Evaluation of quit4u
Summary report

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Contents

Acknowledgements .............................................................................................................. 1
Abbreviations and glossary ............................................................................................... 2
Main findings ....................................................................................................................... 3
Background ........................................................................................................................ 3
Aims and objectives .......................................................................................................... 3
Method .................................................................................................................................. 3
Summary of main results .................................................................................................... 3
Effectiveness in encouraging take-up of cessation services ............................................. 3
Effectiveness in increasing quit rates ................................................................................ 4
‘Mechanisms of change’ – key factors impacting on quit success or relapse ............... 5
Conclusions and recommendations ................................................................................... 6
References ........................................................................................................................... 7
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Abbreviations and glossary

DEPCAT – DEPCAT is used as an area-based measure of deprivation and is based on Carstairs scores derived from Census data. They are a composite measure of four variables: overcrowding, male unemployment, low social class and having no car. The Carstairs scores are used to define seven DEPCAT groups, from 1 (the most affluent) to 7 (the most deprived). (Definition taken from Mallam et al, 2004).

ISD – Information Services Division of NHS National Services Scotland.

Relapse – in the context of smoking cessation, relapse indicates that someone has started smoking again.

Varenicline/Champix – Varenicline (brand name ‘Champix’) is a pharmacotherapy which alleviates symptoms of craving and withdrawal and also acts on the brain’s dopamine receptors to reduce the pleasurable effects of smoking.
Main findings

Background
The evaluation of quit4u report presents the key findings from a three year independent evaluation of a smoking cessation scheme developed and led by NHS Tayside. Quit4u combines structured behavioural support and pharmacotherapy with financial incentives for each week (up to a maximum of 12 weeks) that participants remain quit, as verified by a carbon monoxide (CO) breath test. It was offered to all those living in deprived areas (DEPCATs 5, 6 or 7) of Dundee and aimed specifically to increase take-up of cessation support and quit rates among smokers in deprived areas.

Aims and objectives
The evaluation of quit4u had three key aims:

1. To assess the effectiveness, including the cost effectiveness of combining standard pharmacotherapy interventions with financial incentives and behavioural support in encouraging take-up and successful quit attempts among people in areas of deprivation.
2. To identify the ‘mechanism(s) of change’ – the key individual, social and contextual, service design and delivery or other factors contributing to take-up and quit rates (or drop out) at one-month post-quit date, three-months post-quit date and 12-months post-quit date.
3. To draw generalisable conclusions to inform the design and development of smoking cessation services.

Method
The evaluation design combined qualitative and quantitative methods and collected data from a range of stakeholders to explore the ways in which quit4u influenced smoking-related behaviour change and quit rates. Key elements included:

- secondary analysis of smoking cessation data to assess the effectiveness and cost effectiveness of quit4u in comparison with other NHS smoking cessation services
- primary research with participants, including small scale surveys, repeat one-to-one in-depth interviews, and focus groups to explore their views and experiences of attempting to quit with quit4u
- primary research with professionals involved in planning or delivering quit4u, to explore their perceptions of the programme and of the barriers and facilitators to achieving its objectives.

Summary of main results
Effectiveness in encouraging take-up of cessation services
Quit4u met and exceeded its target for recruitment, signing-up 2,042 smokers between its launch in March 2009 and the end of March 2011. Take-up of smoking cessation services in deprived areas of Tayside also increased
following the introduction of quit4u. However, other Health Board areas achieved similar increases in take-up among smokers in deprived areas with their own smoking cessation services over the same period. Thus while quit4u appears to have been effective in attracting smokers from deprived areas to sign up for smoking cessation support, it is not possible based on the available data to say whether or not it has been more successful in this respect than other approaches in other Health Board areas.

All the elements of quit4u appear to have played a role in attracting different participants to join the scheme. The small-scale survey of participants suggests that the financial incentives provided an additional motivation to sign up for a substantial minority of participants. For these participants, incentives may provide a trigger or ‘tipping point’ to (a) give up and (b) give up with support.

Finally, the evaluation provides some evidence to suggest that quit4u’s geographical focus was successful in encouraging people to join at the same time as their family, friends or neighbours. Given the importance of peer influences on people’s quit attempts, this may have been a contributing factor in participants’ quit success.

Effectiveness in increasing quit rates
Quit4u was associated with higher quit rates at one, three and 12 months compared with the average quit rates of other NHS cessation services in the rest of Scotland after adjusting for baseline differences in the characteristics of participants, such as deprivation and smoking intensity. It also represents a highly cost-effective use of NHS resources. However, the much higher levels of loss to follow-up in other smoking cessation services make the exact size of the difference in quit rates between quit4u and other NHS smoking cessation services difficult to quantify.

Quit4u appears to have had a particularly large impact on the effectiveness of pharmacy-based services compared to non-pharmacy-based services (mainly groups in the case of quit4u), particularly at one and three months. Participants’ accounts of the support received from pharmacies suggest that the CO tests may have helped to provide an additional focus for providing encouragement and support which may, in turn, have improved the intensity and nature of engagement between pharmacy staff and clients.

Given that previous research has indicated that group interventions are more effective in supporting people to quit smoking than one-to-one support (NHS Health Scotland and ASH Scotland (2010)), it is also important to note that quit4u makes relatively greater use of smoking cessation groups when compared with other NHS cessation services. Within quit4u, while one month quit rates were in fact slightly higher for those who participated through a pharmacy, quit rates at three and twelve months were higher for those who took part through a group. Quit4u’s higher use of groups is therefore also likely to have contributed to its higher three and 12 month quit rates. However, the difference in average quit rates between quit4u and other cessation services is mainly driven by the higher quit rates achieved by
pharmacies within quit4u. Similarly, those quitting with quit4u were relatively more likely to use varenicline/Champix rather than other kinds of pharmacotherapy. As use of varenicline/Champix was associated with higher quit rates at one and three months, this may be another factor contributing to quit4u’s success.

Participants reported finding it easier to quit with quit4u in comparison with previous quit attempts. There was no consensus over which element of the programme had been most helpful in initiating or sustaining their quit attempt. Where participants felt the financial incentive had helped them maintain their quit attempt for longer, it was seen as providing a ‘bonus’ for quitting, ‘something to work towards’ and an encouragement to keep coming back for support. The perceived role of incentives in encouraging participants to ‘stick with’ support for longer was also highlighted by service providers.

The CO tests (provided they were viewed as accurate) gave participants an additional reason not to smoke which appeared to go beyond the desire to pass simply in order to claim the financial incentive. The tests were viewed as demonstrating the immediate health benefits of quitting or cutting down, providing an element of competition or reward, and creating an additional motivation around not wanting to fail a test.

Comments from both participants and professionals about the role of groups in supporting participants’ quit attempts highlight the advantages of rolling groups (where new people join at different points) over ‘closed’ group-based courses (where everyone starts their quit attempt together). In particular, being able to share the experiences, successes and tips of participants at different stages of their ‘quit journeys’ was viewed as motivational.

‘Mechanisms of change’ – key factors impacting on quit success or relapse
Participants’ motivations to quit were varied and often multifaceted, encompassing motivations related to:

- health
- finance
- family and friends
- life stage
- cultural change
- the services offered by quit4u
- perceived ‘readiness’ to quit.

Discussion of reasons for relapsing mainly focused on individual and contextual factors (such as stress or the influence of family and friends), rather than elements of the support provided by quit4u. However, where quit4u was discussed, it was suggested that insufficient support, unsuitable or inflexible support, or problems with pharmacotherapy were factors associated with relapse for some participants.

The response of family and friends was viewed by participants as important in supporting their quit attempts. While attempting to quit generally appeared to
be perceived as positive rather than unusual participants nonetheless cited examples of unsupportive behaviour or mixed messages from friends and family who continued to smoke – for example, continuing to smoke in front of them, or continuing to offer participants cigarettes.

Analysis of qualitative interviews suggest that ‘quit journeys’ are not always linear. Participants who would be classed in smoking cessation statistics as ‘relapsed’ at one and or three months may, nonetheless, have gone on to quit (and sometimes to relapse and quit again) since. This complexity is not captured in national measures of quit rates, but understanding it may help to focus and improve service delivery.

Conclusions and recommendations
There are some important qualifications to the detailed findings discussed above – particularly around the percentage of quit attempts ‘lost to follow-up’, which complicates comparisons between quit4u and other smoking cessation services and introduces uncertainty around the difference in quit rates. However, the evaluation indicates that quit4u provides an effective and cost-effective model for engaging and supporting smokers in deprived areas to quit.

The comparatively lower level of loss to follow-up in quit4u suggests that a key reason for its higher quit rates is likely to be its greater success in maintaining contact between services and clients. Both the quantitative and qualitative data provide further lessons about the elements of quit4u which contribute to the effectiveness of the model in keeping clients engaged and supporting them to quit successfully. These include:

- the use of CO tests
- the use of (rolling) group support
- high quality pharmacy support (which may itself be enhanced by the structure of quit4u)
- greater use of varenicline/Champix
- the use of incentives.

In combination, these elements provide an effective model for engaging and supporting smokers in deprived areas to quit.
References
