

# Evidence into Practice

Supporting smokefree pregnancies  
through incentive schemes

*This report is endorsed by*



# Introduction

Incentives to support smokers to quit during pregnancy are both effective and cost effective. This briefing should support the commissioning of incentive schemes and give both commissioners and practitioners a set of 'lessons for practice' to consider before launching such schemes.

Smoking during pregnancy is a leading cause of poor birth outcomes, including stillbirth and neonatal death. Rates of smoking during pregnancy increase with indicators of disadvantage, and women in the lowest socioeconomic groups are more likely to be smokers when they become pregnant and are less likely to quit during their pregnancy or after childbirth. This is true even among women receiving evidence based support to quit and provides a rationale for going beyond NICE Guidance to offer further support to those who need additional help to stop smoking.

This briefing sets out:

- » Impacts of smoking in pregnancy,
- » NICE Guidance: supporting pregnant women to quit,
- » Evidence for smokefree pregnancy incentive schemes, and;
- » 'Lessons for Practice' based on examples of schemes that have been implemented.

## Impact of smoking in pregnancy

Smoking in pregnancy seriously harms the health of both mothers and babies. Nationally great progress has been made in reducing rates of smoking during pregnancy, but this progress has recently stalled and has not been shared equally across all groups.<sup>1</sup> There are big variations in rates by geography, socio-economic group and age.<sup>1</sup> While more needs to be done to implement evidence-based models of support there is a strong case for looking at innovative ways to speed up progress, particularly among disadvantaged women.

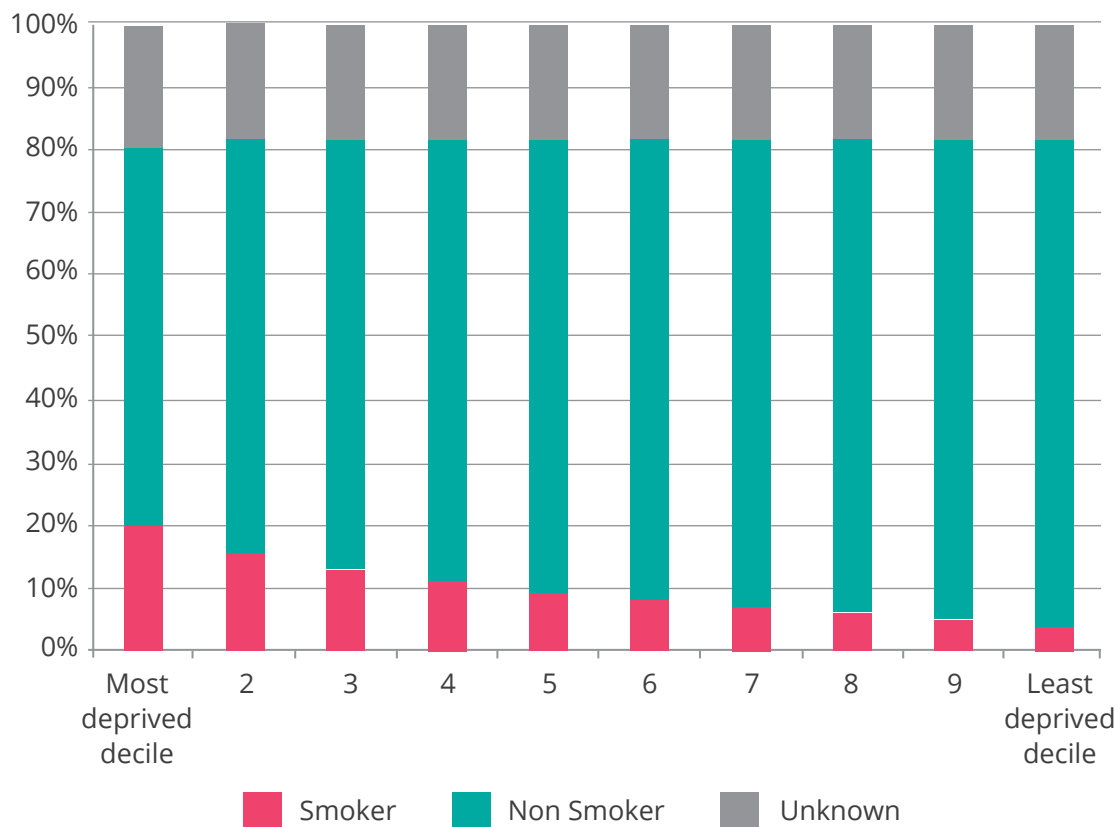
Smoking has serious implications for birth outcomes, and the Government's ambition to halve rates of stillbirths and neonatal deaths by 2025.<sup>2</sup>

	Maternal smoking	Secondhand smoke
Low birth weight	Average 250g lighter	Average 30-40g lighter
Stillbirth	Double the likelihood	Increased risk
Miscarriage	24%-32% more likely	Possible increase
Preterm birth	27% more likely	Increased risk
Heart defects	50% more likely	Increased risk
Sudden Infant Death	3 times more likely	45% more likely

**Table 1.** Smoking in Pregnancy Challenge Group. Review of the Challenge 2018. July 2018.<sup>3</sup>

These adverse outcomes mean it is essential to support women to quit during pregnancy, to increase their chances of remaining smokefree and reduce relapse to smoking after birth.

Smoking is the leading cause of the gap in life expectancy between socioeconomic groups in the UK, accounting for approximately half the difference in life expectancy between the richest and poorest. This is reflected in rates of women smoking during pregnancy with women from more deprived backgrounds more likely to smoke during, and throughout their pregnancy.



**Figure 1:** Smoking status at booking by decile of deprivation of mother's residence, maternity booking appointments January to June 2017 (smoking status by proportion of total in decile).<sup>4</sup>

Further, younger women are most likely to smoke throughout their pregnancy. In 2017/18, 31% of women aged under 20 were current smokers at their booking appointment compared to just 6% of women over the age of 40.<sup>5</sup> More work is needed to target support at these women who are likely to need more intensive support to help them quit.

## NICE Guidance: supporting pregnant women to quit

NICE guidance 'Smoking: Stopping in pregnancy and after childbirth'<sup>6</sup> and 'Smoking: Acute, maternity and mental health services'<sup>7</sup>, set out the support that should be given to all women who are smoking during pregnancy to quit.

In line with this guidance, all women should undertake a carbon monoxide (CO) test and be asked about their smoking status at their booking appointment. Women with a reading of 4ppm (parts per million) or above should be referred on an opt-out basis to specialist stop smoking support. Any woman who has recently quit or is undertaking a quit attempt should also be referred to receive support to remain smokefree.

The Babyclear Programme, a whole system approach to implementing NICE Guidance, evaluated in the North East, shows the positive impact that full implementation can have. 10,594 pregnant smokers received evidence-based interventions from trained midwives. Throughout the programme:<sup>8</sup>

- » referrals to stop smoking services more than doubled
- » the proportion of women quitting by time of delivery nearly doubled, with those referred to a service most likely to quit.
- » Women who quit during pregnancy had significantly heavier babies than those who continued to smoke, equivalent to an additional 210g at 40 weeks.

However, recent findings from the evaluation of the Saving Babies' Lives Care Bundle found inconsistent practice in relation to implementing NICE guidance.<sup>9</sup> Gaps in delivery and inconsistent approaches must be addressed in order to bring down rates of smoking among pregnant women.

# Evidence for smokefree pregnancy incentive schemes

## Going beyond NICE guidance

Women face a range of barriers in attempting to quit smoking with literature identifying both individual and interpersonal obstacles for women to overcome. These include:

- » At an individual level: poor understanding of risks to the baby from continuing to smoke, views of smoking as a method of coping with stress and perceived self-efficacy are clear barriers.
- » At an interpersonal level: living in a community where rates of smoking are high makes it less likely women will successfully quit, and women who live with a smoker are six times more likely to smoke throughout their pregnancy than those who do not.<sup>10</sup>

Overall research suggests that there are more barriers than facilitators for women attempting to quit during pregnancy.<sup>11</sup>

Full implementation of NICE guidance must be the priority for local systems. However, even with this comprehensive evidence-based support women from the most deprived areas are the least likely to quit.<sup>8</sup> More targeted and intensive approaches using incentive schemes have been shown to increase rates of quitting and present the case for going beyond NICE guidance.

## What incentive schemes look like

Incentive schemes designed to support women to quit smoking during pregnancy involve the provision of financial incentives (usually shopping vouchers) to encourage ongoing engagement with quit support programmes throughout their pregnancy (and sometimes beyond).

Importantly, the schemes utilise incentives in addition to routine care in line with NICE guidance, not as a replacement for any part of this.

Features of these schemes:

- » Shopping vouchers, often Love2Shop, which can be used for common purchases excluding tobacco or alcohol. The value and frequency of vouchers has varied between different schemes as discussed below.
- » Vouchers are usually given either for initial engagement with a stop smoking specialist or for coming back after the first appointment and engaging in a quit attempt. Subsequent vouchers are given for biologically validated quits.
- » Schemes have used CO monitoring and cotinine testing to confirm self-reported quits.
- » Post-partum support for women has been a feature of some schemes, these have continued to give women vouchers for remaining smokefree after birth.
- » Significant Other Supporters (SoS) are also frequently engaged with schemes to support women through their quit attempt. These SoS either have to be non-smokers or undertake a quit attempt alongside the woman herself. Some schemes have included vouchers for these SoS.

## Impact of incentive schemes on outcomes

The latest Cochrane Review of the evidence on use of financial incentives for smoking cessation found that incentives increased rates of quitting for six months or longer by approximately 50% compared to no incentives, in mixed populations.<sup>12</sup> Significantly this review also found that the impact of incentives lasted beyond the point where individuals stopped receiving them, with people who had received incentives more likely to remain quit than those who had not received them.

In pregnancy, financial incentives have been found to be one of the most effective ways of helping women to quit.<sup>13</sup> The 2019 Cochrane Review has confirmed the finding that incentives are an effective way of supporting pregnant women to quit smoking during pregnancy and remain quit post-partum, with women receiving incentives more than twice as likely to quit compared to those in non-incentives groups.<sup>12</sup>

In each of the schemes discussed; women receiving incentives had better outcomes than their peers receiving usual support. The table below sets out examples of two schemes which are indicative.

Scheme	Outcomes
<b>NHS Greater Glasgow and Clyde</b>	<p>Women receiving<sup>14</sup> the incentives in addition to behavioural and pharmacological support were:</p> <ul style="list-style-type: none"> <li>• More than twice as likely to have quit at 34-38 weeks gestation, 22.5% of the trial group compared to 8.6% of control participants.</li> <li>• At follow-up, 12 months after quit date, self-report data showed 15% of trial women had remained quit compared to 4% of control participants.</li> <li>• 145g increase in birthweight in women who quit with incentives who would not have quit without incentives</li> <li>• Results were<sup>15</sup> unaffected by controlling for nicotine dependence illustrating effectiveness for a broad range of smokers.</li> </ul>
<b>Supporting a Smokefree Pregnancy Scheme (SaSFPS)</b>	<p>Compared to local<sup>16</sup> stop smoking service returns the 2012 scheme found:</p> <ul style="list-style-type: none"> <li>• 69% (n= 279) of women eligible had engaged with the programme and quit smoking at four weeks, this is a much higher proportion than the 41% from aggregated data from local stop smoking services across the North West (April - December 2012)</li> <li>• Of the women engaged with SaSFPS who had quit at four weeks, 71% (n= 200) were still quit at the time of delivery.</li> <li>• The evaluation of SaSFPS suggests women supported by a SoS are more likely to sustain a smokefree pregnancy.</li> </ul>

## Secondary outcomes

The primary aim of incentive schemes has been to support pregnant women to quit during pregnancy, but a number of schemes have identified other positive outcomes including:

- » an increase in the number of women reporting their home to be smokefree,
- » quit attempts by partners or other family members,
- » increased local focus on SATOD and other data collection.

This was reflected in the SaSFPS scheme, with the number of clients reporting smokefree homes moving from around half of homes to almost universal coverage throughout the programme. This additional positive effect, reducing exposure of family members including other children to secondhand smoke, increases the health benefits of these schemes.<sup>17</sup>

## Why they are effective

Described as a window of opportunity for smoking cessation,<sup>17</sup> pregnancy increases a woman's perception of risk and personal outcomes with the likelihood of prompting strong affective or emotional responses.<sup>18</sup> This makes it a key 'teachable moment' for stopping smoking. As a psychosocial intervention aimed at increasing motivation or emotional responses, incentive schemes support pregnant women to stop smoking and to develop coping strategies to avoid relapse.<sup>19</sup>

Incentive schemes are based on the principles of reinforcement theory, which focuses on the process of shaping behaviours through controlling the consequences of that behaviour in either a positive or negative manner. Fixed interval incentives can create a strong association between the behaviour – not smoking – and positive outcomes, including the incentive but also positive reactions from healthcare professionals, SoS and seeing CO readings decrease.

Insights from focus groups conducted by NHS Tayside for the 'Give it up for Baby' incentives scheme showed that incentives gave women an excuse to 'opt-out' of the social norm of smoking within their peer group but crucially did not isolate them from that group, because changing behaviour for financial reward is seen as legitimate.<sup>20</sup>

This is supported through the results of a survey of women engaged in the SaSFPS scheme. Nearly all women surveyed indicated that the vouchers acted as an incentive for them, in particular by enabling women to buy treats for the baby and themselves. Furthermore, women reported that the vouchers acted as a reminder that they were doing something worthwhile and gave them determination to remain smokefree.<sup>17</sup>

## Economic case for schemes

A 2009 Cochrane Review into interventions to support smoking cessation in pregnancy, concluded that the societal benefits from a range of interventions – including incentives – could be in excess of £500 million per annum in the UK. The 2013 update of this Review, concluded that incentive schemes deliver a return on investment of £4 for every £1 invested.<sup>21</sup>

A specific economic evaluation was undertaken of the Glasgow scheme, assessing the cost-effectiveness of offering up to £400 of shopping vouchers in addition to routine care. The evaluation was undertaken from the UK NHS perspective for cost year 2013, with results showing that the incremental cost per quitter at 34-38 weeks pregnant was £1127. The life time model resulted in a longer-term cost of £482 for each quality-adjusted life year gained (£482/QALY). This is well below the NICE cost effectiveness threshold of £20,000 per QALY.<sup>22</sup>

It's estimated that 20 – 25% of all babies admitted to a neonatal unit are admitted primarily as a result of smoking during pregnancy.<sup>23</sup> It has been estimated that the cost of delivering a complicated birth, the care of a low birth weight baby or the care of a premature baby costs an average (dependant on local tariff for neonatal unit cots) of up to £12,000 per child in the short term.<sup>24</sup> Incentive schemes therefore offer significant cost-saving potential for maternity systems.

## Public support for incentive schemes

There is perceived public hostility towards incentive schemes to support smoking cessation which could be preventing greater roll-out of the programmes.

However, a survey conducted by YouGov for ASH found that public support for incentive schemes increases when people have more information about the effectiveness of schemes. When provided with no further information, only 33% of the public support incentive schemes to help pregnant women quit smoking and 37% oppose. However, when told that there is peer reviewed evidence that it can improve the chances of a woman quitting, public support rises to 44%, with 27% opposing.<sup>25</sup> Other research that has looked at public attitudes to incentives for smoking cessation in pregnancy and breastfeeding among the British public found similar levels of support.<sup>26</sup>

# Lessons for practice

## 1. Requirements for successful implementation

### *Existing Infrastructure*

Key to all incentive schemes is that they operate in addition to a whole systems approach including specialist support, in line with relevant NICE Guidance. Effective delivery of an incentive scheme should be contingent upon having this infrastructure in place.

In the schemes discussed, the incentives are a mechanism for promoting engagement with the specialist stop smoking service. In the various schemes, incentives act as an additional motivation for women to attend an initial appointment, a motivation to come back after the first appointment, and a mechanism to promote continued engagement throughout a quit attempt. Part of the incentive schemes' success is that they can get women through

the door and engaged with a quit support programme. For example, following the introduction of the ongoing NHS Greater Glasgow and Clyde Quit Your Way Incentives programme, the number of women referred to specialist support increased 18% between July – January 2018/19 compared to the same period the previous year. In addition, the number of women referred who attended their initial appointment increased 53% over the same period.<sup>27</sup> This shows the impact of incentives in increasing the number of women engaging with stop smoking support.

That vouchers are contingent upon CO validated quits is illustrative of the need for NICE Guidance to be in place prior to establishing an incentives scheme as CO monitors need to be available and staff trained to use them. This illustrates how successful incentive schemes will be facilitated by ensuring this infrastructure is already in place.

Women have identified engagement with stop smoking advisors as a key factor in their success, describing it as 'very important' to a quit attempt.<sup>28</sup> In particular, the BIBS (Benefits of Incentives for Breastfeeding and Smoking Cessation in Pregnancy) research identified the additional appointments for monitoring and voucher dispensing that form part of an incentive scheme, as important in providing women with extra support when they need it.<sup>29</sup> Local stop smoking services must be able to support an increased uptake in pregnant women using the service, and/or additional appointments. This includes post-natal follow-up for some schemes.

### *Promotion and Partnership working*

To be effective these schemes need buy-in from local authority, NHS and broader health partners, to minimise organisational barriers and promote wide engagement with the scheme from pregnant women. In some cases, such as Give it Up for Baby, a steering group was established bringing together all these partners to oversee the scheme.<sup>21</sup>

Stakeholder awareness of incentive schemes is important and can be promoted through targeted promotion and 'smokefree champions'. Maternity and stop smoking services need good awareness of the scheme and to be able to promote it to women.

A scheme implemented by one council in England, to promote both breastfeeding and stopping smoking among young pregnant women struggled with recruitment, having just two women enrolled in the smoking element of the scheme. This highlights the need to have partners across the maternal health system who can promote the scheme and engage women who they think would specifically benefit.

### *Clear guidance and training on the scheme for advisors and healthcare professionals*

All staff engaged in the scheme need clear guidance and training. This could be through written reminders or aids for staff.

Guidance must be provided to healthcare professionals promoting and delivering the scheme on:

- » Why an incentive scheme is being implemented and the evidence base,
- » What the scheme is and what support women will get if they engage,
- » What the expectations are on women who do engage (e.g. weekly CO monitoring and attending appointments),
- » What the expectations are on healthcare professionals (e.g. CO monitoring of women),
- » Who can access the scheme (e.g. is it available to all pregnant women or those with a certain CO reading, or with certain characteristics, such as age, postcode, etc),
- » Distribution and management of vouchers,
- » Protocols for managing participant relapse,
- » Whether it includes a SoS,
- » Whether it includes post-natal support.

### *Capacity for feedback and evaluation*

Based on valuable feedback from participants and practitioners, schemes can be made more effective. For example, following the North West Smoking and Pregnancy Reward Scheme which preceded SaSFPS, staff fed back that a key future development should be the ability to offer incentives to prompt a quit attempt (i.e. on or around the quit date rather than from four weeks onwards).<sup>30</sup> This has been adopted in the subsequent SaSFPS programme.



The implementation of SaSFPS in local authorities in the North West in 2012, also had capacity for information and feedback sharing with nominated leads from each authority meeting quarterly to discuss the programme.

## 2. Value and frequency of incentive

In most incentive schemes, the value of incentives was phased and increased the longer a woman was able to maintain her quit attempt with the final potential payment being the largest. The exception is Give it up for Baby, where the incentive remained the same throughout.

The value of incentives varied between schemes as did their frequency. For example, the SaSFPS and a scheme implemented in Derbyshire involved lower value vouchers given more frequently whereas the scheme implemented in Glasgow involved just four vouchers of greater amounts each time.

The table below compares the value and frequency of vouchers in three different incentive schemes.

Voucher value and frequency	Derbyshire	SaSFPS in North West 2012 <sup>17</sup>	NHS Greater Glasgow & Clyde <sup>15</sup>	Give it up for Baby NHS Tayside <sup>21</sup>
Type of voucher used	Love2shop	Love2shop	Love2shop	National Entitlement Card (to which credit was added)
Value of first voucher given	£8	£10	£50	£12.50
Point at which first voucher is given	First stop smoking appointment with advisor.	Set a quit date and quit for 1 week.	Attending a face-face stop smoking appointment and setting the quit date	Receive card upon registration with pharmacists after their CO test.
Potential number of vouchers and phasing	Vouchers increased in value by £1 at each appointment where a woman remained smokefree up to 6 months post-partum. The maximum number of appointments was 32 (up to 16 during pregnancy and 16 post-partum).	£10 vouchers for each smokefree week of a 4-week quit. £20 voucher for each additional four weeks she remained smokefree up to 12 weeks post-partum.	£50 voucher for setting a quit date and a successful 4-week quit. £100 voucher for maintaining a quit at 12-weeks. £200 voucher for being smokefree at 34 – 38 weeks gestation.	The £12.50 credit was added for every week women demonstrated they were smokefree. This continued throughout pregnancy and up-to three months post-partum.
Maximum value of final voucher	£39	£60 voucher for CO validated quit at 12 weeks post-partum Additional £40 voucher for significant other if woman is smokefree at 12 weeks post-partum	£200	£12.50

<b>Maximum value if all potential vouchers given</b>	£752	£300	£400	£650 (based on weekly voucher for maximum of 52 weeks)
<b>Uptake by potential cohort</b>	39%	N/A Scheme ran across 17 local authorities with 403 women engaged.	53% of eligible pregnant smokers who could be contacted by advisers	17.5%
<b>Relapse management</b>	If a woman was smoking at an appointment the incentive was withheld and reset to £8 for the next visit.  After two verified smokefree appointments vouchers reset to the highest level previously achieved.	Women who relapsed were re-recruited to the scheme once.  If a woman relapsed twice, she was no longer eligible.	No details given.	No details given.
<b>Budget for scheme and cost of vouchers</b>	Cost estimated at: £139,500. Including £37,490, spent on incentives.  <b>This includes cost for one additional employee who worked with the existing public health smoking cessation service.</b>	Total budget: £101,000  NB. Vouchers were left over from previous pilot scheme so marginal cost for this scheme was £50,000.	Total cost not available.  Cost of vouchers: £41,000	Total budget: £129,000/year  Total not provided. Average voucher payment to women: £210

Each of these schemes was effective in supporting pregnant women to quit smoking and delivered value for money. This suggests that the value of the incentive may be less significant than the prospect of receiving an incentive, and significantly getting women into specialist services to receive the full programme of support to quit. This is supported by pooled evidence on the use of incentive schemes in general population samples, that found no significant association between the value of incentives provided and cessation outcomes.<sup>12</sup>

When considering an incentive scheme and deciding on the value of vouchers, in addition to the existing evidence base, it would be important to think about:

- » The local costs of living;
- » Conducting local insights with women;
- » Frequency of incentives;
- » The overall numbers of women the scheme aims to recruit and available resource.

### 3. Location and administration of scheme

The incentive schemes are primarily delivered by stop smoking advisors within specialist stop smoking services, or as in Give it up for Baby, local pharmacies. This is so the incentive is provided alongside specialist behavioural and pharmacological support, as set out by NICE.

In most schemes women were recruited and referred by healthcare professionals, primarily midwives, but some schemes, such as Give it Up for Baby, employed specialist workers who made personal contact and supported women throughout the process.

Scheme administration varies. In Give it Up for Baby a steering group was established involving representatives from the local NHS, including a community pharmacist and midwife, the local authorities, Stirling and Dundee Universities and local health boards. In areas that have implemented SaSFPS, the consultant team provides support to local authorities and health partners on implementation, oversight and management.

### 4. Determining scheme recipients and recruitment

Despite the success of the Babyclear Programme, women from deprived areas and young women were still the least likely to quit, even with evidence based interventions in line with NICE Guidance.<sup>8</sup> This presents the case for targeting incentive schemes at these women, an approach adopted by the SaSFPS scheme and that implemented in Tayside.

In SaSFPS those women that practitioners judged to be “living in a challenging environment” were included. Practitioners could exercise discretion, but this largely included women who smoked and:

- » lived with a smoker,
- » lived in an area of high smoking prevalence or in an area of deprivation, or
- » were teenagers.

In the 2013 scheme, 70% of women classified themselves as routine and manual workers, unemployed for more than one year or as never having worked, 44% were under 25 years of age and 10% were teenagers. SaSFPS also includes a voucher for SoS if the woman they're supporting is smokefree at 2 months post-partum. The Scheme evaluation suggests that women are more likely to maintain a smokefree pregnancy if supported by a SoS.

In Tayside

- » The scheme aimed to specifically target women from deprivation categories 6 and 7, with the National Entitlement Card providing a vehicle to promote healthy behaviours.
- » Women could be referred by healthcare professionals or could refer themselves for the scheme through their local pharmacy or contacting a 'Give It Up For Baby' development worker.

In Derbyshire

- » Eligibility for the scheme was broader, all women over 16 attending their first antenatal appointment at Chesterfields Hospital who had a CO reading of at least 6ppm could enrol.
- » The age and sociodemographic characteristics of women who enrolled in the incentives scheme were similar to those smokers who did not enrol.
- » 60% of smokers enrolled made a quit attempt, but the chances of making a quit attempt decreased among the women who were most deprived.

When designing incentive schemes, it's important to think about the sociodemographic characteristics of local smokers. As the Derbyshire example shows, even within schemes women from more deprived groups may be less likely to make a quit attempt and commissioners should consider these factors when developing programmes of support.

## 5. Managing incidents

Management of incidents such as deception (individuals stating they are abstinent from smoking when in fact they aren't) commonly known as 'gaming' can be measure by comparing the difference between self-reported abstinence and biochemically validated abstinence. Evaluation of schemes has found this practice to be rare, but it is important to have a clear process in place to give all partners confidence in the scheme.

To avoid gaming, all the incentive schemes referenced above used biological markers of abstinence to confirm women's smoking status. The most common biological marker used was a CO reading.

Using CO readings to confirm smoking status has additional advantages:

- » CO readings can provide an additional motivator for women to remain smokefree. In the SaSFPS scheme, clients were surveyed about their views on the scheme, with 70% reporting that CO monitoring was a very important factor in helping them quit and stay smokefree.
- » NICE guidance requires that all women have a CO test at booking, meaning that monitors should be readily available and staff able to use them without additional training or expense.

Other biochemical methods used to verify smokefree status were cotinine tests, which use urinary, saliva or residual blood samples. In the Glasgow trial, blood tests were used to verify the results of CO testing and self-report measures. These tests confirmed that 80% of those who were defined as quitters had truly quit smoking by late pregnancy in both the incentives and control groups. This suggests around 20% of women in both groups may have relapsed back to smoking in the last few weeks of pregnancy. The similar rate in both groups suggests that this was not related to receiving incentives payments but other factors, such as women wanting to be seen to have quit and thus considered to be good mothers.

In the BIBS trial researchers found that vouchers contingent on biochemically proven smoking cessation in pregnancy were effective, with a relative risk of 2.58, compared with non-contingent incentives, suggesting that the process of validating smoking status is important. These effects were seen up to 3 months post-partum.<sup>29</sup>

There is little evidence of non-smokers attempting to participate in schemes and be rewarded with incentive payments. However, if there are local concerns about this, you may want to consider using different biochemical methods of verifying smoking status when designing your scheme.

## 6. Training requirements

All staff engaged need training in the processes and requirements of an incentive scheme. While specialist stop smoking advisors should already be trained in using CO monitors for recording smoking status and have established referral pathways from the midwifery service, staff need guidance on any new process coming with the scheme, in particular voucher provision and processes around relapse.

In the SaSFPS scheme, project leaders nominated from each area received specialist training and then cascaded this through a 'train the trainer' model. The quarterly meetings established when the scheme was implemented in 17 North West authorities in 2012, were also reported by staff to be a useful opportunity for sharing information and learning.

## 7. Data capture

In order to effectively implement and evaluate incentive schemes commissioners should think about the data that needs to be captured prior to implementing a scheme and ensure capacity to record this is built into systems.

The schemes discussed above CO monitor women at every appointment where they can receive a voucher so it's important to ensure this data can be captured by recording systems and can be shared between local maternity and stop smoking services as required. In addition, schemes that involve a SOS may want to think about how their smoking status is captured and recorded.

Some schemes have shown other secondary outcomes, such as participants moving to having a smokefree home. Commissioners should think about whether and how to capture these potential secondary outcomes.

Thinking about data capture in advance can also allow you to consider scheme data against other locally captured information on pregnant women such as SATOD data. For example, in the North West localities were able to compare records of smoking status for women who had participated in the SaSFPS scheme against their local SATOD data. This provided insights into the accuracy of local SATOD, enabling further work to improve accuracy and monitoring of women beyond those engaged in the incentives scheme.

## 8. Scheme evaluation, sharing findings and implementing improvements

Evaluation of incentive schemes is important for improving future practice and building the evidence base to enable the roll out of these schemes to different localities and incorporation of incentives into national recommendations for practice. This requires schemes to be consistently evaluated, utilising comparable frameworks to establish efficacy and provide robust evidence to inform future practice.

Factors to think about when evaluating your scheme:

1. Uptake and relapse:
  - a. What was the uptake of the scheme?
  - b. How does this compare to other incentive schemes?
  - c. Could more have been done to promote the scheme?
  - d. How many women set a quit date through the scheme?
  - e. What were the quit and relapse rates at key points, e.g. 4-weeks, 12-weeks, late pregnancy and post-partum?
  - f. How do the quit dates set and quit outcomes data compare to previous standard local practice (pre-incentive scheme)?
2. The demographic profile of women engaged in the scheme:
  - a. What was the age of the women engaged with the scheme?
  - b. What was the sociodemographic profile of women engaged in the scheme?
  - c. Was there a correlation between sociodemographics, engagement, chances of quitting, and relapse rate?
  - d. How does the sociodemographic profile of women engaged in the scheme compare to that of women previously accessing standard stop smoking support locally?
3. Insights from women and staff engaged in the scheme:
  - a. Feedback from women on their thoughts and responses to different parts of the scheme.
  - b. Feedback from staff on how the scheme worked, training, administration, engagement and capacity.

It's important that evaluating an incentives scheme is seen in the broader context of the local maternity system and support available for pregnant women. Local areas should think about their evaluation framework and the outcomes that they want to capture prior to scheme implementation.

There are a number of trials currently being undertaken which should provide further evidence for commissioners seeking to implement an incentive scheme. Initial findings from an ongoing Smoking Cessation in Pregnancy Incentives Trial (CPIT III) 2017-2020, show a significant increase in engagement with stop smoking services among the trial group and a subsequent increase in the proportion of women who quit. This study will also include evidence on the effectiveness of post-natal incentives at preventing relapse. Another incentives scheme, being rolled out as part of the Greater Manchester Smokefree Pregnancy Programme (2018-2021), has produced very encouraging initial results and has a detailed academic evaluation process in place. These ongoing schemes will provide further guidance for effective evaluation frameworks.

## Conclusions

The evidence base is now compelling that incentives are an effective way to increase the rate of quitting among pregnant women, where they are coupled with evidence-based support in line with NICE Guidance. While these schemes have each operated in different ways, they have all seen an increase in rates of quitting among women receiving incentives, and other positive secondary outcomes including an increase in women reporting smokefree homes, and motivation for SoS to quit. Given the stagnation in the decline in rates of smoking during pregnancy there is an urgent need to do more to support pregnant women to quit. Incentive schemes are effective, including with disadvantaged women, and could help to close the gap in smoking rates between different socio-economic groups.

For further discussion of incentive schemes, see the Smoking in Pregnancy Challenge Group's 2019 webinar: [Incentive Schemes](#)

# Endnotes

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