them to stop smoking and rates of stopping smoking are three times lower among the least well-off in society, compared with the wealthiest¹⁵. Children from less advantaged social backgrounds may be more likely to start smoking than children from more affluent backgrounds but the difference is not great. However, by their 30s, half of the more affluent young people have stopped smoking whilst three quarters of those in the lowest income group carry on¹⁶.

Why are low-income smokers in Scotland more likely to smoke and less likely to quit? The results of research studies and community-based projects suggest a number of factors, including poverty and coping with living in a disadvantaged environment; unemployment; a pro-smoking culture reinforced by use of cigarettes to foster social participation and belonging; limited experience of environments which encourage cessation; and limited experience of cessation¹⁷. Research also suggests that factors which reinforce smoking as a social norm (including more advertising and promotion outlets) make it harder for people to quit¹⁸.

Analysis of data from NHS smoking cessation services in Scotland shows that they are effective in assisting smokers from poorer areas to quit¹⁹. Although the individual quit rate for smokers from poorer areas tends to be lower than that of more well-off smokers, services are targeting their efforts so more smokers from disadvantaged areas are seen, resulting in more total quits.

Reducing health inequality through tobacco control

As smoking causes a significant health and economic burden on the communities in Scotland least able to afford it, tobacco control is integral to any strategy that aims to reduce inequality, acknowledged both in Professor Sir Michael Marmot's review of Health Inequalities in England, and the *Equally Well* report of the Scottish Government's Ministerial Task Force on Health Inequalities²⁰.

A range of evidence-based measures exist to help reduce smoking's significant contribution to inequalities. Many of these are contained within the World Health Organisation's Framework Convention on Tobacco Control²¹, to which the UK is a signatory. ASH Scotland has recently reviewed the research base, and, in consultation with a range of stakeholders, produced a series of recommendations for a new Scottish tobacco control strategy²². Recommendations central to reducing the health inequality that results from tobacco use include:

- targets relating to smoking prevalence and deprivation should be set (previous targets on smoking and deprivation were superseded by general adult smoking prevalence targets and not reported against; however, a new smoking cessation target for 2011/12 with an inequalities component has just been set²³)
- the importance of tackling inequalities in a comprehensive and joined-up manner that ensures all health and social policies consider the impact of tobacco
- illicit tobacco, though in general decline in the UK²⁴ as a result of improved protection and controls, remains an issue, particularly in disadvantaged areas - Scottish targets to reduce illicit tobacco are needed, as part of a fully-resourced multi-agency Scottish strategy to tackle illicit tobacco
- to ensure progress towards national targets is delivered on locally, through local authority delivery plans and Single Outcome Agreements
- the need to further invest in and develop smoking cessation services to ensure they are accessible for smokers from less advantaged areas
- the need to examine and act upon the continually growing evidence base on tobacco control, including on new and innovative approaches (such as incentive schemes for smoking cessation²⁵, or interventions to reduce second-hand smoke exposure in the home²⁶).

With the severe burden of disease, disability and premature death caused both by active smoking and by exposure to tobacco smoke²⁷ and the economic costs of tobacco use to individuals²⁸ and society¹³, reducing tobacco use must be a key consideration in work to reduce health inequalities.

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