

The Scottish Smoking Cessation Service: an assessment of its success at targeting different groups of smokers and helping them to quit in 2007: Summary Paper

Introduction

Recognising the major impact that smoking has on health, the UK has set up NHS smoking cessation services. These freely available services are unique to the UK and deliver evidence-based support to any smokers who wish to quit, as well as targeting and supporting key groups of smokers. Research on English data has shown the services vastly improve the likelihood of a successful quit attempt (Lancaster *et al*, 2000).

Scotland has a history of higher smoking rates and larger and more extreme deprivation than England (ONS, 2008; Hanlon *et al*, 2005). Consequently smoking cessation has the potential to make an even more significant contribution to improving health and reducing health inequalities in Scotland. To date, limited research has been carried out on the information collected as part of the national monitoring of cessation services in Scotland. This study is the first national level assessment of cessation reach and success in the groups that the service is most keen to target. Information for 2007 has been brought together from the Scottish National Smoking Cessation Database and from the separate local systems in Greater Glasgow & Clyde and Tayside NHS Boards.

Overview

In 2007 there were around 39,000 client quit attempts made in Scotland using NHS cessation services, as recorded on national or local data collection systems (n=38,991). Based on estimates of smoking prevalence in Scotland this means that approximately 3.5% of all smokers in Scotland attempted to quit in 2007 using these services (also known as the 'reach' of the service).

After one month 37.5% of cessation service clients (n=14,784) self-reported that they were still not smoking (also known as the self-reported 'cessation rate'), whilst 28% of clients were lost to follow-up.

Just under half (46%) of all clients who self-reported quitting at one month also reported that they were not smoking three months after quitting. In total 6,885 clients quit for at least three months – that is 18% of all those attempting to quit in 2007.

Based on quits made in the first quarter of 2007, 1 in 10 people who attempted to quit smoking using cessation services self-reported they were not smoking twelve months later (n=733). Assuming all those lost to follow-up by the service at twelve months were smoking again, the relapse rate between one and twelve months was 76%.

Age

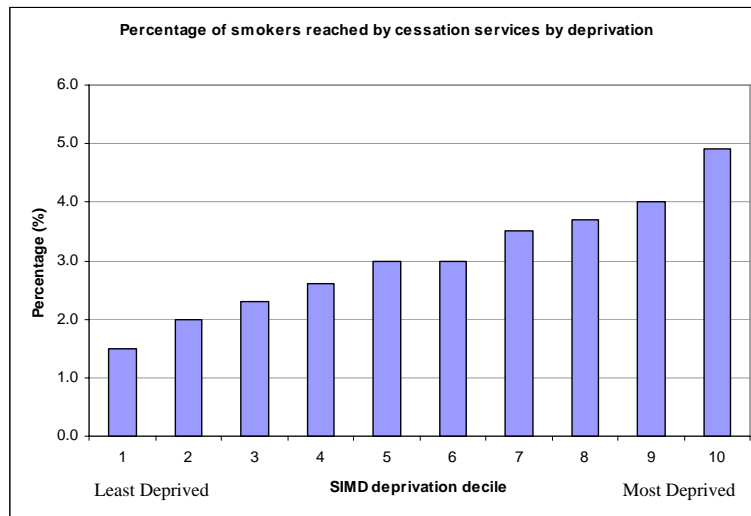
Almost half of all quit attempts were made by those aged over 45, with those aged under 25 accounting for less than 8% of quit attempts. In each age group more women than men attempted to quit.

One month self-reported cessation success increased with age from 16% in those aged under 16 to almost half (48%) of those aged 60 or over. In younger age groups women were marginally more successful than men at quitting for at least one month, whereas in older age groups men tended to have slightly higher one month cessation success rates.

Loss to follow-up at one month decreased with increasing age, from around half of those aged under 16 (51%) to 22% in those aged 60 or older.

Deprivation

Smoking prevalence increases with increasing deprivation (SG, 2008) however, a similar increase was observed in quit attempts resulting in an increasing trend in service reach by deprivation (as shown below).



Self-reported cessation success at one month decreased with increasing deprivation from 46% in the least deprived areas (decile 1) to 31% in the most deprived (decile 10). However, due to larger numbers of quit attempts being made in more deprived areas, these also accounted for much larger numbers of successful quits (516 people living in the least deprived areas of Scotland (decile 1) had successfully quit for one month compared to 2414 cessation clients living in the most deprived areas (decile 10)).

The percentage of all smokers in Scotland who were successful at quitting smoking for at least one month using cessation services increased with increasing deprivation from 0.7% of all least deprived smokers (decile 1) quitting at one month to 1.5% of the most deprived smokers (deciles 8, 9 and 10).

Pregnancy

In 2007 1307 pregnant women attempted to quit with NHS cessation services – approximately 11% of all pregnant smokers. This was higher than the reach in women smokers generally (4%) and showed little difference across deprivation groups. 32% of pregnant women self-reported cessation success at one month, 13% at three months. Loss to follow-up at one month was higher than in women who were not pregnant (41% compared to 32%).

Pharmacotherapy & Intervention type

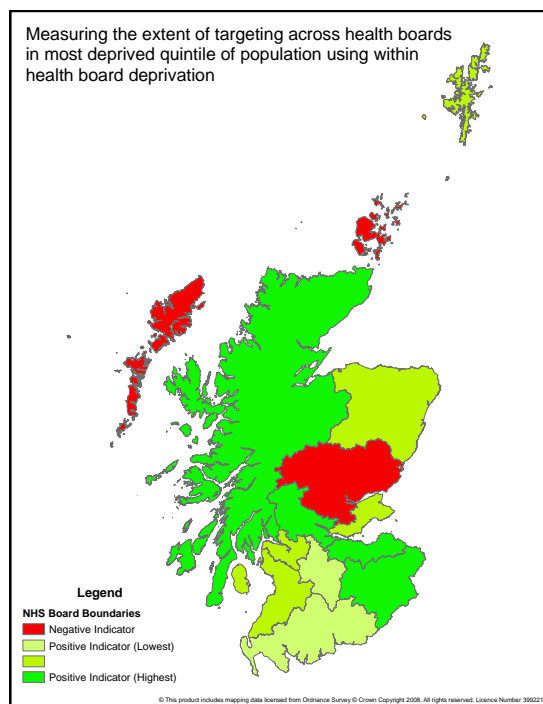
Although there was insufficient information to ascertain whether pharmacotherapy was used in 18% of quits, the most commonly prescribed pharmacotherapy was nicotine replacement therapy (NRT) with around 70% of all cessation clients recorded as using this cessation aid. Just under 2800 people (7%) were prescribed Varenicline. Excluding 'unknown' pharmacotherapy the cessation rates at one month varied from 41% using NRT to 61% using Varenicline. At three months the cessation rate for NRT was 20% and for Varenicline was 34%.

At the Scotland level the estimated reach of non-pharmacy primary care based specialist cessation services was higher than pharmacy services (1.8% compared to 1.5%) although in NHS boards with established pharmacy services these services reached a higher percentage of smokers (e.g. Greater Glasgow & Clyde: 3.8% compared to 0.7% in non-pharmacy primary care services). However, one month cessation rates were highest in non-pharmacy primary and secondary care services (47% and 45%) and lowest in pharmacy services (27%).

The extent of NHS Board targeting

An indicator of NHS Board targeting originally used by Chesterman et al (2005), which compares the percentage of all cessation clients living in each deprivation decile to the percentage of all smokers living in each deprivation decile, was used. This indicator suggests that, at the Scotland level, there was greater targeting of cessation services to deprived areas.

Calculating a similar indicator for each NHS board based on the 15% most deprived areas in Scotland, showed that in 2007 all NHS Boards which contain Scotland's most deprived communities appeared to be successfully targeting those people. This appeared strongest in Glasgow where around half of all quit attempts were from these deprived areas and this was also high in Ayrshire & Arran. The proportion of cessation services being used by deprived smokers outweighed the proportion of all smokers in these areas.



When considering the most deprived communities *within* each NHS Board the indicator varied from being negative in Tayside, Orkney and Western Isles to the most positive suggestion of targeting in Forth Valley, Borders, Highland and Lothian (i.e. the proportion of the cessation service going to local areas of deprivation in these Boards was larger than the proportion of smokers in the board living in these areas). However, it should be noted that the targeting indicator suggested Tayside NHS Board was successfully targeting *national* areas of deprivation and caution should be exerted when discussing island Board information due to the small numbers involved.

Factors associated with cessation success

All the above analyses show the relationship between single factors and cessation success. However, success at quitting smoking is known to be related to a more complex mix of factors. Consequently logistic regression was used to investigate the combined relationship of NHS Board, sex, age group, deprivation, urban-rural index, employment status, ethnic group, service type, intervention, pharmacotherapy, whether receiving free prescriptions and nicotine dependence on one month cessation success.

Living in deprived areas, urban areas and having higher dependence on nicotine reduced the odds of success at quitting, whereas being employed or older increased the chances. In particular, group based interventions, primary care (non-pharmacy)/secondary care cessation services and Varenicline pharmacotherapy were most successful at one month.

The number of previous quit attempts made, sex and ethnicity had very little impact on cessation success whereas service type, intervention type, NHS Board and pharmacotherapy type had large influence.

Health Boards associated with cessation success

In order to evaluate cessation success across health boards a similar logistic model was run with each Board compared against Scotland as a whole. This model was adjusted for the type of people entering the service using personal characteristics, smoking history and geographic variables. Service related factors decided within Boards were not adjusted for (service type, intervention and pharmacotherapy). Cessation successes significantly lower than average were observed in seven NHS boards (Borders, Fife, Greater Glasgow & Clyde, Grampian, Lothian, Tayside, Dumfries & Galloway). Four boards were observed as having significantly higher odds of success than the average (Ayrshire & Arran, Highland, Lanarkshire, Forth Valley). However, there may be factors which are not adjusted for which may be important in explaining these results (e.g. socio-economic status of cessation clients).

Summary

Scottish cessation services in 2007 appeared to be successfully targeting key groups of smokers and large numbers of these smokers successfully quit. However, generally speaking, both reach and cessation rates were lower than English estimates. Reach in Scotland was 3.5% compared to 13-17% in England (Bauld *et al*, 2007). One month cessation rates in Scotland were 37.5% compared to 50% in England (IC, 2007).

The choices that health boards make about the types of cessation services offered and the associated pharmacotherapies provided are vital to the success of the services. However, this analysis shows that maximising reach and maximising cessation success require two very different approaches and are best targeted in different ways. Although at a national level pharmacy services do not appear to have higher reach than other primary care services, at the local level, in areas with established pharmacy services, they do. However, for cessation success, specialist primary care group-based services appear more successful. The balance between these approaches needs to be considered

Note: There are slight differences to the numbers and percentages reported in the 2007 NHS Smoking Cessation Service Statistics ScotPHO report

(http://www.scotpho.org.uk/home/Publications/scotphoreports/pub_smokingcessationstats2007.asp).

This is due to the timing of data extracts used and slight methodological differences.

Note: Local knowledge will assist in the interpretation of these results.

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