Evaluating the effects of financial incentives to support first-time young mothers to breastfeed

› Abstract

Women aged less than 20 years are less likely to initiate and sustain breastfeeding until their baby is 6 weeks and older compared with older mothers, according to the Infant Feeding Survey (McAndrew et al, 2010). The ‘vouchers for breastfeeding’ scheme, which was trialled in 2015–2016 with more than 10000 women in parts of Yorkshire and Derbyshire, offered mothers shopping vouchers worth up to £200 if they provided breast milk to their baby up to the age of 6 months. Over the period of this large-scale scheme, a parallel small-scale intervention was commissioned and offered by a family nurse partnership (FNP) to first-time young mothers in an adjacent area. This article reports on the evaluation of the initiative within the local FNP service. The results indicate that the scheme was acceptable and deliverable within this setting.

Key words
› Breastfeeding › Family nurse partnership › Financial incentives › Health visitors › Behaviour change › Young mothers

Breastfeeding is the physiological norm, and it is beneficial because it can prevent disease and promote health in both the infant and mother over the short and the longer term (Victora et al, 2016). Yet in the UK breastfeeding rates are among the lowest in the world, resulting in a higher incidence of preventable illnesses in children and mothers, with substantial associated costs to the health service. Because infant feeding is socially patterned, low breastfeeding rates only serve to exacerbate existing health inequalities (Renfrew et al, 2012).

The family nurse partnership (FNP) is a voluntary home-visiting programme for first-time young mothers aged 19 years or less, who are recruited before their 28th week of pregnancy. The initiative involves a trained family nurse visiting the young woman regularly, from early in pregnancy until the child is 2 years old. In Barnsley, since the start of the programme in 2007, breastfeeding initiation by young mothers taking part in the scheme has averaged 40.3%, however, by 6–8 weeks, only 11.6% continue to do so. These rates are significantly lower than the UK average (81% for breastfeeding initiation and 34% for breastfeeding at 6–8 weeks) (McAndrew et al, 2010).

Financial incentives have been shown to be effective in promoting positive health behaviours (Giles et al, 2014): for example, they are effective in encouraging smoking cessation in pregnancy (Tappin et al, 2015). However, there is limited evidence on the effectiveness of such incentives for breastfeeding (Moran et al, 2015).

Researchers at the University of Sheffield are exploring whether offering women financial incentives can improve breastfeeding rates in areas where they are low. This research programme, NOurishing Start for Health or NOSH, is funded by the National Prevention Research Initiative through the Medical Research Council.

The first stage of the project (2012–2013) looked at the scheme’s acceptability and developed the NOSH voucher scheme (Whelan et al, 2014; Whitford et al, 2015). The second stage (2013–2014) tested the feasibility of the voucher scheme in three areas with low breastfeeding rates (Relton et al, 2014). The third stage (2015–2016) tested the effectiveness of the scheme through a large cluster randomised controlled trial (Relton et al, 2016) involving 10833 women and 900-plus health professionals in 92 wards with low breastfeeding rates in Sheffield, Doncaster, Rotherham, Bassetlaw and parts of North Derbyshire, areas near to (but excluding) Barnsley.

Local intervention

In June 2015, while the large-scale trial was ongoing (but before the results were known), the...
research team was approached by the Barnsley FNP service leads with a proposal to commission the NOSH scheme to support young first-time mothers to breastfeed. The service also asked the research team to evaluate the acceptability and impact of the scheme within the Barnsley FNP programme.

The initiative offers mothers shopping vouchers worth up to £120 if they provide breast milk to their baby (exclusive or mixed feeding) up to the age of 6–8 weeks and a further £80 if they continue up to 6 months. Women can claim £40 vouchers at five time points (day 2, day 10, 6 weeks, 3 months and 6 months), if their baby is receiving breast milk. Women sign a claim form at each time point and their health-care provider co-signs the forms to confirm the mother is giving her baby breast milk.

All the FNP nurses in Barnsley were given information about the scheme and how it was to be delivered. Booklets (Figure 1) and application forms were adapted for Barnsley FNP. Women interested in taking part completed the form with their FNP nurse, who then sent it to the NOSH office on the woman’s behalf. The NOSH office then sent each mother a pack, which included a welcome letter, a booklet of claim forms, freepost envelopes, and a list of unrestricted shopping voucher options. These included the choice of Love2Shop, and supermarkets Tesco, Morrisons and Sainsbury’s.

Mothers who provided breast milk (exclusive or mixed feeding) for their infant completed a claim form, which was co-signed by the FNP nurse who sent it to the NOSH office. Claims were verified against a list of specimen signatures provided by the FNP team, after which each woman was sent the voucher of her choice. Barnsley FNP paid the full costs of the vouchers, which amounted to £600 plus VAT, and a total of 15 vouchers for £40 each were claimed by six women.

Evaluation
It was agreed that Barnsley FNP would offer the NOSH scheme to FNP mothers for a period of 12 months beginning 1 December 2015. The purpose of the evaluation was to inform future decision-making on the longer term implementation of the NOSH voucher scheme within the Barnsley FNP programme. It had the following objectives:
- To test if the scheme was deliverable within the FNP service
- To assess the acceptability of the voucher scheme to women and FNP nurses
- To evaluate how the voucher scheme influenced women to choose to breastfeed.

Approvals
The work was categorised as a service evaluation. Approval was obtained from the Quality Improvement and Assurance team of the South West Yorkshire Partnership (SWYPT) NHS Foundation Trust in August 2015. Approval was also obtained from the NOSH Trial Steering Committee to use the resources of the NOSH office to administer the scheme for the evaluation.

NHS Research Committee approvals and local authority research governance permissions were obtained for health-care providers to participate and for the researchers to conduct interviews.

Method
The Barnsley FNP NOSH scheme was evaluated using routinely collected service data (maternal age, breastfeeding at birth, and at 6–8 weeks), as well as data on the applications and claims collected by the University of Sheffield-based NOSH office. In addition, two university researchers from the NOSH project (CR and BW) conducted interviews with the FNP nurses involved in delivering the intervention to explore the impact of the voucher scheme on women’s decision to breastfeed and on the scheme’s acceptability.

In May 2016, one of the researchers (CR) conducted a group interview with the nurses and
made written notes. The interview took place during a regular FNP team meeting, at which six of the eight FNP nurses involved in delivering the NOSH scheme were present. The researcher had been invited to attend by the FNP team leaders to discuss their experiences.

Due to a recent decision to decommission the Barnsley FNP service, and the fact that many of the team had just learnt they were facing redundancy, this was a sensitive and emotional meeting. The time allocated for discussion was therefore limited, and it was not felt appropriate to tape-record this meeting. In addition, although all nurses had given verbal consent to the group interview, no written consent had been sought.

At the start of the meeting CR stated the number of applications and claims that had been received, then asked for feedback on the scheme from the FNP team. CR made notes about people’s responses, recording verbatim quotes where possible. One nurse agreed to an in-depth interview, conducted by telephone in June 2016 by another researcher (BW), which was recorded and transcribed.

Results
The NOSH scheme delivered to the FNP was the same as that offered as part of the large-scale NOSH trial in terms of voucher value, voucher type and at which points they were offered (i.e. when the baby was 2 days, 10 days, 6–8 weeks, 3 months and 6 months), as well as the wording used to frame the scheme in the written materials. However, as a result of discussions with the Barnsley FNP service, several changes were made to ensure it was deliverable within an FNP context.

First, FNP mothers (unlike non-FNP mothers) have a dedicated nurse who visits them for one hour every week from week 24 of their pregnancy until the child is 2 years old. This enabled FNP nurses to be active in supporting mothers to take part in the NOSH scheme, for example, the nurses decided that they, rather than the mothers, would post application and claims forms. (In the main trial, the mother was required to obtain signatures and post the application and claims forms).

Second, the FNP nurses decided they would be the sole signatories for the application and claims forms, in contrast to the main trial that allowed any health professional to sign. This reduced the agency (number of decisions and actions) required by the mother in order to be able to take part in the scheme (Adams et al, 2016).

Between 1 December 2015 and 31 March 2016, when the NOSH scheme was being offered, the total number of babies born to the women (n=14) under the care of the FNP service was 14. More than half the mothers (n=8; 57%) applied to join the scheme. Their ages ranged between 17 and 21 years. More than one third claimed vouchers (n=5; 36%): five for breastfeeding up to 10 days, three for up to 6–8 weeks, and one for up to 6 months.

All six FNP nurses interviewed said they had held conversations about the NOSH scheme with all their eligible mothers, i.e. women who had had a baby or were due within the duration of the scheme.

Feedback
At the group meeting interview one FNP nurse described an incident during which some older family members who were present sniggered in the background when she was talking with the woman about breastfeeding. The nurse said she heard one of them say:

‘You’ll be getting your tits out then.’

However, for other young first-time mothers the scheme was an attractive option that sometimes helped them make the decision to breastfeed.

‘One of my clients, a 16-year-old, wasn’t going to breastfeed… until a couple of days before she delivered her mum said, “well, you might as well try and get that money”, and then she did it… I don’t think she quite went to six weeks, but she did it… and enjoyed it. She were adamant she weren’t going to do it all the way through [her pregnancy], so for her it [the voucher scheme] changed her mind.’ (One-to-one interview)

The same nurse commented:

‘They [the mothers] were more interested and, when we started doing it, the couple that I had… they probably started off doing it for the money, but when they did it they quite enjoyed… they enjoyed breastfeeding.’ (One-to-one interview)

Staff at the NOSH office did not report any problems with the eight applications and 15 claims they received and processed; neither were there any issues with the verification checks. All the FNP
nurses interviewed said that verifying breastfeeding was not a problem, due to the unique one-to-one relationship with each woman. Comments included:

‘You know, they are doing it because you visit them every week from [the] birth… And you see them feed… they’re honest because of the relationship.’ *(Group interview)*

The nurses reported no difficulties with signing off the claims forms. On one occasion, one nurse stayed around until the baby was due a feed in order to be sure it was receiving breast milk.

‘It was six weeks, I think… I wanted to make sure that she was still breastfeeding, so I were there quite awhile just chatting about the programme and things… then, obviously, I didn’t want to sign it… I didn’t know if baby was feeding… I asked her, but I sort of wanted to see the baby feeding.’ *(One-to-one interview)*

The FNP nurses were positive about the scheme, expressing the view that it encouraged their clients to be more interested in breastfeeding. For example, one nurse thought the scheme was:

‘A good incentive, especially with the age of the clients.’ *(One-to-one interview)*

Had the FNP service continued, the nurses were generally keen to continue offering the vouchers for breastfeeding. However, the FNP service stopped taking referrals from 1 April 2016, as the decommissioning of the service had started. The nurses considered that the design of the scheme was good and the timings for the claims forms were effective. They also thought the shopping vouchers worked well. This was because women...

‘…could choose themselves how they wanted to spend it.’ *(One-to-one interview)*

One nurse had a suggestion for similar schemes in the future:

‘A DVD should be added, with a young local mum talking in language suitable for teenagers… saying how it is normal to breastfeed and that breasts are not just about sex. You need a peer champion.’ *(Group interview)*

**Discussion**

This small-scale evaluation showed that the voucher scheme was acceptable to all the FNP nurses involved, who reported that it was also acceptable to many of the mothers. The nurses reported that the initiative made the idea of breastfeeding more attractive to young women and helped some of those who would not have considered it to start breastfeeding their baby. However, these findings should be interpreted with caution due to the small amount of data and the lack of direct data from the mothers taking part in the scheme.

This is the first evaluation of a financial incentive scheme among a population of young first-time mothers in the UK. A similar small trial of financial incentives was undertaken recently in the US: it involved 36 low-income breastfeeding Puerto Rican women who were enrolled in the Special Supplemental Nutrition Program for Women, Infants, and Children; this study reported increased breastfeeding rates at 6 months *(Washio et al, 2017)*.

Further research is needed to explore the cost-effectiveness of financial incentives for breastfeeding among this vulnerable population. There is also a need to explore whether a financial incentive scheme would be more beneficial if it were offered universally, i.e. to all mothers regardless of income or age, compared with a scheme centred on a specific population.

The UK-wide Healthy Start scheme *(https://www.healthystart.nhs.uk)* offers financial incentives in the form of vouchers for fresh or frozen fruit and vegetables, plain cow’s milk and infant formula worth £3.10 per week, and free vitamin supplements during pregnancy and up to when the child is 4 years old. Because there is evidence that inclusion of infant formula as a Healthy Start item encourages its early use *(McFadden et al, 2013)*, future research should explore how to reformulate the Healthy Start scheme to encourage breastfeeding rather than the use of infant formula.

**Conclusion**

This is the first time that a financial incentive scheme for mothers to breastfeed has been commissioned and evaluated within an existing NHS service. The results of this small-scale service...
evaluation indicate that it was acceptable to both the nurses and over half the young first-time mothers using the FNP service, and it was deliverable within an FNP service setting.

There is a need for further research to evaluate the cost-effectiveness of vouchers to encourage young first-time for mothers to breastfeed and to identify how such a scheme might be integrated in services for populations where breastfeeding is not the cultural norm.

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