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From evidence-base to practice: implementation of the Nurse Family Partnership programme in England

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Category 7 – Research-policy-practice interface

From evidence-base to practice: implementation of the Nurse Family Partnership programme in England

Abstract

The aims of this paper are to highlight the issues that are relevant to the implementation of a rigorously evidence-based programme of support, the Nurse Family Partnership programme, into a national system of care. Methods used are semi-structured interviews with families in receipt of the programme in the first 10 sites, with the nursing staff, with members of the central team guiding the initiative, and with other professionals. Analyses of data collected during programme delivery evaluate fidelity of delivery. The results indicate that the programme is perceived in a positive light and take-up is high, with delivery close to the stated US objectives. Issues pertaining to sustainability are highlighted. In particular local concerns about cost set against long-term rather than immediate gains. However local investment is predominantly strong with creative methods being planned for the future. Overall the study shows that within an NHS system of care it is possible to deliver a targeted evidence-based programme.

Policy and Practice implications

- The introduction of rigorous evidence-based programmes in England has been facilitated by strong central government support for this type of service.
- There can be difficulties if programmes are introduced with haste, before local systems are prepared to deal with practicalities such as identifying the target population.
- Nursing staff were highly receptive to a new way of working, using a structured and manualised intervention with clear-cut targets, but the attendant greater level of scrutiny of their work was stressful.
- Young first-time mothers and their families did not perceive being offered additional support as pejorative; rather they welcomed the opportunity.
- Sustainability requires intensive information sharing with local professionals, who may feel that their own role is under threat. In particular time needs to be spent explaining the 'all or nothing' nature of delivery. Bits of the programme cannot be extracted to offer a less costly version since that will then not be the programme, so impacts cannot be predicted with any certainty.

Keywords: parent support, young parents, policy, evaluation, fidelity, sustainability

From evidence-base to practice: implementation of the Nurse Family Partnership programme in England

It has been noted that most studies of home visiting programmes initially provided in experimental conditions have not reported on measures of fidelity in implementation (Astuto & Allen, 2009). In a special issue of this journal devoted to discussing randomised controlled trials in children's services Bumbarger and Perkins (2008) , address the important issue of taking evidence-based interventions into communities. They raised three questions: how can communities be encouraged to adopt evidence-based interventions; can they then be implemented in the 'real world', and can high quality implementation be sustained? A further question, given the importance of the cultural the context to development (Bronfenbrenner, 1979; Super & Harkness, 2002), is whether and how evidence-based interventions can be implemented 'across borders'? (Ferrer-Wreder, Stattin, Lorente, Tubman & Adamson, 2004).

It has been noted (Schinke, Brounstein & Gardner, 2002) that implementation of successful programmes in new contexts may lead to tension between the (perceived) need to tailor the programme to the new setting and a desire to maintain fidelity to the original model, so that the expected gains might be achieved. A recent review of more than 500 studies (Durlak & DuPre, 2008) concluded that the level of implementation of a programme will have an impact on its outcomes and identified 23 contextual factors that can influence implementation, grouping them into: community level factors (e.g. politics, funding); provider characteristics (e.g. perceived need for innovation); the innovation itself (e.g. compatibility, adaptability); organizational capacity (e.g. shared decision making, leadership, managerial support); and the support system (e.g. training and technical assistance).

To identify issues arising from 'going to scale' not in the country of origin of interventions but in different countries (and cultures) interviews were conducted with the developers of a number of intervention programmes (Ferrer-Wreder et al., 2004). There was agreement that this could provide the opportunity to strengthen the intervention with good communication between the programme's developers and the new implementers. The programme developers were asked about adaptation and agreed that in the new setting there would need to be a pragmatic fit with the intervention – that the theory behind it made sense – and that the core principles should remain intact unless there was compelling scientific evidence to the contrary (Ferrer-Wreder, 2004). However they also agreed that, 'deep' structure should be protected, the surface structure of the programme could well be amended to enhance initial receptivity with potential participants. All the programme developers agreed that interventions with a sound evidence base provided the best opportunities for implementation in new settings; as one commented "it would be foolish to try to adopt a program that hasn't been demonstrated to be effective no matter what the culture." (Ferrer-Wreder et al., 2004; p.200).

If evidence-based programmes are sought then the quality of the evidence is generally assessed according to standard criteria such as those set out in the UK by the Cochrane collaboration [1] or in the USA by the Society for Prevention Research (SPR; Flay et al., 2005). The best evidence requires ideally more than one randomized trial, using psychometrically sound measures and demonstrating positive effects, with at least one significant follow-up. The SRC also highlight the importance of manuals and training support. There has nevertheless been criticism that national policies such as President Obama's recent pledge (DHHS, ACF, 2009) to spend $8 billion or more

[1] http://www.cochrane.org/resources/general.shtml

over five years for home visiting using the Nurse Family Partnership (NFP) model (Olds, 2006) with the justification of evidence from RCTs for its cost saving potential.. Child development experts argued that building a national initiative on the basis of evidence from randomised trials provides little guidance on how to replicate these models successfully; nor does it provide the ability to generalise findings to diverse populations and diverse contexts (Daro, Dodge, Weiss & Zigler, 2009). Thus not all would agree that programmes with the 'best' evidence should be given priority. Aos and colleagues (2004) made a similar point. The Nurse Family Partnership programme was identified in their research as having almost three times the dollar benefit as other home-visiting programmes for at-risk mothers, with some family support programmes having a substantial cost without cost benefit. But while they recommend investing in "blue-chip" proven prevention they note that the "market place" for rigorously researched programmes is developing fast, with many rigorous studies soon to be producing findings.

In the USA the NFP programme is commonly names when examples of early intervention with good evidence for success are sought. The USA Council for excellence in government's coalition for evidence-based policy, responding to a Congressional directive that funds be directed to programmes that achieve the top tier evidence of effectiveness – i.e., "*that have been shown, in well-designed randomized controlled trials, to produce sizeable, sustained effects on important … outcomes*" identified only two programmes designed to support children aged 0 to 6 and their families that could be thus categorized, one of which was the NFP (CEG, 2008). A similar conclusion was reached by academics seeking programmes with evidence of their capacity to reduce child abuse and neglect, naming the NFP programme as one

of only two home-visiting programmes with the best evidence (MacMillan, Wathen, Barlow, Leventhal & Taussig, 2009).

The NFP programme (Olds, 2006) is notable not only for having been evaluated in three RCT studies but also for being a programme that can only be used under license and following detailed guidance on implementation fidelity, thus fulfilling the SPR's requirements. This is also noted by Aos et al. (2004) who stress that even with programmes with proven cost benefits real-world success depends on close attention to quality control and fidelity of delivery which is not possible without detailed objectives.

This paper documents the introduction the NFP into the range of services offered through the National Health Service in England to parents with young children. Thus a different national context is involved, one that has national provision for all, and one where there is considerable diversity in the population compared with the populations of the trials that form its evidence-base. The paper first summarises the programme and what has taken place in the USA to make it available in many community locations, and the strategies that the programme's developers have put in place to achieve dissemination whilst ensuring fidelity. Then the background of its introduction into England is summarised and the process by which is has been implemented in the first 10 pilot sites in England is described, comparing the strategies in the two countries and highlighting implementation issues that have arisen in the English context.

1. Background to NFP and roll-out in the USA

The NFP programme has been in existence for more than 30 years. It is a nurse home-visitation programme for low-income pregnant women expecting their first child, providing support from early pregnancy until children are 24 months old (Olds,

2006). Visits are mainly weekly or fortnightly and there are detailed manuals with materials for each planned visit plus a number of standardised data forms to record both the visits and details of the participants and their progress. The programme is founded on three theoretical approaches – Attachment theory (Bowlby, 1969), Ecological theory (Bronfenbrenner, 1979) and self-efficacy theory (Bandura, 1977). A detailed description of how these theoretical approaches are translated into programme activities is beyond the scope of this paper (see Olds, Kitzman, Cole & Robinson 1997 for more information). Briefly, attachment theory is the basis for nurses aiming to develop a therapeutic alliance with mothers, with many activities introduced to enhance understanding of how to develop mother-infant and father-infant relationships; self-efficacy is introduced to help women to gain control over their lives in their relationships and in life course planning; and ecological theory underpins the timing of the intervention at the point of an ecological transition, and in the attention paid to enhancing family support and links with community services. Evidence for its impact comes from three randomised controlled trials. The first, in Elmira NY, included a predominantly white population living in a relatively small town with both married and unmarried participants, some low income but others with more financial support (Olds et al., 1986); the second was set in Memphis TN and included mainly black participants, all of whom were low income and mainly unmarried (Kitzman et al., 1997).; and the third was based in Denver CO, including many Spanish speaking participants but again all low income (Olds et al., 2002). Positive outcomes have been identified from all three trials in terms of a lower likelihood of child injuries, more spacing between first and second children, less reliance on welfare, more maternal employment, better child academic outcomes and by the age of 15 a reduced likelihood that children will engage in delinquent activity

(Olds et al., 1998). Overall the impact of the three trials has been greatest for those families most at risk, particularly teen mothers and those with fewer 'psychological resources'.

The move to provide NFP more widely in the USA was launched in 1996, supported by funding from the National Institutes of Justice, with increased financial support from the Robert Wood Johnson Foundation coming in 1999 so that a "National Center" for NFP could be established. The center's role is said to be pivotal in the successful roll-out by providing training for nurses so that the programme can be implemented according to programme guidelines, providing all the guidelines regarding implementation with fidelity, and collecting standardized data in the Clinical Information System (CIS) so the extent of fidelity can be monitored by the National Center in addition to local sites generating their own information about delivery using a series of standardized reports, which can also be linked with programme outcomes (Olds et al., 2003). The thinking in the USA has been that without these supports in place and without the written license agreement the programme might be watered down as it was provided more widely (Olds, 2002), a likelihood that a number of developers of family interventions have highlighted as a potential problem when programmes are rolled-out more s widely (Ferrer-Wreder et al., 2004). Writing about the replication of the NFP in communities, three basic components have been identified that will facilitate a successful roll-out (Olds et al., 2003) – an organization and community fully informed about and supportive of NFP; a well-trained staff group; and the availability of real-time information on the implementation of the programme. The US National Center in Denver provides support around these three functions.

It is suggested (Olds et al., 2003) that to gain full local consensus and ensure that the programme is a fit with local needs it may be necessary to link up with other home-visiting programmes, possibly deciding on a geographical 'share-out' to avoid professional rivalries. Guidance is provided about potential sources of financial support and the development of partnerships with hospitals or non-profit community-based agencies. Secondly selection, training and ongoing supervision of NFP staff need to be assured. It was demonstrated in the third (Denver) trial that outcomes are less marked if the programme is delivered by paraprofessionals (Olds et al., 2002). Thus one of the contractual requirements is that nurses must be recruited with adequate nursing qualifications and then provided with all the necessary training, provided by the National Center in three intensive training periods to cover materials used in pregnancy, infancy and toddlerhood in addition to a number of one day sessions on specific topics.

Finally, to ensure real-time information on implementation, the contract in the USA also specifies that data on programme delivery and key outcomes should be entered into the CIS, with the obligation of the National Center to provide the training and technical assistance for its use, and the evaluation of data nationally so that the service can be evaluated (Olds, 2002; Olds et al., 2003). What this means is that, while its delivery will not be conducted in trial conditions, there will be ongoing and replicable information about delivery and outcomes in all locations where the programme is initiated. This gives the new community some support and guidance while at the same time providing the programme itself with invaluable information about its wider use.

Thus in the USA there is a strong organization, the National Centre, that is supported by a mix of charitable and government funds. They liaise closely with any local

community that wishes to offer NFP (and according to their website the programme is currently available in 28 states [2]) providing guidance with a 'firm hand' so that the programme is initiated with local support, so that the professionals involved are appropriately prepared, and so that the ongoing implementation is monitored. The contractual agreement would allow them to stop a community from providing the programme if they diverged markedly from the recommended objective for delivery but in reality this central organization is generally helpful and supportive, giving useful feedback on delivery so that implementation can be enhanced where is falls below the expected levels, as defined by the programme's developers.

2. Introduction into England

Background

A national context of readiness for this kind of implementation, emphasized as an important first step by Bumbarger and Perkins (2008), has been growing for more than a decade and the introduction of NFP into England can be linked with central government policy. The current Labour government in the UK has had an ongoing commitment to evidence-based practice. A series of policy documents from the Cabinet Office written soon after Labour came into power in 1997 recommended the introduction of programmes that were supported by a strong evidence base (Cabinet Office, 1999; HM Government 1999; Cabinet Office 2001). There has at the same time been a focus on early intervention programmes supporting disadvantaged families since the development of Sure Start Local Programmes (Glass, 1999). While much of the emphasis on early intervention has been directed at those directly concerned with promoting children's development (e.g., early years' professionals), policy experts concerned with crime prevention have also noted that intervention

[2] http://www.nursefamilypartnership.org/content/index.cfm?fuseaction=showMap&navID=17

offering high quality social support alongside antenatal medical care during pregnancy may be an effective approach to preventing later anti-social behaviour (Sutton, Utting & Farrington, 2004). The pre-budget report *Support for Children: the Best Start for Parents* (HM Treasury, 2005) documented the continued focus on moving from treatment to prevention as a means of breaking the cycle of disadvantage as early as possible.

Having identified early intervention as a means of reducing social exclusion the relevant task force was given the task of making the guiding principles tangible, again good quality evidence was identified as a key issue. One of the guiding principle specified in *'Reaching out: an action plan on social exclusion'* (HM Government, 2006) was to "systematically identify 'what works'" and the task force stated "we will introduce a common approach across government to rate programmes by the quality of the evidence behind them…..We will strengthen the capability of commissioners of public services and will explore the best ways of disseminating what works, particularly around excellence in children's and family services (p.9).

The Social Exclusion Task Force report (HM Government 2006) was also the first mention of the government's identification of the evidence to support the NFP programme, emphasising both the 'truly outstanding' outcomes and its long-term cost effectiveness (p. 51). Outcomes for England that would help to reduce social exclusion included all those found in the USA trials, such as: better prenatal maternal health behaviour, more social support, reductions in pre-term infants for smokers and fewer low-birthweight infants for very young mothers, less use of punishment and safer more stimulating home environments, less child abuse, fewer subsequent pregnancies, greater participation in the workforce for parents and less anti-social behaviour in the children in their teenage years (p.52). Members of the task force

approached David Olds, with funding promised jointly from the DCSF and DH, and soon afterwards bids were sought, in December 2006, from around England for PCTs and local authorities wishing to be one of the first 10 pilot sites.

The extent to which this programme appeared to fit with the needs of local communities was reflected in the 63 expressions of interest that were made and the speed with which local teams were assembled. By April 2007 57 nurses from 10 sites had been selected and started their training process. In this first week the adaptation (change in surface structure) began with a re-branding of the programme to the Family Nurse Partnership (FNP) and the practitioners made a collective decision to call themselves Family Nurses (FNs) to distinguish their role from previous posts such as health visitor or community health nurse. The programme was planned as something that could be based around Sure Start Children's Centres, linked to general practice with the expectation was that they would be jointly run by Primary Care Trusts (PCTs) and Local Authorities (LAs) as part of the universal maternal and child health services that are the responsibility of the NHS. However the initial funds came from central government, with support from local commissioners only sought once the programme was in place.

Since then ongoing central support has been evident. The programme was highlighted in several major government papers including '*Every parent matters'* (DfES, 2007), the *Children's Plan* (DCSF, 2007), the *Child Health Promotion Programme* (DH, 2008), the child health strategy '*Healthy lives, brighter futures'* (DH, 2009) and '*New Opportunities'* white paper (HM Government, 2009). The Child Health Strategy noted that the Government wished to expand to 70 pilot sites by April 2011, and it would like to see the FNP offered to the most vulnerable first time young mothers across England over the next decade, if the research findings are

supportive (DH, 2009). Thus central government is giving strong support to the introduction of the programme into England and is also now funding a randomised trial of the programme so that there will be a rigorous evidence base from within the UK context[3].

Evaluation of implementation of NFP in England

Wisely it was decided that, prior to launching a full-scale RCT, it would be important to evaluate the implementation of the NFP programme in the first 10 pilot sites in England. The aims of the evaluation were: to document, analyse and interpret the feasibility of implementing the Nurse-Family Partnership (NFP) model; to estimate the cost; to determine the short-term impact on practitioners, the wider service community and the children and families; and to set the groundwork for a longer term experimental assessment of the programme and its impacts. The data presented are derived from this implementation evaluation that has been conducted in three phases, to correspond with the three phases of the programme materials – pregnancy, infancy up to 12 months, and toddlerhood from 12 to 24 months. The final phase is still in progress. The findings are too numerous to report here and only the main themes are identified. Full details can be found in Barnes et al. 2008 and 2009.

Methods

A range of methods was used so that all those involved in the programme's implementation could be represented. In phase 1 (pregnancy) the following activities were completed: semi-structured interviews with Family Nurses (N=47) and Family Nurse supervisors (N=10); the central team (N=5); other members of the DCSF, DH and the Social Exclusion Unit (N=5); FNP Project Managers (N=10); FNP

[3] http://www.scie-socialcareonline.org.uk/profile.asp?guid=e1eaca8a-30dc-4c2e-a42d-d1f0bb408d47

http://www.dcsf.gov.uk/everychildmatters/strategy/parents/healthledsupport/healthledsupport/

administrators (N=10);an approximate 10% sample of clients during pregnancy (N=106) and again when their infant was about one month old (N=82); relatives of clients (N=44); and local stakeholders representing a range of professionals (54). Additional feedback from FNs and Supervisors was based on their evaluations of training events, confidential reflective notes, and restricted access web-based discussion groups.

In Phase II (infancy) structured face to face home interviews were conducted with an 8-10% sample of the families with infants aged either 6 months (N=87) or12 months (N=67). Structured telephone questionnaires were given to a further 10% of clients with infants of various ages (N=98); and questionnaires sent to nursing staff (44 family nurses and 10 supervisors) who had been in post for at least 12 months. Interviews were conducted with staff who had left FNP (4) and with local commissioners and Children's Centre managers (N=35).

In both phases I and II semi-structured interviews were conducted with clients leaving the programme (62) and case studies were completed (19) to identify best practice and barriers to best practice. Analysis was undertaken of data forms completed as part of programme delivery and work diaries were completed over a 2 week period by all FNs and supervisors in both phases.

Results

a. Is it possible to get clients involved with the programme?

Following on from central and local support for the programme, the next question from an implementation perspective is whether appropriate recipients can be identified, with a further question being, once identified and approached, will they agree to receive FNP? Its target population in the US is low income and otherwise vulnerable young, first-time mothers and their partners. A fidelity requirement is that

they are **all first time parents** and they need to be identified early in pregnancy since the next targets for delivery with fidelity is that at least **60% in any one site will be enrolled by 16 weeks gestation**, with all enrolled prior to 28 weeks gestation. No matter how well trained the nursing staff are to deliver the programme, systems need to be in place to identify suitable pregnant women and acceptance requires a substantial amount of involvement from the clients themselves and ideally from their partners and other family members. In England, after a careful review of the evidence (Hall & Hall, 2007) it was decided that half the pilot sites would recruit on a simple age criterion (under 20) while in the remaining sites, where numbers of pregnant women were smaller, they would also recruit first-time mothers aged 20 to 24, but with additional criteria – not in education, employment of training (NEET), or no educational qualifications, or no supportive partner.

Perception from some midwifery teams that they were making a referral rather than identifying women for a service that was part of routine care for younger first-time mothers led to delays in sharing information in some areas. Mechanisms for data sharing also varied between the 10 areas creating additional delays (e.g., names shared but no contact details), with was particularly problematic for sites recruiting 20 to 24 year olds. Many were eventually found not to be eligible, but contact had to be made with them to ascertain this since education and employment information were not routinely held in maternity records. Thus attainment of recruitment prior to 16 weeks was variable, achieved for 51% of clients with an average gestation at enrolment of 18 weeks (mean per site ranged from 14 to 21 weeks). All were first-time parents and for 78% it was also their first pregnancy.

Having located suitable clients, albeit slightly later in pregnancy than is ideal, the next objective set out by the USA guidelines was that **at least 75% of those eligible**

would accept the programme and this was met with ease in England, with 87% accepting representing 88% of the under 20 group and 81% of the 20 to 24 year olds. In qualitative interviews the young women were overwhelmingly positive about being offered the programme, not perceiving that they had been identified as parents likely to fail but as parents who would benefit from much needed support. As one put it when asked why she had been offered FNP: "*Because I am young and single and needed help"* (Barnes et al. 2008, p.50).

In terms of ongoing implementation, the question of the appropriate targeting of clients is still being investigated, with some of the sites applying additional criteria for first-time mothers under 20 (Barnes & Howden, 2009), and others applying criteria to mothers aged up to 22 (Barnes & Niven, 2009). Policy makers have debated whether to position the programme as one for teenagers, or for vulnerable parents since the two groups have only partial overlap but only mothers under 20 are being recruited to the English RCT (Robling, personal communication).

b. Can it be delivered according to guidelines?

Once young women have been enrolled in the programme, it is then important to find out how close the delivery is to the fairly detailed recommendations. There are fidelity 'stretch objectives', i.e. targets to aim for rather than absolutes of delivery such as all clients being first-time parents, for the number of visits accomplished in each phase, for the average length of visits, and for the types of content covered in each visit.

Values for the proportion of expected visits completes have been calculated in the UK implementation evaluation in relation to the number that are expected for that client, which in pregnancy differs depending on the client's gestation at enrolment and for all clients depends on whether they remain with the programme. Thus if they are

deemed to have left the number of expected visits was cut-short to take that into account. This is a conservative estimate and differs from the method of calculating expected visits used in the USA research (Olds, personal communication), upon which the stretch objectives are based, which does not take into account a client leaving and will lead to lower percentages.

The figures for fidelity in delivery refer to the 1255 Wave 1 clients who had completed their pregnancy phase i.e. their infant was born, and the smaller subgroup of 712 who had also completed the infancy phase i.e., their child was at least 12 months old. The fidelity stretch **objective for pregnancy is delivery of 80% of expected visits**. Despite using the more conservative method of calculating this target it proved to be a challenge for most of the 10 pilot sites. Just under one third (30%) of clients received 80% or more of their expected visits (site range 18% to 44%) although a further 47% receiving between 50% and 79%. The average proportion of visits made in pregnancy was 66% (site range 57% to 74%). The **objective for infancy is delivery of 65% of expected visits** and a similar proportion of clients (31%) received this level of the programme (site range 15% to 54%) with a further 16% receiving between 50% and 64%. The average proportion of visits completed in infancy was just under half (48%; site range 38% to 61%).

Regarding the nature of visits, to deliver with fidelity it is suggested that the visits should **on average be at least 60 minutes**. This was successfully attained in both pregnancy (mean 74; site range 62 to 82) and infancy (mean 74; site range 62 to 81). The recommendations for the proportion of each visit spent, on average, on the different domains of the programme are more complex and change between the two phases (see Table 1 for objectives and full details of what was attained). In pregnancy the greatest proportion of time should be spent on the mother's personal health (35-

40%) and the average across sites was within the suggested range; maternal role should take up about one quarter of the time (23-25%) and again delivery in England was at this level. The mother's life course such as thinking about education and employment is expected to take between 10 and 15% of the time and all 10 sites were within this range. However there was a tendency for the nurses in England to spend more time than the suggested 10-15% on family and friends. Similarly, environmental health is expected to take up only 5-7% of the time on average, but the average for England was twice that and all sites were above the recommendation. Thus a focus on the home environment, when making home visits, may be such a strong inclination for nurses who are used to the health visitor role that it is challenging to avoid that.

In infancy the guidelines suggest spending more time on environmental health (7-10%) and the English teams on average were only just above that level, with appropriate time spent on both family and friends and the mother's life course. The largest change in the guidelines from pregnancy is that up to half the time (45-50%) should ideally be spent ion the maternal role, but substantially less than in pregnancy (14-20%) on maternal health. In the 10 English pilot sites the nurses spent somewhat less than the recommended time on the maternal role but more than recommended on maternal health, again possibly reflecting their previous roles (see Table 1). However the variation was not great overall and for all the domains some of the 10 sites delivered the programme exactly as recommended (see Table 1).

Insert Table 1 about here

c. Will families remain involved for the intended time?

In a programme extending over 30 months attrition will always be a major concern (Olds, 2003). The US team has indicated that, based on their experience, to deliver

with fidelity and obtain the expected outcomes **attrition during pregnancy should not be greater than 10%, and that attrition in infancy should not exceed 20%.** Research evidence from the USA has shown that a proportion of families may drop-out before the service's intended completion date, and that rates of attrition in the national dissemination of the programme are greater than those described in the three research trials (Ingoldsby et al., 2009). They have been able to link attrition with different styles of behaviour of the nurses (Ingoldsby et al., 2009) finding that those who had low retention had a more directive approach, emphasizing the programme's "perks" and positive outcomes with completion. In contrast, nurses who had higher retention talked more about the importance of tailoring and adapting the programme to the needs and interests of the clients. Now that the programme is being disseminated in England it is important to know what the rate of attrition is in this country, and factors associated with more or less attrition so that it can be minimized. The attrition during pregnancy in the 10 pilot sites in England was on average slightly higher than the target in pregnancy (14%) but with considerable differences between sites with rates ranging from as low as 5% up to 23%. This was explained in part on differences locally in dealing with the (politically driven) pressure to recruit in a short period of time. Some teams were more likely to recruit many clients, some of whom almost immediately decided it was not for them, while others took a more measured approach, only enrolling those who seemed very sure that they wanted the programme. The attrition in infancy was very close overall to the guideline at 21% but there remained substantial variability between sites (from 3% to 38%) indicating that this aspect of delivery may be problematic in some areas, and for some teams. Investigating the nature of clients more or less likely to leave the programme, few of their characteristics were found to be relevant. Those leaving in pregnancy had been

enrolled earlier in pregnancy (leavers 16 weeks, non-leavers 18 weeks).There was a trend for black clients, 8% of the total group, to be underrepresented in the leavers group (1% of leavers, 8% of non-leavers). In infancy only one difference was identified. Twice as many clients living in households with their partner and other adults (but not their one mother) left in infancy (15% of leavers, 7% on non-leavers) while those in a household including their own mother and their partner were less likely to leave (7% of leavers, 11% of non-leavers).

Forms completed give details about the reasons for leaving and in both pregnancy and infancy just under one third of the departures could be considered client related (e.g. moved out of area, no longer pregnant or infant death) while just over two thirds could be associated with the programme delivery. Within this category the most common reason was that the client indicated directly to the nurse that she no longer wanted the programme (see Table 2). Some indicated that they had learned a sufficient amount, others indicated that family members wanted to be their main source of support, and others said they were too busy with activities such as education or employment. The next largest group indicated less overtly, by being out when the nurse visited or by being unavailable on the telephone to make more appointments.

Insert Table 2 about here

d. Do the nursing staff find the new way of working acceptable?

The new way of working has the potential to be stressful for the nursing staff recruited to these posts. There is a large amount of training, direction about what they should do in their day to day work, close monitoring of their activities, they are encouraged to keep regular contact with clients who are in some cases resistant to this style of regular support, and they build close relationships with clients which can

mean that they could be affected when clients wish to leave the programme prematurely.

They generally found the training highly informative and the news ways of working were highly appreciated. The majority had put themselves forward for this new role so that they could be at the cutting edge of developments in health care, with an opportunity for working in a new and intensive way with the neediest families and this ambition was realised for most. While they reported that the actual delivery of the programme was daunting to start with, by the time they had been in post for about nine months it was working better. They had been concerned about the amount of data to be collected about clients, thinking that it might put clients off, but found that this was not the case. The frequent home had enabled trust, respect and rapport to build up, and the strength of this relationship was mentioned by many; and they noted that while they attended closely to the materials it was sometimes necessary to be flexible in order to retain clients; *"At times you put the materials on the back burner because you are aware there are pressing issues which the client wants to talk about. You want to keep them in the programme, so the actual programme contents have to wait."* (Barnes et al., 2008, p. 64). This has also been identified in the USA and the style of delivery that enhances retention (Ingoldsby et al., 2009). Thus there is a fine balance between two different aspects of fidelity, delivering the indicated content domains and keeping attrition to a minimum. Nurses reported that they could feel rejected when a client left, even though their training prepared them for this eventuality. They talked of frustration with a belief that they could have done more if only the client would stay, especially if they considered that other family members had pressured the client to leave. In contrast others described pleasure that the client's decision to stop reflected their growing competence and self assurance,

something that FNP is designed to develop.

While most were proud to be part of the first group of nurses to offer the programme in England there was a down side to this. They noted that their previous work had been far less structured, required no intense relationship with clients, and was a good deal less stressful. A number also talked about the pressure they were under to make the programme work. They felt its ultimate success or failure rested with them, and noted that this was not a pressure they were familiar with, since as health visitors or midwives they were simply a tiny part of the huge NHS operation. The site supervisors noted that they felt overstretched by the need to promote the programme locally, not just in the early stages to promote recruitment but after that to raise awareness generally.

e. Is there local support for sustainability?

Following on from central support and take-up by a small number of enthusiastic local areas, the final phase of implementation into policy will be integration of FNP into the range of services for children and families offered in the context of progressive universalism. For long term success it is important that other professionals, outside the programme itself and the PCT, value the programme and also understand how it fits into the range of provision.

Many local professionals had heard of the FNP, though less so in children's centres than from with the NHS staff such as health visitors and midwives, and some were aware that the programme had achieved substantial outcomes in American evaluations. Nevertheless, they did not usually have a detailed understanding of the ingredients of the scheme, beyond knowing that it was intensive home visiting which continued through the antenatal period until a child reached the age of two years. Several noted that there had been little time for them to consider the strategic

implications of the scheme before it had actually started. Overall the hoped for link-up with Children's Centres was a challenge and most of the Wave 1 sites were not based in those settings.

The topic of who should receive the programme was raised by a number of those interviewed. Their thinking was that by using only an age criterion it was being offered to some young women with other support who probably did not need it, while it was not being offered to others who were older, or who already had one child but who could benefit. Some also expressed concern about how the programme could roll out over the longer term without depleting the universal workforce, particularly in relation to health visiting. Others suggested that the FNP would need to be 'watered down' to a less intensive service if it was to be offered more widely and professionals from other agencies suggested that they would like to be able to implement aspects of FNP (use the materials, for example), but this is not viable (and would also not be permitted under the licence). This idea was also mentioned by commissioners who noted that they would like to stretch the fidelity of the scheme, working with a wider group of parents, delivered by family support workers, with the underlying message was that this would make the funding go further: *"The drawback is that FNP is about intensive home visiting, so they can only have a case load of 25, so that in itself is expensive. It is an expensive way of delivering. That way of working from a financial point of view would be unreasonable and unsustainable. It would not be good value for money."* (Barnes et al., 2009; p. 62). Overall, however, concerns about costs were less about the cost-per-head of the service and more about the grossed up cost of providing the service to everyone eligible if the service was to be 'rolled out'. Additional dilemmas were that beneficial outcomes might not immediately be evident, and not all may be health outcomes, including those pertaining to social care,

criminal justice and education: "*In the way budgets work, its not cost releasing efficiencies, we wouldn't get that tangible money back"* (Barnes et al., 2009; p. 62). Thus while commissioners in most of the pilot areas appear to be locating FNP as a central aspect of their services for families with young children others have reservations. Their reservations in relation to cost are sensible in that all the evidence thus far is from the USA but some reassurance can be gained from evidence that real-world delivery in England is close to the original programme which increases the likelihood of gaining the expected cost benefits (Aos et al., 2004). There appears to be a direct relationship between their understanding of the aims and potential outcomes of FNP and their willingness to sustain FNP. At the time of writing one of the 10 sites had decided to conclude the programme once the existing clients have graduated, as their children reach two years of age but the remainder are continuing, with eight of the nine also participating in the RCT. Different models are emerging for local funding, including plans for one site to become a social enterprise, enabling access to funding streams not currently available to PCTs such as the Lottery, Children in Need and Parenting Fund to enable expansion of the FNP (Derby City NHS, 2009).

National roll-out requires that in addition to a shift from central to local funding, which was built into the initial agreements, there also needs to be a gradual shift from central control, which predominated in the first 10 pilot sites, to local management as the programme is integrated into systems of care. The central Department of Health team have facilitated this by establishing a web-based system for entry of the data that describe programme delivery. This will have the same role as that provided by the National Centre in the USA, in that they will be ensuring that sites can locally

examine their performance in relation to fidelity targets and work to attain a level of delivery that is close to the stretch objectives.

Conclusions

Writing predominantly from a USA perspective, Bumbarger and Perkins (2008) concluded that the few evidence-based programmes being used in prevention strategies are not usually implemented with quality and fidelity and that they are often initiated with short-term seed-funding which is not conducive to sustainability. The introduction of the NFP programme into England thus far appears to be more auspicious.. Durlak and DuPre (2008) note from their extensive review that it is unrealistic to expect perfect or even near-prefect implementation. From the evidence collected so far, covering the first two phases of the programme – pregnancy and the first year – the programme is being delivered with a fair degree of fidelity to the guidelines. This despite the teams who were being studied having been brought together and trained in a very short time, with recruitment of full case-loads made in a way that would not be the case in routine delivery of the service. The main aspect of delivery that this influenced was attrition with sites appearing to take one of two styles. Some recruited somewhat over-enthusiastically to meet targets for numbers so that quite a large proportion of clients decided the programme was not really what they needed. Others were slower to fill caseloads but then retained them more effectively. Thus the conclusion of Durlak and DuPre (2008) that local issues may be relevant to successful implementation is confirmed in the context of FNP. There is evidence of differences between the 10 Wave 1 sites in other aspects of their implementation of FNP such as the proportion of visits accomplished (Barnes et al, 2008; 2009). Already the local administrative infrastructure and the quality of local management have been identified as important, in addition to close cohesive team

working (Barnes et al., 2009) and ongoing work is examining in detail the relationship between the kinds of local contextual factors identified by Durlak and DuPre (2008) and implementation of FNP in England.

Central government support as indicated in a recent White Paper remains strong and the programme is expanding with FNP sites currently numbering 50 and plans for 70 to be in place by 2011 (Hansard, 2009). This speed of expansion and level of support may possibly be too strong in its scope, encouraging too fast a roll-out before all relevant local issues can be considered. The work of the central team is addressing the issue of financial sustainability by indicating in their bidding criteria for subsequent sites the necessity local funding that will enable long-term sustainability (DCSF 2008) which should avoid one of the important problems identified in the US by Bumbarger and Perkins (2008), the reliance of short-term grant funding. The most recent bidding guidance (DCSF, 2010) includes a checklist that covers some important factors indentified by Durlak and DuPre (2008) such as a local shared vision about the innovation, leadership capacity and joint decision making, which should increase the likelihood that subsequent sites can implement the programme with fidelity.

It is being justifiably noted that the roll-out is of an evidence-based programme with proven outcomes: "To further support families the Government is extending effective programmes like Family Nurse Partnerships, providing more support to young first-time parents. … Given their effectiveness we will roll-out to all vulnerable pregnant mums one-to one support through the Family Nurse Partnership programme over the next decade." (HM Government, 2009; p.9). However central government support for FNP then possibly weakens its position vis-à-vis understanding evidence-based practice in the progress report of the Children's Plan, which mentions findings from

the implementation evaluation in terms that suggest that it is from a trial: "The programme is efficient and effective [in England]….and having an impact, such as reducing smoking in pregnancy and increasing breastfeeding." (DCSF 2009, p.45). This aspect of rolling out evidence-based programme may be the most challenging, that of being patient until the UK RCT evidence is available. The implementation evaluation is indicative of impacts but not evidence for impacts (Barnes et al., 2008, p. 108; Barnes et al., 2009, p. 88) and politically that is a nuance that is not always acknowledged. However, in terms of incorporating a highly complex manualised intervention into 'real world' national and local systems of care the achievements thus far of the FNP are more encouraging than the evidence from the US summarized by Bumbarger and Perkins regarding the implementation of evidence-based interventions. The introduction of the NFP into England with strong central support has demonstrated that it is possible to disseminate this particular evidence-based intervention in a manner that retains its qualities. Work is ongoing to develop local 'cells' to support the training of future family nurses and team supervisors and tweaks to the process that do not contravene the programme requirements, such as introducing local psychologists to support group team supervision, may provided indications that will be useful in its implementation in other countries and contexts. That and other ways that the English teams have put their own 'handprint' on the surface structure of the programme, hopefully without impinging on its deep structure, will be described in full in the final integrated implementation evaluation report due in early 2012.

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Table 1. Fidelity in the delivery of the Family Nurse Partnership programme in pregnancy and infancy: objectives and average percentage of time spent covering each of the five domains

Programme domain	Objective % Pregnancy	Mean % Wave 1 England	Site Range	Objective % Infancy	Mean % Wave 1 England	Site Range
Personal health	**35-40**	35	30-41	**14-20**	22	20-25
Maternal role	**23-25**	24	21-28	**45-50**	42	36-47
Life course	**10-15**	11	10-13	**10-15**	11	9-12
Family and friends	**10-15**	16	13-18	**10-15**	14	12-17
Environmental health	**5-7**	13	10-15	**7-10**	12	9-15

Table 2. Reasons given for clients leaving the Family Nurse Partnership programme in pregnancy and infancy

Reason for leaving FNP	**Pregnancy**		**Infancy**	
	N	%	N	%
Client related				
Moved out of FNP area	31	18	50	22
Miscarriage/termination/foetal/infant death	19	11	6	3
Child no longer in family's custody	0	0	11	5
Sub-total		29		30
Delivery related				
Client declined further participation	83	48	93	41
Excessive missed appointments/ attempted visits	24	14	37	16
Unable to locate client	15	9	16	7
Programme lacks capacity	0	0	13	6
Sub-total		71		70
Total	**172**		**226**	